

State Innovation Models (SIM) Round 2

Model Test Annual Report Two

Submitted to

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**RTI Project Number:
0214448.001.002**

**Contract Number:
HHSM-500-2014-00037i**

**Task Order Number:
HHSM-500-T0002**



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CMS Contract No. HHSM-500-2014-00037i

This project was funded by the Centers for Medicare & Medicaid Services under contract no. HHSM-500-2014-00037i. The statements contained in this report are solely those of the authors and do not necessarily reflect the views or policies of the Centers for Medicare & Medicaid Services. RTI assumes responsibility for the accuracy and completeness of the information contained in this report.

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Acronym List

ABLE	Above and Below the Line	BW	balancing weight
ACA	Affordable Care Act	C3	Community Care Coalition
ACH	Accountable Community of Health	CA	California
ACN	Accountable Care Network	CAB	Consumer Advisory Board
ACO	accountable care organization	CAH	critical access hospital
ACRS	Active Care Relationship Service	CAHPS	Consumer Assessment of Healthcare Providers and Systems
ACS	American Community Survey	CBO	community-based organization
ADHD	attention deficit hyperactivity disorder	CCBHC	Certified Community Behavioral Health Clinic
ADT	admission, discharge, and transfer	CCHS	Christiana Care Health System
AE	Accountable Entity	CCIP	Community and Clinical Integration Program
AIM	Analytics, Interoperability and Measurement	CCT	care coordination tool
AMH	Advanced Medical Home	CCTP	Community-Based Care Transitions Program
AN	Advanced Network	CDC	Centers for Disease Control and Prevention
APACO	Advance Payment Accountable Care Organization Model	CDPHE	Colorado Department of Public Health and Environment
APC	Advanced Primary Care	CEP	Clinical Episode Payment
APCD	all-payer claims database	CFAI	Capitated Financial Alignment Initiative
APD	All-Payer Database (New York)	CFR	<i>Code of Federal Regulations</i>
APM	alternative payment model	CG	comparison group
AR	Annual Report	CHEMS	community health emergency medical services
ASC	Accountable System of Care	CHIP	Children's Health Insurance Program
ASO	Administrative Services Organization	CHIR	Community Health Innovation Region
AY	Award Year	CHITA	clinical health IT advisor
AZ	Arizona	CHNA	Community Health Needs Assessment
BCBS	Blue Cross Blue Shield	CHNA&HIP	Community Health Needs Assessment and Health Improvement Plan
BH	behavioral health	CHT	community health team
BH-ASO	Behavioral Health Administrative Services Organization	CHW	community health worker
BHDDH	Department of Behavioral Healthcare, Developmental Disabilities and Hospitals	CME	Continuing Medical Education
BMI	body mass index		
BPW	balanced population weight		
BRFSS	Behavioral Risk Factor Surveillance System		

CMHC	community mental health center	EMR	electronic medical record
CMMI	Center for Medicare and Medicaid Innovation	EMS	emergency medical services
CMO	chief medical officer	EOC	episode of care
CMS	Centers for Medicare & Medicaid Services	EOHHS	Executive Office of Health and Human Services
CO	Colorado	ER	emergency room
COPD	chronic obstructive pulmonary disease	ERC	Enhanced Respiratory Care
CPC	Comprehensive Primary Care	ESI	employer-sponsored insurance
CPC+	Comprehensive Primary Care Plus	EWS	Early Warning System
CPCi	Comprehensive Primary Care initiative	FFS	fee-for-service
CPS	Current Population Survey	FOBT	fecal occult blood test
CQM	clinical quality measure	FQHC	Federally Qualified Health Center
CT	Connecticut	FW	final weight
CTC-RI	Care Transformation Collaborative of Rhode Island	FY	fiscal year
DCHI	Delaware Center for Health Innovation	GA	Georgia
DE	Delaware	GAC	Governor's Advisory Council on Payment Innovation
DFS	Department of Financial Services	GME	graduate medical education
DHIN	Delaware Health Information Network	GRC	Government Resource Center
DHS	Department of Human Services	HAP	Health Alliance Plan
DHSS	Department of Health and Social Services	HCA	Health Care Authority
DMHAS	Department of Mental Health and Addiction Services	HCBS	home- and community-based services
DOH	Department of Health	HCC	Health Care Commission
DPH	Department of Public Health	HCCD	Health Care Claims Database
DSHS	Department of Social and Health Services	HCIA	Health Care Innovation Award
DSRIP	Delivery System Reform Incentive Payment	health IT	health information technology
DSS	Department of Social Services	HEC	Health Enhancement Community
ECHO	Extension for Community Healthcare Outcomes	HEDIS	Healthcare Effectiveness Data and Information Set
eCQM	electronic clinical quality measure	HIE	health information exchange
EHR	electronic health record	HILN	Health Innovation Leadership Network
		HIP	Health Improvement Plan
		HITECH	Health Information Technology for Economic and Clinical Health
		HITO	health information technology officer
		HMO	health maintenance organization
		HPIO	Health Policy Institute of Ohio

HRA	Health Risk Assessment	MAPOC	Medical Assistance Program Oversight Council
HRSA	Health Resources and Services Administration	MC	managed care
IA	Iowa	MCO	managed care organization
ICD-10	International Classification of Diseases-10	MD	Maryland
ICD-9	International Classification of Diseases-9	MDHHS	Michigan Department of Health and Human Services
ICW	Integrated Care Workgroup	MEPD	Medicaid Emergency Psychiatric Demonstration
ID	Idaho	MFFSFAI	Managed Fee-for-Service Financial Alignment Initiative
IDHS	Iowa Department of Human Services	MHAS	Department of Mental Health and Addiction Services
IDHW	Idaho Department of Health and Welfare	MI	Michigan
IDPH	Iowa Department of Public Health	MiCHAP	Michigan Children’s Health Access Program
IHC	Idaho Healthcare Coalition	MiHIN	Michigan Health Information Network
IHDE	Idaho Health Data Exchange	MIPCD	Medicaid Incentives for Prevention of Chronic Diseases
IHI	Institute for Healthcare Improvement	MiPCT	Michigan Primary Care Transformation
IHIN	Iowa Health Information Network	MIPS	Merit-Based Incentive Payment System
IL	Illinois	MLR	Medical Loss Ratio
IME	Iowa Medicaid Enterprise	MO	Missouri
IMHC	Idaho Medical Home Collaborative	MOU	memorandum of understanding
IOM	Institute of Medicine	MPRT	monthly progress reporting tool
IPAT	Integrated Practice Assessment Tool	MSA	Medical Savings Account
IPTW	inverse probability of treatment weight	MSSP	Medicare Shared Savings Program
KFF	Kaiser Family Foundation	MT	Montana
KS	Kansas	N/A	not available
KY	Kentucky	NASHP	National Academy for State Health Policy
LAN	Learning and Action Network	NC	North Carolina
LIFT	Linking Interventions for Total	NCE	no-cost extension
LPHA	local public health agency	NCHS	National Center for Health Statistics
LTSS	long-term services and supports	NCQA	National Committee for Quality Assurance
MACRA	Medicare Access and CHIP Reauthorization Act of 2015	ND	North Dakota
MAPCP	Multi-Payer Advanced Primary Care Practice		

NE	Nebraska	PediPRN	pediatric psychiatry resource network
NF	nursing facility	PFFS	private fee-for-service
NH	New Hampshire	PHAB	Public Health Accreditation Board
NJ	New Jersey	PHIP	Population Health Improvement Plan
NM	New Mexico	PHO	Physician Hospital Organization
NV	Nevada	PM	Payment Model
NY	New York	PMO	Program Management Office
NYSDOH	New York State Department of Health	PMPM	per member per month
OB-GYN	obstetrician-gynecologist	PO	Physician Organization
ODH	Ohio Department of Health	PPO	preferred provider organization
ODM	Ohio Department of Medicaid	PPQC	Physician-Payer Quality Collaborative
OH	Ohio	PSC	Prevention Service Center
OHA	Office of the Healthcare Advocate	PSHVN	Puget Sound High Value Network
OHIC	Office of the Health Insurance Commissioner	PTA	practice transformation agent
OHT	Office of Health Transformation	PTO	practice transformation organization
OIT	Office of Information Technology	QHP	qualified health plan
OK	Oklahoma	QI	quality improvement
ONC	Office of the National Coordinator for Health Information Technology	QMRT	Quality Measure Reporting Tool
OQPS	Office of Quality and Patient Safety	QPP	Quality Payment Program
P4IPH	Plan for Improving Population Health	QPR	quarterly progress report
P4V	pay-for-value	QuILTSS	Quality Improvement in Long-Term Services and Supports
PA	Pennsylvania	RAMP	Relationship and Attribution Management Platform
PACO	Pioneer Accountable Care Organization	RC	Regional Collaborative
PAP	Principal Accountable Provider	REI	Recreational Equipment, Inc.
PBPM	per beneficiary per month	RFA	request for applications
PC	primary care	RFP	request for proposal
PCCM	primary care case management	RHC	rural health clinic
PCMH	patient-centered medical home	RHIO	regional health information organization
PCMH+	Person Centered Medical Home Plus	RI	Rhode Island
PCP	primary care provider	RIDOH	Rhode Island Department of Health
PEBB	Public Employee Benefits Board		

RN	registered nurse	SWAHEC	Southwestern Area Health Education Center
ROI	return on investment		
ROMC	regional oversight and management committee	SWAN	Statewide Alert Notification
RWJF	Robert Wood Johnson Foundation	TA	technical assistance
SAMHSA	Substance Abuse and Mental Health Services Administration	TAG	Technical Advisory Group
SBIRT	Screening, Brief Intervention, and Referral to Treatment	TCC	total cost of care
SC	South Carolina	TCPI	Transforming Clinical Practice Initiative
SD	South Dakota	THA	Tennessee Hospital Association
SHB	Substitute House Bill	TN	Tennessee
SHIN-NY	Statewide Health Information Network for New York	TX	Texas
SHIP	State Health Care Innovation Plan	UHIP	Unified Health Infrastructure Project
SHRM	Society for Human Resource Management	UMP	Uniform Medical Plan
SIM	State Innovation Model	UT	Utah
SIM-DSRIP	SIM Delivery System Reform Incentive Payment	UTI	urinary tract infection
SPA	state plan amendment	UW	University of Washington
SPIG	Strategic Planning Innovation Group	VA	Virginia
SPLIT	Shared Practice Learning Improvement Tool	VBID	value-based insurance design
SSC	statewide steering committee	VBP	value-based payment
SSP	shared savings program	VIS	Value Index Score
SUD	substance use disorder	WA	Washington
		WI	Wisconsin
		WRHAP	Washington Rural Health Access Preservation
		WY	Wyoming

Executive Summary

State governments have the potential to accelerate statewide health care system transformation through the many roles they play—as regulators, legislators, conveners, and both suppliers and purchasers of health care services. The Center for Medicare and Medicaid Innovation’s (CMMI’s) State Innovation Models (SIM) program awarded over \$622 million in Model Test awards to support 11 Round 2 Model Test states—Colorado, Connecticut, Delaware, Idaho, Iowa, Michigan, New York, Ohio, Rhode Island, Tennessee, and Washington. To foster health care system transformation, state SIM Initiatives are using policy and regulatory levers to enable or facilitate the spread of innovative health care models, integrating population health into transformation efforts, engaging a broad range of stakeholders, and leveraging existing efforts to improve health care delivery outcomes. The SIM program’s primary objective is to assist states in meeting a “preponderance of care,” the CMMI goal¹ of having at least 80 percent of care in a state—defined on the basis of population, expenditures, or practices—in delivery arrangements that use value-based purchasing or alternative payment models (APMs) that can incent better care and lower costs.²

Many of the reforms and strategies Round 2 Model Test states are implementing in their SIM awards were developed as part of, or evolved from, the State Health Care Innovation Plans (SHIPs) designed during their Round 1 Model Design or Pre-Test awards. States also used their Round 1 awards to build coalitions with key stakeholders. The Model Test awards are for 4 years; Award Year 1 was the preimplementation period, which the states devoted to further refining their SHIPs and developing implementation strategies. Award Years 2, 3, and 4 are the test period, during which the various strategies of the state SHIPs are implemented and evaluated.

CMMI contracted with a team led by RTI International—which includes The Urban Institute, National Academy for State Health Policy, Truven Health Analytics, and The Henne Group—to conduct the independent, federal evaluation of Round 2 of the SIM Initiative. This report, the second annual report (AR) of the SIM Round 2 evaluation contract, analyzes data collected between July 1, 2016, and April 30, 2017.³ The report (1) describes findings on the

¹ Rajkumar, R., Conway, P. H., & Tavenner, M. (2014). CMS—engaging multiple payers in payment reform. *JAMA*, 311(19), 1967–1968. doi: 10.1001/jama.2014.3703

² Value-based purchasing is a strategy used by purchasers to promote quality and value of health care services. The goal of value-based purchasing programs is to shift from pure volume-based payment, as exemplified by fee-for-service payments, to payments that are more closely related to health outcomes. An APM is any approach meeting the criteria established by the Centers for Medicare & Medicaid Services (CMS) that gives added incentive payments to provide high-quality and cost-efficient care. APMs can apply to a specific clinical condition, a care episode, or a population. Advanced APMs are a subset of APMs that let practices earn more rewards in exchange for taking on risk related to patient outcomes. Source: CMS. (2017). APMs overview. *Quality Payment Program*. Retrieved from <https://qpp.cms.gov/apms/overview>.

³ Due to coordination issues, some data collection via telephone interviews occurred in early May 2017.

adoption of delivery models and payment reforms related to value-based purchasing and APMs, including progress toward achieving a preponderance of care; (2) provides an update and lessons learned on the main enabling strategies to support health care delivery transformation in the areas of quality measure alignment, health information technology (health IT) and data infrastructure, and practice transformation and workforce development; and (3) describes states' efforts and challenges in improving population health. What follows is a brief overview of findings in these three key areas.

ES.1 Health Care Delivery Transformation

ES.1.1 Delivery models and payment reforms

Model Test states have more effective policy levers to advance APMs in Medicaid and state employee health plans than they do with commercial payers. Most states' SIM models focus on Medicaid, because they have direct leverage through their oversight of program operations and budgets, including through their contracts with Medicaid managed care plans. Four states (Delaware, Ohio, Tennessee, and Washington) have taken or plan to take advantage of their role as payer to encourage or require state employee health plans to adopt value-based purchasing or APMs.

Within Medicaid, patient-centered medical homes (PCMHs) are the most common strategy to implement APMs and advance preponderance of care goals. PCMHs are a component of the SIM Initiatives in 7 states (Connecticut, Idaho, Michigan, New York, Ohio, Rhode Island, and Tennessee). PCMHs in these states receive fee-for-service (FFS) reimbursement with an additional per member per month (PMPM) payment.⁴ All Round 2 Model Test states except for Ohio have established (or proposed to establish) tiered PMPM payments that are higher for PCMHs that achieve established benchmarks. Ohio includes a shared savings component in its PCMH (i.e., Ohio Comprehensive Primary Care [CPC]) payments. Connecticut also intends to incorporate shared savings in its PCMH payments, although no payments have been made yet.

Ohio and Tennessee implemented episode-based payment models in their Medicaid programs for selected episodes of care. These models are based on FFS payments and apply financial rewards or penalties to providers retrospectively. Although the financial risk under this structure is limited compared to prospective bundled episode payment, providers are concerned about using these models widely without more information about how they are working in Medicaid.

Commercial payers must adopt APMs and value-based purchasing if states are to reach the 80 percent preponderance of care goal. However, their involvement remains voluntary except

⁴ New York's Medicaid program has committed to making PMPM payments within its FFS program and will also require Medicaid managed care plans to make such payments, if it receives approval of a state plan amendment.

in Rhode Island, the only Round 2 Model Test state that has exercised regulatory authority to mandate the adoption of APMs and participation in transformation initiatives. Model Test states mainly use education and participation by payers in decision making, such as by convening collaboratives and work groups, to encourage adoption of value-based purchasing and APMs in commercial health plans. However, some commercial payers have resisted implementing models used in Medicaid either because they already have their preferred payment models or do not see value in adopting the state models. Large national carriers, for instance, often have defined sets of payment models with risks and rewards for providers that they use in all states.

Implementation of SIM initiatives in tandem with Medicare payment initiatives has helped promote wider adoption of value-based purchasing and APMs. State officials view Medicare's adoption of alternative payment methodologies, and alignment of its incentives with state payment models, as essential to moving delivery systems away from FFS, because Medicare is the dominant payer for many providers. Comprehensive Primary Care Plus (CPC+), a Medicare alternative payment initiative for primary care practices, includes all or portions of six Model Test states (Colorado, Michigan, New York, Ohio, Rhode Island, and Tennessee). Some of these states are leveraging CPC+ to increase participation in their SIM initiatives. Ohio initially enrolled 23 out of 90 CPC+ practices in its Medicaid PCMH initiative and enrolled an additional 41 CPC+ practices during a second round. Colorado and Michigan aligned their SIM initiatives with CPC+ by modifying the SIM quality measure sets to incorporate some CPC+ measures. In contrast, New York had to exclude CPC+ practices from its SIM initiative, because the Centers for Medicare & Medicaid Services (CMS) determined that practices cannot receive support for the same practice transformation activities from two federal sources.

ES.1.2 Progress toward a preponderance of care

Stakeholders in Colorado, Delaware, Michigan, Ohio, Rhode Island, and Washington generally were optimistic that the goal of having 80 percent of the state population in a health care delivery arrangement using value-based purchasing or an APM would be reached by the award's conclusion, while stakeholders in Connecticut, Idaho, Iowa, New York, and Tennessee were less consistently confident. However, most states had not documented the extent to which their populations were covered by an APM or value-based purchasing and did not know how close they were to the preponderance of care goal. State officials in more than half the states (Colorado, Connecticut, Delaware, Idaho, Rhode Island, and Washington) described challenges in measuring progress, including uncertainty about the definition of preponderance of care, such as whether all three measures of a preponderance of care (i.e., state population, provider participation, and payments) had to be met and which payment models are considered APMs. Furthermore, Colorado, Connecticut, Ohio, and Washington did not have access to adequate data to monitor their progress toward the preponderance of care goal, particularly from commercial payers.

Variation in health care markets can affect states' ability to meet the preponderance of care goal. Having a concentrated insurance market with a small number of purchasers can either facilitate progress toward the goal, if predominant insurers are already engaged in initiatives that are aligned with preponderance of care, or pose an obstacle if they are resistant to these models. States with less concentrated markets must work to engage multiple insurers to reach the preponderance of care goal, but their success depends less on a single purchaser's participation. Smaller and rural providers face obstacles to participating in value-based purchasing and APMs that may make it difficult for some states to achieve a preponderance of care.

ES.2 Enabling Strategies to Support Health Care Delivery Transformation

ES.2.1 Quality measure alignment

States view quality measure alignment across payers as an effective lever to generate provider and payer buy-in to support the growth of APMs and value-based purchasing. For providers, measure alignment reduces reporting burden and supports feedback on large portions of their patient panel that can inform practice-level improvements. For payers, alignment increases provider interest in value-based purchasing models, which helps them reach the critical mass of participating providers needed to achieve meaningful change in the quality and cost of care. In the AR1 analysis period, most states had identified a common measure set around which alignment was expected to occur. During the AR2 analysis period, SIM teams sought to simplify quality measures to encourage payers to use them and ease providers' reporting burden.

One effective strategy—adopted in Iowa, Tennessee, and Washington—is to first implement quality measure alignment within Medicaid, for example, by requiring Medicaid managed care plans to adopt common measure sets. States can leverage successful measure alignment in Medicaid to gain buy-in from other payers and providers by demonstrating the value of alignment. However, commercial payers had not yet adopted common measure sets from Medicaid, although some payers were signaling interest or intent to align measures. Conversely, some states that chose to first pursue consensus among payers expected the investment, although time consuming, to yield alignment in the long run.

States also have demonstrated flexibility in their strategies to build support for measure alignment. Colorado and Idaho have phased in reporting requirements or permitted partial alignment that allows payers to retain some of their own measures. Some states have moved away from state-defined measures and adopted nationally recognized versions, which has been crucial to gaining buy-in from payers that operate in national markets. As noted earlier, Colorado and Michigan modified their reporting requirements to ease the burden on providers participating in federal APMs like CPC+.

Some states have used a single work group structure to select measures, which streamlines and expedites decision making and consensus building. Although all states have used various consensus-building strategies effectively to achieve some degree of alignment, stakeholders appear to conceive of alignment differently and may disagree as to how much alignment is needed. Full alignment may be challenging and sometimes undesirable because of differences in the populations that payers cover. For example, measures appropriate for the older adults and disabled individuals covered by Medicare may not be appropriate for children and pregnant women enrolled in Medicaid.

ES.2.2 Health information technology and data infrastructure

Health IT and a robust data infrastructure are central to the SIM goals of enhanced care coordination, population health improvement, and APM adoption. A variety of health IT enabling strategies under SIM are intended to give providers a more complete view of their patients' healthcare spending and use patterns to improve coordination of their patients' health care, as well as to take on and manage financial risk. Many states viewed their health IT and data infrastructure strategies as a driver of provider participation in health care transformation by providing the information needed for the adoption of value-based purchasing and APMs.

The Round 2 Model Test states use several health IT and data infrastructure strategies to support SIM goals. The adopted strategies include expanding health information exchange (HIE) and improving the functionality of HIE data. Another strategy is increasing use of admission, discharge, and transfer notifications to support care coordination. All-payer claims databases are used to identify gaps in population health management and create quality metric benchmarks. Electronic health record (EHR) systems are used by some states to support behavioral health integration. Finally, some states are helping providers develop the processes and infrastructure to collect and report electronic clinical quality measures, as well as establishing statewide health provider directories to facilitate access to specialists in communities where there is a shortage.

Successful health IT strategies recognized and planned for existing, incompatible technology platforms to avoid delays in implementation and changes in approach. For example, the variety of HIE systems operating in Connecticut was identified as a problem, so the state's HIE strategy shifted from using a single, statewide HIE to connecting existing HIE systems. Michigan recognized that some providers had a strong familiarity with their regional HIEs and so decided to make the statewide HIE compatible with them. Another key to success was having data that are considered accurate and representative of the state, so providers find health IT and data infrastructure strategies valuable and are willing to fully engage with them.

ES.2.3 Practice transformation and workforce development

States employed a range of strategies for practice transformation and workforce development to increase providers' ability to supply comprehensive, patient-centered care. State

strategies included using community health workers (CHWs), encouraging telehealth clinical practice (telemedicine), offering technical support to primary care providers, and integrating physical health services into behavioral health.

Incorporating CHWs in patient care teams is an explicit component of practice transformation efforts in four states (Connecticut, Idaho, Michigan, and Rhode Island). CHWs have been used to improve population health, increase access to healthcare in rural areas or for minority populations, provide comprehensive and coordinated care, and integrate behavioral health. However, despite state efforts to encourage or even mandate practices to hire CHWs, lack of funding for their salaries or reimbursement for their services has posed a barrier in most states.

Telehealth is one strategy for addressing healthcare provider shortages in rural and underserved areas, although it is being pursued only in Colorado, Idaho, and New York among the Model Test states. New York had not yet implemented its program by the end of the analysis period. Telehealth clinical services that Model Test states are using or anticipate using include video conferencing to provide real-time patient-provider consultations, provider-to-provider discussions, physician mentoring, and remote patient monitoring by electronically transmitting patient health information to health care providers. Telehealth clinical services sometimes require significant investments in infrastructure and training. However, some states have encountered barriers when accessing existing funding sources to secure telehealth equipment. Although funding for telehealth equipment remains a challenge, one state—Idaho—initiated a grant program through the SIM Initiative to provide clinics with resources to develop and implement new telehealth programs or expand existing telehealth programs.

Model Test states have implemented a variety of strategies to improve primary care providers' capacity to deliver comprehensive care, manage complex medical and behavioral health needs of patients, and transform so they can provide value-based care. Strategies include technical assistance, learning collaboratives, support hubs, and specialist consultations. Colorado has also promoted embedding behavioral health providers in primary care practices by making small grants (using non-SIM funds) to SIM-participating practices to hire a behavioral health provider. However, some practices had trouble finding suitable providers. Rhode Island offers remote psychiatric specialty consultations to pediatric primary care practitioners.

Some Model Test states have practice transformation strategies that focus on behavioral health providers. Colorado's and Tennessee's SIM initiatives focus on improving mental health specialty providers' ability to coordinate and manage their patients' physical health needs by integrating physical health services into behavioral health specialty clinics. Although this strategy has not been widely adopted, it has the benefit of providing medical care in a setting that is familiar and where the behavioral health patients have an on-going relationship with the practice personnel. Delaware and Washington have adopted a complementary strategy of

enhancing communication and coordination between physical and behavioral health systems by improving and updating behavioral health providers' EHR systems.

ES.3 Population Health

Improving population health is one of the three goals of health care transformation models and strategies being tested under Round 2 of the SIM Initiative. Many states did not progress as far as they had planned in the AR2 analysis period, but all made some progress toward implementing their population health strategies. The states integrated statewide population health plans (required as part of their SIM Initiative) with existing overall state health plans. Many states completed operational plans at the local and regional levels detailing the activities and responsible entities to accomplish the work set out in the statewide population health plans. Several states awarded SIM funds to undertake specific population health activities, initiatives, or programs during the AR2 analysis period. According to respondents interviewed, most of the population health strategies that states are pursuing combine elements of two or more of the three buckets in the Centers for Disease Control and Prevention's (CDC's) classification system for prevention activities: traditional clinical, innovative patient-centered care, and community-wide health approaches.⁵

Progress on population health strategies was slower than expected, largely because states found it difficult to operationalize complex strategies, and regional actors leading these implementation tasks struggled to define and understand their roles and responsibilities. Stakeholders in several states voiced concerns that the infrastructure to support the population health objectives was inadequate, or objectives were mismatched to local needs or existing infrastructure. Most Round 2 Test states and their stakeholders believed implementation of the population health strategies had not progressed enough to have a measurable impact on any of the population health outcomes, yet they expressed optimism that strategies would impact population health in the future.

ES.4 Next Steps

States continue to progress with their plans, but it remains too early to detect an impact from the SIM Round 2 Model Test awards. Three reports are to follow the one presented here. Plans for the third annual report include providing a quantitative baseline beyond population health, as well as an extension of qualitative findings. The fourth and final reports will provide quantitative impact estimates in addition to a fuller qualitative understanding.

⁵ Auerbach, J. (2016, May/June). The 3 buckets of prevention. *Journal of Public Health Management and Practice*, 22(3), 215–218. doi: 10.1097/PHH.0000000000000381

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1. Introduction

State governments have the potential to accelerate statewide health care system transformation. To test this potential, the Center for Medicare and Medicaid Innovation (CMMI) in 2015 awarded funds through the Round 2 State Innovation Model (SIM) Initiative to 11 Model Test states—Colorado, Connecticut, Delaware, Idaho, Iowa, Michigan, New York, Ohio, Rhode Island, Tennessee, and Washington. Model Test states are using policy and regulatory levers to enable or facilitate the spread of innovative health care models, integrating population health into transformation efforts, engaging a broad range of stakeholders, and leveraging existing efforts to improve health care delivery and outcomes.

All 11 Round 2 Model Test states were recipients of Round 1 Model Design or Pre-Test awards, in which they worked with CMMI to design State Health Care Innovation Plans, representing a state’s strategy “to use all of the levers available to it to transform its health care delivery system through multi-payer payment reform and other state-led initiatives.”⁶ This transformation reflects the SIM Initiative’s primary objective, to assist states in meeting a “preponderance of care,” defined by CMMI as having at least 80 percent of payments from all payers be under value-based purchasing or alternative payment models (APMs).⁷ These 11 Model Test states are the focus of this report.

The Model Test awards are for 4 years. The 12-month preimplementation period (Award Year [AY] 1) was devoted to further development of implementation strategies. The latter three AYs are the test period during which the states ideally would focus on testing the various strategies. However, thus far, states also have been developing and refining strategies during the test period to meet their evolving delivery system reform goals. *Figure 1-1* shows the period of performance for each Model Test state, as of April 30, 2017. Five states are scheduled to complete their test periods on January 31, 2019. The remaining six states were granted no-cost extensions (NCEs) and will end their test period later than originally planned.

CMMI contracted with the team of RTI International and its subcontractors—National Academy for State Health Policy, The Urban Institute, Mission Analytics, The Henne Group, Truven Health Analytics, and Native American Management Services Inc.—to conduct an independent federal evaluation of the SIM Initiative Round 2. Annual Report 2 (AR2) focuses on the states planning, implementing, and testing their SIM Initiatives. Impact estimates will be provided in later reports.

⁶ Centers for Medicare & Medicaid Services (CMS). (2017). *State Innovation Models Initiative: General information*. Retrieved from <https://innovation.cms.gov/initiatives/state-innovations/>.

⁷ Rajkumar, R., Conway, P. H., & Tavenner, M. (2014). CMS—engaging multiple payers in payment reform. *JAMA*, 311(19), 1967–1968. doi: 10.1001/jama.2014.3703

Figure 1-1. Round 2 Model Test period of performance

Year	2015				2016				2017				2018				2019																		
Month	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
Model Test States																																			
Colorado	AY1				AY2				AY3				AY4																						
Connecticut	AY1				AY2				AY3				AY4																						
Delaware	AY1				AY2				AY3				AY4																						
Idaho	AY1				AY2				AY3				AY4																						
Iowa	AY1				AY2				AY3				AY4																						
Michigan	AY1				AY2				AY3				AY4																						
New York	AY1				AY2				AY3				AY4																						
Ohio	AY1				AY2				AY3				AY4																						
Rhode Island	AY1				AY2				AY3				AY4																						
Tennessee	AY1				AY2				AY3				AY4																						
Washington	AY1				AY2				AY3				AY4																						

Source: Information provided by CMMI and reflects the period of performance for Model Test states as of April 30, 2017.

Note: Cells shaded in pink represent months in which there is an intra-month (i.e., mid-month) transition between award years, or months in which the final award year ends mid-month

AY = award year; CMMI = Center for Medicare and Medicaid Innovation.

The federal evaluation of the SIM Initiative Round 2 has the primary goal of evaluating how states fared obtaining a preponderance of care in value-based purchasing models and APMs. In addition, the evaluation assesses the ability of the 11 states to use levers to transform health care delivery and explores whether transformed health care delivery systems have an impact on quality of care, care coordination, health care utilization and expenditures, and population health. In this report, the impact of the SIM Initiative Round 2 is assessed using qualitative data from document reviews, meeting participation, and key stakeholder interviews. This report also provides baseline information on population health measures from Behavioral Risk Factor Surveillance System (BRFSS) data. Future reports will include impact analyses using BRFSS and claims data as the data become available.

1.1 Organization of the Annual Report

As the second of five planned annual reports, this report analyzes data collected between July 1, 2016, and April 30, 2017 (the AR2 analysis period). This report contains findings from the AY2 stakeholder interviews for the 11 states, and data collected via ongoing review of state documents and from program and evaluation meetings with each state. This report also includes baseline population health descriptive statistics for each of the states and their comparison groups in 2014, 2015, and 2016, the 3 years before the initial calendar year of the test period. Future reports will include quantitative data analyses on statewide changes in health care use, expenditures, coordination, and quality and model-specific analyses. The data for the statewide and model-specific analyses were not available for this report.

The remainder of this chapter (*Sections 1.2–1.4*) provides a brief overview of the data and methods for conducting the qualitative data collection and analyses, the population health quantitative data analyses, and limitations of this report. Chapters 2 through 4 provide the main cross-state evaluation findings of the SIM Round 2 Initiative. Chapter 2 reports on findings related to the adoption of value-based purchasing and APMs, including progress toward achieving a preponderance of care and the testing of and lessons related to the delivery models and payment reforms states are adopting. Chapter 3 provides an update and lessons learned on the main enabling strategies to support health care delivery transformation in the areas of quality measure alignment, health information technology (health IT) and data infrastructure, and practice transformation and workforce development. Chapter 4 describes states' efforts and challenges in improving population health. Finally, Chapter 5 contains conclusions that may be drawn from the evaluation findings. The RTI team reports state-specific findings for each of the 11 states in *Appendixes A through K*.

1.2 Qualitative Evaluation Data Collection and Methods

Evaluation teams for each Round 2 Model Test state collected qualitative data throughout the AR2 analysis period. The qualitative analysis in this report focuses on the progress of SIM planning, implementation, and testing in each state and the status of each state's SIM models and

strategies. The evaluation team staff monitored state activities through review of state documents, participation in monthly evaluation calls and biweekly program calls with state and federal SIM program staff, and stakeholder telephone interviews. The data collected through these methods contain information about the states from July 1, 2016, to April 30, 2017. These three data sources were analyzed and formed the basis for the qualitative findings reported for each state.

1.2.1 Document review

The RTI team collected information about each state from documents that RTI received via CMMI: operational plans, driver diagrams, quarterly progress reports, and state profiles prepared by the State Health Access Data Assistance Center. In addition, the evaluation team reviewed reports issued by the states' advisory committees or commissions. To supplement these documents, the RTI team collected information on states' SIM Initiatives or related initiatives from relevant news articles and Web sites maintained by some of the states.

1.2.2 State evaluation and program calls

To gather additional information on state implementation and testing of the models and strategies in the SIM awards, RTI team members participated in biweekly program calls with the states' CMMI project officers and SIM technical assistance (TA) teams, to hear planning and implementation progress updates. The RTI team also held a monthly evaluation call with states, except Tennessee, to discuss any data needed for the federal evaluation and gather additional information about state planning, implementation, testing, and evaluation activities, including successes, challenges, and lessons learned.⁸

1.2.3 Key informant telephone interviews

The RTI team conducted phone interviews with key informants in the states between March and May 2017.⁹ The data collected from the interviews included updates on SIM implementation activities, participation, and early and future impacts. Depending on the type of interviewee, discussion topics for the key informant interviews included progress on SIM implementation and operational activities; governance and project administration; stakeholder participation; health care delivery model reforms; payment system reforms; population health; health IT and other infrastructure investments, practice transformation and workforce

⁸ In Tennessee, the evaluation team instead shared topics for discussion and raised questions on the biweekly program calls, in lieu of a monthly evaluation call.

⁹ Due to the availability of stakeholders, 17 interviews occurred in May 2017, which is outside the evaluation period ending April 30, 2017. The number of interviews conducted in May 2017 by state are as follows: Colorado–2, Connecticut–4, Delaware–1, Michigan–1, Ohio–3, and Washington–6. The discussions during the May 2017 interviews focused on activities that occurred prior to April 30, 2017.

development; outcomes and impacts on preponderance of care, care delivery, coordination of care, utilization, and expenditures; and TA and other support resources.

Evaluation teams for each state recruited telephone interview participants using the state-recommended participant pool. Final lists of site visit interviewees were not shared with state SIM teams or CMMI. The lists remained confidential and were shared only within the relevant state evaluation team. As shown in *Table 1-1*, key interviewees included state officials, payers, providers, and consumer advocates. Some states included other types of key informants, such as research organizations and community and business representatives. The state evaluation teams conducted 187 interviews in all—14 to 20 interviews per state, for a state average of 17 interviews. Most interviews were with state officials. Across the 11 states, the RTI team interviewed 78 state officials, 24 payers, 41 providers, 19 consumer advocates, and 25 other interviewees. *Table 1-2* describes the topic areas the interviews covered, by type of interviewee.

Table 1-1. Interviews conducted in Round 2 Model Test states, by state and stakeholder type

State	State officials	Payers	Providers	Consumer advocates	Other	Total
Colorado	5	3	3	2	6	19
Connecticut	7	0	3	2	2	14
Delaware	7	0	4	2	3	16
Idaho	9	4	4	2	0	19
Iowa	3	3	4	2	5	17
Michigan	6	1	4	2	1	14
New York	8	2	2	2	4	18
Ohio	5	4	4	2	1	16
Rhode Island	9	2	7	2	0	20
Tennessee	9	3	2	1	0	15
Washington	10	2	4	0	3	19
TOTAL	78	24	41	19	25	187

Table 1-2. Telephone interview topic areas, by key informant type

Topic areas	State officials	Payers	Providers	Consumer advocates
About the respondent	✓	✓	✓	✓
Overall progress on SIM Initiative operational model activities	✓	—	—	✓
Governance and program administration	✓	—	—	—
Stakeholder participation	✓	✓	✓	✓
Health care delivery transformation	✓	✓	✓	✓
Delivery and payment system reform	✓	✓	✓	—
Population health	✓	✓	✓	✓
Health IT and other investments	✓	✓	✓	✓
Workforce	✓	✓	✓	—
Outcomes and impacts	✓	✓	✓	✓
TA and other support resources	✓	—	—	—

✓ = interview topic was part of the interview protocol of the key informant type; — = interview topic was not part of the interview protocol of the key informant type; health IT = health information technology; SIM = State Innovation Model; TA = technical assistance.

Between one and three stakeholders participated in each interview. Pairs of state evaluation team staff—one interviewer and one designated note taker—conducted the key informant telephone interviews. The interview leaders used discussion guides to structure each interview session, and the note takers recorded the feedback. Furthermore, the RTI team used a digital recorder to create an audio recording of the interviews. The recordings were used to confirm the notes’ accuracy and gain clarification, as needed. Audio recordings and interview notes were securely stored, and files were encrypted prior to any necessary transfers. Interviewees were encouraged to share the feedback most relevant to their role in the SIM Initiative. To encourage candid discussion, participants were informed that their responses would remain anonymous.

1.2.4 Qualitative data analysis

For each state, the RTI team synthesized the qualitative information from the document review, state evaluation and program calls, and the key informant telephone interviews. To analyze the qualitative data from the telephone interviews, the state evaluation teams reviewed and verified their key informant interview notes, referring to audio recordings as necessary. Using NVivo 10 and 11 qualitative data analysis software, the evaluation team then grouped the key informant telephone interview data into categories, based on the key themes that described the states’ SIM Round 2 activities. The key themes were developed using the discussion topics from the interview protocols, the document reviews, and discussions with the state SIM teams.

Next, the RTI team generated reports by each theme for review and analysis. The data from the telephone interviews were combined with the information from the document review and state evaluation and program calls to produce findings for each state.

The RTI team also generated cross-state findings on activities by reviewing the findings for each state to determine commonalities. The cross-state evaluation team analyzed state documents, state evaluation and program calls, and the key informant telephone interviews data for all 11 states together using NVivo 10 and 11 qualitative data analysis software, based on key topics including progress on SIM implementation and operational activities; governance and project administration; stakeholder participation; health care delivery model reforms; payment system reforms; population health; health IT and other infrastructure investments; practice transformation and workforce development; outcomes and impacts on preponderance of care, care delivery, coordination of care, utilization, and expenditures; and TA and other support resources. The cross-state evaluation team then analyzed the information across the previous topic areas to identify the key themes for the AR2 analysis period, which comprise the overall cross-state evaluation findings presented in *Chapter 2* of this report. Thus, the findings in *Chapter 2* are not a comprehensive presentation of data collected on all topic areas, but rather represent an integrated summary of the key themes formulated from the data and the strongest supporting examples for each theme.

1.3 Quantitative Evaluation Data and Methods

This report presents quantitative data analyses to address baseline measures of population health. The RTI team used BRFSS—an annual, state-representative, telephone survey of adults in the United States—to track health status, prevalence of health conditions, health risk factors, health care access, and receipt of preventive services for adults 18 and older in Model Test states, under Round 2 of the SIM Initiative. See *Appendix M* for further details on these data.

The RTI team plans to use 2013 through 2018 BRFSS data for the analyses; for this report, BRFSS data are available only through 2015. The report presents population health trends over time in Model Test states, and comparison groups over a 3-year baseline period (pre-SIM Initiatives). Post-SIM data will be analyzed as they become available, and the data will be reported in future annual reports.

1.3.1 Identification of comparison states

Comparison groups represent the counterfactual for what would have occurred in the Round 2 Model Test states in the absence of the SIM Initiative. The RTI team used a multistage procedure in creating the comparison group for each state. First, the team identified three states that most closely resemble the Model Test state on key observable characteristics anticipated to be correlated with the SIM Initiative, by computing Euclidean distance scores. The variables used are broadly classified into seven domains: (1) Centers for Medicare & Medicaid Services

(CMS) initiatives; (2) state initiatives; (3) population characteristics; (4) health care system spending, coverage, and delivery models; (5) baseline care coordination and quality measures; (6) baseline access to care measures; and (7) baseline population health measures. However, potential comparison states may have been removed for one of two reasons: (1) lack of recent Medicaid claims or encounter data,¹⁰ and (2) poor face validity. Each eliminated state was replaced with the next state in rank order. See *Appendix L* for further details on the comparison state selection process.

Table 1-3 shows the comparison states in rank order chosen for each Round 2 Model Test state. A comparison state may be in multiple comparison groups—that is, if a state is selected as a comparison state for one Model Test state, it was not necessarily excluded from selection for another Model Test state. In all, 13 different states were selected as comparisons for the Round 2 Model Test states.

Table 1-3. Comparison states selected for each State Innovation Model Round 2 test state

Rank of comparison state	Model Test state											
	CO	CT	DE	IA	ID	MI	NY	OH	RI	TN	WA	
1	UT	PA	KY	MO	MT	PA	CA	MO	NJ	KY	AZ	
2	AZ	NJ	AZ	ND	UT	AZ	PA	KY	PA	GA	CA	
3	MT	VA	PA	SD	SD	KY	NJ	GA	KY	SC	VA	

AZ = Arizona; CA = California; CO = Colorado; CT = Connecticut; DE = Delaware; GA = Georgia; IA = Iowa; ID = Idaho; KY = Kentucky; MI = Michigan; MO = Missouri; MT = Montana; ND = North Dakota; NJ = New Jersey; NY = New York; OH = Ohio; PA = Pennsylvania; RI = Rhode Island; SC = South Carolina; SD = South Dakota; TN = Tennessee; UT = Utah; VA = Virginia; WA = Washington.

Next, we produced comparison state population balancing weights (BW_j), to create a synthetic comparison state that has equal contribution from each comparison state *j*. The formula for the state population BW is:

$$BW_j = (\text{sum of eligible population in all three comparison states} / 3) / (\text{sum of eligible population in state } j)$$

where:

$$BW = 1 \text{ if Model Test}=1$$

$$j = \text{comparison state}$$

¹⁰ This is necessary, because future annual reports will use these same comparison groups for Medicaid claims and encounter data analyses.

Finally, we created annual, person-year–specific propensity score weights for every individual within the comparison states. These weights create treatment and comparison populations whose aggregate, observable, person-level characteristics are closely comparable. These annual person-year–specific propensity score weights were derived from the predicted probability of Model Test state residence status, which was estimated via logistic regression. To achieve comparability on observable characteristics, this logistic regression model included demographic, health plan, health status, and county-level characteristics.

1.3.2 Baseline population health trends in model test and comparison states

We summarized population health trends over time, based on weighted BRFSS data for each Model Test state and its comparison group over the baseline period, 2013–2015. Details on the weighting methods, which adjust for differences in observable characteristics in the Model Test state and comparison states populations, are available in *Appendix L*. Mean outcomes are reported for each Model Test state and its comparison group. National mean outcomes also are calculated to allow for comparisons between Model Test states and the overall national trends.

Table 1-4 shows a summary of outcome measures from the BRFSS that were used in the population health analyses. Most measures are reported for all Model Test states; however, some measures are most relevant for a subset of states, given their SIM population health strategies and objectives. Details on the measures and which measures are reported for each Model Test state are available in *Appendix M*. Mean outcomes for each measure were calculated for each year of the baseline period—2013, 2014, and 2015—along with the average over the baseline period and the change in the mean between 2013 and 2015.

1.4 Limitations

Several limitations should be noted when reviewing this report. First, the SIM Initiative and its implementation are dynamic. Thus, many of the analysis results, initiative designs and progress may have changed since the end of the AR2 analysis period, April 30, 2017. This report is an interim assessment of the SIM Initiative and is the second in a series of four annual reports and a final report.

A major data source for this report is the responses that the RTI team collected during its key informant telephone interviews. Although the goal of the interviews was to obtain feedback (including viewpoints) from a variety of stakeholders, there is no guarantee that the individuals who participated in the interviews are representative of the populations in the Round 2 Model Test states. Therefore, the analysis results from the qualitative data may be skewed. Furthermore, the accuracy of the responses received from the interviewees cannot be guaranteed.

Table 1-4. Summary of outcome measures from the Behavioral Risk Factor Surveillance System

Category	Measures
Health Status	Health status is fair or poor Mental health ever not good, past 30 days Impairment due to poor physical or mental health, past 30 days
Health Conditions	Ever diagnosed with diabetes Ever diagnosed with hypertension Has a functional limitation Ever diagnosed with asthma
Risk Factors	Current smoker Current smoker, every day Former smoker Among current smokers, has not tried to quit, past year Overweight Obese No leisure time physical activity or exercise, past 30 days Limited fruit and vegetable intake, past 30 days Any driving after drinking, past 30 days
Health Care Access	Does not have a personal doctor
Preventive Services	No checkup, past year No flu vaccine, past year No 65+ flu vaccine, past year No pneumonia vaccine, ever Among adults with hypertension, no hypertension blood pressure medication No 50–75 colorectal cancer screening—no FOBT, past year No 50–75 colorectal cancer screening—no sigmoidoscopy or colonoscopy, past 5 years No 50–75 colorectal cancer screening—no sigmoidoscopy or colonoscopy, past 10 years

Source: BRFSS, collected by the CDC (2013–2015).¹¹

BRFSS = Behavioral Risk Factor Surveillance System; CDC = Centers for Disease Control and Prevention; FOBT = fecal occult blood test.

¹¹ CDC. (2013–2015). *Behavioral Risk Factor Surveillance System survey data*. Atlanta, GA: U.S. Department of Health and Human Services, CDC.

The report contains only baseline population health measures developed from BRFSS for each state and its comparison group. As with the AR1, this report does not contain any analysis of claims-based measures of care delivery, coordination of care, quality of care, utilization, and expenditures. The timing of the preparation of this report and the availability of Medicaid claims data prevented the inclusion of aforementioned claims-based outcome measures. However, as claims data become available, they will be included in future annual reports.

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2. Adoption of Value-Based Purchasing and Alternative Payment Models

The SIM awards are designed to transform healthcare through greater adoption of value-based purchasing and alternative payment models (APMs) that can incent better care and lower costs. As mentioned in Chapter 1, CMMI set a goal of achieving a preponderance (80 percent) of care—populations, expenditures, and practices—delivered through a value-based purchasing model or an APM. Value-based purchasing is a strategy used by purchasers to promote quality and value of health care services. The goal of the value-based purchasing model is to shift from pure, volume-based payment, as exemplified by fee-for-service (FFS) payments, to payments that are related to health outcomes. An APM is any approach meeting the criteria CMS established that gives added incentive payments to provide high-quality and cost-efficient care. APMs can apply to a specific clinical condition, a care episode, or a population (e.g., episodes of care [EOC] payments, population-based payments). Advanced APMs are a subset of APMs that let providers earn more rewards in exchange for taking on risk related to patient outcomes, such as shared savings programs.¹²

States have been working toward reaching the 80 percent (i.e., “preponderance of care”) benchmark through a variety of reforms and strategies. The approaches Round 2 Model Test states are taking to achieve these goals vary markedly, although there are some common themes. This chapter discusses the progress that states made during the second Annual Report (AR2) analysis period (July 1, 2016–April 30, 2017) in implementing, promoting, testing, or supporting the adoption of delivery system reforms or payment models. Movement toward APMs, where payers or providers operate under financial risk, is progressing slowly.

Most reforms are occurring within Medicaid programs and, to a much lesser degree, state employee health plans, because these systems are run by the states and states are payers. As such, implementing reforms in these plans is easier than in commercial plans and Medicare. Most states have less influence over commercial payers and plans and little or no influence over Medicare.

¹² CMS. (2017). What models are Advanced APMs? *Quality Payment Program*. Retrieved from <https://qpp.cms.gov/apms/overview>

2.1 Delivery Models and Payment Reforms

KEY INSIGHTS



- With the objective of engaging providers into their alternative payment models and value-based purchasing models, states need to balance participation requirements with participation incentives
- While payment reforms with lower financial risk are viewed favorably by providers, commercial payers in most states prefer to not align with such models. Thus, states need to find the right balance to engage both types of stakeholders.
- For several states, involving commercial payers in decision-making groups has been a slow-paced lever for commercial payer alignment; states may have to consider the limitations of voluntary approaches.

2.1.1 Progress with reforms during analysis period

Table 2-1 and *Table 2-2* summarize the delivery and payment reform models planned by the states, as of April 30, 2017. The AR2 analysis period was the first testing year for many SIM delivery system and payment reforms. Most states focused on their Medicaid populations and most used patient-centered medical homes (PCMHs) as the delivery system model. Other states pursued health homes and accountable care organizations (ACOs) as part of their delivery system models. States also are working on payment reforms, such as EOCs and shared savings arrangements.

Table 2-1. State Innovation Model Initiative Round 2 Model Test states' health care delivery system models

Delivery system model	CO	CT	DE	ID	IA	MI	NY	OH	RI	TN	WA
PCMHs	—	✓	—	✓	—	✓	✓	✓	✓	✓	—
Accountable care ^a	—	✓	—	—	✓	—	—	—	—	—	✓
BH integration	✓	✓	✓	—	—	—	—	—	✓	✓	✓
Health homes	✓	—	—	—	—	—	—	—	—	✓	—
Other models ^b	—	—	✓	—	—	—	—	—	—	—	—

^a Connecticut is implementing upside shared savings as part of its PCMH+ model. Washington is implementing upside and downside shared savings as part of Accountable Care Networks (PM3); Iowa has Medicaid ACOs.

^b Delaware's SIM Initiative includes three strategies for delivery system reform: outcome-based models, behavioral health and primary care integration, and care coordination.

✓ = delivery system model that is part of state's SIM Initiative in AR2 analysis period; — = delivery system model is not part of state's SIM Initiative in AR2 analysis period; ACO = accountable care organization; AR = Annual Report; BH = behavioral health; CO = Colorado; CT = Connecticut; DE = Delaware; IA = Iowa; ID = Idaho; MI = Michigan; NY = New York; OH = Ohio; PCMH = patient-centered medical home; PCMH+ = Person Centered Medical Home Plus; PM = payment model; RI = Rhode Island; SIM = State Innovation Model; TN = Tennessee; WA = Washington.

Table 2-2. State Innovation Model Initiative Round 2 Model Test states’ health care payment reform models

Payment reform models	CO	CT	DE	ID	IA	MI	NY	OH	RI	TN	WA
EOC bundles (shared savings or losses)	—	—	—	—	—	—	—	✓	—	✓	—
Foundational support (PMPM) tied to performance or activities	—	✓	—	✓	—	✓	✓	✓	✓	✓	✓
Upside shared savings	—	✓	—	—	—	—	—	✓	—	✓	✓
Upside and downside shared savings	—	—	—	—	—	—	—	✓	✓	—	✓
Allows payers to choose the payment models	✓	—	✓	—	✓	—	✓	—	✓	—	✓

Note: Connecticut is implementing upside shared savings as part of its PCMH+ model. Idaho’s Medicaid PMPM payments are tiered to recognize provider improvements to capability as reflected in PCMH infrastructure development. Iowa allows Medicaid MCOs to have choices in the MCOs’ designs of payment reform models. Michigan’s value-based models are being implemented in its Medicaid population. Ohio is implementing upside shared saving as part of its Ohio CPC. The state is implementing upside and downside shared savings as part of its EOC model. Rhode Island’s PMPM payments in its PCMH Kids model are tied to performance. Rhode Island uses state authority to mandate payer support of PCMHs and to engage in APMs with shared savings or downside risk. Tennessee makes payments to high-volume PCMHs, low-volume PCMHs, and Health Links using upside shared savings. Health Link payments are tied to activities. Tennessee is adopting different value-based payment models for long-term services and supports, including quality-based retrospective rate adjustment for nursing homes and per diem quality-based bonus payments for enhanced respiratory care providers. Washington’s PMPM payments in PM1 and PM2 (planned) are tied to performance. The state is implementing upside shared savings as part of its PM1. The state is implementing upside and downside shared savings as part of Accountable Care Networks (PM3). The state also is allowing payers to have choices in the payers’ designs of payment reform models for PM4.

✓ = payment reform model continued as part of state’s SIM Initiative in AR2 analysis period from AR1 analysis period; — = payment reform model is not part of state’s SIM Initiative in AR2 analysis period; APM = alternative payment model; AR = Annual Report; CO = Colorado; CPC = Comprehensive Primary Care; CT = Connecticut; DE = Delaware; EOC = episode of care; IA = Iowa; ID = Idaho; MCO = managed care organization; MI = Michigan; NY = New York; OH = Ohio; PCMH = patient-centered medical home; PCMH+ = Person Centered Medical Home Plus; PM = payment model; PMPM = per member per month; RI = Rhode Island; TN = Tennessee; WA = Washington.

Patient-centered medical homes. PCMHs are the most common delivery model used within Medicaid programs to implement APMs and to further preponderance of care goals. PCMHs (sometimes also referred to as *medical homes*, or *Advanced Primary Care* [APC]) is a model for structuring primary care. The medical home is accountable for coordinating each patient’s physical and mental health care needs, including prevention and wellness, acute care, and chronic care through a team of care providers.¹³ Seven of the 11 states (Connecticut, Idaho,

¹³ U.S. Department of Health & Human Services, Agency for Healthcare Research and Quality. (n.d.). *Defining the PCMH*. Retrieved from <https://pcmh.ahrq.gov/page/defining-pcmh>

Michigan, New York, Ohio, Rhode Island, and Tennessee) are focusing on PCMHs as part of their SIM Initiatives.

Medicaid Health Homes. Health Homes is an optional Medicaid state plan benefit composed of six Health Homes services typically associated with the PCMH model: comprehensive case management, care coordination, health promotion, comprehensive transitional care/follow-up, patient and family support, and referral to community and social support services.¹⁴ Health Homes is available to Medicaid enrollees who meet certain eligibility criteria based on prevalence of chronic conditions and may be targeted to individuals with a serious and persistent mental health condition. Tennessee created Health Link as a Health Home to better integrate behavioral and physical health treatment among Medicaid providers.

Episodes of care. Another payment innovation is EOCs, under which payments are made for a set of services that occur over time or across settings.¹⁵ This payment model can be applied at the setting level, such as a hospital stay; the procedure level, encompassing a defined surgical procedure; or a clinical condition.¹⁶ Bundling payments for EOCs shows promise for reducing costs and improving the quality of care.¹⁷ Episode-based payment has the potential for broad impact on utilization and expenditures of specialty care, because the EOCs encompass a wide scope of high-cost conditions across the lifespan, such as perinatal care and chronic obstructive pulmonary disease.

In the AR2 analysis period, the Ohio and Tennessee SIM Initiatives implemented EOC payment models in their Medicaid programs; CMS approved Ohio's State Plan Amendment for episode-based payments in January 2017. Both states have had significant engagement from many specialists throughout their states in selecting and defining their EOCs. Stakeholders reported that most providers need better orientation to EOCs, and practices need more experience with using feedback reports to leverage meaningful changes in performance.

Behavioral health integration. Persons with both physical and mental health conditions need services from different types of providers. Colorado, Connecticut, Delaware, Rhode Island,

¹⁴ U.S. Department of Health & Human Services, CMS. (n.d.). *Health Homes*. Retrieved March 8, 2018, from <https://www.medicaid.gov/medicaid/ltss/health-homes/index.html>

¹⁵ Ohio's EOC program places little risk on participating providers as it is an incentive or disincentive payment system that is added on top of and retrospective to normal FFS payments for selected providers (no bundled payment is made). High-cost/low-quality Principal Accountable Providers (PAPs) receive financial penalties; low-cost/high-quality PAPs receive financial incentives. Some health plans in Ohio are concerned that practices will withdraw from Medicaid if the health plans need to recoup money from the practices if their costs exceed the EOC payment amounts. Tennessee's models are also retrospective, with financial rewards and penalties.

¹⁶ Health Care Payment Learning & Action Network, with [Clinical Episode Payment \(CEP\) Work Group](#). (2016, August 1). *Accelerating and aligning clinical episode payment models* (p. 6). Available at <https://hcp-lan.org/groups/cep/clinical-episode-payment/>

¹⁷ CMS. (2017). *Bundled Payments for Care Improvement (BPCI) Initiative: General information*. Retrieved from <https://innovation.cms.gov/initiatives/Bundled-Payments/index.html>

Tennessee, and Washington are working to better integrate behavioral health into care delivery to better coordinate care for these population.

Other models. Connecticut, Iowa, and Washington moved forward with their accountable care models in the AR2 analysis period. Michigan decided to not pursue its accountable care model in Medicaid, because it overlapped with what the Medicaid health plans were already pursuing. Delaware's SIM Initiative includes three strategies for delivery system reform: outcome-based models, behavioral health and primary care integration, and care coordination.

2.1.2 Lessons learned

Participation requirements and incentives affect provider participation. In states and models where participation was not required, the outcomes of recruiting practices to participate in SIM models varied across the states and depended on the level of difficulty of the participation requirements and on the incentives offered. For example, in Connecticut, stakeholders noted that the rigorous National Committee for Quality Assurance (NCQA) accreditation standards deterred some practices from the Person Centered Medical Home Plus (PCMH+). In Idaho, practices were discouraged from becoming a virtual PCMH, because they could not identify an ongoing source of funding to pay for telehealth services or the services provided by the required community health workers or community health emergency medical services.¹⁸

SIM funds are prohibited from being used to provide direct services to patients, but can be used for incentives such as technical assistance (TA) and practice transformation. Such incentives offered by Michigan and Tennessee helped these states to achieve or exceed recruitment goals during the AR2 analysis period for payment and delivery reforms. In addition to building on a previous state demonstration called Michigan Primary Care Transformation, Michigan's state Medicaid program provides two per member per month (PMPM) payments to practices, one to support practice transformation and another to provide care coordination services. The support for care coordination PMPM payment is provided by the state's Medicaid program and not through SIM funds. Tennessee has higher or additional payments, through a care management fee paid by the state from non-SIM funds, to incent providers to become PCMH or Health Link providers. As other states consider similar initiatives to ensure participation by providers, the states will need to carefully consider how to optimally balance incentives and requirements.

¹⁸ A virtual PCMH is a PCMH that has incorporated community health workers, community health emergency medical services, or telehealth into its operations.

Lower financial risk often encourages provider participation, but may discourage payer satisfaction and/or alignment. APMs can be categorized on a continuum ranging from incorporating minimal financial risk or rewards to incorporating higher amounts of financial risks and rewards. **Table 2-3** summarizes the payment features of the states’ planned payment reform models. The most common payment structure is FFS with a PMPM payment that places little or no risk on providers.^{19,20} The SIM payment models are consistent in this use of PMPMs with the payment models that have been used to support PCMHs across several demonstrations; a 2010 survey found that the majority of PCMH demonstrations simply added PMPM fixed payments or bonus performance payments to traditional FFS.²¹ Nine states have models that fall into this category. In Michigan, practices receive two PMPMs. The care coordination PMPM helps to reduce the exposure to risk by practices by varying the amount between \$3 and \$8 based on the intensity of the patient’s care.²² As of April 30, 2017, in Washington, 13 Federally Qualified Health Centers and 1 Rural Health Clinic²³ said they will test a PMPM payment model for services provided to Medicaid enrollees. The PMPM payments were sufficient to mitigate or eliminate concerns about financial risk.

Models with downside risk exposed providers to the most financial risk and were the least popular. In Tennessee, mandatory provider participation in the commercial EOC reform was delayed until 2018 to address provider concerns about downside risks in the commercial market, where significant payment amounts are at stake compared to their Medicaid populations. As part of Washington’s Payment Model 3, the Accountable Care Program, two provider networks became available to public employee benefit enrollees. These networks are large enough to accept the potential savings and tolerate the potential losses associated with the program. However, further expansion of the model was deterred by an unwillingness of other payers to accept the associated downside risk.

¹⁹ SIM funds are not being used for the PMPM payments.

²⁰ These are “Foundational Payments for Infrastructure & Operations (e.g., care coordination fees and payments for health information technology investments)” as defined by the Health Care Payment Learning & Action Network framework. Source: Health Care Payment Learning & Action Network, with [CEP Work Group](#). (2016, August 1). *Accelerating and aligning clinical episode payment models* (p. 6). Available at <https://hcp-lan.org/groups/cep/clinical-episode-payment/>

²¹ Bitton, A., Martin, C., & Landon, B. E. (2010, June). A nationwide survey of patient centered medical home demonstration projects. *Journal of General Internal Medicine*, 25(6), 584–592. doi: 10.1007/s11606-010-1262-8

²² While the care coordination PMPM payment is not funded through the SIM Initiative, the payment is a feature of the SIM-supported delivery model. This feature impacts the risk faced by providers.

²³ The term “Rural Health Clinic” (note capitalization) is used in this report when referring to official designations for Medicare reimbursement. When used in a general sense, “rural health clinic” (note lowercasing) is used. Source: U.S. Department of Health and Human Services, CMS. (2017, January). *Rural Health Clinic*. ICN 006398. Available at <https://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/downloads/RuralHlthClinfctsht.pdf>

Table 2-3. Risk-bearing features of payment models pursued by State Innovation Model Initiative Round 2 Model Test states

Payment Feature	CO	CT	DE	ID	IA	MI	NY	OH	RI	TN	WA
Foundational payments (PMPM) support tied to activities or performance	—	✓	✓	✓	—	✓	✓	✓	✓	✓	✓
Upside shared savings	—	✓	—	—	—	—	—	✓	—	✓	✓
Upside and downside shared savings	—	—	—	—	—	—	—	✓	✓	—	✓

Note: Connecticut is implementing upside shared savings as part of its PCMH+ model. Idaho's Medicaid PMPM payments are tied to whether practices perform certain activities. Iowa allows Medicaid MCOs to have choices in the MCOs' designs of payment reform models. Michigan's value-based models are being implemented in its Medicaid population. Michigan removed its accountable care component from the SIM Initiative in the AR2 analysis period. Ohio is implementing upside shared saving as part of its Ohio CPC. The state is implementing upside and downside shared savings as part of its EOC model. Rhode Island's PMPM payments in its PCMH Kids model are tied to performance. The state is using state authority to mandate payer support of PCMHs and to engage in APMs with shared savings or downside risk. Tennessee makes payments to high-volume PCMHs, low-volume PCMHs, and Health Links using upside shared savings. Health Link payments are tied to activities. Washington's PMPM payments in PM1 and PM2 (planned) are tied to performance. The state is implementing upside shared savings as part of its PM1 and PM2. The state is implementing upside and downside shared savings as part of Accountable Care Networks (PM3).

✓ = risk bearing feature is part of state's payment reform model during AR2 analysis period; — = risk bearing feature is not part of state's payment reform model in AR2 analysis period; APM = alternative payment model; AR = Annual Report. CO = Colorado; CPC = Comprehensive Primary Care; CT = Connecticut; DE = Delaware; EOC = episode of care; IA = Iowa; ID = Idaho; MCO = managed care organization; MI = Michigan; NY = New York; OH = Ohio; PCMH = patient-centered medical home; PCMH+ = Person Centered Medical Home Plus; PM = payment model; PMPM = per member per month; RI = Rhode Island; TN = Tennessee; WA = Washington.

Some payers expressed the desire to move to more risk-based contracts with both upside and downside financial consequences for providers. For example, payers in Rhode Island shared that they felt that PCMHs should graduate from PMPM payments to risk-based payments. Payers in New York had similar opinions. New York proposed that payers offer supplemental payments to practices that adopt its APC model of care—practices that adopt NCQA's PCMH model already qualify for such payments from Medicaid—but as of April 2017, no commercial payers had finalized contracts with providers that included supplemental payments for APC practices. Some stakeholders believed the lack of contracts is because of payers' preference for performance-based payments, in addition to the lack of any strong policy levers incenting or compelling payers to participate in New York.

Purchasing power can be used as a lever. States are using their power as a purchaser (Medicaid and state employee plans) to help them toward reaching a preponderance of care. Iowa, New York, Ohio, Rhode Island, Tennessee, and Washington require that contracts with Medicaid managed care organizations (MCOs) include adoption of APMs or value-based

purchasing models. Some states are adding more value-based purchasing to their MCO contracts, and encouraging MCOs to contract with providers using APMs and value-based purchasing models. For example, Iowa’s Medicaid MCOs are required to have 40 percent of their covered lives in a qualified ACO program (i.e., using a value-based purchasing arrangement) by 2018. The Ohio Department of Medicaid requires all Medicaid health plans to pay its providers according to the EOCs designed by the state, and pay PCMHs according to rules established by the Ohio Comprehensive Primary Care (CPC) program. Tennessee mandated payer participation in EOC, PCMH, and Health Link through its contracts with its three MCOs. Rhode Island’s Medicaid managed care contracts require that health plans demonstrate involvement with SIM delivery transformation goals, contract with PCMHs, and adopt value-based purchasing models. Michigan, while not mandating participation, has built-in financial incentives to encourage the development of APMs by its Medicaid health plans.

Four states (Delaware, Connecticut, Ohio, and Tennessee) incorporated SIM models into state employee health plans, or intend do so in the future, through their contracts and negotiations with health plans. States’ dual roles as employers and payers provide them with leverage to implement new APMs through their benefit plans. Adopting SIM APMs in state employee plans can make a substantial contribution to achieving preponderance of care objectives, because states are large, if not the largest, employers. The plans often also include local government employees, as well as family members of enrollees. Delaware required state employee health plans to include value-based purchasing in their contracts with providers starting on July 1, 2017. About one eighth of the population (over 120,000 employees) have these plans as options. Connecticut incorporated value-based purchasing into state employee health plans outside of its SIM award during the AR2 analysis period. State employee plans added new value-based purchasing products to cover 200,000 lives by April 30, 2017.

Ohio and Tennessee are preparing to spread their EOC models to state employee health plans after addressing stakeholder concerns and getting a better understanding of the financial risks to providers. In Tennessee, providers were concerned that payments will be lower than they have been through the current system, and their objections to EOCs caused Tennessee to delay mandatory participation. The state now is scheduled to require participation in the 2018 contract year. Ohio started exploring whether it would be possible to report on, but not necessarily pay on, EOCs in its state employee health plans. Ohio requires participating state employee health plans to participate in the SIM Initiative and to offer Ohio CPC to its providers. Stakeholders said that administrative and data systems were not yet ready to support EOCs, however.

2.1.3 Commercial alignment with State Innovation Model preponderance of care goals

States other than Rhode Island were limited in their abilities to have commercial payers use the same, or similar, APMs used in the SIM Initiative (i.e., to “align” with the SIM

Initiative). Alignment across payers may facilitate provider acceptance of APMs by reducing their needs to meet numerous and diverse contractual requirements. However, commercial carriers are resistant to aligning their APM models with those used in Medicaid, because they prefer other approaches or are not anticipating a return on investment from the APMs being promoted by the states. Commercial payers said they prefer models that put at least some risk or rewards on providers, because such models would offer stronger incentives to manage costs. In addition, larger insurers often have their own widely used, preferred models and do not want to change their arrangements with providers.

Despite the obstacles, states reported some success with commercial payers aligning with or at least participating in SIM plans for APMs and value-based purchasing models. Idaho reported that the four largest commercial payers have committed to APMs and have value-based purchasing models with some providers in their networks. However, the degree of alignment with SIM APM models varies across insurers. Two commercial payers in Idaho have a payment model that supports and aligns with the PCMH model for delivery of care. In another example of alignment, payers in Colorado agreed to participate in payment reform with SIM practices, but did not adopt a uniform payment structure. The state allowed payers the flexibility to negotiate their own payment arrangements with the practices. In Connecticut, outside of the SIM Initiative, three of the five commercial payers developed accountable payment models with Advanced Networks, and one also launched a value-based purchasing product for employers with more than 50 employees.

Current levers not working quickly. States' chief lever for achieving or attempting to achieve adoption of APMs in commercial health plans was convening (e.g., collaboratives, work groups), which involved education and participation by payers in decision-making. Thus far, commercial payers participate in discussions, but are not substantially changing their own models to align with the SIM Initiative. While Colorado's multi-payer collaborative succeeded in spreading value-based purchasing within SIM-participating practices, this success was not seen by most other states by the end of the AR2 analysis period. The Delaware Center for Health Innovation promotes value-based purchasing adoption by holding meetings with commercial payers at which the payers share enrollment data for value-based purchasing models. However, stakeholders reported that Delaware needs to leverage its authority to require or incent commercial payers to adopt value-based models. Iowa recognized that despite its Alignment and Action Team, which includes payers, APM adoption was moving slowly and created a Healthcare Innovation & Visioning Roundtable to identify and prioritize elements necessary to implement risk-based payment reforms in the state.

A voluntary approach to commercial alignment may have limited reach. Approximately half of all individuals in the Round 2 Model Test states receive their insurance from commercial carriers. Thus, the adoption of APMs by commercial payers is likely necessary for states to reach

their goals of having 80 percent of providers participating in APMs. However, most states do not exercise the regulatory authority to require commercial payers to use APMs or value-based purchasing models. Rhode Island is the only state that requires participation in APM for all insurers licensed in the state. The Rhode Island Health Insurance Commissioner—which is also one of the two lead agencies for Rhode Island’s SIM Award (with the Executive Office of Health and Human Services)—established an Alternative Payment Methodology Plan that requires health insurers to have at least 40 percent of insured medical payments made through APMs in 2017, and 50 percent in 2018. These requirements are not directed by Rhode Island’s SIM office but are foundational to Rhode Island’s SIM goals. Tennessee delayed the mandated participation in commercial EOC reforms. No other states are planning to require commercial payers to adopt prescribed payment models.

State Innovation Model activities may encourage commercial payers. States’ SIM activities and engagement may have served as a catalyst for commercial payers to adopt APMs or adjust existing APMs to align with SIM models. The payment innovations that commercial payers may use in their contracts may not have existed without the SIM Initiative. For example, Ohio included commercial insurers as active parties in its SIM steering committees to shape and encourage participation in SIM APMs. During the SIM design phase, the four largest commercial payers in Ohio committed to align with the PCMH Charter. However, only a single payer linked only one EOC to payment. Connecticut’s value-based insurance design consultant has been working closely with the Program Management Office and Office of the State Comptroller in engaging business councils, chambers of commerce, union leaders, brokers, and payers in discussions.

Moreover, the health information technology (health IT) and workforce infrastructure investments that states are making through the SIM Initiative (discussed in Chapter 4) may make it more feasible for providers to adopt commercial payer value-based purchasing and APM initiatives. In Colorado, six commercial payers that already were participating in Comprehensive Primary Care Plus (CPC+) agreed to work alongside Medicaid to shift from paying SIM-participating primary care practices on an FFS basis to paying for value. Colorado’s participating SIM payers signed a memorandum of understanding with the Colorado SIM office, committing payers to providing financial support for participating practices through value-based purchasing, sharing claims-based performance data with primary care practices, aligning quality measures, and defining payer expectations for practice success in meeting SIM practice transformation milestones.²⁴ Colorado has achieved commercial payer voluntary involvement, in part because the state leveraged pre-existing relationships between payers established through CPC+ and

²⁴ Memorandum of Understanding Between the Colorado SIM Office and the Colorado Multi-payer Collaborative In Support of the SIM Initiative.

because the state allowed payers the flexibility to implement their own value-based purchasing models with their SIM-participating primary care practices.

2.1.4 Medicare payment reforms

Changes in payment and delivery system reform by some Round 2 Model Test states in the AR2 analysis period occurred in conjunction with, and was influenced by, the CMMI CPC+ initiative. Five of the 14 CPC+ regions announced as of April 30, 2017, are the Model Test states of Colorado, Michigan, Ohio, Rhode Island, and Tennessee, and a sixth is the North Hudson-Capital Region of New York.²⁵ Colorado, Michigan, and Ohio are aligning their SIM initiatives with CPC+. Colorado aligned quality measure reporting with CPC+ and Medicare's Quality Payment Program. Michigan included 12 of the 14 electronic clinical quality measures used in CPC+. Ohio designed its SIM PCMH eligibility guidelines and quality measures to be as consistent with CPC+ as possible but not fully consistent. Ohio also invited CPC+ participating practices to join the state's Medicaid primary care medical home initiative. The targeted CPC+ enrollment effort for Ohio CPC did not conclude until May 2017. Ohio added 18 practices to the 23 that had already enrolled during the 2016 open enrollment period, for a total of 41.

In contrast, New York did not align its SIM PCMH initiative with CPC+, even though the same set of primary care practices are eligible for both initiatives. CMS advised New York SIM staff, as they do all states, that practices cannot receive federal funds from multiple sources to pay for the same services; in New York's case, this is PCMH-focused TA. As a result of this guidance—and because New York had not finalized its plans for providing TA to APC practices at the start of its test period on February 1, 2016—the state decided to not allow CPC+ practices in New York to receive APC payments from Medicaid or other non-CPC+ payers. Thus, practices in its CPC+ regions must choose between adopting the state's APC care delivery model or CPC+. This means that New York's APC effort cannot be an all-payer effort in any area where CPC+ is being tested, and practices must instead pick and choose the patients to whom they offer enhanced care management and care coordination. Stakeholders reported that implementation of CPC+ was a motivating factor for practices in the CPC+ area to abandon their planned APC transformation and adopt the CPC+ model instead. Thus, New York is considering ways to allow practices to participate in both its APC model and CPC+ while adhering to CMS's rules.

Tennessee also did not prioritize alignment. In its application to CMS for CPC+, Tennessee included its reasons for not electing to align its SIM Initiative fully with the CPC+ model; the state was already committed to the existing PCMH and Health Link framework. CMS

²⁵ Round 2 CPC+ commences January 1, 2018, and will include practices in four regions, including the Greater Buffalo Region of New York.

granted the state permission to not pursue measure alignment. Instead, Tennessee plans for the CPC+ measures to complement the PCMH measure framework.

Some state officials view Medicare’s adoption of alternative payment methodologies, and alignment of its incentives with SIM-related payment models, as essential to moving delivery systems away from FFS for two reasons. First, when Medicare makes a significant change in payment policy, other insurers frequently have followed. Second, Medicare is an indispensable business partner, if not the dominant payer for many providers. Where Medicaid payment reforms supported by the SIM Initiative, alone may not be strong enough to reform delivery systems, alignment of Medicare with Medicaid could catalyze delivery reform. Medicare and Medicaid together comprise as much as half of all payments for some hospital systems and physician practices. Respondents in Colorado and Iowa, for example, described federal initiatives of the Medicare Access and Children’s Health Insurance Program (CHIP) Reauthorization Act of 2015 and CPC+ as levers to transformation because these initiatives send strong signals to providers and payers that change is imminent.

2.2 Progress Toward a Preponderance of Care in Value-Based Purchasing and Alternative Payment Models

KEY INSIGHTS

80%

- States were generally positive about their ability to meet the goal by the end of the SIM Initiative, while expressing some uncertainty around measurement and data.
- Variations in state insurance markets mark different “starting points,” advantages, and challenges.
- Potential obstacles for rural and smaller providers to participate are identified.

2.2.1 States optimistic about their progress

Officials and stakeholders in most states were optimistic that their state would reach the 80 percent preponderance of care goal by the end of the Model Test award period. In Colorado, Delaware, Michigan, Ohio, Rhode Island, and Washington, stakeholders were generally positive that the goal would be met. However, in Connecticut, Idaho, Iowa, New York, and Tennessee, respondents were not as consistently confident that their state would be able to achieve a preponderance of care by the end of the SIM Initiative.

In many states, stakeholder confidence in achieving the goal was limited to a subset of their total state population or measures of preponderance. For example, one Connecticut official expressed confidence that they could achieve a preponderance in the Medicaid population, but was less certain about commercial beneficiaries. Additionally, a Delaware official thought that

80 percent of primary care providers (PCPs) could be practicing under an APM or a value-based purchasing model at the end of the Model Test period but was less certain that Delaware could reach 80 percent of all care delivered (percent of population, all providers, or expenditures) in the state. Similarly, one Idaho respondent believed 80 percent of providers would start receiving value-based payments, but not 80 percent of all expenditures.

2.2.2 Defining and measuring preponderance of care

While all states knew that a key goal was reaching a preponderance of care (80 percent) in an APM or value-based purchasing, many state officials were unsure how to define it. Stakeholders from six states (Colorado, Connecticut, Delaware, Idaho, Rhode Island, and Washington) were uncertain about the specifications to use for defining and calculating preponderance of care (i.e., what counts?). Stakeholders in Connecticut and Washington were not sure whether all payment models among commercial payers would be considered APMs according to the Learning and Action Network (LAN) category definitions. A state official from another state commented, “I think it all depends on how you define that metric.” The official went on to say, “If you broadly define it [APM], then I think it’s [preponderance of care] do-able.” Furthermore, the official did not know whether all three measures of preponderance of care (i.e., state population, provider participation, and payments) had to be met and, if not, how to prioritize the three measures.

A lack of detailed data, particularly from commercial payers, to measure preponderance of care was an issue among many states (Colorado, Connecticut, Ohio, and Washington). Commercial payers often consider the details of value-based purchasing contracts to be proprietary, and they do not have incentives to disclose or discuss the details of their payment policies openly. A Connecticut stakeholder mentioned that Connecticut also does not have access to data to measure the state’s progress toward the preponderance of care goal. Ohio and Colorado both indicated that, although commercial payers are beginning to adopt new models, they do not provide specifications of the models to the state. Therefore, the states do not currently have data on the number of participants, nor could they assess whether the new payment models meet criteria for counting toward the 80 percent preponderance of care goal. During the AR2 analysis period, Colorado was working to address the lack of payment model specifics reported by payers by planning to have them share with the state which of the four Health Care Payment and LAN framework categories their payment models align.²⁶ This approach worked for Idaho where reports were received by all but one commercial payer. Colorado also is having one-on-one calls with each payer to troubleshoot challenges the payers may have reporting the data. To ensure accurate data

“If you ask me today what the progress is in that area, we couldn’t give you an estimate. We don’t have access to that type of data.”

—Connecticut state official

²⁶ Category 1 = FFS with no link to quality and value; Category 2 = FFS with a link to quality and value; Category 3 = shared savings or risk built upon an FFS platform; and Category 4 = population-based payment.

on SIM participation among Medicaid participants in Michigan, all 11 health plans are contractually obligated to collect and report baseline APM data.

The challenge of measuring progress toward a preponderance of care within each state may be reflected in the metrics that they submitted. In addition to the above challenges, states were collecting and reporting these data for the first time during this analysis period. Thus, the quality of the metrics may also reflect states' inexperience with the processes. **Tables 2-4 through 2-9** show the participation metrics reported as of April 30, 2017, from states that were intended to measure their progress toward preponderance of care among different populations, payers, and providers. Many states are not yet reporting on all metrics. For example, even though Michigan requires its Medicaid health plans to report baseline APM data, Michigan did not report any data beyond its SIM models. Regarding commercial population participation in the SIM value-based purchasing models and APMs (**Table 2-6**), only one (Rhode Island) of the 11 Round 2 Model Test states reported this data. Rhode Island has a well-established reporting template for commercial payers that has effectively allowed them to gather these data and is working to develop a comparable template for Medicaid to use. Most of the states are already reporting on the number of physicians and providers that are participating, and approximately half are reporting Medicaid population participation.

Table 2-4 reflects the participation in SIM models among the Medicaid population. Reported participation in any SIM model among Medicaid beneficiaries ranges from 5.7 percent in Washington to 100 percent in Tennessee (in which all Medicaid beneficiaries are eligible for EOCs). Statewide population participation (i.e., residents across all payers) in SIM models among states that reported these metrics (**Table 2-5**), ranges from 0.8 percent in New York to 40.1 percent in Delaware. Although commercial population data were not yet submitted by states other than Rhode Island, **Table 2-6** represents the SIM models that have commercial payer participation (as noted by dashes). Five states reported information regarding the number of beneficiaries and percentage of payments in relation to the four LAN payment categories (**Table 2-7**).²⁷ Participation in value-based purchasing models or APMs among providers and practices are shown in **Table 2-8** and **Table 2-9**, respectively. Many states reported provider counts, but had not yet defined or provided a denominator in their report. Therefore, comparisons among all states was not possible. Rhode Island reported a large percentage of network primary care physicians participating in any APM or value-based purchasing model (71.3 percent). Among SIM models, only Delaware reported that 60 percent of targeted providers were participating. Delaware also reported the highest percentage (over 100 percent) of targeted practices participating in SIM models, given that the state exceeded their early target of six practices for participation in SIM models. For all tables, the source of the denominators, when available, is provided in the footnote.

²⁷ CMS. (2017). *Health care payment learning and action network*. Retrieved from <https://innovation.cms.gov/initiatives/Health-Care-Payment-Learning-and-Action-Network/>

Table 2-4. Medicaid populations reached by a value-based purchasing or alternative payment model in Round 2 Model Test states, as of most recent reporting quarter

State	SIM models						Landscape	
	Primary care PCMHs	Health homes for medically complex patients	ACOs	Behavioral Health Integrated care models	EOC payment models	Other	SIM-wide (total)	Statewide (total)
Colorado				-			—	—
Connecticut	—		127,000 (17.9%)			—	—	—
Delaware	—					—	—	—
Idaho	—					—	—	—
Iowa			—				—	—
Michigan	346,665 (16%)						346,665 (16%)	—
New York	—						—	—
Ohio	0 0%				276,527 (11.4%)		276,527 (11.4%)	276,527 (11.4%)
Rhode Island	—						—	—
Tennessee	—	—			66,022 (4.4%)	—	1,490,000 (100%)	—
Washington				112,224 (5.7%)			112,224 (5.7%)	112,224 (5.7%)

Source: Most recently available SIM Quarterly Progress Reports to CMMI in AY2: third quarter 2016 (CO, RI, TN), fourth quarter 2016 (WA, NY, MI, DE, OH, ID), fifth quarter 2017 (IA), and first quarter 2017 (CT). CO's report refers to the calendar year quarter.

Note: Denominators for CO, CT, DE, ID, IA MI, NY, and RI are provided by the Henry J. Kaiser Family Foundation State Health Facts (<https://www.kff.org/statedata/>, accessed December 2, 2017).

Note: Colorado data are current as of third quarter 2016; the denominator (855,800) is the 2016 Medicaid population. Connecticut data are current as of the end of 2016; the denominator (711,200) is the Medicaid population. Delaware data are current as of fourth quarter 2016; the denominator (211,900) is the 2016 Medicaid population. Idaho data are current as of fourth quarter 2016; the denominator (293,500) is the 2016 Medicaid population. The Virtual PCMH model is categorized as "other" for Idaho. Iowa data are current as of first quarter 2016; the denominator (571,300) is the 2016 Medicaid population. Michigan data are current as of fourth quarter 2016; the denominator (2,168,900) is the 2016 Medicaid population. New York data are current as of third quarter 2016; the denominator (4,621,700) is the 2016 Medicaid population. Ohio data are current as of second quarter 2016; the denominator (2,427,702) is the total Medicaid-enrolled population minus beneficiaries with eligibility for both Medicare and Medicaid and certain other targeted populations without full Medicaid benefits. Rhode Island data are current as of third quarter 2016; the denominator (214,100) is the 2016 Medicaid population. Primary care PCMHs (Child) are categorized as "other" for Rhode Island. Tennessee data are current as of the preimplementation year, 2015; the denominator (1,490,000) is the number of Medicaid beneficiaries. LTSS is categorized as "other" for Tennessee. The state reports that 66,022 beneficiaries had an episode in the baseline period. However, all 1,490,000 Medicaid beneficiaries are eligible for an episode, if they have a diagnosis or event that triggers an episode. Consequently, 100% of the Medicaid population is reached by a value-based purchasing model. Washington data are current as of fourth quarter 2016; the denominator is the total Washington State Medicaid population targeted for inclusion in fully integrated managed care (1,985,873).

— = relevant data were not provided in data source; shaded cells = the field is not applicable for that state; ACO = accountable care organization; APM = alternative payment model; AY = Award Year; CMMI = Center for Medicare and Medicaid Innovation; CO = Colorado; CT = Connecticut; DE = Delaware; EOC = episode of care; IA = Iowa; ID = Idaho; LTSS = long-term services and supports; MI = Michigan; NY = New York; PCMH = patient-centered medical home; RI = Rhode Island; SIM = State Innovation Model; TN = Tennessee; WA = Washington.

Table 2-5. Statewide populations reached by a value-based purchasing or alternative payment model in Round 2 Model Test states, as of most recent reporting quarter

State	SIM models						SIM-wide (total)	Landscape Statewide (total)
	Primary care PCMHs	Health homes for medically complex patients	ACOs	Behavioral Health Integrated care models	EOC payment models	Other		
Colorado				—			—	—
Connecticut	—		—			—	—	—
Delaware	—					—	143,210 (40.1%)	143,210 (40.1%)
Idaho	0 ^e 0%					—	—	—
Iowa			—				—	—
Michigan	—						—	—
New York	100,000 (0.8%)						100,000 (0.8%)	—
Ohio	—				—		—	—
Rhode Island	—						—	—
Tennessee	—	—			66,022 (1%)	—	1,490,000 (22.6%)	—
Washington			47,102 (28.3%)	112,224 (5.7%)			159,326 (34.0%)	159,326 (34.0%)

Source: Most recently available SIM Quarterly Progress Reports to CMMI in Award Year 2: third quarter 2016 (CO, RI, TN), fourth quarter 2016 (WA, NY, MI, DE, OH, ID), fifth quarter 2017 (IA), and first quarter 2017 (CT). CO's report refers to the calendar year quarter.

Note: Denominators for CT, IA, MI, OH, and RI are provided by the Henry J. Kaiser Family Foundation State Health Facts (<https://www.kff.org/statedata/>, accessed on December 2, 2017).

Note: Colorado data are current as of third quarter 2016. The denominator is defined as the total number of beneficiaries targeted for inclusion in the SIM practice transformation cohort (3,040,000). Connecticut data are current as of the end of 2016; the denominator (3,570,300) is the 2016 state population. Delaware data are current as of fourth quarter 2016; the denominator (356,800) is the number of beneficiaries targeted for inclusion in a category 2 or category 3 payment model. Idaho data are current as of fourth quarter 2016; the denominator (275,000) is the number of beneficiaries enrolled with State Health Care Innovation Plan-participating payers. The Virtual PCMH model is categorized as "other" for Idaho. Although the metrics submitted reported "0," the first SIM PCMH cohort began in February 2016, and so this is likely missing instead of a true "0." Iowa data are current as of first quarter 2016; the denominator (3,106,200) is the 2016 state population. Michigan data are current as of fourth quarter 2016; the denominator (9,893,200) is the 2016 state population. New York data are current as of third quarter 2016, and reflect the number of people served by practices that receive PCMH-related payments through a multi-payer effort that began before the SIM Initiative. Ohio data are current as of second quarter 2016; the denominator (11,468,700) is the 2016 state population. Rhode Island data are current as of third quarter 2016; the denominator (1,054,300) is the 2016 state population. Tennessee data are current as of the preimplementation year, 2015; the denominator (6,600,299) is defined as the total state population. LTSS are categorized as "other" for Tennessee. Washington data are current as of fourth quarter 2016; the denominators are the total number of Public Employee Benefit Board members eligible for Public Employee Benefit Accountable Care Plans in Washington (membership in 5-county populations—King, Snohomish, Thurston, Pierce, and Clark) (166,175) and the total Washington State Medicaid population targeted for inclusion in fully integrated managed care (1,1985,873).

— = relevant data were not provided in data source; shaded cells = the field is not applicable for that state; ACO = accountable care organization; APM = alternative payment model; AY = Award Year; CMMI = Center for Medicare and Medicaid Innovation; CO = Colorado; CT = Connecticut; DE = Delaware; EOC = episode of care; IA = Iowa; ID = Idaho; LTSS = long-term services and supports; MI = Michigan; NY = New York; PCMH = patient-centered medical home; RI = Rhode Island; SIM = State Innovation Model; TN = Tennessee; WA = Washington.

Table 2-6. Commercial populations reached by a value-based purchasing or alternative payment model in Round 2 Model Test states, as of most recent reporting quarter

State	SIM models						Landscape	
	Primary care PCMHs	Health homes for medically complex patients	ACOs	Behavioral Health Integrated care models	EOC payment models	Other	SIM-wide (total)	Statewide (total)
Colorado				—			—	—
Connecticut	—		—				—	—
Delaware	—						—	—
Idaho	—					—	—	—
Iowa			—				—	—
Michigan	—						—	—
New York	—						—	—
Ohio	—				—		—	—
Rhode Island	174,429 (51.3%)						—	—
Tennessee					—		—	—
Washington							—	—

Source: Most recently available SIM Quarterly Progress Reports to CMMI in Award Year 2: third quarter 2016 (CO, RI, TN), fourth quarter 2016 (WA, NY, MI, DE, OH, ID), fifth quarter 2017 (IA), and first quarter 2017 (CT). CO's report refers to the calendar year quarter.

Note: Denominators for CO, CT, DE, ID, IA, MI, NY, OH, TN and WA are provided by the Henry J. Kaiser Family Foundation State Health Facts (<https://www.kff.org/statedata/>, accessed on December 2, 2017).

Note: Colorado data are current as of third quarter 2016; the denominator (3,242,600) is the 2016 employer and non-group insurance population. Connecticut data are current as of the end of 2016; the denominator (2,127,600) is the 2016 employer and non-group insurance population. Delaware data are current as of fourth quarter 2016; the denominator (481,700) is the 2016 employer and non-group insurance population. Idaho data are current as of fourth quarter 2016; the denominator (976,500) is the 2016 employer and non-group insurance population. The Virtual PCMH model is categorized as "other" for Idaho. Iowa data are current as of first quarter 2016; the denominator (1,882,500) is the 2016 employer and non-group insurance population. Michigan data are current as of fourth quarter 2016; the denominator (5,503,100) is the 2016 employer and non-group insurance population. New York data are current as of third quarter 2016; the denominator (11,061,700) is the 2016 employer and non-group insurance population. Ohio data are current as of second quarter 2016; the denominator (6,475,100) is the 2016 employer and non-group insurance population. Rhode Island data are current as of the preimplementation year, 2015; the denominator (340,146) is the total number of commercial health plan members in the state. Tennessee data are current as of the preimplementation year, 2015; the denominator (3,442,700) is the 2016 employer and non-group insurance population. Washington data are current as of fourth quarter 2016; the denominator (4,091,900) is the 2016 employer and non-group insurance population.

— = relevant data were not provided in data source; shaded cells = the field is not applicable for that state; ACO = accountable care organization; APM = alternative payment model; AY = Award Year; CMMI = Center for Medicare and Medicaid Innovation; CO = Colorado; CT = Connecticut; DE = Delaware; EOC = episode of care; IA = Iowa; ID = Idaho; LTSS = long-term services and supports; MI = Michigan; NY = New York; PCMH = patient-centered medical home; RI = Rhode Island; SIM = State Innovation Model; TN = Tennessee; WA = Washington.

Table 2-7. Medicaid participation in a value-based purchasing or alternative payment model in Round 2 Model Test states by Learning and Action Network Category, as of most recent reporting quarter

State	LAN Category 1 Payments: Fee-for-service with no link of payment to quality		LAN Category 2 Payments: Payment linked to quality		LAN Category 3 Payment: Alternative payment models		LAN Category 4 Payment: Population-based payment	
	Number of beneficiaries	Percentage of payments	Number of beneficiaries	Percentage of payments	Number of beneficiaries	Percentage of payments	Number of beneficiaries	Percentage of payments
Colorado	—	—	—	—	—	—	—	—
Connecticut	—	—	—	—	—	—	—	—
Delaware: United HealthCare	72,508	—	16,472	—	927	—	0	0%
Delaware: Highmark	108,363	—	—	—	9,017	—	0	0%
Idaho	—	—	—	—	—	—	—	—
Iowa	393,891	69.9%	170,695	29.9%	0	0%	235	.2%
Michigan	—	—	—	—	—	—	—	—
New York	—	—	—	—	—	—	—	—
Ohio	—	—	—	—	—	—	—	—
Rhode Island	—	—	—	—	—	—	—	—
Tennessee	0	0%	—	—	21,058 ^a 12,616 ^b 329 ^c	13.3% ^a 14.1% ^b 16.0% ^c	—	—
Washington	270,986	26%	136,967	0%	131,486	13%	155,605	4%

Source: Most recently available SIM Quarterly Progress Reports to CMMI in Award Year 2: third quarter 2016 (CO, RI, TN), fourth quarter 2016 (WA, NY, MI, DE, OH, ID), fifth quarter 2017 (IA), and first quarter 2017 (CT). CO's report refers to the calendar year quarter.

Note: The values represent percentage of providers who received payments (gain sharing):

^a perinatal EOCs.

^b acute asthma exacerbation EOCs.

^c total joint replacement EOCs.

Note: Colorado data are current as of third quarter 2016. Connecticut data are current as of the end of 2016. Delaware data are current as of fourth quarter 2016. Idaho data are current as of fourth quarter 2016. Iowa data are current as of the preimplementation year, 2015. Michigan data are current as of fourth quarter 2016. New York data are current as of third quarter 2016. Ohio data are current as of second quarter 2016. Rhode Island data are current as of third quarter 2016. Tennessee data are current as of the preimplementation year, 2015. The percentage of payments provided by Tennessee is defined differently than the values provided by other Model Test states. Washington data are current as of fourth quarter 2016.

— = relevant data were not provided in data source; CO = Colorado; CT = Connecticut; DE = Delaware; EOC = episode of care; FFS = fee for service; IA = Iowa; ID = Idaho; LAN = Learning and Action Network; MCO = managed care organization; MI = Michigan; NY = New York; OH = Ohio; RI = Rhode Island; TN = Tennessee; WA = Washington.

Table 2-8. Number of physicians participating in a value-based purchasing or alternative payment model in Round 2 Model Test States, as of most recent reporting quarter

State	SIM models						Landscape	
	Primary care PCMHs	Health homes for medically complex patients	ACOs	Behavioral Health Integrated care models	EOC payment models	Other	SIM-wide (total)	Statewide (total)
Colorado				842 (16%)			842 (16%)	—
Connecticut	—						—	—
Delaware			—	—		0	240 (60.0%)	—
Idaho	—					—	—	—
Iowa			—				—	—
Michigan	2,123 (22%)						2,123 (22%)	—
New York	230 (0.9%)						230 (0.9%)	—
Ohio	—				—		—	—
Rhode Island	524 (46.2%)		623 (54.9%)			0 (0%)	—	808
Tennessee	—	—			—	—	—	—
Washington			15,153 ^a 12,552 ^b	1,286 (4.9%)			—	—

Source: Most recently available SIM Quarterly Progress Reports to CMMI in Award Year 2: third quarter 2016 (CO, RI, TN), fourth quarter 2016 (WA, NY, MI, DE, OH, ID), fifth quarter 2017 (IA), and first quarter 2017 (CT). CO's report refers to the calendar year quarter.

^a Participating in SIM (UMP Plus, UW).

^b Participating in SIM (UMP Plus, PSHVN).

Note: Denominators for CO and MI are provided by the Association of American Medical Colleges 2016 Physician Workforce Profile. (<https://www.aamc.org/data/workforce/reports/484392/2017-state-physician-workforce-data-report.html>, accessed on January 19, 2018).

Note: Colorado data are current as of third quarter 2016. The count consists of providers and staff within primary care practices and who have a national provider identifier. Therefore, providers are not limited to physicians only. Colorado reports that this is likely to be an overestimation of the true number of PCPs participating in the SIM Initiative. The state is working to revise this number. The denominator (5,218) is the number of Primary Care Physicians. Connecticut data are current as of the end of 2016. Delaware data are current as of fourth quarter 2016; the denominator is the total number of providers targeted for inclusion in a Category 2 or Category 3 payment model (400). Idaho data are current as of fourth quarter 2016. The Virtual PCMH model is categorized as "other" for Idaho. Iowa data are current as of fourth quarter 2016. Michigan data are current as of fourth quarter 2016; the denominator (9,701) is the number of Primary Care Physicians. New York data are current as of third quarter 2016, and reflect the number of providers who receive PCMH-related payments through a multi-payer effort that began before SIM; the denominator (24,733) is the total number of PCPs in the state. Ohio data are current as of second quarter 2016. Rhode Island data are current as of the preimplementation year, 2015; the denominator (1,134) is total number of Network PCPs. Primary care PCMHs (Child) are categorized as "other" for Rhode Island. Tennessee data are current as of the preimplementation year, 2015. LTSS are categorized as "other" for Tennessee. Washington data are current as of fourth quarter 2016; the denominator for the behavioral health integrated care models (26,177) is the total number of active Washington State Medicaid service providers providing care to beneficiaries targeted for inclusion in fully integrated managed care.

— = relevant data were not provided in data source; shaded cell = the field is not applicable for that state; ACO = accountable care organization; APM = alternative payment model; CMMI = Center for Medicare and Medicaid Innovation; EOC = episode of care; LTSS = long-term services and supports; PCMH = patient-centered medical home; PCP = primary care provider; PSHVN = Puget Sound High Value Network; SIM = State Innovation Model; UMP = Uniform Medical Plan; UW = University of Washington.

Table 2-9. Number of practices participating in a value-based purchasing or alternative payment model in Round 2 Model Test states, as of most recent reporting quarter

State	SIM models						SIM-wide (total)	Landscape Statewide (total)
	Primary care PCMHs	Health homes for medically complex patients	ACOs	Behavioral Health Integrated care models	EOC payment models	Other		
Colorado				93 (23.3%)			93 (23.3%)	—
Connecticut			—				—	—
Delaware			—	—			7 (116.7%)	—
Idaho	56 (11.2%)					0 (0%)	56 (11.2%)	—
Iowa			—				—	—
Michigan	346						346	—
New York	—						—	—
Ohio	—				1,515 (36.9%)		—	—
Rhode Island	—		—			0 (0%)	—	—
Tennessee	—	21			— 75 ^a (69.4%) 3,149 ^b	— — ^a 292 ^b (99.7%)	21 75 ^a (69.4%) 3,141 ^b	— — ^a — ^b
Washington			8 ^c 6 ^d	1,424 (7.5%)			—	—

Source: Most recently available SIM Quarterly Progress Reports to CMMI in Award Year 2: third quarter 2016 (CO, RI, TN), fourth quarter 2016 (WA, NY, MI, DE, OH, ID), fifth quarter 2017 (IA), and first quarter 2017 (CT). CO's report refers to the calendar year quarter.

^a Hospital providers: The denominator (108) is the number of all hospitals.

^b Non-hospital providers: The denominator (293) is all participating Medicaid nursing facilities.

^c Participating in SIM (UMP Plus, UW).

^d Participating in SIM (UMP Plus, PSHVN).

Note: Colorado data are current as of third quarter 2016. The denominator is the total number of primary care practice sites targeted for inclusion in practice transformation supported by SIM (400). Connecticut data are current as of the end of 2016. Delaware data are current as of fourth quarter 2016. The denominator (6) is the total number of provider organizations targeted for inclusion in a category 2 or category 3 payment model. Idaho data are current as of fourth quarter 2016. The denominator (500) is the reported number of primary care clinics in Idaho. The Virtual PCMH model is categorized as "other" for Idaho. Idaho reports in its SIM Operational Plan that 55 clinics participated in Cohort 1 during fourth quarter 2016. Iowa data are current as of fourth quarter 2016. Michigan data are current as of fourth quarter 2016. New York data are current as of third quarter 2016. Ohio data are current as of second quarter 2016. The denominator (4,102) is the total number of providers targeted for inclusion in episode-based payments; specifically, it includes all providers with the presence of at least one valid or nonvalid episode. Number represents the number of providers eligible for payment. Rhode Island data are current as of third quarter 2016. Tennessee data are current as of the preimplementation year, 2015. LTSS are categorized as "other" for Tennessee. Washington data are current as of fourth quarter 2016. The denominator for the Behavioral Health Integrated Care Models (18,912) is the total number of Washington billing providers (based on Provider Organization definition) participating in providing care to clients targeted for inclusion in Fully Integrated Managed Care.

— = relevant data were not provided in data source; shaded cell = the field is not applicable for that state; ACO = accountable care organization; APM = alternative payment model; CMMI = Center for Medicare and Medicaid Innovation; EOC = episode of care; LTSS = long-term services and supports; PCMH = patient-centered medical home; PCP = primary care provider; PSHVN = Puget Sound High Value Network; SIM = State Innovation Model; UMP = Uniform Medical Plan; UW = University of Washington.

Overall, these tables reflect that, at the end of the AR2 analysis period, most states were just beginning to collect some metrics to measure the percentage of the population, expenditures, and providers that are participating in value-based purchasing models or APMs. States expect to have a better picture of both progress toward value-based purchasing in their commercial markets and degree of alignment across payers sometime in 2018, after compiling information from payers about the design and scope of value-based purchasing products. However, an outstanding question is the amount of detail that states will request and that insurers will disclose. Ideally, the AR3 analysis period will include more definitive and detailed information about the advancement of APMs across the commercial sector. Given the concerns of not having complete data, many of the values in the current tables may represent a lower bound estimate of value-based purchasing and APM adoption.

2.2.3 State context influences progress toward a preponderance of care

Many Round 2 Model Test states discussed the context in which they are implementing their SIM awards as impacting their progress toward reaching a preponderance of care among all payers. In addition to state-specific context, there was concern across several states regarding how changes at the federal policy level would impact state insurance markets and progress moving forward.

Insurance markets. The number and market concentration of payers varies across the states. The competitiveness of the state's health insurance market could serve as either an advantage or disadvantage for moving toward a preponderance of care, depending on how much collaboration there is among payers in the state. For example, in a highly concentrated market, fewer entities need to be brought to the table, and the critical mass needed to make change happen may be easier to achieve. Conversely, more fragmented markets may require more time and resources to get enough cooperation to make significant progress toward a preponderance of care.

Highly concentrated insurance markets served as an advantage for some states. Iowa, for example, has one large payer, which already adopted value-based purchasing for most of its PCPs. Similarly, one Delaware official estimated that they had already included a little less than half of PCPs through Medicaid and state employee plans. A second Delaware official was optimistic about reaching 80 percent of expenditures, given the engagement of Highmark Blue Cross Blue Shield, a large commercial payer controlling more than two thirds of the state's commercial health insurance market.²⁸ In contrast, a highly concentrated commercial insurance market was not always advantageous. For example, although there were only a few payers in Idaho, the state initially ran into considerable difficulty trying to get them to adopt a PMPM model. To address the lack of adoption of this model, Idaho instead began encouraging

²⁸ National Association of Insurance Commissioners. (2017, September). *2016 supplemental health care exhibit report, volume 1*. Retrieved from http://www.naic.org/documents/prod_serv_statistical_hcs_zb.pdf

commercial payers to pursue their own value-based purchasing models. During the AR2 analysis period, Idaho advanced this through a multi-payer work group,²⁹ individual meetings between payers and state officials, and inviting payers to present at Idaho Healthcare Coalition meetings.

Other states, like Colorado and Ohio, have competitive health care markets in which no one payer covers a majority of the market. In these competitive markets, states reported that convening the multiple commercial payers allowed the states to make good progress toward reaching their preponderance of care goal. Colorado officials, for example, see their role as conveners of multiple payers as the most effective approach for their SIM office to further APM adoption. One state official in Colorado was optimistic about reaching the preponderance of care goal because “all the major payers in Colorado are at the table.” Ohio similarly touted its ability to reach diverse payers as a reason for optimism. A stakeholder was hopeful that engaging Ohio’s four largest commercial payers, in addition to Medicaid and the state employee health plans, would allow Ohio to reach more than 80 percent of Ohioans.

Stakeholders in Washington indicated that of concern in their insurance market were large, self-funded purchasers in technology fields who viewed their current health plans as a way to recruit talent. The purchasers are less willing to take risks and make changes that align with the state, thereby resulting in less interest in value-based purchasing models and APMs.

“If you look at Microsoft, Amazon, Google, Facebook, they are more interested in benefits that recruit employees than cutting costs. ... Value-based purchasing plans like the accountable care product that [the] state has launched and Boeing has launched is viewed by some with some uneasiness because they are viewed as narrow networks and are not as useful for recruiting and retaining critical personnel.”

—Washington stakeholder

Changes in the administration at the federal level have created some uncertainty across states that the current insurance market landscape may change and impact the SIM Initiative moving forward. For example, one stakeholder in Connecticut spoke optimistically about reaching the preponderance of care goal, but with the caveat of “assuming that the [Medicaid] expansion holds, given debate on the ACA [Affordable Care Act].” As states move toward a preponderance of care in APM and value-based purchasing models, they continue to work within their unique state insurance markets, while trying to anticipate changes.

Other influential state contexts. Stakeholders identified characteristics beyond the insurance market that posed potential challenges to reaching preponderance of care goals. One of the potential obstacles, reported by Connecticut, Idaho, Ohio, and Washington, was being able to effect change among health care providers in rural areas and the different challenges that these providers face. For example, one Ohio payer commented that “The thing that worries me is that Ohio has a few large metropolitan areas ... and submarkets ... When you get outside of those

²⁹ Although a stakeholder mentioned the multi-payer work group, it rarely met during the AR2 analysis period.

counties it is very rural. The low population makes it more difficult to engage provider[s] than in metropolitan areas. I don't know how we penetrate that [rural areas]." A payer in Washington argued that the "monopolistic market dynamic" in rural areas gives the practices more leverage than commercial payers when it comes to "both what rates they charge and whether they participate in a value-based payment." That stakeholder went on to say that the increase in Medicaid and Medicare APM models might make rural providers even less likely to engage in APMs with commercial payers, before fully understanding the financial implications of those arrangements. A state official in Idaho also commented that meeting the preponderance of care goal in rural areas would be a challenge, because facilities such as rural health clinics were not eligible for several CMS initiatives involving APMs.

"When you get to goals like 80 percent it depends on if we are on an uninterrupted trajectory and we controlled all the variables, I think that would certainly be doable. With as many unknown variables that we are in right now it would be hard to say."

—Iowa state official

Respondents from Rhode Island, New York, and Delaware noted concerns about the needs of smaller practices. According to a Delaware official, smaller practices may not be willing or able to handle the downside risks associated with some of the models. One New York payer described the importance of reaching out to smaller practices—which is a focus of the state's SIM effort—this way: "Go get the moms and pops with ones and twos, because they're the guys that need the help transforming, and no one payer is going to have the volume to want to go after them." Providers in Rhode Island expressed concern that small practices might be a hindrance to reaching 80 percent. Rhode Island recognized that meeting necessary participation requirements may be more challenging for small practices. To address this, Rhode Island began a small practice work group to provide the smaller practices with additional assistance and improved input into the SIM decision-making process, but the state continues to struggle with engaging these practices.

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3. Enabling Strategies to Support Health Care Delivery Transformation

3.1 Quality Measure Alignment

KEY INSIGHTS



- Quality measure alignment is seen by states as an effective means to generate stakeholder buy-in and support the growth of value-based purchasing.
- One effective strategy some states have taken is to first implement quality measure alignment with Medicaid payers, then leverage successful measure alignment to gain buy-in from other payers.
- Other successful strategies that states have used is to build flexibility into multi-payer agreements for payers, relying on nationally recognized measures used already by national commercial plans, and modifying reporting requirements that ease the burden on providers participating in federal alternative payment models.
- Some states have used a single work group structure to select measures to streamline and expedite decision making and consensus building.

States view quality measure alignment as an appealing vehicle to aid the expansion of value-based purchasing contracts. Prior to the alignment efforts funded through the SIM Initiative, payers developed measure sets for their value-based purchasing contracts, independent of one another. Providers that entered into more than one value-based contract faced the prospect of reporting for multiple measure sets that differed with little payback for their efforts. Because provider performance feedback reports provided snapshots on quality for only a portion of their patient panel, providers could not derive lessons to inform practice-level improvements.

Payers also see several advantages to aligning quality measurement. Insurers need a critical mass of providers willing to participate. Alignment increases provider interest in value-based purchasing models. As the payer for Medicaid and public employees, states stand to benefit from alignment, too. By leveraging the market power of larger, asset-rich, private insurers, payers together can generate adequate incentives for providers to produce more quality and more coordinated care at lower cost.

This section provides an overview of the progress states have made in the second Annual Report (AR2) analysis period in quality measure alignment efforts, lessons learned in working across payers, and a discussion of issues to consider as states move forward with alignment efforts.

3.1.1 Progress with strategies during analysis period

During the AR2 analysis period, states sought to simplify quality measures to encourage use by payers and ease the reporting burden for providers. As of June 30, 2016, most states had

identified a common measure set around which alignment was expected to occur. In the AR2 analysis period, some SIM teams facilitated stakeholder work groups and pursued agreements with payers on the degree of alignment that would take place. In some cases, states applied contractual or regulatory levers to require quality measure alignment for value-based and alternative payment contracts, primarily in Medicaid and public employee contracts. States focused also on refining and operationalizing measures, which led some to drop problematic measures or align definitions with national measures.

Several states confronted unanticipated problems in the execution of measurement plans that included operationalizing measures, extracting data from electronic health records (EHRs), and managing data input to and output from health information exchanges (HIEs). Although there were some delays, states had mostly resolved these problems or had found work-arounds that resulted in some quality measurement activities by April 30, 2017. As one example, Colorado directed the clinical health information technology (health IT) advisors (CHITAs) to help primary care practices having trouble meeting reporting requirements for its behavioral health integration initiative.³⁰ Most primary care practices needed additional time to work with vendors to add data fields and ensure accurate reporting from these fields before they could retrieve data from EHRs and report all required measures.

Through varying strategies, SIM teams have derived initial lessons from their experience in the AR2 analysis period on how much quality measure alignment could be attained, while assuring population-specific quality objectives and achieving or maintaining buy-in from major payers. As discussed throughout this report, progress on quality measure alignment took place during the AR2 analysis period as federal regulations governing new reporting requirements in Medicare were issued and Medicare Comprehensive Primary Care Plus (CPC+) regions and practices were selected. These developments played a central role in alignment decisions for some states, and required others to pivot and modify initial plans and measure sets. State experiences also suggest states could be helped by clarification of the circumstances in which alignment between models is necessary, desired, or appropriate.

3.1.2 Lessons learned

Lessons learned about effective quality measure alignment strategies among states include implementing quality measure alignment with Medicaid payers first to leverage successful measure alignment to gain buy-in from other payers; building flexibility into multi-payer agreements for payers, relying on nationally recognized measures used already by national commercial plans; and modifying reporting requirements that ease the burden on providers participating in federal alternative payment models (APMs).

³⁰ CHITAs provide in-person assistance to the practice with data analytics. For example, CHITAs help practices pull data from the EHR to report clinical quality measures to the Colorado SIM office.

Leading with Medicaid. States that focused first on implementing a common measure set for Medicaid payers and models progressed further on measure implementation than other states that first sought agreement among payers before proceeding to implement a measurement plan. Stakeholders viewed the former approach as effective because the implementation experience in Medicaid could serve to demonstrate the value proposition of alignment to other payers and providers. Despite identification of an effective strategy for promoting measure implementation among providers in this analysis period, states that focused on quality measurement in Medicaid did not make substantial progress in extending the use of these common measure sets to commercial payers, although some payers were signaling interest or intent to align measures. On the other hand, some states with willing major payers found consensus-building work groups took time, but expect the investment to yield alignment in the long run.

Leading with Medicaid was possible in states where Medicaid initiatives were predominantly involved in the SIM award, namely in Iowa, Ohio, Tennessee, and Washington. In three of these states (Iowa, Tennessee, and Washington), the SIM Initiative leveraged Medicaid managed care contracts or public employee contracts to require adoption of common measure sets. Tennessee and Washington experiences are exemplary of successful contracting strategies. Tennessee used contracts to establish an extensive measurement system within Health Link (for Medicaid beneficiaries with serious mental illness), patient-centered medical home (PCMH) programs, episodes of care, and the Quality Improvement in Long-Term Services and Supports program. TennCare managed care organizations (MCOs) operate in the private market as well, and the state aims to demonstrate success in Medicaid as a way to motivate MCOs to incorporate core measures into other lines of business. In Washington, legislation passed in 2014 required stakeholder participation to develop a common measure set, most of which were drawn from nationally recognized measure sets. Since then, subsets of the common measures have supported performance goals in Medicaid MCO contracts, public employee accountable care network contracts, and Federally Qualified Health Center alternative payment methodology memoranda of understanding.

Flexibility. Where SIM Initiatives have not centered on Medicaid models, many states have achieved partial alignment—between some payers and along a set of core measures—using a mix of approaches that signal flexibility in how payers and providers can choose to align. Flexibility for both payers and providers has helped attract and sustain alignment activity. In Idaho, the 16 clinical quality measures selected for alignment are meant to be used alongside measures already used by payers in PCMH contracts, at least initially. The measures will be used to assess cross-payer PCMH performance and will aid in assessing the impact of the PCMH initiative. Idaho is also easing the reporting burden for PCMHs by phasing in the measures PCMHs are required to report. In Colorado, all six commercial payers plus Medicaid agreed during the analysis period to use the SIM quality measure set for the primary care-based

behavioral health integration model, yet added some of their own measures for value-based payment contracts.

Not all flexible approaches led to the outcome desired by states. Connecticut's SIM Quality Council finalized a core measure set for voluntary use by Medicaid and commercial plans in value-based contracts late in the analysis period. Despite commercial plans' active engagement in the selection of measures, they chose to not implement the measures in their own value-based purchasing arrangements. As commercial payers with a national market, they were reluctant to adopt local measures that do not align with their national measures.

Alignment with Medicare. Comprehensive Primary Care Plus. Designation of 14 regions as CPC+ sites in mid-2016 and the enrollment of practices into Medicare CPC+ in late 2016 required the affected states to choose an approach to align or not align with CPC+ reporting requirements. Several states gave practices selected for CPC+ the option to use the clinical quality measures required by CPC+ to meet reporting requirements for SIM model initiatives. Colorado decided to extend this option to practices, if the practices reported on the CPC+ behavioral health measures.

National measures. Most states also dropped problematic measures in common measure sets and replaced state-specific measures or definitions with nationally recognized versions. The latter approach was especially important to achieve alignment with national payers. Commercial payers with a national presence could not use state-specific measures, because procedures were decided by headquarters and plans already used national measures. This problem with state-specific measures was identified as a contributing factor stalling progress toward alignment in Connecticut.

Work group structures. Most states used a single work group to engage all stakeholders in the measure alignment decision process, and this approach worked well for states to derive common measure sets. A single work group allows for expediency of information sharing, clear accountability for decisions delegated to one entity, and minimizes the time to arrive at decisions and implement mid-course corrections. Through a series of 12 meetings held between July 2015 and March 2016, Rhode Island's Measure Alignment Workgroup selected 59 aligned measures (24 core measures and 35 menu measures) to be used in contracts with accountable care organizations (ACOs), primary care practices, and hospital providers. Between July and October 2016, a new work group with a narrower charge convened and recommended common measure sets for maternity care and behavioral health. The contrasting experience with work groups in Idaho is informative. In 2016, three different groups in Idaho played a role in selecting and operationalizing a common measure set. This compartmentalization complicated the task and slowed the work, because each group's process depended on information needed from other groups. As of April 30, 2017, there are plans to merge the groups into a single group to facilitate more efficient decision making, moving forward.

3.1.3 Defining alignment and its purpose

The emergence of an increasing number of alternative payment options available to providers and stakeholder experiences with alignment strategies clarified the need for a structured dialogue over the degree to which quality measure alignment between models is either necessary or appropriate. The differences between SIM measure alignment work group individual payer decisions regarding measure alignment suggest that SIM stakeholder processes were not guided by a shared understanding of what should be aligned and for what purpose.

During the AR2 analysis period, some states effectively used consensus-building strategies to achieve some degree of alignment. However, processes and outcomes across states indicate that stakeholders appear to conceive of alignment differently, and probably disagree as to how much alignment is needed. Delaware used a consensus-building approach to determine an alignment requirement that other states might consider “partial” alignment: 75 percent measure alignment in value-based contracts for each of three major commercial payers. While far below “full” alignment, Delaware stakeholders considered this achievement a positive outcome.

Stakeholders also appear to define measure alignment differently within states. In Connecticut, Medicaid chose to refine its measures for Person Centered Medical Home Plus (PCMH+) based on focus areas of its program, rather than give priority to their Quality Council’s core measure set. Lack of full adoption by the Department of Social Services (the Medicaid agency overseeing the implementation of PCMH+) of the SIM core measure set was described by one stakeholder as “frustrating.” Yet the viewpoint expressed by another state official suggests that the degree of alignment achieved with Medicaid was perceived as appropriate and reasonable. In fact, PCMH+ drew on a subset of the SIM quality measures and preserved an emphasis on behavioral health measures. This approach is comparable to alignment sought in other states between Medicaid and CPC+ or expected between Medicaid and commercial plans.

In other states, differences between the characteristics of the Medicaid and Medicare populations, or differences between Medicaid and commercial populations, have been cited as obstacles to full alignment, or as points of contention around alignment. For example, Ohio reported difficulty aligning measures used in Ohio Comprehensive Primary Care with Medicare CPC+, because Medicaid covers many children and pregnant women, and Medicare serves older individuals and disabled adults under age 65. However, decisions to emphasize certain service domains or morbidity in measure sets reasonably can be expected to shift between populations that vary markedly in their use of and need for services. Thus, full alignment would not protect small or vulnerable populations that tend to be better served by a wider measure set, nor would full alignment be practical.

Complete or full alignment may not be attainable or ideal for payers or their patient populations. Many states achieved partial alignment with a common measure set and

measurement processes, which may end up yielding the most important objective of full alignment: the buy-in among large numbers of providers to participate in value-based purchasing contracts with multiple payers. Stopping at partial alignment allows payers the flexibility to use common measures where it is practical, yet add other measures better suited to their populations and products. This approach promotes sustainability by meeting each payer's unique needs, especially Medicaid. A more rigid requirement for alignment could negate payer buy-in and may not be in all patients' best interest. Moreover, allowing providers to meet the reporting requirements for one payer's model by submitting the measure set required of another payer can encourage providers to contract with payers that may have less negotiating leverage or lower payout, such as Medicaid and smaller private payers.

3.1.4 Looking forward

Looking forward, stakeholders can be expected to continue to weigh the benefits of adding measures to serve the quality objectives of their own patient populations against the risk of providers reporting fatigue and stakeholder burnout. To the extent that practice populations do not overlap, as is the case with pediatric patients in Medicaid and older patients in Medicare, adding measures may not significantly add to provider burden. States also will continue to refine alignment decisions as more Medicare providers respond to new Merit-Based Incentive Payment System requirements and seek options to participate in advanced APMs. Finally, states will continue to work with more limited quality measure sets in the short term, while they help practices address limitations in EHRs and seek to fully leverage the potential of HIE technology.

3.2 Health Information Technology and Data Infrastructure

KEY INSIGHTS



- States recognize the key role that health information technology (health IT) and data infrastructure play in health care transformation by allowing providers to have a comprehensive view of patients' healthcare quality, use, and costs in meaningful, actionable formats.
- The amount and accuracy of data are critical to providers finding health IT and data infrastructure sufficiently valuable enough to adopt and use.
- Nontechnical attributes—such as having a vision or plan, filling key leadership roles and staff, and leveraging existing infrastructures—are important to efficient development and implementation of health IT and data infrastructure strategies.

Health IT and a robust data infrastructure are central to the SIM goals of enhanced care coordination, population health improvements, and alternative payment model (APM) adoption. A variety of health IT enabling strategies under the SIM Initiative are intended to give providers a better view of their patients' complete healthcare spending and use patterns to improve coordination of their patients' health care, as well as to take on and manage financial risk. Common strategies that Round 2 Model Test states are using include HIE and data sharing;

admission, discharge, and transfer (ADT) notifications; all-payer claims databases (APCDs); EHR systems to support behavioral health integration; electronic clinical quality measures (eCQMs); and statewide health provider directories. Each of these strategies relies on data sharing and the ability of providers to access, comprehend, and make use of the shared data.

Table 3-1 summarizes the different strategies used by states.

Table 3-1. Strategies for health information technology and data infrastructure by State Innovation Model Initiative Round 2 Model Test states

Strategies	CO	CT	DE	ID	IA	MI	NY	OH	RI	TN	WA
Promote adoption/use of EHRs	—	—	✓ ^a	✓	—	✓	—	—	—	—	—
Promote interoperability	—	—	—	—	—	✓	—	—	—	—	✓ ^a
Establish, promote HIE adoption or enhancement, or clinical data sharing	—	✓	✓ ^a	✓ ^a	✓ ^a	✓ ^a	—	—	✓	✓ ^a	—
ADT notification	—	—	—	—	✓ ^a	✓	—	—	✓ ^a	✓ ^a	—
Increase data analytic capability	—	✓	—	✓	✓	—	✓	—	—	—	✓
Develop common set of quality metrics or reporting systems	✓ ^a	✓	✓	✓	✓ ^a	✓	✓	✓	✓	✓ ^a	✓
Develop/enhance APCD	—	✓	✓ ^a	—	—	—	✓	—	✓	✓ ^a	✓
Expand telehealth	✓	—	—	✓	—	—	✓	—	—	—	—
Develop data hub/repository	✓	—	—	—	—	—	—	—	✓	—	✓ ^a

^a Significant activity or milestone related to health IT strategy occurred in the AR2 analysis period.

Note: TN’s care coordination tool is considered an HIE in this table.

✓ = Health IT strategy that state has included in its SIM Initiative; — = Health IT strategy was not included in state’s SIM Initiative; ADT = admission, discharge, and transfer; APCD = all-payer claims database; AR = Annual Report; CO = Colorado; CT = Connecticut; DE = Delaware; EHR = electronic health record; HIE = health information exchange; IA = Iowa; ID = Idaho; MI = Michigan; NY = New York; OH = Ohio; RI = Rhode Island; SIM = State Innovation Model; TN = Tennessee; WA = Washington.

This section presents the progress among the states in the strategies they are implementing (**Section 3.2.1**), followed by a discussion of the challenges they faced and lessons learned (**Section 3.2.2**).

3.2.1 Progress with strategies during analysis period

During the AR2 analysis period, states differed in the steps that they were taking with their health IT and data infrastructure strategies. Even within states, there was variation in the actions that a state was taking on its various strategies. While some states were still in the planning and development phase, other states implemented strategies during the AR2 analysis period. There were also strategies for which states continued their testing from the AR1 analysis period or earlier (i.e., pre-Model Test award). Some states already experienced delays in their

implementation, pauses in their testing, shifting timelines, and other challenges. The details of the progress for each state's health IT initiatives are found in *Appendices A–K*. However, the following sections provide a description of the common strategies and their purposes.

Health information exchanges. HIE is the transmission of healthcare-related data among facilities, health information organizations, government agencies, and patients.³¹ HIE allows clinicians, nurses, pharmacists, other health care providers, and patients to appropriately access and securely share a patient's vital medical information electronically.³² Within their SIM Initiative, several states are expanding their HIEs to more providers, improving the functionality of HIE data for care coordination, and/or developing quality and cost scorecards, benchmarks, and population health metrics.

Admission, discharge, and transfer notifications. ADT messages are an HIE technology that sends real-time alerts to health care providers to indicate when their patients receive services in an emergency room or are admitted, discharged, or transferred from a hospital.³³ The information is generated from a hospital information system, then sent to an HIE system, where the information is transformed into an alert that is sent to the outpatient provider. The communication notifies the practitioner to initiate an intervention, improving the postdischarge transition. Some states are expanding their ADT notification systems through their SIM Initiatives, which they anticipate will create new opportunities to quickly engage patients and coordinate care. States with robust HIEs developed prior to their SIM Initiative (e.g., Michigan and Rhode Island) are using them to deliver ADTs. States that do not have robust HIEs, such as Iowa and Tennessee, are working with individual hospitals or hospital associations to operationalize their ADTs. Once participating, the platform being used by Iowa hospitals is the Iowa Health Information Network (IHIN), the state's HIE.

All-payer claims databases. An APCD is a statewide database that systematically collects health care claims data from all health care payers to further cost containment and quality improvement efforts. APCDs may be governed by state-led agencies (e.g., Tennessee, Rhode Island, New York, Washington), public-private partnerships (Colorado, Connecticut, Delaware),

³¹ U.S. Department of Health & Human Services. (2014). Health information exchange (HIE): What is HIE? *HealthIT.gov*. Retrieved January 30, 2018, from <https://www.healthit.gov/providers-professionals/health-information-exchange/what-hie>

³² Ibid.

³³ U.S. Department of Health & Human Services, Office of the National Coordinator for Health Information Technology. (2013, May). *Improving hospital transitions and care coordination using automated admission, discharge and transfer alerts: A learning guide*. Retrieved January 30, 2018, from <https://www.healthit.gov/sites/default/files/onc-beacon-ig1-adt-alerts-for-toc-and-care-coord.pdf>

or private, voluntary reporting initiatives.³⁴ Some states are using SIM funding to directly support their APCD initiatives—Rhode Island’s APCD, called HealthFacts RI, is being enhanced through its SIM Initiative. Other states are leveraging their APCDs as part of their SIM reforms but using other funding to expand their APCDs. APCDs provide information on population health and spending, allowing providers to more fully participate in value-based purchasing models.^{35,36} Thus, states are using their APCDs in their SIM Initiatives to identify gaps in population health management and create quality metric benchmarks.

Electronic health record systems to support behavioral health integration. EHRs are a critical component of APMs: They support care coordination activities. Compared to other provider types, behavioral health providers have lagged in their adoption of EHRs and traditionally, behavioral health assessments are not part of standard EHR systems. States are working to improve the ability of EHRs to support behavioral health integration. For example, in Colorado, CHITAs are tasked with working with their assigned practices and their practices’ EHR vendors, as needed, to improve data quality, particularly behavioral health measure data. Delaware used Award Year 2 SIM funds to award grants to six practices with 68 behavioral health providers to adopt or enhance their EHRs.

Electronic clinical quality measures. eCQMs use data from EHRs and/or health IT systems to measure health care quality.³⁷ eCQMs are an improvement over traditional quality measures, because gathering data from medical charts (“chart-abstracted data”) is very resource intensive and subject to human error. Also, eCQMs can capture more clinical outcome information than is typically available in insurance claims-based quality measures. Under the SIM Initiative, some states are helping providers develop the processes and infrastructure to collect and report eCQMs to support APMs. Colorado is providing practices with technical assistance (TA) in implementing eCQMs. Colorado also created a Quality Measure Reporting Tool by which SIM-participating primary care practices transmit eCQM information quarterly to the SIM Office.

Statewide health provider directories. A statewide health provider directory is a Web-based database designed to house detailed provider information, such as provider demographics

³⁴ MacTaggart, P., & Love, D. (2016, May 24). *Claims and clinical data integration: All payer claims data*. (SIM Learning Event). Presentation prepared for U.S. Department of Health & Human Services, Office of the National Coordinator for Health Information Technology. Retrieved January 30, 2018, from https://www.healthit.gov/sites/default/files/sim_apcd_learning_event_05_20_16.pdf

³⁵ Delaware Center for Health Innovation. (2016, February 10). *Outcomes-based payment for population health management*. Retrieved January 30, 2018, from <https://www.dehealthinnovation.org/resources>

³⁶ Delaware Department of Health and Social Services. (n.d.). *Delaware State Innovation Model award year 3: Health information technology operational plan*. Retrieved January 30, 2018, from <http://dhss.delaware.gov/dhss/dhcc/files/desimhitopsplan3.pdf>

³⁷ U.S. Department of Health & Human Services, Office of the National Coordinator for Health Information Technology, CMS. (n.d.). eCQMs. *eCQI Resource Center*. Retrieved January 30, 2018, from <https://ecqi.healthit.gov/ecqms>

and contact information, as well as each provider's relationship to practices, hospitals, ACOs, and health plans. As part of their SIM awards, some states, including Colorado, Rhode Island and Michigan, are developing or enhancing their statewide provider directories to improve access to and identification of specialized providers for whom there is a shortage, particularly in many local communities. These provider types include child psychiatrists, physicians who are approved to provide medication-assisted treatment for opioid addiction, and providers who can treat children with developmental disabilities. The audiences for the directories differ across states and include administrative agencies, providers, and patients. In Colorado, the directory is intended for administrative agencies; in Rhode Island, administrative agencies, providers, and patients; and in Michigan, administrative agencies and providers, but not patients directly.

3.2.2 Lessons learned

Even though states were not far into testing their health IT and data infrastructure enabling strategies, their experiences provided lessons that may be beneficial for other states looking to supplement health care transformation with similar strategies. These lessons speak to the importance of these enabling strategies to health care transformation, the consideration of incompatible platforms, nontechnical success factors, and the significance of having the right data.

Health IT is an important enabling strategy. Many states viewed their health IT and data infrastructure strategies as a driver of provider participation in health care transformation by supplying the information needed for the adoption of value-based purchasing and APMs. Delaware and Iowa state officials regarded the Health Care Claims Database and Statewide Alert Notification (SWAN), respectively, as being able to increase the number of providers interested in value-based purchasing models, because the systems offer access to data that make these models feasible for the providers. Similarly, Michigan state officials described its health IT strategies as enablers for its PCMH and Community Health Innovation Region initiatives. Furthermore, Washington started its SIM Initiative with the belief that health IT would be a strong enabler, and thus, the goal of Washington's Payment Model 4 is to "test whether increasing access to patient data across multiple payers increases adoption of value-based reimbursement arrangements." Idaho provides further support of this lesson. The delay in connecting PCMHs to Idaho Health Data Exchange (IHDE) and the lack of data reports were early challenges to the success of the state's payment and delivery reforms.

The use of different technology platforms must be considered. Not initially realizing or accounting for the incompatibility of different, existing platforms caused delays in implementation and necessitated changes in approach. During the Connecticut health information technology officer's (HITO's) needs assessment, the variety of HIE systems operating in the state was identified as a problem that would have to be overcome. As a result, Connecticut's HIE strategy shifted from using a single, statewide HIE to connecting existing HIE systems, and several recommendations for accomplishing this connection were developed. The use of different EHRs by Idaho's clinics increased the complexity of getting PCMHs connected

to the IHDE and contributed to the delays in Idaho's health IT strategies. Conversely, Michigan recognized early in their SIM award that some providers had a strong familiarity with their regional HIEs. Thus, Michigan decided to plan for making the Michigan Health Information Network (MiHIN) compatible with the technology of the existing regional HIEs.

Nontechnical factors of success were having a vision or plan, identifying key leadership roles and staff, and leveraging existing infrastructures. Among the states, these elements were identified as having led to smooth implementation and testing of health IT and data infrastructure strategies, or having significantly helped to improve implementations that originally were not going well. In Colorado and Rhode Island, the lack of a clear vision and goals for their SIM health IT strategies were identified as reasons why aspects of their activities were delayed. Colorado, subsequently, contracted with outside organizations to develop use cases that support a long-range vision for health IT and develop a roadmap for achieving the use cases. Colorado now is more confident about the potential for success of its health IT strategies. Similarly, Connecticut derives confidence in its ability to successfully implement necessary health IT activities from the results and recommendations from health IT needs assessments led by their new HITO; Idaho, from extensive health IT planning; and Rhode Island (HealthFacts RI and statewide common provider directory), from well-defined projects.

Stakeholders in Connecticut (HITO), Idaho (project manager), and Washington (Analytics, Interoperability and Measurement director) identified filling key positions as helping the states resume operationalizing their health IT and data infrastructure as originally planned. Conversely, Colorado noted that not having an IT data architect slowed its progress.

Several states found that having existing infrastructure from which to work benefited them when developing health IT and data infrastructure strategies, implementing the developed strategies, and attempting to garner stakeholder participation in the strategies. For Idaho, implementing connections to its IHDE for Cohort 2 clinics that were part of health systems already connected to IHDE required significantly less effort than for clinics not in such health systems. Thus, Idaho expected to not experience the delays that they had with Cohort 1 and anticipated meeting their updated goals and timeline. By building SWAN within IHIN, Iowa had the attention of providers already knowledgeable of the IHIN, while also increasing the value of the network. In Michigan, MiHIN complements existing regional HIEs to encourage a level of standardization without replicating systems.

High data quantity and quality are necessary for health data systems to be useful. States learned that the health IT and data infrastructure systems will only be valuable and desired by providers if there is sufficient data in them and if the data is believed to be accurate. Whereas Rhode Island was able to launch its statewide common provider directory for data exports only, stakeholders questioned the usefulness of the directory, given that only one of the four major payers in the state contributed to the directory as of April 30, 2017, and another major provider had not agreed to contribute. In Idaho, Cohort 1 clinics experienced delays or lack of data on

their patients, and the production of reports was impeded due to several factors, including an insufficient number of hospitals sending data to the IHDE, vendor EHR maintenance fees, and HIE vendor resource delays. Similarly, Connecticut and Washington were concerned about being able to contribute Medicaid claims and commercial claims, respectively, to their databases. States also continued to lament the impact of the *Gobeille v. Liberty Mutual Insurance Company* (2016) Supreme Court decision on the usefulness of their APCDs, due to not being able to mandate the inclusion of claims data from self-insured employers.³⁸ According to interviewees, self-insured employers comprise approximately 50 percent of the Connecticut employer insurance market and New York’s commercially insured. Although Delaware celebrated the decision of a third commercial payer to contribute data to their Common Scorecard, providers’ distrust in the accuracy of the Common Scorecard resulted in low provider enrollment. Thus, if states are unable to ensure the quality of data and populate their databases with a significant proportion of the data in their states, providers are likely to not find the health IT and data infrastructure strategies valuable and will be less likely to fully engage with them.

3.3 Practice Transformation and Workforce Development

KEY
INSIGHTS



- Community health workers (CHWs) have been an important part of practice transformation efforts. In contrast, telehealth service delivery has had limited uptake.
- Adoption of CHWs and telehealth strategies have financing challenges. CHWs and providers offering telehealth services are often not able to bill for their services, and states cannot use SIM funding for the costs of infrastructure.
- States are finding creative solutions to dealing with the issue of behavioral health shortages, including telehealth and specialty consultation.

To increase the likelihood that value-based purchasing will improve quality of care and outcomes from treatment, states are investing in innovative strategies to assist providers in improving primary care. Under the SIM Initiative, practice transformation and workforce development approaches include support for primary care practices (e.g., trainings, learning collaboratives, specialty consultation), community health workers (CHWs), telehealth clinical practice (telemedicine), and integration of physical health services in behavioral health clinics. **Table 3-2** describes practice transformation and workforce development strategies that are part of each state’s SIM Initiative as of April 30, 2017. Although progress has been made across these strategies, and providers and other stakeholders are generally positive about the practice transformation strategies their states have adopted, financing and sustainability beyond SIM awards is a consistent challenge, particularly for the integration of CHWs and telehealth clinical practice.

³⁸ *Gobeille v. Liberty Mutual Insurance Company*, No. 14-181, 577 U.S. ___, slip op. at 1, 13 (2016). Retrieved January 10, 2018, from https://www.supremecourt.gov/opinions/15pdf/14-181_5426.pdf

Table 3-2. Annual Report 2 analysis period State Innovation Model Initiative Round 2 Model Test states’ practice transformation facilitation and workforce development strategies

Strategies	CO	CT	DE	ID	IA	MI	NY	OH	RI	TN	WA
Learning collaboratives for medical (i.e., PC or BH) practices	✓	✓	✓	✓	✓	✓	—	—	✓	✓	—
Other TA for medical practices	✓	✓	✓	✓	✓ ^a	✓	✓	✓	✓	✓	✓
Mental health consultation teams and referral services	—	—	—	—	—	—	—	—	✓	—	—
Learning collaboratives and other TA to entities other than medical practices	—	—	—	—	✓	—	—	—	—	—	✓
Telehealth	+	—	—	✓	—	—	+	—	—	—	—
Including CHWs	—	✓	+	✓	—	✓	—	—	✓	—	✓
Practice transformation support hub	—	—	—	✓	✓	—	—	—	✓	—	✓
Collection of information from physicians when registering for licenses	—	—	—	—	—	—	+	+	—	—	—

^a Not SIM funded.

✓= strategy continued (either implemented or planned) as part of state’s SIM Initiative in the second AR2 analysis period from the AR1 analysis period; += strategy was new (either implemented or planned) to state’s SIM Initiative during the AR 2 analysis period; X = strategy was discontinued in AR2 analysis period; — = strategy was never part of state’s SIM Initiative as April 30, 2017; AR = Annual Report; BH = behavioral health; CHW = community health worker; CO = Colorado; CT = Connecticut; DE = Delaware; IA = Iowa; ID = Idaho; MI = Michigan; NY = New York; OH = Ohio; PC = primary care; RI = Rhode Island; TA = technical assistance; TN = Tennessee; WA = Washington.

3.3.1 Progress with strategies during analysis period

Support to providers and practices.

States have made progress in providing technical support to primary care providers (PCPs) to enable them to expand the way that these providers practice. Practices are receiving assistance with providing team-based care, using technology, and incorporating services that traditionally would have been provided by specialists. Across states, these supports are provided by outside professionals (i.e., TA), colleagues (i.e., learning collaboratives), and hubs that consolidate support, offering resources, coaching, and discussion boards. Providers, payers, and state officials generally expressed satisfaction with the support received and the organizations that provided assistance. An

“...having a coach that’s able to fill out the required comments, make sure we’re doing the right assessments, but then also helping us to stay on task and helping us to address the culture of change as we’re making changes, is helpful. I wonder if lots of practices potentially understand that benefit. ... I know the difference it can make.”

—Colorado Provider

I think what does work well is peer-to-peer engagement and testimonial. Practices that have done well and can say to practices, “It was worth it. I feel like my practice runs better.”

—Delaware Provider

achievement in the AR2 analysis period was getting these supports off the ground. Providers acknowledged that the support—both from outside professionals and their own colleagues—was beginning to make a difference in their efforts to change their practices.

Specialty consultation and telehealth. Faced with a shortage of specialists and behavioral health providers, some states adopted specialty consultation models to improve primary care physicians’ support and skills in offering comprehensive care to their patients. These approaches involve consultative assistance from specialists regarding patients’ behavioral health or complex medical needs and offer a way to improve patient care and mentor PCPs. Rhode Island has taken this approach to support the furthest. In December 2016, Rhode Island began providing telephone psychiatric specialty consultation to pediatric primary care practices on diagnostic or treatment issues at no charge. By April 2017, 314 pediatric providers in Rhode Island from 49 practices were enrolled, and 87 consultation calls had been made. Both providers and state officials agreed that these efforts paid off. For example, one pediatrician expressed satisfaction for being able to develop a workable solution to manage the complex behavioral needs of a teenager. Other states plan to use telehealth services to connect rural primary care practices with clinical specialists in academic medical centers to receive mentoring regarding management of patients with complex health needs. In March 2017, New York released a solicitation for Project ECHO (Extension for Community Healthcare Outcomes) awards to practices interested in participating in a telehealth support program.

Community health workers. CHWs are an important component of practice transformation efforts in Connecticut, Idaho, Michigan, and Rhode Island. The role that the CHWs play in practice transformation varies across these states, reflecting state-specific needs. In Idaho, CHWs are a fundamental component of their virtual PCMHs, which is the state’s primary strategy to extend existing primary care resources into rural and underserved areas. A key aspect of other states’ practice transformation efforts is expanded care teams that focus on comprehensive coordinated care, in which CHWs play a major role, including coordinating care with respect to behavioral health.

“In our practice, we have four CHWs [community health workers] who are doing a great job with outreach to patients. They speak Spanish, which is helpful for reaching migrant farmworker patients. They go out to patients’ homes to help them there. ... CHEMS [community health emergency medical services] is much less being used, but it is being used. ... The practice I mentioned earlier is making use of CHEMS for home visits to follow up on care. It’s very helpful for very sick patients that may need transportation assistance.”

—Idaho provider

All four states included requirements for the employment of CHWs within their SIM Initiative. These states made varying progress in integrating CHWs into the state’s health care workforce, including initiating certification programs for CHWs³⁹ and training individuals. Rhode Island, in which certification efforts

³⁹ Certification for CHWs in Michigan is not a SIM initiative.

predated SIM, believes that certification will increase the size of, and establish standards for, this workforce. In the AR2 analysis period, Michigan, Rhode Island, and Idaho trained and included CHWs as part of care teams for somewhat different purposes. In Michigan's practice transformation effort, the state envisions CHWs playing a role in expanded care teams that focus on comprehensive coordinated care. As members of Rhode Island's community health teams (CHTs), CHWs are vital agents of the state's strategy to enhance behavioral health integration.

Integration of physical health services in behavioral health clinics. Patients with severe and prolonged behavioral health (mental health and substance use disorder) conditions often also have complex, chronic, physical health needs that require services from multiple provider types and social service systems. Several states are in the early stages of implementing SIM initiatives to address this population's need for improved care coordination. Colorado and Tennessee are directly providing physical health care within behavioral health specialty clinics, where individuals have regular and ongoing relationships with providers. Rhode Island also is using SIM funding to train primary care practices on how to deliver behavioral health-related screening and coach providers on effective collaboration with behavioral health professionals co-located in their practice. Washington is integrating behavioral health services for Medicaid patients within unified, regionally based MCOs. During the AR2 analysis period, financial integration was implemented in the first region; Washington's goal is administrative, financial, and clinical integration in each of the MCOs.

The delivery of whole-person physical and behavioral health care to individuals with behavioral health conditions requires coordination and communication between providers. To meet this need, behavioral health providers taking on these new responsibilities are receiving practice transformation support, (TA, practice coaches, and learning collaboratives). States also began investing in improving and updating behavioral health providers' EHR systems and providing support in using the new systems (see ***Section 3.2.1***). For example, Washington's practice support hub is working with behavioral health providers to improve their IT capacity to be able to meet MCO EHR requirements.

3.3.2 Lessons learned

States made efforts in implementing strategies to effect practice transformation. Along with their successes, states faced challenges in implementation that have led either to reassessment of their strategies or to new approaches. Although every state's experience is unique, there are lessons to be learned from the difficulties states faced and the solutions that they proposed to deal with these challenges.

Funding for and sustainability of community health workers. Although CHWs are a central component of several states' SIM Initiatives, the financing of CHWs has proven problematic because SIM funds cannot be used to provide health care services. Even in cases

where practices are currently paying for CHW services through grant funding, the long-term viability of these alternative funding sources is uncertain. The issue of financial support for CHWs was mentioned by Connecticut, Idaho, and Michigan. In Idaho, providers cited insufficient payments for supporting CHWs (as well as community health emergency medical services [CHEMS] and telehealth) as a reason for the state receiving fewer than expected applications from PCMH-certified practices seeking virtual PCMH status. Whereas incorporating CHWs into a PCMH practice increases its Medicaid payments and allows for designation as a virtual PCMH, Medicare does not pay for CHW services as part of its fee schedule. According to stakeholders, other payers also do not pay for telehealth, CHEMS, or CHW services. Michigan and Connecticut are seeking stable financing for CHWs. Connecticut proposed a mechanism for funding through primary care models, but the success of this effort is not yet known. Michigan has been attempting to get Medicaid to pay for CHWs as a non-SIM effort for several years, with no success as of April 30, 2017.

In Rhode Island, CHWs are not reimbursed, but some Rhode Island payers that have their own CHTs have hired CHWs on their own. Additionally, some care coordination is happening between certified CHWs and other CHT team members. However, the extent to which this care coordination is coded, billed, and reimbursed is unknown. One of the goals of the Rhode Island SIM Initiative is to demonstrate the effectiveness of the CHTs and the CHWs, to assist the state in making decisions about reimbursement for them. Whether certification programs for CHWs will result in reimbursement is unknown, as well.

Multiple telehealth challenges. Adoption of telehealth presents challenges in financing the costs, reimbursing providers who use the technology, and regulating its use. Idaho learned that the SIM Initiative cannot fund the cost of telehealth equipment, although SIM funds can be used for awards to support the implementation or expansion of telehealth. One Idaho provider lamented the state’s rejection of a law to provide parity in payment for providers who use telehealth services. Although Connecticut passed a law to reimburse telehealth services in certain rural settings, a Connecticut provider identified the lack of infrastructure and state regulation to “support telehealth” as reasons for the limited uptake of this technology. Idaho stakeholders also indicated the need for state legislation regarding logistical issues and the technological capacity needed for telehealth. Without significant state legislation or investments outside of the SIM Initiative—such as occurred in Colorado, which expanded broadband across the state and required insurance companies to reimburse providers for telehealth service delivery—practices may find it difficult to take advantage of telehealth as an approach for delivering care to underserved populations.

Behavioral health shortages. Shortage of behavioral health providers remains an issue that may require creative solutions other than financing. In implementing Colorado’s initiative to integrate behavioral health in primary care practices, the state was aware that access to

behavioral health providers would be a challenge. Therefore, Colorado provided small grants (using non-SIM funds) to SIM-participating practices to support their hiring a behavioral health provider, if necessary. However, some practices had trouble finding suitable providers. Colorado also is working on a telehealth strategy to improve access to behavioral health providers. Colorado's embrace of telehealth may work only in those states that have the necessary infrastructure.

Rhode Island is another example of a state that is dealing with behavioral health shortages. As one solution, Rhode Island began providing child and adolescent psychiatric consultation on diagnostic or treatment issues to pediatric primary care practitioners at no charge. The program's goals are to help pediatric primary care practitioners meet the immediate needs of their patients and to expand the range of behavioral health conditions they ultimately will be able to treat without psychiatric consultation.

Systems and skills for behavioral health providers. States also realized that behavioral health providers are likely to need systems and skills to promote their new responsibilities in care coordination. For example, a webinar was developed in Colorado to teach behavioral health providers how to appropriately and effectively share patient health information with PCPs. In Washington, an alert system of regular and ongoing information gathering from various sources, and between stakeholders and the state, was used to quickly surface potential problems during initial implementation of behavioral health providers' integration into Medicaid MCOs. State officials said they were pleased with how the process promoted ongoing dialogue and allowed for quick responses. Washington intends to repeat its use of the alert system as each new region implements the initiative. Similarly, the Rhode Island SIM Initiative funded Care Management Dashboards for its Community Mental Health Organizations to alert community mental health organizations about hospitalizations of their patients.

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4. Population Health

KEY INSIGHTS



- During the second Annual Report (AR2) analysis period, states completed integration of SIM population health plans with existing state population health plans, completed operational plans at the local and regional level, and awarded funds to pay for population health strategies.
- Progress on population health strategies was slower than expected, due in large part to complex objectives and a lack of clarity on roles and responsibilities.
- Stakeholders in several states voiced concerns that the infrastructure to support the population health objectives was inadequate or mismatched to local needs or existing infrastructure.

Improving population health is one of the three goals of health care transformation models and strategies being tested under Round 2 of the SIM Initiative. This chapter reviews the implementation progress states reported to meet population health goals during the second Annual Report (AR2) analysis period. The first section describes the progress made by states in their population health strategies as of April 30, 2017. The second section reviews common challenges in implementation and differing approaches to addressing these challenges, as well as stakeholders' emerging concerns that could hold implications for impact. **Section 4.3** summarizes the range of population health strategies states are employing based on the CMS adaptation of the Centers for Disease Control and Prevention (CDC) classification framework.⁴⁰ The final section compares the population health of the Round 2 Model Test states and the United States during the evaluation baseline period, using measures from the Behavioral Risk Factor Surveillance System (BRFSS).

4.1 Progress with strategies during analysis period

Given the challenges described in **Section 4.2**, many states did not progress as far as they had planned in the AR2 analysis period. However, all states made some progress in implementing their population health strategies. Idaho and Tennessee integrated statewide population health plans (required as part of their SIM Initiative) with existing overall state health plans. Delaware established new regional agents to carry out SIM objectives. Similarly, many other states completed operational plans at the local and regional levels. For example, Michigan's five Community Health Innovation Regions (CHIRs) either continued or completed local operational plans that included a 3-year budget and timeline for its activities. Iowa completed more detailed statewide strategies covering clinical and community health priorities, bringing the total to 10 by April 30, 2017.

⁴⁰ Auerbach, J. (2016, May/June). The 3 buckets of prevention. *Journal of Public Health Management and Practice*, 22(3), 215–218. doi: 10.1097/PHH.0000000000000381

Several states awarded SIM funds to initiate specific population health activities, initiatives, or programs during the AR2 analysis period. These activities address a wide range of local priorities. Examples include stigma-reduction campaigns and behavioral health prevention and screening promotion in Colorado, diabetes prevention programs and embedding health navigators in the delivery system in Iowa, and suicide prevention in Idaho. Each of Washington’s nine regionally based Accountable Communities of Health (ACHs) received \$50,000 to implement one locally developed, public health improvement project focused on bringing resources to at-risk populations.

4.2 Challenges

Progress was slower than expected largely because states struggled with a variety of challenges including (1) how to operationalize complex integration objectives in the absence of roadmaps, and (2) regional actors, tasked with meeting these objectives, struggled to define and understand their roles and responsibilities. In addition, population health strategies may not be as effective, because some health information technology (health IT) solutions, designed to support population health, fell behind schedule. Furthermore, some states are dealing with inadequate infrastructure and population health plans.

Operationalizing complex objectives and plans. The challenge of operationalizing complex objectives was faced at the state and regional levels. In Iowa, stakeholders reported that the organizations involved in the SIM Initiative were still trying “to understand social determinants ... [and] figure out where does that practically fit in a changed delivery system.” In Delaware, the Healthy Neighborhoods initiative struggled with finding the right implementation model. In Connecticut, stakeholders expressed different visions of who should carry out the work at the community level. Connecticut’s SIM strategies establish Prevention Service Centers and Health Enhancement Communities to coordinate population health efforts, but stakeholders expressed concern that new community entities would not integrate with existing programs or could duplicate or conflict with existing community resources.

Local and regional entities charged with coordinating activities between clinical and community settings confronted challenges operationalizing plans to engage clinical practices. In Idaho, some Regional Collaboratives (RCs) reported difficulty making decisions when confronted with conflicting interests of its members, without a statewide framework to coordinate the medical-health neighborhoods, and without actionable, local-level data. In Iowa, the Community Care Coalition (C3), the community agents for the SIM Initiative, struggled to make the transition from the traditional public health role they played, toward a new role that requires them to coordinate efforts with clinical settings.

To address the planning challenge described above, Michigan took several steps—from which other states could learn—to assist the regional CHIRs with operational planning in the

AR2 period. The state released a Participation Guide for CHIRs outlining clear guidance of expectations and requirements, added monthly learning calls with SIM staff, and added a SharePoint site to post frequently asked questions and deadlines.

Dependence on behind-schedule health information technology strategies. In addition to the organizational and process challenges described above, some states are supporting population health objectives through health IT initiatives, yet these initiatives are behind schedule. For example, Delaware planned to develop and launch a population health scorecard-dashboard for Healthy Neighborhoods during the AR2 analysis period, but made slower progress with the dashboard than expected. In Washington, discussions to incorporate nonclinical measures into the common measure set began at the end of the AR2 analysis period. Stakeholders anticipated that a challenge for this task would be linking existing clinical health data with population health data on social determinants of health, such as housing, education, and corrections. Therefore, the late start of what is expected to be a difficult task may impact the effectiveness of Washington’s related population health work.

Insufficient infrastructure and population health plans. Stakeholders in several states voiced concerns that the infrastructure to support the population health objectives was inadequate or mismatched to local needs and existing infrastructure. For example, Michigan’s CHIR organizations expressed frustration that the state population health focus was on emergency room (ER) utilizers, an area already targeted by several existing initiatives, but there were limitations on the types of health IT products CHIRs could use to fulfill SIM requirements. The state did not want CHIRs focusing on extensive system customization efforts, when solutions were already available; thus, Michigan plans to encourage CHIRs to use commercial off-the-shelf solutions. Several people in Connecticut thought the resources to be invested in creating new structures and programs would be better spent on existing programs to directly increase housing, food security, and transportation services. In Idaho, a few stakeholders pointed out a lack of resources led to a reliance primarily on volunteers among RCs. In Iowa, a few stakeholders pointed to some misalignment or lack of coordinated planning between C3s and overlapping activities already conducted by Medicaid managed care plans.

Similarly, a few stakeholders described weaknesses in their state’s population health plan, which they believed would limit the long-term impact of SIM population health strategies. One stakeholder in Rhode Island cautioned that the interventions selected to advance population health were not directly addressing social determinants of health. A parallel concern was raised by a stakeholder in Connecticut, who argued that “SIM overall hasn’t provided support and money to improve social determinants,” which could be addressed through partnerships with city and town officials that manage transportation, employment, and housing and directing resources to communities in need. However, a core activity for most SIM population health plans is linking

patients that present in clinical settings to community services they need. This linkage approach can be successful only if the community resources are available to meet these needs.

4.3 Classification of Population Health Strategies

States described 31 SIM-funded population health strategies based on their alignment with the three buckets adapted from the CDC's classification system for population health activities: traditional clinical approaches, innovative patient-centered care, and community-wide health.⁴¹ Ohio does not think of their population health initiatives, which focus on aligning quality measures for episodes of care and patient-centered medical homes (PCMHs) with population health goals, in terms of these three buckets.

States described three types of state population health strategies as sharing at least some elements with all three CDC buckets. One type, statewide population health plans, presumably spans all three buckets because the plans call for all three approaches to be used under the plan, and envision a comprehensive set of coordinated, linked activities and service offerings. Two examples are Rhode Island's Integrated Population Health Plan and Washington's Plan for Improving Population Health, known as P4IPH.

Another strategy, regional population health collaboratives, is simply a vehicle used in some states to pursue statewide goals at a regional level. Examples are Idaho's RCs and Washington's ACHs. In Idaho, responsibilities of RCs include supporting clinical interventions at the practices transforming into PCMHs, connecting PCMHs to the broader medical-health neighborhood, and addressing community-wide health issues. In Washington, ACH projects focus on health care system delivery issues, implementation of evidence-based services, and clinic-community linkages.

The third type of strategy, database initiatives, is viewed by some states as potentially supporting all three buckets. Database initiatives could support all three prevention approaches, depending on the spectrum of data shared across communities and how these data are used to pursue population health objectives. Iowa described its clinical indicators database, intended to support improvement efforts in communities, as falling into all three buckets, as did Delaware with its Common Scorecard, which focuses on aligning delivery system outcome goals with population health goals using patient-centered outcome measures.

According to the states' perception of the three CDC buckets, most other population health strategies fell into the first two buckets: traditional clinical and innovative patient-centered approaches. Of the 20 strategies defined by states as traditional clinical approaches, all but 6 also were described as supporting innovative, patient-centered care. States' dual classification of

⁴¹ Auerbach, J. (2016, May/June). The 3 buckets of prevention. *Journal of Public Health Management and Practice*, 22(3), 215–218. doi: 10.1097/PHH.0000000000000381

traditional clinical approaches with innovative, patient-centered care could be explained by several characteristics of their population health initiatives. First, clinical interventions that lead to referrals for other interventions taking place outside clinical settings, such as home visitation by community health workers, are examples of this dual classification. Furthermore, clinical care approaches could promote innovative, patient-centered care, if payment for the intervention is tied to patient-centered measures of provider performance. Lastly, states may perceive the interventions themselves as built on patient-centered principles. An example is Connecticut's Prevention Service Centers, which were in the proof-of-concept stage of development at the end of the AR2 analysis period. Connecticut engaged a diverse group of community service organizations in listening sessions to inform development of these centers, which will offer culturally appropriate and evidence-based community preventive services through primary care providers. Connecticut also is considering strategies to integrate incentives for population health improvement (e.g., its medical home programs) into health care finance mechanisms, such as shared savings arrangements, as an alternative to requiring health plans to meet population health targets.

Community-wide health is the second most populated bucket. Most of these initiatives focused on broad, community-based, or local public health agency strategies, often covering much or all the states' populations, and divided into local or regional efforts. Delaware's Healthy Neighborhoods initiative was placed in this bucket, as was Michigan's CHIRs. In both cases, these are the states' primary population health strategies. Connecticut's Health Enhancement Communities and Rhode Island's Community Health Teams also are described as fitting within this bucket.

4.4 Population Health Measurement and Impacts

To capture changes in population health in the Round 2 Model Test states, this and future annual reports will include 19 measures from BRFSS on health status, prevalence of health conditions, health risk factors, health care access, and receipt of preventive services for adults aged 18 and older (see *Section 1.3.2* for greater detail on the development of these measures). This report presents comparisons of population health in the states and the United States during the evaluation baseline period. The following series of figures displays the relative ranking of the 11 states and the national average during the 3 calendar years (2013–2015) prior to the start of the testing period.

Not all population health priorities selected by the states are captured in the selected BRFSS measures. Behavioral health is a population health priority in four states—Colorado, Connecticut, Ohio, and Washington. Maternal and child health was a population health priority for Ohio and Washington, and early childhood initiatives are a population health priority for Washington. Idaho has prioritized access to care, and Michigan is targeting high ER utilizers as part of its population health goals.

4.4.1 Baseline

Table 4-1 provides a summary count of how each state compared with the national average for the 19 measures. Six states' prevalence rates for 10 or more of the 19 measures are better than the national average. Connecticut ranks highest among these six states, performing better than the national average on 16 of the 19 rates. Five states' prevalence rates were lower than the national average for 10 or more measures. Ohio ranked at the bottom, with 17 of the 19 population health rates being worse than the national average.

Table 4-1. State Innovation Model Round 2 Model Test states' population health measure ranks relative to national average, 2013–2015

Rank	CO	CT	DE	ID	IA	MI	NY	OH	RI	TN	WA
Better than national average	14	16	9	8	10	3	14	2	14	6	13
Same as national average	0	0	0	1	0	0	2	0	0	0	0
Worse than national average	5	3	10	10	9	16	3	17	5	13	6

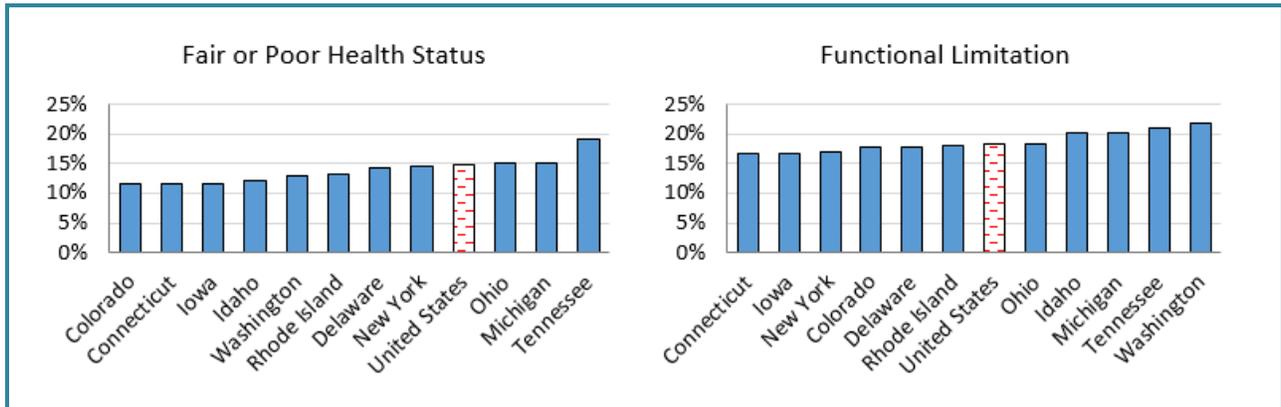
CO = Colorado; CT = Connecticut; DE = Delaware; IA = Iowa; ID = Idaho; IA = Iowa; = MI = Michigan; NY = New York; OH = Ohio; RI = Rhode Island; TN = Tennessee; WA = Washington.

The following figures (4.1–4.8) present measure-specific comparisons for each state relative to the national average. For many of the measures, the states vary across the baseline distribution, above and below the national average.

General health status is examined in *Figure 4-1*. For both fair or poor health status and functional limitation, Michigan, Ohio, and Tennessee had prevalence rates greater than the national average during 2013–2015. Idaho and Washington also fared worse than the nation for having a functional limitation. Colorado, Connecticut, Delaware, Iowa, New York, and Rhode Island performed better than the national average for both measures.

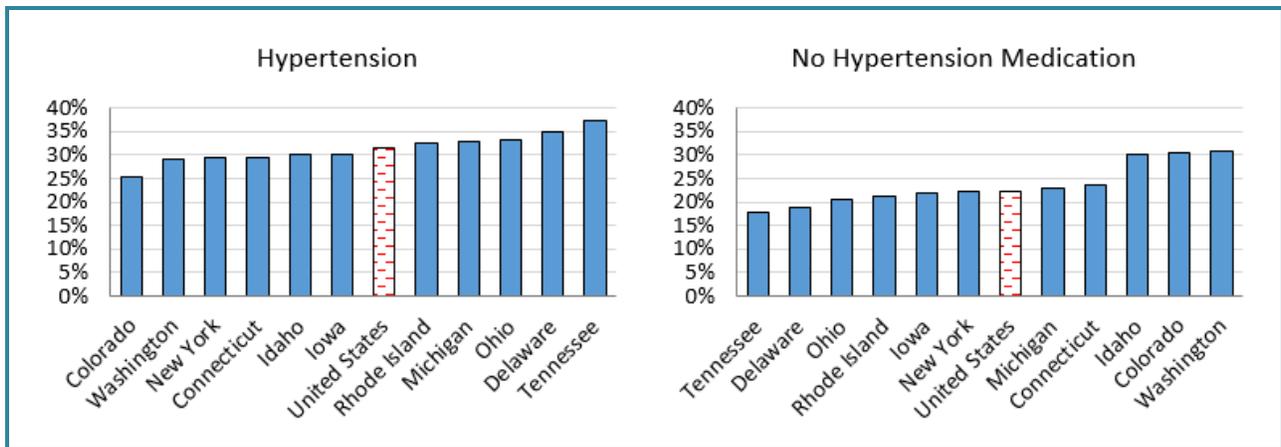
Figure 4-2 presents measures related to hypertension. The denominator of the first measure is the state population, while the denominator of the second is individuals diagnosed with hypertension. A higher percentage of diagnosed cases (first measure) could reflect relatively poor health statewide, or reflect greater success diagnosing cases. The second measure represents higher untreated hypertension (an indicator of poor population health) and is a measure of the system's response to diagnoses (thus lower rates are better). In states with prevalence rates of hypertension higher than the national average (Rhode Island, Michigan, Ohio, Delaware, and Tennessee), all but Michigan has lower (better) percentages of individuals not taking hypertension medication. Michigan had higher rates of hypertension and untreated hypertension than the national average, suggesting a greater population health problem than in New York and Iowa, where both prevalence rates and untreated hypertension rates were lower than the national average.

Figure 4-1. State Innovation Model Round 2 Model Test states' fair or poor health status and functional limitation prevalence rates, 2013–2015



Source: CDC (2017).⁴²

Figure 4-2. State Innovation Model Round 2 Model Test states' hypertension and hypertension medication prevalence rates, 2013–2015



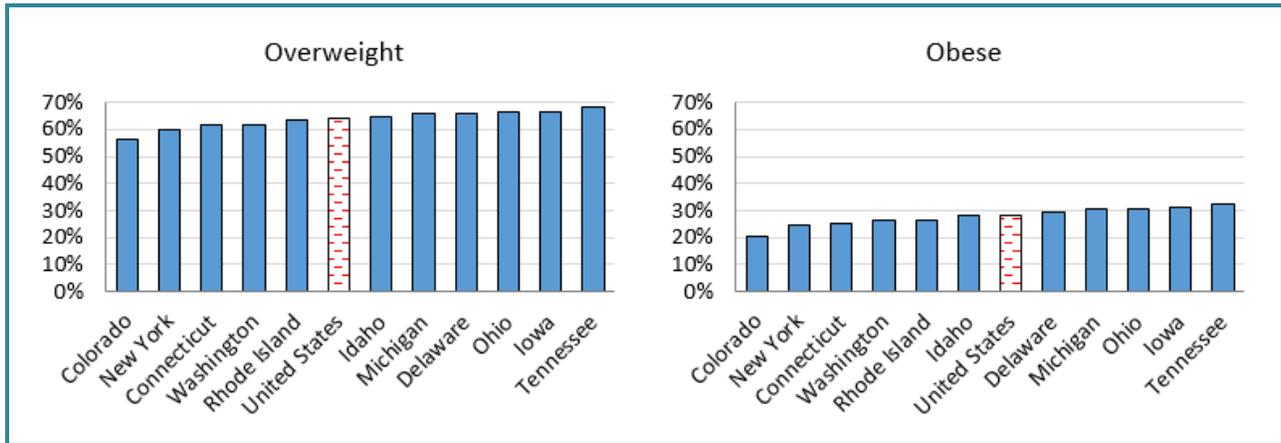
Source: CDC (2017).⁴³

The weight status of residents is compared in **Figure 4-3**. Compared to the national averages, five states have a higher prevalence of both overweight and obesity (Delaware, Iowa, Michigan, Ohio, and Tennessee). Among the 11 states, Tennessee has the highest rates of overweight and obesity; Colorado has the lowest.

⁴² CDC, National Center for Chronic Disease Prevention and Health Promotion, Division of Population Health. (2017). *BRFSS prevalence & trends data*. Retrieved August 10, 2017, from <http://www.cdc.gov/brfss/brfssprevalence/>

⁴³ Ibid.

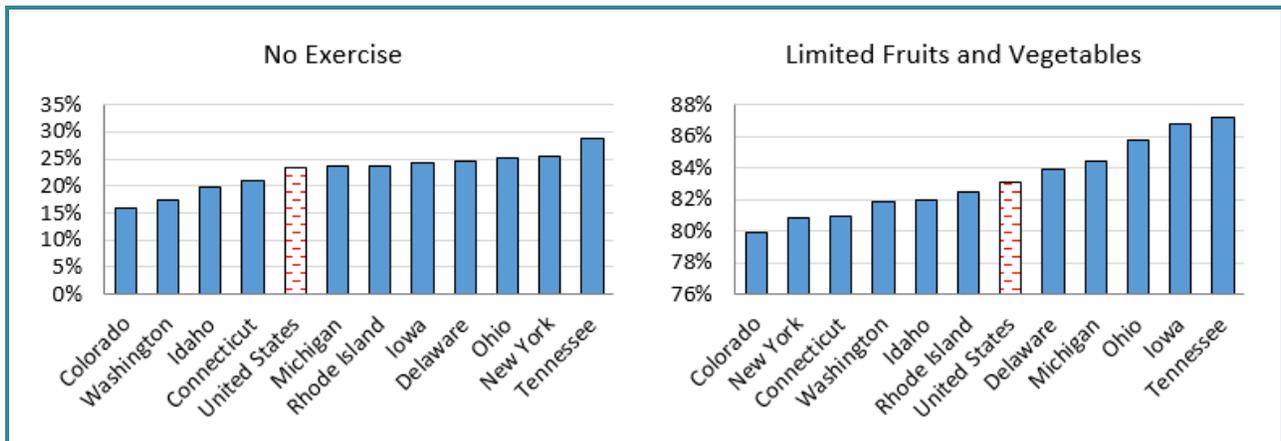
Figure 4-3. State Innovation Model Round 2 Model Test states' overweight and obesity prevalence rates, 2013–2015



Source: CDC (2017).⁴⁴

For two measures related to an unhealthy lifestyle—no exercise and limited fruit and vegetable intake—the prevalence rates of Delaware, Iowa, Michigan, Ohio, and Tennessee were worse than the national average for both measures (*Figure 4-4*). Colorado, Connecticut, Idaho, and Washington had rates better than the national average for both measures.

Figure 4-4. State Innovation Model Round 2 Model Test states' unhealthy lifestyle prevalence rates, 2013–2015



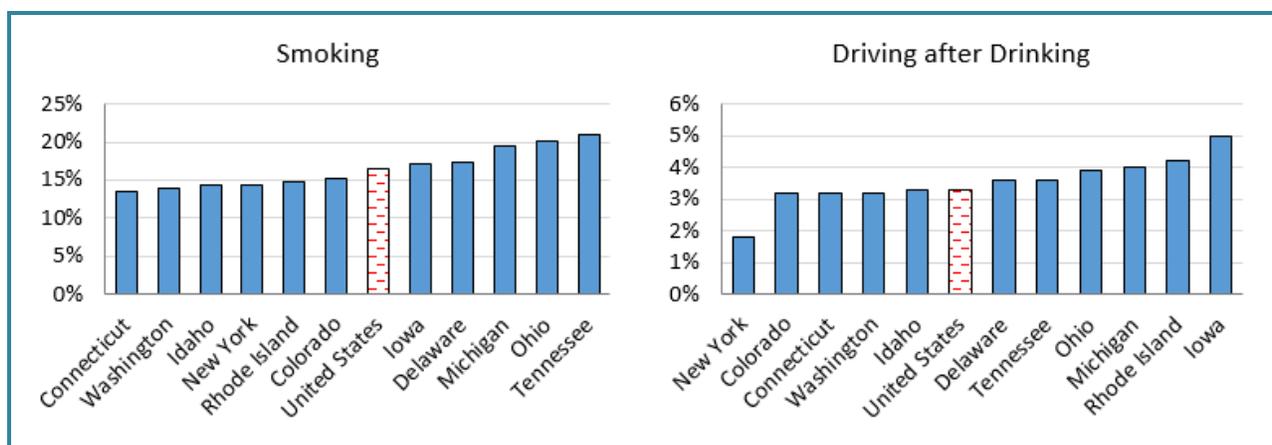
Source: CDC (2017).⁴⁵

⁴⁴ CDC, National Center for Chronic Disease Prevention and Health Promotion, Division of Population Health. (2017). *BRFSS prevalence & trends data*. Retrieved August 10, 2017, from <http://www.cdc.gov/brfss/brfssprevalence/>

⁴⁵ Ibid.

Figure 4-5 captures two measures related to unhealthy habits—smoking and driving after drinking. Delaware, Iowa, Michigan, Ohio, and Tennessee had prevalence rates that were worse than the national average for both measures. Rhode Island had a prevalence rate higher than the national average for driving after drinking only; Colorado, Connecticut, Idaho, New York, and Washington had prevalence rates that were better than the national average for both measures.

Figure 4-5. State Innovation Model Round 2 Model Test states’ unhealthy habits prevalence rates, 2013–2015



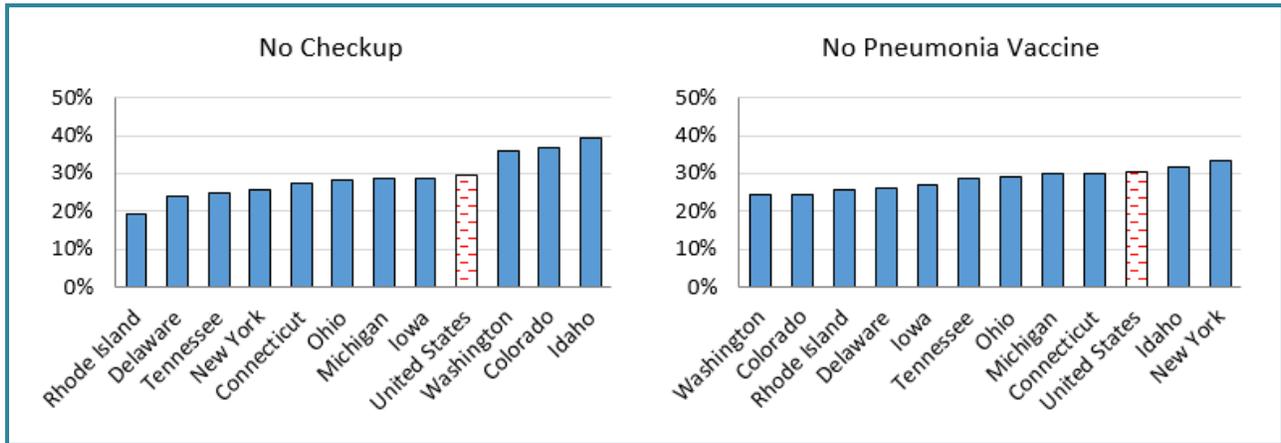
Source: CDC (2017).⁴⁶

Measures of preventive care are contained in **Figure 4-6**. Among the 19 population health measures, the states performed best relative to the national average on receipt of the pneumonia vaccine; only two states had higher rates of no vaccine. For these two measures—*no check-up* and *no pneumococcal vaccine*—seven states’ (Connecticut, Delaware, Iowa, Michigan, New York, Ohio, Rhode Island, and Tennessee) prevalence rates were better than the national average. Washington and Colorado had worse rates for *no check-up* but better rates for *no pneumococcal vaccine*. New York had a worse rate than the national average for *no pneumococcal vaccine* only, and only Idaho had worse rates for both measures.

Flu vaccination rates were worse than the national average for Idaho, Michigan, and Ohio for all ages and for adults 65 years and older (see **Figure 4-7**). Washington State’s rate was also worse only for adults 65 years and older, but better for all ages combined.

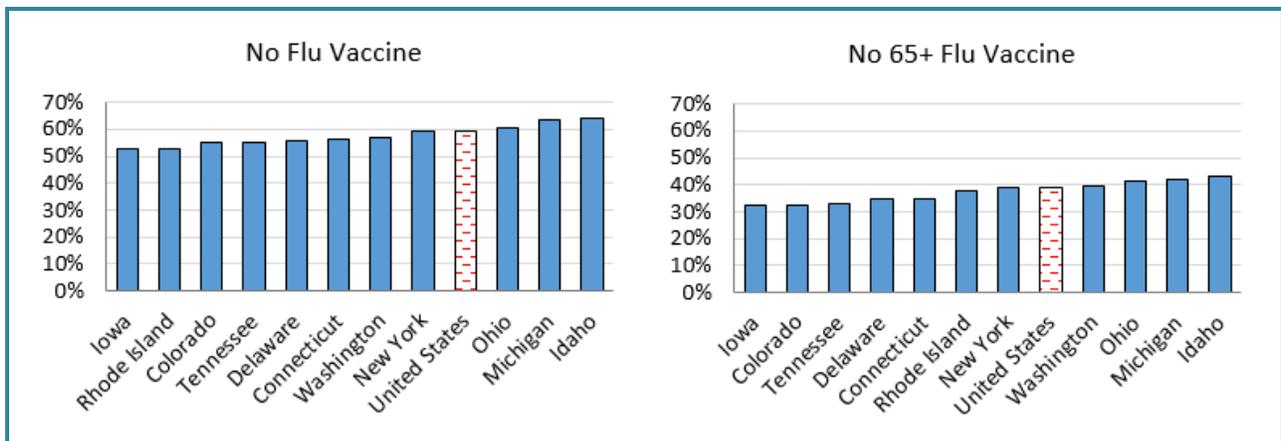
⁴⁶ CDC, National Center for Chronic Disease Prevention and Health Promotion, Division of Population Health. (2017). *BRFSS prevalence & trends data*. Retrieved August 10, 2017, from <http://www.cdc.gov/brfss/brfssprevalence/>

Figure 4-6. State Innovation Model Round 2 Model Test states' preventive care prevalence rates, 2013–2015



Source: CDC (2017).⁴⁷

Figure 4-7. State Innovation Model Round 2 Model Test states' flu vaccine prevalence rates, 2013–2015



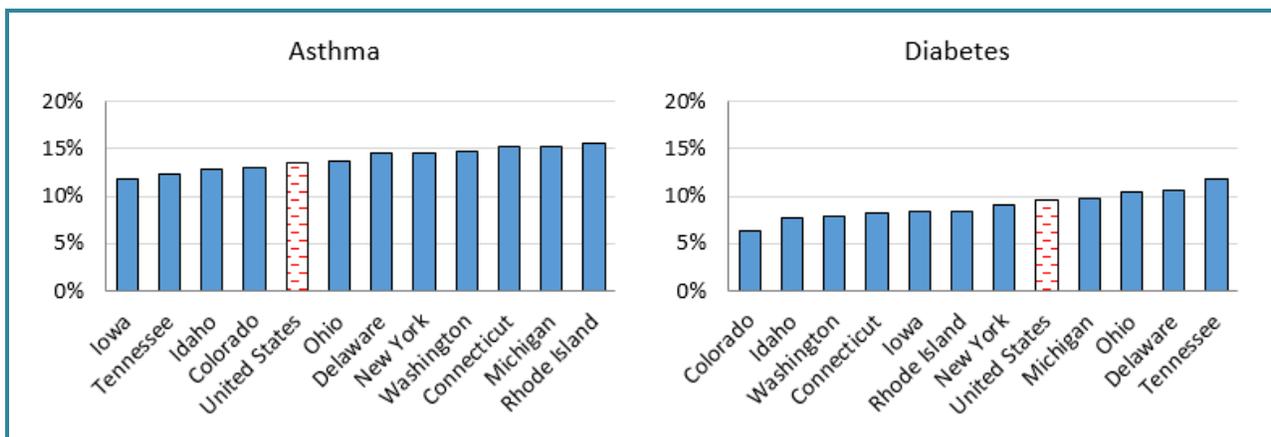
Source: CDC (2017).⁴⁸

The prevalence of asthma and diabetes among adults is compared in **Figure 4-8**. Asthma prevalence was greater than the national average for Connecticut, Delaware, Michigan, New York, Ohio, Rhode Island, and Washington. Diabetes prevalence was higher in Delaware, Michigan, Ohio, and Tennessee.

⁴⁷ CDC, National Center for Chronic Disease Prevention and Health Promotion, Division of Population Health. (2017). *BRFSS prevalence & trends data*. Retrieved August 10, 2017, from <http://www.cdc.gov/brfss/brfssprevalence/>

⁴⁸ Ibid.

Figure 4-8. State Innovation Model Round 2 Model Test states' asthma rates, 2013–2015



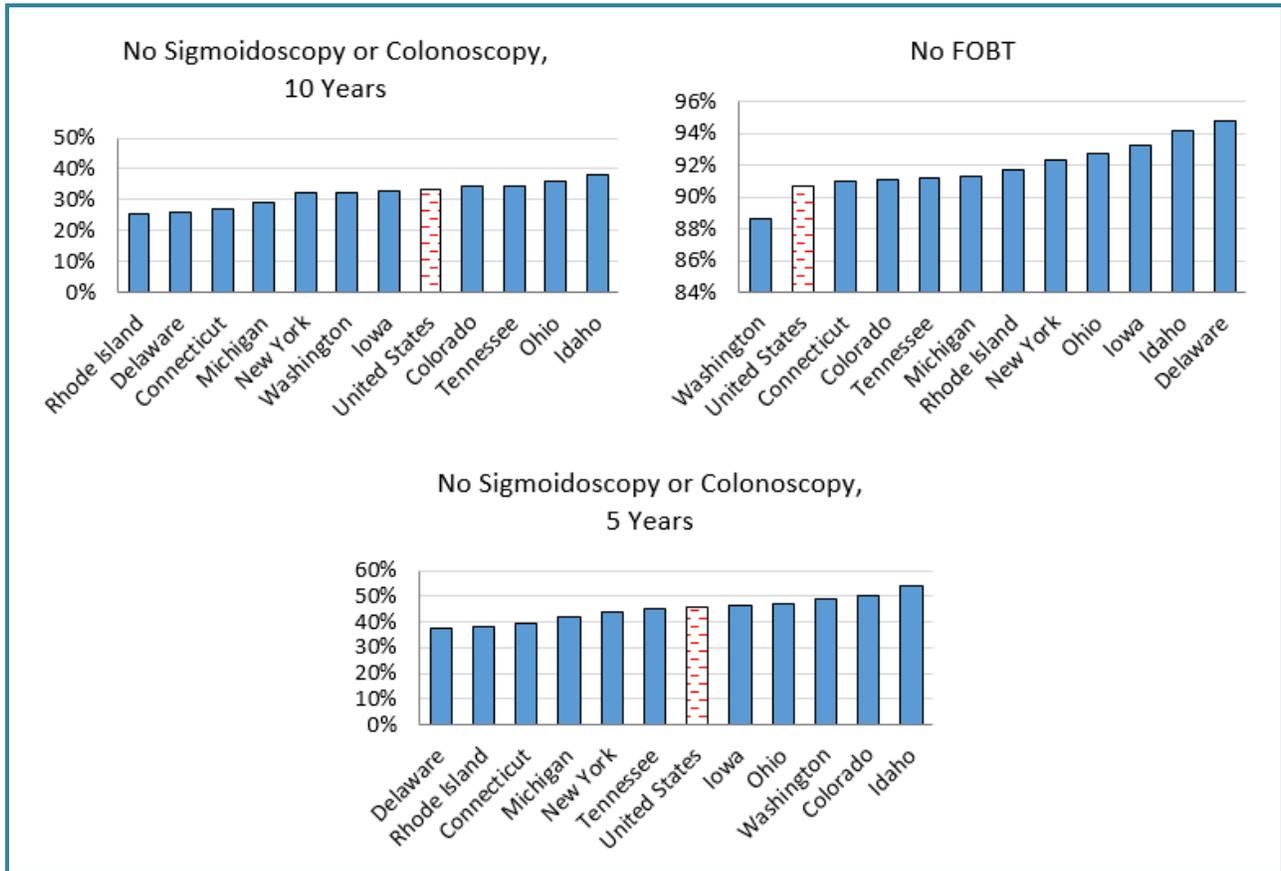
Source: CDC (2017).⁴⁹

Figure 4-9 presents measures related to colorectal cancer screenings. Among the 19 population health measures, the states performed worst relative to the national average on fecal occult blood testing; Washington is the only state that had a better testing rate than the national average. For sigmoidoscopy and colonoscopy rates of testing within the past 5 years, five states performed worse than the national average (Colorado, Idaho, Iowa, Ohio, and Washington⁵⁰). The rates for testing within the past 10 years were worse in three of these states (Colorado, Idaho, and Ohio) and in Tennessee.

⁴⁹ CDC, National Center for Chronic Disease Prevention and Health Promotion, Division of Population Health. (2017). *BRFSS prevalence & trends data*. Retrieved August 10, 2017, from <http://www.cdc.gov/brfss/brfssprevalence/>

⁵⁰Washington's lower colonoscopy rates may be a result of the state's higher fecal occult blood testing, and thus, not necessarily a negative finding.

Figure 4-9. State Innovation Model Round 2 Model Test states' colorectal cancer screening rates, 2013–2015



Source: CDC (2017).⁵¹

CDC = Centers for Disease Control and Prevention; FOBT = fecal occult blood test.

4.4.2 Impact

Most states and their stakeholders felt that the population health initiatives underway in their state were too new to impact population health outcomes, given that prevention programs and campaigns were selected and funded in this analysis period. However, there were anecdotes of early improvements in Idaho and Washington, but Delaware was the only state that reported measurable improvements. A health system stakeholder described improvements in Delaware’s diabetes control (evidenced by lower hemoglobin A1c levels) and mammography rates as early indications of the population health impact on the health systems’ patient panels. Despite the lack of early evidence, every state expressed strong optimism that the population health strategies would have an impact on outcomes in the future.

⁵¹ CDC, National Center for Chronic Disease Prevention and Health Promotion, Division of Population Health. (2017). *BRFSS prevalence & trends data*. Retrieved August 10, 2017, from <http://www.cdc.gov/brfss/brfssprevalence/>

However, several challenges and concerns that arose during the AR2 analysis period could influence the realization of these expectations. As pointed out earlier, some stakeholders expressed concern that population health plans did not match local assessments of community needs, or did not fully leverage and coordinate with existing infrastructure. These concerns could signal more obstacles ahead or lead to challenges sustaining community interest in SIM population health initiatives. Moreover, a few stakeholders perceived weaknesses in their state's population health plan, which they believed would limit the long-run impact of SIM population health initiatives and the impact on social determinants. Finally, some states are supporting population health objectives through health IT initiatives, yet these initiatives are behind schedule. Thus, states' capacity to overcome these challenges and address these concerns in the future could have implications for the long-run impact of SIM population health initiatives.

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5. Conclusion

At the close of the Annual Report 2 (AR2) analysis period (July 1, 2016, through April 30, 2017), the 11 Round 2 Model Test states had completed their preimplementation period (Award Year 1) and were in their testing phase (either Award Year 2 or Award Year 3). Every state pursued reforms and models in support of making progress toward its “preponderance of care” goal: 80 percent of health care in the state being delivered through value-based purchasing or alternative payment models (APMs). States worked to develop strategies to engage payers and providers within their unique state contexts. During this period, states began to report their progress toward reaching their preponderance of care goals and grappled with methodology (how to define the metrics) and getting all the data that they needed. For example, no state had reported data showing the extent to which its commercial payer population is participating in SIM payment models.

Across states, value-based purchasing and APM initiatives were implemented in state-run and financed delivery systems; commonly in Medicaid programs and to a lesser degree, public employee health plans. States continued to focus on engaging practices in their Medicaid patient-centered medical homes (PCMHs) SIM initiatives, and some states found uptake to be slower than expected, resulting in varying success in reaching recruitment goals. For example, some providers were deterred by rigorous National Committee for Quality Assurance accreditation standards and others by payments considered to be inadequate to support the additional services needed to operate virtual PCMHs. Episodes of care were being implemented in two states and are an important approach for directly including specialty practices in APMs. Stakeholders reported that to be successful, specialty providers will need to learn how to use practice feedback reports to improve their performance. Also, some states require their Medicaid managed care organizations to adopt value-based purchasing models or offer financial incentives for them to do so.

Except in Rhode Island, participation by commercial payers in the SIM Initiative is voluntary. States encouraged engagement of commercial payers through education and participation by payers in decision making, including seeking their participation on collaboratives and work groups. States hope that alignment across payers will facilitate provider acceptance of APMs by reducing their need to meet numerous and diverse contractual requirements. Some progress has been made to date, most notably in Comprehensive Primary Care Plus practices.

The SIM Initiative is an important catalyst for quality measure development and alignment in the states. Many states have convened one accountable stakeholder work group to lead measure set development, but have varied approaches to implementation. Some states are successfully implementing measures in their Medicaid programs, with the additional goal of

demonstrating their value to other payers in the future. Others are promoting participation across payers and providers by allowing flexibility in selecting and alignment among measures. Commonly, practices need assistance in operationalizing measures, including extracting data from their electronic health records.

Health information technology and data analytics infrastructure development are cornerstone strategies across SIM initiatives. In general, states are proceeding more cautiously than they had originally planned, due to the complexity of developing a new data infrastructure. During AR2, activities included pilot projects and developing enhancements that built on existing infrastructure. Going forward, a key consideration will be a state's ability to establish systems that can ensure the protection and confidentiality of proprietary data, while integrating health records from multiple commercial payers.

Practice transformation, workforce, and population health development activities differ significantly across states and reflect the states' different environments and visions. An important activity across states was supporting change in primary care practices through a variety of levers (e.g., technical assistance, hubs, collaborative learning, telehealth, new staff roles such as community health workers). State administrators worked on the needs of providers and addressed stakeholder concerns regarding funding sustainability and workforce availability. In their focus on population health, states began to operationalize complex integration objectives that required the development of new roles and responsibilities on the local level. As in other aspects of implementation, challenges were being addressed, but progress was slower than originally expected.

Because states were at the end of their Award Year 2 or early in their Award Year 3 at the end of this analysis period, implementation of many reforms and strategies had occurred only recently. Thus, most stakeholders agreed that substantial progress in implementation has occurred, although the impacts of these initiatives on care delivery, coordination of care, utilization, expenditures, and population health outcomes were not yet measurable.

Appendix A: State Innovation Model in Model Test States: Colorado

Key Results from Colorado's State Innovation Model Initiative July 2016–April 2017

- Many providers and organizations participate in Colorado's SIM Initiative, including 92 primary care practices, with approximately another 150 set to join (as the second of three planned cohorts totaling nearly 400 SIM-participating practices); four community mental health centers; 21 regional health connectors; eight local public health agencies; and several community-based organizations and government agencies participating in two behavioral health transformation collaboratives.
- Practice coaching and practice transformation technical assistance were well received by SIM-participating primary care practices. These efforts were improving care delivery and the integration of behavioral health into primary care.
- Colorado modified its primary care initiative to (1) clarify expectations for success, (2) ensure participating providers understood what financial support they could expect from participating payers, and (3) align quality measure reporting with Comprehensive Primary Care Plus (CPC+) and Medicare's Quality Payment Program. Stakeholder and provider feedback and implementation of CPC+ motivated these changes to align the SIM Initiative with other efforts to reduce provider burden.
- The SIM-participating payers (six commercial payers and Medicaid) are adopting their own alternative payment models with SIM-participating primary care practices. Payers appreciate the flexibility, but providers are concerned that, without a uniform model, they may not have adequate financial resources to support practice transformation.

This appendix provides an updated overview of the Colorado SIM Initiative; describes important changes in the state's SIM Initiative; summarizes implementation and testing successes, challenges, and lessons learned; and discusses early changes or prospects of changes resulting from the SIM Initiative. The findings in this appendix are based on analysis of data collected from key findings from stakeholder telephone interviews, state document reviews, and state program and evaluation calls. These data were collected between July 1, 2016, and May 2, 2017.

As a source for this appendix, the RTI team conducted 20 key informant interviews from March 29 through May 2, 2017.⁵² The key topic areas of the interviews were (1) changes in governance and program administration, (2) progress implementing SIM models and initiatives, (3) participation of payers and providers, (4) progress toward a preponderance of care in the state being provided through an alternative payment model (APM), and (5) early indicators of changes in relevant outcomes. Interviewees included state officials, payers, providers, and consumer advocates involved in the development and implementation of Colorado's SIM Initiative. Further

⁵² The RTI evaluation team needed to obtain primary care provider (PCP) perspectives on the SIM Initiative for this annual report, but there were delays scheduling interviews with participating PCPs. Thus, interviews extended beyond the April 30, 2017, analysis period for this report.

details on the analytic approach are available in *Chapter 1*. Information on the number and type of stakeholders interviewed for the state is in *Table 1-1*.

A.1 Implementation Activities

Since June 30, 2016, Colorado has made progress in the implementation of delivery system reform, practice transformation, population health, and quality measure alignment. Colorado maintained payer and primary care practice participation in its delivery reforms, released funding to bidirectional health homes to begin activities, onboarded local public health agencies (LPHAs) and regional health connectors, and refocused its quality measure approach. Implementation progress was slower than anticipated for health information technology (health IT) efforts, because the state spent this analysis period defining and revising its goals for the health IT investment. However, the state did make progress in health IT by connecting SIM-participating practices to claims and clinical data sharing platforms to support their practice transformation efforts. Colorado experienced some delays in release of SIM funds to conduct key activities. In response to these delays, the SIM office requested and was granted a no-cost extension for SIM Award Year 2 through the end of July 2017.

A.1.1 Governance and program administration

The governance and administrative structure of Colorado's SIM Initiative has remained substantially the same since the end of the Annual Report 1 (AR1) analysis period. However, in the AR2 analysis period, Colorado experienced SIM office staff turnover, challenges in recruiting key staff, and vendor contracting delays.

State Innovation Model staff turnover. Turnover in several management positions, including the policy and strategy program managers and the health IT program manager, resulted in delay of some implementation activities, a shift in some roles because of ensuing office reorganization, and in one case, an issue with recruitment. Several state officials interviewed concurred that there was some disruption in SIM administration with staff turnover, but that the SIM office had managed the turnover well. Some interviewees, however, still perceive that the SIM office is understaffed, and as a result, communication between the SIM office and stakeholders was adversely affected at times.

Recruiting challenges. In the AR2 analysis period, the SIM office anticipated filling a position for a health IT data architect, which will be housed in Colorado's Office of Information Technology (OIT). This position is viewed as key to identifying the technical requirements needed to move Colorado's SIM Initiative health IT plan forward. However, at the end of the AR2 analysis period, the data architect position remained unfilled. To address this key staffing gap, the SIM office is partnering with OIT for a staff member to temporarily assist in the SIM work through July 2017, after which the office is planning to contract for a technical-data architect through the OIT. The SIM office also created two new health IT staff positions—a

health IT data strategy program manager and a data and policy analyst—with the intent of having these positions filled by July 2017.

Vendor contracting delays. As of April 30, 2017, Colorado’s SIM Initiative has 17 vendors. Over the current analysis period, the state experienced delays in receiving CMS approval to release SIM funds to these vendors, because vendor budgets and project plans did not always conform to CMS’s requirements. After following steps outlined in a CMS performance improvement plan, state officials reported satisfaction with their capacity to more effectively execute and monitor vendor contracts, and funding was released for the delayed activities.

A.1.2 Stakeholder engagement

A wide range of stakeholders indicated that they felt engaged in Colorado’s SIM implementation by providing feedback mainly through work group meetings and direct communication with SIM office staff. Moreover, they believed that their feedback was heard by SIM office staff and that they could obtain information about the SIM Initiative when needed.

Work groups. Engaged stakeholders attributed their positive experiences to participation in one of the SIM Initiative’s seven work groups. As one stakeholder shared, “... the amount of information sharing that goes on with each and every work group with all the people and pieces of information is pretty impressive.” Many stakeholders noted that the work groups were the right size and included the right types of stakeholders.

Despite overall positive feedback about the work groups, some stakeholders shared criticisms about their effectiveness. Some work group members noted that, although they had a good understanding of their work group’s SIM activities, they lacked a good understanding of what other work groups were doing. In addition, only two group forums, the Consumer Engagement Workgroup and the SIM Advisory Board included consumer representatives. Whereas the SIM office promoted inclusion of consumer representatives and their integration was viewed by stakeholder work group members as beneficial for the SIM Initiative, a few stakeholders observed that the consumer perspective was not always considered and that greater emphasis needed to be placed on including consumers in all work groups. Based on this feedback, the state is considering piloting an initiative that would use community liaisons to connect interested consumers with the Consumer Engagement Workgroup or other SIM work groups. In response to another critique that SIM activities often overlap across work groups, the SIM office decided in January 2017 to end the payment reform work group and work group members were reassigned to one of the remaining seven work groups.

State Innovation Model communications. Stakeholders described a variety of opportunities outside the work groups to give feedback to the SIM office. A frequently mentioned opportunity for provider feedback was the use of telephonic office hours for practice transformation organizations (PTOs). The office hours give PTOs time to ask questions and

share progress with the SIM office as well as share best practices with other PTOs. However, some consumer advocates, state officials, and payers reported that patient and provider engagement in SIM was inadequate and that communication between payers and providers specifically needed to improve. Further, a few stakeholders observed that behavioral health providers were not appropriately engaged in the initiative. As one payer described, "... behavioral health organizations in general have struggled with the endorsement of SIM and, you know, a frustration that SIM does not adequately represent behavioral health perspective or direction."

To address patient engagement, the SIM office hired a communications manager to revamp many of the SIM communication efforts. In addition, the Consumer Engagement Workgroup is working on a toolkit to help SIM-participating practices improve their patient engagement.

Multi-Stakeholder Symposium. Many stakeholders, including state officials, payers, and others, felt that communications between payers and SIM-participating primary care providers (PCPs) were inadequate, particularly around value-based payment (VBP) reimbursement. As discussed in greater detail in ***Section A.1.3.***, some Cohort 1 participating providers believed that payers did not provide transparent information about VBP reimbursement. Stakeholders also indicated that more ongoing communication about how SIM-participating payers were collaborating with the SIM Initiative would be helpful. To improve the working relationship between payers and practices, Colorado initiated a Multi-Stakeholder Symposium with payers and practices in January 2017. Symposium attendees were invited to share their thoughts on SIM implementation, current challenges, and areas for improvement. The SIM office received positive feedback from symposium attendees, and the symposium will be reconvened three to four times per year.

A.1.3 Delivery systems and payment reforms

The Colorado SIM Initiative supports two major delivery system reforms focused on integrating behavioral health and primary care services. First, Colorado will select up to 400 primary care practices over the course of 3 years. These primary care practices will receive practice transformation support to integrate behavioral health and primary care services and to prepare for VBP arrangements with payers. Second, Colorado is piloting "bidirectional integration," that is, integration of primary care with four community mental health centers (CMHCs).

Regarding payment reform under the SIM Initiative, seven payers (six commercial payers and Medicaid) agreed to support SIM-participating primary care practices with VBP. The expectation is that a VBP will provide practices reimbursement for some of the transformation activities that are not typically reimbursable under fee-for-service (FFS) arrangements. The

CMHCs in the bidirectional health home pilots are not included in that arrangement, but they do receive some SIM funding to assist in carrying out their transformation activities. At the end of the AR2 analysis period, Colorado's delivery system and payment reforms remained focused on these two initiatives.

Practice transformation model for primary care

Primary care practice participation remained consistent for the first cohort. By December 2016, 92 of the original 100 practices were participating in the model.⁵³ According to state officials, five practices dropped out because they were purchased by a health system that declined to participate. Among the other three of the single-practitioner primary care sites, at least one dropped out because the financial support available from SIM-participating payers did not match the practice's expectations, and participation was deemed cost prohibitive. Participating practices received practice transformation support with no major delays in activities (see **Section A.1.5** for more details on practice transformation support).

In February 2017, after several months of intentional delay, Colorado released a request for application (RFA) for the second round of primary care practices to participate in the SIM practice transformation model.⁵⁴ Colorado intends to select approximately 150 practices in this round (i.e., Cohort 2).⁵⁵ As of April 2017, over 200 practices applied, but final selections were not made. Colorado delayed release of the RFA to allow time to make changes to the practice transformation model for Cohort 2 and to ensure that all changes were clearly communicated through the RFA. Changes were made to (1) clarify what practice transformation milestones practices needed to meet, (2) describe the nature of multi-payer support, and (3) align quality measure reporting with Comprehensive Primary Care Plus (CPC+) and Medicare's Quality Payment Program (QPP). Colorado's SIM office worked extensively with its practice transformation work group and the multi-payer collaborative to narrow the focus of the model for the practices and payers.

The impetus for changes in the SIM practice transformation model came from (1) Colorado's selection to participate in CPC+ beginning January 2017 and (2) a reported lack of alignment of expectations between primary care practices and payers in Cohort 1. As one state official noted, "[CPC+] created tremendous opportunities and challenges all at the same time for us." Because CPC+ has a behavioral health integration track and VBPs are made by participating CPC+ payers, including Medicare, the Colorado SIM office was concerned that if the request for the SIM Cohort 2 practices was issued when originally planned, the primary care practices would

⁵³ Colorado Department of Health Care Policy, Financing Purchasing and Contracting Services. (2017, April 5) *Colorado State Innovation Model Evaluation Quarterly Report October–December 2016*. Final report. Retrieved from <https://drive.google.com/file/d/0BxUiTiOwSbPUUHpOSTFiVDiKMGM/view>

⁵⁴ For the remainder of this appendix, Colorado's initiative to integrate behavioral health and primary care within SIM-participating primary care practices will be referred to as the practice transformation model.

⁵⁵ Colorado SIM Operational Plan. (2016, January 6). Retrieved from <https://drive.google.com/file/d/0BxUiTiOwSbPUY2xvRmNpX1JkMDg/view>

choose CPC+ participation over SIM participation. The Colorado SIM office worked extensively with CMS to devise a pathway that would enable both current and future cohorts of primary care practices to participate in both initiatives and make the SIM Initiative complementary to CPC+.

Payment reform for the SIM-participating primary care practices

Colorado places a high value on the multi-payer aspect of the SIM Initiative's payment reform. The SIM office views its role as working with the multi-payer collaborative to promote the spread of VBP within SIM-participating practices. By offering the participating payers the flexibility to negotiate their own payment arrangements with the practices, the SIM office believes it can sustain multi-payer support for the SIM Initiative and spread the use of VBP. However, reactions by providers and payers to this approach to payment reform are mixed.

Most practices had expected additional reimbursement for their integration efforts under the SIM Initiative, and this was not always the case. Some payers chose to provide additional reimbursement, and others believed that VBPs that were already in place with participating practices were appropriate also to adequately support the SIM primary care transformation requirements. State officials, payers, and providers uniformly acknowledged that misaligned expectations created some discord between practices and payers. The SIM office described the experience of Cohort 1 as a critical learning experience that motivated them to revise the RFA for Cohort 2. The goal for the new RFA was to make much more explicit what financial support from payers would look like, in the hope of creating aligned expectations for Cohort 2 at the start of their SIM participation.

Stakeholders expressed some criticism about the state's approach to payment reform. Some state officials described the payment model as very much a "patchwork" without any cohesiveness or continuity. As one state official noted, "What practices would like and need is a single voice and alignment across all the payers showing them: Here's the dollars you would get." Another noted that, without a uniform VBP approach, it would be difficult to know what kind of VBP successfully supports practice transformation. Other providers and state officials observed that flexibility resulted in some payers offering financial incentives that were not large enough to cover participating practices' integration activity costs. Some payers wished other payers were doing more to support the SIM-participating practices, either by providing a new or enhanced VBP or by covering more SIM-attributed patients under an existing VBP. Despite concerns about adequate reimbursement, some providers reported that they were participating regardless of the payment amount, because they believe integrating behavioral health is "just the right thing to do."

Payers and state officials who supported the model's flexibility reported that this flexibility was a "carrot" that kept Colorado's SIM Initiative truly multi-payer. According to these state officials and payers, if the model had been more prescriptive, fewer payers may have been willing to participate, because reaching agreement among many payers on one specific

model was viewed as virtually impossible. Payers have their own priority projects that do not necessarily include the SIM Initiative. As one payer described it, the SIM Initiative was a “leap of faith,” because the payer’s return on investment was not guaranteed. Therefore, having the flexibility to decide the level of financial support to provide practices made participation more feasible.

Bidirectional health homes pilot

In November 2016, 10 months after the launch of the SIM Initiative in Colorado, the CMHCs’ SIM funding was approved by CMS. Through the approval process, some CMHCs had to revise proposed projects to ensure that they conformed with CMS requirements for the types of activities SIM funding could cover. In some cases, their initially proposed activities could not be funded. CMHCs involved in the pilot expressed dissatisfaction with the delays and the initiative itself. The SIM Office responded to CMHC concerns by refocusing efforts to increase the CMHCs’ practice transformation supports (see **Section A.1.5** for additional details). Colorado views their ability to provide this in-depth practice transformation assistance as a key lever to encourage participation. As one state official shared, “[Practice transformation assistance has] been a huge motivator for practices, because they feel as though they are getting rewarded for something they were already doing or things they were already trying to implement, and now they get coaching, they get guidance, and they also get funding [for it].”

Some participating CMHCs were disappointed that the SIM office does not intend to facilitate VBP with payers in the multi-payer collaborative for CMHC integration efforts. CMHCs hoped that their integration efforts would be viewed as a worthy investment to improve patient care by payers. However, the SIM office does plan to use the pilot to develop recommendations for future VBP approaches to support bidirectional CMHC transformation after the SIM Initiative.

A.1.4 Health information technology and data infrastructure

During the AR2 analysis period, Colorado’s SIM Initiative continued to implement several health IT and data analytics tools put in place during the SIM Award Year 1, and Colorado continued to plan for additional health IT investments, including telehealth and advancement of electronic reporting of clinical quality measures (CQMs).

In summer 2016, Colorado provided the Shared Practice Learning Improvement Tool (SPLIT)⁵⁶ to SIM-participating primary care practices. Practices are required use the tool to submit self-assessments of practice transformation progress and CQM reporting to the Colorado

⁵⁶ SPLIT is used by the primary care practices and bidirectional health homes to submit results of their self-assessments of progress in meeting practice transformation milestones every 6 months. The Quality Measure Reporting Tool (QMRT) is embedded within SPLIT and used by SIM-participating primary care practices to electronically transmit CQM information quarterly to the SIM office.

SIM office. In turn, this practice requirement serves as a primary lever in Colorado’s efforts to encourage practices to adopt health IT and data analytics. Interviewed providers were familiar with the tool and reported that their assigned practice transformation facilitator and clinical health IT advisors (CHITAs) were helping them use SPLIT (see **Section A.1.5** for more information about practice transformation facilitators and CHITAs).

With respect to the telehealth strategy, since the start of the SIM Initiative, Colorado expanded broadband (a prerequisite for telehealth) across the state, reaching 80 new health care sites. Colorado’s efforts to promote telehealth were bolstered by the 2015 passage of Colorado House Bill 15-1029, which requires insurers to reimburse providers for telemedicine. The Colorado SIM office also funded development of two reports on the state of telehealth, and the SIM office convened subject matter experts in this area who are helping the SIM office develop a telehealth strategy.

During the AR2 analysis period, the SIM office advanced data analytics by providing SIM-participating primary care practices with claims-based cost and utilization data and data reports. Colorado began distributing practice-specific reports (generated using Colorado’s all-payer claims database) to help practices monitor trends in cost, utilization, and quality as well as identify gaps in care. As of April 2017, all SIM-participating primary care practices have access to Stratus, a data analytics tool that aggregates patient-level information from multiple payers’ claims data, but not all of the primary care practices were accessing the Stratus data. With Stratus, practices can view their patients’ claims data from one portal with data visualizations to help practices identify gaps in care and track costs and utilization. As practices become familiar with tracking these trends, Colorado expects that the practices will be prepared to participate in VBP arrangements because they can track their progress in meeting quality and costs targets. As of April 2017, Colorado began negotiating with CMS to obtain Medicare data for inclusion in Stratus.

During this AR2 analysis period, the SIM office also served as a convener to bring health IT thought leaders into the health IT work group and its subcommittees. The goal of these collaborations is to think through and guide various health IT activities including reviewing and promoting state laws, regulations, and policies that could be helpful in promoting provider data sharing and more widespread use of telehealth. Despite progress in advancing their health IT agenda, Colorado is grappling with several challenges.

Barriers to sharing behavioral health data remain. Primary care and behavioral health providers are unsure which data they can share with each other. One interviewee noted that the ongoing data-sharing barriers are a critical impediment to behavioral health integration. In one effort to address this, the policy work group developed and launched a webinar for providers to explain how to effectively share behavioral health data between mental health and PCPs.

Bidirectional health homes are not yet integrated into SPLIT, and some providers are concerned that they will not be fully integrated into a telehealth strategy. At the outset of the SIM Initiative, interviewees from bidirectional health homes reported that they were unclear whether they would gain access to SPLIT or receive practice feedback reports, even though Colorado had always planned to provide them with these tools. As of April 2017, bidirectional health homes were not integrated into these data analysis tools. However, Colorado does plan to have them report on practice transformation and CQM progress in SPLIT and receive practice feedback reports. To this end, Colorado contracted with Health Management Associates to work with the bidirectional health homes to develop consensus around reporting quality measures and defining which patients should be attributed to the health homes for purposes of monitoring costs, utilization, and quality. Telehealth also was raised as an area of concern among behavioral health providers, who expressed concern that they will not be included as quickly as other providers in future telehealth strategies. However, without a clear telehealth strategy in place as of the end of the AR2 analysis period, the role of behavioral health providers in future telehealth strategies remains to be seen.

The State Innovation Model health information technology vision is taking time to develop. Many state officials acknowledged that the health IT component of the SIM Initiative was the slowest to gain traction. State officials perceived that Colorado struggled with a lack of a long-range vision for how to best use SIM funding to promote health IT. The substantial need to support SIM-participating providers in their data reporting requirements, coupled with a limited amount of SIM funds for promoting statewide health IT changes, is a challenge for the SIM office. State officials noted that these issues are compounded further by competition from health IT initiatives elsewhere in the state and the challenge the SIM office had with filling the vacant IT data architect position.

To address concerns about developing a feasible, long-range vision for health IT, the Colorado SIM Initiative contracted with Mede Analytics to work with the health IT work group to develop approaches to using SIM health IT investments, known as “use cases.” After 11 use cases were identified, two were prioritized by the health IT work group: (1) approaches to facilitating effective exchange of health information between providers and (2) advancing CQM reporting for providers. To further this work, Colorado contracted with Deloitte Consulting to develop a health IT implementation roadmap for the two use cases. Colorado expects that the roadmap will inform how certain data analytics platforms develop to support the vision. For example, it is anticipated that the Quality Measure Reporting Tool (QMRT+)—currently envisioned as a centralized data hub that will collect, quality check, store, aggregate, and report out CQM data collected through providers’ electronic health records (EHRs), which also can link to Colorado’s all-payer claims database—may evolve.

A.1.5 Practice transformation and workforce development

The SIM Initiative supported providers participating in the delivery system models in four ways: through in-person technical assistance using contracts with PTOs to provide practice facilitators and CHITAs; learning collaboratives; E-learning modules; and practice transformation small grants funds.

Practice transformation

Stakeholders had mixed impressions of the effectiveness of the practice support provided by the PTOs during the AR2 analysis period, although, overall, providers welcomed the transformation support. Some stakeholders viewed practice transformation assistance as a critical lever for practices' participation and continued engagement in the practice transformation model. As one stakeholder shared, "... the most valuable resource we have had by far is the practice transformation piece," and another reported "... now with a coach, [the practice] know[s] the difference it [practice transformation assistance] can make." Practices also completed a survey about practice transformation and provided positive feedback about the opportunities associated with it.

Despite the positive reception of practice transformation support, there were also several concerns raised by stakeholders. Some payers and state officials indicated that the skills and resources of the PTOs do not always meet practices' transformation assistance needs, which varied greatly. A few state officials and providers observed that practices were unable to gain the support and transformation assistance they needed from the practice facilitators and CHITAs. Some providers noted that they were expecting more assistance from their CHITAs and found that CHITAs' knowledge was somewhat limited. This was particularly true regarding CHITAs' ability to assist some practices in using their EHRs for SIM quality measure reporting. Some stakeholders believed that PTOs received limited guidance and resources, such as provider education materials. Without the proper guidance, some stakeholders believed that practice facilitators did not have sufficient knowledge to help practices transform. Other stakeholders reported that knowledge-sharing among the PTOs was limited, which may have impacted PTOs' ability to assist providers in implementing transformation best practices.

The SIM office took several steps to address the concerns about limited practice support and transformation assistance. The SIM office began holding office hours for PTOs to ask questions and obtain additional support. Furthermore, the SIM office and the University of Colorado are working together to develop a set of minimum competencies for CHITAs to improve their value to the practices. Several stakeholders provided additional recommendations to bolster practice transformation, including more peer-to-peer learning opportunities for providers and opportunities for providers to obtain Continuing Medical Education (CME) credits. Some provider education modules already offer CME credits to practices, but state

officials felt more opportunities to obtain CMEs for practice transformation related education would be helpful.

Another notable concern was lack of coordination between SIM practice transformation assistance and assistance provided by other initiatives. For example, some practices have multiple coaches—one that a payer provided, one from their practice organization, and a SIM-funded PTO coach. As one community stakeholder shared, “...we’ve heard some complaints from providers about all these different coaches—you know, ‘We have six different coaches that want to come meet us.’” Numerous stakeholders reported that the state should continue its work of coordinating the SIM Initiative’s practice facilitation efforts with other alternative payment reform initiatives, such as CPC+ and QPP, to address these concerns.

Finally, some state officials and payers noted that practices were not given explicit models for how to integrate care. One payer stated “... I know there are some folks trying to get behavioral health people co-located in their practice, but integration is more than just having a person ... I don’t see any ‘here is a great example to do that’ [models].” Without these models as guides, practices and their practice facilitators might struggle to make progress in integrating care. Without clear models for integration, some SIM-participating practices faced challenges including sharing clinical information between primary care and behavioral health providers, having sufficient behavioral health staff with whom to integrate, and obtaining appropriate reimbursement for provider visits when they tried to integrate behavioral health. In some cases, practice transformation small-grant funds, which were provided to 47 Cohort 1 practices,⁵⁷ were helpful. Some practices could use the funding to support behavioral health clinicians; others still lacked the initial funds to hire a behavioral health provider. As one stakeholder noted, “It’s a bit of a chicken-or-egg question. [A] primary care practice is reluctant to hire [a behavioral health provider], because they are not sure where the money would come from or how to do that.”

By April 2017, the SIM practice transformation supports for bidirectional health homes had begun. The bidirectional health homes were attending the learning collaboratives. A few practices reported that the learning collaboratives focused mainly on helping PCPs integrate and provided limited guidance for behavioral health providers. To address the concerns of bidirectional health homes, beginning in spring 2017, each bidirectional health home was connected to a practice facilitator and a CHITA. However, as of April 2017, the full technical assistance plan for the CMHCs was not finalized.

Workforce development

Progress in workforce development under Colorado’s SIM Initiative was described by some state policy stakeholders as minimal. In the current analysis period, Colorado’s main SIM

⁵⁷ Colorado Department of Health Care Policy, Financing Purchasing and Contracting Services. (2017, April 5). *Colorado State Innovation Model Evaluation Quarterly Report October–December 2016. Final report*. Retrieved from <https://drive.google.com/file/d/0BxUiTIOwSbPUUHpOSTFiVDIKMGM/view>.

workforce development strategy focused on creating a comprehensive provider directory. The state made some progress but encountered challenges building the directory. Workforce development for SIM providers also focused on provider education (because Colorado considers their provider education efforts as a population health strategy, see more detail in **Section A.1.6**).

Although stakeholders viewed the SIM Initiative as contributing to increased awareness of the value of behavioral health integration among Colorado's PCP workforce, Colorado has a shortage of PCPs in rural areas and behavioral health providers across the state. The shortage posed a significant barrier for some SIM-participating practices that wanted to hire a behavioral health provider as their primary approach to integration. To address these concerns, some stakeholders are turning to Colorado's SIM-supported telehealth strategy (which is still under development) and the Regional Health Connector program (see **Section A.1.6** for more details) as venues to foster better collaboration with or access to behavioral health providers.

A.1.6 Population health

Stakeholders reported that Colorado's population health strategies can be placed into three buckets of prevention (adapted by CMS from the Centers for Disease Control and Prevention's [CDC's] classification system for population health activities):⁵⁸ traditional clinical approaches, innovative patient care, and community-wide health. Prior to the AR2 analysis period, Colorado (1) started developing and disseminating education modules to providers on topics such as depression and substance use disorder (traditional clinical approach); (2) contracted with two community collaboratives (known as behavioral health transformation collaboratives) and eight LPHAs to address stigma reduction, access to and coordination of behavioral health care, and screening, prevention, and education (innovative patient-centered care and community-wide health); and (3) developed a new workforce, known as regional health connectors, who will help providers identify community resources that help improve patient health (innovative patient-centered care and community-wide health).

Colorado experienced barriers to effective implementation of provider education strategies, including delays in the development of materials and modules and challenges with provider engagement. State officials noted that trainings usually were delivered to providers via webinars, and that provider engagement in this learning was limited. As the state moves forward with implementing provider education modules, state officials reported that they would like to see more evidence-based approaches for improving provider engagement in the learning, as well as to develop concrete outreach plans to target providers for training.

Among Colorado's population health strategies, the work of LPHAs progressed the farthest since the start of the SIM Initiative. State officials noted that some LPHAs already

⁵⁸ Auerbach, J. (2016, May/June). The 3 buckets of prevention. *Journal of Public Health Management and Practice*, 22(3), 215–218. doi: 10.1097/PHH.0000000000000381

achieved key milestones and deliverables merely two quarters into their performance year. State officials attributed LPHA success to the ability to mobilize existing efforts and community partnerships as soon as the SIM funding was made available to them. For example, the TriCounty Department of Health reported that, in partnership with four other counties, they quickly adapted the stigma reduction messaging campaign “Make it Ok” into the “Let’s Talk Colorado” campaign. Because of the expeditious roll-out, TriCounty and their partner health departments could use additional resources to survey local primary care practices on their screening and referral processes for behavioral health care. LPHAs were aware that there are many projects to support practices in the state and so began investigating avenues for collaboration. An LPHA gave the example of potentially collaborating with practices in their geographic area that will be involved in Colorado Department of Public Health & Environment’s (CDPHE’s) 2016–2017 pregnancy-related depression and anxiety public awareness campaign.

As of April 2017, 21 regional health connectors had been hired, with 70 percent of their funding coming from the SIM Initiative and 30 percent from EvidenceNOW Southwest.⁵⁹ Colorado is using regional health connectors to help SIM-participating practices improve their capacity for identifying and connecting patients to behavioral health and social services. Several state officials have high expectations for the regional health connector program and LPHA support, hoping that it will draw more attention to mental health service needs in the community. One stakeholder observed, “The regional health connector infrastructure will help spread the adoption of some of these [prevention strategies] but also maintain the spread ... this level of connection to [funding and resources] has not always existed previously.” However, to date, PCP interaction with regional health connectors appears to be limited. Some SIM-participating primary care practices were aware of the regional health connectors’ role but have not yet had opportunities to work directly with them.

Many state officials note that historical “philosophical differences” among the disciplines present a special challenge in the effort to engage payers and clinical providers to work collaboratively on population health. State officials noted, for example, that payers and clinicians often think about population health in terms of managing a panel of patients and that broader population-level health promotion work is something that happens outside of a medical clinic. Nevertheless, some stakeholders are optimistic that the Population Health Workgroup will also be a forum for allowing providers and payers to reach a mutual understanding of population health and how best to promote it in the context of Colorado’s SIM Initiative.

⁵⁹ Sponsored by the Agency for Healthcare Research and Quality, this initiative aims to build 208 small- and medium-sized primary care practices’ capacity for quality improvement and practice transformation to improve the heart health of their patients.

A.1.7 Quality measurement alignment

During the AR2 analysis period, Colorado spent significant time refining the requirements for quality measure reporting for future cohorts of SIM-participating primary care practices. These efforts were primarily focused on aligning the SIM quality measure set with CPC+ and MACRA QPP. To align with these programs and reduce provider reporting burden, Colorado dropped some of the original quality measures, replaced others, and gave practices participating in CPC+ and the SIM Initiative the flexibility to use CPC+ quality measure reporting for the SIM Initiative, provided the practice reports on the CPC+ behavioral health measures. For example, anxiety screening was dropped because it was not a required measure for CPC+ or QPP.

Despite this alignment, some SIM-participating payers will require additional quality measure reporting from SIM-participating practices. Although all seven SIM-participating payers agreed on this revised approach to quality measure reporting, commercial payers and Medicaid have additional measures that they use in their own VBP programs, and if SIM-participating practices are in those VBP programs, they will still need to adhere to those reporting requirements. Therefore, quality measures beyond the SIM measure set were not fully aligned across all payers as of April 2017. Nevertheless, PCPs were supportive of the quality measures chosen for SIM reporting. Providers indicated that they felt the reporting requirements are reasonable and the selected measures align with other quality improvement and VBP models with which they are familiar.

Over the AR2 analysis period, the SIM office also sought to better understand (1) how well SIM-participating primary care practices could retrieve required CQM data from EHRs and (2) the quality of the data from EHRs. The SIM office believes that available, high-quality data are a critical component to practice success. Without high-quality data, the SIM practices do not have a good source of information upon which they can plan quality improvement efforts. Furthermore, data tracking and quality improvement plans are central to most VBP arrangements. Based on baseline (pre-SIM Initiative) quality measure reporting, Colorado determined that Cohort 1 practices varied in their ability to pull high-quality data from their EHRs. Some practices could not report any of the required quality measures using their EHRs, although others could accurately report almost all required measures. Practice facilitators and CHITAs observed that most practices were somewhere in the middle. In other words, the practices could accurately and consistently capture data on some, but not all, required CQMs.

According to providers, the ability to retrieve accurate behavioral health measure data from EHRs was particularly lacking. The biggest reported challenges are (1) working with EHR vendors to develop the necessary data fields to be able to report the quality measures and (2) ensuring that the information reported is accurate. CHITAs are tasked with working with their assigned practices and their practices' EHR vendors, as needed, to improve data quality.

A.1.8 Lessons and looking forward

Reflecting on SIM implementation over the AR2 analysis period, some stakeholders noted several, overarching lessons learned, as summarized below.

Make course corrections when necessary. Implementation of CPC+ and MACRA QPP motivated changes to the design of the delivery system reform for primary care practices that are integrating behavioral health. Further, redesigning bidirectional health home activities in accordance with the use of SIM funds provided the SIM office and the bidirectional health homes an opportunity to reassess practice transformation supports. As a result, bidirectional health homes will be receiving the same practice transformation supports as the SIM-participating primary care practices.

Communicate regularly with providers and stakeholders. Over the AR2 analysis period, the SIM office was intent on addressing communication issues. They received feedback that providers wanted to be made more aware of SIM activities and progress, and work group members wanted more information about SIM progress. In response, the SIM office published a provider newsletter for all SIM-participating providers, initiated office hours for PTOs, developed a series of podcasts and video interviews explaining the SIM Initiative; SIM staff began presenting to work groups on SIM activities not related to a particular work group's charge.

The State Innovation Model office has a role in facilitating communication between stakeholders. Over the last year, the SIM office observed that SIM-participating providers and payers were not always communicating well about the SIM Initiative. The SIM office noted that payers and providers lacked an understanding of their respective roles in the SIM Initiative, their different challenges with participation, and their goals for participation. To help ensure that payers and providers view the SIM Initiative and its success as a shared responsibility, Colorado convened the Multi-Stakeholder Symposium. Now scheduled to be held three times per year, the Multi-Stakeholder Symposium is intended to keep lines of communication open throughout the duration of the SIM award and keep both parties "at the table" and collaborating on the SIM Initiative.

Despite the progress made and the lessons learned, stakeholders observed that the following challenges remain.

Vendor contracting. From an operations perspective, several stakeholders shared that working through state and federal contracting requirements to release funds to Colorado's many vendors (17 vendors) takes a nontrivial amount of staff time. Some stakeholders noted that these vendor contracts take SIM staff away from implementation work.

Sharing behavioral health data. A major challenge in Colorado is that practices continue to encounter significant barriers to bidirectional data sharing, which is especially relevant because behavioral health integration is the focus of the Colorado SIM Initiative. The SIM office continues to strive to identify policy levers and strategies to overcome data sharing barriers.

Maintaining an adequate focus on behavioral health. The stated goal of Colorado’s SIM Initiative is behavioral health integration. However, many stakeholders, other than state officials, commented that they did not feel the state had focused sufficiently on this goal, especially in the context of eliciting behavioral health provider feedback and in building behavioral health providers’ capacity to engage in VBP. One consumer advocate noted, “...it’s [behavioral health integration] just a cultural shift and so foreign to the world of value-based payment and insurance design and everything that we haven’t gone far enough in that direction.” Some providers suggested that behavioral health providers needed more opportunities to provide input and feedback on SIM strategies. As one provider noted, “There just needs to be more conversation and more transparency ... you don’t see any emails anywhere about soliciting questions or feedback [from behavioral health providers and rural practices] about this payer system.”

Insufficient behavioral health workforce. Colorado’s SIM strategies are limited because of the shortage of behavioral health providers. Thus, the state is challenged in its effort to promote behavioral health integration and raise awareness and demand for behavioral health services among the patient population.

Uncertainty surrounding the Affordable Care Act. State officials, payers, and providers noted that possible federal policy decisions related to the Affordable Care Act have an impact on how providers organize and deliver care. State officials will continue to monitor federal policy decisions that could affect Colorado’s SIM strategies and SIM-participating providers.

Regardless of the challenges, many interviewees expressed enthusiasm about the SIM Initiative, noting that Colorado was heading in the right direction. Several state officials and consumer advocates expressed that the SIM Initiative is the perfect catalyst to begin normalizing discussion of behavioral health in primary care.

A.2 Changes in Outcomes During the State Innovation Model Initiative

A.2.1 Progress toward a preponderance of care in value-based purchasing models and alternative payment models

The goal of Colorado’s SIM Initiative is “to improve the health of Coloradans by improving access to integrated primary care and behavioral health services in coordinated community systems, with VBP structures, for 80 percent of state residents by 2019.” State officials, partners, and payers almost universally acknowledged that the goal is very ambitious,

because it relates not only to VBP, but also to primary care–behavioral health integration within communities that will help coordinate and support this integration. However, the same stakeholders expressed guarded optimism in being able to reach this goal because of numerous initiatives underway in Colorado, including CPC+, Transforming Clinical Practice Initiative, Colorado Medicaid’s accountable care collaborative, commercial payer VBP, and other primary care transformation initiatives. When these initiatives are considered together, some state officials expressed that Colorado has a robust starting point for progressing toward achieving 80 percent of residents in VBPs.

However, some state officials observed that achieving the VBP component of the goal will be feasible only if the state is flexible in what they count as a VBP. Payment models aligned with global or capitated payment models may be much harder to achieve than small, per member per month (PMPM) coordination payments provided on top of FFS reimbursement. Furthermore, one partner noted that the goal of reaching 80 percent inherently forces the state to consider less intensive innovative activities that will have greater reach, at the expense of more intensive, evidence-based innovation for select providers.

State officials and payers reported several obstacles to achieving Colorado’s preponderance of care goal, summarized as follows.

Shortage of behavioral health providers. Some state officials expressed concern over the shortage of behavioral health providers available to integrate with primary care.

Not engaging enough primary care practices. Some state officials questioned whether Colorado could reach 80 percent of all Colorado residents by engaging up to only 400 primary care practices. However, these officials acknowledged that the SIM Initiative’s primary care practice delivery system reform is only one of many VBP initiatives occurring in the state, and when all initiatives are considered together, the 80 percent goal might be more attainable.

Range of payer support. Two notable payers are not currently participating in Colorado’s SIM Initiative—Medicare and the state employees’ health plan. Colorado was discussing the SIM Initiative with the state employees’ health plan, but the health plan cannot make SIM-related changes until their next contracting cycle with their participating providers. As of the end of the AR2 analysis period, Colorado paused discussions with Medicare about participation in payment reform specifically in SIM and in state-led all-payer transformation models while CMS transitioned to new leadership. However, Colorado is not without Medicare VBPs because Medicare is providing VBP to CPC+ participating primary practices statewide. Furthermore, one payer observed that some SIM-participating payers could be enrolling more SIM-participating practices or more patients within a practice in its APM models, which would extend the reach of VBPs to a greater proportion of the state’s population.

Relatively short test period. State officials expressed concern that a 3-year test period⁶⁰ is not long enough to bring 80 percent of state residents into integrated, coordinated systems of care supported by VBP.

Availability of data to show progress. State officials reported that obtaining data from participating payers on which of their enrollees were receiving care through Health Care Payment Learning and Action Network (LAN) VBP categories 1–4⁶¹ within SIM and outside of SIM is particularly challenging. The inability to obtain these data may hinder Colorado’s ability to measure progress toward the 80 percent goal.

Despite these concerns, some state officials reported that the preponderance of care goal is foundational to all SIM activities. Work groups and vendors are asked to prioritize activities that may improve the state’s progress in reaching the goal.

Provider participation

Table A-1 presents the extent to which Colorado’s providers are participating in the SIM payment and health care delivery models as of third quarter 2016. As of April 2017, Colorado is not yet reporting data on the number of patients participating in its payment and delivery models or on the number of payers participating in APMs. The participating provider numbers were provided by the state in its third quarter 2016 progress report to CMMI.⁶² Ninety-three primary care practices with 842 providers are participating in primary care transformation to integrate behavioral health, and four CMHCs are participating in the bidirectional health home pilot. Colorado met 23 percent of its goal to enroll 400 primary care practices in practice transformation and met its goal of enrolling four CMHCs.

The number of practices participating in primary care transformation to integrate behavioral health dropped from 100 in first quarter 2016 to 93 in third quarter 2016, because seven practices decided to end their participation in the SIM Initiative. As a result, the number of providers participating in primary care transformation dropped from 909 in first quarter 2016 to 842 in third quarter 2016. See **Section A.1.3** for discussion of the practices that terminated participation.

⁶⁰ Colorado’s SIM Model Test Award includes 4 years of funding. The first year of the award funded planning and implementation activities, and the last 3 years fund the test period.

⁶¹ The LAN framework defines four categories of VBP: Category 1 = FFS with no link to quality and value; Category 2 = FFS with a link to quality and value; Category 3 = shared savings or risk built upon an FFS platform; and Category 4 = population-based payment. Colorado has been asked to provide these data in their quarterly progress reports to CMS.

⁶² These data values were not verified by CMMI. Thus, the RTI team cannot attest to their accuracy.

Table A-1. Number of providers participating in a value-based purchasing or alternative payment model in Colorado, as of the third quarter 2016

Provider type	SIM models		Landscape
	BH integrated care models	SIM-wide	Any value-based purchasing or APMs
PCP ^a	842 ^b	842	—
Primary Care Practices	93	93	—
CMHCs	4	4	—

Source: *Colorado State Innovation Model Progress Report* for third quarter 2016.⁶³

^a PCPs include all providers and staff within a practice that have a national provider identifier; therefore, providers are not limited to physicians only.

^b Colorado reports that this is likely to be an overestimation of the true number of PCPs participating in the SIM Initiative. The state will revise this number.

— = relevant data were not provided in data source; APM = alternative payment model; BH = behavioral health; CMHC = community mental health center; PCP = primary care provider; SIM = State Innovation Model.

A.2.2 Care delivery

Nearly all stakeholders indicated that practice coaching and practice transformation assistance, in general, had a positive impact on primary care practices. As one stakeholder shared, “... we have a lot of practices that are definitely moving in the right direction of advanced models of primary care and with behavioral health capacity.” Stakeholders emphasized a changing perspective on how PCPs view and understand the need for behavioral health assistance. State officials and providers did not mention progress in changing care delivery for bidirectional health homes, likely because the health homes were not approved to begin SIM activities until November 2016.

Although there are no quantitative data at this time to support stakeholders’ perceptions that care delivery is improving, Colorado is working on data collection efforts to better understand how well SIM-participating primary practices are integrating behavioral health. The SIM office administers the Integrated Practice Assessment Tool (IPAT) to SIM-participating primary care practices. To date, Colorado SIM practices have conducted a baseline assessment; as follow-up assessments are done, the SIM office will be able to describe progress in integrating behavioral health.

A.2.3 Coordination of care, quality of care, utilization, and expenditures

As of April 2017, evidence was limited that Colorado’s SIM Initiative had an impact on coordination of care, quality of care, utilization, and expenditures. However, stakeholders provided anecdotal feedback about improvements in care coordination and quality of care, and

⁶³ *Colorado SIM Progress Report* for third quarter 2016, submitted in 2016 to CMMI.

attributed these changes to the payment and delivery system reform strategies implemented by the Colorado SIM Initiative. For example, one stakeholder shared:

... through looking at our workflow together [with the practice facilitator], we were able to identify potential cracks where patients could slip through. Through trying to refine this and getting more of the team on board to help support behavioral health integration, [the new workflow] will reduce the number of missed opportunities we have, so I'm really hopeful about that.

Colorado is also analyzing claims data and CQMs, and state officials shared their commitment and desire to identify impacts on quality, utilization, and expenditures after the analyses are complete.

A.2.4 Population health

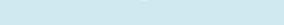
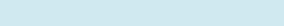
Table A-2 shows Colorado's baseline population health outcomes based on 21 measures from the 3 years prior to the implementation of Colorado's SIM award. The table also includes information from the comparison group states: Utah, Arizona, and Montana. The multistage procedure for identifying the comparison group states is described in detail in **Appendix L**. In general, Colorado performs slightly better on population health measures compared with national averages, with the exception of no checkup within the past year, no hypertension blood pressure medication, no colorectal cancer screening in the past 5 years, and mental health outcomes. On these measures, Colorado performed worse than the national average. Colorado's comparison group also performed worse than the national average on these same measures.

Table A-2. Baseline measures of population health in Colorado, 2013–2015

Measure		2013–2015 Average	2013–2015 Trend
Health status is fair or poor	Colorado	11.5%	
	CG	11.7%	
	National	14.9%	
Ever diagnosed with diabetes	Colorado	6.3%	
	CG	7.6%	
	National	9.6%	
Ever diagnosed with hypertension ##	Colorado	25.3%	
	CG	26.1%	
	National	31.6%	

(continued)

Table A-2. Baseline measures of population health in Colorado, 2013–2015 (continued)

Measure		2013–2015 Average	2013–2015 Trend
Ever diagnosed with asthma	Colorado	13.0%	
	CG	13.6%	
	National	13.5%	
Has a functional limitation ##	Colorado	17.7%	
	CG	17.0%	
	National	18.2%	
Current smoker	Colorado	15.1%	
	CG	12.6%	
	National	16.4%	
Overweight	Colorado	56.6%	
	CG	61.0%	
	National	64.4%	
Obese	Colorado	20.4%	
	CG	24.7%	
	National	28.5%	
No leisure time physical activity or exercise, past 30 days	Colorado	15.8%	
	CG	18.7%	
	National	23.3%	
Limited fruit and vegetable intake, past 30 days	Colorado	79.9%	
	CG	81.6%	
	National	83.1%	
Any driving after drinking too much, past 30 days #	Colorado	3.2%	N/A
	CG	3.5%	
	National	3.3%	
No checkup, past year	Colorado	36.8%	
	CG	36.6%	
	National	29.4%	
No flu vaccine, past year	Colorado	55.0%	
	CG	61.8%	
	National	59.6%	

(continued)

Table A-2. Baseline measures of population health in Colorado, 2013–2015 (continued)

Measure		2013–2015 Average	2013–2015 Trend
No 65+ flu vaccine, past year	Colorado	32.3%	
	CG	40.6%	
	National	39.1%	
No 65+ pneumonia vaccine, ever	Colorado	24.6%	
	CG	29.4%	
	National	30.2%	
Among adults with hypertension, no hypertension blood pressure medication ##	Colorado	30.5%	
	CG	28.7%	
	National	22.4%	
No 50–75 colorectal cancer screening—no fecal occult blood test (FOBT), past year #	Colorado	91.1%	N/A
	CG	93.2%	
	National	90.7%	
No 50–75 colorectal cancer screening—no sigmoidoscopy or colonoscopy, past 5 years #	Colorado	50.4%	N/A
	CG	47.5%	
	National	46.0%	
No 50–75 colorectal cancer screening—no sigmoidoscopy or colonoscopy, past 10 years #	Colorado	34.2%	N/A
	CG	33.8%	
	National	33.6%	
Mental health ever not good, past 30 days	Colorado	35.2%	
	CG	33.1%	
	National	32.6%	
Impairment due to poor physical or mental health, past 30 days	Colorado	20.6%	
	CG	20.1%	
	National	20.4%	

Source: BRFSS, collected by CDC (2013–2015).⁶⁴

Note: To facilitate the comparison of trends over time between the model test state, its comparison group, and the nation, the sparklines for each measure rely on the same scale for the vertical axis for all three groups. Because the vertical scale for the sparklines varies by measure, the sparklines are not comparable across the different measures. Sparklines are not available for outcomes for which data are limited to 2014 (indicated by #). Sparklines for outcomes that are limited to data for 2013 and 2015 (indicated by ##) will be based on data for two points in time and so will appear more stable than outcomes for which data are available for 2013, 2014, and 2015.

BRFSS = Behavioral Risk Factor Surveillance System; CDC = Centers for Disease Control and Prevention; CG = comparison group; FOBT = fecal occult blood test; N/A = not available.

⁶⁴ CDC. (2013–2015). *Behavioral Risk Factor Surveillance System survey data*. Atlanta, GA: U.S. Department of Health and Human Services, CDC.

In terms of physical health, the percentage of adults in Colorado who were ever diagnosed with hypertension, were overweight, were obese, had no leisure time for physical activity or exercise within the past 30 days, and did not receive flu or pneumonia vaccines were at least 5 percentage points lower than the national averages during the baseline period. Colorado's comparison group also performed about the same as or better than national averages.

In terms of mental health, the percentage of adults in Colorado reporting poor mental health within the last 30 days was 2.6 percentage points higher (35.2 percent vs 32.6 percent) than the national average during the baseline period, and increased 1.4 percentage points from 2013 to 2015. In contrast, the percentage of adults in the comparison group reporting poor mental health was about the same as the national average. The RTI team will continue monitoring Colorado's Behavioral Risk Factor Surveillance System (BRFSS) data for changes in population health.

The Population Health Workgroup identified the following state-endorsed goals for the SIM Initiative from the Governor's plan for 2018⁶⁵ and the Shaping a State of Health Plan⁶⁶:

- Reduce prescription drug overdose death rates of Coloradans aged 15 and older from 20.5 per 100,000 in 2013 to 16 per 100,000 in 2018.
- Increase percentage of adults who report symptoms of depression from 7.7 percent in 2012 to 8.0 percent in 2018.
- Increase the percentage of men who report symptoms of depression from 6.5 percent in 2012 to 7.7 percent by 2018.
- Reduce suicide death rate from 19.4 per 100,000 to 17.6 per 100,000 by 2018.
- Reduce nonmedical opioid (prescription drug) use from 5.08 percent to 3.5 percent by 2018.

Moreover, to monitor progress in improving population health, CDPHE will track performance on 18 behavioral health and 16 physical health measures that are expected to provide corollary, population-level data to the SIM CQMs that SIM-participating primary care and CMHC providers will report to the SIM office. Although most state officials agree that the state's population health strategies under the SIM Initiative have not progressed far enough

⁶⁵ The Governor's 2018 priorities for Colorado to become the healthiest state in the country include six goals around supporting healthy weight of kids and adults, reducing substance use disorders, reducing impact on daily life of mental illness, increasing the immunization rate, improving health care coverage, and improving value in health care service delivery.

⁶⁶ *Healthy Colorado: Shaping a State of Health, Colorado's Plan for Improving Public Health and the Environment, 2015–2019* is the 5-year strategic plan developed from a multi-stakeholder engagement and assessment process intended to guide efforts to address critical issues of health care access and coverage, marijuana, and public health infrastructure and to continue working toward achieving Colorado's other Winnable Battles. Authored by the CDPHE, the plan is available at https://www.colorado.gov/pacific/sites/default/files/OPP_2015-CO-State-Plan.pdf

during the AR2 analysis period to impact these targeted behavioral health outcomes, officials are optimistic that the SIM Initiative's strategies will positively impact outcomes over time.

However, state officials were mindful that Colorado's efforts to improve behavioral health outcomes and reduce stigma associated with mental health will be particularly challenging in rural areas. Lack of behavioral health providers and lack of anonymity in rural areas were noted barriers to improving access to behavioral health care and reducing stigma. However, some state officials were hopeful that concurrent SIM strategies to integrate behavioral health into primary care and telehealth will provide some innovative solutions to these barriers.

A.3 Colorado Summary

In the AR2 analysis period (July 2016 through April 2017), Colorado continued to make progress in its delivery system reform models. Cohort 1 participating primary care practices were working with their practice facilitators and CHITAs to advance primary care transformation and behavioral health integration and improve quality measure reporting. The state was set to implement Cohort 2 primary care practices in summer 2017. Leveraging CPC+ as an opportunity for change, the state refocused participation requirements for SIM-participating primary care practices to clarify expectations for successful practice transformation, determine what multi-payer support may look like, and align quality measures with CPC+ and MACRA QPP. Furthermore, after delays in the release of SIM funding, bidirectional health homes started their SIM project activities. To complement practice-level efforts to improve access to behavioral health services, Colorado deployed its regional health connector workforce and released funding for eight LPHAs and two behavioral health transformation collaboratives to start work on mental health stigma-reduction campaigns and begin activities to improve behavioral health prevention and screening in local communities.

As Colorado continues with SIM implementation, several aspects will require the state's attention over the coming year. The state will continue to work with stakeholders to find strategies to overcome barriers to behavioral health integration, including behavioral health provider workforce shortages and challenges with behavioral health data exchange between providers. In addition, the state plans to continue fostering cooperation between SIM-participating primary care practices and payers to ensure continued support of both key stakeholders. As regional health connectors ramp up efforts to connect patients with local behavioral and social services, the state will be monitoring the level of collaboration between SIM-participating PCPs and regional health connectors. Finally, although the state made progress connecting certain health IT and data analytics efforts (e.g., SPLIT, Stratus, practice feedback reports) to the SIM-participating primary care practices, the state has more planned for health IT. Colorado is working to develop an actionable telehealth plan and a feasible plan for advancing CQM reporting.

State officials, providers, payers, and other site visit interviewees continue to voice strong support for Colorado's SIM Initiative. Most are cautiously optimistic that Colorado will make good progress toward its preponderance of care goal and that the SIM Initiative will be a catalyst for realizing better integration of physical and behavioral health in the state.

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Appendix B: State Innovation Model in Model Test States: Connecticut

Key Results from Connecticut's State Innovation Model Initiative July 2016–April 2017

- Connecticut's Medicaid shared savings program, Person Centered Medical Home Plus (PCMH+), began January 1, 2017, with an initial cohort of 127,000 beneficiaries. PCMH+ consists of upside-only, shared-savings arrangements with selected Federally Qualified Health Centers and Advanced Networks to provide enhanced care coordination activities to Medicaid beneficiaries.
- Connecticut faced challenges securing sufficient participation in the Advanced Medical Home (AMH) model. Connecticut aimed to enroll 150 practices in its AMH program to receive technical assistance to transform into medical homes, but only six practices had enrolled when the program launched in 2017. As a result, some funds originally intended for AMH may be reallocated to other SIM programs in the coming years.
- In spring 2017, a health information technology (health IT) officer (HITO) was hired to advance and coordinate statewide health IT initiatives, which include but are not limited to the SIM Initiative. The all-payer claims database director at Access Health CT was replaced in March 2017. The HITO and Health IT Advisory Council are expected to address difficulties identifying statewide health IT solutions that delayed SIM Initiative implementation activities.

This appendix provides an updated overview of the Connecticut SIM Initiative; describes important changes in the state's SIM Initiative; summarizes implementation and testing successes, challenges, and lessons learned; and discusses early changes or prospects of changes resulting from the SIM Initiative. The findings in this appendix are based on analysis of data collected from key findings from the stakeholder telephone interviews, state document reviews, and state program and evaluation calls. These data were collected between July 1, 2016, and May 3, 2017.

As a source for this appendix, the RTI team conducted 14 key informant interviews from April 4 through May 3, 2017.⁶⁷ The key topic areas of the interviews were (1) changes in governance and program administration, (2) progress implementing SIM models and initiatives, (3) participation of payers and providers, (4) progress toward a preponderance of care in the state being provided through an alternative payment model (APM), and (5) early indicators of changes in relevant outcomes. Interview participants included state officials, payers, providers, and consumer advocates involved in the development and implementation of Connecticut's SIM Initiative. Further details on the analytic approach are available in *Chapter 1*. Information on the number and type of stakeholders interviewed for the state is in *Table 1-1*.

⁶⁷ Due to a scheduling constraint, one interview occurred outside the Annual Report 2 (AR2) analysis period, on May 3, 2017.

B.1 Implementation Activities

During the Annual Report 2 (AR2) analysis period (July 1, 2016, to April 30, 2017), Connecticut made progress implementing its delivery system and payment reforms and planning for its workforce development, quality measurement alignment, health information technology (health IT), and population health strategies. The SIM Initiative in Connecticut encountered several challenges during this analysis period, such as consumer opposition to the payment reform model and difficulties identifying statewide health IT solutions, which delayed SIM implementation activities. Despite these challenges, the Connecticut SIM Initiative had marked expansion of activities in this analysis period with the launch of three initiatives including its Medicaid shared savings Person Centered Medical Home Plus (PCMH+) program, the complementary Community and Clinical Integration Program (CCIP) technical assistance awards, and SIM-funded Advanced Medical Home (AMH) cohort. The state continues to make strides toward population health and health IT reforms; however, activities were limited.

B.1.1 Governance and program administration

Connecticut's SIM Initiative continues to be administered by the Program Management Office (PMO), located within the Office of the Healthcare Advocate (OHA). The PMO reports to the Lieutenant Governor, who plays a key oversight role. Connecticut's SIM Initiative is guided by a steering committee and work groups, such as the Population Health Council and the Practice Transformation Task Force, which serve in an advisory role to the PMO. Each group focuses on developing a component of the SIM Initiative and includes a variety of stakeholders with relevant interests and expertise. State agencies—including the Department of Social Services (DSS), Department of Public Health (DPH), and Department of Mental Health and Addiction Services (DMHAS)—also participate in the SIM Initiative.

There were changes in state leadership positions in this analysis period, and additional organizational changes are expected in the second half of 2017 that may affect the SIM Initiative operationally. The health care advocate transitioned to become chief health policy advisor for the Lieutenant Governor in June 2016.⁶⁸ One state official who discussed this change viewed it positively and noted that “she is [now] purely dedicated to carrying out the Lieutenant Governor’s vision for health care reform in Connecticut.”

During the analysis period, there were staff changes related to the SIM health IT strategies. In January 2017, a health IT officer (HITO) was hired to coordinate all statewide health IT initiatives under the leadership of the Lieutenant Governor, which includes but is not limited to the SIM Initiative. The HITO currently oversees projects related to electronic clinical quality measures (eCQM) and a health information exchange (HIE). The all-payer claims

⁶⁸ Although this transition occurred at the end of the previous analysis period, the evaluation team did not learn of the change until the start of the current analysis period (July 2016).

database (APCD) director was replaced in March 2017 with an interim director. Although Connecticut's APCD is not a SIM-funded health IT strategy as of this writing, it plays an integral role in supporting the state's SIM award. According to one respondent, this interim director "will probably be more effective in terms of managing the politics of implementing APCD and he seems to be stronger in terms of resolving technical issues in an efficient way."

Staffing in the PMO was consistent, with several consultants joining the team but no departures. Hiring remains a slow process, particularly by DSS and DPH, as the result of a statewide hiring freeze. Consistent with what was reported in the AR1 analysis period, the hiring freeze continues to be seen by Connecticut SIM leadership as "a huge challenge" that prevented the departments from using the federal funds to hire necessary staff. As a result, the departments performed the work with existing staff resources, including managers and actuarial staff for the PCMH+ and population health initiatives.

Multiple stakeholders expressed concerns about lack of coordination across state agencies, particularly the SIM PMO and DSS, which oversees the Medicaid program and is a key partner in implementing PCMH+. The SIM PMO is within the Lieutenant Governor's office whereas the state Medicaid program, a key partner in coordinating and implementing PCMH+, is within the DSS. Several stakeholders noted that this disjointed coordination led to implementation delays and unnecessary complications because of unclear communication and contradictory guidance on efforts such as quality measure development. One stakeholder noted that the current SIM governance structure (the PMO and DSS) does not seem to have shared goals for moving the SIM Initiative forward. Some stakeholders raised broader concerns related to what they saw as DSS's unwillingness to participate in aspects of the SIM Initiative. According to one consumer advocate, DSS participated in the SIM application but no longer wants to be an active participant because PCMH+ is within its control.

Another stakeholder expressed disappointment about the reluctance of DSS to explore APMs. Although the state garnered support for APMs, including bundled payments and advanced payments from commercial insurers, DMHAS, and the State Comptroller's Office, DSS adopted fee-for-service (FFS) with care management and will not consider alternatives. This reluctance was evident in spring 2017, when multiple stakeholders in the state, including several state agencies and key commercial providers (Anthem, Aetna, and United), planned on applying for Comprehensive Primary Care Plus (CPC+). DSS, however, told stakeholders that it could not participate because of limited staff resources and other ongoing initiatives.

In January 2017, Governor's Bill 795 was introduced to create an Office of Health Strategy that would become operational in July 2018. The bill is designed to create sustainability for efforts to advance multi-payer reforms and health analytics beyond the SIM Initiative. The office also would coordinate the state's health IT initiatives and convene forums and meetings with state government and external stakeholders to develop effective health care cost and quality

strategies. The Office of Health Strategy would be housed in DPH—but report directly to the Governor—and be charged with developing and implementing a comprehensive and cohesive health care vision for the state; coordinating a state health care cost-containment strategy; and directing and overseeing the APCD program, the SIM Initiative, and the OHA. The bill is largely supported by the legislature and the SIM PMO and is expected to pass. According to the SIM PMO, the bill was designed to unify several currently disjointed offices working toward multi-payer reforms, and the new structure will allow for continuity of efforts across administrations. Several stakeholders noted that the creation of a new office may provide a better structure for SIM Initiative implementation and address some of the frustrations with the current management divisions across the Lieutenant Governor’s office and DSS.

B.1.2 Stakeholder engagement

Most interviewees commented on Connecticut’s robust stakeholder engagement and characterized it as a major strength of the SIM Initiative. During this analysis period, state officials, providers, consumer advocates, payers, and employers continue to engage in the SIM program primarily through multisector work groups and committees that lead the design and implementation of various SIM Initiative components. In addition to topic-specific SIM work groups, other key stakeholder committees include the Consumer Advisory Board (CAB) and the Care Management Committee of the Medical Assistance Program Oversight Council (MAPOC). These work groups host a variety of public and private meetings that provide opportunities for stakeholders to engage with the SIM Initiative and offer feedback to the state.

Although most interviewees praised the stakeholder engagement activities, several noted that the amount of time spent on stakeholder engagement and building consensus may be slowing down implementation. For example, one provider commented, “I think SIM is overly inclusive. It’s been very rigorous in thinking, consensus, and input. But moving from that process of getting buy-in to getting to implementing things is the next step. It’s like we got a lot of plans on the shelf but is anyone doing it?” Another stakeholder expressed similar frustration about making progress when so much effort and time are spent trying to attain multi-stakeholder agreement on a plan of action.

State officials identified consumer advocates as key stakeholders in the Connecticut SIM Initiative. Most interviewees agreed that consumer engagement was vigorous and positive in Connecticut. Similarly, most agreed that the state provided ample opportunity for consumer advocates to contribute to the design and implementation of SIM models and give feedback to the state through the CAB structure and inclusion of consumer advocates on all SIM committees and work groups. A state official shared:

One of the successes I want to point to is our consumer engagement and the work of our CAB as well as the work of our consumers sitting on our various councils and committees. I think they've been very instrumental in a lot of the progress ... When we look at what other states are doing around consumer engagement, we found that our consumers are in the forefront compared to some other states.

Consumer advocates shared diverse opinions regarding overall consumer engagement in the SIM Initiative. One consumer advocate reported being very pleased with the SIM Initiative's consumer engagement in the state and felt that the PMO was very responsive to their questions and concerns. However, another consumer advocate felt that the selection process to participate in work groups and committees was not inclusive enough, and those consumers who were selected were generally more supportive of the SIM activities than the broader consumer advocate community.

Beyond consumer advocates, state officials described challenges engaging employers and commercial payers in the SIM Initiative. State officials shared that several of their value-based insurance design (VBID) recruitment events were unsuccessful, because of poor employer turnout. In response to this challenge, the state is working with a consultant to develop a new employer engagement strategy to meet employers at non-SIM-related employer events, instead of creating new SIM-specific meetings. State officials hope this approach will garner greater engagement and subsequently yield greater participation in VBID. Although payers were actively involved with the SIM Initiative and very engaged in the SIM committees and task forces, the state faced some challenges securing payers to adopt unified quality measures. As of April 2017, the state is continuing to meet with payers individually to encourage them to adopt the cross-payer measure set developed by the SIM Quality Council (see **Section B.1.7**).

The common theme from interviewees is that the SIM office worked diligently to engage a multitude of stakeholders and gather feedback, but faced challenges implementing that feedback. For example, one provider commented, "I have been given opportunity to provide it [feedback]. Whether it is translated into...anything is probably minimal." Another provider made a similar comment:

My feeling is we do have space to provide input and they're very open to the conversations and to meeting with us. The part where it becomes challenging is the gap between the ability to provide input and then seeing actions and results, even on things that are really fundamentally critical to performing in these programs, like data and reporting. We've had some very good conversations where we feel heard but the ability to impact or have actions that come out of that has not always been the case.

Two stakeholders also noted that the SIM leadership is geographically concentrated in urban areas and that rural consumers and providers are not being considered in decision making. When asked about the potential differences between urban and rural participants and potential modifications to ease the burden of participation of smaller, rural providers, state officials indicated that the SIM Initiative is a statewide initiative and would not be adapted to meet differing needs of rural practices.

B.1.3 Delivery systems and payment reforms

Connecticut has four models in place that focus on delivery system and payment reform: PCMH+, CCIP, AMH, and VBID. At the end of the AR1 analysis period (June 30, 2016), Connecticut was preparing to launch three of those models—PCMH+, CCIP, and the SIM-funded AMH cohort. The state was finalizing the application process for participating entities to join the AMH program and CCIP. The state felt confident that it was addressing the concerns of the community and would be ready for a successful launch on January 1, 2017. Although the VBID model component was still under development, multiple stakeholders were optimistic that the initiative could be successful by collaborating with payers and employers to improve health outcomes and reduce health care expenditures.

Person Centered Medical Home Plus. The Medicaid shared savings program (SSP), PCMH+, began on January 1, 2017, with an initial cohort of approximately 127,000 beneficiaries. Throughout the launch of the initiative, several stakeholders in the state, especially some consumer advocates, expressed concerns about potential underservice and patient selection biases in an SSP. Stakeholders specifically noted that participating providers would be incented to not serve sicker patients who would be costlier and subsequently produce less savings. Some consumer advocates expressed support for the model to transition to a value-based system that improves quality of care and aligns with emerging payment models in the commercial market. Other consumer advocates would prefer that the Medicaid program be exempt from any major payment reforms and remain an FFS system. These concerns are thought to be a remnant of the state's previous Medicaid managed care program, which was unpopular among both beneficiaries and providers, and the state eventually reverted to an FFS model.

In response to the concerns about potential underservice and patient selection issues, the PMO postponed the launch of PCMH+ by a year (January 2016 to January 2017) to allow for more community engagement and outreach activities. In preparation for the launch, the state Medicaid agency sent letters to eligible beneficiaries informing them of the program and providing information on how to voluntarily opt out. Despite early concerns, stakeholders from multiple domains report that opt-out rates are low as of April 2017, although they could not quantify numbers or percentages in interviews. The state plans to launch a second cohort of PCMH+ in 2018, although advocates are requesting that the state postpone implementing the

second cohort of PCMH+ until evaluation results from the first cohort are available and the state can be certain that the PCMH+ model will not harm Medicaid beneficiaries.

Although many cited the launch of the PCMH+ as the chief success of the AR2 analysis period, stakeholders noted several challenges and concerns about the program implementation. Several providers expressed concern that the state was not properly equipped to implement the program and that the burden was passed down to the participating entities. Providers from both Advanced Networks (ANs) and Federally Qualified Health Centers (FQHCs) noted that the state's estimates for attributed lives and actual beneficiary attribution were significantly lower than providers had been asked to prepare for during the planning phase. One provider noted the negative financial implications of administratively preparing for a significantly higher volume than actual attributed lives. Another provider at an FQHC reported:

I am surprised how little the state was prepared for this program...They came in woefully unprepared across the board. Clinically, administratively, legally, financially, IT, the whole thing, was not prepared to take on two patients, let alone the thousands we are responsible for.

Two providers expressed concern with the differences between the FQHC and AN PCMH+ contracts and how these differences affected morale. Despite the same participation requirements, the participating FQHCs were offered an enhanced fee schedule and care coordination funds, whereas ANs were offered a simple SSP without additional resources. One provider noted:

At the end of the day [Advanced Networks are] spending a heck of an amount of their own money to invest in creating assistance and to participate in Medicaid with the state and accountable care organization (ACO) likewise, whereas the same amount of investment is reduced, in my opinion, from FQHCs.

At the time of the interviews, several respondents from PCMH+ participating entities noted that they were not sure why the state had established different payment mechanisms between FQHCs and ANs for PCMH+ participation.

Several providers noted that the PCMH+ program relied too heavily on strict adherence to the National Committee for Quality Assurance (NCQA) accreditation standards and that these rigorous requirements adversely affected practice participation and satisfaction. When state officials were asked to comment on this concern, one stated:

We did hear that there were some providers that indicated that they would have participated in PCMH+ had they not had to meet the NCQA accreditation standards. ... We felt that it was important to honor the investment as well as the commitment that we made to the initial providers who were in the PCMH⁶⁹ program from Medicaid. ... Some of the providers who said they would participate if there were not NCQA requirements were providers who had not been part of Medicaid before. We wanted to stick with providers who were invested.”

The most common concern cited in stakeholder interviews regarding the PCMH+ program was the launch of the second cohort in 2018. A broad range of stakeholders, including state officials, providers, payers, and consumer advocates expressed significant concern that the next cohort of participants will begin before the successes and challenges of the first cohort were evaluated. Stakeholders noted a perceived rush to add a second cohort without time to assess potential lessons learned, make administrative modifications, or review early outcomes. Multiple providers noted that they would not have any data on their performance with their first cohort of beneficiaries (beginning January 1, 2017) until at least September 2018 and felt that adding an additional cohort without additional information would place them at greater financial risk.

One state official did not think program administration, both within the PMO and DSS, were receptive to these concerns and would continue regardless of widespread stakeholder pushback. However, when asked to comment on these concerns, another state official noted:

We do not agree with some advocates who are urging we stop PCMH+ at the end of the year and evaluate before considering whether or not to start a second cohort. We think we'd [have] a substantial loss of momentum [and] erosion of the investment that the participating entities are making right now. I feel like we'd have to restart in a really inefficient way.

Advanced Medical Homes. The AMH initiative did not meet its enrollment goal for this analysis period, thereby limiting its reach and potential impacts. The state previously piloted the program using state funds and intended to enroll 150 additional practices in the program during this analysis period using SIM funding. Despite significant recruitment strategies, only six new practices enrolled in the new SIM-funded AMH cohort.⁷⁰ Multiple interviewees thought that the number of participating practices was low possibly because the state-funded pilot had saturated the market and “taken the low-hanging fruit.” Several stakeholders noted that the AMH program was successful this year; however, many interviewees conflated the state-funded pilot cohort and the SIM-funded cohort that was to be enrolled during the analysis period. Because both programs are indistinguishable by name or content, only those familiar with how the programs are funded

⁶⁹ PCMH is patient-centered medical home.

⁷⁰ 2017 Quarter 1 QPR Reporting Metrics, Final.

were aware that the pilot was funded by the state and not part of SIM. In response to the low participation rates in the SIM-funded AMH cohort, the state PMO is considering modifying its AMH strategy. As of April 2017, the state is considering reallocating AMH funding to the CCIP to foster practice transformation with fewer limitations.

Community and Clinical Integration Program. As of April 2017, three participating entities were enrolled in CCIP, lower than the projected goal of four for this period. Stakeholders expressed diverse views on the implementation and potential of the program. Several stakeholders said that the program was in its infancy, beginning to develop transformation plans, and felt it was too early to comment on potential successes. One provider noted that despite its early stages, CCIP was moving in the right direction by approaching technical assistance more broadly and seeking feedback from participants on their needs. One state official noted:

With regards to CCIP, we have built a public safety net and we've built a continuum of services that wrap around individuals with complex needs. It is heartening to see the development of that available to perhaps commercial clients, definitely to Medicaid clients.

Several providers noted that, although CCIP is promising, they had concerns about its long-term effectiveness. Some thought that the funding levels and sustainability do not align with practice transformation needs. One provider alluded to this tension when describing a meeting with state officials:

We went to a group today and they said that they need to do more around care coordination etc. Sure they can start with us on CCIP but they need some sort of sustainability funding down the road for when we step away, who's gonna help [practices] fill that gap?

Another provider thought that CCIP would be ineffective because of limited oversight from the PMO, the office tasked with governing the program:

I am very skeptical it [CCIP] will have any impact at all. I seriously doubt it will be very effective in doing much of anything. I don't think the department [PMO] is serious about making sure this [implementation and monitoring] happens. CCIP is enforced not by DSS, but by [the PMO]. We expect [PMO] enforcement to be even more lax than DSS. DSS at least cares about this stuff and is more used to doing evaluations and all of that. I really don't think [the PMO] would be interested in doing any enforcement.

Multiple stakeholders also expressed concerns and frustrations about limited coordination across the SIM PMO and the DSS office to integrate CCIP and PCMH+ activities and reporting.

For example, multiple providers noted that, although PCMH+ and CCIP are linked, the initiatives are administered by the SIM PMO and DSS, respectively, with different reporting standards and quality metrics.

Value-Based Insurance Design. During the AR2 analysis period, the Connecticut SIM Initiative continued supporting adoption of VBID among employers throughout the state. The state finalized VBID templates and implementation manuals for self-insured and fully insured employers. The state sought to engage employers interested in participating in VBID through community events and learning collaboratives. In October 2016, the PMO sponsored a learning collaborative event for employers that yielded minimal interest and participation from employers. Recognizing that there may be alternative ways to connect with employers, SIM officials hired Freeman Healthcare to assist with employer engagement and VBID expansion. Freeman Healthcare has since altered the outreach strategy of VBID to capitalize on existing networks for human resources professionals, including the Society for Human Resource Management continuing education program.

B.1.4 Health information technology and data infrastructure

During the AR2 analysis period, the state's health IT and data infrastructure planning progressed substantially. Connecticut is focusing its health IT efforts within three broad health IT and data infrastructure strategies: (1) initiate a robust and broad-based stakeholder engagement process to assess and prioritize health IT needs; (2) establish a statewide HIE; and (3) invest in and provide technology solutions for SIM participants (e.g., disease registries, eCQM).

Stakeholders agreed that Connecticut's biggest health IT accomplishment in the AR2 analysis period was hiring the HITO in January 2017 to coordinate statewide health IT initiatives. The HITO now oversees the Health IT Advisory Council, which includes members from the former SIM Health IT Council. Stakeholders reported that filling this position helped create a sense of urgency around solving Connecticut's health IT issues. Although most stakeholders were pleased that the position is centrally located in the Lieutenant Governor's Office, several stakeholders were disappointed that DSS will no longer lead health IT efforts given the potential impact on the Medicaid program.

The HITO's largest undertaking as of April 30, 2017, has been overseeing a statewide stakeholder engagement process to identify and assess the health IT needs of government agencies, providers, and other key stakeholders. As part of this process, the state, with support from the Cedar Bridge consulting group, engaged more than 60 stakeholder groups and 200 individuals across the state through interviews, focus groups, and surveys. This process covered the breadth of Connecticut's health IT needs such as HIE, eCQM collection, an admissions, discharge, and transfer alert system, and an improved direct messaging system. Stakeholders reported that they were pleased with the thoroughness of this stakeholder engagement effort and

appreciated the opportunity to provide input on the state’s health IT needs. The health IT stakeholder engagement process resulted in a set of recommendations that were presented at a Health IT Advisory Council meeting on April 20, 2017.

Stakeholders shared that developing a unified HIE strategy in Connecticut historically was a very challenging process. They noted that there is an urgent need to develop a unified HIE solution to allow for the sharing of information; however, a major obstacle is lack of collaboration and compromise between providers and state agencies. Multiple stakeholders, including state officials and providers, specifically commented on tensions between DSS and providers. For example, a state official noted:

We have a lot of infrastructure in place in Medicaid, but there are private partners who do not want to participate. Some have been adversarial in developing competitive tools and then seek to charge the state to use those tools. I hope that the HITO can identify opportunities for alignment.

In the absence of a single statewide HIE system, multiple providers proceeded to develop their own systems, including the Connecticut State Medical Society. In recognition of the variety of HIE systems operating, stakeholders shared that the state’s HIE strategy shifted from a single statewide HIE system to connecting existing HIE structures. The HITO’s stakeholder engagement process produced several recommendations that support this revised strategy, including, “Connecticut must implement core technology that complements and interoperates with systems currently in use by private sector organizations.”⁷¹

Although stakeholders were optimistic about the HITO’s ability to develop an aligned HIE solution, many noted potential challenges with implementation. One provider believed that the HITO’s process “has made more progress than prior failed attempts at HIE,” but was still concerned about the state’s ability to implement and enforce a real solution. This provider noted that the state has “an over tendency to meet people where they are. There are still providers and agencies who have not adopted a certified EHR [electronic health record]. The [state’s] intent and goal sounds like we’ll accept that and find ways to still get data and exchange rather than moving people forward to where they need to be.” Furthermore, providers noted their frustration that some solutions to solving data exchange issues require providers to pay a fee to participate in an HIE.

⁷¹ Matthews, M., & Robinson, C. (2017, May 8). *Assessing Connecticut’s health information technology & health information exchange services: Supporting presentation on current state, future needs, and recommendations for action*. Prepared for the Connecticut Health Information Technology Advisory Council. Retrieved August 18, 2017, from http://portal.ct.gov/-/media/Office-of-the-Lt-Governor/Health-IT-Advisory-Council/Reports/Environmental_Scan_Summary_Findings_Draft_CouncilReview_20170508.pdf?la=en

The final component of Connecticut’s SIM-supported health IT strategy entails investing in technology solutions through disease registries and an eCQM system for SIM participants. The SIM Quality Council primarily focused on developing a multi-payer core set of quality measures as described in **Section B.1.7**; however, stakeholders noted that there are disagreements regarding the most appropriate health IT tools to support this effort. One state official shared that DSS was a proponent of using an edge server to support eCQMs, although others on the Health IT Advisory Council believe there may be better tools. To address this issue, the Health IT Advisory Council chartered an eCQM Design Group in January 2017. The eCQM group was charged with developing recommendations for a statewide health IT-enabled system to support clinical quality measure (CQM) reporting in the context of APMs.⁷² The eCQM Design Group presented its final report and recommendations for a statewide quality measurement system to the Health IT Advisory Council in April 2017.

Although Connecticut’s APCD is not a SIM-funded health IT strategy and is housed within Access Health CT, the APCD plays an integral role in supporting the state’s SIM Initiative by supplying necessary data to quantitatively measure its impacts. A state official shared that, as of February 2017, the APCD contains data for approximately 600,000 lives (out of 3 million lives in the state) including commercial data for fully insured and individual market covered lives and the state employee health plans from 2012 through 2015. In 2017, data from 2016 is expected to be added to the APCD and Medicare data procurement and integration will begin. Because of the 2016 *Gobeille v. Liberty Mutual Insurance Company* ruling,⁷³ the APCD cannot mandate self-insured employers to submit data, and in Connecticut, self-insured employers comprise roughly 50 percent of the employer insurance market.

State officials described several changes and challenges related to the APCD during the AR2 analysis period. As previously discussed, in March 2017, the Executive Director of the APCD resigned. The state appointed an interim director who it feels will be effective in navigating the challenges ahead. Stakeholders described that one of the APCD’s biggest challenges was including Medicaid claims because of statutory standards around data protection. One state official explained that the agency must be able to affirmatively determine that it is in the best interest of Medicaid members to share data with the APCD. DSS is negotiating a memorandum of understanding with the APCD that requires very controlled use of the Medicaid claims data. A state official also noted that incorporating Medicaid eligibility data and the master

⁷² Checko, P., Fusco, D., Hunt, M., Hashyap, N., Rioux, R., Scibelli, N. ... Woodruff, T. (2017, April 24). *Final report and recommendations of the electronic clinical quality measures design group*. Prepared for the Connecticut Health Information Technology Advisory Council. Retrieved August 18, 2017, from http://portal.ct.gov/-/media/Office-of-the-Lt-Governor/Health-IT-Advisory-Council/eCQM/eCQM_Final_Report_20170424.pdf?la=en

⁷³ *Gobeille v. Liberty Mutual Insurance Company*, No. 14-181, 577 U.S. ___, slip op. at 1, 13 (2016). Retrieved January 10, 2018, from https://www.supremecourt.gov/opinions/15pdf/14-181_5426.pdf

provider index will present challenges, because these datasets are currently housed in separate systems.

In addition to incorporating Medicaid data, several other challenges may affect APCD implementation. A state official noted that some smaller insurers had difficulties participating in the APCD because of limited resources. A recent Substance Abuse and Mental Health Services Administration regulation poses challenges with collecting substance abuse treatment claims for services provided under federally reimbursed substance use treatment facilities. Finally, a state official noted that if the state legislature passes the bill moving the APCD to the Office of Health Strategies in the Lieutenant Governor's Office, administrative challenges may delay progress. Despite these challenges, stakeholders still believe that the APCD is poised for success and expect that the data to calculate dashboard metrics will be available by July 1, 2017.

B.1.5 Practice transformation and workforce development

At the end of the AR1 analysis period, Connecticut's primary strategy for workforce development was to implement a Community Health Workers (CHWs) Initiative. The CHW Advisory Committee was in the process of developing a policy framework for defining the role of CHWs and their incorporation into primary care teams for health care delivery and preventive service provision. The CHW implementation team, led by Southwestern Area Health Education Center (SWAHEC), was conducting stakeholder engagement activities in preparation of an employer-needs survey and to identify CHW apprenticeship opportunities. Although the state intended to incorporate CHWs into the various components of the SIM Initiative, individual work streams had not yet been integrated with one another.

As of April 30, 2017, Connecticut is poised to meet its goals for the CHW initiative as planned. The CHW Advisory Committee submitted a final certification model to the SIM Steering Committee for approval and proposed mechanisms for sustainable funding through primary care payment models. The latter is a need that the state realized upon conducting a statewide needs assessment among health care organizations. State officials observe that, prior to the SIM Initiative, most CHWs were not being integrated with primary care teams because they were employed by community-based organizations (CBOs) and not by health care organizations, thereby limiting their reach. Providers echo that, despite general recognition of the value added by CHWs to patient care, the lack of payment mechanisms within the current FFS environment is a huge barrier to the integration of CHWs and other types of care coordinators and patient care managers into primary care teams. A state official explained that "shared savings is not going to be enough for practices to bring in CHWs. The state needs CPC+ and other primary care payment models" to help practices with upfront costs associating with the integration of a CHW workforce.

To encourage integration of CHWs into the health care delivery system and to develop an evidence base for CHW return on investment (ROI), Connecticut included a CHW employment requirement for participating entities in CCIP. As of April 30, 2017, the three selected ANs and FQHCs are developing their practice transformation work plan with the state's vendor, Qualidigm. Moving forward, Qualidigm will be assessing the participating entities' readiness to integrate CHWs and providing technical support for the recruitment and hiring of CHWs in these practices. SWAHEC, in turn, will provide best-practice manuals and additional needed technical assistance to Qualidigm to ensure successful CHW integration within CCIP.

SWAHEC also engages in ongoing activities to promote CHW integration and employment opportunities. Provider association events such as the Connecticut Public Health Association annual meeting and the Connecticut Hospital Association Asthma Symposium are being leveraged by SWAHEC as platforms for public presentations and raising awareness of the CHW Initiative. SWAHEC also connected with workforce partners such as the Metro Hartford Alliance for Career Groups to explore CHW apprenticeship opportunities. These activities are expected to continue through 2018. To provide additional resources and tools for CHWs and potential employers, SWAHEC is expecting to launch a CHW Web site in September 2017.

At the broader policy level, the Connecticut legislature introduced Senate Bill 126 during the 2017 legislative session to establish an official process to certify CHWs that includes specific training and experience requirements. State officials are optimistic that the bill will pass and help transform the health care delivery system into one that is favorable to CHW integration.

Although most stakeholders agreed that Connecticut was making steady progress on the CHW Initiative, they also noted areas of concern regarding workforce development—some stakeholders expressed concern that the bigger challenge in Connecticut was a shortage of primary care physicians. Both providers and consumer advocates commented that medical school graduates were often discouraged by the relatively low pay and overwhelming administrative burden in primary care. There were also concerns over equitable distributions of the primary care supply throughout the state, particularly in urban and rural communities. These stakeholders expressed a need for a residency placement program, loan forgiveness for rural providers, and investment in telehealth infrastructure to ensure that the health care needs of rural and other underserved communities can be met.

B.1.6 Population health

At the end of the AR1 analysis period, Connecticut's population health strategies under the SIM Initiative were being rolled out as originally planned. The state continues to pursue the two primary population health strategies described in the previous annual report, summarized below.

- Establish a proof-of-concept model for Prevention Service Centers (PSCs) to offer community preventive efforts, be staffed with primary care providers, and offer evidence-informed and culturally and linguistically appropriate prevention services.
- Develop a comprehensive plan for Health Enhancement Communities (HECs) to foster coordination and accountability among community organizations, health care providers, schools, and other entities to improve health and social determinants of health in geographic areas with the greatest disparities.

Through the development of the PCMH+ program and the Population Health Council, SIM stakeholders reached consensus on the need to address social determinants such as housing, employment, education, and basic needs. One of the core drivers of better health care outcomes in CCIP is the integration of health care delivery with community resources to address socioeconomic factors that affect health outcomes. CCIP is developing community health collaboratives, and the Population Health Council is developing the PSC model with an intent to align the collaboratives and model to support each other. As of April 30, 2017, Connecticut is considering expanding community collaboratives for CCIP as PSC test sites.

The Population Health Council engaged with several stakeholders to gather their input on population health planning. They held three listening sessions in spring 2017 with participants who represented diverse community service organizations and perspectives. These sessions were used to engage community stakeholders, build buy-in for population health efforts, discuss challenges and opportunities for CBOs and public health entities to intersect with the health care system and health care entities, and test the PSC concept and its assumptions in the community.

The listening sessions, the state’s environmental scans, discussion with existing local coalitions, and 2016 focus groups led to a belief among stakeholders that their opinions are valued. One provider commented on this process:

I think SIM is doing a good job of listening to stakeholders. I think they came in with some initial ideas that don't make sense but I do think they're listening to the members of the team. They're doing focus groups and talking to people who would be involved including organizations and patients. I think they are listening. That's developing. I think they're changing things they need to.

Some stakeholders expressed concern that the PSCs and HECs will be new community entities that do not integrate with existing programs and services and could duplicate or conflict with existing resources. According to one state official, “There was some kind of discussion about having community collaboratives exist in their own form, separate from everything else. I don’t think that fits our model as well in terms of tying it to our providers in some way so that everyone is working together on primary care.” A consumer commented, “I think it’s important to build on what’s already in place and not to say here comes the new shiny thing, we’re going to do this and impose this on communities. That is absolutely not going to work.”

Several people expressed concern about putting resources into creating new structures and programs, rather than into existing programs to increase housing, food security, and transportation services. One provider noted:

SIM overall hasn't provided support and money to improve social determinants. We need more thorough partnerships at the community level that bring in people who run the cities and the towns, transportation, employment, and all those folks. It is happening, but SIM has to put more resources towards helping the most needy communities address those needs but there's no state money to do that. The state is broke right now.

The SIM Initiative is considering strategies to integrate incentives for population health improvement into health care finance mechanisms such as shared savings arrangements rather than pursuing mandates that require health plans to meet specific population health targets. The SIM PMO considered other potential financial incentives and supports but is cautious about developing programs using grant funding without sustainability mechanisms. The SIM PMO hopes to develop strategies that interest the health care sector, because it could help providers meet quality measures for which they are accountable.

The state Medicaid program and DPH are exploring opportunities to embed population health interventions into future cohorts of PCMH+ as well. PCMH+ requires participating entities to enter into formal arrangements with CBOs addressing relevant social determinants of health. According to one state official, “There are pieces there that could very helpfully be refined to reflect an emphasis on a connection to public health entities and also to look at our care coordination strategies and also our quality measures to determine whether those need to evolve or expand to reflect the prevention agenda.”

B.1.7 Quality measurement alignment

As of June 30, 2016, Connecticut's quality measurement alignment strategies included developing and implementing three multi-payer initiatives: a CQM set, a care experience survey, and a public scorecard. During the AR1 analysis period, Connecticut primarily focused on identifying the specific quality measures for their measure sets and had not finalized them.

During the AR2 analysis period, Connecticut made the most progress on the CQM set designed for use by commercial and Medicaid payers in value-based payment (VBP) arrangements. The final core measure set was finalized by the SIM Quality Council and approved by the SIM Steering Committee on November 10, 2016. The measure set includes PCMH-Consumer Assessment of Healthcare Providers and Systems (CAHPS) as the care experience measure. In February 2017, the state confirmed that several commercial payers and Medicaid will participate in the CAHPS survey, which is being funded through the SIM Initiative. In addition to the CQM set, the Quality Council finalized a set of measures for

reporting (i.e., not for payment) that the state plans to incorporate into its public scorecard. As of April 2017, the public scorecard was still under development and is intended to provide consumers with information regarding the performance of Connecticut's ANs and FQHCs.

State officials reported that their work on quality measurement alignment was not adopted by commercial payers. One official remarked, "the quality measurement alignment process has been disappointing." Persuading commercial payers to adopt the CQM set proved challenging, even though payers actively participated in the SIM Quality Council's core measure set design process. National payers participating in the Connecticut market were reluctant to adopt local measures that do not align with their national measures. State officials also shared that, at one point, it seemed the CMS core measure work would supplant Connecticut's SIM efforts as payers were considering adopting them instead of those adopted by Connecticut's SIM. However, the relevant insurers did not end up pursuing the CMS initiative. As of April 2017, no commercial plans have agreed to adopt the full CQM set developed by the SIM Quality Council, and therefore the state intends to modify its approach. To address this challenge, the state is working to convince its largest commercial payer to adopt the full measure set and then achieve buy-in at the provider level. The state believes that if the largest commercial payer adopts the common multi-payer measure set, others would agree to participate because it would reduce provider reporting burden.

As of April 2017, only one payer in the state has even partially aligned with the SIM-developed CQM set, Medicaid. However, stakeholders reported that DSS adopted some but not all the SIM Quality Council's quality measure set. Stakeholders were frustrated by DSS's lack of full adoption and pointed to it as a concrete example of where better alignment between DSS and the SIM PMO would be helpful. DSS explained that although it did not use the SIM measures to develop PCMH+ measures, the measure set developed by DSS for PCMH+ ultimately aligns well with the SIM CQM set. A state official shared,

As we did model design for PCMH+, we started with an existing set of measures we were already using for our PCMH⁷⁴ program and refined that to some extent based on the focus areas for PCMH+. Fortunately, when we tested alignment with the master quality measure set for SIM, there was very good consistency and essentially a subset of the measures that were agreed upon for SIM. We do have different emphasis points. For example, we wanted to make sure behavioral health was represented.

Although no payers fully adopted the SIM-developed CQM set for use in their VBP contracts during the AR2 analysis period, three payers, including two commercial payers and Medicaid, adopted the CAHPS care experience measure. Given that the state is funding the

⁷⁴ This refers to the DSS PCMH program, which predates the SIM Initiative.

production of the CAHPS measure, Connecticut did not originally anticipate difficulties in securing payers to commit to reporting the measure. However, one state official noted that it ultimately took “heroic effort [to get payers to] agree to share their member files for the care experience survey. Had we not picked a vendor that was already working with all three of those payers it would have been impossible.” State officials believe that attainment of the largest commercial payer to participate first was crucial to their success.

B.1.8 Lessons learned and looking forward

Engage a broad array of stakeholders often. Connecticut reported that stakeholder engagement was a focal point of its activities, and this was evident during key informant interviews. Representatives from a variety of backgrounds reported that the SIM PMO was actively seeking feedback from partners and the community. Some of the early challenges Connecticut encountered were driven by community resistance to VBPs for Medicaid beneficiaries. To alleviate some of the concern and solicit greater partnerships beyond the SIM Initiative, the state listened to stakeholder input and responded by delaying implementation by 1 year. However, as noted in ***Section B.1.2***, stakeholders criticized the state for engaging too many people and not always acting on the feedback they solicit.

Increase collaboration across state programs. Stakeholders reported that having separate state departments (DSS and PMO) responsible for implementing and overseeing the complementary PCMH+ and CCIP initiatives was challenging. SIM participants identified this as a key opportunity to increase coordination and reduce the reporting burden for participating entities. In addition to the DSS and PMO, the SIM Initiative collaborates with the health IT office within the Office of the Lieutenant Governor and Access Health Connecticut for the APCD. To streamline efforts of the “State Innovation Model Initiative and related successor initiatives,” the state proposed legislation in 2017 to create an independent Office of Health Strategy within the DPH that would be charged with “developing and implementing a comprehensive and cohesive health care vision for the state” and would oversee the SIM PMO, HIE, APCD, and the health IT office, among other responsibilities.⁷⁵ Stakeholders reported that this new office would provide greater collaboration across key partners and provide a permanent home for efforts like the SIM Initiative that can be sustained and uninterrupted by changes in the state administration. The proposed legislation, should it be approved, will take effect on July 1, 2018.

⁷⁵ State of Connecticut General Assembly. Governor’s Bill 795: An Act Establishing the Office of Health Strategy and Improving the Certificate of Need Program. <https://www.cga.ct.gov/2017/TOB/s/2017SB-00795-R00-SB.htm>

Use existing channels to work with employers. Initially, Connecticut’s approach to promoting VBID across the state was through learning collaboratives and providing tools and assistance to employers interested in implementing it. When the October 2016 learning collaborative yielded little employer interest, the state hired Freeman Healthcare to develop a new employer engagement strategy that focuses on targeting human resource specialists and capitalizes on existing employer events and networks such as the Society for Human Resource Management continuing education program.⁷⁶ At the time of the 2017 site visit, the state and its vendor were in the process of reaching out to professional organizations and employers to expand their reach.

Embrace new opportunities for success. Multiple stakeholders noted that changes in health IT leadership (the HITO and new Director of the APCD) renewed enthusiasm and opened new channels for activities. Additionally, the CHW initiative is progressing and, pending legislative action in July 2017, will bring about certification processes that may improve care delivery, and act as a conduit for both expanding or increasing reimbursement from payers.

Prepare for potential challenges. There are several challenges that the Connecticut SIM Initiative anticipates in the AR3 analysis period. Many stakeholders expressed great concern over expanding PCMH+ to a second cohort in 2018 without any evaluation from the first cohort. Stakeholders will likely continue to oppose the expansion until the new cohort launches in 2018. The PMO and other stakeholders will also need to consider alternatives to the AMH model and reallocate resources given low participation rates. With fewer participating entities in AMH, there will likely be fewer NCQA-certified person-centered medical homes able to participate in future waves of the PCMH+ SSP. At the time of this report, the PMO and Steering Committee had just begun discussions on potential alternative activities and models that could be supported using the existing award.

B.2 Changes in Outcomes During the State Innovation Model Initiative

B.2.1 Progress toward a preponderance of care in value-based purchasing models and alternative payment models

Stakeholders with a variety of backgrounds expressed a mix of optimism and doubt about the state’s ability to move 80 percent of the statewide and SIM-targeted populations into a VBP or primary care delivery model by the end of the SIM award. Prior to the implementation of the SIM Initiative, numerous Connecticut providers were already participating in the Medicare Shared Savings Program (MSSP) and commercial payers in the state had implemented VBP methodologies with providers in their networks. State officials reported that, outside of the SIM Initiative, at least three of the five commercial payers in Connecticut provide advanced payments

⁷⁶ Society for Human Resource Management. (2017). *SHRM essentials of human resources—Education partner programs*. Retrieved from <https://www.shrm.org/learningandcareer/learning/pages/college.aspx>

to ANs and hold providers accountable to the total cost of care for their patients. As of April 30, 2017, the state is still working with payers to determine the baseline penetration of VBP model in the state. State officials estimated that 46 percent of Medicaid's 780,000 beneficiaries were attributed to an APM via Medicaid's PCMH+ SSP and traditional capitated PCMH programs combined. Some state officials and providers are hopeful that Medicaid can successfully recruit a second cohort of PCMH+ providers in 2018 and move another 200,000 beneficiaries into that shared savings model. With that increased participation, the state should be close to achieving the 80 percent goal among the Medicaid target population. Nevertheless, almost all stakeholders agree that achieving preponderance of care among the statewide population is a lofty goal.

The biggest obstacle that stakeholders reported in the state's progress toward preponderance of care is providers' reluctance to participate in a Medicaid shared saving program without successful demonstration of ROI. Although Medicare and some commercial payers implemented SSPs in Connecticut prior to the implementation of the SIM Initiative, respondents noted that ROI is not yet seen. According to several respondents, none of the Medicare ACOs in Connecticut had been awarded shared savings at the time of interviews. As such, many providers remain dubious that APMs will be effective in the long run. Stakeholders observed that current PCMH+ providers are early adopters and committed to high-quality care coordination and patient management. However, even these providers express doubts about their ability to care for their Medicaid patients in a way that achieves cost savings. Participating hospital-anchored ANs continue to have concerns about managing total cost of care for patients with multiple chronic diseases in an FFS environment with high utilization of emergency rooms and lack of reimbursement for home health care.

Other initiatives under SIM may have an indirect impact on the ability of the state to increase VBP penetration. By design, AMH and CCIP will help participating entities develop the organizational capacity to coordinate care and manage the cost of caring for their patients to expand the availability of VBPs. The VBID initiative is intended to influence consumer behaviors and increase demand for VBP models in the commercial health plan member population.

Table B-1 presents the preliminary participation numbers available as of April 30, 2017 and shows that 127,000 Medicaid beneficiaries were attributed to the PCMH+ SSP.

Table B-1. Populations reached by a value-based purchasing or alternative payment model in Connecticut, latest reported figures as of first quarter 2017

Payer type	SIM models			Landscape	
	Primary care PCMHs	ACOs	Other	SIM-wide	Any value-based purchasing or APMs
Medicaid	—	127,000 (17.9%)	—	—	—

Source: *Connecticut SIM Quarterly Progress Report 2 for Award Year 2*.

Note: Numbers in this report were preliminary at the end of this analysis period. Denominator (711,200) was provided by Kaiser Foundation State Health Facts (<https://www.kff.org/statedata/>, accessed on November 27, 2017).

— = relevant data were not provided in data source; ACO = accountable care organization; APM = alternative payment model; PCMH = patient-centered medical home; SIM = State Innovation Model.

B.2.2 Care delivery

Both CCIP and SIM-funded AMH formally started on January 1, 2017, and at the time of the interviews, stakeholders noted that it is too early to see results of these initiatives. Although the AMH program was launched too recently to observe changes in outcomes, some respondents highlighted their positive perception of the state-funded pilot cohort of AMH and were optimistic about the SIM-funded cohort. A state official described the state-funded pilot of AMH as “far enough along for practices that weren’t medical homes to be doing more coordination.” Despite the generally positive perception of the pilot cohort, Connecticut does not have formal measures of its impact. Respondents did note that they perceived improvements in care coordination and that participants appear to be well positioned for the SIM SSP, PCMH+. Because the content of the state-funded pilot cohort and SIM-funded cohort is identical, the new cohort is anticipated to see similar benefits.

CCIP also started implementation in the beginning of 2017, and respondents report that this program will take time to show demonstrable impacts to its three focal areas of care delivery. Early work by the transformation vendor focused on conducting readiness assessments with participating practices to inform the development of individual transformation plans. CCIP has not yet started to provide assistance to practices that would impact care delivery, and practices will not be required to meet CCIP standards until at least 15 months after the start of implementation. State officials commented that “CCIP will take longer to show success” and that “it’s still too early” to see impacts of this program. Still, some respondents did express optimism for the program and praised its three focal standards as well correlated with Connecticut’s needs for improving care delivery. One consumer advocate praised the design of the program, saying that “it’s actually dealing with some real structural issues with behavioral health and complex patients.” At the same time, several respondents questioned whether the resources dedicated to CCIP would be sufficient to help participating practices meet the lofty goals aligned with the CCIP standards.

Connecticut also intends to impact care delivery by integrating more CHWs into Connecticut’s health care system. This work is in the planning phases and has not yet had any impact on care delivery.

B.2.3 Coordination of care, quality of care, utilization, and expenditures

Connecticut’s SIM Initiative aims to impact expenditures and utilization reform primarily through its Medicaid SSP, PCMH+. How this program will influence the health care market in Connecticut is contentious in the state. Proponents argue that PCMH+ will streamline payment and delivery, although a group of vocal patient advocates argue that it will place perverse incentives on providers, including underservice and cherry-picking of patients. However, because the program started on January 1, 2017, both groups agree that the program has not yet had time to impact expenditures or utilization.

Most respondents seemed optimistic that PCMH+ will have a beneficial impact on costs and utilization in the state. Some respondents noted that providers would be incented to bring about this change because of the upside shared-savings model. Several respondents noted that participation in other SIM programs, such as AMH and CCIP, may help facilitate this impact.

Connecticut is still focusing on building its health IT infrastructure to support the SIM Initiative, and has not yet fully implemented any strategies that would show an impact on health care delivery or utilization. Current efforts continue to prioritize gaining participation in the APCD from private payers and Medicaid so that Connecticut will be able to monitor quality measures across the state.

B.2.4 Population health

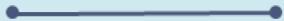
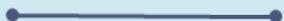
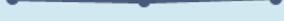
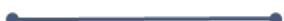
Table B-2 shows Connecticut’s baseline population health outcomes based on 19 measures from the 3 years prior to the implementation of Connecticut’s SIM award. The table also includes information from the comparison group states: New Jersey, Pennsylvania, and Virginia.

Table B-2. Baseline measures of population health in Connecticut, 2013–2015

Measure		2013–2015 Average	2013–2015 Trend
Health status is fair or poor	Connecticut	11.5%	
	CG	13.0%	
	National	14.9%	
Ever diagnosed with diabetes	Connecticut	8.3%	
	CG	8.9%	
	National	9.6%	

(continued)

Table B-2. Baseline measures of population health in Connecticut, 2013–2015 (continued)

Measure		2013–2015 Average	2013–2015 Trend
Ever diagnosed with hypertension ##	Connecticut	29.4%	
	CG	31.5%	
	National	31.6%	
Ever diagnosed with asthma	Connecticut	15.3%	
	CG	12.7%	
	National	13.5%	
Has a functional limitation ##	Connecticut	16.7%	
	CG	16.3%	
	National	18.2%	
Current smoker	Connecticut	13.5%	
	CG	15.4%	
	National	16.4%	
Overweight	Connecticut	61.6%	
	CG	63.9%	
	National	64.4%	
Obese	Connecticut	25.2%	
	CG	27.1%	
	National	28.5%	
No leisure time physical activity or exercise, past 30 days	Connecticut	21.1%	
	CG	22.3%	
	National	23.3%	
Limited fruit and vegetable intake, past 30 days	Connecticut	80.9%	
	CG	84.1%	
	National	83.1%	
Any driving after drinking too much, past 30 days #	Connecticut	3.2%	N/A
	CG	3.1%	
	National	3.3%	
No checkup, past year	Connecticut	27.4%	
	CG	24.7%	
	National	29.4%	
No flu vaccine, past year	Connecticut	56.1%	
	CG	57.5%	
	National	59.6%	

(continued)

Table B-2. Baseline measures of population health in Connecticut, 2013–2015 (continued)

Measure		2013–2015 Average	2013–2015 Trend
No 65+ flu vaccine, past year	Connecticut	34.6%	
	CG	38.3%	
	National	39.1%	
No 65+ pneumonia vaccine, ever	Connecticut	30.0%	
	CG	31.0%	
	National	30.2%	
Among adults with hypertension, no hypertension blood pressure medication ##	Connecticut	23.5%	
	CG	21.0%	
	National	22.4%	
No 50–75 colorectal cancer screening—no fecal occult blood test (FOBT), past year #	Connecticut	91.0%	N/A
	CG	92.8%	
	National	90.7%	
No 50–75 colorectal cancer screening—no sigmoidoscopy or colonoscopy, past 5 years #	Connecticut	39.5%	N/A
	CG	44.4%	
	National	46.0%	
No 50–75 colorectal cancer screening—no sigmoidoscopy or colonoscopy, past 10 years #	Connecticut	27.1%	N/A
	CG	32.8%	
	National	33.6%	

Source: Behavioral Risk Factor Surveillance System, collected by CDC (2013–2015).²⁷

Note: To facilitate the comparison of trends over time between the model test state, its comparison group, and the nation, the sparklines for each measure rely on the same scale for the vertical axis for all three groups. Because the vertical scale for the sparklines varies by measure, the sparklines are not comparable across the different measures. Sparklines are not available for outcomes for which data are limited to 2014 (indicated by #). Sparklines for outcomes that are limited to data for 2013 and 2015 (indicated by ##) will be based on data for two points in time and so will appear more stable than outcomes for which data are available for 2013, 2014, and 2015.

CDC = Centers for Disease Control and Prevention; CG = comparison group; FOBT = fecal occult blood test; N/A = not available.

As of April 30, 2017, the state did not decide on a final model design for PSCs and HECs. Hence, it is too early to tell what the models will target in terms of population health measures and to hypothesize if outcomes can be improved within the test grant period. The latest plans for PSCs focus on providing evidence-based practices in five issue areas: asthma, diabetes, hypertension, behavioral health, and early childhood. From 2013 to 2015, the percentage of adults with asthma in Connecticut was, on average, 2 percent higher than national levels from the same time (15.3 percent vs. 13.5 percent); the comparison group was slightly lower than the national average during the same time (12.7 percent vs. 13.5 percent) The baseline rates of

²⁷ Centers for Disease Control and Prevention (CDC). (2013–2015). *Behavioral Risk Factor Surveillance System survey data*. Atlanta, GA: U.S. Department of Health and Human Services, CDC.

diabetes in the state are lower than national average (8.3 percent vs. 9.6 percent); the comparison group is slightly lower than the national average during the same time period (8.9 percent vs. 9.6 percent). Slightly over 60 percent of adults are overweight (61.6 percent vs. 64.4 percent nationally) and nearly one in four adults in the state is obese (vs. 28.5 percent nationally); in the comparison group, 63.9 percent of the population is overweight. Although Connecticut's baseline rate of hypertension is lower than the national average (29.4 percent vs. 31.6 percent), the percentage of adults with hypertension without hypertension medication or treatment is higher than national average (23.5 percent vs. 22.4 percent). In the comparison group, 21 percent of adults with hypertension were not taking hypertension medication.

B.3 Connecticut Summary

During the AR2 analysis period (July 1, 2016, to April 30, 2017) Connecticut made progress implementing its delivery system and payment reforms and planning for its workforce development, quality measurement alignment, health IT, and population health strategies. Despite early implementation challenges and delays, Connecticut's SIM Initiative progressed during the analysis period. The Connecticut SIM Initiative prioritized stakeholder engagement activities during this analysis period. State officials, providers, consumer advocates, payers, and employers continue to engage in the SIM Initiative primarily through multisector work groups and committees that lead the design and implementation of various SIM components. In addition to topic-specific SIM work groups, other key stakeholder committees include the CAB and MAPOC.

The Medicaid SSP, PCMH+, began on January 1, 2017, with an initial wave of approximately 127,000 beneficiaries. Prior to the launch of the initiative, several stakeholders in the state, especially some consumer advocates, expressed concerns about potential underservice and patient selection biases in an SSP. In response to those concerns, the PMO postponed the launch of PCMH+ by a year (January 2016 to January 2017) to allow for more community engagement and outreach activities. Despite early concerns, stakeholders from multiple domains report that opt-out rates are low as of April 2017, although they could not quantify numbers or percentages in interviews. The state plans to launch a second cohort of PCMH+ in 2018.

During this analysis period, three participating entities enrolled in CCIP. Several stakeholders said that the program was in its infancy, beginning to develop transformation plans, and felt it was too early to comment on potential successes. Several providers noted that, although CCIP is promising, they had concerns about its long-term effectiveness.

The AMH model did not meet its enrollment goal, thereby limiting its reach and potential impacts. In response to the low participation rates in the SIM-funded AMH cohort, the state PMO is considering modifying its AMH strategy. As of April 2017, the state was considering

reallocating AMH funding sources to CCIP to foster practice transformation with fewer limitations.

In the coming year, the evaluation will monitor and assess early implementation, beneficiary and provider participation, and early impacts on individual and population health metrics.

Appendix C: State Innovation Model in Model Test States: Delaware

Key Results from Delaware's State Innovation Model Initiative July 2016–April 2017

- Delaware's overall implementation and testing of its SIM Initiative since the previous analysis period demonstrated progress on each of its strategies, but not as much progress as the state anticipated.
- Although Delaware did not discontinue any of its strategies, some modifications were made to the state's approach to the SIM Initiative. Among its workforce development strategies, Delaware expanded support to behavioral health practices through its planning for the Behavioral Health Integration testing pilot. The possibility of changing the course of, or discontinuing, the Common Scorecard in the future was discussed, because of lower than expected adoption by providers and undefined, long-term funding sources.
- The results of Delaware's stakeholder engagement efforts and subsequent participation in the SIM Initiative's strategies were mixed. Most stakeholders reported sufficient resources to provide feedback to the state on the SIM Initiative; they felt that the Delaware Center for Health Innovation (DCHI) considered their feedback and that committee meetings were well attended. However, others raised concerns that DCHI did not consider certain stakeholders' feedback and that the DCHI board often made decisions without having first engaged providers in the decision-making process.
- Most stakeholders felt that the Delaware SIM Initiative is not advanced enough in its implementation to have large-scale, statewide impacts on health care expenditures, health care utilization, care coordination, quality of care, and population health. However, many felt that the infrastructure reached a point where an impact will be seen in the coming years, and that from a small-scale perspective, they are starting to see positive impacts.

This appendix provides an updated overview of the Delaware SIM Initiative; describes important changes in the state's SIM Initiative; summarizes implementation and testing successes, challenges, and lessons learned; and discusses early changes or prospects of changes resulting from the SIM Initiative. The findings in this appendix are based on analysis of data collected from key findings from the stakeholder telephone interviews, state document reviews, and state program and evaluation calls. These data were collected between July 1, 2016, and May 24, 2017.

As a source for this appendix, the RTI team conducted 16 key informant interviews from March 24 through May 24, 2017.⁷⁸ The key topics of the interviews were (1) changes in governance and program administration, (2) progress implementing and testing SIM models and initiatives, (3) participation of payers and providers, (4) progress toward a preponderance of care in the state being provided through an alternative payment model (APM), and (5) early indicators of changes in relevant outcomes. Interview participants included state officials, payers,

⁷⁸ Interviews extended beyond the April 30, 2017, analysis period, because the RTI team had difficulty securing the participation of payer stakeholders and needed to continue the interviews and gather the information for this report.

providers, and consumer advocates involved in the development, implementation, and testing of Delaware's SIM Initiative. Further details on the analytic approach are available in *Chapter 1*. Information on the number and type of stakeholders interviewed for the state is in *Table 1-1*.

C.1 Implementation Activities

Delaware's SIM Initiative demonstrated progress on each of its models and strategies, but not as much progress as the state anticipated. State officials are concerned that, at the current pace, some of Delaware's original objectives may not be completely met by the end of the SIM Initiative. This slower progress includes missing implementation timelines for some strategies (Common Scorecard and Behavioral Health electronic health record [EHR] incentives) and achieving lower penetration within the provider community on others (Common Scorecard, pay-for-value [P4V] models, and practice transformation).

Delaware's consensus-based approach contributes to the pace of progress. This approach uses the Delaware Center for Health Innovation (DCHI) to develop and vet strategies and implementation plans through its committee structure. Stakeholders and state officials recognized that this approach has both positive and negative consequences. The consensus-based approach results in better alignment and buy-in from stakeholders, but implementation can be slowed by this process. While slow, the committee processes worked smoothly, with stakeholders remaining actively engaged and the DCHI increasing its responsibilities for implementation.

Another factor that influenced progress during the Annual Report 2 (AR2) analysis period was the election of a new Governor in November 2016. Several state officials indicated that payers and providers both slowed their implementation activities during the latter half of 2016 while waiting to see how the state's new administration would impact the Delaware SIM Initiative. The response to political uncertainty most directly affected the payment reform strategies.

C.1.1 Governance and program administration

Delaware's governance structure for its SIM Initiative consists of a public-private infrastructure comprising the Health Care Commission (HCC), the Delaware Health Information Network (DHIN), and DCHI, with all three organizations sharing responsibility for SIM implementation and testing. HCC, which is part of the Delaware Department of Health and Social Services (DHSS), functions in the state policy-setting role, and the position of SIM project director resides within this agency. DHIN is a statewide health information network and leads the health information technology (health IT) components. DCHI is a nonprofit created to convene state government and stakeholders and build consensus around health care transformation.

DCHI's board of directors is broadly representative of external stakeholders; its chairperson is from the business community. The DHIN executive director and the SIM project director also serve on the DCHI board. DCHI leads the consensus development process for SIM implementation plans, using five committees (Clinical, Payment Model Monitoring, Patient and Consumer Advisory, Workforce and Education, and Healthy Neighborhoods) to accomplish this work. Funding for DCHI's work comes from commercial payers, hospital systems, and other non-SIM sources. This governance and financing structure supports a voluntary, consensus-based approach, complemented by the state's use of its regulatory and purchasing authority to incent and support change.

During the AR2 analysis period, the Healthy Neighborhoods Committee structure changed. First, the full committee increased its membership to enhance statewide strategic partnerships. This change included the addition of health systems to the group, as their engagement was viewed as a means of sustaining the initiative beyond the SIM Initiative. The belief is that communities and providers need to see the value of the population health initiatives to sustain them. Second, the committee formed three subcommittees designed to support functions that all local councils will need—data support and evaluation, resource and sustainability, and clinical advisory.

There was stability within the SIM leadership during the analysis period, which helped maintain stakeholder participation in the DCHI committees, according to state officials. The DCHI board renewed all its committee chairs, committee co-chairs, and board officers. The new DHSS secretary sits on the DCHI board, and the previous DHSS secretary was added to the board as an at-large member at the beginning of 2017, further solidifying leadership continuity.

Delaware changed its approach to staffing to support sustainability, increasing the use of internal state staff and DCHI staff to lead implementation and shifting the role of consultants to providing project management and support for stakeholder committees. DCHI added five staff positions, including a project director for Healthy Neighborhoods and two local council support staff. DCHI also engaged a consultant to support committee work. Delaware continues to rely on its four vendors to carry out the SIM practice transformation activities with providers.

State officials said Delaware's budget situation might necessitate some changes in the decision-making process for SIM strategies, which contributed to a slower than anticipated pace of implementation (see *Section C.1, Implementation Activities*). As of April 2017, Delaware faces a \$348 million shortfall for the FY2018 budget, and much of that amount can be attributed to projected cost increases for Medicaid and state employee and retiree health care.⁷⁹ This situation increased scrutiny of the pace of payment and delivery reform. The new administration

⁷⁹ Delaware DHSS. (2017, May 1). *State Innovation Model Annual Progress Report*. Choose Health Delaware Web site. Retrieved from <http://dhss.delaware.gov/dhss/dhcc/files/annualreport1.pdf>

undertook a review of the SIM consensus-based approach, as well as state levers used by the SIM Initiative, to determine whether the current approach can achieve the payment and delivery systems changes within the timeframes necessary to address the state deficit. State officials said they envision the state taking a more proactive role on payment reform and making greater use of its regulatory and purchasing authority to drive changes related to health care spending, while continuing to use a consensus-based model for other SIM strategies.

In summary, Delaware's public-private infrastructure and consensus-based process has been both a strength and a weakness for successful implementation of its SIM Initiative. Its strength lies in the breadth, depth, and continuity of stakeholder engagement, which can enhance both implementation and sustainability. On the other hand, the process can be slow; its voluntary nature has, in part, been the reason for the uneven implementation of SIM strategies.

C.1.2 Stakeholder engagement

The five DCHI committees are the primary method for stakeholders to provide feedback on the Delaware SIM Initiative. Several stakeholders stated that there are adequate channels through which they can provide feedback, particularly through committee meetings. One provider stated that great care is taken in ensuring that stakeholders feel comfortable enough to speak, regardless of their point of view. DCHI committee structure is discussed in *Section C.1.1*.

Two stakeholders did not believe DCHI and HCC leadership were receptive to feedback. One consumer advocate stated that very little feedback that her committee provides is incorporated by DCHI leadership into their decision-making. The consumer advocate felt that the DCHI leadership preferred a more top-down approach. However, another consumer advocate thought the recommendations made by the committees are being acted upon by the DCHI leadership.

Multiple stakeholders felt that HCC did not value the committee's feedback and has its own plan. A provider committee member also described the committee communication structure as broken down. This provider reported that conversations about the SIM Initiative took place behind the scenes, and those conversations were not conveyed to the committee members.

In addition to stakeholder engagement, Delaware continued efforts to engage consumers. The Patient/Consumer Advisory Committee at DCHI is responsible for engaging with patient advocates, faith leaders, and individuals representing various stakeholder groups, and meets monthly to engage with patients and consumers. In 2016, Delaware completed six community forums, attended by about 200 individuals, to introduce the public and additional stakeholders to the SIM Initiative. One consumer advocate felt that the community forums were well published, but not well attended because the forums were held in the summer when fewer people could attend.

C.1.3 Delivery systems and payment reforms

Delaware's SIM Initiative includes two strategies for delivery system and payment reform: outcome-based payment models and behavioral health and primary care integration. At the end of the AR1 analysis period, June 30, 2016, the state had selected four vendors to work with primary care practices to support practice transformation, and adoption of value-based payment (VBP) models was underway. In July 2016, one Medicaid managed care organization (MCO) implemented a P4V model; other payers were expected to implement P4V models in 2017. The total-cost-of-care (TCC) model was under development. Behavioral health and primary care integration were progressing slower than anticipated. Since July 2016, Delaware did not make changes to the design and implementation plans of its delivery and payment reforms (including no new or discontinued reforms).

Outcome-based payment reforms

Although the progress of adopting payment reforms is slower than anticipated, some outcome-based payment models were started. At the end of January 2017, more than 30 percent of Delaware residents insured by Medicare, Medicaid, and commercial payers had a primary care provider (PCP) under a value-based contract.

Two payers, Highmark and United Healthcare, took the lead with outcome-based payment reform. In 2016, Highmark launched a pilot P4V model to a small number of Medicaid providers (15 providers statewide). Highmark began to provide quality reports and care coordination payments to these providers. This pilot included approximately 10,000 beneficiaries and provided state leadership with insight into the model's potential adoption statewide. Later in 2016, Highmark also introduced the model to commercial populations, initially targeting 123 high-volume providers. By November 2016, approximately 55 providers contracted for the commercial P4V model. However, Highmark's model affects only primary care doctors, not specialists. United Healthcare introduced a new VBP model that extended to pediatric doctors and includes quality shared savings.

One reason cited for the lack of progress with delivery system and payment reform is the size of the state. Payers are more likely to devote resources for the infrastructure and overhead needed for the reforms in a larger market than in a small state like Delaware. One state official described Delaware as an "add-on to regional strategies." In other words, a payer may implement programs across several states, and Delaware must then adjust the state's strategies to the payer's regional strategies.

DCHI responded to the feedback about slower adoption of payment reform efforts by holding informational events. First, the payment model monitoring committee held a series of virtual meetings about innovative models in other states, to learn about best practices for payment reform. DCHI also promoted VBP adoption by holding biweekly, monthly, or quarterly

meetings with payers. During the meetings, payers provide current enrollment data for VBP models and qualitative updates on ongoing partnerships.

Behavioral health and primary care integration

State officials and providers felt that there was a lack of progress with the behavioral health and primary care integration initiative. One reason for the lack of progress was that payers did not commit resources for behavioral health services. Another reason reported was the lack of behavioral health providers in the state. This strategy is discussed in further detail in ***Section C.1.5***.

Levers

During the AR2 analysis period, Delaware utilized three of its seven planned levers for promoting the adoption of delivery and payment reforms by providers and payers: state legislation, state employee health plan contract requirements, and standards for qualified health plans (QHPs) in the marketplace. The Health Care Claims Database (HCCD), Delaware's all-payer claims database, provides an example of a state using legislation as a lever to encourage participation in reforms by payers and providers. In July 2016, the state passed a law that requires certain claims data to be reported to HCCD by plans in the health insurance marketplace, the state Medicaid plan, and the state group plan. By providing data that will allow payers to better understand factors affecting costs and providers to identify areas for improvement, the state hopes that the HCCD will help drive participation in outcome-based payment models. Another example of the state using a lever is the state employee health plan contract requirements. In 2016, the state issued a request for proposal (RFP) for a medical third-party administrator. The RFP required alignment with the SIM Initiative, such as the accountable care organization (ACO) payment methodology and value-based care strategies. The state awarded plan administration to two entities. A state official noted that the two administrative entities increased the availability of VBPs in the state's group health plan. The plans will be available to Delaware's 122,000 state employees on July 1, 2017. The final lever utilized by the state was implementing standards for QHPs in the marketplace. According to the updated standards, payers that offer QHPs are required to make VBP models available to eligible PCPs and ACOs. As of April 2017, two payers, Aetna and Highmark, offered QHPs.

Despite the state's use of these levers, both state officials and stakeholders felt that the state should do more to leverage its authority. State officials acknowledge that they would like to further leverage the state employee health plan to accelerate payment reform. In addition, a provider felt that Delaware could mandate that payers participate in payment reform or lose health care contracts for the state employee health plan and Medicaid. A state official noted that the state is open to looking at the aforementioned and other additional policy levers.

Most interviewees stated that it was too soon to know whether these levers influenced the adoption of reforms by providers and payers, because, at the conclusion of the AR2 analysis

period, some of the levers were not fully implemented or were only recently started. For example, although the legislation establishing HCCD was passed in 2016, the database will not be operational until 2018. Furthermore, the QHP standards were updated in fourth quarter 2016 to align with HCCD.

Participation and alignment

Most interviewees felt that payers' alignment with delivery and payment reforms, by operationalizing any model with a P4V or shared savings (TCC) component, is not as strong as anticipated. The state lacks a legislative mandate to compel payers to participate in the SIM Initiative; thus, payer participation is voluntary. A state official reported that Delaware prefers to use a consensus-based approach to encourage participation by building broad support among stakeholders, including payers, instead of mandating participation through legislation, regulatory authority, or other levers. However, the same state official felt that some in the state are starting to see the necessity of a mandate to encourage participation.

Stakeholders and state officials acknowledged a need for more focus on provider engagement. The state described encountering "change fatigue" when engaging with providers. The number of payment models, practice transformation efforts, and other tools like the Common Scorecard led some providers to feel overwhelmed. In response to this concern, DCHI's Clinical Committee is refocusing on provider engagement through provider-to-provider communication. DCHI thinks this method of communication may be more effective. Another challenge noted by a provider is moving beyond the "early adopters" in the various SIM models.

C.1.4 Health information technology and data infrastructure

Delaware developed, implemented, or tested several health IT tools to enhance the state's data infrastructure and support the SIM Initiative's payment reform, practice transformation, care coordination, and population health strategies. DHIN, Delaware's statewide health information exchange (HIE), supports the development of health IT in collaboration with DCHI. Although most DHIN activities predate the SIM Initiative, state officials and stakeholders work together to ensure that the initiatives receive the necessary health IT support. To prioritize health IT elements that were viewed as necessary to support statewide health transformation, Delaware leveraged its Health IT Roadmap, which it developed in collaboration with stakeholders early in the SIM Initiative.⁸⁰ Specific health IT tools Delaware sought to use to support SIM initiatives include EHRs, the Common Scorecard, HCCD, the community health record, the Population Health Scorecard, care coordination tools and patient dashboards, the Direct secure messaging platform, and health data analytics.

⁸⁰ CMS. (2016, May 2). *SIM annual progress report*. Retrieved from <http://dhss.delaware.gov/dhss/dhcc/files/annualreport.pdf>

The state's plan to incent the use of EHRs and facilitate the sharing of behavioral health data included a grant program for behavioral health providers to adopt an EHR or enhance an existing one. The state issued six such grants ranging from \$10,000 to \$15,000 for practices that enhanced EHRs, and \$15,000 to \$20,000 for those that adopted a new EHR. As part of its goal to integrate primary care and behavioral health care, the state wanted at least 50 behavioral health providers to adopt EHRs to facilitate care coordination. Despite a lower response rate to the two released behavioral health grant RFPs, Delaware reached its goal and awarded grants to six practices with 68 providers. In Award Year 3, the state will perform site visits with these providers to identify which EHR vendors were selected by the providers and how EHRs are impacting their practices. Overall, statewide adoption of EHRs among all Delaware providers was very high, at 99 percent. Stakeholders felt that value-based contracts helped to incent further movement toward adoption, and that EHRs are having a positive impact on secure communication and care coordination.

The Delaware SIM team chose to include DHIN's existing Web-based community health record in the Health IT Roadmap to leverage it for the promotion of patient and consumer engagement, as well as population health management. The community health record receives data from all Delaware hospitals and commercial labs; about 95 percent of its imaging centers and nearly 100 ambulatory practices send encounter-level care summaries.⁸¹ The SIM team aims to increase the patient use of the community health record through the use of a patient portal, including the collection of patient-generated data. At the end of the AR2 analysis period, DHIN was developing the patient portal through funding from a separate grant—Office of the National Coordinator for Health Information Technology's (ONC's) Advance Interoperable HIE—using connections to existing hospital and practice patient portals, with the goal of completing it during 2017. The portal will enable patients to access all their health data through a single login, either to their provider's portal or to DHIN directly.

The state achieved significant technical and payer participation milestones with the Common Scorecard in Award Year 2. In the second quarter, DHIN and the SIM technical team released Version 2.0 of the Common Scorecard, which included new data from two commercial payers. Later in Award Year 2, the scorecard added data feeds from a third commercial payer and updated to Version 2.0, release 3, which added no new functionality. State officials viewed the addition of data from the third payer as a significant achievement. Prior to gaining that payer's participation, Delaware did not have high engagement with the payer. The availability of these additional data on the most recent version of the Common Scorecard (Version 2, release 4, released in March 2017) is expected to increase the scorecard's usefulness and improve the value of the tool for providers who are using it.

⁸¹ Delaware DHSS. (n.d.). *Delaware State Innovation Model award year 3, health information technology operational plan*. Retrieved from <http://dhss.delaware.gov/dhss/dhcc/files/desimhitopsplan3.pdf>

Despite provider outreach and enrollment efforts to educate providers on the purpose of the scorecard and details on performance measures, enrollment remains low. Interviewed providers stated that the lack of provider enrollment is likely the result of a perception that the data found in the scorecard for their practice does not accurately reflect their true data. Multiple providers indicated that payers still maintain their own scorecards, with numbers that are different from those in the Common Scorecard. Providers trust the accuracy of the payer's scorecard over that of the Common Scorecard because the payer's scorecard more consistently predicts the payment they will receive.

Taking advantage of the opportunity provided by the additional data feeds, the Clinical Committee and the DCHI board are looking broadly at the state to evaluate the scorecard by discussing its value and most beneficial future use. The groups are considering many possible uses for the scorecard, including, but not limited to, clinical performance improvement tools, making provider performance accessible to consumers, and using data to inform policy making and monitoring DCHI initiatives.

Delaware regarded HCCD as an essential tool and resource for the state to advance SIM-related work, allowing providers to use the data contained within the database to help them participate in VBP models.^{82,83} The state passed Senate Bill 238, providing the statutory authority for DHIN to create HCCD in Delaware in second quarter 2016. DHIN continues to develop and publish the regulations, and the operational HCCD is expected in 2018.

Levers

The only levers Delaware used relative to health IT strategies involved the creation and support for the HCCD. DHIN collaborated with state leadership and the DCHI board to enact regulations guiding the implementation of HCCD. DHIN also worked with a consulting firm in fourth quarter 2016 to establish recommendations for the implementation of technology necessary for the creation of HCCD.⁸⁴

In general, the overall incentives for participation in Delaware health IT SIM strategies are thus far intangible, and commercial payer involvement has been voluntary. However, HCC, which oversees Delaware's health insurance marketplace, approved regulatory changes to QHP standards, which will add leverage to bolster the acquisition of data for health IT initiatives connected with DHIN. Effective in 2018 through the passage of Senate Bill 238, all QHPs will

⁸² Delaware DCHI. (2016, February 10). *Outcome-based payment for population health management*. Retrieved from <https://www.dehealthinnovation.org/resources>

⁸³ Delaware DHSS. (n.d.). *Delaware State Innovation Model award year 3, health information technology operational plan*. Retrieved from <http://dhss.delaware.gov/dhss/dhcc/files/desimhitopsplan3.pdf>

⁸⁴ Delaware DHSS. (2017, May 1). *State Innovation Model annual progress report*. Choose Health Delaware Web site. Retrieved from <http://dhss.delaware.gov/dhss/dhcc/files/annualreport1.pdf>

be considered mandatory reporting entities, requiring that their claims data be submitted to DHIN, which will result in more robust datasets.

C.1.5 Practice transformation and workforce development

Practice transformation support for practices

Delaware’s practice transformation strategy focuses on helping primary care practices to develop person-centered, team-based primary care and integrated care for high-risk individuals to achieve the state’s SIM goal of being in the top 10 percent of states on quality and patient experience within 5 years.⁸⁵ Delaware’s SIM practice transformation goal for Award Year 2 was to reach 50 percent of the 1,000 PCPs in Delaware with practice transformation support. By April 30, 2017, the state reached approximately 35 percent of PCPs.⁸⁶

Delaware made two changes to practice transformation support for Award Year 2. First, the duration of practice transformation support was extended by 12 months, for a total period of 18–24 months, to ensure that practices can implement changes necessary to become patient-centered medical homes (PCMHs). Second, HCC staff redesigned vendor reporting tools to measure changes within the supported practices. The original reporting tools focused on process measures (number of webinars, trainings, coaching sessions); the revised tools enable vendors to report each practice’s progress on nine milestones identified by the DCHI Clinical Committee during Award Year 1. Vendors use a three-category scale (no progress, partial progress, and full implementation) to report how much progress each provider made on each milestone.

Delaware launched the new monthly progress reporting tool (MPRT) in September 2016 and can now analyze practice progress and respond to challenges. Delaware reports that “enrolled practices demonstrated measurable progress toward each of the nine practice transformation milestones, from September 2016 when the MPRT was launched, through January 2017.” In addition to measuring practices’ progress, the state determined that providers had the most difficulty achieving milestones related to behavioral health and implementing team-based care. Milestone 9 (Document a plan for patients with behavioral health needs) was particularly difficult for providers to achieve due to a shortage of behavioral health providers in Delaware, which makes appointment access and coordination very difficult.

Behavioral health integration

Delaware included behavioral health integration as a component of its practice transformation strategy and selected two sets of activities for implementation. The first is support

⁸⁵ Delaware DHSS. (n.d.). *State Innovation Model operational plan model test year 2 (award year 3)*, February 1, 2017–January 31, 2018. *Choose Health Delaware*, p.14. Retrieved from <http://dhss.delaware.gov/dhss/dhcc/files/desimopplan3.pdf>

⁸⁶ CMS. (2016, August 30). *SIM progress report, Q2, 2016*. Retrieved from http://dhss.delaware.gov/dhss/dhcc/files/q2_2016.pdf

for adoption of EHRs by behavioral health providers. Practices with no EHR are eligible for up to \$20,000 to help them purchase and install a system. Practices already using an EHR are eligible for up to \$15,000 to help them upgrade it to better enable integration with primary care. EHRs acquired or upgraded with SIM support must be interoperable with DHIN. The second set of activities focused on the development of a plan for pilot testing three different models of care delivery, with a goal of six to nine practices participating in the pilot. Each pilot site would be expected to achieve eight milestones specific to the model used.⁸⁷

Both state officials and providers expressed frustration with the lack of progress on behavioral health integration. During the AR2 analysis period, Delaware issued two RFPs to solicit behavioral health providers for the EHR support initiative. Neither RFP generated the expected volume of interest from providers. To stimulate provider interest, the DCHI Clinical Committee developed a business case tool designed to help practices estimate the profit or loss they can expect from integration of behavioral health services into primary care settings. Beyond a lack of understanding the financial ramifications of the integration, the limited response to the RFPs was attributed to a lack of commitment by payers to pay for psychologist services within primary care practices and an insufficient supply of behavioral health providers in Delaware. This situation delayed implementation of the behavioral health integration pilots, which were scheduled for first quarter 2017.

Practice transformation levers and participation

The primary lever for adoption of practice transformation is SIM funding for training and support resources, such as on-site coaching, provided at no cost to providers. Delaware has not reached its goal with this lever, in part due to low enrollment in rural areas; over 60 percent of enrolled PCPs are located within three urban areas. Although the state did not have a specific goal for enrollment of rural practices, state officials cited the inability to attain small, independent, rural practices to enroll as the major factor in failing to achieve their enrollment goal.

State officials and stakeholders identified several reasons for the failure to reach the goal. Reaching small practices through existing outreach methods was difficult, and even if they were interested, small practices might be unable to participate due to their limited infrastructure and resources. State officials said participation was also adversely affected by other changes, including the launch of new ACOs and changes under the Medicare Access and Children's Health Insurance Program (CHIP) Reauthorization Act of 2015 (MACRA), which resulted in "change fatigue" among PCPs (see **Section C.1.3**). Some stakeholders said the use of four vendors may have also adversely affected enrollment by making it more difficult for providers to

⁸⁷ Delaware DHSS. (n.d.). *State Innovation Model operational plan model test year 2 (award year 3)*, February 1, 2017–January 31, 2018. *Choose Health Delaware*, p.20. Retrieved from <http://dhss.delaware.gov/dhss/dhcc/files/desimopplan3.pdf>

make decisions about participation, especially smaller practices. They said the state should have either offered fewer choices to small practices or helped practices select vendors.

Stakeholders offered several suggestions for increasing enrollment. Providers said the state should work with payers to include care coordination payments in their P4V models, with payments based on successful completion of practice transformation milestones as originally planned. They also suggested additional outreach, particularly peer-to-peer engagement, using practices that have implemented changes to promote the benefits of transformation. Practice transformation vendors should provide more education on MACRA and Merit-Based Incentive Payment System (MIPS) to focus attention on the urgency of practice transformation, and the state should sponsor additional learning collaboratives. Finally, providers and consumers recommended that HCC build some outcome measures to demonstrate that care is improved as a result of process changes.

State officials said they were considering changing their strategy to increase the long-term impact. Although practice transformation vendors and providers favored more outreach, state officials said it was unclear whether it was feasible to enroll small practices during the Model Test period. State officials said it might be more effective to engage currently enrolled providers deeply so they can serve as practice transformation ambassadors beyond the Model Test period.

Workforce

Delaware's overall workforce and education strategy contains four elements: (1) training for the existing workforce, (2) expanding graduate health professions training, (3) streamlining licensing and credentialing of health providers, and (4) developing a workforce assessment and planning capability. Delaware made progress on all these initiatives, although implementation of the first and second initiatives was delayed by the contracting process.

During the AR2 analysis period, HCC contracted with Christiana Care Health System (CCHS) to facilitate the graduate health professions training consortium.⁸⁸ CCHS convened a steering committee, hired an executive director and project manager for the consortium, and began work on developing a nonprofit to sustain the consortium.

The University of Delaware was contracted to develop and implement a learning and relearning curriculum based on the training needs of the current health care workforce. The curriculum focuses on strengthening workforce competencies in six areas: communication and counseling skills; collaborative report writing; interprofessional practice; navigation and access to resources; care decisions and transitions of care planning; and health IT. Training sessions

⁸⁸ Delaware DHSS. (2017, May 1). *State Innovation Model annual progress report*. Choose Health Delaware Web site. Retrieved from <http://dhss.delaware.gov/dhss/dhcc/files/annualreport1.pdf>

began in fourth quarter 2016, and 55 individuals attended the first training, which focused on forming quality improvement teams in primary care practices.

Delaware continued development of the two workforce education strategies that did not reach the implementation stage by April 30, 2017. First, the DCHI board gave final approval to a consensus paper on streamlining current licensing and credentialing processes.⁸⁹ Second, the DCHI board gave final approval to a paper establishing a framework to assess workforce capacity.⁹⁰ These two papers will inform SIM work in Award Years 3 and 4.

During the AR2 analysis period, work began on one new element of the workforce strategy. The DCHI Workforce Education and Healthy Neighborhoods committees began working together to assess different models for use of community health workers (CHWs) throughout Delaware. The goal of the committees is to develop consensus on role, job duties, and compensation for this group of workers. Stakeholders view expanded use of CHWs as an opportunity to improve care and outcomes.

Workforce education levers and participation

Delaware's primary levers to promote workforce education are convening stakeholders and funding initial development and implementation of the workforce strategies. Using the DCHI Workforce and Education Committee to develop the strategies ensured broad stakeholder engagement—individual providers became engaged in the training, and health systems changed their graduate health professions training. State officials stated that their goal is for the provider community to come to value the trainings and sustain these training activities in the long term.

The learning and relearning curriculum for the current workforce is still in the early stage of implementation, so there is only anecdotal and some initial survey information to answer the question of success. Providers reported satisfaction with the training to date. Practice transformation vendors reported that the learning and relearning curriculum has value for providers from small, independent practices, who may not have sufficient infrastructure to benefit from practice transformation support.

⁸⁹ Delaware DHSS, DCHI. (2016, August). *Licensing and credentialing health care providers*. Retrieved from <http://dhss.delaware.gov/dhcc/files/licensingcredentialing.pdf>

⁹⁰ Delaware DHSS, DCHI. (2017, February 8). *Developing a framework for sustainable workforce capacity assessments*. Retrieved from http://dhss.delaware.gov/dhcc/files/workforce_capacity.pdf

C.1.6 Population health

Delaware's population health efforts largely focus on the Healthy Neighborhoods initiative, although SIM Initiative leaders still believe that all Delaware SIM strategies and initiatives are broadly aimed at improving population health. Although they were not planned with the Centers for Disease Control and Prevention (CDC) framework for population health in mind, nearly all Delaware's strategies fall within one or more of the three CDC buckets of prevention, which CMS adapted.⁹¹ In the first bucket, traditional clinical approaches, Delaware places its Behavioral Health Integration strategy (see **Section C.1.5**). Delaware describes Practice Transformation and the associated Care Coordination strategies (see **Section C.1.5**), along with the Common Scorecard (see **Section C.1.4**) as bridging traditional clinical approaches and the second bucket, innovative patient care. The workforce development strategy (see **Section C.1.5**), specifically the CHW activities with the Department of Public Health (DPH), is also classified as part of the innovative patient care bucket. Finally, the Healthy Neighborhoods strategy, which is the focus of this section, falls in the third bucket, community-wide health.

Delaware's population health strategy plans and expectations at the end of the ARI analysis period focused on five primary goals: (1) launch three Healthy Neighborhoods (Sussex, Wilmington, and Dover) by the end of calendar year 2016, (2) establish the Sussex Healthy Neighborhood Council (the first Neighborhood to roll out), (3) develop a sustainable funding model for all 10 planned Healthy Neighborhoods, (4) develop and launch a Healthy Neighborhoods population health scorecard-dashboard, and (5) develop a resource inventory for the Neighborhoods in conjunction with DPH and University of Delaware.

Strategies

During the current analysis period, Delaware made some progress on its five primary goals. The state fully achieved one goal: establishing the Sussex Healthy Neighborhood Local Council. The state partially achieved two goals: establishing two Healthy Neighborhoods (Sussex and Wilmington, but not yet Dover) and developing the resource inventory for two Neighborhoods. However, Delaware did not yet launch the Healthy Neighborhood dashboard, or develop a sustainable funding model for all 10 of the Neighborhoods. The dashboard launch has been delayed. Furthermore, the dashboard may be eliminated as a strategy. However, the sustainable funding model will be a focus of Award Year 3 activities.

The Sussex Healthy Neighborhood was launched in the second quarter 2016 in partnership with the Sussex County Health Coalition, an existing organization with a broad stakeholder base and infrastructure and more than a decade of experience working in population health in the county. Part of the Sussex County Health Coalition is the Healthier Sussex County Task Force, with more than 400 members and a focus on one or more of the four priority areas

⁹¹ Auerbach, J. (2016, May/June). The 3 buckets of prevention. *Journal of Public Health Management and Practice*, 22(3), 215–218. doi: 10.1097/PHH.0000000000000381

for Healthy Neighborhoods. Together with the Sussex Healthy Neighborhood Local Council, the task force participated in a community needs assessment, which then was aligned with a separate needs assessment conducted by the two health care systems in the area, and includes the four priority areas for the Healthy Neighborhoods. The local council also began work on a strategic plan to address priority areas of need and establish metrics and measures to track the impact of the interventions.⁹² Additionally, during the AR2 analysis period, the resource inventory was developed for the Sussex Healthy Neighborhood.

The other operational neighborhood, Wilmington, was launched in late spring 2017. The Wilmington Healthy Neighborhood established its local council and a regional Community Health Needs Assessment (CHNA) Clinical Advisory Work Group (known as CHNA North) to support the integration of efforts between the Healthy Neighborhoods Local Council and the health care systems in that area. CHNA is based on the Healthier Sussex County Task Force model and seeks to ensure integration of clinical and community data for determining priority areas of need, and developing complementary interventions that address the clinical and social determinants of health.

Although no changes were made to the design of the Healthy Neighborhoods strategy, the initiative began a transition from the visionary structure required for formation to an operational structure, reflecting the shift to implementation and testing. The Healthy Neighborhoods initiative struggled with finding the right implementation model, according to a state official. Recent activities related to this transition to implementation included hiring several new staff and providing additional oversight and support activities to the communities. DCHI also established three subcommittees: data support and evaluation, resources and sustainability, and CHNA-clinical advisory to provide resources and guidance to the local committees.

C.1.7 Quality measurement alignment

Delaware established a plan to use the Common Scorecard to measure quality under the P4V and TCC models (with payment linked to quality and utilization, and quality and total cost, respectively) to achieve its goal of having 80 percent of payments to providers from all payers in fee-for-service (FFS) alternatives that link payment to value.⁹³ The Common Scorecard's set of 26 quality measures, which were selected through a stakeholder consensus process and approved by the DCHI board of directors, would be linked to provider performance rewards through the payers' implementation of their individual payment models.⁹⁴ Delaware set a goal for Award

⁹² Delaware State Innovation Model operation plan year 3. (2017, May 1). Retrieved from <http://dhss.delaware.gov/dhss/dhcc/files/desimopplan3.pdf>

⁹³ Delaware DHSS. (2017, May 1). *State Innovation Model annual progress report*. Choose Health Delaware Web site. Retrieved from <http://dhss.delaware.gov/dhss/dhcc/files/annualreport1.pdf>

⁹⁴ Common Scorecard performance rewards are not paid with SIM funds.

Year 2 to have at least 75 percent measure alignment with the Common Scorecard for each major payers' value-based contracts.

Delaware achieved its goal of at least 75 percent alignment of measures with the three major payers. The payers structured their VBP models to have incentives based on performance, with at least 75 percent of their measures drawn from Delaware's Common Scorecard. Specifically, they reached 75 percent, 88 percent, and 100 percent alignment with the three major commercial payers. State officials view 75 percent alignment on quality measures with major payers as a significant accomplishment—one that will help the Common Scorecard become functional as it moves beyond the pilot phase to a statewide rollout with data updated quarterly.

C.1.8 Lessons learned and looking forward

Lessons learned

State officials said that, despite the ability of the consensus-based approach to build broad and deep stakeholder support, using this approach was a problem for the payment reform and behavioral health integration strategies. The lesson learned was to focus on when and how to use a consensus development process. State officials believe that a more focused process, with the state bringing some proposed plans to the stakeholders for input, would allow for quicker implementation. The consensus-based approach limited the state's use of purchasing and regulatory levers, leaving the state with a primarily voluntary approach to payment reform, which Delaware found to be slow. Providers, payers, and state officials agreed that using Medicaid and state employee benefits programs as early adopters of payment reform, with related mandates to their contracted payers, would have allowed more and quicker progress to be made.

A second theme that emerged was the need to ask the right questions up front during the development of initiatives. Two examples were cited to illustrate this point. First, Delaware's payment reform consultant introduced national P4V models to the state SIM process without any real analysis of Delaware's payment landscape or the feasibility of various models. State officials reported that, looking back, it would have been valuable to do an environmental assessment prior to looking at payments models. The assessment would have allowed officials to better analyze what might and might not work in Delaware. For example, all the payers in Delaware are regional or national companies, so implementing any payment strategy unique to Delaware would be a challenge for them. The second example concerns the Common Scorecard. One official described the development process as too focused on the presentation of data rather than the feasibility of producing measures. Consequently, the initial launch was delayed to accommodate revisions to measures based on payer ability to report data.

A third theme that emerged was that some state officials believe that sustainability plans for practice transformation strategies and payment reforms need to be identified during the

development phase to gain stronger penetration into the provider and payer communities. Providers and payers suspected that the SIM initiatives and strategies might end after the test period, according to state officials, and thus were less willing to fully engage.

Both state officials and stakeholders see the SIM Initiative as challenging work and cautioned others to be careful and reasonable in setting goals and timelines. They offered three recommendations for other states. The first recommendation is to clearly understand the “why” as well as the feasibility of the “how” for a particular plan. The second recommendation is to recalibrate and modify any component of the Model Test award, as needed, if it does not work as well as others. Finally, Delaware advises other states to spend the time and resources necessary for good planning; these investments will pay dividends, with less time wasted during implementation.

Stakeholders provided additional recommendations to improve the chances of broad implementation of the SIM strategies, particularly payment reform and the Common Scorecard strategies. Stakeholders cite the need to have decision makers—particularly from payer organizations—in the room as approaches are being developed. Stakeholders also suggested that approaches that include rapid pilots and testing of models with celebrations and publication of successes along the way are critical to increasing chances for success.

Looking forward

In the short term, state officials believe their biggest opportunity, and perhaps their biggest challenge, is taking a more assertive approach to payment reform. They feel they can more effectively leverage the purchasing power of the state to expand use of alternative payment methods, and that MACRA and MIPS provide a key opportunity to focus providers’ attention on payment reform. Although state officials expect that an assertive approach will be met with pushback, they believe they can work through changes, such as contractual requirements to implement payment reform, by engaging payers and providers. Stakeholders also see payment reform as the biggest challenge.

State officials and other stakeholders cite several strengths that can help the SIM Initiative produce results, including the breadth and depth of stakeholder engagement, the potential of the Healthy Neighborhoods initiative to improve the health of Delawareans, and the implementation of the multi-payer claims database. Finally, stakeholders interviewed cited improving coordination among DCHI committees and SIM strategies as a significant opportunity going forward.⁹⁵ State officials and stakeholders alike view outreach to providers and securing

⁹⁵ Delaware held two cross-committee meetings during Award Year 2 as a means of engaging members of the five DCHI committees and members of the public. The agendas included updates from payers on payment reforms and in-depth discussions of select topics such as behavioral health integration. Source: Delaware DHSS. (2017, May 1). *State Innovation Model annual progress report*, p.1. Choose Health Delaware Web site. Retrieved from <http://dhss.delaware.gov/dhss/dhcc/files/annualreport1.pdf>.

their engagement in practice transformation, payment reform, and the Common Scorecard as major challenges. Much effort is needed to reach providers in independent, small practices to inform them of changes and secure their engagement. Change fatigue among physician practices was cited as the major factor in low provider engagement (see *Section C.1.3* and *Section C.1.5*).

Implementation of the Common Scorecard continues to be very challenging, with a low number of providers signed up to participate. Providers indicated that they expected the scorecard would be built on a combination of claims and EHR data that had been validated. At the end of the AR2 analysis period, the scorecard consisted of measures calculated from claims data only. Providers also expected that scorecard data would trigger care coordination payments from payers, which did not happen. Consequently, providers indicated that they had not yet seen the value of the scorecard and did not believe that it provided a complete reflection of their practices, because it relies solely on claims data and does not accurately predict payment in their experience.

The lack of payer engagement with the scorecard may be related to the difficulty of obtaining all the necessary data from the payers. To the extent that payers are already producing their own provider scorecards, they likely calculate at least some measures differently than the Common Scorecard measures, and are reluctant to produce multiple types of reports. Payer IT staff were not part of the design process, which may have led to some unrealistic demands for payer data.

Finally, both state officials and stakeholders view sustainability planning as an important challenge. Delaware began reducing its reliance on consultants and moving SIM-related responsibilities to state staff to improve sustainability of the work. However, the state's primary focus continues to be on achieving success with payment reform. Successful implementation and testing of payment reform could create the value proposition for payers and providers necessary for sustainability beyond the SIM award.

C.2 Changes in Outcomes During the State Innovation Model Initiative

C.2.1 Progress toward a preponderance of care in value-based purchasing models and alternative payment models

Most stakeholders and state officials agreed that Delaware is on track to moving 80 percent of the state's population into a VBP or APM by the end of the SIM Initiative. These views were driven by a belief that payer and provider participation in payment reform will continue to grow. Stakeholders are optimistic about payer and provider participation based on the success of the practice transformation work and the interest generated by this work even among hospital systems, which are now moving toward VBP. Other stakeholders mentioned that hospitals and payers are having the difficult conversations that will move Delaware toward VBP.

Also, according to a state official, maximizing the use of Medicaid and the state employee benefits will make significant strides toward achieving the 80 percent goal.

In addition to Medicaid and state employee benefits, a state official thought that commercial payers also are helping to move toward the goal. The official remarked, “[A payer] has a [quality incentive plan] they are rolling out. They will move the needle. The ACOs are moving the needle. I don’t see why you wouldn’t get to 80 percent.” Another state official noted that a commercial payer in the state is moving “a lot” of their plans toward VBP; this official felt that movement toward VBP would help the state reach its goal.

However, not all interviewees felt that the state was moving toward accomplishing the 80 percent goal. One state official believed that the state needs to take a different approach and recommended that, instead of using a “ground up” approach, the state should utilize additional levers. Without changing approaches, he thought that 70 percent was a more realistic transformation outcome target. Other interviewees were also skeptical that the goal was achievable. One provider believed that the preponderance of care goal was too ambitious and that the state would not meet its goal within the grant period.

Table C-1 presents the extent to which Delaware’s population is participating in the SIM payment and health care delivery models during the fourth quarter of Award Year 2. These values were provided by the state in its fourth quarter 2016 progress report to CMMI.⁹⁶ Statewide, 143,210 Delawareans were impacted by a value-based or APM supported by the SIM Initiative.⁹⁷ This number represented 40 percent of the population that Delaware targeted in Award Year 2. Given the state’s population of 945,937 in 2015, RTI estimates that 15 percent of Delawareans were enrolled in a SIM value-based or APM.⁹⁸

⁹⁶ These data values were not verified by CMMI. Thus, the RTI team cannot attest to their accuracy.

⁹⁷ The Healthy Neighborhood participants, a population health model under the SIM Initiative, is not reflected in this total.

⁹⁸ Delaware Population Consortium. (2016, October 27). *Annual population projections*, version 2016.0, Dover, Delaware. Retrieved from <http://stateplanning.delaware.gov/information/dpc/DPC2016v0.pdf>

Table C-1. Populations reached by a value-based purchasing or alternative payment model in Delaware, as of fourth quarter 2016–2017

Payer type	SIM models			Landscape
	Value-based purchasing and/or APMs ^a	Other ^b	SIM-wide	Any value-based purchasing or APMs
Medicaid	—	—	—	—
Medicare	—	—	—	—
State employee plans	—	—	—	—
Commercial	—	—	—	—
Statewide	143,210 (40.1%)	—	143,210 (40.1%)	143,210 (40.1%)

Source: Delaware fourth quarter 2016 progress report to CMMI.

^a Beneficiaries receiving care through any value-based purchasing and APM supported by the SIM Initiative. Models: True Performance (P4V model), PCMH, Basic Quality (payment model tied to quality), and Accountable Care Shared Savings Model (P4V model). The denominator (356,800) is the total number of beneficiaries targeted for inclusion in a Category 2 or Category 3 payment model.

^b Beneficiaries living in a community that is participating in the Healthy Neighborhoods program.

— = relevant data were not provided in data source; APM = alternative payment model; CMMI = Center for Medicare and Medicaid Innovation; P4V = pay for value; PCMH = patient-centered medical home; SIM = State Innovation Model.

Table C-2 presents the extent to which Delaware’s payers are participating in the SIM payment and health care delivery models during Award Year 2. These values were provided by the state in its fourth quarter 2016 progress report to CMMI.⁹⁹ In Category 2 payments, United Healthcare reported 16,472 beneficiaries impacted by an FFS payment linked to quality. Other payers reported zero beneficiaries impacted by Category 2 payments. Medicare FFS had the highest percentage of Category 3 payments (40 percent), impacting 66,115 beneficiaries. Medicare Advantage had lowest reported percentage of Category 3 payments (zero percent). None of the payers reported a beneficiary impact or payments to providers for Category 4, population-based payment.

⁹⁹ These data values were not verified by CMMI. Thus, the RTI team cannot attest to their accuracy.

Table C-2. Payers participating in a value-based purchasing or alternative payment model in Delaware, as of fourth quarter 2016

Payer	Category 1 Payments: FFS with no link of payment to quality		Category 2 Payments: Payment linked to quality		Category 3 Payment: APMs		Category 4 Payment: Population-based payment	
	Number of beneficiaries	Percentage of payments	Number of beneficiaries	Percentage of payments	Number of beneficiaries	Percentage of payments	Number of beneficiaries	Percentage of payments
Medicare (FFS)	99,172	60%	0	0%	66,115	40%	0	0%
Medicare Advantage	16,057	100%	0	0%	0	0%	0	0%
Medicaid: United Healthcare	72,508	—	16,472	—	927	—	0	0%
Medicaid: Highmark	108,363	—	—	—	9,017	—	0	0%
Commercial: Highmark	298,844	75%	0	0%	50,679	25%	0	0%
Commercial: Other payers ^a	133,980	0%	0	0%	0	0%	0	0%

Source: Delaware fourth quarter 2016 progress report to CMMI.

^a The reported values for “Commercial: Other payers” show that the payments for this payer were not classified in any of the payment categories. However, this likely represents incomplete data rather than a true lack of fit into the categories.

— = relevant data were not provided in data source; APM = alternative payment model; CMMI = Center for Medicare and Medicaid Innovation; FFS = fee for service.

Provider participation

Table C-3 presents the extent to which Delaware’s providers participate in the SIM payment and health care delivery models. These values were provided by the state in its fourth quarter 2016 progress report to CMMI.¹⁰⁰ Statewide, 240 of the 400 providers targeted by Delaware (60 percent) were involved in value-based purchasing and APMs supported by the SIM Initiative in Award Year 2. Seven provider organizations were involved in value-based purchasing and APMs supported by the SIM Initiative. Delaware targeted six provider organizations in Award Year 2; thus, the state exceeded its goal for this period.

¹⁰⁰ These data values were not verified by CMMI. Thus, the RTI team cannot attest to their accuracy.

Table C-3. Number of physicians and provider organizations participating in a value-based purchasing or alternative payment model in Delaware, as of fourth quarter 2016

Provider type	SIM models			SIM-wide ^b	Landscape
	ACOs	BH integrated care models	Other ^a		Any value-based purchasing or APMs
Physicians	—	—	0	240 (60.0%)	—
Provider organizations	—	—		7 (116.7%)	—

Source: Delaware fourth quarter 2016 progress report to CMMI.

^a Primary care providers participating in practice transformation.

^b Physicians and practices participating in any value-based purchasing and APM supported by the SIM Initiative. The denominators are the number of providers (400) and provider organizations (6) targeted for inclusion in a Category 2 or Category 3 payment model.

— = relevant data were not provided in data source; ACO = accountable care organization; APM = alternative payment model; BH = behavioral health; CMMI = Center for Medicare and Medicaid Innovation; SIM = State Innovation Model.

C.2.2 Care delivery

During the AR2 analysis period, there were no significant care delivery findings for Delaware. Most interviewees felt that it was too soon to see any impact from the practice transformation and workforce development strategies on care delivery, particularly given that participation in practice transformation is lower than expected.

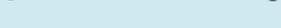
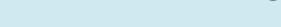
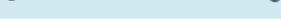
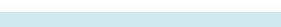
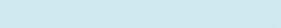
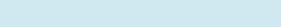
C.2.3 Coordination of care, quality of care, utilization, and expenditures

The opinion of most interviewees is that it is too soon to see any impact on coordination of care, quality of care, utilization, and expenditures from the payment and delivery reforms and health IT strategies. As a result, there are no significant findings during the AR2 analysis period.

C.2.4 Population health

Table C-4 shows Delaware’s baseline population health outcomes based on 19 measures from the 3 years prior to the implementation of Delaware’s SIM award. The table also includes information from the comparison group states: Kentucky, Arizona, and Pennsylvania. The multistage procedure for identifying the comparison group states is described in detail in *Appendix L*.

Table C-4. Baseline measures of population health in Delaware, 2013–2015

Measure		2013–2015 Average	2013–2015 Trend
Health status is fair or poor	Delaware	14.3%	
	CG	15.1%	
	National	14.9%	
Ever diagnosed with diabetes	Delaware	10.6%	
	CG	10.1%	
	National	9.6%	
Ever diagnosed with hypertension ##	Delaware	34.9%	
	CG	33.1%	
	National	31.6%	
Ever diagnosed with asthma	Delaware	14.6%	
	CG	14.3%	
	National	13.5%	
Has a functional limitation ##	Delaware	17.7%	
	CG	18.3%	
	National	18.2%	
Current smoker	Delaware	17.3%	
	CG	17.3%	
	National	16.4%	
Overweight	Delaware	66.1%	
	CG	65.1%	
	National	64.4%	
Obese	Delaware	29.5%	
	CG	29.1%	
	National	28.5%	
No leisure time physical activity or exercise, past 30 days	Delaware	24.5%	
	CG	23.4%	
	National	23.3%	

(continued)

Table C-4. Baseline measures of population health in Delaware, 2013–2015 (continued)

Measure		2013–2015 Average	2013–2015 Trend
Limited fruit and vegetable intake, past 30 days	Delaware	83.9%	
	CG	84.0%	
	National	83.1%	
Any driving after drinking too much, past 30 days #	Delaware	3.6%	N/A
	CG	3.4%	
	National	3.3%	
No checkup, past year	Delaware	23.9%	
	CG	28.6%	
	National	29.4%	
No flu vaccine, past year	Delaware	55.7%	
	CG	59.4%	
	National	59.6%	
No 65+ flu vaccine, past year	Delaware	34.5%	
	CG	38.7%	
	National	39.1%	
No 65+ pneumonia vaccine, ever	Delaware	26.3%	
	CG	30.1%	
	National	30.2%	
Among adults with hypertension, no hypertension blood pressure medication ##	Delaware	19.0%	
	CG	20.6%	
	National	22.4%	
No 50–75 colorectal cancer screening—no fecal occult blood test (FOBT), past year #	Delaware	94.8%	N/A
	CG	91.1%	
	National	90.7%	
No 50–75 colorectal cancer screening—no sigmoidoscopy or colonoscopy, past 5 years #	Delaware	37.8%	N/A
	CG	46.7%	
	National	46.0%	

(continued)

Table C-4. Baseline measures of population health in Delaware, 2013–2015 (continued)

Measure		2013–2015 Average	2013–2015 Trend
No 50–75 colorectal cancer screening—no sigmoidoscopy or colonoscopy, past 10 years #	Delaware	26.0%	N/A
	CG	33.5%	
	National	33.6%	

Source: Behavioral Risk Factor Surveillance System, collected by CDC (2013–2015).¹⁰¹

Note: To facilitate the comparison of trends over time between the model test state, its comparison group, and the nation, the sparklines for each measure rely on the same scale for the vertical axis for all three groups. Because the vertical scale for the sparklines varies by measure, the sparklines are not comparable across the different measures. Sparklines are not available for outcomes for which data are limited to 2014 (indicated by #). Sparklines for outcomes that are limited to data for 2013 and 2015 (indicated by ##) will be based on data for two points in time and so will appear more stable than outcomes for which data are available for 2013, 2014, and 2015.

CDC = Centers for Disease Control and Prevention; CG = comparison group; FOBT = fecal occult blood test; N/A = not available.

During the baseline period, Delaware performed better than the national average on some measures and worse on others. Delaware residents were more likely to have had a check-up (76.1 percent vs. 71.4 percent), a flu vaccination for all adults (44.3 percent vs. 40.6 percent) and older adults (65.5 percent vs. 60.9 percent), and a sigmoidoscopy or colonoscopy within the past 5 years (62.2 percent vs. 54.0 percent) and 10 years (74.0 percent vs. 66.4 percent). However, compared with the national averages, Delaware has higher rates of hypertension (34.9 percent vs. 31.6 percent) and overweight status (66.1 percent vs. 64.4 percent), and lower rates of fecal occult blood testing (5.2 percent vs. 9.3 percent).

Comparing Delaware’s comparison group states to the national averages for the same period, there are also mixed results. The comparison group states rank the same or worse on nearly all the measures. The comparison group states rank slightly better compared to the nation in having had a check-up (71.4 percent vs. 70.6 percent) and hypertension medication among hypertensive adults (79.4 percent vs. 77.6 percent). Hypertension diagnosis (33.2 percent vs. 31.6 percent) is the only measure on which the comparison group ranks notably worse than the national average. Among the remaining measures, the comparison state group showed no meaningful difference compared with the national average.

Delaware’s interviewed state officials and other stakeholders unanimously agree that it is too early to see impacts related to Delaware’s population health strategies. However, all stakeholders also unanimously agree that the Healthy Neighborhoods initiative—although the most difficult to implement of all strategies Delaware is or will be testing—will show the greatest impact on improving the health of Delawareans. They also believe that the Healthy

¹⁰¹ CDC. (2013–2015). *Behavioral Risk Factor Surveillance System survey data*. Atlanta, GA: U.S. Department of Health and Human Services, CDC.

Neighborhoods are focused on the right health issues, chose to focus on communities with the greatest needs initially, and engaged the right stakeholders who prioritize the communities' needs. Thus, the stakeholders are fully supportive of the initiative's continuation and remain optimistic about its eventual success.

C.3 Delaware Summary

Overall, Delaware's SIM Initiative made progress in moving some initiatives forward during the AR2 analysis period, but there were also challenges. Some of this progress represents continued work on existing initiatives, such as the Healthy Neighborhoods and practice transformation; progress also centers around expanding initiatives such as Workforce Development. At the same time, Delaware experienced challenges related to implementations, including timeline slippage on more than one initiative, and not achieving the traction hoped for with the provider community. Some stakeholders fear that a slower rate of visible progress, coupled with competing priorities, led to waning stakeholder engagement and buy-in for the SIM Initiative. Although state officials are concerned that the current pace will result in unfulfilled goals, nearly all other stakeholders agree that the goals set for the SIM Initiative are still achievable, and that the priorities chosen as the focus for the SIM Initiative are the right ones for the state. However, they also suggested that additional levers—such as mandating that commercial payers participate in payment reform, further leveraging the state employee help plan, offering peer-to-peer engagement to promote the benefits of transformation, and building outcome measures that demonstrate improved care as a result of process changes—could be helpful in stimulating further participation, particularly around payment reform. Award Year 3 will be a pivotal year for the Delaware SIM Initiative, as further progress and visible success on initiatives, coupled with the possibility of additional levers being put into place, will be the focus.

Appendix D: State Innovation Model in Model Test States: Idaho

Key Results from Idaho's State Innovation Model Initiative July 2016–April 2017

- Idaho's SIM Initiative successfully engaged providers in the state to participate in patient-centered medical home (PCMH) transformation, building on provider interest in the model that preceded SIM. Eighty-one clinics applied for 56 openings in Cohort 2, and as of December 2016, 32 of the 55 clinics in Cohort 1 had achieved PCMH certification.
- The state made minimal changes to the SIM Initiative during the second Annual Report (AR2) analysis period, most of which were small tweaks to existing plans. For example, the state canceled their planned financial incentive payments to instead offer transformation expense reimbursement and are now allowing Cohort 1 clinics to remain eligible for further reimbursements after the original deadline of January 31, 2017. One more significant development during the AR2 analysis period was Medicaid's tangential work developing the Healthy Connection Value Care model, which is an accountable care organization type structure that may incorporate the Regional Collaboratives (RCs) and sustain the PCMH model beyond the SIM Initiative.
- Two primary challenges from the AR1 analysis period persisted into the AR2 analysis period: delays in connecting PCMHs to the Idaho Health Data Exchange (IHDE) and payment reform. The SIM team established a new timeline for connecting practices to the IHDE and believes they still will achieve their goals. However, according to many stakeholders, the lack of data about PCMH performance on clinical quality metrics impeded the planning work of the RCs and the SIM Initiative's ability to demonstrate the value of its transformation efforts. For payment reform, Medicaid aligned its Healthy Connections program with the PCMH model during the AR1 analysis period and continues to support the SIM Initiative through this alignment. However, commercial payers resist changing their payment models to the specific per-member-per-month (PMPM) model of the SIM Initiative, so the state continues to be supportive of private payers pursuing other forms of value-based payments.

This appendix provides an updated overview and describes important changes in the Idaho SIM Initiative; summarizes implementation and testing successes, challenges, and lessons learned; and discusses early changes and/or prospects of changes resulting from the SIM Initiative. The findings in this appendix are based on analysis of data collected from the stakeholder telephone interviews, state document reviews, and state program and evaluation calls. These data were collected between July 1, 2016, and April 30, 2017.

As a source for this appendix, the RTI team conducted 19 key informant interviews from March 24 through April 28, 2017. The key topics of the interviews were (1) changes in governance and program administration, (2) progress implementing SIM models and initiatives, (3) participation of payers and providers, (4) progress toward a preponderance of care in the state being provided through an alternative payment model (APM), and (5) early indicators of changes in relevant outcomes. Interview participants included state officials, payers, providers, and consumer advocates involved in the development and implementation of Idaho's SIM Initiative.

Further details on the analytic approach are available in *Chapter 1*. Information on the number and type of stakeholders interviewed for the state is in *Table 1-1*.

D.1 Implementation Activities

The overarching goal of Idaho’s SIM Initiative continues to be transformation of the state’s health care delivery system to one based on patient-centered medical homes (PCMHs) operating within an organized medical-health neighborhood. As described in AR1, Idaho is promoting PCMHs statewide by providing a program of technical assistance (TA) and financial support to practices seeking to become PCMHs. This TA includes coaching and access to data for performance improvement and care management, and is complemented by reimbursement for eligible expenses related to transformation and accreditation. Idaho established a statewide system of Regional Collaboratives (RCs) in 2016 that continues to foster quality improvement (QI) by PCMHs; helps PCMHs connect to an organized “neighborhood” of clinical, social, and public health providers; and implements population health projects. Overall, stakeholders reported that, despite some delays in health information technology (health IT) and data infrastructure, Idaho was on track to achieve its overarching goal of transforming the health care system.

D.1.1 Governance and program administration

Implementation of the SIM Initiative in Idaho is guided by the Idaho Healthcare Coalition (IHC), which the Governor established in 2014. The IHC comprises a wide range of both public and private stakeholders. In addition to the IHC, Idaho’s SIM Initiative is also informed by seven topic-focused work groups (Multi-Payer; Behavioral Health Integration; Health Information Technology; Idaho Medical Home Collaborative; Population Health; Clinical Quality Measures; Community Health Emergency Medical Services [CHEMS]) and two advisory groups (Telehealth; Community Health Workers).¹⁰² The IHC meets monthly, and the work groups have varied meeting schedules. The overall day-to-day management and implementation of the SIM Initiative is directed by the Office of Healthcare Policy Initiatives within the Idaho Department of Health and Welfare (IDHW).

Whereas the IHC structure remained the same, some stakeholders commented that interest and participation among the IHC members diminished somewhat, although not significantly and not in a way that obstructed implementation. Some noted that this slight decrease in engagement may be due to individuals’ time constraints, subject fatigue, and, in part, uncertainty about the effect of possible changes in federal health care policy. Overall,

¹⁰² Note that two of these work groups—Clinical Quality Measures and Health Information Technology—are being merged with the Data Element Mapping Subcommittee into one work group, which will be called the Data Governance Work Group.

stakeholders commented that the IHC governance structure is effective; the members work well together and are able to avoid becoming mired in political or bureaucratic issues.

State officials at IDHW noted that although there was a change in leadership in the SIM Initiative, the new director had been involved from its inception. This facilitated a smooth transition, and none of the stakeholders indicated that it had affected implementation. State officials also noted some challenges in staff capacity after the resignation of a staff member overseeing the implementation of Goals 3 and 4 (the establishment of RCs and virtual PCMHs), and there were some difficulties in securing a replacement. However, IDHW hired a new staff person for the position in April 2017.

D.1.2 Stakeholder engagement

One of the primary avenues of stakeholder engagement is through the IHC, which includes representatives from IDHW, public health districts, and the Office of the Attorney General, as well as providers, hospitals, commercial payers, consumer advocates, and the Idaho Health Data Exchange (IHDE). Several stakeholders commented that the IHC leadership, including the IDHW staff, promoted collaboration among the diverse entities involved in the group. One stakeholder mentioned that the IHC aligned well with the “Idaho culture” of individuals working together to address issues.

Given that the PCMH model is the centerpiece of the SIM Initiative, payers and providers both serve key roles in implementation. In the initial stages of implementation, payers felt that they were not engaged early enough in the process and were being asked to align their existing value-based payment (VBP) reform efforts around a specific payment model. Some challenges remain in terms of the state understanding their perspectives concerning payment reform (see *Section D.1.3*). Overall provider engagement is robust, considering the strong interest in participating in the clinic cohorts. Providers viewed engaging in the SIM Initiative as an opportunity to align with health care delivery system changes at the national level that are moving toward VBP, patient-centered, and team-based models. Providers also are engaged in the work of the RCs, as primary care physicians serve as co-chairs on each RC in addition to participating as members.

Payers, providers, and consumer advocates reported that they believed the state valued their feedback. However, they thought that the state could improve their communications with patients and the broader public about the SIM Initiative and the benefits of the PCMH model.

D.1.3 Delivery systems and payment reforms

Idaho’s delivery system reforms seek to establish the PCMH as the backbone of the health care delivery system in Idaho. Specifically, Idaho is supporting clinics in their efforts to transform into PCMHs, creating virtual PCMHs to extend existing primary care resources into

underserved areas, and establishing RCs to provide ongoing support to PCMHs. Idaho is also seeking to implement payment reforms that will compensate practices for PCMH services.

Patient-centered medical homes. All interviewees (state officials, payers, providers, and consumer advocates) viewed Idaho's work to promote the PCMH model statewide as a success. One payer, however, was doubtful of the value of the model to its health plan. Stakeholders reported that this work went almost entirely as planned with no major changes, although they did report some minor changes related to payment structure and timelines, detailed below.

Idaho intends to help 165 clinics transform into PCMHs over the life of the SIM award. The clinics will be divided into three groups called cohorts. These cohorts are being convened in sequence, and each receives a 1-year program of support that includes technical and financial assistance. The first group of 55 clinics (Cohort 1) concluded their year of support on January 31, 2017. In October 2016, 81 clinics applied to join Cohort 2; in December 2016, Idaho announced the 56 clinics selected to form Cohort 2. All Cohort 2 clinics had signed memoranda of understanding (MOUs), agreeing to participate in the program by the end of February 2017.

The biggest change that Idaho made to the program was to shift from making incentive payments to PCMHs that achieved specific milestones to reimbursing practices for the costs incurred to achieve the milestone. The amounts paid for each milestone remain the same, and the total amount available to practices is still up to \$17,500 (up to \$10,000 for PCMH Transformation, \$5,000 for National PCMH Recognition, and \$2,500 for Virtual PCMH). The change, however, necessitated implementation of new procedures, including a new requirement that practices in Cohort 2 submit budget worksheets justifying the reimbursements. This change did not affect Cohort 1, because it occurred after these clinics had signed MOUs defining their responsibilities as cohort members. The new requirement, however, will apply to Cohort 3.

Also, the agreement under which Cohort 1 clinics received transformation assistance envisioned that practices would achieve all the milestones (and receive reimbursement for expenses related to those achievements) by the end of the PCMH transformation period (January 31, 2017). However, as of February 2017, many of the practices in Cohort 1 had not reached one or more of the milestones for which they were eligible to receive reimbursement. Therefore, the state directed its PCMH support contractor to amend its agreements with the Cohort 1 clinics to enable these practices to remain eligible for reimbursements past January 31, 2017.

Interviewees viewed the financial and technical support as important levers for practice participation. However, some providers and other stakeholders said the financial support is a relatively small incentive, because the cost to transform is greater than the total reimbursement amount offered to cohort clinics. The TA, however, was more attractive to providers. Interviewees stated that many practices have the goal of becoming a PCMH to increase efficiency and become better equipped to provide comprehensive, coordinated care.

In early 2016, Medicaid launched a payment model that was aligned with the SIM Initiative's vision (see "Payment reform" later in this section). Interviewees involved in SIM operations viewed this model as a key recruiting factor for practice participation, because it provides an ongoing source of payment for PCMH functions. State officials also reported that the Medicaid agency benefited from SIM's PCMH transformation work. Twenty-nine Cohort 1 clinics sufficiently enhanced their PCMH functions to qualify for a higher PCMH payment from Medicaid. Medicaid officials viewed this increased access to PCMHs with enhanced functions as a benefit to Medicaid beneficiaries. Three state officials indicated that PCMH transformation and the Medicaid payment structure were mutually reinforcing.

Looking ahead, state officials identified the National Committee for Quality Assurance's (NCQA's) redesign of its PCMH accreditation process as a possible challenge. During 2017, NCQA is planning to move from a PCMH recognition process based primarily on documentation submitted by the practice to one that takes performance into account via annual check-ins between NCQA and the provider. This change may lengthen the process, so that some practices, especially Cohort 3 clinics, may not be able to achieve national recognition before the end of the SIM Initiative. This is concerning to stakeholders, because any cohort clinics that do not attain recognition before the end of the SIM Initiative will not be reimbursed for achieving that milestone.

Virtual patient-centered medical homes. Idaho's SIM Initiative aims to create virtual PCMHs to extend primary care resources in underserved and rural areas. Idaho defined a virtual PCMH to be a PCMH that incorporated one of the following three components into its practice: telehealth, community health workers (CHWs), and/or CHEMS. Idaho anticipates designating 50 virtual PCMHs by the end of the SIM Initiative in 2019. As of June 30, 2016, Idaho was just beginning to operationalize this concept by developing measurable criteria for determining if a PCMH could be designated as virtual. Idaho completed this work and began accepting applications from Cohort 1 clinics in late February 2017, with an application due date in early April. The state received seven applications: one from a PCMH located in an urban area, three from PCMHs in rural areas, and three from PCMHs in frontier areas.¹⁰³ State staff reported that they received fewer applications than expected and could have approved up to 18 applications.

State officials reported two factors that could account for the low number of applications. The first step toward becoming a virtual PCMH practice is to complete the transformation as a member of a PCMH cohort. When the application was released, only the 55 clinics from Cohort 1 were eligible to apply. In the next application round, the pool will increase to 111, when Cohort 2 clinics become eligible to apply, and to 165 when Cohort 3 clinics become eligible.

¹⁰³ Urban counties are those with at least one population center with 20,000 or more people. Rural counties are those that do not have a population center with 20,000 or more people. Frontier areas are those with a population of fewer than six people per square mile.

Second, the payments, which support telehealth, CHWs, and CHEMS, were cited as a limiting factor. Telehealth training for providers and training for CHWs and CHEMS were launched in 2016, but the strategies for paying for them were not fully established in Idaho. As some stakeholders explained, the Medicaid agency pays PCMHs more if they incorporate these components into their practices, but it does not pay for the CHW and CHEMS services themselves. Also, other payers do not pay for PCMH, CHEMS, or CHW services. Some stakeholders also reported that practices sometimes receive a lower payment for delivering a service via telehealth than for delivering the same service in the office.

Project staff plan to reopen the application process in September 2017 and are optimistic that, ultimately, they will achieve their goal. SIM stakeholders are implementing several strategies that they believe will increase the number of applications. IHC members, project staff, and the RCs agreed to conduct outreach to make practices aware of the opportunity. Also, the PCMH coaches who deliver TA to cohort members will offer support to clinics seeking to incorporate telehealth, CHWs, or CHEMS. Finally, Cohort 1 clinics and CHEMS agencies were offered an opportunity in March 2017 to apply for grants to help establish or expand their telehealth capabilities.

Regional Collaboratives. The RCs play a key role in delivery system reform, although their primary focus is population health. As discussed in more detail in **Section D.1.6**, one of the primary tasks of each RC is to develop a local medical-health neighborhood¹⁰⁴ and foster connections between PCMHs and the neighborhood. Although these efforts are still in their early stages, most stakeholders reported that they saw promise in them. However, one provider observed that some RCs encountered challenges in operationalizing the concept of the medical-health neighborhood. This provider said that some of the RCs were having difficulty reaching consensus on their definition of “neighborhood,” that the mechanics of the task were logistically challenging, and that some PCMHs already had established referral patterns that did not fully align with the neighborhood.

Payment reform. Payment reform alignment across payers is relatively unchanged as of April 2017. As described in the first annual report, the Medicaid agency implemented a four-tier, per-member-per-month (PMPM) payment for PCMH activities, effective February 1, 2016, that is aligned with the SIM Initiative’s original payment reform goal as defined in the Idaho Statewide Healthcare Innovation Plan.¹⁰⁵ Commercial payers, on the other hand, participated in

¹⁰⁴ Per page 160 of Idaho’s *AY3 Operational Plan*: The Medical-Health Neighborhood is “... the clinical-community partnership that includes the medical, social, and public health entities that provide wrap-around supports for the PCMH and patient to achieve better health outcomes and wellness. The Medical-Health Neighborhood can include medical specialists; community services such as food, housing, and transportation; dietitians; behavioral health specialists; home health; dental professionals; CHWs; CHEMS; education; social services; etc.”

¹⁰⁵ State of Idaho. (2013, December 20). *Idaho statewide healthcare innovation plan*. Retrieved from <http://ship.idaho.gov/Portals/93/Documents/Grant%20Documents/IdahoSHIP%202012-13.pdf?ver=2015-06-18-092350-000>

the IHC, but were resistant to changing their payment models to the specific PMPM model promoted by the SIM Initiative. Consequently, by June 2016, Idaho had modified its approach to encourage commercial payers to pursue their own VBP models. Commercial payers still strongly support VBP, and all of them implemented some form of VBP. Two payers interviewed for this report said that at least one of their models was aligned with the PCMH. One of these payers stated that their model also was aligned with the virtual PCMH. None of the commercial payers, however, implemented a PMPM model similar to the one Medicaid implemented.

Five of the stakeholders interviewed for this report mentioned that the greatest implementation challenge is the reluctance of commercial payers to change their payment model to better align with the Medicaid model promoted by the SIM Initiative. These interviewees believed that payment reform was the pathway to sustainability. As previously stated, many stakeholders reported that only Medicaid adopted the PCMH payment model proposed for Idaho's SIM Initiative, and that no payer is directly reimbursing for services provided by CHWs and CHEMS. One interviewee also expressed concern about the low overall payment to primary care compared to other specialists.

Payers preferred their own models over the model proposed by the SIM Initiative because they preferred VBP models that included a comprehensive set of services (instead of just primary care), built on payment arrangements they already had with providers, and could be administered at the network (instead of the provider) level. They also cited a need to differentiate themselves in the market. One payer stated that its policy was to not enter risk-based contracts with providers who served fewer than 1,000 members.

A few stakeholders offered additional reasons that payers might be reluctant to change their payment models to align with the SIM Initiative. A couple said that payers would not change because they were comfortable with their current payment models or that the plans' upper (out-of-state) management could not see the big picture of how change could save money. As one interviewee noted, "They know they need to make some migration, but they're trying to guard their bottom line, and they don't have spirit of innovation and creativity for it."

Some interviewees viewed commercial payers' continued participation in the IHC and their submission of VBP data as a success. Several stakeholders, however, reported that, to maintain payer participation, understanding payer approaches and respecting their concerns are necessary. As one stakeholder described it, "... come tell us what you are doing without any expectation that you are going to give any of your financial information away or anything that would compromise you in any way or give your competitors an edge."

Using this approach, the SIM Initiative secured information from three of the four commercial payers, Medicaid, and Medicare about the extent to which they used VBP in

2015.¹⁰⁶ The IHC issued a report based on this information in January 2017 and plans to update the information in future years. The information in the 2017 report confirmed that, in 2015, Medicare and the three commercial carriers were already using some form of VBP—mostly fee-for-service (FFS) payments with incentives tied to quality and value. Some stakeholders were hopeful that demand from providers for VBP, combined with evidence of PCMH value, will encourage payers to increase their use of VBP that recognizes the value of primary care.

Looking ahead, the Medicaid agency is developing a new reform, Healthy Connections Value Care, to accelerate the adoption of VBP and move Medicaid’s payment models further along the continuum of VBP models. According to a Medicaid presentation to the IHC in January 2017, this move would be based in primary care. Beginning in 2018, primary care providers (PCPs) will have three options for Medicaid participation: Healthy Connections Care Network Incentive program, Patient-Centered Medical Home Incentive program, and Healthy Connections Primary Care program. Under the Healthy Connections Care Network program, PCPs could band together with hospitals and other providers to form a system of care, whereas under the PCMH Incentive program, PCPs with medical home capability could contract directly with Medicaid. In both incentive programs, the groups formed would bear risk and be rewarded for improving patient health care. The Healthy Connections Primary Care program would help providers become PCMHs. A Medicaid beneficiary would choose a PCP, and the beneficiary’s experience would be attributed to their provider’s choice of system. Furthermore, Medicaid envisions that a local advisory committee would be associated with each system participating in the Care Network program; some stakeholders are hopeful that at least some RCs might take on that role after the SIM Initiative ends.

Further out on the horizon is the reprocurement of the state employees’ group health insurance, not scheduled to occur until the end of the SIM Initiative in 2019. The state legislature showed growing concern about increases in the cost of this coverage. Two state officials felt that, if the SIM Initiative produced data showing that PCMHs provide a return on investment, the Department of Administration (which administers the coverage) would consider incorporating the model at the time of the reprocurement. They were not optimistic, however, that this would occur. The officials pointed out that Idaho’s constitution limits the ability of the state to accept financial risk—which constrains their ability to innovate with health care coverage—and that state employees would likely be reluctant to accept any changes to their health benefits.

D.1.4 Health information technology and data infrastructure

With the SIM Initiative, Idaho envisions using health IT to provide PCMHs with the information needed to coordinate an individual’s care and all stakeholders with information

¹⁰⁶ Mercer. (2017, January). *SHIP payer financial and enrollment statistics for goal 6*. Prepared for the Statewide Healthcare Innovation Plan January 2017. Retrieved from <http://ship.idaho.gov/LinkClick.aspx?fileticket=uzZGGUICoc%3d&tabid=2978&portalid=93&mid=12567>

about PCMH performance. Idaho is increasing the number of providers exchanging health information through IHDE by connecting the clinics from all three PCMH cohorts to IHDE, and hopes to increase the number of hospitals sending their data to IHDE. In addition, Idaho is implementing a statewide data analytics system that will use the data in IHDE to produce reports showing PCMH performance on clinical quality metrics across payers.

Health IT continues to be a major challenge to the SIM Initiative's success. Almost all stakeholders interviewed for this report identified either delays in connecting PCMHs to IHDE or the lack of data reports as the greatest implementation challenge they faced in the next year. Idaho had anticipated that all Cohort 1 clinics would be exchanging information through IHDE as of January 31, 2017. However, by April 2017, only 26 of the 55 clinics in Cohort 1 and 20 of the 56 clinics in Cohort 2 had bidirectional connections in place with IHDE. There was anecdotal evidence from a small number of providers that were connected to the IHDE that the data they received were useful, although one provider reported issues incorporating the data into their workflow.

Also, IHDE did not succeed in increasing the number of hospitals that participate in data exchange; the goal was to have 15 hospitals connected by the end of January 2017, but only 8 were connected. As a result, many Cohort 1 clinics still lack information, or encounter delays in receiving information, about the services provided to their patients by other providers, including emergency room (ER) and hospital admissions. This situation also impeded progress on the statewide data analytics system, which will draw the information needed to produce reports from IHDE. Although Idaho completed development and testing of this system, it will not be able to produce reports based on complete information until more clinics are connected to IHDE.

Many stakeholders felt that the original plans were overambitious or that delays in IT implementation were to be expected, as experienced in other states. Other stakeholders identified technical and personnel challenges to completing the connections between the clinics and IHDE. Three stakeholders pointed out that clinics in Idaho used different electronic health records (EHRs), increasing the technical complexity of connecting to IHDE. One of these stakeholders reported that many of the EHR vendors on the Office of the National Coordinator for Health Information Technology's Certified Health IT Product List were "less than cooperative about getting information out of the clinical record and into the IHDE." Another pointed out that a bidirectional connection with IHDE required more than two feeds per clinic, because there are separate outbound and inbound feeds for different types of services (e.g., laboratory). Also, some delays were due to requests from clinics while they were implementing new EHRs during their year of PCMH transformation; these clinics preferred to delay their connection until after the EHR transition was completed. Finally, one interviewee cited slow progress by clinics (and slow follow-up by IHDE) to complete the administrative tasks necessary to establish the connections.

The SIM Initiative's leadership were optimistic that they ultimately would meet their goals, and established a new timeline for completing this work. One reason for their optimism is that some of the clinics in Cohort 2 were part of health systems that were already connected to IHDE as members of Cohort 1. According to state officials, when one clinic in a system is connected to IHDE, the work needed to connect another clinic in the same system is greatly reduced. Consequently, it will take less time to connect Cohort 2 clinics. Nonetheless, Idaho is exploring the feasibility of using claims data from payers and data from regional databases to augment the data they expect to receive from providers connected directly to IHDE.

Many stakeholders believed that issues with the data exchange itself contributed to at least some of the delays in connecting PCMHs to IHDE. One interviewee believed that, at the start of the SIM Initiative's implementation, IHDE was more focused on vision than operations, whereas now IHDE had a more operational focus. Others concurred with this assessment, based on reports now provided by IHDE to the IHC and IHDE's recent hiring of a project manager to oversee the SIM work. Some attributed the positive change at IHDE to changes in staffing; others mentioned that Idaho engaged in extensive health IT planning outside of SIM. Two state officials cited that changes to IDHW's management structure and contract with IHDE were important for steering this work back on track. One noted that strengthening IHDE's partnership with the Medicaid agency was helpful, because the Medicaid agency had relationships with clinics that could be leveraged to speed clinic responsiveness to IHDE requests.

Stakeholders emphasized that the unanticipated complexity of the work and the delays in connecting clinics had financial ramifications for both project administration and participating clinics. According to some state officials, increased complexity led to increased costs. To augment the SIM Initiative's resources for this work, SIM staff worked with the Medicaid agency to use Health Information Technology for Economic and Clinical Health (HITECH) funding to pay for eligible clinic connections to IHDE, as well as a portion of the cost of extracting the data from IHDE to produce the statewide data analytics reports. Part of the package of TA offered to members of the PCMH cohorts was payment for the cost of building the connection to IHDE and 1 year of the portal licensing fees charged by IHDE. Originally, this offer was available only to clinics that completed the work before the end of their year of PCMH transformation. However, many of the Cohort 1 clinics were not expected to meet that deadline. Therefore, in third quarter 2016, Cohort 1 clinics were notified that their participation agreements would be modified to enable them to continue to obtain reimbursement for these costs, even if their connections were not completed before January 31, 2017.

By April 2017, the SIM Initiative's leadership anticipated that the statewide data analytics system would be producing reports showing Cohort 1 clinic performance on four of the clinical quality measures (CQMs), implementing reports showing Cohort 2 performance on these same measures, and working with Cohort 1 clinics to implement six additional CQMs. This work

is behind schedule due to the delays in connecting clinics to IHDE. However, the SIM Initiative completed and tested the system for producing the measures and is engaged in working with each clinic as it connects to IHDE, to identify and address data gaps and other factors impeding the production of accurate measures for that clinic.

Once project administrators are confident that the system is producing accurate information for enough clinics, they will begin rolling out the reports intended for RCs, state administrators, and IHC members. These reports will show aggregate PCMH performance across payers at the regional level and statewide. Leadership still anticipates that these reports will go into production soon enough for RCs and others to use them to plan population health and other activities during the period of the SIM Initiative. Finally, the statewide data analytics contractor continues to work with payers to determine their data needs.

D.1.5 Practice transformation and workforce development

Idaho plans to assist 165 practices in their efforts to transform into PCMHs over the course of the SIM award (see *Section D.1.3*). SIM funds will be used to provide training and TA to these practices. Another goal of the SIM Initiative is to help create virtual PCMHs to address Idaho's health care workforce shortages and improve rural residents' access to care. For practices to qualify as a virtual PCMH, they must incorporate at least one of the following components: telehealth, CHEMS, or CHWs.

To facilitate PCMH transformation, the SIM Initiative provides TA to clinics through learning collaboratives, webinars, and individualized coaching. Through the RCs and the TA contractors, clinics receive direct support with their practice transformation efforts, can share best practices with other clinics, and connect with the broader medical-health neighborhood.

Idaho's efforts around practice transformation and workforce development are progressing well, and the state is on track toward its overall goal of transforming 165 primary care clinics into PCMHs. As of December 2016, 32 of the 55 clinics in Cohort 1 had achieved PCMH certification. As of February 2017, a total of 111 clinics are participating through the two cohorts, meeting the state's goal of engaging 55 clinics per year. Stakeholders noted that transformation involves a significant culture change, is resource-intensive, and causes some practices to completely change their business models. Many stakeholders commented that given the challenges, they were impressed by the number and diversity of providers adopting the PCMH model. One stakeholder mentioned that some providers were influenced to participate after seeing their peers transforming to a PCMH.

State officials reported that CHEMS recruitment for enrollment is proceeding very well, with 10 participants in the first cohort and 15 in the current cohort. CHEMS program development is underway in some areas, and the state is progressing toward its goal of establishing 13 CHEMS programs by the end of Award Year 4 in January 2019. However, the

number of CHW training participants is lower than expected, with 11 individuals in the first cohort and 23 in the second cohort, although the state's goal is to train 125 CHWs by the end of the SIM Initiative. Also, beginning in April 2017, Cohort 1 clinics could apply for telehealth grants funded by the SIM Initiative to develop and implement or expand an existing telehealth program.

Although the state did not discontinue any practice transformation or workforce strategies or develop any new approaches during the analysis period, stakeholders did note a few minor adjustments needed and unexpected developments. For example, the state initially anticipated that it would be able to offer funding to providers for telehealth equipment but later learned that federal restrictions prevented this funding as an allowable expense. Also, state officials reported that two participating clinics were behavioral health clinics that were aiming to incorporate primary care into their practices.

State officials emphasized the importance of TA as a lever to facilitate practice transformation, mentioning that individualized coaching was useful, especially for smaller clinics that may need more guidance. One state official commented that the individual QI staff person who works directly with the clinics in each region was key, serving as the “boots on the ground” in assisting clinics with PCMH transformation efforts. However, one stakeholder noted that, during the first year, some clinics were not connected with the most appropriate coaches to meet their needs, and as a result, some adjustments were made to find better clinic-coach matches. Additionally, a few changes were made to the TA offered to clinics, based on the experience of Cohort 1. For example, the TA offered to Cohort 2 was split into two tracks.

A few clinic representatives reflected that the TA calls might have been improved if their clinic had taken a greater leadership role in directing the coaching content to meet their needs. Other stakeholders commented that, because some participating clinics joined the cohort further along in the process of becoming a PCMH, it is difficult to determine whether the TA significantly assisted their practice transformation efforts or if these clinics would have achieved NCQA accreditation on their own outside of the SIM Initiative. Regarding behavioral health integration, general, high-level information is offered; clinics interested in more intensive TA need to seek out individualized coaching on the topic.

Additionally, the state encouraged Cohort 1 clinics that did not achieve PCMH certification to continue working with RCs and the public health district staff. State officials also indicated that the SIM Initiative team worked closely with state Medicaid officials to align and expand technical resources to clinics to ensure that their efforts are coordinated and not duplicative. State officials commented that Healthy Connections staff often join the regional health district QI specialist and TA contractor during the initial, individual clinic assessment meeting, and work together on the development of a clinic transformation plan to ensure that the requirements of Medicaid tier advancement align with the SIM Initiative PCMH requirements.

The coordination with Medicaid’s tiered payment structure was viewed as an important lever for engaging practices in transformation efforts.

Stakeholders noted that, in addition to the TA provided to the clinics, one of the key levers for achieving practice transformation is the RCs. Stakeholders also mentioned informal clinic mentoring occurring between the clinic cohorts, which some RCs helped to facilitate.

Regarding workforce strategies, stakeholders commented that one reason for CEMS recruitment being relatively robust is that the SIM Initiative is utilizing an existing resource of emergency medical services (EMS) workers. However, there are more challenges with recruiting CHWs because they do not comprise a current workforce pool—the state must more actively seek individuals to participate in the CHW trainings. Stakeholders noted that the CEMS and CHW initiatives face some long-term sustainability challenges; whereas providers recognize their value, no reimbursement mechanism is available for their services. However, incorporating CEMS or CHWs can qualify practices for advancement within Medicaid’s Healthy Connections tiered payment system, which may serve as an incentive to providers. Also, one payer mentioned that they are considering including CEMS in their future contracting.

Stakeholders also cited telehealth as a way to improve access to care and address provider shortages, particularly for behavioral health. However, some stakeholders noted challenges because of provider uncertainty about implementation of telehealth related to logistics, technological capacity, Health Insurance Portability and Accountability Act compliance, documentation, and other issues. One stakeholder commented that having state legislation (such as S1058 for Telehealth Access and Cost Coverage, which was defeated in March 2017) would be helpful to facilitate telehealth implementation, address the logistical challenges, and ensure that payments for telehealth consultations are equivalent to in-person office visits.

D.1.6 Population health

The primary population health strategy of Idaho’s SIM Initiative is the RCs that are based in each of the state’s seven public health districts. Established by June 2016, the RCs are designed to address local needs, support practices in their PCMH transformation efforts, and connect PCMHs to the broader medical-health neighborhood in each region to improve care coordination. Idaho also developed a population health plan in 2014, Get Healthy Idaho, as part of the Division of Public Health’s accreditation process, and this plan was incorporated into the work of the SIM Initiative. Additionally, the Population Health Work Group of the IHC assists in the development of population health measures and identifies opportunities for public health and primary care integration at the regional level.

Each RC is physician-led and comprises a diverse group of volunteers, representing different sectors, who meet regularly. To support the RCs’ work, IDHW has contracts with the public health districts via subgrants to fund three RC staff in each district: a SIM Initiative

manager, a QI specialist, and an administrative assistant. State officials indicated that, to some degree, the RCs address CMS' adaptation of the three buckets of prevention from the Centers for Disease Control and Prevention¹⁰⁷ (CDC), which are (1) clinical approaches, (2) innovative patient-centered care, and (3) community-wide health initiatives. The RCs support clinical interventions at the practices transitioning to PCMHs, focus on connecting PCMHs to the broader medical-health neighborhood, and address community-wide health issues.

Overall, stakeholders indicated that the RCs are operating well and progressing toward their goals, each having developed a strategic plan. Whereas some RCs are more advanced than others, stakeholders commented that their overall progress is notable, considering that they are volunteer-run, are not directly funded, and serve dual purposes of supporting PCMHs and engaging in population health promotion work. Many stakeholders thought that, because of the decentralized nature of public health in the state and their ability to serve as fiduciary agents, the seven public health districts were a natural fit to take on the RC work. The stakeholders also noted that the direct connection between the RCs and the public health districts helps support the RCs' efforts to advance population health goals and address social determinants of health. Stakeholders also mentioned that the SIM Initiative's Population Health Work Group aligns well with the RCs and supports their efforts to address population health issues. Additionally, one stakeholder highlighted that some RCs are focusing on behavioral health integration.

RCs could apply for grant funding through the SIM Initiative beginning in November 2016 to support their locally targeted activities and initiatives. The funds will be directed to and administered through the public health districts. As of March 2017, six public health districts had applied for grants. Two grants were formally approved, and two more are awaiting approval. The areas of focus of the four selected applications included care coordination, suicide prevention, community ER services, and caregiver integration support.

A few stakeholders commented on some of the challenges with the RCs, such as their lack of resources and reliance primarily on volunteers, and discrepancies in operation among the RCs, which depends on the individual public health districts and RC leadership. Stakeholders also mentioned that sometimes the diverse interests of RC members, as well as the lack of actionable, local-level data, can create barriers for RCs in their progress toward their goals. Also, one consumer advocate from a statewide organization mentioned that working with the seven different RCs can be challenging because they each have their own strategies and vary in their degree of engagement. The consumer advocate noted that engaging with RCs may have been easier if the state had provided an overall framework for coordinating the medical-health neighborhood that regions could tailor to meet their needs.

¹⁰⁷ Auerbach, J. (2016, May/June). The 3 buckets of prevention. *Journal of Public Health Management & Practice*, 22(3), 215–218. doi: 10.1097/PHH.0000000000000381

The implementation of the state's population health plan, Get Healthy Idaho, is supported through the SIM Initiative and focuses on four priorities: (1) access to health care, (2) diabetes, (3) tobacco use, and (4) obesity. The leading health indicators identified in Get Healthy Idaho provided the framework for the primary data used in the statewide needs assessment, and aligned with SIM efforts to improve health care and outcomes and reduce costs. In January 2017, an update to the plan was completed, which indicates continued emphasis on the same four priority areas. The state is continuing to operationalize the plan and align it with the SIM Initiative.

Regarding the levers designed to advance population health, stakeholders noted that they all serve important roles. State officials commented that the RC grants are likely to help RCs strengthen their connections to the medical-health neighborhood even if they are not aligned with the SIM Initiative or the state's population health plan, because they are based on the RCs' strategic plans.

Regarding sustainability of RCs beyond the SIM award, some stakeholders commented that Medicaid may be able to serve a role in this capacity—perhaps through the new payment model Medicaid is developing for 2018 (described in *Section D.1.3*). However, one stakeholder thought that if this payment model development occurs, the number of RCs may need to be reduced from seven to approximately three to five RCs to meet an appropriate market size capable of sustaining a robust medical-health neighborhood in each region. Another stakeholder noted that the RCs also could be sustained by connecting with hospitals or incorporating on their own as nonprofit organizations.

D.1.7 Quality measurement alignment

Prior to the SIM Initiative, individual payers, systems, and programs used measures they selected from the data they could access to track the performance of PCMHs and other providers. Through the SIM Initiative, Idaho sought to create a statewide data reporting system that would report on PCMH performance across payers. The IHC selected a set of CQMs for key population health areas (e.g., diabetes) to be produced from the system. The IHC envisioned that different groups of stakeholders would use these metrics for different purposes (e.g., PCMHs would use these measures to improve performance, although the IHC would use them to demonstrate the impact of the initiative). Idaho's plans did not call for these measures to immediately replace those already in use. Rather, the state considered the measures to be a new source of cross-payer performance information that could be used in conjunction with other measures—and, perhaps, gradually replace some of those other measures.

Idaho elected to phase in CQM reporting. Clinics from each of the three PCMH cohorts would be expected to produce four measures in their first year of SIM participation, six each in the second and third years. In June 2016, the state anticipated that by April 30, 2017, the first four measures would have been selected and operationalized, and the state would then work to

operationalize the remaining twelve. Idaho also would have implemented a system to produce the four measures from EHR data flowing through IHDE to the statewide data contractor; the statewide data contractor would then produce reports at the practice, county, RC, and statewide level; and stakeholders at these levels would start to use the newly available information.

As described in *Section D.1.4*, this aspect of the SIM Initiative is behind schedule, due mostly to delays in connecting Cohort 1 clinics to IHDE. As of April 2017, the statewide data contractor had completed and tested the reporting system and was working with each individual clinic as it came online with IHDE to ensure that the measures produced for the clinic accurately reflect clinic performance. The regional and statewide reports were not yet being produced, although Idaho anticipates producing them in 2017.

The work of operationalizing the measures was also a factor in the slowdown. In 2016, three groups of IHC members played a role in selecting and operationalizing the measures: the Health IT Work Group, the Clinical Quality Measures Work Group, and the Data Element Mapping Subcommittee. This compartmentalization complicated the task, not only slowing the work, but also making it more difficult to share information from one group that affected the work of the others. To address this challenge, the IHC decided to merge the three groups into one: the Data Governance Work Group. The IHC approved the member roster and charter for this new group, which will be released in May 2017.

In addition to the organizational challenges, the groups found that the measures selected for implementation (tobacco cessation, weight assessment and counseling for children and adolescents, adult body mass index assessment, and diabetes care) needed to be more precisely defined in the data available in IHDE. In addition, during this report year, the work group determined that Cohort 1 clinics would need to submit a Patient Attribution File (a file identifying the PCMH's patients) to generate the measures at the clinic level. Through their work to address this challenge, the IHC made changes to the four measures to align them with national measures, which were already defined in sufficient detail. Also, choosing measures already used in national programs increased the likelihood that practices already were producing the measures for the other programs—thus minimizing provider burden and potentially speeding implementation.

Several stakeholders expressed concern about the continuing lack of statewide data. The CQMs and statewide data analytics report were planned to be critical resources; cohort clinics and RCs hoped to use these reports to plan and carry out their work. These critical reports were to be the source of quantitative information for demonstrating the SIM Initiative's impact on Idahoan's health. Without this information, some stakeholders reported that they were unable to confidently state that their work was improving clinical care or population health. Lack of information, some interviewees reported, impeded their ability to make the case to payers and providers for investing in PCMH transformation. Due to delays in launching the CQM reports,

the RCs and clinics turned to other sources of information to plan their work, although they still hope to receive the reports in time to use them for planning in the future. State officials and other stakeholders also remain hopeful that they will receive the performance reports in time to use them for their intended purpose.

D.1.8 Lessons learned and looking forward

Most stakeholders cited the health information exchange challenges as the primary roadblock to implementation of the SIM Initiative over the past year. Although stakeholders noted that the new IHDE interim executive director appears to be moving efforts in a positive direction, many commented that identifying these issues sooner would have been beneficial.

Several other comments focused on the continued challenge of commercial payer involvement. As noted in *Section D.1.3*, state officials evolved in their engagement with payers by allowing them to pursue their own VBP models, while keeping them engaged and working with them to promote approaches that align with PCMHs.

A few stakeholders commented that having a mechanism to better identify clinics' readiness, particularly to more effectively meet the needs of further advanced clinics, would have been helpful. One state official noted that implementation efforts could have been improved by providing clearer information about participation expectations to clinics at the outset. However, stakeholders commented that the locally based TA was an effective model, and overall, practices are very willing to participate in transformation efforts when given the opportunity, as demonstrated by their active engagement in the SIM Initiative.

Another stakeholder mentioned that behavioral health integration ideally would have been priority during the initial SIM Initiative concept development process, because without clear goals, progress in this area was slower. Additionally, some state officials believed that, whereas the implementation efforts were going well overall, the project was understaffed given its scope, which at times overburdened certain staff members.

Idaho stakeholders offered advice that might benefit other states implementing similar models. A common response was the importance of fostering partnerships and stakeholder engagement at the local level. For example, through the Idaho RCs, the collaboration between public health and primary care was very successful in advancing the SIM Initiative's goals for practice transformation, QI, and population health. Additionally, some stakeholders noted the importance of tailoring communication to the needs of different stakeholders and providing clear, consumer-centric information to the public.

Regarding significant issues or opportunities that can affect implementation, stakeholders offered several comments. Numerous stakeholders mentioned the importance of addressing current health information exchange challenges, because establishing clinic connectivity will be

critical for data exchange and for generating data analytics on performance and quality. Many also noted that having these data are crucial for obtaining payer engagement and movement in payment reform efforts, which remains an ongoing challenge. Other stakeholders mentioned the importance of having regional-level data to inform RCs and clinic activity.

In terms of opportunities, some stakeholders noted the direct parallels between the SIM Initiative's efforts and Medicaid's long-term plan to change the function of primary care practices. The stakeholders highlighted the opportunity to align PCMH transformation efforts with the regional networks that the Medicaid agency plans to form as part of its Healthy Connections Value Care program, which will include shared savings for PCMHs and could represent the next generation of the SIM Initiative.

Finally, many stakeholders noted uncertainty about how implementation may be affected by potential health care policy changes at the national level, most notably the potential repeal and replacement of the Affordable Care Act and changes to federal funding for Medicaid.

D.2 Changes in Outcomes During the State Innovation Model Initiative

D.2.1 Progress toward a preponderance of care in value-based purchasing models and alternative payment models

Opinion ranged widely about whether Idaho could move 80 percent of the state's population into a VBP or delivery model by the end of the SIM Initiative in 2019. Roughly a third of stakeholders reported that the goal is feasible given their starting point, but that it might be a stretch. Information provided by the state's project management and financial analysis contractor, Mercer, indicates that 58 percent of beneficiaries and 24 percent of expenditures across Medicaid, Medicare, and the commercially insured were in some form of a VBP model as of 2015, before SIM implementation began. One state official felt that, with so many clinics already having demonstrated some involvement in PCMH transformation, there are many "easy catches." The official pointed out that, generally, providers across the state show a high level of interest. Another state official indicated that Medicare, although not aligned with the Idaho's VBP structure, is also pursuing VBPs, which will help meet the goal. Finally, one state official indicated that, separate from having Medicaid implement the PMPM model for PCMHs, the Idaho Medicaid program is working with three major hospital systems in the state to implement VBPs. If that effort is successful, the state will obtain close to 80 percent.

Most stakeholders held the view that the state's ability to reach the 80 percent preponderance of care goal depended either on the definition or whether the state is looking at the population, providers, or expenditures. Two stakeholders pointed out that some of the value-based components of a contract might be very small; if the measure includes any level of pay for performance or VBP, then the state might reach the goal. Two other stakeholders indicated that,

although attaining 80 percent of the population or expenditures did not seem likely, 80 percent of practices could start to receive at least some type of VBPs. Overall, stakeholders with this view wanted more clarity about how the measure would be defined, but at the same time, expressed some optimism that the state might be able to reach certain versions of the goal.

Finally, a few stakeholders reported that they did not think attaining a preponderance of care would be feasible at all. One state official indicated that reaching the 80 percent goal seemed unlikely, given that there are no incentives within the SIM Initiative for a payer to change reimbursement models. Others pointed out that the transition is moving slowly for payers because they are not only rolling out a new model, but also updating all their contracts and providing support tools and education. Even if the goal were just looking at the Medicaid population, one state official still did not think the 80 percent mark would be achievable. Stakeholders with this point of view indicated that they are seeing shifts toward VBPs and are continuing to work on that goal; however, they also are being realistic about how much change they can make by January 2019.

Stakeholders pointed out that Idaho is a state that will not use legislation to incent participation in the SIM Initiative, and instead will rely on convening, consensus building, and information sharing to engage payers. This continues to be the approach for payment reform with private payers, especially for self-funded employers which, as of April 2017, have not implemented VBP models. SIM Initiative leaders hope that, by collecting data showing the financial return to VBP models, more payers will adopt these new models.

Table D-1 presents the extent to which Idaho's population is participating in the SIM payment and health care delivery models. These values were provided by the state in its first quarter 2017 progress report to CMMI.¹⁰⁸ The table indicates that none of Idaho's population was involved in SIM's PCMH delivery model. However, this seems likely to be a reporting error, because Idaho's SIM Operational Plan indicates that 55 practices were participating in the PCMH model for Cohort 1 during fourth quarter 2016. No payer-specific data were reported, no data were given about VBP models, and no data were provided about alternative payment or health care delivery models beyond the SIM Initiative. Moreover, Idaho did not report on the extent to which payers are participating in the SIM payment and health care delivery models.

¹⁰⁸ These data values were not verified by CMMI. Thus, the RTI team cannot attest to their accuracy.

Table D-1. Populations reached by a value-based purchasing or alternative payment model in Idaho, as of fourth quarter 2016

Payer type	SIM models			Landscape
	Primary care PCMHs	Other ^a	SIM-wide	Any value-based purchasing or APMs
Statewide	0 (0%)	—	—	—

Source: Idaho *SIM Quarterly Progress Report* for first quarter 2017. Data were reported in the first quarter 2017, but the values shown are for the fourth quarter 2016.

^a The category “Other” is for the Virtual PCMH model, which is a designation that only PCMHs participating in the SIM Initiative can attain. Thus, the Virtual PCMH model is a subset of the PCMH model.

— = relevant data were not provided in data source; APM = alternative payment model; PCMH = patient-centered medical home; SIM = State Innovation Model.

Table D-2 presents the extent of Idaho provider participation in the SIM health care delivery model. These values were provided by the state in its first quarter 2017 progress report to CMMI.¹⁰⁹ Roughly 11 percent of primary care practices participate in a SIM cohort to develop as, or transform into, a PCMH. The state did not report data about value-based purchasing and alternative payment or health care delivery models beyond the SIM Initiative; the state did not report any information about physician participation.

Table D-2. Number of practices participating in a value-based purchasing or alternative payment model in Idaho, as of fourth quarter 2016

Provider type	SIM models			Landscape
	Primary care PCMHs	Other ^a	SIM-wide	Any value-based purchasing or APMs
Practices ^b	56 (11.2%) ^c	0 (0%)	56 (11.2%)	—

Source: Idaho *SIM Quarterly Progress Report* for first quarter 2017. Data were reported in the first quarter 2017, but the values shown are for the fourth quarter 2016.

^a The category “Other” is for the Virtual PCMH model, which is a designation that only PCMHs participating in the SIM Initiative can attain. Thus, the Virtual PCMH model is a subset of the PCMH model.

^b The denominator for the practice data is 500, the reported number of primary care clinics in Idaho.

^c Idaho reports in its SIM Operational Plan that 55 clinics participated in Cohort 1 during fourth quarter 2016.

— = relevant data were not provided in data source; APM = alternative payment model; PCMH = patient-centered medical home; SIM = State Innovation Model.

¹⁰⁹ These data values were not verified by CMMI. Thus, the RTI team cannot attest to their accuracy.

D.2.2 Care delivery

Overall, stakeholders reported that practice transformation progressed enough to impact delivery of care. Stakeholders note anecdotal reports of team-based care in PCMHs and the positive impact on practices' delivery of care. One large practice (comprising a Federally Qualified Health Center and several practices) is making use of PCMH strategies, especially CHWs. One nurse practitioner at a small practice in Cohort 1 hired a behavioral health specialist and subsequently integrated behavioral health on site. In another example, a single physician in a frontier county runs an integrated and coordinated practice and is beginning to use telehealth, CHWs, and CHEMS. Twenty-nine of the 55 clinics in Cohort 1 advanced to a higher payment tier in Idaho's Healthy Connections PCMH program, indicating more care coordination and increased health IT capabilities, among other possible improvements. Although no data were published indicating systematic changes in care delivery, these anecdotes indicate that delivery of care was impacted for at least some practices.

Workforce development did not have a significant impact on care delivery, but stakeholders noted that there are some successes. The integration of CHWs and CHEMS occurred in some practices, although others, mainly small practices or those in frontier areas, still needed to implement this strategy. One provider reported positive impact on care delivery from four CHWs who are providing outreach to Spanish-speaking patients. The CHWs can communicate with the largely Spanish-speaking population and make home visits, which is helpful in outreach to migrant farmworkers. As another example, a frontier practice utilizes CHEMS for home visits for follow-up care to aid patients who lack transportation. Stakeholders reported that staffing CHWs presents a greater challenge than staffing CHEMS. Most of the CHEMS engaged for the SIM Initiative are employed by their county EMS agency or another emergency services agency, allowing the state to tap into an existing resource. However, CHWs are scarcer than CHEMS, and work needs to be done to identify individuals who are interested in undergoing CHW training.

Some stakeholders expressed concern about the sustainability of CHW and CHEMS models. A provider cited a failed legislation attempt to make telehealth more cost effective, stressing that such legislation is needed to assist practices in making some of the necessary transformations to facilitate telehealth implementation.¹¹⁰ A different stakeholder commented, "Another challenge is the payment structure—we have a great piece with CHWs and CHEMS and telehealth expansion, but we haven't resolved how this is going to be paid for and ensuring we have a strong handle on that." However, a state official noted that training for CHWs and CHEMS was robust and that the SIM team had envisioned that the funding to pay for these workers (not necessarily their training) would come from the savings generated by the PCMHs.

¹¹⁰ The Idaho Medicaid program has an official telehealth payment policy, available here: <http://www.healthandwelfare.idaho.gov/Portals/0/Providers/Medicaid/TelehealthPolicy.pdf>. However, stakeholders still have concerns regarding telehealth expansion and payment from commercial plans.

The official also noted that strategies such as telehealth were never intended to begin immediately in the SIM Initiative and that more infrastructure must be in place before the strategies could become fully operational.

Other stakeholders are optimistic about the use of CHWs and CHEMS to extend the delivery system and address health care needs. One state official noted:

In public health, we're looking at suicide prevention in health care settings, and part of that is having follow-up care for people who are discharged who are suicidal, and so we could use CHEMS in cases like these to have connectivity to the community individual. So I see lots of opportunities even beyond State Healthcare Innovation Plan.

Another stakeholder commented:

CHEMS is an amazing opportunity to reduce hospital admissions and readmissions, and reduce avoidable emergency [room] visits, so for me when I think about those impacts to hospitals and for patients, I think CHEMS holds the most promise.

One payer noted that the SIM Initiative laid the groundwork for use of CHWs and CHEMS to extend the delivery system, especially in terms of addressing psychosocial issues and patient engagement. The payer indicated interest in beginning to include CHEMS and CHWs in the contracting schema. For example, a patient on peritoneal dialysis became despondent because of his limited life expectancy and stopped his dialysis. After a long conversation with a CHW, the patient decided to restart dialysis and is doing well. Echoing the opinions of other stakeholders, a consumer advocate was optimistic that the SIM approach will meet workforce needs, emphasizing its value in rural and frontier parts of the state.

D.2.3 Coordination of care, quality of care, utilization, and expenditures

Fewer than half of the stakeholders reported immediate, positive impacts of the payment and delivery reforms on coordination of care; others expect to see impacts in the future but are waiting to see supporting data. Currently, limited evidence exists for the impact of the reforms on utilization and expenditures. One stakeholder indicated that findings from a prior 2-year pilot on the PCMH model in Idaho demonstrated reductions in ER utilization and number of prescriptions. One provider felt that care coordination had increased but noted the lack of a funding mechanism for it. The provider compared its practice to hospitals with better revenue streams for care coordination. A payer noted that coordination of care is happening at the level of primary care and major specialties but not yet with mental health, dental, or ancillary services; the payer thought it was too soon to see impacts on utilization and expenditures. Another payer did not see an impact on outcomes yet but cited growing awareness and education about the

varying levels of PCMHs and more discussion among entities that did not exist before, which could have a positive impact on outcomes. One state official noted, as a consumer, changes in a medical clinic in availability, responsiveness, access, and a variety of PCMH benefits, such as improved follow-up and behavioral health screening.

Stakeholders emphasized that impact was seen in some practices but not at others, depending on where the practice is in the transformation process. One provider commented, “I would say for certain clinics it has, but some clinics struggle more than others ... I’ve heard from clinics that have seen the difference, but then others are not because it’s such a big lift. I think by the end of the SIM project we will see broader changes.” Similarly, a consumer advocate cited instances of care coordinators meeting the needs of pediatric patients, and noted instances where adult patients were not aware that their primary care physician was part of a PCMH, and the patient was not connected to a care coordinator.

Despite noted delays in health IT and data infrastructure implementation, stakeholders acknowledged that these strategies are having positive impacts on outcomes. A state official reported that progress was made in getting clinics access to the IHDE clinical portal and their ability to start pulling information together. More significant improvements in care coordination are expected in the next 6 to 12 months, as more clinics achieve bidirectional connectivity. Another state official acknowledged that the SIM Initiative is moving forward despite a gap in the expected data. There are no population health data at a regional level or down to the clinic level, but the state is optimistic that the data are coming, and progress is being made (e.g., the dashboard being built by HealthTech).

Two payers saw progress in coordination of care, but one payer noted that hospitals’ involvement was challenging, which underscores the necessity of information dissemination and having a central place for the data. The payers hope to see further improvements as IHDE matures. One payer agreed that IHDE is moving slowly, and noted some lack of clarity on the part of IHDE as to how to involve payers. Another payer noted uncertainty that health IT changes will affect providers’ delivery of care but would need to first see supporting data. One provider noted that IHDE made needed changes, but data that will help ascertain progress are not yet available. This provider was hoping to obtain more of the payer data and cited challenges in combining payer data, when available. The provider indicated that the SIM Initiative is moving in the direction of impact, but that there is no measurable impact yet.

Aside from practice transformation, workforce development, and health IT, stakeholders felt that other SIM-related activities are impacting outcomes such as quality of care, access, and cost. Payers expect further progress on these outcomes over time as the PCMH model continues to develop and patient engagement improves. One payer noted that, although every region is in a different stage of implementation depending on resources, the RC model was very successful. There are strong supporters in several of the regions that are the early adopters, and they will

help other regions move forward. A provider observed that in the macro sense, patients knowing where to go for their usual source of primary care is a success: “Because if they don’t have affordable and timely access to quality care, then we’ve changed nothing.” Even though fewer than half of the stakeholders reported positive impacts of payment and delivery reforms on coordination of care, stakeholders expect to see progress on other outcomes in the future.

D.2.4 Population health

Table D-3 shows Idaho’s baseline population health outcomes based on 19 measures from the 3 years prior to the implementation of Idaho’s SIM award. The table also includes information from the comparison group states: Montana, Utah, and South Dakota. The multistage procedure for the identifying the comparison group states is described in detail in *Appendix L*. Idaho ranks higher than the national average for most general health measures but underperforms in prevention and screening activities.

Table D-3. Baseline measures of population health in Idaho, 2013–2015

Measure		2013–2015 Average	2013–2015 Trend
Health status is fair or poor	Idaho	12.1%	
	CG	13.2%	
	National	14.9%	
Ever diagnosed with diabetes	Idaho	7.7%	
	CG	8.1%	
	National	9.6%	
Ever diagnosed with hypertension ##	Idaho	30.1%	
	CG	28.4%	
	National	31.6%	
Ever diagnosed with asthma	Idaho	12.8%	
	CG	12.6%	
	National	13.5%	
Has a functional limitation ##	Idaho	20.2%	
	CG	20.0%	
	National	18.2%	
Current smoker	Idaho	14.4%	
	CG	15.8%	
	National	16.4%	

(continued)

Table D-3. Baseline measures of population health in Idaho, 2013–2015 (continued)

Measure		2013–2015 Average	2013–2015 Trend
Overweight	Idaho	64.6%	
	CG	62.8%	
	National	64.4%	
Obese	Idaho	28.3%	
	CG	26.7%	
	National	28.5%	
No leisure time physical activity or exercise, past 30 days	Idaho	19.9%	
	CG	20.7%	
	National	23.3%	
Limited fruit and vegetable intake, past 30 days	Idaho	82.0%	
	CG	84.8%	
	National	83.1%	
Any driving after drinking too much, past 30 days #	Idaho	3.3%	N/A
	CG	3.6%	
	National	3.3%	
No checkup, past year	Idaho	39.5%	
	CG	35.6%	
	National	29.4%	
No flu vaccine, past year	Idaho	64.3%	
	CG	56.3%	
	National	59.6%	
No 65+ flu vaccine, past year	Idaho	43.0%	
	CG	35.9%	
	National	39.1%	
No 65+ pneumonia vaccine, ever	Idaho	31.7%	
	CG	29.7%	
	National	30.2%	
Among adults with hypertension, no hypertension blood pressure medication ##	Idaho	30.0%	
	CG	24.8%	
	National	22.4%	

(continued)

Table D-3. Baseline measures of population health in Idaho, 2013–2015 (continued)

Measure		2013–2015 Average	2013–2015 Trend
No 50–75 colorectal cancer screening—no fecal occult blood test (FOBT), past year #	Idaho	94.2%	N/A
	CG	94.1%	
	National	90.7%	
No 50–75 colorectal cancer screening—no sigmoidoscopy or colonoscopy, past 5 years #	Idaho	53.8%	N/A
	CG	48.0%	
	National	46.0%	
No 50–75 colorectal cancer screening—no sigmoidoscopy or colonoscopy, past 10 years #	Idaho	38.3%	N/A
	CG	34.8%	
	National	33.6%	

Source: Behavioral Risk Factor Surveillance System, collected by CDC (2013–2015).¹¹¹

^a Data available for even years only.

^b Data available for odd years only.

Note: To facilitate the comparison of trends over time between the model test state, its comparison group, and the nation, the sparklines for each measure rely on the same scale for the vertical axis for all three groups. Because the vertical scale for the sparklines varies by measure, the sparklines are not comparable across the different measures. Sparklines are not available for outcomes for which data are limited to 2014 (indicated by #). Sparklines for outcomes that are limited to data for 2013 and 2015 (indicated by ##) will be based on data for two points in time and so will appear more stable than outcomes for which data are available for 2013, 2014, and 2015.

CDC = Centers for Disease Control and Prevention; CG = comparison group; FOBT = fecal occult blood test; N/A = not available.

Idaho compares favorably in the percentage of the population reporting that health status is fair or poor, ever diagnosed with diabetes, ever diagnosed with hypertension, ever diagnosed with asthma, current smoker, no leisure time physical activity in the past 30 days, and limited fruit and vegetable intake in the past 30 days. For these areas, where a lower percentage indicates better health, Idaho’s 3-year average is typically 1 to 3 percentage points lower than the national, 3-year average. Idaho’s share of the population that is overweight and obese is roughly in line with the national average, although Idaho tends to score lower than the national average for prevention- and screening-related activities. The most striking differences are for no checkup in the past year and no hypertension blood pressure medication among adults with hypertension. Measures where Idaho underperforms the national average are colorectal cancer screening, vaccination rates, and functional limitation.

The Get Healthy Idaho population health plan is targeting obesity, diabetes, tobacco cessation, and access to care. For diabetes and tobacco use, Idaho already outperforms the national average, and Idaho’s obesity rates are comparable to the national average. On the other

¹¹¹ CDC. (2013–2015). *Behavioral Risk Factor Surveillance System survey data*. Atlanta, GA: U.S. Department of Health and Human Services, CDC.

hand, almost 40 percent of Idaho’s population did not have a checkup in the past year, compared to 29.4 percent for the national average, so there is opportunity to improve the access to care initiatives in the population health plan. Improvements in access to care may also improve vaccination and screening rates, which are also low relative to the national average.

State officials indicated that although there may be some anecdotal evidence that the population health strategies had an impact, they consistently reported that there were no data yet that indicated an impact on population health outcomes. One official said that determining how to measure progress on population health was something they still needed to work on. The official wanted the state to focus on some CDC initiatives because they are tangible and can be easily measured, as opposed to it all being “a bit squishy.” Despite the current lack of data, overall sentiment about the SIM Initiative’s impact on population health is positive, with the caveat that RCs will need to determine how to be sustainable in the long-run.

D.3 Idaho Summary

Idaho is continuing to focus its SIM Initiative on implementation of the PCMH model and shifting from an FFS model to a VBP model, with only minor changes made since June 30, 2016. For example, Cohort 1 clinics received incentive payments for achieving certain milestones; due to CMS rules, Cohorts 2 and 3 practices must provide evidence of expenditures and instead receive payments as reimbursements. Another change was made with respect to the TA offered to clinics. In Cohort 1, there was only one track; Cohort 2 had two tracks to allow for different levels of experience with the PCMH model. Staff changes included, most notably, a new key director for the SIM award. However, stakeholders did not convey any significant issues associated with personnel changes.

The payment reform plan is largely unchanged from 2016, but there is new related work in this area by Medicaid. The agency is planning a new reform to sustain the PCMH model beyond the SIM Initiative, called Healthy Connections Value Care. The program would have three different options for Medicaid participation, two in which PCMH practices would bear risk (either by themselves or as part of a larger practice-hospital group), and one that would help providers become PCMHs.

In terms of progress, stakeholders reported across the board that fostering the transformation of practices into PCMHs is their greatest success so far. As of April 2017, Idaho’s SIM Initiative largely completed its work with the 55 practices in Cohort 1 for PCMH transformation, launched a second cohort of 56 practices and was planning recruitment for a third cohort. Stakeholders and quarterly progress reports provided anecdotal evidence that the delivery transformation started to influence care, but there were no data to substantiate that claim.

Continuing from issues reported in the AR1 analysis period, the SIM Initiative had challenges in health IT and VBPs. For health IT, the SIM Initiative aimed to have a bidirectional connection between all Cohort 1 clinics and IHDE, but when the award year ended in January 2017, fewer than half had achieved the goal. Stakeholders cited both technical and personnel issues for the delays, in addition to delays requested by practices due to EHR vendor changes. The state is hopeful that the pace of IHDE connections for Cohort 2 will be faster, because they already worked through the challenges with each EHR vendor. For VBPs, Medicaid is aligned with the SIM Initiative, but commercial payers are pursuing their own VBP models. Some stakeholders are concerned that lack of alignment will cause sustainability issues. Private payers repeatedly indicated that, although they support the PCMH transformation, they do not wish to pursue a PMPM payment model for PCMH activities, and instead would pursue models that work best for their systems. The SIM team is hoping that data on the successes of the SIM Initiative in Medicaid will provide further incentives for private payers to increase the share of business derived from VBP models.

State officials and other stakeholders were pleased with the progress of Idaho's PCMH transformation as of April 2017, and were confident they would be able to achieve the targeted participation of 165 practices by the end of the SIM period. Medicaid's alignment on supporting the PCMH model, the successful development of RCs, and the collaborative environment fostered by the IHC inspire confidence in stakeholders that the SIM Initiative ultimately will succeed. Although challenges persisted with health data exchange and commercial payer alignment, stakeholders agree that the SIM Initiative is effectively taking what was initially provider-led enthusiasm for a new model (PCMHs) and turning it into a statewide transformation.

Appendix E: State Innovation Model in Model Test States: Iowa

Key Results from Iowa's State Innovation Model Initiative July 2016–April 2017

- Testing of the state's major SIM components progressed in all areas. However, implementation of Medicaid managed care in Iowa resulted in delays and interruptions, particularly for the adoption of value-based purchasing in Medicaid and the Statewide Alert Notification system.
- Iowa's SIM Initiative shifted focus to better define value-based purchasing through alignment with the Medicare Access and Children's Health Insurance Program (CHIP) Reauthorization Act of 2015 (MACRA). Iowa also adjusted its SIM components to give a larger role to the health care delivery system and to align them around advancing value-based purchasing.
- This shift was met with mixed reactions by stakeholders. Some highlighted that MACRA offers a discrete timeline, clear incentives, and bonuses—all positive elements. Others questioned the relative roles of public health and the health system in preparing communities for value-based purchasing. Stakeholders also expressed concern around the tradeoff between standardizing approaches to prepare communities for value-based purchasing at the state level and allowing strategies to be tailored for the local context.
- Stakeholders remain generally optimistic that the major components are in place for Iowa to make significant progress in value-based purchasing, particularly given the ongoing commitment, collaboration, and alignment among Iowa Medicaid, Wellmark, Medicare, and the accountable care organization infrastructure already in place.

This appendix provides an updated overview of the Iowa SIM Initiative; describes important changes in the state's SIM Initiative; summarizes implementation and testing successes, challenges, and lessons learned; and discusses early changes and/or prospects of changes resulting from the initiative. The findings in this appendix are based on analysis of data collected between July 1, 2016, and April 30, 2017, from telephone interviews with stakeholders, state document reviews, and state program and evaluation calls.

As a source for this appendix, the RTI team conducted 17 key informant interviews from March 6, 2017, through April 3, 2017. The key topics of the interviews were (1) changes in governance and program administration, (2) progress implementing SIM models and initiatives, (3) participation of payers and providers, (4) progress toward a preponderance of care in the state being provided through an alternative payment model (APM), and (5) early indicators of changes in relevant outcomes. Interview participants included state officials, payers, providers, and consumer advocates involved in the development and implementation of Iowa's SIM Initiative. Further details on the analytic approach are available in *Chapter 1*. Information on the number and type of stakeholders interviewed for the state is in *Table 1-1*.

E.1 Implementation Activities

Iowa's SIM Initiative aims to transform the state's health care system using a two-pronged approach to (1) align payers in value-based purchasing and (2) equip providers to participate in delivery system reform. The SIM Initiative has several components, including value-based purchasing in payer and provider contracts, resources to support care coordination among providers and between health and social service sectors, community-based performance improvement strategies, and a plan for population health improvement focused on diabetes. Several specific goals are tied to Iowa's SIM activities, such as reduced rates of preventable hospital readmissions and preventable emergency room (ER) visits, increased provider and payer participation in value-based purchasing, and reduced total cost of care (TCC).

Stakeholders generally described SIM implementation as a mix of successes and challenges. Two major developments during the Annual Report 2 (AR2) analysis period prompted Iowa to revise its SIM strategy: a shift to a managed care delivery system for the Medicaid program in April 2016 and the state's decision in mid-2016 to pursue value-based payment (VBP) models introduced by the Medicare Access and Children's Health Insurance Program (CHIP) Reauthorization Act (MACRA). Although its overarching vision was stable, Iowa changed its SIM Initiative activities to incorporate these developments, resulting in delays and some stakeholder confusion over the Initiative's evolving focus. Nevertheless, most stakeholders felt that the various pieces of the Initiative were falling into place and expressed confidence that the state would make good progress on SIM activities in Award Year 3. Overall, stakeholders felt that the SIM Initiative was directionally on track to deliver on its goals, even if many would not be achieved until the post-SIM period.

E.1.1 Governance and program administration

Iowa's SIM Initiative is housed within the Iowa Medicaid Enterprise (IME) division of the Iowa Department of Human Services (IDHS). The initiative is a collaboration among IDHS, the Iowa Department of Public Health (IDPH), and the Iowa Healthcare Collaborative. The Iowa Healthcare Collaborative is a private, nonprofit organization formed by health care providers and focused on improving health care in the state. With oversight from the Governor's Office, these three entities are responsible for most SIM activities. The initiative is guided by the Strategic Implementation Team (also known as the SIM leadership team or SIM team). It is made up of leaders from the payer, provider, and public health communities and is under the direction of the IDHS executive chair. This team directs the SIM Initiative implementation partners, including technical and evaluation subcontractors, such as 3M and the University of Iowa Public Policy Center, and other organizations (e.g., the three Medicaid managed care organizations [MCOs]) involved in SIM-related activities.

SIM leadership and most other positions were stable. The number of implementation partners is growing, with new subcontracts between the Iowa Healthcare Collaborative and

provider associations (focused on stakeholder education and engagement) and pursuit of a sustainability planning contractor in Award Year 3. Overall, stakeholders felt that the SIM governance structure was functioning well and that team members enjoy positive working relationships.

Recent shifts among state leadership include the inauguration of a new Governor. Stakeholders did not think this would influence SIM; they expected the initiative to continue benefitting from bipartisan legislature support and support from the new Governor's Office.

E.1.2 Stakeholder engagement

Iowa's SIM Initiative involves a multifaceted effort to engage the many stakeholders critical to successful implementation, including payers, providers, state government agencies, and local communities. The state adopted several different methods for communicating with these stakeholders and soliciting input on SIM. These methods included:

- periodic meetings of the Strategic Implementation Team;
- individual and group meetings with payers and providers, including the Medicaid MCOs and the five major accountable care organizations (ACOs);
- short-term work groups focused on specific tasks, such as integrating value-based purchasing for specific vulnerable populations in Medicaid or developing statewide strategic plans;
- Value Index Score (VIS) User Group conferences to collect feedback from the delivery system on VIS, a quality measurement tool used by Medicaid and Wellmark Blue Cross Blue Shield (Wellmark), the state's dominant commercial payer;
- direct technical assistance (TA), such as regular SIM Learning Communities, conferences to educate and train providers, payers, and other health care stakeholders; a SIM Web site,¹¹² press releases and electronic newsletters used to inform stakeholders about the initiative and promote involvement; and
- a SIM feedback email account, accessed through the SIM Web site and intended to be a mechanism for communication between public stakeholders and the SIM team.

Two additional methods of stakeholder engagement were added to the project in response to CMMI's July 2016 site visit and subsequent recommendation to involve the delivery system more in SIM's focus and activities. First, Iowa created a Healthcare Innovation & Visioning Roundtable, expected to begin meeting in mid-2017. The roundtable is designed to bring health system leaders and experts together to identify and prioritize elements necessary to implement risk-based payment reforms in Iowa (e.g., infrastructure support, regulatory shifts). The roundtable also will create ad hoc work groups to plan more specific tasks. Stakeholders were enthusiastic about the roundtable and the opportunity to focus on the complexities of health

¹¹² This IDHS Web site can be accessed at <https://dhs.iowa.gov/ime/about/initiatives/newSIMhome>

system alignment. Several described it as an effort to engage providers more directly, especially ACOs. Others emphasized the roundtable as the key to sustainable transformation in a highly uncertain post-SIM environment given the evolving health policy landscape.

Iowa's SIM Initiative also bolstered provider engagement with more direct TA to providers working on MACRA-aligned payment models. The Iowa Healthcare Collaborative secured contracts with the Iowa Medical Society, Iowa Pharmacy Association, and Iowa Primary Care Association to provide communication and education about SIM activities. The Iowa Healthcare Collaborative is also leading a new presentation series on delivery system and payment reforms directed at hospital officials, to leverage hospitals' roles and encourage them to begin engaging others in conversations about transformation. A stakeholder explained this hospitals-as-conveners approach by saying, "There isn't a community that wants to lose their hospital through delivery system redesign, they are the largest employer... It just makes sense for the hospitals to lead some of these discussions."

Many stakeholders described the SIM team as hardworking and responsive in their efforts to engage stakeholders and the project overall. Following a "quieter period" surrounding managed care implementation, some perceived a renewed interest among SIM leaders to engage stakeholders in early 2017. The Community Care Coalitions (C3s, described in more detail below) were identified by one stakeholder as an increasingly effective platform for community-level engagement. C3 steering committees and work groups include individuals who interact with health systems in various ways, such as medical interpreters, local law enforcement, and housing officials.

Although most stakeholders felt that the SIM team was effective at communicating information about the initiative, some suggested the team was not using stakeholder feedback in any obvious way. One described meetings as more educational and focused on "information gathering" than collaborative decision making. Another stakeholder expressed frustration that IME had not been more receptive to feedback during meetings with MCOs about value-based purchasing in Medicaid. In this case, the feedback related to IME oversight of contracts between MCOs and ACOs, and concerns about negative effects on the carriers' relationships with their provider network. The stakeholder summed the experience by explaining, "Our last meeting was so contentious that we had to establish ground rules for the next one. We don't feel like we are being listened to. [IME] hired us because we are experts ... let's find a solution together."

Importantly, SIM officials acknowledged IME's learning curve in working with MCOs, with one official suggesting there was room for improvement in the agency's "balancing act" in giving the plans flexibility to be successful along with the parameters necessary to align payers.

E.1.3 Delivery systems and payment reforms

The primary driver of change in Iowa's SIM Initiative is to increase the use of value-based purchasing within the state's Medicaid program that aligns with Wellmark and Medicare initiatives. These three payers together cover 90 percent of Iowans. The state is measuring the prevalence of value-based purchasing by both the number of provider contracts with a value-based purchasing arrangement and the number of lives covered under these contracts.

By the end of the AR1 analysis period in June 2016, Iowa did not make much progress increasing participation in value-based purchasing for Medicaid. The state had just shifted from mostly fee-for-service (FFS) to fully capitated managed care for the entire Medicaid population—a substantial shift in care delivery that was unanticipated when the state initially developed its SIM Initiative. This led to a restructuring of the SIM Initiative, although its aims remained the same. Rather than direct engagement with ACOs to implement value-based purchasing, Medicaid MCOs would now take the lead in contracting with ACOs and other providers, implementing value-based purchasing within these contracts. Many stakeholders expected the first year of Medicaid managed care to focus on establishing program operations and learning about the needs of Medicaid enrollees. Value-based purchasing strategies were a lower priority in the short run and were expected to be introduced over time through MCO contracting. The slow establishment of value-based purchasing contracts in 2015 and 2016 raised concerns among some stakeholders that it would be difficult to establish the momentum needed under the SIM Initiative to sustain health system transformation beyond 2018.

Although Wellmark reportedly has more provider organizations participating in value-based purchasing than ever before, Iowa made little headway in increasing value-based purchasing within Medicaid. Stakeholders generally indicated that, as of spring 2017, value-based purchasing arrangements between Medicaid MCOs and ACOs were very limited. State officials, the SIM team, and others again attributed the slow progress primarily to Medicaid managed care implementation. MCOs continued to focus on program operations such as ensuring an adequate network and paying claims. In 2016, IME also had to focus more on these operational issues than on urging MCOs to advance ACO value-based contracts. Some stakeholders stated that Medicaid providers also were preoccupied with the transition to managed care. One stakeholder explained:

You just can't start value-based purchasing when you are in this period of transition ... you need a solid claims and operational platform. Providers [are unwilling to enter into value-based contracts because] they have no confidence in the underlying data required for value-based purchasing because so many claims have had to be reprocessed.

Some stakeholders were frustrated with the slow progress, particularly those who viewed managed care as having “disrupted” value-based purchasing arrangements that Medicaid had with ACOs under the FFS system, which were perceived as successful.

Iowa made another significant change in its value-based purchasing approach during the AR2 analysis period. In response to CMMI feedback during a TA site visit, SIM leadership decided to investigate strategies that more closely align SIM’s value-based purchasing activities with MACRA. The SIM team spent a considerable amount of time, particularly in late 2016 and early 2017, developing a plan for its third award year that is aligned with MACRA goals as described in the Quality Payment Program. MACRA changes the way that Medicare providers are paid, shifting from volume-based payment to methods that link Medicare reimbursement to provider performance. The law creates an opportunity for providers to engage in value-based purchasing of varying intensity. Medicaid and Wellmark are collaborating to establish and build on existing ACO programs that may qualify as an Other Payer Advanced APM. Other Payer Advanced APMs must meet criteria like Medicare Advanced APMs. They must feature upside and downside risk, and meet MACRA guidelines around the use of certified electronic health records (EHRs) and the use of clinical quality measures (CQMs). Iowa hopes to have at least one qualified Advanced APM by the end of the SIM Initiative. Providers participating in Advanced APMs can qualify for a five percent Medicare bonus in 2019.

SIM officials pointed to a few reasons for shifting the SIM value-based purchasing strategy to align with MACRA. The initially proposed model was not gaining the amount of traction the state hoped for, and leadership felt that a change in strategy was needed to achieve the goal of health system transformation. Moreover, CMMI felt that Iowa’s project did not focus enough on payment reform, and encouraged the change. Iowa SIM officials believe that pursuing an Advanced APM aligns with the vision of the SIM Initiative by helping providers adopt a payment model that transforms the system in a sustainable way. Some stakeholders highlighted that MACRA offers a discrete timeline, clear incentives, and bonuses—all positive elements. However, one stakeholder also noted that MACRA had introduced “some chaos into the system” in terms of provider behavior. Some providers feared taking any steps toward practice transformation, because they did not want to make a mistake; others wanted to jump unprepared into risk-sharing, without the proper data systems to participate successfully.

Since deciding to align value-based purchasing with MACRA, Iowa has reevaluated all SIM activities in view of how they best fit with pursuit of an Advanced APM. The state also added SIM goals of (1) receiving CMS approval of at least one other-payer Advanced APM program by the end of 2019 and (2) increasing the rate of provider organizations financially successful in Advanced APMs.

Iowa used several types of levers to promote adoption of its SIM delivery system and payment reforms by providers and payers. Primarily, the state used the set of requirements in its

contracts with the three Medicaid MCOs—each is contractually committed to support the SIM Initiative relating to use of the common VIS (a quality measure set described later in this chapter) and tracking TCC. The MCOs also must have value-based purchasing arrangements with ACOs that meet these requirements for 40 percent of their covered lives by 2018. As part of their managed care oversight duties, IME is responsible for reviewing and approving the MCOs’ value-based purchasing agreements with ACOs.

Reviewing these value-based purchasing agreements was a major SIM activity for IME during the AR2 analysis period. The SIM team provided feedback and corrective action plans to improve the agreements to ensure that they were in compliance with the SIM Initiative.¹¹³ According to state officials, many of the value-based purchasing arrangements lacked the necessary specificity around VIS and TCC. Although it was too early at the time of the 2017 interviews to assess the corrective action plans’ effectiveness as a policy lever, some stakeholders underscored the importance of contractual requirements as a tool for MCO compliance. One official explained, “We wanted to make sure we had the ability to not get bogged down in arguments over why [each MCO’s] way is the only way ... we knew we would need to play certain cards, because we weren’t sure what we would get when we brought in three new health plans within Medicaid.”

Some stakeholders had a different perspective on contract review. They pointed out the delays in value-based purchasing implementation that had resulted, with one describing the process as “two steps forward, one step back.” Moving forward, the SIM team is creating a value-based purchasing contracting template that the MCOs will use for the 2018 calendar year, which may help alleviate some of these tensions. This template will be another tool to promote value-based purchasing among Medicaid payers. The state also believes that it will increase provider confidence in the value-based purchasing programs offered by each MCO.

SIM officials and other stakeholders highlighted two additional levers they felt were effective in promoting Iowa’s delivery and payment reforms. First, aligning the project with MACRA was valuable, because Medicare has historically driven health care quality improvement, and providers pay attention to developments in the program. One stakeholder explained how MACRA alignment worked particularly well in a state like Iowa, noting, “We are such a big Medicare state. If Medicare and Medicaid go [in the value-based purchasing direction] and Wellmark even halfway goes, there is going to be no other option. A provider will have to be able to play in this game.” Similarly, another stakeholder described the SIM Initiative itself as a

¹¹³ Examples of qualifying value-based purchasing models include shared savings and shared costs between the MCO and participating providers and bonus payments to providers for improved quality on a population basis. Value-based purchasing arrangements must be evaluated using a TCC methodology and the VIS. Source: IDHS. (2015, December). *Value-based payment (VBP) models definition and qualifying criteria for determining eligible models*. Retrieved from https://dhs.iowa.gov/sites/default/files/VBP_Models_Definition_and_Qualifying_Criteria_for_Determining_Eligible_Models.pdf.

lever, because it allowed payers and providers to identify mutual points of interest and generate a statewide response to controlling health care costs. In short, the presence of the SIM Initiative helps support the idea that “VBP [value-based purchasing] is the way of the future” for Iowa providers.

Second, Iowa is leveraging existing relationships between implementation partners and providers (e.g., with the Iowa Healthcare Collaborative and its subcontractors) as part of its engagement and education strategies related to value-based purchasing.

Stakeholders mentioned some levers that, although not currently used in Iowa, could be considered. For instance, one stakeholder suggested that IME could require MCOs to use a standard health risk assessment (HRA) to collect uniform baseline information on members’ health needs, which would further the goal of aligned quality measurement. In addition, stakeholders frustrated by the state’s focus on standardization suggested that Iowa consider how to build on what each MCO is already doing individually to promote value-based purchasing. One stakeholder suggested a greater role for the federal government in promoting delivery system reforms, stating that CMS could compel nationally participating MCOs to move in the direction of Medicaid value-based purchasing reform. Finally, the SIM team highlighted that the state agencies involved in the SIM Initiative have the authority to support, oppose, and submit legislative packages or update the administrative code to ensure that transformation activities are legally supported, if necessary.

Stakeholders agreed that Iowa was “in a good place” from a payer engagement perspective. That the state has a dominant commercial carrier—Wellmark—is helpful in this respect, as is the pre-existing collaborative relationship between Wellmark and IDHS. By all accounts, Wellmark is an engaged partner, and stakeholders perceive the payer as influential. However, some noted that the carrier did not have to commit to any major changes in its operational approach as a result of the SIM Initiative. Since 2012, Wellmark has had an active ACO program and has used VIS for value-based purchasing. As of April 2017, Wellmark contracted with more than a dozen health systems that link payment to quality with shared savings or shared loss arrangements. Iowa’s SIM initiative builds on Wellmark’s progress and includes value-based purchasing goals for both Wellmark and Medicaid. Regarding engagement with Medicare, SIM alignment with MACRA builds on Medicare’s health care transformation efforts. Equally important, Iowa’s already strong ACO penetration through Medicare’s Shared Savings Program, Pioneer, and Next Generation ACOs and Wellmark, provide an existing infrastructure for SIM.

Increased provider participation in SIM reforms is a focus of Award Year 3, particularly through the stakeholder engagement activities described earlier. Because value-based purchasing via ACOs is a primary driver of SIM payment reform, participation in ACOs is a key measure of provider participation in SIM’s approach to payment reform. In 2015, about half of Wellmark

and Medicaid primary care providers participated in an ACO (53 and 45 percent, respectively). Medicaid contracts with ACOs ended in late 2015 with managed care implementation; since then, value-based purchasing arrangements among Medicaid MCOs and ACOs have been limited. Under SIM, the state worked to establish and strengthen value-based purchasing contracts between MCOs and ACOs, and encouraged provider participation in ACOs through education provided by the Iowa Healthcare Collaborative and its subcontractors and by providing resources to ACOs, such as VIS scores and patient admission, discharge, and transfer notifications. Providers also participate in SIM reforms through the use of health information technology (health IT) and population health components, described later.

E.1.4 Health information technology and data infrastructure

Health IT is a critical component of Iowa's SIM strategy. Better exchange of information among providers is necessary to improve care coordination, reduce preventable admissions and ER visits, and ultimately lower utilization and TCC. Although EHRs were widely adopted by large health systems in Iowa, stakeholders felt that their adoption by independent practices is limited and that interoperability is poor.

The centerpiece of Iowa's health IT strategy is the Statewide Alert Notification (SWAN) system. SWAN gives providers timely information on patient admissions, discharges, and transfers, which they can use to better coordinate care for patients. SWAN was built within the Iowa Health Information Network (IHIN), the state's health information exchange, to drive provider interest in that existing infrastructure by adding value and functionality. IME began rolling out the SWAN system in December 2015 with a focus on ACO-led provider systems. By the end of Award Year 1, SWAN was connected to 21 hospitals and had generated 2,474 alerts.

In fall 2016, IME decided to change how patients were attributed to providers, reflecting the new Medicaid managed care approach. The state paused all SWAN alerts and began to transition to a new system in which MCOs and ACOs would generate their own eligibility lists to ensure accurate and up-to-date patient attribution. This led to a 3-month suspension in SWAN alerts, as IME, the MCOs, and ACOs worked through the technical and legal issues surrounding this new system. SWAN was operational again with Iowa receiving eligibility files from two of five ACOs and one of three MCOs. SWAN-generated alerts are sent daily to relevant ACOs or MCOs. Although some stakeholders were frustrated about the temporary halt in the issuance of SWAN alerts, many expressed hope that the newly flowing data would help improve care delivery and reduce costs. They felt that it was too early to measure the impact of SWAN data but pointed to anecdotes about timely follow-ups after admissions and the successful management of care transitions for patients with multiple conditions. These success stories gave stakeholders confidence that SWAN data would deliver on their potential and help achieve transformation in the state.

Several key groups reported that they were not engaged in SWAN and had little information about this aspect of the SIM initiative. C3s reported limited engagement, and other stakeholders like Wellmark were not involved. Some stakeholders expressed concern that non-ACO providers, rural hospitals or health clinics, or home health were not yet receiving SWAN alerts even though access to SWAN data might have significant benefits for those entities. Others felt that primary care practices and Federally Qualified Health Centers (FQHCs), although they might have access to SWAN, lacked the tools to make best use of the data. One stakeholder said, “I don’t think everyone is quite ready to digest the data. Some of them are just beginning the predictive modeling for ambulatory care. If they see someone in the ER, they don’t always do outreach.”

IME plans to expand SWAN to all 118 hospitals in Iowa, engage non-ACO providers and non-Medicaid payers, and provide education to increase the usability and value of SWAN data. Although C3s previously did not focus on SWAN, the next round of funding for these entities includes significant health IT components, including a requirement to use SWAN if there is an ACO receiving the alerts in the region. As part of a broader health IT strategy, the state transitioned IHIN from IDHS control to a nonprofit run by the firm HKG, to increase sustainability and drive further provider interest in the network.¹¹⁴ Requirements to use IHIN also are included in C3 contracts.

More broadly, Iowa’s health IT strategy (including SIM-supported efforts, like SWAN, and other state initiatives, like the Medicaid EHR incentive program) is viewed by the SIM team as a key driver for increasing value-based purchasing. Although Iowa has several levers to induce participation in SWAN, stakeholders felt that the primary incentive was the actual usefulness of the data in a value-based purchasing environment. One stakeholder said:

It’s the funding that will draw out the addiction to those alerts. If you are using an accountable care strategy, the first thing you have to do is know where [your patients] are going. If they show up in an emergency room and you don’t know about it, that is a huge loss you are incurring under that type of financing strategy.

Improvements in infrastructure and data exchange are also critical for the quality measurement and reporting necessary to execute value-based contracts.

¹¹⁴ IDPH. (2017, March 31). *Iowa health information network moves out of IDPH*. Retrieved from <https://idph.iowa.gov/News/ArtMID/646/ArticleID/158160/Iowa-Health-Information-Network-Moves-Out-of-IDPH>

E.1.5 Practice transformation and workforce development

Workforce-related initiatives are not a large component of the SIM strategy, nor is direct practice transformation, although the state is leveraging another effort—the CMMI/CMS practice transformation networks through the Transforming Clinical Practice Initiative (TCPI)¹¹⁵—to further its SIM goals. TCPI-supported practice transformation in Iowa is mostly led by the Iowa Healthcare Collaborative, IDPH’s main partner for all SIM-related TA, and involves TA for rural, small, and non-ACO affiliated providers.

Under the SIM Initiative, the Iowa Healthcare Collaborative has been providing TA to the C3 communities about strategies and methods to address the social determinants of health and care coordination. With a second C3 request for proposals (RFP) that focuses more explicitly on delivery system involvement in payment reform, the type of TA provided through SIM is evolving. One state official said, “Whereas before TA was awkwardly given through the C3s, now we will both have TA given at a community level for C3s, and we will be directly working with providers engaged in APM activity to help them be successful in risk-based contracts.” The Iowa Healthcare Collaborative or subcontractor-led training at the ACO, practice, or hospital levels is focused on the impact of payment reform legislation like MACRA and strategies for managing a patient panel through person and family engagement, medication safety and effectiveness, care coordination, and using community resources to address social determinants of health.¹¹⁶ Stakeholders largely agreed that such education was necessary, and providers would take advantage of it. One stakeholder explained:

There is an assumption ACOs should have these resources, but they are excluded from funding under Medicare. So, if there were such resources, it would only be things they are funding themselves out of their own health system budget with no revenue stream to support it.

E.1.6 Population health

At the end of the AR1 analysis period, Iowa’s SIM Initiative was building infrastructure for continuous population health improvement, using three major strategies:

- *Development of statewide plans recommending evidenced-based approaches and clinical indicators for improving quality related to various health conditions and areas of care.* Communities are encouraged to align with these plans as they carry out their Community Health Needs Assessment and Health Improvement Plans (CHNA&HIPs) that they update every 5 years.

¹¹⁵ CMS. (2016, September 29). *Transforming clinical practice initiative*. Retrieved from <https://innovation.cms.gov/initiatives/Transforming-Clinical-Practices/>

¹¹⁶ IDPH. (n.d.). *Iowa population health roadmap*. (Appendix included in IDHS *State Innovation Model grant operational plan—award year 3*). Retrieved March 7, 2018, from <https://dhs.iowa.gov/ime/about/initiatives/newSIMhome/population-health>

- *Development of a database to assess and track clinical indicators that communities target through their CHNA&HIPs.*
- *Rapid-cycle improvement around population health measures driven by Community Care Coalitions.* C3s are locally-based coalitions of health and social service stakeholders funded by SIM to coordinate services across care settings. C3s also align priorities with their community’s CHNA&HIPs and are the primary mechanism under the SIM Initiative for community-based change. C3s’ primary functions are to (1) address social determinants of health through care coordination, and (2) implement population-based, community-applied interventions related to the statewide strategies.

IDPH described these tactics as spanning across all three buckets of prevention (adapted from the Centers for Disease Control and Prevention [CDC] population health framework¹¹⁷), including (1) traditional clinical approaches, (2) innovative patient-centered care, and (3) community-wide health. For example, the statewide strategies include tactics from all three buckets, such as identifying the target population by risk (traditional clinical approaches bucket), linking patients between clinical and community resources (innovative patient-centered care bucket), and identifying and addressing policy needs (community-wide health bucket).

A summary of progress during the AR2 analysis period, organized around each of Iowa’s population health activities, is provided below.

Statewide plans. Stakeholders generally agreed that the development of statewide plans steadily progressed over the last year. At the time of the 2017 interviews, 11 statewide strategy plans had been developed: Care Coordination, Cardiovascular and Stroke, Diabetes, Healthcare-Associated Infections, Palliative Care, Medication Safety & Effectiveness, Obstetrical Care, Obesity, Person and Family Engagement, Tobacco Prevention and Reduction, and Social Determinants of Health (currently being finalized). More than 30 organizations convened several times to develop and review the plans.

The release of the statewide plans did not occur in time for incorporation into the last round of CHNA&HIPs, but stakeholders still found the plans “extraordinarily helpful” to identify strategies to implement in their provider practices and communities. However, one representative from a C3 said that the topics covered in the statewide plans were not the best fit for their community.

Database. The development of a database to assess and track clinical indicators reportedly progressed as planned. According to the state’s plans for its third SIM year, the

¹¹⁷ Auerbach, J. (2016, May/June). The 3 buckets of prevention. *Journal of Public Health Management & Practice*, 22(3), 215–218. doi: 1097/PHH.000000000000038110

database will be used to develop community scorecards that present these clinical indicators to be used both by C3 and non-C3 communities for improvement efforts.

Community Care Coalitions. Stakeholders had varying views on the progress of the six C3s, with one saying they were “slow getting out of the gate at best,” and another saying they needed a lot of TA. However, representatives from the C3s themselves reported several steps they had taken to address needs related to social determinants of health, such as housing, transportation, and food. Each C3 approached the past year based on their CHNA&HIP, focusing on the needs of their communities and the SIM goals of improving population health regarding diabetes, tobacco use, and obesity. Activities varied by C3 and included building a coalition, embedding health navigators in the delivery system, facilitating care coordination by the local health department, and implementing local diabetes prevention programs.

Representatives from the C3s and some of their health system partners expressed concerns about the “ever-evolving focus” of SIM and noted that TA often did not match their original objectives. Some C3s felt that they were too advanced for TA around building community relationships and coordinating care, and others felt TA opportunities did not exist for key issues of interest such as violent crime and working with law enforcement. Stakeholders appreciated efforts from the Iowa Healthcare Collaborative to facilitate peer-to-peer learning, but some would have preferred if these efforts had been made during initiative planning rather than after implementation.

The Iowa SIM team envisioned C3s as focusing more in the first year on building relationships with the health system, although this was not explicitly stated in the first round of C3 requirements but was added in the second round. Therefore, some C3s reportedly used the SIM Initiative as an opportunity to continue work that began under previous grants or projects (e.g., the Community Care Team pilot funded by the CDC), which were often more focused on public health. Some C3s reported challenges making connections with the health care system; one representative shared, “I think we are really well connected to community resources. However, making sure that providers are aware of our program, and closing loops with them will continue to be a challenge.” An additional challenge that the C3s faced during the first year of their SIM activities (2016) was that MCOs were implementing care coordination systems for their own network. However, the MCOs’ care coordination efforts were reportedly less comprehensive in addressing social determinants of health.

Reports on C3 progress and effectiveness reflect differing visions for their role in the bigger picture of health system transformation, as well as around the roles of public health and the delivery system in addressing social determinants of health. As one stakeholder described it, organizations involved in SIM are still trying “to understand social determinants ... [and] figure out where does that practically fit in a changed delivery system.”

Population health strategy changes for Iowa's State Innovation Model

The Iowa SIM Initiative's approach to population health will have an increased focus on the health system in Award Year 3. This change was perceived by most as having been required by CMMI after State Innovation Group leaders visited Iowa in July 2016 to learn about the state's SIM efforts. Other explanations were that these adjustments were due to the release of MACRA regulations, to perceived changes in the "CMMI vision" for Iowa SIM, or to the Iowa Healthcare Collaborative's focus on hospitals. There were some conflicting views on the role of public health going forward—even among SIM leadership and those implementing major components. Comments ranged from one stakeholder saying that the delivery system and public health still stand "shoulder to shoulder" in SIM, to another saying that population health is a "complementary component."

Overall, there will be several changes to further engage the health system in population health. For example, the Iowa Healthcare Collaborative will play a larger role in the implementation of the statewide strategies, working with lead agency IDPH. During Award Year 3, Iowa plans to develop a statewide plan, aimed at health systems, that builds on the existing statewide plans but focuses more closely on the roles and responsibilities of different pieces of the health care system.

Both the statewide plans and C3s will increase the focus on diabetes. Although the original C3 RFP did not specify a target population, the RFP for the second funding round specifies that C3s must target individuals with diabetes. The community scorecards the state plans to develop also will focus on measures about diabetes.

In addition, in the second-round RFP for the C3s, the name of the entities was changed from "Community Care Coalition" to "Community Clinical Care," reflecting a greater focus on clinical indicators. One C3 representative said, "That seems like a light change but [it's] no longer as focused on developing coalitions ... it's more of a focus on how we, as a community, address a particular concern in the clinical setting." The second-round RFP featured several IT requirements, including a mandate that health systems and ACOs in these communities use SWAN alerts and IHIN; the original RFP did not have any IT requirement. C3s also will be required to educate providers in their communities about MACRA. Furthermore, although the state had planned to expand the number of C3s, the new RFP was made available only to the six C3s previously funded. The state did not intend to extend beyond six C3s for the SIM Initiative award period.

At the time of the interviews, C3s were either working on or had just submitted their new funding period applications (due March 31), with the new contract year scheduled to start May 1. All six C3s reapplied, although they acknowledged that the new focus was a major pivot. C3 representatives shared some concern over whether they had adequately addressed the new

requirements in their applications, as well as the impact of the new focus on existing partnerships.

During the AR2 analysis period, the SIM team worked to develop a standardized HRA that can be used statewide, and includes questions on social determinants of health and health confidence. In addition to its usefulness for patient care, the standardized questions will allow the state to aggregate data across payers. The team is working to add the questions to the existing 3M-developed AssessMyHealth tool already being used by some providers. Providers who do not use that tool can administer the key questions separately.

Although several stakeholders agreed that standardized questions would be useful, there were differing views about the types of questions to include. One provider representative reported,

[The HRA questions] don't really resonate with us as being consistent with the science and where things are going. We are using the standardized testing tools embedded in our EMR, but they have extra questions they want to put on the health risk assessment, which really isn't coupled with anything, and it doesn't really live anywhere."

Another interviewee from a health system expressed concern with having to implement another HRA for Medicaid beneficiaries, because there is already one in place for all their patients.

Stakeholders mentioned several levers to promote adoption of population health reforms by practices and payers, described below.

- *Medicaid managed care contracts.* IME reported that the annual contracts with MCOs were being renegotiated during spring 2017 and were building in requirements related to population health, such as requiring MCOs to tie payment to clinical diabetes measures. The contracts also require MCOs to have an HRA tool. Many SIM stakeholders suggested that MCO contracts were not yet as effective a lever as they could be and felt that the state should be more prescriptive. MCO representatives did not report much involvement with the statewide plans or C3s during the past year.
- *C3 contracts.* C3s reapplied for funding in spring 2017. If funded for the second round, C3s will be contractually required to support population health goals, including using statewide strategy plan tactics and building relationships with local health care delivery systems. C3 contracts beginning in Award Year 3 will include performance targets on National Quality Forum measures relating to diabetes self-management education and the National Diabetes Prevention Program. Interviewees suggested that there is some tradeoff between more standardized requirements for C3s and the ability for C3s to tailor their efforts for their local context.
- *Value-based purchasing.* Several stakeholders reported the value-based purchasing environment itself is an effective lever for engaging providers in population health.

As one stakeholder explained, “Doing clinical care perfectly only affects 20 percent of our cost opportunity. The rest of it is driven by patient behavior and social determinants of health.” The Iowa Healthcare Collaborative reportedly was working with providers through the Statewide Learning Communities, educating them about MACRA and the importance of working with community-based organizations to be successful. However, one C3 representative had a different view on the effectiveness of this lever and shared, “Especially when talking with medical staff, physicians and different providers, if I start talking value-based purchasing, I lose them. However, if I start talking quality of care and the well-being of their patients, that is where I have traction.” Because value-based purchasing is still in the early stages of being defined and implemented through the SIM Initiative, the effectiveness of this lever also remains to be seen.

- *Alignment with existing efforts.* Interviewees reported that a culture of statewide planning already exists in Iowa among local health departments. Stakeholders agreed that the use of well-established processes like CHNA was an effective lever. One stakeholder also reported that Affordable Care Act (ACA) requirements for nonprofit hospitals to engage in this type of planning gave them an additional lever to engage hospitals. Several stakeholders mentioned that there was greater opportunity for alignment and engagement between the SIM Initiative and Wellmark’s Health Home Town (formerly called Blue Zones) initiative, an existing effort to improve community health.
- *Community scorecards.* One challenge C3s faced in demonstrating their value was a lack of data. During Award Year 3, the development of community scorecards for diabetes measures is intended to demonstrate how C3s are helping improve clinical indicators. These indicators will be tied to payment under value-based purchasing.

Overall, stakeholders felt that these levers were valuable for encouraging broader participation in population health improvement activities and helping the state achieve its goals.

E.1.7 Quality measurement alignment

A core component of Iowa’s value-based purchasing model is the use of a common VIS and TCC calculation across health payers. Wellmark developed VIS, a composite measure of provider performance based on claims and encounter data, in 2012. VIS was used to assess ACO performance serving the Medicaid expansion population in 2014–2015, when Medicaid was still an FFS system. The VIS tool consists of 16 measures across six domains, risk-adjusted and rolled into a composite score incorporating 12 months of claims data, creating a longitudinal record for each member. VIS is reported monthly to providers, using an online, secure login dashboard. The tool is meant to be used for performance improvement and financial incentives to support a value-based delivery system.

TCC is calculated for Medicaid in the VIS dashboard as the sum of all allowed amounts for all medical claims for a member (across all the providers they from whom they receive care) in a 12-month period. TCC is represented as a percent of the expected average cost, based on

aggregated information for all members included in an age, gender, and clinical risk group cohort. Wellmark reportedly uses a similar TCC calculation.

At the SIM evaluation's 2016 site visit, stakeholders identified challenges and concerns with adapting the VIS system for value-based purchasing under Medicaid managed care. Chief among these was that the state needed to collect consistent claims and encounter data from the MCOs—a process that was not yet in place at the end of the previous analysis period. Both provider and MCO stakeholders expressed concern about how VIS measures would be constructed and used. Some raised the possibility that the introduction of new scorecards and dashboards related to VIS and each of the MCOs might result in “information overload” for providers or simply that providers would receive such a large volume of information that they would be unable to interpret or use it in a straightforward and efficient way.

SIM officials continued to work on establishing VIS and TCC measures under Medicaid managed care during the AR2 analysis period, but progress was slower than officials expected. Incorporating an MCO-level view into the VIS dashboard took considerable effort—particularly obtaining, processing, and testing the methodologies using encounter data from the three MCOs. Release of the first VIS and TCC measures using the MCO data were expected at the time this report was being written in May 2017.

IME and its analytic contractor, 3M, made some temporary adjustments, particularly to the TCC measure. For example, long-term care data were not included in TCC as of April 2017 but will be integrated into the TCC baseline data for 2018. While work on the first MCO-involved VIS and TCC measures continued, IME held meetings with MCOs during 2016 to discuss their use of the measures in the value-based purchasing agreements that MCOs establish with ACOs; using the VIS and TCC measures is a contractual requirement for the MCOs. In SIM Award Year 3, the Medicaid MCOs also have withhold-based performance incentives tied to VIS, along with TCC targets necessary to qualify for the incentive payout.

Because Wellmark is the original user and developer of VIS, alignment of this quality measurement tool is already in place between Medicaid and most of the commercial sector. Although the federal Medicare program is not using VIS, Iowa is interested in obtaining Medicare population claims and processing them using VIS to establish quality scores for ongoing evaluation of the SIM Initiative. The state was granted access to Medicare data and is in the process of staging and sharing the data with 3M.

Additionally, under the SIM award, IME is working with 3M to develop a measure set focused on populations unique to Medicaid. The measures will allow IME to assess and compare how MCOs deliver care across subpopulations, including (among others) adults and children with behavioral health needs, children in juvenile justice or child welfare, and women with high-risk pregnancies. Like VIS and TCC, these measures will be reported monthly starting in 2017.

They will inform future Medicaid policies and programs and have the potential to impact SIM's goals related to ER use or readmissions.

Although not as common a concern as it was in the AR1 analysis period, some stakeholders still shared negative feelings in 2017 about quality measure alignment. They voiced dissatisfaction with what they saw as Wellmark's undue influence on this area of the SIM Initiative, and suggested that a sole focus on VIS had been limiting. Stakeholders seemed to agree on the concept of alignment and having one system for measuring quality across payers, but not all were convinced that the system should be VIS.

SIM officials stated their firm belief that VIS is a good indicator of quality and is clearly linked to TCC. They highlighted analyses of VIS and TCC interactions in the Medicaid expansion population for 2014–2015, reporting, for instance, that providers who improved their VIS over time also have patients with a lower TCC. At the same time, the SIM team acknowledged concerns about VIS and made midcourse changes to the tool based on provider feedback. These changes had not been fully implemented at the time of the AR2 interviews, but were expected to include improvements in transparency, direct group scoring, and ability for all providers to score well (versus an equal balance of “winners” and “losers”).

In addition to VIS revisions, Iowa's SIM Initiative is also considering changes to its strategy for quality measurement because of MACRA alignment. The state recognizes that its original quality framework reliant on VIS is not sufficient to qualify for Advanced APM program participation. SIM leadership indicated that in the coming year, Iowa needed to decide whether to continue to use VIS for value-based purchasing, and which additional quality measures to build into its framework to achieve Advanced APM status. The roundtable (specifically, the health IT work group) will consider this issue, aided by a SIM team paper comparing VIS and MACRA quality measures. Once CQMs are identified and developed, Iowa expects to implement a Medicaid pilot program for CQM reporting.

Another strategy adaptation that Iowa made during its SIM award was to require C3s to report on some of the measures in VIS, a requirement in the RFP for the C3s' second round of funding. This midcourse adjustment was made with sustainability in mind: it enables C3s to show value to a provider in making the case for supporting something like a C3 in the future after the SIM Initiative no longer funds the entities. Although still mostly conceptual, Iowa's consideration of a common statewide HRA for the general population is relevant to quality measure alignment, given that parts of a common HRA could be built into an aligned quality framework.

E.1.8 Lessons learned and looking forward

Based on the SIM implementation experience, stakeholders offered several lessons, opportunities, and remaining challenges. Several stakeholders pointed to a need for better

collaboration and communication as a major lesson of the SIM Initiative. Although many felt the initial SIM design process was open, well-managed, and collaborative, after the transition to Medicaid managed care, the flow of information from IDHS to stakeholder groups largely stopped. Although some stakeholders felt a renewed sense of engagement, others still felt that they lacked information about how the SIM Initiative related to Medicaid managed care implementation, which hindered efforts to promote value-based purchasing.

Stakeholders and state officials agreed that the state should have had a clearer strategy for implementing the SIM Initiative in a managed care environment from the beginning. Although some delay in value-based purchasing was inevitable, given the scope of managed care implementation, more prescriptive expectations for the MCOs could have resulted in faster progress. State officials recognized that there was a tradeoff between exercising control over the MCOs for alignment and achieving the benefit of competition among the three companies—but the officials were not sure the balance was right. Stakeholders advised other states with managed care considering a similar multi-payer reform effort to proactively engage MCOs on issues of payment and measurement from the very beginning.

Similarly, stakeholders felt that state could have focused on payment reform earlier, before the CMMI site visit that led to major changes in the state's plan for Award Year 3. Although payment reform goals were included in the SIM Initiative from the beginning, the state did not focus on alignment with Medicare reforms like MACRA. After the site visit and finalization of the MACRA rule from CMS in fall 2016, the state began to formulate a strategy to move toward an Other Payer Advanced APM designation and potentially all-payer rate setting as a longer-term goal. However, stakeholders acknowledged that that these efforts would take time, and that not including these elements in the original SIM plan was a missed opportunity, although the fact that MACRA came after the initial SIM award made it impossible to do early planning specifically around the law. State officials felt, in hindsight, that SWAN should have been designed from the beginning with member lists coming from MCOs and ACOs, instead of eligibility files from IME. Eventually, this change was made after a significant pause in the flow of data.

Stakeholders agreed that the greatest opportunity for the SIM Initiative was the potential impact of SWAN data, which had just begun to flow to some of the MCOs and hospital systems. Stakeholders and state officials were frustrated by the delay, which shows that SWAN users were finding the data valuable. Stakeholders were enthusiastic about spreading SWAN to additional hospitals and health systems, as well as different types of providers such as home health and C3s. Although there were some concerns about the technical hiccups and the ability of providers to use the data, stakeholders seemed largely confident that the system and providers' competency would improve over time. Other opportunities mentioned by stakeholders included work on social determinants of health and savings from public health efforts. Finally, several

state officials expressed hope that the new roundtable would play a valuable role in convening stakeholders, creating consensus around payment reform and measurement, and developing a response to federal health care changes.

The uncertainty surrounding potential repeal of the ACA presented a significant challenge for state officials and nonstate stakeholders alike. State officials were confident that health care transformation would continue regardless of legislative changes but expressed concerns about repeal, including the continuation of SIM funding and the survival of CMMI. Although ACA repeal would have a significant impact on the commercial market, stakeholders pointed to potential restructuring of Medicaid as the area of greatest concern. Many felt that Iowa's expansion of Medicaid served as an important platform for implementing delivery and payment reforms.

Other major challenges for the SIM Initiative included financial issues and implementation struggles for the MCOs. Some stakeholders shared concerns about news reports of large financial losses by MCOs and potential cuts to provider reimbursement, and thought that these problems would hurt collaboration between MCOs and providers. One said, "The market is too volatile right now. What if an MCO pulls out in a year? It's possible because of the losses they are reporting and the capitation rates will be renegotiated." However, a state official disagreed with the assessment, saying, "We feel very strongly our funding is actuarially sound, and we are in a solid position." Despite widespread national coverage of problems in the Iowa health insurance marketplace, few stakeholders raised these problems and none reported that issues in the marketplace would be a significant barrier to progress for the SIM Initiative.

E.2 Changes in Outcomes During Iowa's State Innovation Model Initiative

E.2.1 Progress toward a preponderance of care in value-based purchasing models and alternative payment models

The Iowa SIM team reported that they are not likely to achieve the target of having 80 percent of the state's population in a value-based purchasing arrangement by the end of the SIM Initiative, but will continue to keep the target as an end-state goal in their post-SIM environment. The state is working to build a strong foundation for health system transformation during the SIM award period that will help them eventually achieve the target. Iowa's shorter-term goal is to have 50 percent provider participation and covered lives in value-based purchasing by the end of the SIM Initiative.

Population reached. *Table E-1* presents available information on the extent to which Iowa’s population participated in the SIM payment and health care delivery models in early 2016.¹¹⁸ These values were provided to CMMI by the state’s SIM staff.¹¹⁹ In the pre-test SIM baseline period (February 2015–January 2016), 10.9 percent of Iowa’s Medicaid population—comprising 2.1 percent of Iowa’s general population—was involved in Medicaid value-based purchasing, defined as any category 2 to 4 payment system, based on the Health Care Payment Learning and Action Network Alternative Payment Model framework. Baseline data are not shown.¹²⁰

Table E-1. Populations reached by a value-based purchasing or alternative payment model in Iowa, as of first quarter 2016

Payer type	SIM models		Landscape
	ACOs	SIM-wide	Any value-based purchasing or APMs
Medicaid	— ^a	—	—

Source: Iowa State Innovation Model Progress Report for Fifth Quarter, Award Year 2 (2017).

^a Iowa’s SIM strategy involves promoting value-based purchasing arrangements between Medicaid MCOs and ACOs, but during the AR2 analysis period, these arrangements were limited.

— = relevant data were not provided in data source; ACO = accountable care organization; APM = alternative payment model; AR = Annual Report; MCO = managed care organization; SIM = State Innovation Model.

However, this percentage dropped to zero in the first quarter of Award Year 2 (February 2016–April 2017), as Medicaid managed care was implemented and the value-based purchasing contracts between IME and ACOs ended. Iowa did not report data for these measures beyond the first quarter of Award Year 2 (i.e., first quarter 2016).

Considering participation in *any* type of value-based purchasing or APM (including but not limited to SIM-funded models), at least 18 percent of the state’s population had been reached by health care transformation by the end of the 2015 pre-SIM implementation baseline period.¹²¹ The actual proportion of Iowans participating in payment reforms is larger than this figure, because it does not include Medicare beneficiaries, for whom data were not available.

¹¹⁸ 2017 Iowa State Innovation Model Progress Report for Fifth Quarter, Award Year 2, submitted to CMS.

¹¹⁹ These data values were not verified by CMMI. Thus, the RTI team cannot attest to their accuracy.

¹²⁰ Baseline data are provided in the 2017 Iowa State Innovation Model Progress Report for Fifth Quarter, Award Year 2.

¹²¹ Baseline data are provided in the 2017 Iowa State Innovation Model Progress Report for Fifth Quarter, Award Year 2.

Payer participation. *Table E-2* presents the extent to which Iowa’s payers participated in the SIM payment and health care delivery models by the end of the SIM preimplementation (baseline) year in 2015. These values available during the AR2 analysis period were provided to CMMI by Iowa SIM staff.^{122,123} As shown in Table E-2, at the baseline, Medicaid and Wellmark had a similar proportion of beneficiaries under a value-based purchasing arrangement. In 2015, roughly two-thirds of Medicaid and Wellmark payments were Category 1 FFS payments, although one-third were value-based purchasing (Categories 2 to 4).

Table E-2. Payers participating in a value-based purchasing or alternative payment model in Iowa, as of pre-test year 2015

Payer	Category 1 Payments: FFS with no link of payment to quality		Category 2 Payments: Payment linked to quality		Category 3 Payment: APMs		Category 4 Payment: Population-based payment	
	Number of benefi- ciaries	Percentage of payments	Number of benefi- ciaries	Percentage of payments	Number of benefi- ciaries	Percentage of payments	Number of benefi- ciaries	Percentage of payments
Medicaid	393,891	69.9%	170,695	29.9%	0	0	235	0.2%
Wellmark	1,186,573	68%	0	0	494,471	32%	0	0

Source: Iowa State Innovation Model Progress Report for Fifth Quarter, Award Year 2 (2017).

APM = alternative payment model; FFS = fee for service; SIM = State Innovation Model.

Provider participation. *Table E-3* presents the extent to which Iowa’s Medicaid and Wellmark providers participated in the SIM payment and health care delivery models in early 2016.¹²⁴ These values were provided to CMMI by the Iowa SIM staff.¹²⁵ In the 2015 preimplementation baseline period, 44.7 percent of Iowa Medicaid’s primary care providers and 40 percent of practice organizations were involved in Medicaid value-based purchasing (baseline data not shown¹²⁶). The proportion fell to zero percent in the beginning of 2016 as Medicaid managed care was implemented. Also during the 2015 baseline period, 53 percent of Wellmark providers participated in value-based purchasing.

¹²² These data values were not verified by CMMI. Thus, the RTI team cannot attest to their accuracy.

¹²³ 2017 Iowa State Innovation Model Progress Report for Fifth Quarter, Award Year 2, submitted to the Centers for Medicare and Medicaid Services.

¹²⁴ Ibid.

¹²⁵ These data values were not verified by CMMI. Thus, the RTI team cannot attest to their accuracy.

¹²⁶ Baseline data are provided in 2017 Iowa State Innovation Model Progress Report for Fifth Quarter, Award Year 2.

Table E-3. Number of physicians and practices participating in a value-based purchasing or alternative payment model in Iowa, as of fourth quarter 2016

Provider type	SIM models		Landscape
	ACOs	SIM-wide	Any value-based purchasing or APMs
Physicians	— ^a	—	—

Source: Iowa State Innovation Model Progress Report for Fifth Quarter, Award Year 2 (2017).

^a Iowa’s SIM strategy involves promoting value-based purchasing arrangements between Medicaid MCOs and ACOs, but during the AR2 analysis period, these arrangements were limited.

— = relevant data were not provided in data source; ACO = accountable care organization; APM = alternative payment model; AR = Annual Report; MCO = managed care organization; SIM = State Innovation Model.

For Medicaid, the baseline figure represents the FFS delivery system before managed care implementation. As noted earlier, the value-based purchasing contracts in place with Medicaid-participating ACOs were terminated in preparation for managed care implementation, and new contracts are being negotiated between the ACOs and MCOs. Across the board, stakeholders agree that the implementation of Medicaid managed care has been an obstacle to meeting preponderance of care targets by the end of the SIM Initiative.

The state has been working to overcome this obstacle via the policy levers discussed in the Delivery System and Payment Reforms section of this chapter—including contractual requirements for value-based purchasing and review of ACO–MCO agreements. However, the process included many stumbling blocks—providers desired more standardization across MCO processes, but MCOs countered that there is no “one size fits all” contracting approach for Iowa providers. In addition, several stakeholders were confused about what qualifies as value-based purchasing. The Iowa SIM team is working to address some of this confusion by aligning their criteria for value-based purchasing with MACRA Advanced APM requirements. In addition to providing a more concrete definition, this alignment will facilitate provider participation in value-based purchasing and bring more Medicare patients under value-based purchasing arrangements, which will move the state closer to achieving and sustaining preponderance of care.

Considering provider participation in *any* type of value-based purchasing or APM (including but not limited to SIM-funded models), at least 45 percent of Iowa providers participated in health care transformation by the end of the 2015 pre-SIM implementation baseline period.¹²⁷ The actual proportion of providers participating in payment reforms is larger

¹²⁷ Baseline data are provided in the 2017 Iowa State Innovation Model Progress Report for Fifth Quarter, Award Year 2.

than this figure, because it does not include Medicare providers, for whom data were not available.

E.2.2 Care delivery

Although many stakeholders felt that components of the SIM Initiative would eventually result in changes to care delivery, they also thought it was generally too early to assess results.

E.2.3 Coordination of care, quality of care, utilization, and expenditures

Actual or perceived impacts of Iowa’s SIM Initiative on care coordination and health care quality, use, and spending are presented below by major SIM component.

Payment and delivery reforms. Stakeholders generally agreed that delays in the implementation of value-based purchasing made it impossible to identify impacts on care coordination, quality of care, utilization, and expenditures during the AR2 analysis period. Additionally, IME does not yet have the data they need to track the impact of the SIM Initiative. They anticipate the first VIS quality scores and TCC calculations based on MCO encounter data in May 2017. Despite this delay, IME officials shared what they described as “powerful” evidence that VIS scores were better for the Medicaid expansion population enrolled in ACOs in 2014–2015 than for non-ACO enrollees. This experience gave the team confidence that when VIS scores become available, they will show improvements in quality related to value-based purchasing.

Health information technology and data analytic strategies. Stakeholders felt that more time is needed before SWAN has an impact on care coordination, utilization, and ultimately, costs. However, several shared anecdotal evidence of SWAN alerts being incorporated into workflow to the benefit of individual patients. For instance, one provider reported using SWAN alerts to develop a care plan for a patient with a high ER utilization rate. Some stakeholders reported receiving and sharing SWAN alerts, but several still noted a need to help providers use the data effectively.

Other activities. Several stakeholders felt that C3s had improved care coordination. The SIM team pointed to the number of referrals that C3s made to connect clients to community-based resources, which the team recognized as early evidence of better care coordination. One team member shared, “In the past three quarters, with only four of our six C3s reporting social determinants of health, we have completed over 2,000 referrals....that’s probably the feather in our cap for the C3s.”

Conversations with C3 representatives revealed activities that improved care coordination and helped address needs related to the social determinants of health. For example, one community is now coordinating care for individuals released from jail and reentering their

communities. C3s also reported that they were supporting activities that should ultimately affect health care utilization in their communities through prevention, such as screening for tobacco use and obesity, and starting a diabetes prevention program. Some stakeholders felt that the C3s already affected utilization and cost but did not have the data to prove their impressions.

E.2.4 Population health

Table E-4 shows Iowa’s baseline population health outcomes based on 22 measures from the 3 years prior to the implementation of Iowa’s SIM award. The table also includes information from the comparison group states: North Dakota, South Dakota, and Missouri. The multistage procedure for the identifying the comparison group states is described in detail in *Appendix L*. The measures suggest that, compared with national averages, Iowa generally had slightly lower average rates of chronic disease and disability, slightly higher use of preventive health care services, and slightly higher rates of unhealthy lifestyle choices. Overall, during the 2013–2015 baseline period, an average of 11.7 percent of Iowans reported being in fair or poor health, compared with 14.9 percent nationally. During the same period, 8.4 percent of Iowans reported having ever been diagnosed with diabetes, compared with 9.6 percent nationally. Iowans were also less likely than the national population to report not receiving several types of recommended preventive services in the past year. Together, these findings suggest that the lower rate of diabetes in Iowa was not likely due to lower screening rates.

Table E-4. Baseline measures of population health in Iowa, 2013–2015

Measure		2013–2015 Average	2013–2015 Trend
Health status is fair or poor	Iowa	11.7%	
	CG	13.0%	
	National	14.9%	
Ever diagnosed with diabetes	Iowa	8.4%	
	CG	9.0%	
	National	9.6%	
Ever diagnosed with hypertension ##	Iowa	30.1%	
	CG	30.9%	
	National	31.6%	
Ever diagnosed with asthma	Iowa	11.8%	
	CG	12.2%	
	National	13.5%	

(continued)

Table E-4. Baseline measures of population health in Iowa, 2013–2015 (continued)

Measure		2013–2015 Average	2013–2015 Trend
Has a functional limitation ##	Iowa	16.8%	
	CG	18.7%	
	National	18.2%	
Current smoker	Iowa	17.2%	
	CG	19.0%	
	National	16.4%	
Overweight	Iowa	66.8%	
	CG	67.0%	
	National	64.4%	
Obese	Iowa	30.9%	
	CG	30.5%	
	National	28.5%	
No leisure time physical activity or exercise, past 30 days	Iowa	24.2%	
	CG	23.7%	
	National	23.3%	
Limited fruit and vegetable intake, past 30 days	Iowa	86.8%	
	CG	86.6%	
	National	83.1%	
Any driving after drinking too much, past 30 days #	Iowa	5.0%	N/A
	CG	4.2%	
	National	3.3%	
No checkup, past year	Iowa	28.8%	
	CG	32.7%	
	National	29.4%	
No flu vaccine, past year	Iowa	52.5%	
	CG	53.4%	
	National	59.6%	
No 65+ flu vaccine, past year	Iowa	32.1%	
	CG	33.3%	
	National	39.1%	

(continued)

Table E-4. Baseline measures of population health in Iowa, 2013–2015 (continued)

Measure		2013–2015 Average	2013–2015 Trend
No 65+ pneumonia vaccine, ever	Iowa	27.2%	
	CG	29.6%	
	National	30.2%	
Among adults with hypertension, no hypertension blood pressure medication ##	Iowa	22.1%	
	CG	19.2%	
	National	22.4%	
No 50–75 colorectal cancer screening—no fecal occult blood test (FOBT), past year #	Iowa	93.2%	N/A
	CG	93.5%	
	National	90.7%	
No 50–75 colorectal cancer screening—no sigmoidoscopy or colonoscopy, past 5 years #	Iowa	46.1%	N/A
	CG	50.9%	
	National	46.0%	
No 50–75 colorectal cancer screening—no sigmoidoscopy or colonoscopy, past 10 years #	Iowa	32.7%	N/A
	CG	37.2%	
	National	33.6%	
Current smoker, every day	Iowa	12.7%	
	CG	13.8%	
	National	11.2%	
Former smoker	Iowa	25.5%	
	CG	26.2%	
	National	25.2%	
Of current smokers, has not tried to quit, past year	Iowa	46.1%	
	CG	46.0%	
	National	40.1%	

Source: Behavioral Risk Factor Surveillance System, collected by CDC (2013–2015).¹²⁸

Note: To facilitate the comparison of trends over time between the model test state, its comparison group, and the nation, the sparklines for each measure rely on the same scale for the vertical axis for all three groups. Because the vertical scale for the sparklines varies by measure, the sparklines are not comparable across the different measures. Sparklines are not available for outcomes for which data are limited to 2014 (indicated by #). Sparklines for outcomes that are limited to data for 2013 and 2015 (indicated by ##) will be based on data for two points in time and so will appear more stable than outcomes for which data are available for 2013, 2014, and 2015.

CDC = Centers for Disease Control and Prevention; CG = comparison group; FOBT = fecal occult blood test; N/A = not available.

¹²⁸ CDC. (2013–2015). *Behavioral Risk Factor Surveillance System survey data*. Atlanta, GA: U.S. Department of Health and Human Services, CDC.

However, in 2013–2015, Iowans had slightly higher rates of smoking, obesity, inactivity, limited fruit and vegetable intake, and drunk driving than the national average. For example, during this period, 30.9 percent of Iowans reported they were obese, compared with 28.5 percent of the national population (see *Table E-4*).

The Iowa SIM Initiative targets diabetes, obesity, and tobacco use through its population health strategies. Multidisciplinary stakeholder work groups developed statewide plans for all three of these topics, and they are included in the database developed by the SIM team to track clinical measures targeted by CHNA&HIPs. During Award Year 3, C3s will narrow their focus to diabetes, but obesity and tobacco use will be included as “diabetes comorbidities,” and measures of these conditions will be reflected in the community scorecards.

Specific population health goals are included in the population health roadmap, developed as an IDPH framework for the Iowa SIM Initiative population health activities, such as the development and implementation of statewide plans designed to address these goals. These objectives are to decrease (1) the prevalence of diabetes, (2) the rates of obesity and tobacco use among diabetics, and (3) the TCC for diabetes by the end of the SIM Initiative.

Although stakeholders felt that the Iowa SIM Initiative population health strategies had not progressed enough to impact population health outcomes, they were optimistic that, ultimately, the strategies would have their intended impact. For example, one member of the SIM team described the statewide plans as “a good foundation for now drawing in these communities engaged in these health outcomes. They have these documents where they can pull tactics from.” Several stakeholders reported that momentum was building for improving population health in Iowa for some time, through the Healthiest State Initiative and Wellmark’s Healthiest Hometown initiative, which the SIM strategies will further support.¹²⁹

E.3 Iowa Summary

Overall, interviews and other evaluation sources suggested that, despite major changes to Iowa Medicaid and shifts in SIM’s focus, the state’s SIM components progressed in all areas. Although progress was reportedly slower than it might have been without these changes, overall stakeholders praised the SIM team for their hard work and continuous stakeholder engagement around the ambitious goal of multi-payer alignment. The impact of Medicaid managed care implementation during the current analysis period cannot be understated. This change introduced some strain in the relationships between IME and various stakeholders. In addition, the need to make managed care operational drew resources and focus away from SIM activities and resulted in delays or interruptions to its major components, including value-based purchasing and SWAN.

¹²⁹ For more information on the Healthiest State Initiative, see <http://www.iowahealthieststate.com/>

Feedback obtained during CMMI’s site visit highlighted the need for Iowa’s SIM Initiative to focus more on payment reform, involve the delivery system more in SIM activities, and better define value-based purchasing—much of which the state addressed through a new strategy to align with MACRA. SIM goals also shifted to better align all components, including the state’s population health strategies, around advancing value-based purchasing.

An ongoing theme, as stakeholders discussed MCOs and the future of C3s, is the tradeoff between a standardized approach at the state level and allowing strategies to be tailored for the local context. Whereas stakeholders wanted IME to use more regulatory power to standardize operations across MCOs, the MCOs felt that each health system and health plan is different, thus value-based purchasing cannot be “one size fits all.” Similarly, C3s are concerned about the increased number of requirements for Award Year 3, given different needs of each community. However, many stakeholders understood that the state needs to prompt all health system stakeholders to move in the same direction for statewide health improvements.

The commitment to alignment among Iowa Medicaid, Wellmark, Medicare, the existing ACO infrastructure, and the ongoing collaborative environment in the state continues to give stakeholders confidence that the SIM Initiative ultimately will be successful. The major uncertainty during the current analysis period is the future of federal Medicaid funding, which would affect the SIM Initiative and Medicaid more broadly. Stakeholders were generally optimistic that the major components were in place for Iowa to make significant progress in the number of providers and patients involved in value-based purchasing.

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Appendix F: State Innovation Model in Model Test States: Michigan

Key Results from Michigan's State Innovation Model Initiative July 2016–April 2017

- Most components of the SIM Initiative were moving ahead, but the patient-centered medical home (PCMH) component was an early success. Strong primary care provider participation has been spurred, in part, by practices' interest in building on earlier PCMH efforts and wanting to continue receiving monthly payments to support practice transformation and care coordination.
- Community Health Innovation Regions (CHIRs), described by state officials as the most important and innovative part of the SIM Initiative, experienced some implementation delays. The five CHIRs were still setting up their governance and stakeholder structures, conducting community health needs assessments, and drafting local operational plans.
- With respect to health information technology, Michigan successfully developed the Relationship and Attribution Management Platform to support the identification of relationships between patients and the providers who play a role in their healthcare delivery and enable the exchange of information required for effective care coordination. The state also focused on integration between the statewide Michigan Health Information Network and the state's pre-existing regional health information exchanges, which play major roles in several of the CHIRs.
- The Michigan SIM Initiative modified its plan to use Accountable Systems of Care (ASCs) as risk-bearing entities within payment reforms to eliminate the need to regulate them. This decision was made, in part, because managed care plans argued that risk-bearing ASCs would duplicate the existing role of health plans.
- State officials felt it was premature to comment on the early impacts of the SIM Initiative on care delivery, coordination of care, quality of care, utilization and expenditures, or population health. However, using Behavioral Risk Factor Surveillance System data for a baseline period of 2013–2015, the evaluation found that Michiganders are slightly less healthy than the average American and that a higher percentage of Michiganders have been diagnosed with diabetes, hypertension, or asthma compared to national averages.

This appendix provides an updated overview of the Michigan SIM Initiative; describes important changes in the state's SIM Initiative; summarizes implementation and testing successes, challenges, and lessons learned; and discusses early changes or prospects of changes resulting from the initiative. The findings in this appendix are based on analysis of data collected from stakeholder telephone interviews, state document reviews, and state program and evaluation calls. These data were collected between July 1, 2016, and April 30, 2017.

The RTI team conducted 14 key informant interviews from April 18 through May 3, 2017.¹³⁰ The key topic areas of the interviews were (1) changes in governance and program administration, (2) progress implementing SIM models and initiatives, (3) participation of payers

¹³⁰ The RTI evaluation team needed to obtain primary care provider (PCP) perspectives on the SIM Initiative for this AR, but there were delays scheduling interviews with participating PCPs. Thus, interviews extended beyond the April 30, 2017, end of the analysis period for this report.

and providers, (4) progress toward a preponderance of care in the state being provided through an alternative payment model (APM), and (5) early indicators of changes in relevant outcomes. Interview participants included state officials, payers, providers, and consumer advocates involved in the development and implementation of Michigan’s SIM Initiative. Further details on the analytic approach are available in *Chapter 1*. Information on the number and types of stakeholders interviewed for the state is in *Table 1-1*.

F.1 Implementation Activities

Michigan’s SIM Initiative builds on its *Blueprint for Health Innovation*,¹³¹ which was developed under a Round One Model Design Grant. The *Blueprint for Health Innovation* was a strategic plan to test innovative multi-payer and service delivery models to improve care coordination, lower costs, and improve health outcomes. The original *Blueprint* was based on five complementary components:

1. ***Patient-centered medical homes***. A care delivery model where patient care is coordinated through patients’ primary care provider (PCP).
2. ***Community Health Innovation Regions***. Entities designed to address social determinants of health to improve wellness on a population health level. Each Community Health Innovation Region (CHIR) is governed by a “backbone organization.” CHIRs would work directly with Accountable Systems of Care (ASCs) and providers to facilitate quality improvements and reductions in expenditures through effectively coordinated care and access to social services.
3. ***Value-Based Payment Models***. Value-based payment (VBP) models that encourage SIM goals through shared risk/shared savings.
4. ***Enhanced Data-Sharing and Interoperability***. A strategy to facilitate performance metric collection and reporting, care coordination, and technology to support population health efforts through the statewide health information exchange (HIE) called the Michigan Health Information Network (MiHIN), in partnership with regional HIEs throughout the state.
5. ***Accountable Systems of Care***. Michigan’s variant of accountable care organizations, where health plans and providers would earn bonuses if they control spending growth while also meeting quality metrics.

Although the SIM Initiative is intended to benefit all Michiganders, many of the payment reform and data-sharing strategies are focused on Medicaid enrollees. Within the Medicaid population, the initiative is further aiming to impact high emergency room (ER) utilizers, individuals with multiple chronic conditions, and pregnant women and infants. All regions are

¹³¹ Michigan Department of Health & Human Services (MDHHS). (n.d.) *Blueprint for Health Innovation*. Retrieved from http://www.michigan.gov/mdhhs/0,5885,7-339-71551_2945_64491_76091---,00.html

required to focus on high ER utilizers in the first year of implementation and can select a second priority population in subsequent implementation years.

As of April 2017, SIM implementation was going smoothly overall, although state officials and stakeholders acknowledged that some activities are behind schedule. The patient-centered medical home (PCMH) initiative was emerging as an early success, with many practices participating in shared learning and undergoing practice transformations to improve delivery and coordination of care. The CHIR component was moving slower than the PCMH initiative and has encountered delays. CHIRs submitted their local operating plans in April 2017 and are working with the state to develop their strategies. Interviewees representing CHIRs were optimistic that the SIM Initiative represented an opportunity to improve population health through increased integration between the health system and community resources. However, some CHIRs reported what they perceived to be a lack of clarity around state officials' expectations in some cases, overly prescriptive guidelines in others, changing deliverable timelines, and insufficient funding relative to expected outcomes. Additionally, some CHIRs felt that the state was not taking full advantage of CHIR backbone organizations' collective experience in population health improvement. State officials, meanwhile, believed that some CHIRs' close alignment with health care systems was limiting the "upstream" social determinants of health approaches that the SIM Initiative aims to achieve. Health information technology (health IT) activities were moving forward with some delays. A major focus regarding IT in this round of interviews was on integration between MiHIN and the regional HIEs, which play major roles in several SIM regions.

F.1.1 Governance and program administration

The SIM Initiative is administered by the Michigan Department of Health and Human Services (MDHHS). In the first Annual Report (AR1) analysis period, a high-ranking MDHHS official served as project director and oversaw the work of the four SIM component groups: population health, delivery system transformation, health IT, and the project management and delivery office. In addition, a state official served as the program lead for SIM program management and governance and was the day-to-day operational lead for the SIM Initiative.

During the AR2 analysis period, some internal staffing changes were made to the SIM Initiative's governance structure with the intention of elevating the SIM Initiative within the department and placing leaders in charge of the initiative who had more seniority in the statewide health care community. During the AR1 analysis period, the program was housed within the Policy Planning and Legislative Services division, which was responsible for daily operations and maintaining relationships with internal and external stakeholders. In early 2017, however, the SIM team worked through a transition process to shift the ownership from a managerial to an executive level. At the time of the interviews, the SIM director was at the senior deputy director level, and the SIM executive sponsor was at the departmental director level. The

program director managed a leadership team with a care delivery lead, a population health lead, a technology lead, and two program managers, who were responsible for carrying out SIM implementation activities.

The elevation of the SIM Initiative to a higher level of leadership was a strategic change. During the planning phases, the state relied heavily on relatively mid-level staff with operational experience to plan and launch an innovative SIM program. According to state officials, after implementation began ramping up, the state made the strategic decision to more systematically involve higher-level management in SIM operations. This elevation helped increase the project's visibility both within MDHHS and among external stakeholders, allowing for enhanced negotiating capabilities. For example, state staff said the project's elevation enabled senior MDHHS officials to more directly and effectively negotiate with health plan executives on the payment reform components of the initiative.

In addition to the governance changes described above, the state hired a contractor from the Michigan Public Health Institute to serve as an analytics and evaluation coordinator to manage the state monitoring and evaluation activities related to the SIM Initiative. In addition to evaluation duties, this person has worked to encourage more cross-collaboration between the teams working on the various SIM tracks.

State officials report that the staffing changes have not had a major impact on day-to-day operations. However, several key informants working in Michigan's five CHIR regions and backbone organizations reported that the turnover had resulted in delayed communications and confusion about who to contact at the state level in early 2017. Representatives of the CHIRs indicated that this compromised their ability to communicate with state officials and made it difficult to pose questions that arose as they were developing their implementation plans.

F.1.2 Stakeholder engagement

A major focus of stakeholder engagement efforts is on Physician Organizations (POs) and Physician Hospital Organizations (PHOs). POs, which are otherwise independent physician practices that form a group to centralize certain administrative functions, are common in Michigan. Similarly, PHOs are groups of physician practices linked to hospitals in organizations that perform administrative functions for both physicians and hospitals. Many of the PCMHs participating in the SIM Initiative are linked to a PO or PHO to fulfill certain SIM participation requirements, such as participating in and contributing data to an HIE.

During the Model Design phase, Michigan formally included stakeholders in its planning and decision-making processes. However, as the SIM Initiative moved from the Model Design phase to the Model Test phase, stakeholders reported during interviews that the level of engagement with state officials had declined. Stakeholders also reported that following the 2016 presidential election, they received a notice from the state that work groups were suspended

temporarily. State officials confirmed that there were delays following administration changes at the federal level, especially as they awaited guidance on potential Medicare participation in the state's multi-payer strategy. The state postponed many stakeholder activities until there was more clarity around how federal policy direction would affect payer alignment.

Stakeholder knowledge of the work group suspension was varied. One PCMH respondent reported that work groups had been paused because of possible changes in federal health care policy; a representative from a PO had no knowledge of the status of the work groups. She mentioned that all the PCMHs participating from her PHO put their names in to be considered for a position with the work group, but the state never notified them of whether they were selected or who was going to be involved.

In addition to the planned work groups, Michigan created an optional PCMH initiative, Practice Transformation Collaborative, which was intended to provide support to participating SIM practices and their POs and PHOs. This collaborative is described in more detail in **Section F.1.5**.

The state conducts monthly check-in calls with the CHIRs, both as a cohort and individually. The CHIR respondents reported that the monthly calls generally focus on the logistics of implementation and technical assistance, leaving limited room for feedback or shared learning. CHIRs felt that it would be beneficial to also talk among themselves and share their own successes and lessons learned and were frustrated that the state was not providing a forum to encourage collaboration. This issue led some CHIRs to schedule calls with each other to ask each other questions and gain a better understanding of what is happening on a big picture level and outside of their own individual communities.

F.1.3 Delivery systems and payment reforms

In the AR2 analysis period, Michigan continued to build on the delivery system and payment reforms outlined in its SIM plans. For example, in the *Blueprint for Health Innovation*¹³²—the document that serves as a foundation for Michigan's SIM Initiative—the state outlined a plan to create payment reforms that paid for value instead of volume and incented PCMHs, ASCs, and CHIRs to undertake delivery reforms that would support SIM goals. The state built VBPs into its ASC and PCMH models as part of the goal to align payment incentives with outcome goals, and the state outlined its vision for VBP in its draft planning documents: “Improvements in provider behavior within patient-centered medical homes and Accountable Systems of Care will be rewarded through provider participation in shared savings or two-sided risk models, respectively, care coordination payments and practice transformation

¹³² MDHHS. (n.d.) *Blueprint for Health Innovation*. Retrieved from http://www.michigan.gov/mdhhs/0,5885,7-339-71551_2945_64491_76091---,00.html

funding.” By the end of the AR1 analysis period, the details of the state’s plan had not been finalized, and discussions of the details of payment reforms continued at the state level in 2017.

In terms of delivery system reforms, the PCMH initiative was a major focus at the time of the April 2017 interviews. In the AR2 analysis period, 358 PCMHs were selected from a group of 486 practice applicants. This group represents more than 2,100 primary care practitioners and serves approximately 350,000 Medicaid beneficiaries out of a state Medicaid population of roughly 2.4 million.¹³³ Among the practices selected for the PCMH initiative, approximately half are located within the state’s five CHIR regions, and roughly two thirds previously participated in the Michigan Primary Care Transformation (MiPCT) Demonstration Project, which focused on the value of the PCMH model. Participating practices signed formal participation agreements in November 2016, and the PCMH initiative launched on January 1, 2017.

Also in 2017, the state developed a screening questionnaire that PCMHs could use to screen for social factors and non-health needs that might play a role in an individual’s health. The questionnaire includes domains related to health care, food, employment and income, housing and shelter, utilities, childcare, education, transportation, and clothing. PCMHs can alter the template the state created to meet each of their community’s unique needs. Once fully operational, the PCMHs and CHIRs will collaborate to attempt to connect patients with social service resources. A major focus of the AR2 analysis period was the development of a “Clinical-Community Linkages” program. The aim of Clinical-Community Linkages is to develop and document partnerships between practices and community-based organizations that provide services and resources to address patients’ psychosocial needs.

In terms of the design and implementation of payment reform, there have been some delays. State officials reported that their goal is to convene a multi-payer group to discuss multi-payer alignment across Michigan. Because state officials feel that Medicare participation in the PCMH initiative is crucial for multi-payer alignment to succeed, they sought to develop a strategy that would allow Medicare payments and quality incentives to continue after the conclusion of the state’s Multi-Payer Advanced Primary Care Practice (MAPCP) initiative. In the summer of 2016, the state began a process to engage stakeholders in the design of a potential custom Medicare participation option but suspended these activities following the November presidential election, citing the perceived uncertainty of the status of the existing Medicare participation guidance. State officials indicated that considerable uncertainty at the federal level made it difficult to bring payers to the table, causing broader payment reform discussions to stall.

The AR2 analysis period saw changes to the SIM model that will have an impact on payment reform moving forward. During the AR1 analysis period, the state included ASCs in the

¹³³ The Henry J. Kaiser Family Foundation. (2017). *Total monthly Medicaid and CHIP enrollment*. Retrieved from <https://www.kff.org/health-reform/state-indicator/total-monthly-medicaid-and-chip-enrollment/?currentTimeframe=4&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%22asc%22%7D>

plans for delivery and payment reform. However, as of April 2017, ASCs were no longer a central component of the SIM Initiative. In the *Blueprint for Health Innovation*, the ASCs were intended as vehicles for Michigan to move toward payment models involving shared savings and shared risk. However, as implementation began, state officials found the *Blueprint* was “good in concept, but lacked operational understanding” when it came to ASCs. Following discussions with the Medicaid health plans, the state realized that from a department and regulations standpoint, there was little reason to create ASCs that would bear risk because the Medicaid health plans were already bearing risk. Overall, CHIR and PCMH representatives acknowledged that ASCs were no longer a component of the SIM Initiative but that the structures that serve as ASCs (i.e., POs in most regions) would continue to play a role in the local health care systems. That role was still being worked out at the time of the 2017 interviews.

However, some interviewees were frustrated that such a major change was made to the project after implementation. State officials reported that CHIR selection during the AR1 analysis period was heavily based on the presence of an ASC in the region. Therefore, if the ASC component had been curtailed during the AR1 analysis period, different CHIRs may have been selected.

During the AR2 analysis period, the state worked on developing and moving closer to finalizing the APM strategies. All 11 Medicaid health plans were contractually obligated to collect and report baseline APM information so that the state could acquire an accurate description of existing payment models across the Medicaid health plans. This baseline information will inform two goals for each health plan: the overall percentage of payments in their contracts that have an APM component and the actual share of spending through an APM. Then, each plan will work with MDHHS to develop these APM goals and a plan to achieve them over the next fiscal year.

To classify the types of provider payments, MDHHS is using the Health Care Payment Learning and Action Network APM Framework—a common framework created by a coalition of health plans, providers, patients, consumers, states, and federal agencies to align approaches to payment innovation, share information about successful models, and encourage best practices. After health plans submit their baseline APM data, the state will validate the data and schedule conference calls with each plan to discuss the submissions and outline steps for moving toward the development of APMs.

In March 2017, the state convened its first APM work group meeting with representatives from Medicaid health plans. The work group began to discuss and develop strategies to encourage APM adoption. Each Medicaid health plan was required to submit APM goals by August 2017, and the goals and payment methodologies will officially go into effect on October 1, 2017. The goals that each health plan develops will comprise two parts: the first related to the overall percentage of payments in a contract that have an APM component and the second

related to actual APM spending. The second will allow the state to see not just what APM payments each plan has under contract but also the actual amount of money it is spending through APMs. Additionally, at the time of the site visit, the state was in the process of developing a “preferred APM” to incent plans to align around a certain payment methodology. If plans select the preferred APM, they will have an opportunity to earn a withhold performance bonus back more quickly. A state official anticipates that the preferred APM will be structured in a way that is attractive to plans and will encourage alignment with Medicare and private payers.

Additionally, the state provides two per member per month (PMPM) payments to practices: one to support practice transformation and another to provide care coordination services. These funds are funneled from the state through Medicaid health plans to participating practices. Practices participating as a PCMH cited the small PMPM payment being provided for practice transformation as one of the biggest policy levers for participation. Each practice receives a payment of \$1.25 PMPM for practice transformation and then an additional payment of \$3, \$5, or \$8 PMPM for care coordination, depending on the required intensity of the patient’s care. Some providers, particularly those in the Flint area who were still dealing with a water crisis, felt that these payments fall short of what is needed to accomplish Michigan’s practice transformation and care coordination goals. These providers argued that \$3 PMPM was insufficient to support care coordination, which frequently entails connecting patients with community resources that can help ensure they have access to adequate food and housing. However, other key informants praised the additional PMPM payments, stressing that they can be used for non-licensed personnel rather than just nurses. This aspect has helped some practices to hire care coordinators who closely match the demographics and backgrounds of their patient population and can effectively serve as peers.

In addition to the PMPM payments, practices were more likely to participate in the SIM Initiative because it built on a previous state demonstration project called MiPCT. The MiPCT demonstration aimed to test the PCMH model through payment reform and a major focus on increasing care coordination. As part of MiPCT, many practices hired care coordinators to help manage complex patients and facilitate patient connections with community resources. For many of these practices, SIM represented a logical continuation of the enhanced services they had begun delivering under MiPCT.

The state intends to achieve alignment across payers through the SIM Initiative, although by April 2017, only Medicaid health plans were participating in the SIM payment mechanism. In their contracts with the state, the Medicaid health plans are required to align with the PMPM payments made to practices as part of the PCMH initiative. The funds for these PMPM payments come from the state Medicaid budget, and the Medicaid health plans are responsible for delivering the payments to the PCMH practices. This is in contrast to the MiPCT initiative, which did not include Medicaid health plans. The SIM payment model also is aligned with Blue

Cross Blue Shield (BCBS) of Michigan, the primary commercial payer in Michigan. The state's goal is for the Medicaid health plans, Medicare, BCBS of Michigan, and other commercial payers to use similar payment and delivery structures, leading to alignment across the state. However, Medicaid health plans are still developing their APM strategies, and state officials recognize that they currently only have influence over the Medicaid health plans through the formal contracts in place. State officials are optimistic that the new, more elevated SIM leadership structure will help to facilitate conversations with payers and move the state toward an APM strategy that has participation from all payers in Michigan.

F.1.4 Health information technology and data infrastructure

MiHIN has been an important component of the state's health IT strategy since before the SIM Initiative and was an effort to create an organizing umbrella over the state's many regional HIEs. The SIM Initiative's use of MiHIN built on existing initiatives in the state, including the BCBS Physician Group Incentive Program initiative, which provided financial incentives to providers to participate in two of MiHIN's use cases: the Active Care Relationship Service (ACRS) care attribution and admission, discharge, and transfer (ADT) notifications.

In the AR2 analysis period, Michigan continued to develop its health IT strategy as it related to the SIM Initiative. Specifically, the state was beginning to outline processes and procedures to use the MiHIN to align payers around common information sharing use cases to improve care coordination across all payers and providers and to streamline quality measure collection and reporting across payers. A use case is a software and systems engineering concept that defines an interaction between a user (e.g., a health care provider) and a system (e.g., an HIE). The SIM Initiative's four foundational use cases are described in the PCMH participant guide:

1. ***Active Care Relationship Service.*** Tracks patient-provider attributions by identifying which health care providers have "active care relationships" with patients/consumers.
2. ***Health Provider Directory Service.*** Contains contact information for physicians and is refreshed every 30 days with continuous data from ACRS submissions.
3. ***Quality Measure Information.*** Enables providers and payers to consolidate and standardize the electronic exchange of quality-related data and performance results.
4. ***Admission-Discharge-Transfer Notifications.*** Improves patient care coordination by sending messages when a patient is admitted to a hospital, transferred to another facility, or discharged from the hospital.

Overall, health IT and data infrastructure strategies remain on track. During the AR2 analysis period, Michigan began onboarding entities participating in the SIM Initiative to MiHIN. Also in this period, the state continued to partner with MiHIN to help participating PCMHs and Medicaid health plans achieve the SIM Initiative's IT requirements. A major focus

in the first full year of implementation was the development of the Relationship and Attribution Management Platform (RAMP). The purpose of the RAMP is to support the identification of relationships between patients and all the individuals who play a role in their health care delivery team and, thereby, enable the exchange of information required for effective care coordination. The RAMP is supported by the use cases described above.

One of the first major steps of the SIM Initiative's health IT strategy was for each SIM PCMH to undergo the legal onboarding process required for MiHIN participation. Toward the beginning of the AR2 analysis period, all PCMHs were successfully onboarded. The next priority was to begin the implementation of statewide use cases. In addition to the four use cases described above, a "Common Key Service" was included in the PCMH participation guide; this use case was designed to create universal identifiers for patients. However, the implementation of this use case was postponed because of internal delays. State staff reported that progress on the implementation of the other four use cases was occurring as planned. Practices test and implement the ACRS and Health Provider Directory use cases first, followed by the ADT and quality measure use cases, which depend on the first two. State staff agreed that the focus in late 2016 and early 2017 was ensuring that PCMHs were knowledgeable in meeting SIM requirements to participate in MiHIN. Overall, the CHIRs are on a slower track in terms of adopting technology strategies. The state emphasized that the plans for the CHIRs needed more focus on organizational strategic planning and less on technology systems. Additionally, the state did not dictate a specific vendor for CHIRs to use, in acknowledgement of existing vendor relationships in each of the regions. Instead, CHIRs could choose any technology system that could input and process a social determinants of health screening questionnaire. Additionally, state staff were working to develop and define technical specifications to meet CMMI reporting requirements.

In terms of levers, PCMHs participating in the SIM Initiative are contractually required to "actively participate" in RAMP. Active participation entails legal onboarding (discussed earlier in this section) and connection with MiHIN. Because ACRS is the basis of many other use cases, PCMHs are required to actively participate in the ACRS use case. Similarly, Medicaid health plans are also contractually obligated to interface with MiHIN. In November 2016, the state held an HIE onboarding session for the Medicaid health plans. Additionally, by the time of the evaluation team's interviews in April 2017, approximately half of the health plans were currently sending ACRS files to the exchange. Moving forward, Medicaid health plans will need to outline a strategy to incentivize participating providers to participate in the statewide use cases in MiHIN. There is some flexibility around what these incentives will look like, but in some cases, the incentives are likely to be financial.

Despite some early successes within the technology track of the SIM Initiative (i.e., legally onboarding all participating PCMHs and Medicaid health plans), state officials reported

some challenges. State officials reported a significant need for education about MiHIN for both SIM participants and MDHHS. Furthermore, many health IT vendors are being used in the SIM CHIR regions, and the state reported some challenges in coordinating and communicating with all vendors. Additionally, one state staff person referenced the sheer scale of the project as an inherent challenge because it can be difficult to manage a large number of participants and concurrent strategies. Although some of what the state aims to do with respect to HIE is not novel, the scale of the proposed activity (i.e., across hundreds of PCMHs and 11 Medicaid health plans) exceeds anything the state has attempted in past demonstrations. Because of these challenges, the state reported delays on some aspects of its health IT plans. As mentioned, the Common Key use case was delayed at the time of the interviews. Additionally, efforts to coordinate the care coordinators using the Health Provider Directory information were delayed. Overall, state officials agreed that the IT efforts were generally on track and acknowledged that some delays were expected given the scale of the project.

State officials and CHIR and PCMH representatives agree that MiHIN played a larger role in some regions than in others. This variation is the result of the strong presence of regional HIEs in some regions. For example, Great Lakes Health Connect—a Grand Rapids-based regional HIE—is a major player in Genesee County and partners with organizations to some extent in each of the five CHIR regions. Similarly, in Jackson County, the Jackson Community Medical Record is a major source of HIE. In Muskegon, the local health system—Trinity—owns a dominant technology structure that local providers interact with daily. In these communities, providers might be familiar with MiHIN by name but are more accustomed to working with their local HIEs. Provider relationships with HIEs will be maintained throughout the SIM period, and as one state official said, MiHIN will “fit into the puzzle” of existing technology solutions.

Interviewees from provider and CHIR organizations tended to characterize MiHIN and the state’s technology strategy as in development. For example, several CHIR representatives reported that they were aware of MiHIN’s role in the SIM Initiative but had not yet received the necessary information to create functional relationships between providers, social service agencies, and MiHIN. CHIRs were expecting to have contracting discussions about how the RAMP platform would be integrated with local technology vendors, but at the time of the interviews, these types of discussions had yet to take place. Some CHIR and provider representatives were frustrated with what they viewed as a delay in communications related to MiHIN. CHIRs were expected to be fully operational by November 1, 2017, and some were concerned that they would not have enough time to pilot test the various use cases required by the SIM Initiative (and described in more detail earlier in *Section F.1.4*).

State staff echoed the sentiment that MiHIN’s role was still evolving. For example, one key informant noted that MiHIN would play an important role in Clinical-Community Linkages by facilitating communication between care coordinators, PCMHs, and social service agencies

but acknowledged that specific needs related to these relationships would arise as the SIM Initiative became operational. Overall the technology component of the SIM Initiative was described by one state official as “an enabler” for the PCMH and CHIR components of the initiative. Other state staff and participating practices and CHIRs agreed with the assessment that technology strategies underlie the SIM Initiative’s major components.

F.1.5 Practice transformation and workforce development

Michigan’s practice transformation efforts center around the PCMH initiative described in **Section F.1.3**. At the end of the AR1 analysis period, Michigan was preparing to select PCMH initiative participants and finalize the PCMH initiative participant guide outlining expectations for participating practices. As of the AR2 analysis period, implementation of the strategies identified in the planning phase were on track for the most part. No strategies related to practice transformation were discontinued or added during the same period. The activities and their status are described below.

To support practice transformation, PCMHs receive practice transformation payments and care coordination payments from state Medicaid funds, via Medicaid health plans (also described in **Section F.1.3**). Additionally, MDHHS, in partnership with the Institute for Healthcare Improvement (IHI), launched the PCMH Initiative Practice Transformation Collaborative. The collaborative was designed to encourage shared learning among the participating PCMH practices through in-person learning collaboratives, peer coaching webinars, and monthly “action period” teaching webinars. A range of PO and practice staff (i.e., clinical leadership, administrative leadership, providers, practice coaches, and patient representatives) attend.

The first in-person learning session as part of the collaborative was held in April 2017 in Lansing and focused on Clinical-Community Linkages. The second is scheduled for June 2017 in Lansing with a focus on population health management. A third learning session will be scheduled for a later date. In between in-person learning sessions, practices attend webinars aimed at accelerating change through continued shared learning. Additionally, the state plans to host one regional summit in October 2017 in each of the North, West, and Southeast regions of the state.

Michigan SIM staff acknowledge that a robust health workforce is required to sustain the transformations taking place under the demonstration. Although the state is not directly hiring individuals to enhance the workforce, practices are expected to make transformations to support enhanced access, whole-person care, and expanded care teams that focus on comprehensive

coordinated care to maintain their PCMH recognition.¹³⁴ As part of these efforts, practices are employing care managers and care coordinators. Some practices already had care managers in place from the MiPCT initiative, and many new PCMHs were hiring care managers as part of their SIM efforts. SIM participants echoed this shift in focus by reporting that under MiPCT, PCMHs hired registered nurses (RNs) to serve as care coordinators, but under the SIM Initiative, many practices were hiring medical assistants, social workers, and community health workers (CHWs), in addition to RNs. PCMH staff reported that some practices were hiring or repurposing existing staff members to serve as care coordinators. Other practices or POs hired shared care coordinators that worked across several locations or provided telephonic care coordination services from a central location.

The state did not dictate educational or licensure requirements for care managers but emphasized essential characteristics of care managers in the PCMH participation guide including strong communication and critical thinking skills. A state official reported that the state is encouraging SIM participants to think outside the box with care coordination and employ individuals outside the traditional care management team members, such as CHWs, social workers, and medical assistants.

Key informants described the different tactics practices were taking to fulfill SIM requirements. Some practices and CHIRs were using SIM funds to hire CHWs to provide additional care coordination and patient support services. PCMHs are required to have two care managers per 5,000 patients, and one of these care managers must be a licensed medical professional, such as an RN or medical assistant. The other care manager can be a CHW, although the state does not require PCMHs to use CHWs. Medicaid health plans, however, were contractually obligated to employ CHWs to serve as liaisons between health and social services providers for outreach and social support.

CHWs are typically from the community they serve, facilitating a high level of cultural competence. The number of CHWs required by plan was relative to the number of lives insured (1:20,000). State officials reported that there was a certain amount of culture shift required to accept CHWs and other nonclinical support staff as part of care coordination teams. They explained that the MiPCT demonstration was heavily focused on patients with chronic conditions and many clinical needs. The goal of the SIM Initiative is to look at broader needs outside the

¹³⁴ To be eligible to participate in the PCMH initiative, practices had to have PCMH recognition/accreditation from one of the following organizations: the National Committee for Quality Assurance, the Accreditation Association for Ambulatory Health Care, The Joint Commission, the BCBS of Michigan Physician Group Incentive Program, the Utilization Review Accreditation Commission, or the Commission on Accreditation of Rehabilitation Facilities. An Office of the National Coordinator for Health Information Technology-certified electronic health record, a registry, a tool to document care management/coordination, and at least 100 attributed Medicaid beneficiaries also were required. Source: MDHHS. (2016, August 10-11). *Patient-centered medical home initiative application and onboarding*. Presented at Michigan State Innovation Model Kick-Off Summit, Lansing, MI. Retrieved from https://www.michigan.gov/documents/mdhhs/PCMH_Initiative_Application_and_Onboarding_531937_7.pdf

medical system and social determinants of health; one state official said providers still “have a ways to go” in terms of integrating team members with less clinical experience. Going forward, the state intends to offer opportunities for care managers to receive training on fitting social needs into the medical care model.

F.1.6 Population health

The cornerstone of Michigan’s SIM Initiative—and the strategy widely described by both state officials and SIM participants as the most innovative—is the CHIR component. CHIRs aim to improve population health by addressing the social determinants of health and encouraging collaboration between the medical system, social service agencies, and other community resources that can collectively work to improve an individual’s wellness. On a population level, CHIRs are designed to create healthier communities. The five CHIRs are in Genesee County, Jackson County, Muskegon County, Livingston/Washtenaw Counties, and a multi-county Northern Region.

At the end of the AR1 analysis period, Michigan had selected the five CHIR regions and was ramping up to begin operations planning within each CHIR. Of the three buckets of population health strategies adapted from the Centers for Disease Control and Prevention’s (CDC’s) classifications¹³⁵ (traditional clinical approaches, innovative patient-centered care, and community-wide health), Michigan is taking a blended approach, using efforts in all three buckets. For example, individual PCMHs will aim to increase the use of evidence-based medicine within their clinics and will measure and report health care quality metrics as part of the SIM Initiative. In terms of innovative patient-centered care, the SIM Initiative aims to improve the performance of PCMHs by paying for both practice transformation and care coordination. Care coordinators will, in part, make it easier for patients to be referred to services provided outside the primary care setting (e.g., behavioral health services). Third, the CHIR component of the SIM Initiative is designed to improve health on a community-wide level by improving the integration between clinical care and community resources (e.g., housing, nutrition support) that impact social determinants of health.

During the AR2 analysis period, population health strategies have been going according to plan, albeit at a slower pace than participants would have hoped. In August 2016, representatives from each of the five CHIRs traveled to Lansing for a 2-day kickoff summit. Subsequently, CHIRs began a relatively intensive period of activity, including conducting community health needs assessments and developing local operational plans. In early 2017, the state finalized the CHIR Participation Guide and distributed it to each CHIR. The Participation Guide was designed to be an iterative document, and the state plans to update it over the course of the SIM Initiative. It summarizes the state’s vision for the SIM Initiative, including guidance

¹³⁵ Auerbach, J. (2016). The 3 buckets of prevention. *Journal of Public Health Management & Practice*, 22(3), 215–218. doi: 1097/PHH.00000000000038110

around CHIR requirements established by the state. CHIR backbone organizations were encouraged to submit feedback on the Guide and identify areas requiring clarification. CHIRs began receiving funding in Fall 2016. The state reported that it wanted the Guide to provide clear guidance to CHIRs about expectations and requirements while also allowing for innovation.

CHIRs submitted descriptions of their plans to the state in April 2017, and these plans were under review by the end of the AR2 analysis period. At the same time, CHIRs were developing Clinical-Community Linkages plans and preparing to implement them. Clinical-Community Linkages will be a major component of each CHIR's work. Through Clinical-Community Linkages, CHIRs will utilize social determinant of health assessments (i.e., those that PCMHs will be conducting with patients) to identify patient needs and make appropriate referrals to a network of community-based resources. CHIRs will work with PCMH care coordinators to develop a system for feedback reporting to ensure that individuals access the resources they need, and the entire process will be supported by coordinated social service navigation and delivery.

CHIR staff have access to several training opportunities. As of April 2017, the state was gearing up to host 2-day trainings facilitated by a Michigan State University professor on a tool she and a colleague created for promoting systems change called the ABLe (Above and Below the Line) Change Framework.¹³⁶ The state is making the Framework and trainings with one of its creators available to CHIRs to enable their population health work. There was a considerable amount of enthusiasm for the workshop among most CHIR regions, although some expressed some uncertainty about what the workshop would entail. At least one CHIR representative expressed hesitation about attending because of the resources required to send attendees to the training.

In addition to occasional in-person training opportunities, CHIRs engage in shared learning through calls with SIM staff. Each month, CHIR leadership are required to attend one call between the individual CHIR and the state and another call between the state and the entire cohort of CHIRs. The calls between the CHIRs and state SIM staff received mixed reviews from participants. Some CHIR representatives reported that they wanted to engage in more shared learning with other CHIRs and less discussion around specific deliverables and deadlines. Furthermore, some CHIRs felt that they were receiving contradictory or unclear guidance around participation requirements. However, most informants agreed that the issue of unclear

¹³⁶ The ABLe Change Framework is a system designed to help communities address social issues affecting the local population, including a "toolbox" of strategies communities can implement to impact social issues. The model is currently being used in several states, especially around early childhood school readiness initiatives. More information about the ABLe Change Framework is available at <http://ablechange.msu.edu/index.php/about/our-approach>

communication had been improved over the last few months after the state created a SharePoint site to post frequently asked questions and project deadlines.

In terms of levers, both PCMHs and Medicaid health plans are required to partner with the CHIRs on population health activities. Medicaid health plans must contract with CHIRs and participate in Clinical-Community Linkages. In many cases, Medicaid health plans already had longstanding relationships with CHIR backbone organizations before the introduction of the SIM Initiative. For example, at least two Medicaid health plans in Genesee County partner with that region's CHIR backbone organization—The Greater Flint Healthcare Coalition—on several local initiatives. Representatives from the plans serve on the Coalition's boards and are highly involved with the Coalition's work.

CHIR backbone organizations described several factors that incented them to participate in the SIM Initiative. A director of one backbone organization mentioned that she expected that the SIM Initiative would represent a good opportunity to collect data on the effectiveness of CHIR-like structures so that they could be replicated throughout the state. Michigan's original SIM plan was to roll out the initiative in two waves—initially within the five CHIR regions and then statewide. That expectation has changed, and the state no longer plans to expand the CHIR model statewide as part of the SIM Initiative. Given the complexity and attention required to launch the first five CHIRs, state officials have dropped plans to expand the model statewide as part of the current SIM Initiative.

Some CHIR backbone organizations have had to alter their plans because of what they perceived as SIM funding constraints. For example, an interviewee from one CHIR described how the CHIR had originally hoped to be able to choose its own target population and develop an intervention “encompassing all social service providers and touching many lives in the region.” However, the focus on ER utilizers in the first year of CHIR implementation paired with a smaller budget than the CHIR anticipated has resulted in a pared down plan. Several CHIRs expressed frustration about the level of funding they are receiving compared to the total SIM award and the amount being spent at the state level. Representatives from each of the five CHIRs said they expect to receive between \$1 million and \$1.5 million in each of the implementation years, which they universally felt was inadequate, compared to the approximately \$70 million total award that Michigan received for its SIM Initiative. Several CHIRs reported that they were surprised to discover that the amount of funding they received per year was meant to be used for both implementing their plans and the associated administrative costs. This fact contradicted earlier guidance indicating that they would receive separate funds for transformation activities and administrative costs.

CHIRs were taking a variety of approaches to their operational plans, given the funding available. One CHIR representative reported that there were already several initiatives targeting high ER utilizers in the region and was wary of duplicating work. A key informant from one of

the CHIR regions said the CHIR’s approach was to develop a system to “coordinate the care coordinators” across different service delivery sites. They were working on developing a hub to facilitate communication between social service agencies, clinical providers, mental health agencies, and other services. Each patient will receive a psychosocial assessment, and one lead care manager will organize activities across the service providers. Another interviewee from one CHIR had hoped to create infrastructure to transfer psychiatric cases that could be managed by a PCP back to the primary care setting to facilitate access for individuals with more acute needs to the higher-level psychiatric settings. Another CHIR representative was concerned that the lack of funding might prevent that component of their plan from materializing.

Overall, although the CHIR component of the initiative seemed to be proceeding as planned, there was a definite sense of frustration among some CHIR participants. Several interviewees described a lack of vision and cohesiveness at the state level. Some backbones were frustrated because they did not believe that the state was taking advantage of the rich history and experience of the backbone organizations. CHIRs had hoped for more shared learning across regions and were disappointed by what some characterized as a top-down approach to the initiative. Interviewees from CHIRs felt that the state was not affording them enough flexibility to achieve their aims. For example, some states had existing health IT products that they planned to use to achieve Clinical-Community Linkage requirements but did not think this would be compatible with the state’s request (that CHIR reported that the state designated a certain amount of money per CHIR to purchase an off-the-shelf solution).

State staff also had some concerns about the proposed operational plans from some CHIRs. One CHIR, in particular, was taking what both the state and the backbone organization characterized as an “academic” approach to the initiative. Specifically, the CHIR planned to randomize its target population into intervention and control groups, with the latter group receiving enhanced care coordination services only after a 6-month delay. This plan was incongruous with the state’s aims, and at the time of the site visit, some tension continued to exist between the state and this CHIR as the operational plan was being revised and finalized.

F.1.7 Quality measurement alignment

Although not explicitly a part of the SIM Initiative, Michigan’s Physician-Payer Quality Collaborative (PPQC) is an existing effort that aligns with the SIM Initiative’s objective of improving health care quality measurement. Specifically, PPQC is a multi-stakeholder initiative in Michigan that aims to align and streamline quality measure processes across initiatives and payers. It is led jointly by the Michigan State Medical Society and MiHIN. Participants include physicians, commercial health plans, and Medicaid health plans. State staff described the PPQC as a “neutral convener” of plans and providers across the state. The PPQC has created a superset of quality measures to support alignment across initiatives. The SIM Initiative’s PCMH initiative adopted 27 measures from the superset.

During the AR2 analysis period, the state was aiming to create alignment with Comprehensive Primary Care Plus (CPC+), Medicare’s advanced PCMH model that will be operating in Michigan and 13 other states or metropolitan areas. Two major health plans in the state—BCBS of Michigan and Priority Health—are participating in CPC+. In addition to improving access to and efficiency of primary care, CPC+ also aims to improve quality of care and established 14 electronic clinical quality measures (eCQMs). In selecting the quality targets PCMHs need to meet in the SIM Initiative and to promote alignment across payers, Michigan included 12 of the 14 eCQMs used in CPC+. Depression remission at 12 months and dementia are not included. However, both BCBS of Michigan and Priority Health participate in PPQC, so the group is likely to work toward the total alignment of quality measures in the future.

F.1.8 Lessons learned and looking forward

State staff and stakeholders identified many lessons learned. Several state staff mentioned that the CHIRs were selected, in some cases, based on their connections to health systems, generally, and ASCs, in particular. In the absence of a prominent role for ASCs in the SIM Initiative, that relationship is less important. Instead, the focus of CHIRs is on community- and population-wide health improvement. Based on that shift, state staff might have chosen different CHIRs. According to one state official, they might have focused on CHIRs with stronger histories of community change initiatives that were in a good position to achieve the SIM Initiative’s aims. However, other state staff disagreed with this assessment and said they would still have chosen the same CHIRs.

Several state staff also described the siloed nature of the SIM Initiative in the early implementation phases, which they perceived as being to its detriment. In 2017, the state has moved to hold more cross-track meetings to encourage collaboration across the SIM Initiative’s various arms.

Also from the state perspective, some staff reported that MDHHS had underestimated the resources required to implement a project of the SIM Initiative’s scale and wished they had hired additional support staff early in the process to handle administrative tasks, such as subcontracting and procurement. State staff were pleased that the SIM Initiative had been elevated within MDHHS, and several interviewees said they wished this had taken place earlier. However, initially, the SIM Initiative was competing with the implementation of the Patient Protection and Affordable Care Act, the Michigan Medicaid health plan rebid process, the departmental reorganization, and the Flint water crisis. These unpredictable and urgent issues may have complicated or slowed the SIM Initiative’s rollout beyond what the state could control.

PCMH and CHIR staff also had recommendations for how to improve the initiative. Several stakeholders characterized the SIM implementation timeline as “aggressive” and “too short.” Practice representatives cited the years of implementation that MiPCT required to make

meaningful change to care management and argued that the SIM Initiative was trying to do too much, too quickly. Other SIM participants felt that the SIM requirements and changing deadlines were confusing and suggested that a list of deliverables should be provided from the beginning of the initiative. Additionally, some participants felt that the timeline for health IT implementation was too short and that they had not had sufficient time to pilot and test use cases. Finally, as mentioned previously in this appendix, CHIR staff would have liked to receive additional funding to implement their proposed plans.

Looking forward, state staff and stakeholders had several concerns but were optimistic that roadblocks could be overcome. One CHIR representative was concerned about the time required to build relationships with nonmedical partners within the region and was worried about the sustainability of a project that was implemented over such a short course. SIM participants were looking forward to having committee structures reinstated to more effectively collect stakeholder feedback. Sustainability was becoming a concern to several stakeholders. One CHIR representative mentioned thinking ahead to sustainability and was hoping that CHIRs would be integrally involved in sustainability planning. Another CHIR representative suggested that effective negotiation with Medicaid health plans would be the only way to ensure the sustainability of Clinical-Community Linkages and other SIM reforms after the conclusion of the initiative.

State staff and stakeholders alike were very optimistic and excited about the potential for community change and population health improvement through the CHIRs and Community-Clinical Linkages specifically. Interviewees were confident that CHIRs had the potential to have a major impact on community health by focusing on social determinants of health. CHIR and PCMH staff were excited about the linkages that would be built between the medical system and social agencies and thought the SIM Initiative had the potential to build on existing service relationships. Overall, SIM participants were pleased with the guidance and support from CMS and characterized their relationship with their project officer as “a huge resource.”

F.2 Changes in Outcomes During the State Innovation Model Initiative

Interviewees of all types agreed that it was too early to comment on changes in outcomes from the SIM Initiative. However, primary care practice and CHIR staff were optimistic that the types of activities supported by the SIM Initiative had the potential to impact quality of care and clinical outcomes.

F.2.1 Progress toward a preponderance of care in value-based purchasing models and alternative payment models

VBP were widespread in Michigan well before the introduction of the SIM Initiative. Additionally, one of the state’s largest insurers, BCBS of Michigan, had already implemented VBPs for much of their population, and—as one state official said—“isn’t interested in doing

anything differently [from what it is] already doing.” Given the widespread existence of VBPs implemented by BCBS of Michigan, state staff and stakeholders explained that the SIM Initiative would not be the primary vehicle for achieving the 80 percent preponderance of care targets, although it would expand on what was already implemented throughout the state. Some interviewees thought that Michigan was already close to or had exceeded the 80 percent target or thought that they would reach it within the SIM demonstration period. Additionally, state staff stated that the SIM Initiative represented a major opportunity to convene a group to facilitate multi-payer reform. Michigan began collecting baseline preponderance of care data in 2017 and felt prepared to effectively measure progress moving forward.

Table F-1 shows the number of Michigan’s residents participating in the SIM payment and health care delivery models. These values were provided by the state in its fourth quarter 2016 progress report to CMMI.¹³⁷ Statewide, 346,665 Medicaid beneficiaries were receiving care through a SIM PCMH. No information was reported on the state’s other payers, such as Medicare, state employee, or commercial plans.

Table F-1. Populations reached by a value-based purchasing or alternative payment model in Michigan, latest reported figures as of fourth quarter 2016

Payer type	SIM models		Landscape
	Primary care PCMHs	SIM-wide	Any value-based purchasing or APMs
Medicaid	346,665 (16.0%)	346,665 (16.0%)	—

Source: Michigan SIM Quarterly Progress Report for fourth quarter 2016.

Note: Denominator (Medicaid population totaling 2,168,900) was provided by Kaiser Foundation State Health Facts (<https://www.kff.org/statedata/>, accessed November 27, 2017).

— = relevant data were not provided in the data source; APM = alternative payment model; PCMH = patient-centered medical home; SIM = State Innovation Model.

Table F-2 presents data on the extent to which Michigan’s Medicaid health plans are participating in the SIM payment and health care delivery models. These values were provided by the state in its fourth quarter 2016 progress report to CMMI.¹³⁸ No information was reported for commercial payers or Medicare in Michigan. Eleven Medicaid health plans are participating in the SIM Initiative in Michigan. Each of the 11 participating plans report that some percentage of their payments to providers fall under Category 2 (fee-for-service payments linked to quality) of the Payment Taxonomy Framework.

¹³⁷ These data values were not verified by CMMI. Thus, the RTI team cannot attest to their accuracy.

¹³⁸ These data values were not verified by CMMI. Thus, the RTI team cannot attest to their accuracy.

Table F-2. Payers participating in a value-based purchasing or alternative payment model in Michigan, latest reported figures as of fourth quarter 2016

Payer	Category 1 Payment: Fee-for-service with no link of payment to quality		Category 2 Payment: Payment linked to quality		Category 3 Payment: APMs		Category 4 Payment: Population-based payment	
	Number of beneficiaries	Percentage of payments	Number of beneficiaries	Percentage of Payments	Number of beneficiaries	Percentage of payments	Number of beneficiaries	Percentage of payments
Aetna Better Health	—	—	—	1.96%	—	—	—	—
Blue Cross Complete	—	—	—	1.42%	—	—	—	—
Harbor Health Plan	—	—	—	2.92%	—	—	—	—
McLaren Health Plan	—	—	—	1.38%	—	—	—	—
Meridian Health Plan of Michigan, Inc.	—	—	—	1.46%	—	0.01%	—	—
HAP Midwest Health Plan	—	—	—	1.64%	—	—	—	—
Molina Healthcare of Michigan	—	—	—	0.99%	—	12.55%	—	0.39%
Priority Health Choice	—	—	—	2.39%	—	—¹³⁹	—	—
Total Health Care	—	—	—	1.73%	—	7.13%	0.14%	—
United Healthcare Community Plan	—	—	—	1.03%	—	1.36%	—	3.45%
Upper Peninsula Health Plan, Inc.	—	—	—	0.31%	—	—	—	—

Source: Michigan SIM Initiative Quarterly Progress Report for fourth quarter 2016.

— = relevant data were not provided in the data source; APM = alternative payment model; SIM = State Innovation Models.

¹³⁹ The Quarterly Progress report for fourth quarter 2016 included a negative value, which was a typographical or reporting error.

The percentage of payments to providers in Category 2 range from 0.31 percent (Upper Peninsula Health Plan, Inc.) to 2.92 percent (Harbor Health Plan). Five of the 11 participating plans report that some percentage of their payments to providers fall under Category 3 (APMs) of the Payment Taxonomy Framework. The percentage of payments to providers in Category 3 range from slightly above zero (Meridian Health Plan of Michigan, Inc.) to 12.55 percent (Molina Health Care of Michigan).¹⁴⁰ Three of the 11 participating plans report that some percentage of their payments to providers fall under Category 4 (Population-based Payment) of the Payment Taxonomy Framework. The percentage of payments to providers in Category 4 range from 0.349 percent (Molina Health Care of Michigan) to 3.45 percent (United Health Care Community Plan). As the table indicates, the percentages for each plan do not equal 100 percent, which means that, as of the submission of the fourth quarter 2016 progress report to CMMI, health plans were submitting incomplete data related to the types of payments being made by Medicaid health plans.

Table F-3 presents the number of Michigan’s providers participating in the SIM payment and health care delivery models. There are 2,123 providers participating in a SIM PCMH model and 346 practices participating in a SIM PCMH model.

Table F-3. Number of physicians and practices participating in a value-based purchasing or alternative payment model in Michigan, latest reported figures as of fourth quarter 2016

Provider type	SIM models		Landscape
	Primary care PCMHs	SIM-wide	Any value-based purchasing or APMs
Physicians	2,123	2,123	—
Practices	346	346	—

Source: Michigan SIM Initiative Quarterly Progress Report for fourth quarter 2016.

— = relevant data were not provided in the data source; APM = alternative payment model; PCMH = patient-centered medical home; SIM = State Innovation Model.

F.2.2 Care delivery

State officials and stakeholders agreed that practice transformation and workforce development strategies had not yet progressed enough to impact how providers deliver care and the workforce’s ability to meet the demands of health system transformation. However, many interviewees noted that the impacts of MiPCT were ongoing and that the last several years were a time of significant practice transformation across the state. The SIM Initiative was viewed as a

¹⁴⁰ The value of -0.34 percent reported by Priority Health Choice does not seem like a plausible entry in this table, but it is the value reported by Michigan.

continuation of this work, and participants were confident that it was a step in the right direction toward improvements in care delivery.

F.2.3 Coordination of care, quality of care, utilization, and expenditures

State staff and SIM stakeholders felt that the implementation of payment and delivery reforms had not yet progressed enough to affect coordination of care, quality of care, utilization, or expenditures. State officials emphasized that PCMHs and CHIRs were expected to drive improvements in coordination of care, quality of care, utilization, and expenditures but that CHIRs would not be fully operational until late 2017, and they did not expect to see impacts until after that time. State officials and stakeholders expected that the Clinical-Community Linkages—if implemented as envisioned—would improve access to resources to address social determinants of health. The health IT initiatives described in this appendix should help improve coordination of care by facilitating communication and information exchange between providers. State officials and stakeholders agreed that it would take time for SIM activities to begin to have impacts on these measures but were hopeful that they would see some positive impacts.

F.2.4 Population health

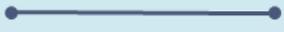
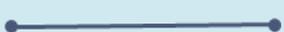
Table F-4 shows Michigan’s baseline population health outcomes based on 19 measures from the 3 years prior to the implementation of Michigan’s SIM award. The table also includes information from the comparison group states: Arizona, Kentucky, and Pennsylvania. The multistage procedure for the identifying the comparison group states is described in detail in Appendix L. The measures suggest that, compared with national averages, Michiganders are slightly less healthy than the average American, although the statistics are close in most cases.

Table F-4. Baseline measures of population health in Michigan, 2013–2015

Measure		2013–2015 Average	2013–2015 Trend
Health status is fair or poor	Michigan	15.2%	
	CG	16.3%	
	National	14.9%	
Ever diagnosed with diabetes	Michigan	9.7%	
	CG	10.2%	
	National	9.6%	
Ever diagnosed with hypertension ##	Michigan	33.0%	
	CG	33.5%	
	National	31.6%	

(continued)

Table F-4. Baseline measures of population health in Michigan, 2013–2015 (continued)

Measure		2013–2015 Average	2013–2015 Trend
Ever diagnosed with asthma	Michigan	15.3%	
	CG	14.7%	
	National	13.5%	
Has a functional limitation ##	Michigan	20.3%	
	CG	20.3%	
	National	18.2%	
Current smoker	Michigan	19.5%	
	CG	18.9%	
	National	16.4%	
Overweight	Michigan	65.8%	
	CG	65.1%	
	National	64.4%	
Obese	Michigan	30.5%	
	CG	29.5%	
	National	28.5%	
No leisure time physical activity or exercise, past 30 days	Michigan	23.7%	
	CG	24.3%	
	National	23.3%	
Limited fruit and vegetable intake, past 30 days	Michigan	84.4%	
	CG	84.7%	
	National	83.1%	
Any driving after drinking too much, past 30 days #	Michigan	4.0%	N/A
	CG	3.3%	
	National	3.3%	
No checkup, past year	Michigan	28.5%	
	CG	29.7%	
	National	29.4%	
No flu vaccine, past year	Michigan	63.7%	
	CG	59.8%	
	National	59.6%	

(continued)

Table F-4. Baseline measures of population health in Michigan, 2013–2015 (continued)

Measure		2013–2015 Average	2013–2015 Trend
No 65+ flu vaccine, past year	Michigan	42.2%	
	CG	38.0%	
	National	39.1%	
No 65+ pneumonia vaccine, ever	Michigan	29.9%	
	CG	29.2%	
	National	30.2%	
Among adults with hypertension, no hypertension blood pressure medication ##	Michigan	23.1%	
	CG	21.3%	
	National	22.4%	
No 50-75 colorectal cancer screening—no fecal occult blood test (FOBT), past year #	Michigan	91.3%	N/A
	CG	91.2%	
	National	90.7%	
No 50-75 colorectal cancer screening—no sigmoidoscopy or colonoscopy, past 5 years #	Michigan	41.7%	N/A
	CG	47.5%	
	National	46.0%	
No 50-75 colorectal cancer screening—no sigmoidoscopy or colonoscopy, past 10 years #	Michigan	29.4%	N/A
	CG	34.3%	
	National	33.6%	

Source: Behavioral Risk Factor Surveillance System, collected by CDC (2013–2015).¹⁴¹

Note: To facilitate the comparison of trends over time between the Model Test state, its comparison group, and the nation, the sparklines for each measure rely on the same scale for the vertical axis for all three groups. Because the vertical scale for the sparklines varies by measure, the sparklines are not comparable across different measures. Sparklines are not available for outcomes for which data are limited to 2014 (indicated by #). Sparklines for outcomes that are limited to data for 2013 and 2015 (indicated by ##) will be based on data for two points in time and so will appear more stable than outcomes for which data are available for 2013, 2014, and 2015.

CDC = Centers for Disease Control and Prevention; CG = comparison group; FOBT = fecal occult blood test; N/A = not available.

Table F-4 shows baseline measures of population health in Michigan compared with a comparison group and national averages in 2013–2015. For example, 15.2 percent of Michiganders described their health status as fair or poor on average during 2013–2015, compared with the 14.9 percent national average. Additionally, a higher percentage of Michiganders have ever been diagnosed with diabetes, hypertension, or asthma (9.7, 33.0, and

¹⁴¹ CDC. (2013–2015). *Behavioral Risk Factor Surveillance System survey data*. Atlanta, GA: U.S. Department of Health and Human Services, CDC.

15.3 percent, respectively), compared with the national averages (9.6, 31.6, and 13.5 percent, respectively) during 2013–2015.

Michigan had a higher rate of current smokers than national estimates (19.5 percent on average between 2013 and 2015, compared with 16.4 percent nationally over the same period). Measures of overweight and obesity were higher in Michigan compared with the national averages; Michiganders were also less likely to exercise or consume fruits and vegetables compared with the national averages between 2013 and 2015. A total of 28.5 percent of Michiganders had not had a checkup in the past year, compared with the 29.4 percent national average. Michiganders were also less likely to have received the flu vaccine (63.7 percent of Michiganders compared with 59.6 percent of the overall population). Among the 65+ population, 42.2 percent of Michiganders had not received the vaccine, compared with 39.1 percent of the national population.

F.3 Michigan Summary

Michigan received approximately \$70 million for a 4-year grant beginning in February 2015. The Medicaid managed care procurement in Michigan took place from May to October 2015 and delayed the implementation of some components of the initiative, as discussed in detail in AR1. The state received a no-cost extension, which extended the first year of the SIM award through July 31, 2016.

The SIM Initiative has evolved since the planning stages in several critical ways. Although the original plan was to be implemented statewide, the state elected to focus the CHIR activity in five regions: Jackson County, Muskegon County, Genesee County, Northern Region (a 10-county¹⁴² region covering the top of the northern lower peninsula), and the Livingston/Washtenaw counties area. The state selected these five regions to enable a diverse mix of circumstances under which to test the initiative. The five regions reflect a variety of urban, suburban, and rural communities and a mix of health market conditions (i.e., both large integrated medical systems and smaller independent providers).

Another major change to the initiative occurred in 2017, when the state—with extensive feedback from health plans and other stakeholders—elected to drop the ASC component of the initiative. The state and stakeholders jointly concluded that having ASCs serve as a risk-bearing entity as proposed in the state’s original plan would be duplicative with existing Medicaid managed care structures in the state. As implementation progressed, the CHIRs became regarded as the centerpiece of the initiative and the focus of the state-based evaluation. Without ASCs, the

¹⁴² The Northern CHIR region comprises the following counties: Antrim, Benzie, Charlevoix, Emmet, Grand Traverse, Kalkaska, Leelanau, Manistee, Missaukee, and Wexford.

VBP component of the initiative relies more heavily on a direct relationship between the Medicaid health plans and PCMHs.

Overall, activities were progressing in the AR2 analysis period as planned, despite some delays. As the implementation period began in August 2016, the state selected participants for the PCMH initiative, which built on the state's MAPCP initiative, MiPCT. The PCMH initiative officially launched on schedule on January 1, 2017. The PCMH initiative includes workforce development efforts by the state, including IHI-developed learning collaboratives that facilitate shared learning across PCMHs and technical assistance by practice coaches.

Additionally, the five CHIR regions began implementation in 2016 by setting up governance and stakeholder structures, conducting community health needs assessments, and drafting local operational plans. Each CHIR is governed by a backbone organization that ranges from health departments to nonprofit health care coalitions to academic policy research organizations.

As SIM PCMH and CHIR participants began their implementation periods, the state continued to work on health IT solutions to support and enhance care delivery and payment transformations. The state also collaborated with health plans and other stakeholders to create payment methodologies to support enhanced care coordination and encourage shared risk payment approaches. APMs were expected to go into effect for health plans in late 2017.

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Appendix G: State Innovation Model in Model Test States: New York

Key Results from New York's State Innovation Model Initiative July 2016–April 2017

- In a major implementation change in late 2016, New York moved away from its original approach of trying to urge payers to commit to making Advanced Primary Care (APC) payments statewide to instead trying to secure payers to commit to making these payments in specific geographic areas. As of the end of the second Annual Report (AR2) analysis period, four regions of the state have active efforts toward this end, but no private payer has agreed to make APC payments.
- The payer that has made the strongest endorsement of the APC model is one of the most important payers in the state, New York's Medicaid program, which has submitted a state plan amendment to CMS, seeking approval to offer new payments to primary care practices that are APC certified.
- New York launched the practice transformation agent (PTA) program to provide coaching and technical assistance to practices interested in adopting the APC model. By the end of the AR2 analysis period, PTAs had begun recruiting primary care practices to participate in the APC model.

This appendix provides an overview of the New York SIM Initiative activities that occurred between July 1, 2016, and April 30, 2017 (the Annual Report 2 [AR2] analysis period). This appendix describes important changes in New York's SIM Initiative; summarizes implementation and testing successes, challenges, and lessons learned; and discusses early changes and/or prospects of changes resulting from the Initiative. The findings in this appendix are based on findings from stakeholder telephone interviews, state document reviews, and state program and evaluation calls.

As a source for this appendix, the RTI team conducted 18 interviews with 24 individuals, including state officials, payer representatives, consumer advocates, and other stakeholders, between April 3 and April 26, 2017. The key topics covered during interviews were (1) changes in governance and program administration, (2) progress implementing SIM activities, (3) participation of payers and providers, (4) progress toward a preponderance of care in the state being provided through an alternative payment model, and (5) early indicators of changes in relevant outcomes. Interview participants included state officials, payers, representatives of provider organizations, and consumer advocates involved in the development and implementation of New York's SIM Initiative. Further details on the analytic approach used to produce this appendix are available in *Chapter 1*. Information on the number and type of stakeholders interviewed in New York is included in *Table 1-1*.

G.1 Implementation Activities

The broad consensus among study informants is that New York made some progress in implementing its SIM Initiative during the AR2 analysis period and is moving in the right

direction, but progress has been slower than expected. In the period covered by this report (July 2016 through April 2017), the bulk of SIM implementation activity in New York focused on trying to launch the Advanced Primary Care (APC) model, the state's version of the patient-centered medical home (PCMH) model and the centerpiece of its SIM Initiative. New York's vision is for private payers to voluntarily make new payments to primary care practices that adopt the APC model and for state contractors to provide SIM-funded technical assistance to help practices adopt the APC model. Making this vision a reality, however, is taking longer than originally anticipated by the state.

New York originally had aimed to launch the APC model statewide in early 2016, but its APC practice transformation agent (PTA) contractors did not start recruiting practices until early 2017. By April 2017, only 70 primary care practices had signed up to adopt the APC model. In addition, no private payers had finalized contracts with providers that include new payments for APC practices. In an effort to try a new approach to recruit payers, in late 2016, New York moved firmly away from its plan to implement the APC model statewide and instead began setting up regional committees charged with convincing payers to make APC payments.

Informants offered several reasons for the delay in launching the APC model. A common explanation was the reluctance of payers to agree to make additional payments to participating APC practices. Another reason cited by several informants was the lack of support from the Governor's Office to use strong policy levers to incent or compel payers to participate. Some of these informants felt that the Governor's Office could have pushed harder to persuade payers, including the state employee health plan, to participate. Another reason for the lack of firm commitments from payers may be their desire to wait and see "what Washington is going to do"; as one state official put it, "virtually at every meeting I am asked [about this], and we don't know."

Although the APC care delivery model had only begun to be implemented around the time of the interviews in April 2017, the state had been busy during the prior year, laying the foundation for when the model would launch. For example, New York entered into contracts with 10 organizations to serve as APC PTAs in different regions of the state. The state also sponsored a series of meetings and webinars designed to educate PTAs about the APC model and support them in their work with participating practices.

In addition, New York contracted with several organizations and individuals to staff three regional oversight and management committees (ROMCs), which are new groups charged with facilitating multi-payer APC payment negotiations in different regions across New York. At the time of the interviews, ROMCs had begun meeting in three regions: the Hudson Valley and Capital District (Albany), Finger Lakes (Rochester), and New York City and Long Island. A fourth multi-stakeholder group in the Adirondacks that pre-dated SIM was viewed as a de facto ROMC by state SIM staff. Establishing ROMCs in other regions of the state was also in the

works. New York also developed plans during the period covered by this appendix for several physician provider organizations to educate their members about the APC model. Finally, SIM staff continued to work with the New York State Medicaid office to align the APC effort with Medicaid's Delivery System Reform Incentive Payment (DSRIP) program, a component of New York's 2014 Medicaid waiver that also aims to transform primary care received by Medicaid beneficiaries.

Although the APC model is at the heart of New York's SIM Initiative, there are other components of the effort involving workforce development, population health improvement, and the use of health information technology (health IT) for quality measurement. Progress on these activities has varied. SIM-funded workforce development efforts have proceeded at a steady rate but have received mixed reviews from interviewees. Some felt that the findings produced by the SIM Workforce Workgroup and its five subcommittees have the potential to have a great impact, whereas others worried whether anything would be implemented by any entity (because no policy levers are being used to incent or compel organizations to make changes suggested by this work group). More concrete workforce-related actions pursued by the state included preparing to fund new rural residency programs and soliciting applications from organizations interested in participating in a Project ECHO (Extension for Community Healthcare Outcomes) telemedicine effort.

New York addressed population health by soliciting and reviewing applications from organizations that would bring together stakeholders from different sectors of a local community to implement interventions focused on preventing chronic disease. Population health also eventually will be addressed through some of the milestones that practices will be expected to achieve in the APC model.

In terms of health IT and quality measurement, New York had originally hoped to use data from its nascent All-Payer Database (APD) and state health information exchange (HIE) to populate a multi-payer quality measure report for APC practices. Because of delays in both data endeavors, however, New York developed an alternate plan during the AR1 analysis period to use payer-reported, claims-based, quality measure data to produce these reports in the interim period before the APD and the HIE are ready to be used for this purpose. During the AR2 analysis period, the state engaged in a pilot test of a claims-based, quality measure data request to a few payers and reviewed the quality measure data voluntarily submitted by these payers. At the time of the interviews, the state also was preparing to issue its first official data request to a wider range of payers, which was expected to result in the collection of quality measure data in the summer of 2017. Simultaneously, a health IT-focused work group worked on continuing to advance the HIE and the APD, so these data sources could be used to populate the APC practice reports in the future.

G.1.1 Governance and program administration

New York's SIM Initiative is directed and staffed by a state office called the Innovation Center, which was originally an independent office, not part of a state agency, but which, during the AR2 analysis period, was brought within the New York State Department of Health's (NYSDOH's) Office of Quality and Patient Safety (OQPS). The center was officially renamed the Office of Health Innovation, although it is still generally referred to as the Innovation Center. The SIM Initiative involves individuals working in several other NYSDOH offices, divisions, and advisory boards, including the Office of Public Health, the Office of Primary Care and Health Systems Management, the Office of Health Insurance Programs, the Office of Rural Health, and the State Council on Graduate Medical Education.

To solicit input from and achieve consensus among numerous stakeholder groups, both within and outside state government, the Innovation Center originally relied on several statewide work groups: the SIM Integrated Care Workgroup (ICW), which focused on developing the APC care delivery model; a joint SIM-DSRIP Workforce Workgroup, which includes various subcommittees; and a Transparency, Evaluation, and Health IT Workgroup, which predated the SIM Initiative. Work group members were given the opportunity to attend meetings in person or by phone, and meeting locations varied to allow for geographic diversity of in-person attendees.

New York's SIM Initiative underwent several important changes pertaining to governance and program administration in the period covered by this report. Specifically, the state continued to experience turnover in its SIM project director role, gaining a new project director and then a new state official overseeing the SIM effort. In addition, the medical director of the office leading the state's SIM effort (who was the former co-chair of the SIM ICW and one of the principal architects and proponents of the APC model) was replaced.

Several state officials and nonstate stakeholders identified these leadership changes as causing some implementation challenges for the SIM award, such as delays in releasing funding announcements or finalizing contracts, although no interviewees felt that the direction of the SIM Initiative or the staff commitment to the SIM Initiative's goals had been affected by these personnel changes. Nevertheless, one stakeholder reported that "when there is staff turnover, as there often is, we end up starting over [about the importance of our concerns] with a new set of people."

Significant changes in the work group structure of the SIM Initiative also took place over the past year. Although the Workforce and Health IT Workgroups continued to meet, the ICW was disbanded after issuing its final report in December 2016. To continue some of the functions of the ICW, the state formed three ROMCs, as noted earlier, which have been charged with convening and convincing payers in different regions of the state to make new payments to practices that adopt the APC model. By the end of this reporting period, a similar group that

predated the SIM Initiative in the Adirondacks region was serving as a de facto fourth ROMC, in the state's eyes. The state plans to form additional ROMCs in other regions of the state on a rolling basis in the future. For each of the three ROMCs, the state contracted with a convening organization to handle meeting logistics and a facilitator to guide meetings and communicate with committee members between meetings. In addition, a new statewide steering committee (SSC) will oversee ROMCs' efforts and provide a forum for ROMC representatives to share best practices with each other. The SSC will not be involved in payer negotiations, however.

A variety of state officials and nonstate stakeholders felt that moving from a statewide approach for convening payers to a regional approach was warranted, because "what works in some regions might not work in other regions," as one state official put it. More specifically, many payers have different market shares in different areas of the state and therefore different incentives to participate in a multi-payer effort in one region versus another. At the same time, others felt that a statewide approach could have worked if state officials had been willing to expend more political capital to persuade payers to support the APC model.

G.1.2 Stakeholder engagement

The work groups described in the previous section serve as New York's primary mechanism for receiving stakeholder feedback on the SIM Initiative. During the AR2 analysis period, the state's most important goal for stakeholder engagement was to have payers agree to make new payments to primary care practices that adopt the APC care delivery model. Respondents consistently acknowledged that this has not been an easy undertaking or produced the level of cooperation necessary for widespread adoption of the APC model.

Multiple informants agreed that the most promising region was the Hudson Valley and Capital District (Albany) region. Payers in this area were reported to be the closest to "signing on the dotted line." In this region, one state official thought that the cooperation of plans might be explained by the individuals leading the plans in that region. Unfortunately, many other payers in this and other regions were reported to be "doing the politically expedient thing to do, and sitting around the table but not saying much" at meetings, according to one state official.

Some state officials said that recruiting payers with existing value-based contracts with primary care practices to align with the APC model was inherently difficult, but others suggested that differences among regions might offer reasons for uneven progress. The Finger Lakes region, for example, is dominated by a single commercial payer that relies on two large accountable care organizations to provide care to its members. Although this payer attended the ICW meetings during the planning of the APC care delivery model, interviewees reported that the payer decided to not financially support the model, because most of its providers were already in value-based contracts. (This payer declined to be interviewed for this report.) In other regions of New York, however, the commercial health insurance market is more competitive,

which some interviewees thought might make these payers more interested in banding together to send consistent incentives to practices.

Although the perceived reasons for uneven progress varied, a consistent theme that did emerge among informants was that New York was not using all the policy levers at its disposal to promote the APC model. Several state officials and external stakeholders thought the Governor's Office could have done more to convince payers to make new APC payments. For example, although the New York State Department of Financial Services (DFS) has the authority to use the rate review process to incentivize financial support for the APC model among the payers it regulates, DFS has been reluctant to exercise this authority to the extent that some observers think it should. Similarly, some external stakeholders and state officials were surprised that the state employee health plan (an important payer in the state) was not more active in the ICW or the ROMCs. One stakeholder found it "unbelievable" that "the Governor's Office has dragged its feet on getting them [state employee health plan representatives] to come to the meetings." Instead, the state employee health plan was represented at these meetings only by the commercial payers that administer the plan on the state's behalf.

Although the state's reluctance to press more firmly on payers may be understandable, given the recent state of New York's insurance market (including a high-profile payer closure because of financial difficulties and some large annual premium increases), one payer representative nevertheless worried that the state was allowing payers to use APC payment models that were too different from each other, saying, "I hope the ... ROMCs don't fall prey to the same hesitation around things like alignment on payment. The last meeting, to be perfectly honest, was a disappointment. It's almost like the state isn't really encouraging alignment."

New York's stakeholder engagement strategy has uncovered some misalignment between the state's vision of primary care and that of providers. One provider representative felt that the state had not been responsive to provider feedback, saying, "I don't think the state understands how to listen very well. I've been in dozens of meetings. I've seen regulators and state bureaucrats lecturing physicians about how they should practice medicine." This stakeholder felt that small primary care practices, which are the main types of practices that New York hopes will adopt the APC model, "can't afford to participate in models that do an extensive amount of alteration of their practice," yet the state has continued to target these practices with its APC effort. Meanwhile, a payer who has participated in ROMC meetings stated, "[w]e need the smaller guys, but none of the smaller guys are going to take control and speak for the body [at ICW or ROMC meetings]. These bigger [practice] groups are the most boisterous ones and have their ducks in a row."

Consumer advocates also continued to feel that their perspective has not been sufficiently considered by the state. One consumer advocate said that:

“[t]he New York health care system is very provider-focused, and I don’t think the state, and the Department of Health in particular, has done so much to really get the patients’ point of view and to address the concerns that our groups have brought up to make the system more patient-responsive ... many of the recommendations we made weren’t incorporated into any of the final reports or the structure of the [SIM] Initiative.”

A specific concern noted by some consumer advocates was only requiring APC practices to develop individualized care plans for high-cost patients, and only among practices achieving the most advanced level of APC certification. One advocate believed that “every patient should have an individualized care plan and [be] having a conversation with their provider about their goals for health improvements over the coming year.” A second concern noted by consumer advocates was the lack of commitment to transparency in making APC Scorecards (practice-specific, multi-payer quality measure reports) available to consumers, instead of just APC practices, as is currently planned.

Some in state government have recognized these concerns and have been persuaded of the importance of improving consumer input. As one state official put it, “I was a big skeptic in involving consumers in a meaningful way, but I have had my own transformation by talking to consumer representatives, and I now can clearly see why this is an important piece of driving health care in the nation—by asking patients what is valuable to them.”

G.1.3 Delivery systems and payment reforms

New York has struggled to secure firm commitments from payers to make APC payments, although it has secured a tentative commitment from Medicaid, which submitted a state plan amendment (SPA) to CMS seeking to expand an existing statewide PCMH payment model so that APC practices could qualify for payments, in addition to National Committee for Quality Assurance (NCQA) PCMH practices. These payments were expected to be available from both Medicaid managed care plans and the state’s fee-for-service Medicaid program. If CMS approves New York’s SPA, the state will offer \$3.00 per beneficiary per month (PBPM) to practices recognized as a Level 2 PCMH under NCQA’s 2014 standards and \$7.50 PBPM to practices recognized as an NCQA Level 3 practice or an APC Gate 2 or Gate 3 practice.¹⁴³ Despite this tentative commitment from Medicaid, New York SIM staff readily acknowledged that they had not secured other firm payer commitments for the APC model.

¹⁴³ At present, APC practices do not qualify for payments PBPM through Medicaid.

Under its SIM Initiative, New York planned “not to compel but to incent” payer participation. Previously, one incentive New York intended to offer was to let payers, whose health insurance plans are subject to rate review by the state, count APC payments and other value-based payments (VBPs) in the numerator of their Medical Loss Ratio (MLR). Although this incentive was offered during the current analysis period, the policy did not lead to an increase in payers offering APC payments, because payers already were counting such payments in the numerator of their MLR. Another incentive contemplated by DFS would have allowed payers to have higher annual premium increases if they made APC payments to practices.

Ultimately, however, this was not offered to payers. The explanation offered by New York officials was that payers had requested large premium increases in 2017, and the state did not want to do anything to further increase insurance premiums. As one state official put it, “if [premiums are] going up 12 percent, do we really have the stomach to make it go up 13 or 14 percent? It was felt, ‘no, we did not.’”

Because of the lack of strong financial incentives for payers to make APC payments, one of the state’s main selling points to payers now is that, if they agree to align with each other to financially incent practices to adopt the APC model, they may be able to produce a financial incentive large enough to gain the attention of small practices. In contrast, several interviewees felt that, at present, payers usually offer practices their own care delivery model. This customization by plans has caused many small practices to not go to the trouble of adopting any new care delivery models. Whichever model the practices chose would result in new payments for only a few patients covered by one of these payers and, thus, a small amount of money for the practice. As one payer put it, “where we see the value of APC with our population is penetrating the market above and beyond where we have existing value-based contracts—if we align ourselves via the APC initiative, then I believe we could further penetrate.”

Interestingly, several interviewees reported that payers that insure a relatively small share of enrollees in any given region seemed to be the most likely to be interested in making new APC payments. Although the reason behind this was unclear to a state official who noted this trend, a payer explained the reason was that a smaller price tag was easier to agree to: “The bigger the price tag, the more scrutiny it gets.” Payers that cover a large share of enrollees in an area tend to be less interested in negotiating a common payment and care delivery model with other payers, because such payers already insure a large enough share of many practices’ patients to gain these practices’ attention. Payers with a bigger market share may not see the appeal of moving from their preferred payment and care delivery models to negotiated models that did not focus on their priorities. As one payer put it, “for the bigger price tag, you want to be sure that you’re actually focusing on what’s important to *you*, as a plan, as opposed to the state’s overall health goals.” According to this payer, market share explained why the state could recruit payers

for a prior multi-payer PCMH initiative in the Adirondacks region: “It was somewhere in the neighborhood of 10,000 members for each payer, which is minimal.”

Interviewees reported that payers do not see the value of an APC payment model for their larger, more advanced practices, which often have already agreed to take on some financial risk through shared-risk or total-cost-of-care contracts. The three-phase payment model that the state recommended payers consider for APC includes a lump sum payment, followed by flat payments made per member per month during the first two proposed phases of a practice’s transformation, which would not be adjusted based on a practice’s performance on cost or quality measures. Interviewees reported that some payers considered the state’s payment model “a step backwards,” compared to the value-based arrangements they had often already entered into with larger practices.

One payer identified additional reasons payers might not support APC: national payers might not be inclined to pursue a “one-off” payment model that differs from their national payment model, and hospital-sponsored payers might not see the benefit of allocating more resources to primary care practices. This payer felt that regional payers outside of New York City (e.g., the Capital District Physicians’ Health Plan in Albany) were the most likely to support the APC payment model. Other interviewees agreed that the Albany area was the region most likely to implement the APC model first.

Even though a range of interviewees believed at least some commercial payers were interested in pursuing an APC payment model for smaller practices, New York struggled to finalize commitments from these payers. Two state officials said they were not sure what the best way forward was. One admitted that “it is still not clear in my mind what we are working for—I doubt we will have a [Memorandum of Understanding] with plans because I don’t think New York should be in the middle of that and negotiating with the plans and then the providers.” Instead, this official envisioned payers signing letters of intent to offer APC contracts to providers, and then negotiating contracts with providers one-on-one. At the same time, the official acknowledged that this was a less active role than CMS took in its most recent multi-payer PCMH initiative, Comprehensive Primary Care Plus (CPC+). Meanwhile, one payer felt that the state was being too “flexible” by not encouraging payers to use the same methodology for attributing patients to providers, the same payment structure, or the same performance measures for their APC payment models. This payer felt that alignment was needed, so that small practices considering adopting the APC model would not have to understand numerous payers’ different attribution logics or measure sets.

All in all, SIM staff were worried about whether they would be able to secure enough payers to ensure the success of the APC model. One commented that “it’s hard for a multi-payer initiative to be successful when the payers are lukewarm.”

In contrast to the lack of policy levers being used on payers, the state is employing a policy lever to try to encourage primary care practices to adopt the APC model. Under the state's Medicaid DSRIP program, participating practices must become recognized either as a Level 3 PCMH under NCQA's 2014 standards or as a Gate 2 or Gate 3 APC practice. Because the deadline to adopt one of these models (March 31, 2018) had not yet passed at the time of the interviews, it is too early to tell whether this DSRIP requirement will be an effective incentive to motivate practices to adopt the APC model.¹⁴⁴ Another way the state hopes to increase clinicians' interest in adopting the APC model is by arranging for APC practices to be eligible for maintenance-of-certification credits. At the end of the AR2 analysis period, negotiations were underway with the American Board of Family Medicine.

Several interviewees worried that practices may not be eager to adopt the APC model if payers do not end up offering APC payments to pay for new expenses like care coordinator salaries. A state official summed up providers' views as follows: "The provider community has bought into this concept—they are willing to do this, but they have to be compensated." As a consumer advocate put it, primary care physicians are "already the most underpaid practitioners in the health care system, and then to have all of these government entities throwing different milestones and metrics at them ... It seems like a heavy lift." A payer observed that "a lot of physicians view [adopting the APC model] as a lot of work for not a lot of money," yet acknowledged that practices might sign up to adopt the model out of an awareness that if they want to stay in practice, they will eventually need to adopt some version of the PCMH model of care. A representative of a provider organization observed that primary care physicians felt "some fear and panic" and "just want to see their patients." This observer reported that the lack of confirmed APC payers has been "a big barrier" to having practices agree to adopt the APC care delivery model.

Although delayed, New York had successfully executed contracts with a first round of 10 APC PTA organizations in all eight regions of the state by April 2017. The state had also brought these organizations together for train-the-trainer meetings and conference calls, and these organizations had signed up 70 practices interested in adopting the APC model by the end of the AR2 analysis period, as noted earlier. State officials expected many more practices to sign up in the coming months as APC PTA organizations ramped up their efforts. In total, the state hoped to sign up 1,200 practices through its initial set of APC PTA organizations. In addition, at the end of this reporting period, New York was in the process of executing contracts with a second set of PTAs, which will help further expand the reach of the APC model.

¹⁴⁴ DSRIP practices are not eligible to receive APC technical assistance from SIM-funded PTAs.

At the same time, several interviewees expressed concern that competing federally funded initiatives targeting primary care practices could make it harder to recruit practices to the APC model.¹⁴⁵ As one provider organization representative put it, “it’s a confusing place and confusing time.” Another stakeholder reported that “the confusion of multiple models freezes practices as they try to figure out what might work best for them.” Concern about competing initiatives was enough of an issue that the state developed a decision-tree-style infographic designed to help primary care practices select the practice transformation opportunity that was best for them—noting the differences between the SIM APC effort, the CPC+ demonstration in Albany, New York’s DSRIP Medicaid program, and CMS’ Transforming Clinical Practice Initiative.¹⁴⁶ New York also developed a SIM-funded database to track which program primary care practices participated in to ensure that no practice was receiving technical assistance from more than one federally funded program.

The APC model is not the only way that New York hopes to influence the health care delivery system. The state also would like to incorporate value-based insurance design (VBID) principles into the New York State employee health insurance plan, which interviewees reported had not been re-procured in decades. After initially making limited headway on this front, New York SIM staff were pleased to learn that the state agency overseeing the state employee health plan was considering re-procuring the contract. SIM staff believed this re-procurement presented a potential opportunity to modify the benefit structure of the state employee health plan to incorporate VBID principles. As of April 2017, the state was awaiting an analysis and recommendations from a consultant about whether to proceed with a re-procurement.

G.1.4 Health information technology and data infrastructure

As has been planned since the beginning of the SIM test period, New York hopes to enhance its health IT data infrastructure enough to allow quality measure data to be generated using data from two preexisting health IT sources: the state’s HIE, called the Statewide Health Information Network for New York (SHIN-NY), and the state’s nascent APD. Both efforts are led by the NYSDOH OQPS, and SIM staff are involved with these initiatives largely through the Transparency, Evaluation, and Health IT Workgroup.

¹⁴⁵ An important note related to overlapping programs concerns the interaction between APC and CPC+. Although APC PTAs will give practices the option of only being assessed into an APC gate and not receiving technical assistance, the state and CMS have decided to prohibit practices that receive technical assistance and payments through CPC+ in the Albany area from also receiving new payments from other, non-CPC+ payers through the APC program. This decision means the 157 practices in Albany participating in the CPC+ initiative will be ineligible to participate in the APC program, thus reducing the SIM Initiative’s potential reach in that area.

¹⁴⁶ NYSDOH. (2016). *Transparency, evaluation, and health information technology workgroup—11/23/2016 meeting slides*. Available at https://www.health.ny.gov/technology/innovation_plan_initiative/docs/2016-09-23_hit_wrkgrp_final_rpt.pdf

Eight regional health information organizations (RHIOs) facilitate health information exchange at the regional level across the state and connect to the SHIN-NY. New York also allows health care systems with their own HIE to connect to the SHIN-NY. The SHIN-NY's Statewide Patient Lookup feature enables providers to find patient records from across different regions. According to a state official, most hospitals in New York had adopted the SHIN-NY by the end of the AR1 analysis period, in spring 2016.¹⁴⁷ Although SHIN-NY is operational, it continues to develop as the RHIOs grow in adoption and capability. SIM funds have been used to hire a consultant to help further develop the SHIN-NY's infrastructure.

Although New York's SIM Initiative provides relatively little funding for health IT, some work of the SIM-funded APC PTAs focuses on health IT. For example, SIM APC PTA funds are being used to encourage practices to improve their health IT capabilities. For example, connectivity to SHIN-NY is a milestone that Gate 3 APC practices are expected to meet, and PTAs will help APC practices use their local RHIOs for sending and receiving alerts on patients. As of the fall of 2016, only about a quarter of New York's clinical practices were using the SHIN-NY,¹⁴⁸ indicating that there is considerable work for PTAs to bring APC practices into the network.

Progress on the APD is behind the schedule originally developed as of the end of the AR2 analysis period. The state now plans to start importing Medicaid data during 2017 and then incorporate commercial data in January 2018. The Transparency, Evaluation, and Health IT Workgroup has been involved in revising the architecture and regulations of the APD to refine the patient privacy and consent rules that will allow health plans to submit data to the APD, among other things. Although there have been some delays on the production side of the database, the availability of data to populate the APD also is a problem. As one state official put it, "the big hurdle is the [*Gobeille v. Liberty Mutual Insurance Company*, 2016] court decision¹⁴⁹ and what that means, given that New York has such a high percentage of self-insured." According to interviewees, about half of the commercially insured in New York are enrolled in self-insured plans—plans that the United States Supreme Court ruled could not be compelled by states to submit claims to APDs.

¹⁴⁷ To increase the number of hospitals connected to the SHIN-NY, in spring 2016, New York adopted a regulation requiring all hospitals to connect to the SHIN-NY by March 2017. See NYSDOH. (2016, April). SHIN-NY Spotlight, "Who is connected to SHIN-NY?" Issue 1, p. 3. Retrieved from http://www.nyehealth.org/nyec16/wp-content/uploads/2017/11/shin-ny_spotlight_issue1_april_2016_UPDATE.pdf

¹⁴⁸ NYSDOH. (2016, September). SHIN-NY Spotlight, "Who is connected to SHIN-NY?" Issue 2, p. 3. Retrieved from http://www.nyehealth.org/nyec16/wp-content/uploads/2016/09/shin-ny_spotlight_issue2_september_2016_FINAL.pdf

¹⁴⁹ *Gobeille v. Liberty Mutual Insurance Company*, No. 14-181, 577 U.S. ___, slip op. at 1, 13 (2016). Retrieved January 10, 2018, from https://www.supremecourt.gov/opinions/15pdf/14-181_5426.pdf

G.1.5 Practice transformation and workforce development

In addition to the practice transformation efforts being pursued through the development and deployment of the APC care delivery model, New York is pursuing various workforce development efforts through a joint SIM-DSRIP Workforce Workgroup. There were four subcommittees of this group at the end of the AR1 analysis period; a fifth subcommittee was subsequently established to address a different dimension of workforce development, namely integrating behavioral health into primary care. The five workforce subcommittees have worked on (1) reviewing the scope of care coordination activities carried out by licensed and nonlicensed health care workers and patients' family and friends in an effort to address barriers; (2) identifying core concepts in care coordination that could be included in educational curricula for licensed professionals; (3) identifying key concepts that could serve as the basis for developing core curriculum guidelines for training care coordinators¹⁵⁰; (4) identifying information gaps on the health care workforce and recommending a statutory change that would require health care practitioners to provide demographic, educational, and practice characteristics; and (5) exploring how behavioral health can be better integrated into primary care practices. This work will continue in the AR3 analysis period.

The fifth subcommittee was added to address issues that had emerged during the first year of the Workforce Workgroup's activities, which were "specific to behavioral health integration, and the behavioral health field, and the shortages we're seeing," according to one state official. Apart from the third subcommittee, which disbanded in August 2016 after publishing a guide containing potential core curricula for training care coordinators, the other workforce subcommittees continue to meet.

New York also planned to allocate SIM funds to support several workforce initiatives during the AR2 analysis period. For example, the state had identified organizations to contract with to set up rural residency programs. SIM funds will be used to set up new primary care graduate medical education (GME) residency training programs in rural areas and cover costs that academic medical centers and partnering rural community health organizations incur as they write curricula for GME programs, hire staff, and apply to CMS for GME program approval. As one state official elaborated, "not all of their efforts will occur in the hospitals—some will be in the community clinical settings; this varies by grantee." According to one state official, the goal of this initiative is "to help get [primary care] training in areas where training doesn't exist—because the data substantiates that you tend to stay and practice where you've trained."

¹⁵⁰ NYSDOH, DSRIP/SIM Workforce Workgroup: Subcommittee to Identify Recommended Core Curriculum for Training Workers in Care Coordination Titles. (2016, June). *Guidelines for core curriculum to train care coordination workers*. Retrieved from https://www.health.ny.gov/technology/innovation_plan_initiative/workgroup_workforce.htm

Also, New York released a solicitation for applications from organizations interested in participating in a Project ECHO telemedicine effort, through which rural primary care practices would connect with clinical experts in academic medical centers to receive mentoring and training to bolster “the capacity of primary care practices to manage patients with complex health needs.”

Finally, New York also plans to fund an initiative aimed at trying to convince physicians who trained in New York state to move to and practice in rural areas of the state, although plans for this effort are still in development. Initially, the state envisioned this effort as funding brief tours of rural areas that could help primary care physicians decide whether they might be interested in moving to a rural area. Although a decision had not been reached by the end of this period, New York was gravitating toward funding travel and lodging costs for primary care physicians to engage in much lengthier, 8-week visits to rural areas, allowing them to practice and live in a rural area where they were considering moving.

Interviewees had mixed views of New York’s SIM workforce efforts, with one state official calling them “unbelievably important” and “really helpful” to the success of the overall SIM Initiative, while another state official viewed them as “[not] a hugely important piece,” because the workforce subcommittees “don’t have teeth,” in the sense that they were not making recommendations but were instead issuing fact-finding reports. A nonstate informant also shared this latter sentiment, noting that one of the problems with the workforce work group was that its recommendations were not being implemented by anyone. This informant highlighted as an example a care coordination definition that one subcommittee had come up with, which was “just kind of out there, floating in the air—no one is required to look at it ever again.”

Meanwhile, a state official felt that a challenge in addressing workforce needs was that “a lot of things we’re looking at now probably won’t come to fruition for a couple of years” because “it’s ultimately up to the government in some cases to make some changes, or major medical schools to adopt some of these changes.” A more optimistic state official thought that New York’s SIM workforce activities may actually end up producing the largest impact of all, stating that “my personal opinion is that if we are going to have any really lasting impact with the SIM award, you will see it mostly in the areas of workforce, because you are getting people to sit down and talk about scope of practice, scope of license, what care coordination is, and who should do it, the funding of new residency programs across the state.” This informant went on to explain that “the name of the game is care coordination, and you have to train your workforce to operate in this environment.”

G.1.6 Population health

New York is using a two-pronged approach to improve population health through its SIM Initiative. First, the state is addressing population health through the APC care delivery model,

which includes milestones for practices that are related to population health. To attain Gate 3 APC recognition, practices must participate in local and county health collaborative activities associated with New York State’s Prevention Agenda, annually identify and contact patients due for preventive services or chronic care management, and develop a process to refer patients to structured health education programs. During the period covered by this report, New York started offering webinars to educate PTAs about the state’s population health goals and efforts and better equip PTAs to work with practices on population health milestones.

The second way New York is attempting to address population health through the SIM Initiative is by funding Linking Interventions for Total (LIFT) Population Health awards. LIFT awards are designed to bring together stakeholders from different sectors of a community with the goal of developing and implementing interventions that focus on preventing chronic disease. Toward that end, LIFT awardees are to adopt approaches that are consistent with CMS’s adaptation of the three buckets of prevention from the Centers for Disease Control and Prevention (CDC): traditional clinical approaches, innovative patient-centered care, and community-wide health.¹⁵¹

The LIFT Population Health request for applications (RFA)¹⁵² promotes the idea that “common health improvement goals can best be achieved when there is a coordinated approach across all three buckets.” Thus, applicants were directed to submit proposals that addressed multiple buckets and to approximately distribute their “level of effort per bucket” as follows: (1) bucket one—10 percent, (2) bucket two—30 percent, and (3) bucket three—60 percent. For example, a LIFT intervention designed to target patients with asthma might be understood as touching all three buckets in the following way: (1) bucket one—diagnosis, action plan, medications, and clinical guidance; (2) bucket two—community health worker does home visit, assesses triggers, counsels patient, and offers limited remediation; and (3) bucket three—community standards on housing, limits to indoor and outdoor pollutants, and reductions in smoking rates.

As another example, one informant described a LIFT applicant that planned to include a group health education class for overweight patients at risk of developing diabetes, using the YMCA’s Diabetes Prevention Program curriculum. This informant saw LIFT awards as a “big opportunity” to connect primary care practices with community social support services that

¹⁵¹ Auerbach, J. (2016, May/June). The 3 buckets of prevention. *Journal of Public Health Management and Practice*, 22(3), 215–218. doi: 10.1097/PHH.0000000000000381

¹⁵² Health Research, Inc. (2016). *New York State Department of Health, Office of Quality and Patient Safety. Request for Applications: L.I.F.T. Population Health. (RFA Number QPS-2016-04)*. Retrieved from <https://www.healthresearch.org/wp-content/uploads/2016/08/QPS-2016-04-Population-Health-RFA-FINAL-2016-8-4-16.pdf>

“practices can’t do,” and, furthermore, that the awards would create connections “between community services and primary care ... to change how things are working.”

During the AR2 analysis period, New York released an RFA for LIFT awards. Applicants were invited to focus on one of the five chronic disease prevention goals included in the New York State Prevention Agenda 2013–2018,¹⁵³ but all applicants ended up focusing on the same goal: preventing and controlling obesity and diabetes. The state solicited and reviewed funding applications and conditionally notified six LIFT awardees spanning urban, rural, upstate, and downstate communities.

G.1.7 Quality measurement alignment

The primary quality measurement activity being undertaken as part of New York’s SIM Initiative is the APC Scorecard. Once launched, the Scorecard will give APC practices multi-payer quality measure data to help inform their quality improvement activities. The state envisions the Scorecard as eventually including National Quality Forum-endorsed metrics within six domains: prevention, chronic disease, behavioral health, patient-reporting, appropriate use, and cost. As noted earlier, New York intends to eventually use its APD and HIE data to populate the Scorecard. Given that the APD and HIE are still works in progress (see *Section G.1.4*), New York in the meantime plans to rely on claims-derived quality measure data reported by payers on the subset of the Scorecard measures that can be calculated using claims data. This consists of 13 measures within three domains: prevention, behavioral health, and appropriate use.

During the AR2 analysis period, New York conducted a pilot test meant to inform the development of the Scorecard, using data voluntarily reported by four payers. The state’s vendor for this pilot test advised that with these payer-submitted data, it was sometimes difficult to link primary care providers to individual practice sites, because payers sometimes contracted with an intermediary entity, like a physician group, rather than an individual practice site. At the end of the AR2 analysis period, New York was finalizing a request for data from all carriers with Medicare Advantage, Medicaid, or commercial plans. Data are due to the state during third quarter 2017. Although consumer advocates and some state officials expressed a preference for ultimately making APC Scorecard data available to consumers, in addition to APC practices, interviewees reported that there had been resistance to this idea from some parties. At the end of the reporting period, whether the APC performance metrics would be made publicly available was yet to be determined.

¹⁵³ New York State, Department of Health. (2015). *Summary: The prevention agenda 2013–2018: New York state’s health improvement plan*. Retrieved from Health.NY.gov Web site, https://www.health.ny.gov/prevention/prevention_agenda/2013-2017/summary.htm

G.1.8 Lessons learned and looking forward

Informants had several ideas about how they would do things differently to improve New York’s SIM Initiative and its implementation. Multiple informants, for example, felt that the state should have obtained payer commitment right at the beginning of the SIM Initiative. One thought there should have been “a clear ask” of what the state wanted from the payers right away. Informants explained that the state did not do this because it was worried that asking for financial commitments from payers early on “... might alienate [them], so they decided to table it—and so here we are,” with no commercial payer commitments. As one payer noted, “we met for the better part of two years and in my opinion danced around the most important topic.”

Another idea suggested by some informants was that the state should have used more of its regulatory authority to incent financial support of the APC model by payers. For the first year and a half of the SIM Initiative, the state was planning to use its health plan rate review authority as a means of promoting payer participation in the APC. New York eventually backed away from using some of the stronger incentives available through this policy lever, when it decided to not allow payers to have higher premium increases if they were making APC payments. As noted earlier, this decision was made because annual premium increases for the individual and small group markets were already high, and state officials did not want to increase them further. Informants also felt that the state should have used its authority as a purchaser and pushed harder to secure early commitments from Medicaid and the state employee health plan to financially support the APC model. An earlier commitment from these payers may have helped in recruiting private payers to make APC payments, according to some informants.

Other recommendations included making the APC model less complex and less prescriptive. Another was that the state should have considered starting with a narrower effort, perhaps focusing simply on aligning quality measures among payers. Consumer advocates felt that the design of the SIM Initiative should have been informed early on by engagement with consumers. Gaining a better understanding of what consumers “need and what they don’t get out of health care,” according to these informants, would have made for a better initiative.

Several informants also mentioned the importance of fully understanding the different markets that operate in a state before launching a multi-payer effort, with one informant suggesting that an environmental scan of markets be conducted early on in any state’s efforts. An environmental scan also could help ensure that participants have a full understanding of all the different care delivery transformation and payment reform programs operating in a state. This, informants emphasized, is critical information that helps inform how to brand and market a new initiative; sound messaging, in turn, can help avoid confusion, especially among providers.

Although a statewide approach to recruiting payers has its benefits (e.g., easier to administer, may lead to greater program consistency), interviewees thought it may be beneficial

to first look for geographic markets that have a critical mass of payers willing to participate in a new effort and start implementation in those areas. Finally, interviewees noted that so far, recruiting APC payers in markets dominated by a single payer has been more challenging than in regions with many payers.

Some New York informants also endorsed the state’s approach of focusing its transformational efforts on smaller practices, because payers tend to target larger practices, which tend to be better resourced than smaller practices, for transformational help. A state effort targeted at small practices could potentially fill this gap. Finally, informants cautioned, do not underestimate the difficulty and complexity of implementation, which takes time and sustained vision and leadership at the highest level of state government.

Going forward, the biggest implementation issue for New York involves recruiting more payers to participate in the APC initiative. If enough payers do not commit to making new payments to APC practices, informants expect that achieving widespread adoption of the APC model by primary care practices in New York will be difficult. Other challenges involve firming up and finalizing commitments from Medicaid. Finally, several stakeholders commented that the general uncertainty about the direction of health care at the federal level was causing many stakeholders to adopt a wait-and-see attitude generally about health care, including the SIM Initiative.

G.2 Changes in Outcomes During the State Innovation Model Initiative

G.2.1 Progress toward a preponderance of care in value-based purchasing models and alternative payment models

State informants consistently acknowledged that reaching the SIM Initiative’s preponderance of care goals—80 percent of primary care practices delivering care that is integrated with behavioral health, specialty care, and community supports, and 80 percent of primary care providers in VBP arrangements with payers by 2019—will be a challenge. One representative informant referred to these goals as an “unbelievably tall order,” and most other interviewees agreed that these ambitious goals were not likely to be achieved within the timeframe provided.

Although generally not hopeful about reaching preponderance of care goals within the SIM Model Test period, state informants were optimistic that New York could potentially reach these goals at some point beyond this period. Exactly when depended on how preponderance of care was defined. State officials felt that New York likely would not obtain the 80 percent goal with the SIM APC model alone. If other value-based models—such as CPC+ and Medicaid and commercial payers’ value-based contracts—also were counted, then the state “[has] a shot” of reaching the 80 percent mark, albeit most likely a few years after the SIM Initiative ends.

State informants also felt that New York health care stakeholders have all been informed that the state is increasingly moving into VBP models and away from the fee-for-service world. As one state official explained, “providers and payers understand that there is no turning back, and we will see an uptick in practices transforming their operations to look more like an advanced primary care model.” At the same time, state officials recognized that VBP models are still relatively new, and implementing them will be challenging. This is especially true, informants argued, because the models require insurance companies and providers to “do things they have never done before.” Securing smaller primary care practices—the “moms and pops” with one or two physicians—“to jump in full throttle” on value-based care was characterized by payer informants and state officials as being unlikely. If the state is successful in launching the APC model, which is targeted at transforming small practices, one payer felt that, combined with private payers’ own value-based efforts, New York might be able to attain close to the 80 percent mark.

Table G-1 presents the extent to which New Yorkers are receiving care from primary care practices that are in VBP arrangements that incent adoption of an APC-like care delivery model, according to the state. New York reported that 100,000 individuals or 0.8 percent of New Yorkers were receiving care from such practices in third quarter 2016. No information was reported for specific payers in the state.

Table G-1. Populations reached by a value-based purchasing or alternative payment model in New York, as of third quarter 2016

Payer type	SIM models		Landscape
	APC	SIM-wide	Any value-based purchasing or APMs
Statewide	100,000 (0.8%)	100,000 (0.8%)	—

Source: New York fourth quarter 2016 progress report to CMMI.

— = relevant data were not provided in data source; APC = Advanced Primary Care; APM = alternative payment model; SIM = State Innovation Model.

Table G-2 presents the extent to which providers are participating in VBP models that incent the adoption of APC-like care delivery models, according to the state. Less than 1 percent (0.9 percent) of New York’s providers were reported as being involved in such arrangements. No information was reported for practice participation in the state. According to state officials, these numbers reflect individuals and providers who participated in the Multi-Payer Advanced Primary Care Practice initiative in the Adirondacks, which predated the SIM Initiative. The state has not reported any payers as having officially made commitments to make new payments to practices that adopt the APC care delivery model.

Table G-2. Number of providers participating in a value-based purchasing or alternative payment model in New York, as of third quarter 2016

Provider type	SIM models		Landscape
	APC	SIM-wide	Any value-based purchasing or APMs
Primary care providers	230 (0.9%)	230 (0.9%)	—

Source: New York fourth quarter 2016 progress report to CMMI.

— = relevant data were not provided in data source; APC = Advanced Primary Care; APM = alternative payment model; SIM = State Innovation Model.

G.2.2 Care delivery

Because only 70 primary care practices had signed up to adopt the APC care delivery model by April 2017, interviewees felt it was too early in the implementation process to assess whether the model had influenced how health care providers deliver care. A few informants suggested that it could take more than 2 years after the APC model had been implemented before changes could be detected at the practice level.

G.2.3 Coordination of care, quality of care, utilization, and expenditures

Given the limited degree of APC model implementation that had taken place as of the end of the AR2 analysis period, informants similarly felt that it was too soon to expect care coordination, care quality, utilization, or expenditures to have been affected by the SIM Initiative.

A few informants suggested that the effects of the APC model on quality, cost, care coordination, and patient experience could be observed after 12 months of implementation; however, that depended on how advanced a given practice was in terms of health care transformation when it signed up for the APC model. Informants noted that although practices at the beginning stages of transformation might take 2 years or more before changes are observed, for more advanced practices such changes could occur “in months rather than years.” Several informants thought that quality improvements, as indicated by such measures as patient experience and satisfaction ratings, might be observed first. Some other interviewees thought that improvements in utilization measures—such as rates of hospital readmissions, emergency room visits, and avoidable hospitalizations—might follow, but these impacts would not be observed until later. The long amount of time necessary to observe impacts makes it hard to sell payers on supporting care delivery models like the APC, according to one interviewee, “almost like a kiss of death.”

Although it was suggested that some of the effects of the APC model could be assessed during the SIM Model Test period, informants cautioned that the workforce strategies being pursued under the SIM Initiative are particularly long-term strategies (e.g., changing medical

curricula, developing training programs) whose impacts are not likely to be observed for several years.

G.2.4 Population health

Table G-3 shows New York’s baseline population health outcomes based on 20 measures from the 3 years prior to the implementation of New York’s SIM award. The table also includes information from the comparison group (CG) states: California, Pennsylvania, and New Jersey. The multistage procedure for identifying the CG states is described in detail in **Appendix L**. The measures suggest that, on balance, New Yorkers’ overall health status was comparable to that of the nation. As shown in **Table G-3**, 14.5 percent of New Yorkers report being in fair or poor health, compared with 14.9 percent of Americans, overall. Similarly, New Yorkers were slightly less likely to report having a functional limitation (16.9 percent in New York, compared with 18.2 percent nationally).

Table G-3. Baseline measures of population health in New York, 2013–2015

Measure		2013–2015 Average	2013–2015 Trend
Health status is fair or poor	New York	14.5%	
	CG	14.5%	
	National	14.9%	
Ever diagnosed with diabetes	New York	9.1%	
	CG	9.0%	
	National	9.6%	
Ever diagnosed with hypertension ##	New York	29.3%	
	CG	29.7%	
	National	31.6%	
Ever diagnosed with asthma	New York	14.6%	
	CG	13.6%	
	National	13.5%	
Has a functional limitation ##	New York	16.9%	
	CG	17.0%	
	National	18.2%	
Current smoker	New York	14.4%	
	CG	14.4%	
	National	16.4%	

(continued)

Table G-3. Baseline measures of population health in New York, 2013–2015 (continued)

Measure		2013–2015 Average	2013–2015 Trend
Overweight	New York	60.1%	
	CG	61.9%	
	National	64.4%	
Obese	New York	24.9%	
	CG	25.8%	
	National	28.5%	
No leisure time physical activity or exercise, past 30 days	New York	25.4%	
	CG	22.2%	
	National	23.3%	
Limited fruit and vegetable intake, past 30 days	New York	80.8%	
	CG	82.1%	
	National	83.1%	
Any driving after drinking too much, past 30 days #	New York	1.8%	N/A
	CG	3.4%	
	National	3.3%	
No checkup, past year	New York	25.5%	
	CG	28.0%	
	National	29.4%	
No flu vaccine, past year	New York	59.4%	
	CG	60.7%	
	National	59.6%	
No 65+ flu vaccine, past year	New York	39.1%	
	CG	39.2%	
	National	39.1%	
No 65+ pneumonia vaccine, ever	New York	33.3%	
	CG	32.0%	
	National	30.2%	
Among adults with hypertension, no hypertension blood pressure medication ##	New York	22.4%	
	CG	23.6%	
	National	22.4%	
No 50-75 colorectal cancer screening—no fecal occult blood test (FOBT), past year #	New York	92.3%	N/A
	CG	88.9%	
	National	90.7%	
No 50-75 colorectal cancer screening—no sigmoidoscopy or colonoscopy, past 5 years #	New York	43.7%	N/A
	CG	46.5%	
	National	46.0%	

(continued)

Table G-3. Baseline measures of population health in New York, 2013–2015 (continued)

Measure		2013–2015 Average	2013–2015 Trend
No 50-75 colorectal cancer screening—no sigmoidoscopy or colonoscopy, past 10 years #	New York	32.5%	N/A
	CG	34.9%	
	National	33.6%	
Does not have a personal doctor	New York	16.2%	
	CG	18.0%	
	National	20.7%	

Source: Behavioral Risk Factor Surveillance System, collected by CDC (2013–2015).¹⁵⁴

Note: To facilitate the comparison of trends over time between the model test state, its CG, and the nation, the sparklines for each measure rely on the same scale for the vertical axis for all three groups. Because the vertical scale for the sparklines varies by measure, the sparklines are not comparable across the different measures. Sparklines are not available for outcomes for which data are limited to 2014 (indicated by #). Sparklines for outcomes that are limited to data for 2013 and 2015 (indicated by ##) will be based on data for two points in time and so will appear more stable than outcomes for which data are available for 2013, 2014, and 2015.

CDC = Centers for Disease Control and Prevention; CG = comparison group; FOBT = fecal occult blood test; N/A = not available.

For health conditions, New Yorkers were slightly less likely to report having been diagnosed with diabetes and hypertension, but slightly more likely to report having been diagnosed with asthma. New Yorkers were somewhat less likely to report being overweight or obese than the nation overall, yet somewhat more likely to report having no leisure time for physical activity or exercise in the past 30 days. They were less likely to report being a current smoker or having driven after drinking in the past 30 days.

Among access to care measures, New Yorkers were somewhat less likely than Americans overall to report not having had a checkup in the past year (25.5 percent compared to 29.4 percent) and not having a personal doctor (16.2 percent compared to 20.7 percent). New Yorkers, however, were like the nation in the share who reported not receiving a flu vaccine in the past year.

Because APC PTAs were only just beginning to sign up primary care practices to adopt the APC care delivery model, and LIFT awardees were named only at the end of the AR2 analysis period, state officials and stakeholder informants alike did not feel that the population health strategies New York is pursuing under the SIM Initiative had advanced enough to show any impacts on population health outcomes.

¹⁵⁴ CDC. (2013–2015). *Behavioral Risk Factor Surveillance System survey data*. Atlanta, GA: U.S. Department of Health and Human Services, CDC.

G.3 New York Summary

After developing its state-specific PCMH care delivery model in the AR1 analysis period, New York shifted to trying to implement this model in the AR2 analysis period. The state's implementation efforts primarily consisted of beginning to encourage primary care practices to sign up to work with SIM-funded PTAs to adopt the APC model, and continuing to encourage payers to offer APC practices new payments. New York PTAs had signed up an encouraging number of practices by the end of the AR2 analysis period, given how late in this period they began recruiting, but the lack of firm commitments from any private payers was seen by some informants as dampening efforts to sign up practices and may affect how wholeheartedly practices adopt this model.

The one payer that has made the strongest endorsement of the APC model is one of the most important payers in the state, New York's Medicaid program, which has submitted a SPA to CMS seeking approval to offer new payments to APC practices. (Medicaid already offered monthly payments per beneficiary to practices that adopted NCQA's PCMH model of care.) Other payers continue to attend SIM stakeholder meetings and discuss potential payment models but have not yet committed officially to offering a new payment model.

The state has not mandated terms for contracts between payers and primary care practices, but instead has given payers wide flexibility in whether and how they structure any new payments to APC practices. Some payers worried that this flexibility would defeat the purpose of a multi-payer initiative, because it could lead to payers using different approaches for structuring new APC payments, different algorithms for attributing patients to providers, and different performance measures. Such a diversity of arrangements could be overwhelming for small practices to keep straight.

Thus, the state officials charged with implementing the SIM Initiative face a tradeoff: if they are too prescriptive or demanding in their communications with payers, payers may choose to not make new APC payments; if they are too flexible and accommodating, payers may develop payment models that are so different from each other that it will be difficult to call the APC effort a multi-payer PCMH effort at all. The state's solution to this quandary has been to shift payer negotiations from a statewide stakeholder committee to regional stakeholder committees and to allow different regions' payers to develop their own APC payment models. Time will tell if this approach will succeed in securing firm commitments from payers to support the APC model.

Appendix H: State Innovation Model in Model Test States: Ohio

Key Results from Ohio's State Innovation Model Initiative July 2016–April 2017

- Ohio began testing the main components of its SIM models in earnest in the second Annual Report period. By April 30, 2017, Ohio had implemented 13 episodes of care (EOCs) and expects to roll out another 34 EOCs during the remainder of 2017. Ohio Comprehensive Primary Care (OH CPC), the other primary Ohio SIM strategy, initially enrolled 92 practices, covering approximately 630,000 Medicaid beneficiaries.
- Ohio Medicaid managed care plans were mandated to participate in the SIM initiatives; the extent of replication of the state's models by participating commercial payers was less clear, with some commercial insurers expressing reservations about the state's approach. Nonetheless, the state has secured commitments to participate at some level from United Healthcare, Aetna, Medical Mutual, and Anthem, which are the state's largest insurers.
- As Ohio began testing, Ohio stakeholders expressed some concern that they did not have as much input as they did earlier during the design period. Consumer groups felt that they had fewer opportunities than payers and providers to express their views.
- Ohio developed referral reports, which will provide primary care physicians participating in OH CPC with cost and quality of care data for specialists who are available to their attributed members. Principal Accountable Providers will also receive reports. The first referral report will be available in summer 2017.

This appendix provides an updated overview of the Ohio SIM Initiative; describes important changes from the first Annual Report (AR1) to AR2; summarizes implementation and testing successes, challenges, and lessons learned; and discusses early changes or prospects of changes resulting from the SIM Initiative. The findings in this appendix are based on analysis of data collected from stakeholder telephone interviews, state document reviews, and state program and evaluation calls. The data were collected between July 1, 2016, and May 3, 2017.

As a source for this appendix, the RTI team conducted 16 key informant interviews from March 28, 2017, through May 3, 2017.¹⁵⁵ The key topic areas of the interviews were (1) changes in governance and program administration, (2) progress implementing SIM models and initiatives, (3) participation of payers and providers, (4) progress toward a preponderance of care in the state provided through an alternative payment model (APM), and (5) early indicators of changes in relevant outcomes. Interview participants included state officials, payers, providers, consumer advocates, and others involved in the development and implementation of Ohio's SIM Initiative. Further details on the analytic approach are available in *Chapter 1*. Information on the number and types of stakeholders interviewed for the state is in *Table 1-1*.

¹⁵⁵ The RTI evaluation team needed to obtain primary care provider (PCP) perspectives on the SIM Initiative for this AR, but there were delays scheduling interviews with participating PCPs. Thus, interviews extended beyond the April 30, 2017 end of the analysis period for this report.

H.1 Implementation Activities

Ohio state officials reported that implementation of the Ohio SIM Model Test Initiative generally has been going as expected. State officials believe their decision to accelerate implementation of their health reform strategies—episodes of care (EOCs) and patient-centered medical homes (PCMHs)—from their original timelines was the right one. Originally, the state had planned a 3-year regional rollout of PCMHs but instead began statewide in 2016. Although 13 EOCs were designed in 2015, 18 additional EOCs were designed in 2016. Sixteen more are in process in 2017, for a total of 47 by February 2018, which is ahead of the state’s initial schedule.

Although state officials were generally satisfied with how EOC implementation is proceeding during the AR2 analysis period, many stakeholders questioned aspects of its implementation and what impact EOCs will have. Several stakeholders noted that most providers were not accessing their EOC reports, and many were completely unaware of the initiative.

Ohio Comprehensive Primary Care (CPC) initially enrolled 92 practices as of January 1, 2017, covering approximately 630,000 Medicaid beneficiaries. In the initial enrollment periods, the state required participating practices to meet one of the following criteria:

- Be a practice with 5,000 Medicaid members and national PMCH accreditation.
- Be a practice with 500 or more Medicaid members with claims-only attribution and participate in Comprehensive Primary Care Plus (CPC+).
- Be a practice with 500 or more Medicaid members with claims-only attribution and National Committee for Quality Assurance (NCQA) III accreditation.

State officials and many stakeholders cited the initiation of the Medicare CPC+ program just prior to the planned launch of the Ohio PCMH strategy as creating opportunities and challenges for the state. As of April 30, 2017, the state is in the process of enrolling a second wave of Ohio CPC practices by targeting CPC+ practices that also qualified for Ohio CPC.

Most stakeholders remain supportive of the state’s transformation strategies. Even critical stakeholders gave the SIM Initiative fairly high marks overall. State officials remain confident that the EOC and PCMH strategies will result in a preponderance of care in Ohio being delivered through value-based payment and delivery models by the end of the project. However, some stakeholders noted that they had little to no information on how implementation was proceeding.

Ohio made uneven progress in other areas that support transformation but are not financed by the SIM Initiative. State officials and stakeholders who were aware of population health initiative strategies saw them as being on track. The State Health Assessment, the State Health Improvement Plan (SHIP), and guidance on health assessments and plans for local communities were all completed in the AR2 analysis period. The SHIP’s identification of three priority areas is now meant to guide the state’s health system across clinical care and public and

community health, with some PCMH and EOC quality measures aligned with the health priority areas and more aligned EOCs planned. Ohio also continued with state health information technology (health IT) and data analytic structure activities that support SIM Initiatives. State officials acknowledged that workforce development was a weaker aspect in its transformation strategies. For example, Ohio did not revise its graduate medical education (GME) formula to support more primary care workforce training as originally planned, because of the resistance by teaching hospitals. The state continued to use webinars as the primary means of workforce education.

During this analysis period, Ohio worked to meet the federal requirements of the SIM cooperative agreement, which resulted in a 3-month delay of some of their activities. State officials noted they now had a better understanding of federal expectations and thought they had improved communications with federal officials.

H.1.1 Governance and program administration

The Office of Health Transformation (OHT) leads Ohio's SIM Initiative, providing oversight on behalf of the Governor, directing and coordinating line agency efforts, and working with the private sector and other stakeholders. The Governor established the OHT in 2011 to strengthen healthcare in Ohio.

Several state agencies are involved in the implementation of Ohio's SIM Initiative. Their efforts are organized through the SIM Directors Group, which includes leaders of the OHT, Ohio Department of Medicaid (ODM), Ohio Department of Health (ODH), Department of Mental Health and Addiction Services (MHAS), and Department of Administrative Services. The ODM is responsible for implementing the key SIM strategies, administers the SIM model test funding, and connects the SIM efforts to other Medicaid strategies. The ODH connects the SIM Initiative to other population health strategies, whereas the MHAS connects the work to the state's behavioral health redesign. Administrative Services manages state employee health plans, which the state plans to have adopt the SIM PCMH and EOC initiatives.

Engaging the state's private sector partners are the Governor's Advisory Council on Payment Innovation (GAC), the multi-payer SIM core team, and the SIM EOC and PCMH planning teams; each plays important roles in the design and implementation of the SIM Initiative. The GAC, established in 2013 prior to the SIM award, comprises purchasers, payers, providers, consumers, and researchers. The GAC convenes periodically to advise the state on priorities for and the coordination of multi-payer health care payment innovation activities statewide. The SIM core team aligns overall strategy across payers. The original multi-payer SIM core team of chief executive officers of all Medicaid managed care plans (Buckeye, CareSource, Molina, United, and Paramount) and four large commercial payers (United Healthcare, Aetna, Anthem, and Medical Mutual) helped design and implement the EOC and

PCMH models in Ohio. The EOC and PCMH teams, which are made up of clinicians and payer representatives, advised on the development of the two models and the work of related focus and advisory groups.

Ohio made two notable changes to the SIM governance structure during the AR2 analysis period. First, the state simplified the internal management of Ohio CPC and EOC. In 2017, to increase efficiency and support operationalizing payments to providers across both programs, internal work groups were combined to address EOC and Ohio CPC. Second, the state added three commercial CPC+ plans (AultCare, SummaCare, and Gateway Health) to the Ohio SIM core team to increase coordination between Ohio CPC and CPC+.

During the AR2 analysis period, ODM had a change in leadership. State officials believed that this change had no negative impact on the SIM implementation. State officials cited the new leadership's previous experience working with Ohio's OHT and state legislature as contributing to a smooth transition. Another state official reported that the change of leadership at ODM created an opportunity to improve communication between the state and CMMI.

During the AR2 analysis period, the state selected the Government Resource Center (GRC), part of Ohio State University, to conduct the state's evaluation of the SIM award. GRC has proposed a comprehensive evaluation design that includes key informant interviews and focus groups, quantitative analyses of Medicaid claims data, and a survey of both providers and patients in Ohio CPC. Reports on findings will be generated every 6 months, beginning in July 2017. The first report will include findings to help inform SIM model design moving forward, particularly with respect to Ohio CPC program expansion.

Ohio's utilization of the contractor McKinsey & Company, which assisted with several aspects of SIM design and implementation, particularly EOCs, changed during the AR2 analysis period. The state began transferring the role of production of the EOC provider reports from McKinsey to Electronic Data Systems, now known as DXC Technology. The main purpose of the transfer was to integrate SIM activities into ongoing Medicaid systems.

H.1.2 Stakeholder engagement

OHT engaged many stakeholders, particularly payers and providers, in the initial implementation phase of the SIM Initiative in several ways: establishing numerous external work groups, convening many meetings, holding focus groups with providers, and conducting a survey of primary care providers (PCPs). Given the commitment to nonregulatory approaches to health transformation for non-Medicaid providers and insurers, buy-in is key to voluntary implementation by these stakeholders. Stakeholders commented that engagement with OHT was more intense during the design period and had lessened substantially during the testing phase. For example, stakeholders interviewed in 2017 noted that the GAC had not met in some time.

As part of an effort to accelerate the timeline for developing EOCs in the AR2 analysis period, Ohio employed a different process that lessened engagement with providers. During the development of the first two waves of EOCs in the AR1 analysis period, providers were convened at multiple, in-person meetings. However, as the state began to rapidly scale EOCs and develop the third wave of episodes, the state moved to a more streamlined process, using webinars and online engagement instead. This approach relied more heavily on feedback from internal Medicaid clinical leadership for EOC development.

The state acknowledged that engagement of providers in the design of individual EOCs is a challenge, especially as the pace of EOC development accelerated. One provider interviewed participated in two phone meetings about the construction of an EOC but then never heard anything more. The state plans to address this issue of provider engagement during Award Year 3.

During the AR2 analysis period, payer and provider stakeholders continued to participate in the SIM Core Team and the EOC and PCMH design teams as the primary means to provide feedback on the state's SIM initiatives. Providers and payers engaged with both teams reported that the state provided ample opportunity for stakeholder participation. In three interviews, payers and providers noted that, although they had opportunity to provide feedback to the state on the SIM Initiative, that input was not always incorporated into the state's SIM methodology. One stakeholder reflected that feedback on the EOC design process “fell on deaf ears” and that the state's decisions relied too heavily on McKinsey's EOC model without tailoring it to meet the specific needs of Ohio. A commercial payer noted, “I feel like Medicaid is really driving this and that commercial plans are along for the ride. They listen to our feedback, but it doesn't make sense for them to change the plans moving forward.” Some provider stakeholders expressed concern that the original risk adjustment models for EOCs were using too few cases to be statistically significant.

Although providers and payers felt that there were ample opportunities to share feedback about SIM implementation, interviewed consumer advocates and policy analysts did not. Two of these stakeholders said that SIM stakeholder meetings that would have included consumer advocates and policy analysts were often rescheduled or canceled. Both stakeholders felt that there was “inconsistent communication” from the state about the status of SIM implementation. As one interviewee noted, “The SIM Initiative has been very much internal and between the state and the payers. That is where most of the work happens.”

H.1.3 Delivery systems and payment reforms

Ohio's SIM Initiative is based on two main reforms—EOCs and PCMHs, known as Ohio CPC. All types of stakeholders reported that these two models were the primary options chosen for the SIM Initiative because they were achievable in Ohio. At the time of the SIM application,

state officials reported that they believed that more ambitious health care transformations, such as accountable care organizations (ACOs), were beyond the reach of the Ohio healthcare system on a widespread basis.

Starting in 2016, Ohio accelerated the implementation of both EOCs and PCMHs. Initially, Ohio was planning to rollout PCMHs on a regional basis but switched to statewide implementation. Although the decision was made prior to the announcement of CMS's CPC+ demonstration, the state believes that the existence of CPC+ will aid the implementation of Ohio CPC because of the provider attention that CPC+ draws to PCMHs and has worked to align with the Medicare demonstration. Similarly, Ohio has increased the number of EOCs that it will develop to approximately 50 and accelerated their development and implementation.

Participation in EOCs and Ohio CPC varies by payer. Medicaid health plans and fee-for-service (FFS) providers must participate in EOCs, and Medicaid health plans must offer providers the state-designed PCMH as an option. Participation by commercial insurers is voluntary, with participation varying by insurer and initiative.

During the AR1 analysis period, Ohio mostly focused on designing its two major initiatives, whereas in the AR2 analysis period, the state started to implement the initiatives. By April 30, 2017, Ohio had implemented 13 EOCs and expects to develop another 34 EOCs during the AR3 analysis period. In a recent development, Ohio is considering developing a dental EOC, recognizing that dentists are major prescribers of opioid pain killers.

The plan for implementing an EOC involves 1 year of providing information about performance to the Principal Accountable Providers (PAPs), followed by a performance year based on which providers receive financial rewards or penalties, according to their quality metrics and financial performance. Because of claims lags, a significant lag period exists between the beginning of the payment period and the first incentive or penalty. The first payments and penalties for the first wave of EOCs, which included asthma acute exacerbation, chronic obstructive pulmonary disease (COPD) exacerbation, and perinatal, will be made in summer 2017. By July 2017, the state expects to have a full set of data (with full run-outs of claims data) on the first set of EOCs for performance calendar year 2016.

Ohio CPC initially enrolled 92 practices in the AR2 analysis period, covering approximately 630,000 Medicaid beneficiaries. In this initial enrollment period, the state required participating practices to be a practice with 5,000 members and national PCMH accreditation, be a practice with 500 or more Medicaid members with claims-only attribution and participate in CPC+, or be a practice with 500 or more Medicaid members with claims-only attribution and NCQA III accreditation.

Although attributing beneficiaries to practices has been an arduous task, it was mostly completed by April 2017, although it was “still a bit of a struggle,” according to one state official.

With Ohio CPC testing underway, the state also is implementing a practice monitoring system to assess whether practices are meeting the program’s requirements. During the interviews, one payer reported that some Ohio CPC practices were accepting Ohio CPC payments but had no plans to meet some program requirements, such as weekend coverage.

Toward the end of the AR2 analysis period, the state conducted a second round of Ohio CPC enrollment, targeting practices participating in Medicare’s CPC+ demonstration. This enrollment netted another 19 practices, raising the number of practices to 111 and the number of covered lives to 836,000 Medicaid beneficiaries. In fall 2017, Ohio plans to conduct another wave of enrollment for participation starting in 2018, which will allow any practice that wishes to join Ohio CPC to do so, if they commit to meeting the practice requirements.

In a potentially important development, during the AR2 analysis period, Ohio also worked to develop a Medicaid referral report. This report would provide primary care physicians participating in Ohio CPC with the cost and quality of care scores of the specialists to which they refer. PAPs would also receive reports. The state’s expectation is that primary care physicians will review this information and change referral patterns toward low-cost, high-quality providers. The state is considering whether to also post the data online so that they are available to consumers.

Levers

Ohio used several different levers to promote the adoption of its SIM Initiative reforms by health plans, insurers, and providers. For payers, these strategies differed between Medicaid health plans and commercial insurers. For Medicaid health plans, ODM used its market position to mandate participation in the initiatives. As a contractual requirement, all Medicaid health plans must pay applicable providers based on the EOCs designed by the state. Similarly, the Medicaid managed care plans must establish an Ohio CPC program, which must operate the way the state designed it. To implement these requirements, ODM has submitted state plan amendments to CMS’s Center for Medicaid and Children’s Health Insurance Program (CHIP) Services for approval. Although the initial EOC state plan amendment has been approved, the Ohio CPC state plan amendment was still under discussion with CMS at the end of the AR2 analysis period.

As in other states, Medicaid is an important payer and covers a substantial portion of the state’s population. However, Ohio cannot reach a preponderance of care in either population or spending only by addressing Medicaid payments and beneficiaries. Persuading Ohio commercial insurers to adopt SIM initiatives is particularly difficult because the health insurance market in

the state is relatively fragmented, with no one company having more than about 20 percent of the market. Thus, multiple companies must be persuaded to implement the SIM Initiative to achieve preponderance of care. As one state official put it, “We have a captive audience with Medicaid. We need a way to make [EOCs and Ohio CPC] appealing outside of Medicaid.”

Although Ohio has mandated SIM Initiatives for Medicaid health plans, the state has not mandated the participation of commercial insurers through regulation or other means. To achieve participation by commercial insurers, Ohio adopted a three-pronged strategy. First, Ohio sought buy-in from commercial insurers by including them in many advisory committees. The state’s major insurers—United Healthcare, Aetna, Anthem, and Medical Mutual—all have seats on the advisory committees. Although these committees have met less frequently as the state has moved from design to testing, the beginning of the project was marked by many meetings. Moreover, to avoid potential antitrust problems and achieve additional buy-in, major insurers also have one-on-one meetings with OHT staff.

Second, although the state demanded uniformity from the Medicaid health plans, it was less prescriptive for the commercial health insurers, offering a continuum of possible involvement. Whereas the state sought uniformity and standardization across Medicaid and commercial insurers on some dimensions, such as quality measures, it allowed commercial insurers to “align in principle” with the state design but differ in details (e.g., how gain sharing is calculated) and “differ by design” in other features (e.g., the amount of gainsharing). In this way, commercial insurers could modify the SIM reforms to meet their own needs.

Third, and least developed as of April 2017, is to leverage the state employee health insurance plans to convince commercial insurers to apply the SIM Initiative to the rest of their insureds. The state will require participating state employee health plans to implement EOCs and offer Ohio CPC to its providers. Once the data and analytic systems are in place to operate EOCs and Ohio CPC, and the commercial insurers see the hoped-for advantages of these approaches, the state believes that the insurers will expand these initiatives to other populations.

For providers, the state initially adopted a similar consultation strategy to achieve buy-in when developing the EOCs, with extensive meetings with leading providers and relevant medical societies. As the state gained confidence in its basic approach and accelerated EOC development, consultation became less extensive, which created some unease among providers during the AR2 analysis period. Moreover, shortened consultation lessened the feedback loop. As one provider put it, “I almost have a sense from the state that once we chart the course, the course has been charted and there’s little flexibility for departing based on what we have learned It was just full steam ahead.....” The state appears cognizant of this issue and is planning to increase provider engagement. As one state official related, “Once the episode has been launched, [providers] wanted to somehow circle back and maybe have a final discussion and have more

engagement. ... We don't want to burden them with add-on meetings and conversations, but we are building back some additional touch-points.”

Another major lever for providers is the possibility of additional financial payments under EOCs and Ohio CPC, although the financial penalties in the EOCs made some providers unhappy. These payments and penalties would occur through the Medicaid program and the commercial insurance plans and would not be paid with SIM funds. Splitting PAPs into winners and losers, thereby limiting the potential for unified opposition, is seen as a political advantage in implementing the initiative. As one state official put it, “the creation of winners and losers splits the organized provider community, some of whom benefit and some of whom are penalized.”

The final lever for providers is that the state has established performance goals for EOCs and PCMHs but has not established exactly how providers are to achieve those goals. The state is taking a hands-off approach to practice management. Thus, unlike some other PCMH demonstrations, Ohio CPC does not require that participating practices have electronic health records (EHRs) or hire care managers. As one state official related about health IT, “We wanted to say, ‘If we can build in the right financial incentive to essentially create a financial reward for data sharing, then we don't have to prescribe an EHR or say that you have to do IT in a particular way.’ The financial incentive will drive the demand for data sharing.” In this view, providers who can figure out how to meet the targets will do well, and those who cannot, will not. Although this approach avoids micromanagement, which many providers detest, some stakeholders criticized the state for not providing enough technical assistance to providers about transforming their practices to meet the performance targets.

Several stakeholders noted that providers in the rural Appalachian parts of the state lacked the sophistication or patient volume to make the investments necessary to capitalize on EOCs and PCMHs. As one payer said, “... outside of the few large metropolitan areas ... and submarkets ... it is very rural. The small population makes it more difficult to engage providers than in metropolitan areas. I don't know how we penetrate [rural areas].” While acknowledging the problem, the state has not made exceptions for these areas or mounted any special initiatives to assist providers in rural areas.

Participation and alignment

Participation in EOCs and Ohio CPC has been very high for Medicaid managed care because participation in those initiatives is mandatory; participation is lower for people insured by commercial insurers. During Award Year 2, no financial rewards or penalties had been assessed for any Medicaid EOC, and no financial rewards had been paid for Ohio CPC. Thus, the impact of the financial incentives on participation is not yet known.

Detailed quantitative data on commercial insurer participation in SIM initiatives are not available, and no data collection plan was put in place by the state during Award Year 2. The

state reported that Anthem, Aetna, Medical Mutual, and United Healthcare had some PCMH initiatives in place, some of which are focused on practices participating in CPC+. The same group of insurers were reporting to practices on EOC, but only one commercial insurer (Anthem) had agreed to provide incentive payments and penalties on one EOC.

For Medicaid, at least one managed care plan administrator voiced concern about the potential impact on the Medicaid participation of providers who must repay money because their episode costs are too high. According to this stakeholder, for physicians who only grudgingly participate in Medicaid, the financial penalties may push them out of the program, which could create access problems in underserved areas. In contrast, noting that data at this point are very preliminary, another managed care plan administrator reported that “actual risk to practices is limited at this point in terms of dollars paid back...It is nominal dollars compared to their revenues.” Currently, the state doubts that a negative impact on Medicaid participation will occur.

A major concern voiced by state officials and providers is that relatively few providers examined the data provided to them by the state. If providers have not examined the data, presumably, they have not acted upon it. During the first two quarters of the first performance year of EOCs, fewer than 10 percent of PAPs had opened the reports detailing how they were performing. Officials felt confident that providers will start paying attention once rewards and penalties start being assessed.

During the AR2 analysis period, the state and the Medicaid health plans provided education on how to interpret the data, although many stakeholders questioned whether the education was robust enough and the initial data detailed enough to be actionable by the providers. The state acknowledged that securing the attention of busy physicians is challenging. One Medicaid health plan reported educating its providers on the EOC data by including a cover letter with an explanation of the contents and contact information for questions.

Several stakeholders noted that commitment by payers to EOCs and Ohio CPC in their commercial plans was uneven. As one state official put it, “Anthem has been committed to rolling [the] SIM [Initiative] out. The other plans are committed, but their actual implementation is more of a question mark.” For example, except for its Medicaid managed care business, United Healthcare has decided to not implement EOCs in its commercial plans. According to one provider, the commercial side has “picked and chosen” individual components without making a major commitment to move the market in a significant way.

This resistance by payers reflects several factors. First, some payers already had value-based initiatives under way that differed from the SIM reforms. In recognition that it is not working on a blank slate, the state is trying to find a way to work with those other initiatives. As one state official put it, “When we look at some people who may not want to do the SIM work

because they are attached to their ACO model or some other pay for value arrangement, the question is how do we take that investment and align it with my SIM work.”

Second, commercial plans are typically responsive to provider and health plan purchaser (i.e., employer) preferences (reportedly, 70 percent of contracts are administrative services only). Therefore, a “one size fits all” approach, such as that imposed on Medicaid managed care plans with EOC and Ohio CPC, strikes some commercial payers as “arrogant” and being a “bully,” as one put it. According to this payer, “Medicaid and commercial insurance ... are very different animals.” In some cases, commercial insurers were resistant to EOCs, partly because they preferred to offer providers a suite of possible value-based purchasing options designed “to meet the providers where they are” in terms of willingness and ability to accept risk, rather than offering them one option on a take-it-or-leave-it-basis.

Payers noted that providers liked value-based purchasing plans that included upside risk but not ones that included downside risks. As one payer put it, “[Providers] want to work with you on upside risk and be rewarded for better quality scores, but no one wants to take downside risk.” One stakeholder at one of the state’s major health systems complained that, compared to other value-based purchasing plans, Ohio was not providing enough data to enable providers to identify problems and implement changes to improve services and reduce costs.

Insurers were also worried about the potential negative impact on provider relations of having to recoup money from poor performers, as required under EOCs. A representative of one large health system said that they participated in Medicaid EOCs because they had no choice but would not sign a contract with a commercial plan that included such a payment scheme. One insurer speculated that major health systems—such as the Cleveland Clinic, Ohio State University, University Hospitals, and Summa Health System, which provide most of the care in the state—provided high-quality care but were very expensive and would likely do poorly in an episode-based payment system. Speaking of these health systems, one payer bluntly stated, “Every day [these health systems] have their hand out for more money. They want no part of a program that will take money back from them.”

For Ohio CPC, marketing the program is the major issue. Ohio CPC is a new program; making it salient enough to extremely busy PCPs that they will take the time to enroll is difficult. One provider stated that “I’m concerned that smaller practices don’t know this program is available, and they may not be able to perform adequately and may drop out. ... on the PCMH side, it will require significantly more investment at the ground level, particularly as you move away from larger health systems and practices to the smaller mom and pop shops.”

Ohio fully embraced CPC+ and has tried, to the extent possible, to align with it, even though the Ohio SIM Initiative was quite far along in designing their own PCMH program when CPC+ was announced. Ohio successfully applied to be a CPC+ region, which gave the state the

opportunity to work closely with CPC+. Alignment was particularly a goal for quality measures, but given the differences in target populations, this was not always possible. For example, Medicaid covers many children, unlike Medicare, which makes pediatric quality measures appropriate for Medicaid but not Medicare. Conversely, Medicare may focus on osteoporosis and colonoscopies, which are not relevant to the Medicaid population participating in the SIM Initiative.

Consistent with its general philosophy of setting performance standards and letting practices decide how to meet them rather than establishing specific process requirements, Ohio CPC is less prescriptive than CPC+ on what practices must do. As one state official put it, “The idea is not to do anything to contradict CPC+, but Ohio CPC doesn’t go as far as CPC+. . . . The SIM view was to get as many practices on a path to value as possible. . . . The CPC+ view is to financially reward the highest performing practices.” The state has made a concerted effort to enroll CPC+ practices that will meet the Ohio CPC standards.

Finally, despite the state’s initial assessment, some insurers may not participate because they are moving past EOCs and PCMHs to ACOs or some other APM. That insurers are implementing ACOs is unexpected because the state chose its SIM Initiatives based on the belief that the Ohio health care system was not ready for ACOs. As one payer put it, “I don’t think you will see a PCMH model in the commercial space, because everything is headed in the ACO direction. . . . On the Medicaid side, we were headed down that path, too, but we have scrapped all ACO development on Medicaid to deal with Ohio CPC. The commercial folks . . . are not going to do that.”

H.1.4 Health information technology and data infrastructure

Some health IT and data analytics infrastructure initiatives supporting SIM strategies are in development, although they are not funded by, or a major part of, Ohio’s SIM activities. For example, an Ohio CPC provider enrollment portal connected to the state’s Medicaid Management Information System, which is set to be completed by July 2018, will make enrollment part of the regular Medicaid provider relations system, rather than through a separate enrollment process. Another important initiative that began development during Award Year 2 is a portal that providers can utilize to manipulate EOC data that are only available now as a PDF.

One of the more noteworthy health IT initiatives in Ohio is the development of referral reports. The state sees these reports as a way to encourage primary care physicians to consider cost and quality results when referring patients to specialists. Referral reports will be distributed to all Ohio CPC practices and will show the cost and quality metrics of the providers to which the PCMHs refer. Ohio expected that it would deliver the first set of referral reports for three EOCs—those related to asthma, COPD, and perinatal—in summer 2017. Ohio is also providing educational webinars about the referral reports.

The Ohio CPC program does not require practices to have EHRs to participate, whereas the federal CPC+ program does. State officials noted this difference while reiterating their support, at least in the near term, for incenting rather than mandating participant use of EHRs. With this voluntary approach, two stakeholders expressed doubts about the ability of small rural providers in Ohio's Appalachian region to adopt EHRs. In contrast, another stakeholder was not concerned about the uptake of EHRs across the state, noting, "It is an advantage to have an EMR [EHR]. ... 90 percent of the practices in Ohio are on an EMR. Once you get past that level of participation, the rest will come through retirement of physicians and other avenues."

H.1.5 Practice transformation and workforce development

Although the state has not allocated SIM Initiative funding to address workforce development, the state reported working on priorities established in a separate initiative. In 2013, OHT adopted a comprehensive plan for Ohio's health care workforce programs to support advanced primary care and the recruitment and retention of minorities in health care professions. Stakeholders also noted that the state has embarked upon other initiatives relating to behavioral health workforce issues in Ohio.

A key component in Ohio's workforce development initiatives has been aligning state Medicaid funding to teaching hospitals with the state's priorities in supporting primary care. During the AR2 analysis period, Ohio began promulgating changes to Ohio Medicaid regulations to implement a new GME formula as part of the ODM's hospital inpatient rebasing project, which went into effect July 1, 2017. GME provides hospitals with funds to compensate them for the cost of training doctors. Both Medicare and Medicaid provide hospitals with these funds. However, a state official acknowledged that the change in the Medicaid formula would not achieve the state's goal of redirecting funds to primary care training because the state encountered substantial resistance from teaching hospitals.

The state has a limited program of technical assistance to providers on practice transformation, mostly focused on how to use the data supplied by the state and health plans. During the AR2 analysis period, Ohio disseminated a curriculum for providers to assist in practice transformation. Targeted at the first wave of Ohio CPC practices, this monthly series of webinars is meant to engage providers in bidirectional learning, enable peer mentoring, and provide feedback to ODM about the implementation process. The webinars also will inform providers about additional components of the Ohio CPC model.

H.1.6 Population health

The Ohio SIM Initiative's population health strategies have focused on alignment among statewide and local health assessment and planning initiatives and between these initiatives and the SIM PCMH and EOC health care transformation initiatives. Although the state sees its

population health strategies as being integrated with the SIM Initiative, no federal SIM funds have been expended for population health activities.

The state aims to establish system-wide health priorities and incorporate measures of these health priorities into payment and regulatory systems across health care, public health, and community-based systems. Thus, the state's strategies can be characterized as fitting within both traditional clinical approaches and community-wide population health categories of the CMS adaption of the Centers for Disease Control and Prevention's (CDC's) classification framework,

The state contracted with the Health Policy Institute of Ohio (HPIO) to assist with the processes of health assessment and with planning and alignment. HPIO's January 2016 report contained recommendations to improve state-level health improvement planning, align local priorities, and incorporate population health priorities into primary care. These priorities were considered as SIM advisory groups worked to develop EOC and quality measures for Ohio CPC.

Also in response to the January 2016 HPIO report, state legislation¹⁵⁶ was enacted in July 2016 to align health assessments to the same 3-year timeframes for community benefit hospitals (as required by the federal Internal Revenue Service), local health plans (a requirement for local health department accreditation), and the State Health Assessment. By 2020, all three assessments will be on the same time schedule. The new state statute also required that both local health departments and community benefit hospitals make their assessments, plans, and Schedule H hospital expenditure information publicly available.

In mid-2016, the state again contracted with HPIO to develop the statewide needs assessment, guidance for local assessments, and SHIP. The 2017–2019 SHIP identified three broad health priority topics for the state: mental health and addiction, chronic disease, and maternal and infant health. Ten priority health outcomes were tied to these three priority topics (*Table H-1*). Moreover, some quality metrics for EOCs and Ohio CPC align with these population health goals. For example, the SHIP priorities for maternal and infant health are to reduce preterm births, low birth weight, and infant mortality. Aligned Ohio CPC metrics include timeliness of prenatal care, low birthweight births, postpartum care, and well-child visits in the first 15 months. Related EOCs focus on neonatal and perinatal services.

Beyond linking quality metrics to population health goals, the state sees several features of Ohio CPC and EOCs as addressing population health. These features include attribution reports that include diagnoses and risk tiers, referral reports (to be released later in 2017) with quality metrics, CPC activity requirements, and CPC and EOC quality measures.

¹⁵⁶ Completion and submission of assessments and plans, Ohio Revised Code 3701.981 (2016).

Table H-1. Priority topics and outcomes in the 2017–2019 State Health Improvement Plan

Health Priority Topic	Mental health and addiction	Chronic disease	Maternal and infant health
Priority Health Outcomes	Depression	Heart disease	Preterm births
	Suicide	Diabetes	Low birth weight
	Drug dependency/abuse	Child asthma	Infant mortality
	Drug overdose deaths		

Source: 2017–2019 Ohio State Health Improvement Plan.¹⁵⁷

State officials also plan to further align EOCs with population health priorities by developing at least one episode in 2017 to address the opioid crisis. This EOC would focus on dental care because dentists are one of the main prescribers of opioid pain medication. As far as the state knows, no other state has developed an EOC with this focus. Developing a dental EOC will be a challenge because Ohio has not engaged dentists in any way in the SIM Initiative so far.

State officials and other stakeholders familiar with the population health priority work were generally positive about what has been accomplished to date and the prospects for positive impacts in the future. State legislative levers requiring local health department accreditation and alignment of state and local planning processes and tying PCMH and EOC quality measures to payment were seen as effective mechanisms for improving population health. When asked what was working well in Ohio’s transformation initiatives, one state official replied, “...Now we see a beginning of aligning [health planning and assessment] all the way down from local to state, which gives us the opportunity to focus our providers on those public health issues instead of myopically looking at their practice only ... I think people are eager for ... that feeling that they all have a common mission.”

The Ohio law requiring local health accreditation by 2020 by the national Public Health Accreditation Board (PHAB) is intended to improve the uneven performance of the 118 local health departments. The law is expected to spur consolidation among the departments that may not be able to meet accreditation standards on their own. Assessment and planning are 2 of the 12 domains addressed by PHAB standards.

H.1.7 Quality measurement alignment

Ohio aims to align quality measures across multiple payers and initiatives. The state was not anticipating the announcement of consensus quality measures by CMS and America’s Health Insurance Plans in summer 2016, which caused Ohio to modify its quality measures to better align with these initiatives. In addition, the state did not expect CPC+ but has tried to align Ohio

¹⁵⁷ ODH. (2017, May). *Ohio 2017–2019 state health improvement plan*. Retrieved from https://www.odh.ohio.gov/-/media/ODH/ASSETS/Files/chss/ship/SHIP_02072017.pdf?la=en

CPC quality measures with the Medicare initiative. However, differences in population have limited some of the ability to make the measures the same in CPC+ and Ohio CPC.

Quality measure alignment between population health priority areas and Ohio CPC and EOCs is one of the main components of the state's population health initiative. Operationalizing quality measure alignment, however, has proven challenging for the state because of its voluntary approach to commercial plan participation in the SIM Initiative. Participating commercial insurers may not be implementing the models exactly as the state is in the Medicaid program. Interviewed payers were quick to point out that commercial insurers differ from Medicaid, especially regarding the populations served. To date, Ohio has attempted to address these challenges by aiming for quality measures to be standardized across models while allowing flexibility for payers to implement the shared savings and penalties. The state has been most successful in aligning quality metrics in Medicaid health plans because of contractual requirements with ODM. Commercial health plans are more difficult to address, because they must voluntarily choose to align, and some already have national quality measures established by their national headquarters.

H.1.8 Lessons learned and looking forward

The success of Ohio's SIM Initiatives depends on the continued communication and engagement of a wide array of stakeholders. There were varying views about how well the state had done in this regard. State officials felt they had continued to effectively communicate with payers, providers, and consumers during the AR2 analysis period. However, in contrast to Award Year 1, payer, provider, and consumer representatives did not feel the state had done enough to convene meetings, solicit feedback, or provide updates on the status of SIM initiatives. A provider noted, "The biggest implementation issue for SIM has been communication. Specifically, staying in touch with all stakeholders and communicating the process." A consumer advocate reflected that better and more consistent communication with a wider stakeholder audience would achieve greater buy-in.

The role of the McKinsey consulting firm continued to receive attention in the AR2 analysis period. Concerns about this contractor and its application of models developed for other states were raised by several stakeholders in the AR1 analysis period. Some stakeholders still chafed against the substantial role that McKinsey played in designing and implementing the SIM models. One stakeholder reflected, "I don't think the national consultants knew the lay of the land and did not take a statewide approach or perspective. ... They had a narrower and more urban idea of what the healthcare landscape looked like in Ohio." State officials insisted that McKinsey provided recommendations, but state government made the decisions. Although the state is pleased with McKinsey's work in helping to design and implement the SIM models, it has begun to shift work to other contractors that maintain Ohio's ongoing systems.

A significant lesson learned by Ohio in the AR2 analysis period was the need for the state to better understand the technical requirements and parameters of the federal SIM award and how to navigate those requirements. Because of a delay in approval of the state's Award Year 3 operational plan, Ohio stopped expending funds on contractors for a while. Despite this temporary holdup, state officials are confident that there will be no long-term impact on relationships with CMS or the overall success of their SIM implementation.

Looking forward to the coming year, state officials cited the need to rapidly scale up both Ohio CPC and EOC as a challenge. Ohio opted to accelerate the implementation of both its PCMH and EOC models, which the state saw as possible partly because of careful planning and design by stakeholders and contractors. State officials and payers noted the need for clear and consistent communication with providers and payers to make this rapid scale up successful.

Ohio is well on its way to constructing the targeted EOCs and is preparing to address the challenges of full testing. In Award Year 3, the state will begin paying providers according to their performance, which involves both upside and downside risk. A state official reflected, "In order for our model to function properly, there are winners and losers. The losers won't be very happy.... I foresee some challenges in that."

With the rapid scaling up of Ohio CPC and EOCs, stakeholders noted a need to more actively engage and educate providers about these initiatives in the coming year. A stakeholder said, "Lots of providers are interested in enrolling in [Ohio CPC] who aren't as well versed in what these value-based programs really need, what the data really means. I know the state has held webinars to explain things, but I wonder—because they have moved so quickly—how many providers actually understand what they are getting into." One provider also reflected that communicating the delineation of roles and responsibilities between managed care organizations (MCOs) and providers is essential to the initiative's success but has not been made clear by the state.

Another concern among providers was that, in their opinion, the state provided insufficient provider education and engagement about the implementation of EOC and Ohio PCMH. A provider noted, "What has concerned me in the implementation phase is the state's attitude of 'if we build it they will come'—meaning that clinicians will automatically get it and understand it. What has been missed is the fundamental focus on provider education and information." Some confusion among providers between Ohio CPC and CPC+ was also noted as a challenge by stakeholders, with one stakeholder indicating that providers who are "overwhelmed, understaffed, and confused about these changes" are receiving multiple communications from multiple entities on something that sounds very similar.

To truly transform care in the state, Ohio state officials see the importance and challenge of securing buy-in from a broad range of providers and payers in support of the SIM Initiative. A

state official also saw an opportunity to engage Ohio’s medical schools in educating new providers in CPC and EOC models of care, explaining, “When we speak with our medical schools, the challenge becomes how are we training providers in school right now to think about value—everything the SIM process encompasses. How do we engage them in the conversation while they are going through school, so they don’t come out of there thinking that it is the old fee-for-service [FFS] model?” At this point, however, the state has no specific plans to involve the medical schools in that training.

H.2 Changes in Outcomes During the State Innovation Model Initiative

H.2.1 Progress toward a preponderance of care in value-based purchasing models and alternative payment models

The SIM Initiative in Ohio has focused so far on the Medicaid population and less on commercial insurers. The state is implementing EOCs and PCMHs for both the FFS and managed care Medicaid beneficiaries, but participation in these initiatives by commercial insurers is unclear. Because Medicaid beneficiaries make up only a relatively small proportion of the population in Ohio, the state will not be able to meet the preponderance of care target set by CMS without substantial commercial insurer participation. Within the Medicaid population, however, most aged and disabled beneficiaries are participating in the state’s Medicare-Medicaid demonstration and not in the SIM Initiative. Moreover, the planned involvement by the state employee health insurance plans has not yet taken place. During the AR2 analysis period, Ohio did not gather information on preponderance of care from the commercial insurers and did not have a plan in place to do so.

Nonetheless, state officials and most stakeholders felt that Ohio is well positioned to achieve the target of moving 80 percent of all patients’ and health care expenditures into value-based payment or delivery models by the end of the SIM award. State officials were pleased with the status of both delivery models and felt that the models are progressing as planned.

Table H-2 presents the extent to which Ohio’s population is participating in the SIM payment and health care delivery models. The numerical values for this table were provided by the state in its fourth quarter 2016 progress report to CMMI.¹⁵⁸ In this report, Ohio only provided data for the Medicaid population. The participation rate in second quarter 2016 for EOCs was 11.4 percent of the applicable Medicaid beneficiaries. Beneficiary participation data were not reported for PCMHs because Ohio CPC had not been launched at that time.

¹⁵⁸ The data are presented as reported by Ohio and were not verified by CMMI. Thus, the RTI team cannot attest to their accuracy.

Table H-2. Populations reached by a value-based purchasing or alternative payment model in Ohio, as of second quarter 2016

Payer type	SIM models			Landscape
	Primary care PCMHs	EOC payment models	SIM-wide	Any value-based purchasing or APMs
Medicaid	0%	11.4%	11.4%	276,527 (11.4%)
State employee plans	—	—	—	—
Commercial	—	—	—	—
Statewide	—	—	—	—

Source: Fourth quarter 2016 Ohio Metric Template.

Note: The denominator is the total Medicaid-enrolled population minus beneficiaries with eligibility for both Medicare and Medicaid and certain other targeted populations without full Medicaid benefits (2,427,702).

— = relevant data were not provided in the data source; APM = alternative payment model; EOC = episode of care; PCMH = patient-centered medical home; SIM = State Innovation Model.

Provider participation

Table H-3 presents the extent to which Ohio’s providers are participating in the SIM payment and health care delivery models. As of second quarter 2016, 74 percent of Ohio’s targeted Medicaid physicians are subject to EOC reporting, and 36.9 percent of Ohio’s targeted Medicaid physicians are subject to EOC payment incentives and penalties. Provider participation data were not reported for PCMHs because enrollment in Ohio CPC had not yet started.

Table H-3. Number of physicians and practices participating in a value-based purchasing or alternative payment model in Ohio, as of second quarter 2016

Provider type	SIM models			SIM-wide	Landscape
	Primary care PCMHs ^a	EOC—eligible for reporting	EOC—eligible for payment		Any value-based purchasing or APMs
Physicians ^b	—	74%	36.9%	—	—
Practices	—	—	—	—	—

Source: Fourth quarter 2016 Ohio Metric Template.

^a PCMH enrollment had not begun as of second quarter 2016.

^b These data values refer only to Medicaid-participating physicians.

— = relevant data were not provided in the data source; APM = alternative payment model; EOC = episode of care; PCMH = patient-centered medical home; SIM = State Innovation Model. The denominator is the total number of providers targeted for inclusion in episode-based payments; specifically, it includes all providers with the presence of at least one valid or nonvalid episode (4,102).

H.2.2 Care delivery

The implementation of practice transformation and workforce development strategies is in its early stages, and therefore, these strategies are unlikely to have impacted care and met the demands of health system transformation by the end of the AR2 analysis period. Stakeholders presented mixed views on the progress of practice transformation and workforce development. Providers reported limited involvement and a lack of awareness of the progress made to date. One state official commented that workforce efforts are underway in various areas, with behavioral health redesign separate from the SIM Initiative being the largest focus because Ohio is working to align the diagnostic coding system with national standards for behavioral health. This state official felt that “[the] behavioral health redesign is going to be the transformation of how we pay the workforce in that entire space.”

H.2.3 Coordination of care, quality of care, utilization, and expenditures

Almost all state officials and stakeholders agreed that it is too early in the implementation process to identify any impacts on care coordination, utilization, or expenditures. Enrolled providers’ participation in the first wave of Ohio CPC did not begin until January 2017, and only three EOCs are included in the performance period. For example, EOC data were just beginning to be disseminated to PAPs because of time lags caused by claims run out. As a result, providers were just beginning to receive data that will allow them to assess their performance and make changes. Furthermore, no provider has received penalties or rewards during the AR2 analysis period for EOCs or rewards for Ohio CPC. Both providers and payers felt that providers’ behavior will likely only change once financial rewards and penalties are involved, which has not yet happened. One state official reported that preliminary data on asthma, one of the early EOCs, suggested a substantial cost reduction because of a reduction in hospital admissions.

H.2.4 Population health

Table H-4 shows Ohio’s baseline population health outcomes based on 19 measures from the 3 years prior to the implementation of Ohio’s SIM award. The table also includes information from the comparison group states: Georgia, Kentucky, and Missouri. The multistage procedure for identifying the comparison group states is described in detail in *Appendix L*.

Table H-4. Baseline measures of population health in Ohio, 2013–2015

Measure		2013–2015 Average	2013–2015 Trend
Health status is fair or poor	Ohio	15.1%	
	CG	16.5%	
	National	14.9%	
Ever diagnosed with diabetes	Ohio	10.4%	
	CG	10.5%	
	National	9.6%	
Ever diagnosed with hypertension ##	Ohio	33.1%	
	CG	35.1%	
	National	31.6%	
Ever diagnosed with asthma	Ohio	13.7%	
	CG	14.0%	
	National	13.5%	
Has a functional limitation ##	Ohio	18.4%	
	CG	20.9%	
	National	18.2%	
Current smoker	Ohio	20.1%	
	CG	20.0%	
	National	16.4%	
Overweight	Ohio	66.3%	
	CG	65.7%	
	National	64.4%	
Obese	Ohio	30.6%	
	CG	30.4%	
	National	28.5%	
No leisure time physical activity or exercise, past 30 days	Ohio	25.1%	
	CG	25.6%	
	National	23.3%	
Limited fruit and vegetable intake, past 30 days	Ohio	85.8%	
	CG	85.8%	
	National	83.1%	
Any driving after drinking too much, past 30 days #	Ohio	3.9%	N/A
	CG	2.8%	
	National	3.3%	

(continued)

Table H-4. Baseline measures of population health in Ohio, 2013–2015 (continued)

Measure		2013–2015 Average	2013–2015 Trend
No checkup, past year	Ohio	28.3%	
	CG	28.8%	
	National	29.4%	
No flu vaccine, past year	Ohio	60.4%	
	CG	57.6%	
	National	59.6%	
No 65+ flu vaccine, past year	Ohio	41.2%	
	CG	35.0%	
	National	39.1%	
No 65+ pneumonia vaccine, ever	Ohio	29.3%	
	CG	29.7%	
	National	30.2%	
Among adults with hypertension, no hypertension blood pressure medication ##	Ohio	20.6%	
	CG	19.0%	
	National	22.4%	
No 50-75 colorectal cancer screening—no fecal occult blood test (FOBT), past year #	Ohio	92.7%	N/A
	CG	91.7%	
	National	90.7%	
No 50-75 colorectal cancer screening—no sigmoidoscopy or colonoscopy, past 5 years #	Ohio	46.8%	N/A
	CG	47.7%	
	National	46.0%	
No 50-75 colorectal cancer screening—no sigmoidoscopy or colonoscopy, past 10 years #	Ohio	35.9%	N/A
	CG	34.7%	
	National	33.6%	

Source: Behavioral Risk Factor Surveillance System, collected by CDC (2013–2015).¹⁵⁹

Note: To facilitate the comparison of trends over time between the Model Test state, its comparison group, and the nation, the sparklines for each measure rely on the same scale for the vertical axis for all three groups. Because the vertical scale for the sparklines varies by measure, the sparklines are not comparable across different measures. Sparklines are not available for outcomes for which data are limited to 2014 (indicated by #). Sparklines for outcomes that are limited to data for 2013 and 2015 (indicated by ##) will be based on data for two points in time and so will appear more stable than outcomes for which data are available for 2013, 2014, and 2015.

CDC = Centers for Disease Control and Prevention; CG = comparison group; FOBT = fecal occult blood test; N/A = not available.

¹⁵⁹ CDC. (2013–2015). *Behavioral Risk Factor Surveillance System survey data*. Atlanta, GA: U.S. Department of Health and Human Services, CDC.

Examining the average results for 2013–2015, of the 19 population health measures selected, Ohio had worse outcomes than the nation on 16 of the measures. In some cases, the differences are not large, but they do suggest that Ohio has significant population health problems. A few of the more notable measures on which Ohio performs markedly worse than the national average were measures related to weight and lifestyle habits, including hypertension (33.1 percent vs. 31.6 percent), currently a smoker (20.1 percent vs. 16.4 percent), overweight (66.3 percent vs. 64.7 percent), obese (30.6 percent vs. 28.5 percent), no leisure time physical activity or exercise (25.1 percent vs. 23.3 percent), and limited fruit and vegetable intake (85.8 percent vs. 83.1 percent). Other measures regarding health among older adults on which Ohio performed poorer than the national average included a lack of flu vaccination in the older population (41.2 percent vs. 39.1 percent) and no colorectal cancer screening in past 5 years (46.8 percent vs. 46.0 percent) or 10 years (35.9 percent vs. 33.6 percent) for adults 50–75 years old.

The three measures where Ohio performed better than the national average were lower percentage of the older population who were unvaccinated for pneumonia (29.3 percent vs. 30.2 percent), lower percentage of adults with no use of hypertension medication among adults with hypertension (20.6 percent vs. 22.4 percent), and lower percentage of the population with no checkup in the last year (28.3 percent vs. 29.3 percent).

Some of the Behavioral Risk Factor Surveillance System measures track to the Ohio SIM initiatives, including the outcomes on diabetes, hypertension, driving after drinking too much, and lack of blood pressure medication among adults with hypertension. On these measures, except for lacking blood pressure medication, Ohio’s outcomes are worse than the national average, although the differences are not always large. Future reports will assess how population health changes over time during the SIM Initiative.

H.3 Ohio Summary

During the AR2 analysis period, Ohio mostly finished designing its SIM Initiative and moved to the implementation phase. The state is on a rapid schedule for constructing the remaining EOCs. A few of the Medicaid EOCs are in the reporting phase for financial incentives and penalties, but no providers have been paid based on the quality and cost metrics. Other EOCs are in the reporting phase of data, but the data do not yet “count” for determining incentives and penalties. Similarly, the state has enrolled its first wave of PCMHs into its Ohio CPC program and has started to make PMPM payments to help practices further transform, but it has not yet provided any financial incentives.

Ohio has obtained much greater participation by Medicaid health plans than commercial insurers. Ohio has mandated that Medicaid managed care plans pay relevant providers per EOC and offer Ohio CPC to PCPs. No similar regulatory approach applies to commercial insurers;

buy-in has mainly been sought by establishing extensive advisory committees. Similar advisory panels were created to design the specific EOCs. Ohio successfully convinced the four major insurers to commit to implementing EOCs and PCMHs, at least in principle. The degree to which commercial insurers are implementing SIM initiatives is variable and difficult to precisely determine.

As in the AR1 analysis period, Ohio was less focused on population health and health IT during the AR2 analysis period. Ohio's population health initiatives have been to align the disparate health planning processes in the state and select quality measures for EOCs and Ohio CPC that align with population health priorities. The state's health IT work has focused on providing practice reports to PAPs and PCMHs. Its SIM workforce activities have focused on providing information to providers on how to interpret the practice reports. The state has not funded health IT or workforce issues as part of its SIM Initiative other than providing data to PCMHs and PAPs in EOCs, although it does have other activities underway outside of the SIM Initiative.

Ohio's work to meet the federal requirements of the SIM cooperative agreement resulted in a delay in the beginning of Award Year 3, but the state is now moving forward. The next year of the project will focus on testing the EOC and PCMH initiatives. Of particular importance will be beginning Medicaid incentive and penalty payments under EOCs and beginning Medicaid incentive payments under Ohio CPC. Also of importance will be the implementation of these initiatives among commercial insurers.

Appendix I: State Innovation Model in Model Test States: Rhode Island

Key Results from Rhode Island’s State Innovation Model Initiative July 2016–April 2017

- Rhode Island has made progress in establishing contracts for practice transformation and workforce development strategies in this analysis period. These contracts are intended to (1) provide technical assistance to patient-centered medical home (PCMH)-Kids and Integrated Behavioral Health pilot programs, (2) provide telephone psychiatric consultation and referral assistance to pediatric primary care providers, and (3) establish a Screening Brief Intervention and Referral to Treatment training center as a resource for all community health workers and health professionals in Rhode Island.
- The Rhode Island SIM Initiative funded several health information technology strategies during this award period. These strategies included (1) enhancing the existing all-payer claims database (APCD), known as HealthFacts RI, by restructuring the APCD vendor model; (2) initiating the development of a common provider directory with physical and behavioral health providers to provide data extracts for state agency use; and (3) “going live” with behavioral health dashboards in one of the nine planned mental health centers and one planned Medicaid Community Health Team.
- Although Rhode Island stakeholders perceived that it is too early for SIM strategies to have an impact, some stakeholders reported PCMH-Kids has already shown improvements in coordination of care and quality of care. The child psychiatry consultation program, known as PediPRN, also was cited as having an immediate impact on the quality of care for children with psychiatric needs.

This appendix provides an updated overview of the Rhode Island SIM Initiative; describes important changes in the state’s SIM Initiative; summarizes implementation and testing successes, challenges, and lessons learned; and discusses early changes or prospects of changes resulting from the SIM Initiative. The findings in this appendix are based on analysis of data collected between July 1, 2016, and April 30, 2017, from key findings from stakeholder telephone interviews, state document reviews, and state program and evaluation calls.

As a source for this appendix, the RTI team conducted 20 key informant interviews from March 13 through April 14, 2017. The key topic areas of the interviews were (1) changes in governance and program administration, (2) progress implementing SIM models and initiatives, (3) participation of payers and providers, (4) progress toward a preponderance of care in the state being provided through an alternative payment model (APM), and (5) early indicators of changes in relevant outcomes. Interview participants included state officials, payers, providers, and consumer advocates involved in the development and implementation of Rhode Island’s SIM Initiative. Further details on the analytic approach are available in *Chapter 1*. Information on the number and type of stakeholders interviewed for the state is in *Table 1-1*.

I.1 Implementation Activities

At the time of the SIM award, Rhode Island already was moving to value-based purchasing; therefore, the SIM Initiative's overall approach was to align and integrate with existing efforts. Throughout the SIM planning process, Rhode Island identified the integration of physical and behavioral health as a critical need and made it central to its overarching SIM strategy. During the Annual Report 2 (AR2) analysis period, the Rhode Island SIM project team directed its efforts to procuring the almost dozen contracts needed to implement its SIM interventions.

Most stakeholders perceived implementation to be going well and that the SIM Initiative would attain its goals; however, others expressed frustration with the pace of the progress. They attributed the slow pace to the need for stakeholder buy-in on investment decisions and slow state purchasing and hiring processes. Several of these stakeholders, however, observed that the pace was increasing as the SIM Initiative moved from planning and design to operation.

I.1.1 Governance and program administration

Rhode Island continues to manage its SIM Initiative using the structure it established at the start of the Initiative. The SIM Initiative is administered jointly by the Executive Office of Health and Human Services (EOHHS) and the Office of the Health Insurance Commissioner (OHIC). The SIM Director and one other staff member are housed at OHIC, and the SIM award funds staff in four state agencies in addition to OHIC: EOHHS; Rhode Island Department of Health (RIDOH); Department of Behavioral Healthcare, Developmental Disabilities and Hospitals (BHDDH); and HealthSource RI. The SIM Core Team, which consists of the SIM-funded staff, manages and coordinates SIM activities. The Interagency Planning Team—the leadership of the five agencies, the chair of the steering committee, and representatives of other state agencies—oversees the strategic and financial planning of the project. The SIM Steering Committee, which oversees the SIM Initiative, includes both public and private sector members.

Between June 30, 2016, and April 30, 2017, there was some turnover in the leadership of the state agencies responsible for implementing the SIM Initiative. The secretary of EOHHS resigned, as did the directors of BHDDH and the Medicaid agency. However, most stakeholders did not feel these changes would have a detrimental effect on the SIM Initiative, as the new leaders either were familiar with health care transformation in Rhode Island or had been involved in the SIM Initiative in their previous roles.

State Innovation Model steering committee

The SIM Steering Committee is the SIM Initiative's governing body. As of April 2017, the committee comprised 34 members, representing medical providers, health systems, payers,

professional associations, consumer advocacy organizations, and state government.¹⁶⁰ State officials have found the steering committee to be an effective, strategic, decision-making body for the SIM Initiative—with one likening the committee to a board of directors. Officials further reported that establishing the steering committee as the governing body was necessary to secure stakeholder buy-in on decisions; most other stakeholders concurred with this assessment.

There were some changes in the leadership and composition of the steering committee during the AR2 analysis period. One state official noted that the change in leadership matched the progression of the SIM Initiative and was not a hindrance to implementation. The original chair was very skilled in planning, which was the primary focus of the steering committee when the SIM Initiative first launched. In year 2, the committee selected a chair with more applied experience in implementation. Rhode Island also added representatives from the behavioral health community and consumer advocacy groups to the committee.

I.1.2 Stakeholder engagement

The SIM Steering Committee continues to be the Rhode Island SIM Initiative’s primary stakeholder engagement strategy; however, SIM staff also seek stakeholder engagement through outreach to other agencies, organizations, and communities. A key objective of this outreach is to gather feedback from those who will be affected by the SIM Initiative but who are not deeply involved in its operations (e.g., home health providers). Staff also hope to ultimately draw other government agencies, which play a role in the delivery of health care (e.g., Veterans’ Affairs), into their efforts.

Some stakeholders believe that the Rhode Island’s SIM Initiative would benefit from more targeted outreach to the behavioral health community, particularly given its emphasis on improving the delivery of behavioral health care. One provider suggested targeted outreach to behavioral health providers to educate them about how the SIM Initiative will impact the delivery of health care. A consumer advocate also noted that peer support providers particularly could benefit from more education about delivery system transformations and how they could more fully engage in the SIM implementation process.

Interview respondents noted the lack of representation from consumers themselves as another gap in stakeholder engagement. Several state officials reported that they continue to discuss more strategies for engaging consumers. However, the officials also acknowledged the logistical difficulties of engaging consumers, who may lack detailed knowledge about health care transformation and the language used to describe it. The specifics of stakeholder

¹⁶⁰ Rhode Island SIM Initiative. (2017, May). *Draft operational plan, Appendix G, SIM governance tables*. Retrieved June 15, 2017, from <http://www.eohhs.ri.gov/Portals/0/Uploads/Documents/SIM/GovernanceCharts-Appendix.pdf>

engagement strategies were still in development as of April 30, 2017, but Rhode Island anticipates that it will become an important SIM strategy over the coming year.

I.1.3 Delivery systems and payment reforms

Rhode Island has a long history of supporting provider and payer transition to value-based care delivery. Since 2008, the state has invested in patient-centered medical homes (PCMHs) and used its regulatory and contractual authority to advance the adoption of APMs among commercial and public payers. The Rhode Island SIM Initiative reinforces these existing investments by delivering technical assistance and practice transformation support to providers to enhance their participation in PCMHs and other alternative delivery models. Many of these investments are designed to advance physical and behavioral health integration by enhancing health care providers' capacity to treat children and adults with mental health and substance abuse conditions.

In January 2017, the Rhode Island SIM Initiative commenced its support for delivery system reform by awarding a 3-year, technical assistance contract to the Care Transformation Collaborative of Rhode Island (CTC-RI). CTC-RI is a stakeholder collaborative created in 2008 to foster the spread of the PCMH model across the state. The state's PCMH initiative comprises adult and pediatric PCMHs and is a multi-payer endeavor supported by Medicaid and all four commercial payers in the state. CTC-RI uses SIM funding to better integrate behavioral health services into primary care, enhance primary care practices' data collection and reporting capacity, and train providers on how to deliver team-based care. According to stakeholders some participating practices have increased screening for behavioral health conditions, such as depression.

Patient-centered medical home—Kids. During 2016, CTC-RI expanded its medical home initiative to nine pediatric practices serving approximately 30,000 children and families. CTC-RI applied a portion of its SIM funds to help participating PCMH-Kids practices integrate behavioral health screening into their workflow and collect and analyze PCMH data. Since January 2017, PCMH-Kids practices have participated in SIM-supported behavioral health learning collaboratives focused on attention deficit hyperactivity disorder (ADHD) and maternal depression.¹⁶¹ CTC-RI is hoping to increase the number of pediatric medical homes by an additional 10 in summer 2017.

Patient centered medical home—Adults (Integrated Behavioral Health). CTC-RI applies SIM funds to help 10 primary care practices, serving approximately 58,000 adults, expand their capacity to treat behavioral health disorders. Referred to as “integrated behavioral health,” Rhode Island SIM Initiative funds are used to train primary care practices to implement

¹⁶¹ State of Rhode Island. (2017, April 13). *Minutes, SIM steering committee meeting, April 13, 2017.* (p. 5). Retrieved May 21, 2017, from <http://sos.ri.gov/documents/publicinfo/omdocs/minutes/6436/2017/53004.pdf>

screenings for depression, anxiety, and substance use. According to one state official, most physicians and nurses do not receive much mental health training during medical school, and they would benefit from additional education and support. SIM funds for integrated behavioral health also will be used to coach primary care physicians and nurses on how to collaborate with behavioral health professionals co-located in their practice.

Additional investments in behavioral health transformation

In addition to its PCMH activities, the Rhode Island SIM Initiative is investing in other behavioral health integration efforts targeted to primary care physicians and providers statewide. These include a pediatric psychiatry telephonic consultation initiative known as PediPRN and a combined community health team (CHT) and Screening, Brief Intervention, and Referral to Treatment (SBIRT) training initiative. CHTs are multidisciplinary health care teams that support high-risk patients in accessing additional primary, behavioral, and specialty health care. SIM-funded CHTs will be educated on how to identify patients with behavioral health conditions and trained in administering SBIRT to identify and screen for substance use (see *Section I.1.5*).

Policy levers to advance delivery system reform

Rhode Island is unique as the only state in the country with an OHIC, which plays an instrumental role in not only regulating commercial health insurance plans in the state but also developing policy designed to ensure the quality and efficiency of the state's health care delivery system. Beginning in 2010 to spur reform and encourage the adoption of APMs in the commercial market, OHIC promulgated a set of regulations referred to as affordability standards. These standards establish targets for health plan adoption of PCMH, as well as APMs. To advance PCMH adoption, OHIC requires private health plans to expand the percentage of primary care practices participating in a PCMH to 80 percent by 2019.¹⁶² OHIC also mandates that plans reach annual targets for APM adoption for years 2016 through 2018.¹⁶³

The state solicits ongoing feedback from payers and providers in creating regulations and has created several committees and work groups to support the policymaking process. In 2016, after receiving feedback that small primary care practices did not have the resources to transform into PCMHs, OHIC convened a small-practice engagement work group to investigate additional financing options to assist small practices with transformation. OHIC also oversees an APM work group, created in 2015, which is charged with developing a plan for facilitating the adoption of APMs among providers and payers. Other committees and work groups convened by

¹⁶² State of Rhode Island, EOHHS. (2016, May 31). *Rhode Island State Innovation Model (SIM) test grant: Operational plan, Version 2*. Cranston, RI: EOHHS. Retrieved from <http://www.eohhs.ri.gov/Portals/0/Uploads/Documents/State%20Innovation%20Model/RISIMOperationalandIPHPlan.pdf>

¹⁶³ Ibid. Regulatory targets for APM adoption by commercial health plans are as follows: 30 percent in 2016, 40 percent in 2017, and 50 percent in 2018.

OHIC include a Care Transformation Advisory Committee, a Primary Care APM Workgroup, and a High-Risk Patient Identification work group.

Consensus among stakeholders was universal that the OHIC affordability standards and regulations are powerful levers in the state’s movement toward delivery system transformation. One key informant remarked, “just the ability to [influence] the carrier contracts is huge.” Stakeholders noted that not only has the Rhode Island SIM Initiative leveraged the power of OHIC in advancing its reforms, but OHIC also deems the SIM Initiative instrumental in helping the agency attain its goals.

“I think the fact that we can inform our payers that we are being held accountable by some other entity [referring to the SIM Model Test cooperative agreement] to meet our objectives is very powerful.”—Rhode Island state official.

All Medicaid managed care plans in Rhode Island are required to meet the same annual targets for APM adoption as commercial plans. Although OHIC only regulates the commercial health insurance market, the state Medicaid agency leverages the commissioner’s affordability standards and other regulations to encourage the adoption of value-based and PCMH models among its Medicaid managed care plans. Medicaid managed care plans must contract with adult and pediatric PCMHs and support behavioral health transformation by reimbursing for services delivered by integrated health homes and community mental health centers (CMHCs) throughout the state. Unlike PCMHs, which integrate behavioral health services into a primary care setting (at varying levels of integration), integrated health homes and CMHCs aim to integrate primary care services into a behavioral health care setting. Medicaid managed care contracts also require that health plans discuss their current involvement and engagement in SIM activities, demonstrating their commitment to state delivery transformation goals.

Rhode Island Medicaid also launched an Accountable Entity (AE) pilot program in spring 2016.¹⁶⁴ AEs are integrated provider organizations responsible for the total cost of care, quality, and outcomes of an attributed population. As of April 2017, the pilot had six participating AEs and served approximately 100,000 lives. According to one stakeholder, AEs are the “central platform for transforming the delivery system” in the state. In addition to contracting with PCMHs, Medicaid managed care organizations (MCOs) also are required to contract with AEs to further incent delivery system transformation statewide. Rhode Island Medicaid submitted a final draft of the AE Roadmap to CMS for approval in April 2017.¹⁶⁵

¹⁶⁴ In October 2016, CMS approved Rhode Island’s proposed Section 1115 waiver amendments to support the development of Medicaid AE organizations.

¹⁶⁵ State of Rhode Island, EOHHS. (2017, April 13). *Medicaid program accountable entity roadmap document*. Retrieved from http://www.eohhs.ri.gov/Portals/0/Uploads/Documents/Acc_Entitites/MedicaidAERoadmap.pdf

Provider and payer participation

OHIC regulations require that all commercial payers financially support PCMHs. Payers are required to reimburse PCMH participants with per member per month (PMPM) payments, which can amount to millions of dollars annually. Prior to the AR2 analysis period, payers expressed concerns about the long-term sustainability of the PCMH payment model. According to one payer, the PCMH model was originally envisioned as a “bridge” to help primary care practices prepare for participation in future, value-based delivery reform models. However, after almost 10 years, PCMH-participating practices have yet to be subject to risk-based penalties and payers are not seeing the return on investment they were expecting. Moving forward, payers are more optimistic about the state’s investment in Medicaid AEs, which offer providers financial incentives to contain spending and hold physicians accountable for the overall cost and quality of care.

Providers participating in the state’s PCMH initiatives were generally satisfied with the PCMH model. Primary care physicians praised PCMH for helping to facilitate practice changes designed to encourage care coordination. For example, one pediatrician credited participation in PCMH-Kids with helping the practice successfully integrate a behavioral health professional on site. Another physician was optimistic that having a licensed social worker on staff would help ensure access to timely treatment for children with mental health needs.

Some providers also expressed anxiety about the future of the state’s delivery transformation efforts. Given state budget cuts and some recent reductions in commercial payer incentives, some providers did express anxiety about the future of the state’s delivery transformation efforts. The enhanced funding from PCMH has enabled providers to make significant changes in staffing and practice operations. However, some primary care physicians are becoming concerned that, as pressure mounts to cut costs, they may not be able to sustain some of these improvements over time. The state’s push toward increased adoption of AEs, which places providers at financial risk, adds to these anxieties.¹⁶⁶

“You talk about how you are going to change the way I’m reimbursed, which means heading toward a capitated model, and we know that in the past, capitation models placed all the risk on providers”—Rhode Island primary care provider

I.1.4 Health information technology and data infrastructure

During Award Year 2, SIM funding was earmarked to support several health information technology (health IT) strategies. Although the state did not make any major changes in its SIM-funded health technology plan, some strategies were somewhat delayed due to procurement or

¹⁶⁶ Rhode Island’s Medicaid AE demonstration requires that Medicaid MCOs implement risk-adjusted, total-cost-of-care contracts with providers.

technological issues or other external factors. SIM-funded health IT strategies for Award Year 2 included enhancing existing all-payer claims database (APCD) offerings, preparing and populating a common provider directory to provide data extracts for state agency use, and “going live” with behavioral health dashboards in nine CMHCs and one Medicaid CHT. Also during Award Year 2, plans included signed contracts in place for development of the Healthcare Quality Measurement Reporting & Feedback System and the integrated health and human services data ecosystem.

According to state officials and various stakeholders, Rhode Island continued to demonstrate success in implementing the SIM health IT strategies during this analysis period. Some interviewees noted that successes were due to increasing knowledge about the SIM Initiative throughout state government and the community, the SIM team being fully staffed, and well-defined SIM health IT projects. One interviewee also attributed success in SIM health IT strategies to the collaborative nature of the SIM Initiative, noting that it seems to be impacting the culture in the major state agencies by fostering more collaboration and communication.

Despite reported successes, some state officials indicated that the state procurement process is taking longer than originally expected for the quality measurement, reporting, feedback system and the integrated, health and human services data ecosystem. State officials indicated the procurement delays likely were related to another, high-profile Rhode Island IT deployment—the Unified Health Infrastructure Project, known as UHIP, which was launched in September 2016—that did not go as planned. These officials said the state’s reaction to the UHIP issue has created additional delays in health IT-related projects, because the state has been more cautious about launching new health IT initiatives without an extensive review process.

HealthFacts RI. SIM funding has supported the implementation and maintenance of HealthFacts RI, the state’s APCD. During this analysis period, Rhode Island restructured and consolidated the APCD vendor model to increase efficiency and accountability. The state initially designed the APCD to have three separate vendors for the major tasks; however, the state determined this arrangement to be inefficient and now has a single vendor.

The state considers future sustainability of the APCD to be a challenge. To address this challenge, the state is developing strategies to support the APCD long term. The state leveraged SIM technical assistance to investigate how to use implementation advanced planning documents¹⁶⁷ to support SIM projects, including HealthFacts RI, in the future. As of April 2017, the state received approval for a plan to move HealthFacts RI to the State Data Center and begin

¹⁶⁷ States can access 90 percent federal matching funds through Health Information Technology for Economic and Clinical Health (HITECH) administrative funding for health information exchange activities. Requests for funding require submission to CMS of an implementation advanced planning document.

using Medicaid analytic tools. The state expects to cease supporting HealthFacts RI with SIM funding and transition in May 2017 to Medicaid funding, which will sustain the APCD.

Whereas the state and several stakeholders considered HealthFacts RI to be a valuable component of Rhode Island's health IT plan, one stakeholder had some concerns. The stakeholder indicated that compliance with APCD was costly to payers, and it was still too early in the implementation process to determine return on investment. However, this stakeholder did remain hopeful about the long-term value of HealthFacts RI.

Statewide common provider directory. The statewide common provider directory is a Web-based database designed to house detailed provider information. Also during this analysis period, data for over 10,000 physical and behavioral health providers were added to the directory and validated. Several stakeholders reported that the provider directory has the potential to be a very valuable tool. One state official indicated that, because behavioral health providers were included in the provider directory, the directory could improve access to providers that are difficult to identify, such as child psychiatrists and physicians who are approved to provide medication-assisted treatment for opioid addiction.

Although some stakeholders expressed support for the value of the provider directory, others had concerns about its usefulness. Several stakeholders mentioned that as of April 2017, only one of the four major payers in the state had agreed to contribute data, despite all major payers' participation in ongoing informational meetings about the directory. Several stakeholders reported that one major payer had not yet agreed to participate in the provider directory, citing the proprietary nature of the provider data and concerns of liability, if the data are incorrect.

Community mental health centers care management dashboards. During this analysis period, care management dashboards were deployed in three CMHCs. These dashboards provide the CMHCs with real-time information on behavioral health consumers' hospital and emergency room (ER) utilization, to help behavioral health workers provide support to consumers when they present to hospitals or ERs. Several stakeholders were excited about the positive impact the dashboard would have on services. Stakeholders expressed that they were anxious for this SIM technology to be installed and felt it could have a significant, positive impact on consumers of behavioral health services. State agency representatives anticipated that the dashboards will ensure that care coordination efforts will improve and that consumers will receive needed crisis care. State agency representatives also perceived the dashboards would be most helpful for consumers who had been recently discharged from psychiatric hospitals. The state noted these individuals are at risk of readmission into the hospital during the first 3 weeks after discharge.

Electronic clinical quality measurement reporting and feedback system. This system is intended to utilize existing state databases to collect standardized health records data and develop analytic, quality measure reports at the provider, provider organization, and hospital levels. The

vendor should be selected by summer 2017. State agency representatives indicated that the design and procurement process for this SIM initiative took much longer than originally anticipated, as the state decided to proceed slowly and attempt to learn from other states who had engaged in a similar process. State officials also noted other issues impacting the timing of the electronic clinical quality measure system, including unclear project goals when it was first conceptualized and changes in leadership during the planning process.

Integrated health and human services data ecosystem. The integrated health and human services data ecosystem is intended to support the integration of person-level information across Rhode Island's EOHHS agencies. The goal of this project is ultimately to assist state policymakers in accessing state databases to inform policies, decrease gaps in services, and improve care across EOHHS programs. State officials reported in April 2017 that this project was still in the analysis phase. The team is developing a business case for this system, with the goal of releasing a request for proposal (RFP) for this project by 2018.

Health information technology levers

Whereas Rhode Island has some levers in place to promote adoption of its health IT and data infrastructure strategies, some SIM programs are helped more than others by these levers. SIM strategies related to APCD have benefitted from the state mandate requiring the establishment of an APCD database and the governance of the APCD Advisory Board. These levers have ensured compliance from all payers and guaranteed sustainability of these strategies, even when SIM funding is no longer available.

The statewide common provider directory and the CMHC care management dashboard, do not have accompanying regulations or oversight boards. As such, the state has faced the threat of nonparticipation (as in the case of the provider directory) and concerns about the sustainability of the strategy (as in the case of the provider directory and the CMHC care management dashboard). For both strategies, the state has emphasized that it anticipates the benefits for stakeholders will be great enough that they will voluntarily participate or fund the service after SIM funding is no longer available. Both strategies are still in early implementation, and the state has not yet reassessed its position or considered revising the levers.

One stakeholder expressed concern over the current lack of strong levers for participation in the provider directory. The stakeholder expressed surprise that the state has not intervened to provide a stronger "stick" for participation but expects state intervention will be forthcoming. The stakeholder indicated a preference that the state utilize contracts to incent or motivate providers to use health IT, or at a minimum, require providers to enroll patients in CurrentCare, the state's health information exchange.

I.1.5 Practice transformation and workforce development

Rhode Island's practice transformation and workforce efforts are primarily directed toward helping providers adapt to working within value-based payment (VBP) systems. Due to the Rhode Island SIM Initiative's focus on integrating behavioral and physical health, most of the state's practice transformation and workforce strategies seek to assist in this integration. As of April 30, 2017, Rhode Island had signed contracts to implement three of its practice transformation interventions: (1) PediPRN, (2) PCMH technical assistance, and (3) SBIRT training center.

Pediatric psychiatry resource network. PediPRN is a program offering statewide child psychiatric telephonic services to support pediatric primary care practitioners. These practitioners can call a child psychiatrist about diagnosis or treatment of children they are seeing any time between 8 a.m. and 5 p.m., Monday through Friday. The goal of the consultation is to assist pediatric primary care practitioners in meeting the immediate behavioral health needs of children and adolescents with mild to moderate conditions, such as depression, anxiety, and ADHD. The program also seeks to increase the practitioners' comfort and competence in treating these children without consultation. The contractor plans to develop seminars for providers to address common needs that emerge from the consultations.

PediPRN was implemented in Rhode Island December 15, 2016. According to state officials, as of April 2017, 314 providers from 49 practices were enrolled, and 87 consultation calls had been made.¹⁶⁸ One provider—who had consulted the service for help in addressing the needs of a teenager who was soon to be homeless and had suicidal thoughts, anxiety, ADHD and a tic disorder—reported, "... we came up with a workable solution for this patient yesterday." However, another provider was concerned that the program would ultimately push primary care providers (PCPs) too far into providing specialty mental health treatment and being responsible for providing care for complex patients far beyond their training, capabilities, and resources.

Patient-centered medical home technical assistance. In January 2017, CTC-RI was awarded a SIM-funded contract to augment the technical assistance that CTC-RI already was providing to practices participating in these pilots. See **Section I.1.3** for additional details on RI's PCMH initiatives.

Screening, Brief Intervention, and Referral to Treatment administration training center. In December 2016, the Rhode Island SIM Initiative awarded a contract to implement a SBIRT training center. SBIRT is an "evidence-based practice used to identify, reduce, and prevent problematic use, abuse, and dependence on alcohol and illicit drugs."¹⁶⁹ SBIRT consists

¹⁶⁸ State of Rhode Island. (2017, April 13). *Minutes, SIM steering committee meeting, April 13, 2017.* (p. 5). Retrieved May 21, 2017, from <http://sos.ri.gov/documents/publicinfo/omdocs/minutes/6436/2017/53004.pdf>

¹⁶⁹ SAMHSA. (2017). *SBIRT: Screening, brief intervention, and referral to treatment.* Retrieved from <https://www.integration.samhsa.gov/clinical-practice/sbirt>

of screening by clinicians to detect potential problems, early intervention for people who screen for risky behavior via brief conversations with clinicians, and referral to treatment for those who may need substance use treatment.¹⁷⁰ According to state officials, because this project is building on the contractor's previous work, training sessions had begun by April 2017.

During the AR2 analysis period, the RI SIM Initiative had planned to implement two additional practice transformation interventions: (1) funding to support CHTs¹⁷¹ to coordinate care for high-risk patients, and (2) a practice coaching initiative to help CMHCs provide more integrated services to patients with co-occurring mental health and substance abuse services. Both interventions were delayed and modified for reasons described below. As of April 2017, the state had redesigned these two interventions and was planning to implement these new strategies in the coming year.

Community health team support and Screening, Brief Intervention, and Referral to Treatment implementation. Rhode Island planned to hire a contractor to provide technical assistance and funding to establish two to three new CHTs that serve all high-risk community members, regardless of the member's source of health coverage. The CHTs will comprise at least one licensed health professional (often a behavioral health professional) and two community health workers (CHWs). SIM resources also will be used to provide technical assistance and training for all existing CHTs.

In 2016, the Rhode Island BHDDH received a grant from the Substance Abuse and Mental Health Services Administration (SAMHSA) to implement SBIRT screening in 10–12 clinical settings. Originally conceived as a standalone project, state officials realized that by combining this new initiative with the CHT contract, they could reduce administrative burden and better coordinate oversight. Ultimately, state officials decided to combine the two strategies, because the new structure will create synergy between the projects, essentially enabling Rhode Island to use the SAMHSA grant as a policy lever to achieve SIM goals. Furthermore, the state sees the two streams of work as related at the patient level. As a state official explained it, “The majority of people who benefit from SBIRT services ... are usually the most vulnerable and hard-to-reach in the population. So, the benefit of having CHTs is that they're building a personal relationship with patients, and [the] chances patients will engage in their own care will increase.” As of April 2017, state officials were evaluating responses to this RFP combining CHTs and SBIRT screening.

¹⁷⁰ CMS. (2011, October). *Fact Sheet: Substance (other than tobacco) abuse structured assessment and brief intervention (SBIRT) services*. Retrieved May 31, 2017, from <https://www.medicaid.gov/medicaid/benefits/downloads/fact-sheet-substance-abuse-structured-assessment-and-brief-intervention-services.pdf>

¹⁷¹ CHTs are multidisciplinary teams that support PCPs by providing health coaching and care coordination services to high-risk patients.

Community mental health center practice coaching. In June 2016, state officials had hoped to be selected by SAMHSA as a Certified Community Behavioral Health Clinic (CCBHC) demonstration state. Rhode Island anticipated that selection would enable CMHCs to become certified CCBHCs and be reimbursed through a prospective payment system for providing CCBHC services to their Medicaid-eligible clients. Officials had planned to use SIM resources to provide practice coaching to CMHCs, which would complement the new certification process. However, in late 2016, Rhode Island learned it had not been selected for the CCBHC demonstration. Although Rhode Island could no longer establish the certification process, the state decided to use SIM funding to proceed with hiring a contractor to provide practice coaching to CMHCs. As of April 2017, SIM staff were engaged in revamping the practice coaching plans to reflect the reduced resources available for the work. Staff anticipated issuing an RFP to secure a contractor to provide the coaching later in 2017.

Healthcare workforce transformation. Continuing its strategy of alignment and integration, the Rhode Island SIM Initiative used its partnerships and convening resources to assist the EOHHS in developing a statewide strategic plan for workforce transformation. EOHHS sought to identify Rhode Island's education and training priorities for workforce transformation. The identification process began in June 2016, with an assessment of the state's current and future workforce capacity. Over 250 state officials, researchers, advocates, payers, and other stakeholders worked together to elucidate where the state should continue its workforce investments to support health system transformation. Interviewees reported that the group would release a workforce strategic plan in May 2017.

Policy levers

Because most of the Rhode Island SIM Initiative's practice transformation and workforce development efforts in the AR2 analysis period focused on procurement, the state's primary policy lever was contracting. The eventual practice transformation and workforce development strategies will use policy levers established through Rhode Island's earlier work. For example, one stakeholder pointed out that the CHW certification process established in 2016 defines standards for the certification, which include training, experience, supervision, and field placement experience. This will, in turn, help define the requirements for the new CHTs, which will include at least two CHWs among their personnel.

Almost all state officials, and some other stakeholders, expressed frustration with the long and complex nature of state procurement processes. One official commented that the structure of the process hampered state officials' ability to negotiate contracts. State officials, however, were proud of the efficiency with which they navigated these challenges and felt that they ultimately had secured contractors who would help them achieve success. Also, although some of the selection processes took longer to complete than anticipated, none of the

stakeholders reported that the delays would prevent the Rhode Island SIM Initiative from achieving its goals.

I.1.6 Population health

The Rhode Island SIM Initiative’s overarching approach to population health is integration and alignment. As of June 30, 2016, Rhode Island had completed its initial integrated population health plan, which, among other things, documented how the state infused population health into the design of all SIM reforms and strategies. Furthermore, the SIM Initiative had just begun planning an assessment of existing population health efforts throughout the state to determine gaps and identify high-value opportunities (i.e., opportunities where the SIM Initiative’s unique strengths and resources could be used to align and accelerate the impact of the existing efforts) for additional SIM investment. As expected, by April 30, 2017, Rhode Island had completed this effort and identified three integrated population health collaborations to focus on during the remainder of the SIM Initiative. The SIM Initiative also is updating its integrated population health plan, which state officials believe, has become a living document that will continue in use after the SIM Initiative concludes. The draft of the updated plan was posted for public comment in April 2017.¹⁷²

Rhode Island’s initial integrated population health plan focused on seven priority conditions: tobacco use, obesity, chronic disease, depression, children with social and emotional disturbance, serious mental illness, and opioid use. By October 2016, the SIM Initiative had committed to add an eighth priority area: maternal and child health.

Rhode Island will address each priority through a combination of existing population health efforts—weaving population health into all SIM investments—and the three integrated population health collaborations. The planned work includes strategies that fall within each of the three buckets of prevention categories of the CMS adaptation of the Centers for Disease Control and Prevention¹⁷³ (CDC) classification framework: (1) traditional clinical approaches, such as the increased depression screening reported by the integrated behavioral health pilot; (2) innovative patient-centered care, such as the patient engagement project; and (3) community-wide health, such as the integrated population health collaboration to align best practices in tobacco cessation.

The SIM staff worked with several social and health agencies to convene a working session in August 2016 to identify the priority areas of interest. The working group identified three integrated population health collaborations: aligning best practices in tobacco assessment,

¹⁷² State of Rhode Island. (2017, May 9). *Rhode Island State Innovation Model (SIM) test grant operational plan 2017*. Retrieved August 17, 2017 from <http://www.health.ri.gov/publications/plans/StateInnovationModelTestGrantOperational.pdf>

¹⁷³ Auerbach, J. (2016, May/June). The 3 buckets of prevention. *Journal of Public Health Management & Practice*, 22(3), 215–218. doi: 10.1097/PHH.0000000000000381

referral, and treatment; leveraging infrastructure for statewide body mass index data collection; and identifying “high-risk” patients to improve quality health care. These three potential collaborations leveraged the SIM Initiative’s connections within and outside of state government, convening ability and staff, but not its financial resources. SIM staff continued to engage subject matter experts within and outside of state government to operationalize the three projects and identify areas where the SIM Initiative, through its interagency structure and ability to convene, could add value.

Many stakeholders reported that the process used to select the collaborations created strong stakeholder buy-in, because it was based on stakeholders’ existing priorities and designed to enhance their investments. A few steering committee members appreciated that SIM staff had respected their feedback on the importance of the three collaborations by finding a way to conduct all three. At least one payer, provider, and consumer advocate stated that they supported one or more of the collaborations, because they saw how the collaboration was going to help them achieve their own goals—one of the outcomes the selection process was designed to achieve.

Although stakeholders are excited about their plans to advance population health, some expressed modest expectations. First, one cautioned that “... those interventions are only addressing the 10 percent of what’s determining an individual’s health,” referring to the much greater influence of the social determinants of health, as compared to factors within the control of the health care delivery system. Second, some stakeholders believe that the time remaining until the SIM Initiative ends will not be sufficient to produce measurable change in the targeted conditions. Most stakeholders recognize this and look to the long term to see changes in population health. As one state official said, “We are setting ourselves up for big change in 5–10 years.”

However, some stakeholders were not pleased with the voting process and its outcomes. A few interviewees were frustrated by the pace of the process, and one complained about voting logistics. Each steering committee member was supposed to vote for his or her top two projects, but this person observed that some voted more than twice and some only once. Finally, one stakeholder payer viewed the collaborations as primarily public health strategies and was concerned that the strategies might not help a provider understand how to manage the different populations represented among their patients.

Policy levers

Although the Rhode Island SIM Initiative is not using financial incentives to improve population health, the state has crafted its efforts to leverage the investments it is making—and policy levers it is using—in other areas. For example, stakeholders anticipate that the new CHTs will help address social determinants of health by activities such as helping high risk patients find housing.

I.1.7 Quality measurement alignment

SIM funding provides administrative support for the Measure Alignment Workgroup, which is a subcommittee of the SIM Steering Committee. This work group—comprising payers, providers, measurement experts, consumer advocates, and other community partners—is responsible for developing and advising on the implementation process for aligned quality measures for accountable care organizations (ACOs), PCPs, and hospitals. During the AR1 analysis period of the SIM Initiative, this work group created an aligned measure set menu with 59 measures. The menu included core measure sets for ACOs (11 measures), PCPs (7 measures), and hospitals (6 measures).

During the AR2 analysis period, the work group met to review existing measures to align with any changes implemented by the National Quality Forum, the National Committee for Quality Assurance (NCQA), or the Healthcare Effectiveness Data and Information Set (HEDIS). The work group removed two measures that had lost National Quality Forum endorsement and recommended removing another measure, pending Medicaid input. The work group also added 10 measures, including new HEDIS measures and measures recommended by two newly developed specialist work groups. The SIM Initiative supported two Specialist Measure Alignment Workgroups to develop measures for specialty care, maternity care, and behavioral health. Like the original SIM Measure Alignment Workgroup, the specialist’s work groups comprise payers, provider groups, professional associations, state agencies, and advocates. These work groups reviewed the existing measure sets and recommended core and menu measures. The behavioral health measure set includes an additional set of measures that Medicaid Integrated Health Homes are required to submit to BHDDH.

In September 2016, OHIC proposed language requiring commercial insurers to implement the aligned measures sets for primary care, hospital, and ACO contracts. Some stakeholders interviewed continue to be very supportive of measure alignment efforts. One stakeholder lauded the collaborative effort and shared how narrowing the scope of measures has been very helpful with contracting with hospitals and has made negotiations much smoother. However, one downside mentioned was a loss of creativity and sometimes being forced to use a measure that was developed for a population not served within every plan.

I.1.8 Lessons learned and looking forward

The stakeholders interviewed for this report identified a wide range of challenges, success, and lessons learned. The following themes emerged from their observations and analysis of their reports of implementation progress.

The State Innovation Model Steering Committee is an effective governing body. Most stakeholders reported the SIM Steering Committee as a success. These stakeholders were impressed by members’ level of engagement and that the wide-range of stakeholders forming

this governing body could come together to make strategic decisions about where to invest SIM resources. Almost all interviewees agreed with the decisions made by the steering committee. Also, almost all interviewees reported putting decision-making power into the hands of the committee, which worked to engage the executive leadership of participating organizations in the Rhode Island SIM Initiative. Interviewees believed this decision-making approach produced strong community buy-in to the Rhode Island SIM Initiative’s approach and objectives. Many pointed to the selection of the three integrated population health collaborations as a major success for the committee.

The Rhode Island State Innovation Model Initiative is producing a “culture of collaboration” among state agencies. Almost all state officials reported that the interagency planning committee not only was a strong support for the SIM Initiative, but also fostered collaboration among state agencies on other work. Several officials reported that agencies are more aware of how their decisions affect the work of other agencies, and these agencies would now consider those effects when they are planning their work. As one state official expressed it, “I think that the partnerships and culture of collaboration that SIM has enabled us to start to build is something that will last.”

The Office of the Health Insurance Commissioner’s affordability standards and the Medicaid managed care organization contracts are effective levers for delivery system and payment reform. Stakeholders often mentioned some aspect of OHIC’s affordability standards and the Medicaid MCO contracts as a means to advance SIM Initiative goals. OHIC used its regulatory authority to create targets for the use of the PCMH and APMs by commercially licensed plans. Medicaid has placed aligned requirements into its MCO contracts.

Buying in to projects led by external organizations mitigated purchasing delays and produced early results. CTC-RI launched both the PCMH-Kids and Integrated Behavioral Health pilots before they could augment their resources with the SIM funding. Similarly, the Bradley Hospital was engaged in planning PediPRN before accessing the SIM funding and was, therefore, able to launch program operations almost immediately after the SIM funding award. Finally, the Rhode Island Quality Institute had developed the care management dashboard for CMHCs, and SIM funds are being used to pay a one-time connection fee for linking the CMHCs’ patient panels to the dashboard. These organizations’ ability to use other resources to forge ahead with their projects blunted the impact of purchasing delays on these projects, enabling the Rhode Island SIM Initiative to point to some early indications of positive outcomes (e.g., increased screening rates in the PCMH-Kids, integrated behavioral health pilots, reports of problems solved by PediPRN).

Aligned quality measures are already having an impact on the delivery system. Stakeholders expressed support for measure alignment efforts. One payer indicated that the alignment efforts were collaborative, and reducing the numbers of measures reduced burden for

providers. The payer also mentioned measure alignment has been helpful in contracting with hospitals and has made negotiations much smoother.

Allow sufficient time for the procurement process. Almost all state officials and some other stakeholders reported that it took more time to navigate the state purchasing process than expected. These stakeholders assigned at least some of the cause of the slow pace of implementation to these delays. One explained how the structure of the process also impeded Rhode Island’s ability to negotiate contracts with vendors. However, no stakeholder expressed concern that the delays were severe enough to prevent Rhode Island from eventually achieving its SIM Initiative goals. Most state officials reported successful navigation of Rhode Island’s long and complex purchasing as a success.

The Rhode Island State Innovation Model Initiative could benefit from increased Medicaid engagement. A few stakeholders expressed the belief that increasing the engagement of the Medicaid agency in SIM planning and implementation would benefit the Rhode Island SIM Initiative. Three stakeholders felt there were potential missed opportunities to learn from Medicaid experience, improve coordination at the detail level among OHIC and Medicaid policies, or benefit from the transformations that agency was implementing outside the SIM Initiative. These stakeholders acknowledged that Medicaid policies were aligned with the SIM Initiative but believed that greater engagement would produce even greater alignment.

Fully developing a business case and engaging stakeholders early in the process are necessary to promote sustainability, especially for health information technology projects. Several components of the SIM Initiatives—such as the provider directory, PediPRN directory, and CMHC Care Management dashboard—will require providers or payers to provide ongoing funding or resources to sustain them. Because the state has experienced unexpected “push back” from some payers about providing data for the provider directory, the state is carefully constructing the business case and engaging stakeholders before embarking on additional SIM health IT projects, in the hope of promoting sustainability.

Looking forward

Looking forward, stakeholders identified a range of opportunities and challenges. Several of the challenges centered on the SIM Steering Committee and the strategic vision for the SIM Initiative. One stakeholder crystalized the challenge facing the committee as needing to shift its focus from deciding where to invest SIM resources to helping ensure that the investments paid off. This stakeholder elaborated that the steering committee needed to stay informed about project progress, contribute to identifying any improvements needed to produce success, and communicate successes to the community. Some stakeholders worried that SIM resources had, perhaps, been spread too thin when the dollar amount of the SIM award was reduced and that the changes produced by SIM investments would not be deep enough to be sustained. Others were concerned that, without ongoing attention, the SIM Initiative’s central goals of spreading VBP

and moving Rhode Island further along the continuum of VBP could become lost in the many projects to support practice transformation, population health, and other goals.

Several other challenges also were mentioned. Some stakeholders reported that engaging small practices in practice transformation was a challenge. Looking to the longer term, some stakeholders expressed concern about the impact of factors outside the SIM Initiative, such as national health reform, on Rhode Island's ability to meet its SIM goals. Stakeholders worried that reductions in the number of people with health coverage would reduce Rhode Island's ability to improve the delivery system, as the state's major policy levers stemmed from its leverage of commercially licensed health plans and Medicaid MCOs. Thus, reducing the number of people covered by Medicaid or commercial insurance would reduce the power of those levers. Others worried about sustainability; they believed that the Rhode Island SIM Initiative needed to be more focused on building the business case to sustain their innovations after the end of the award.

A final theme that emerged from the interviews was that the Rhode Island SIM Initiative's greatest opportunity is one created by the Initiative itself. Many stakeholders commented on the power of convening to achieve transformation goals. Others commented on how the Rhode Island SIM Initiative's implementation had created an atmosphere and environment that fostered change, both within state government and among a broader group of stakeholders. Several observed that alignment and integration was an effective method of amplifying the Rhode Island SIM Initiative's effect on the delivery system. Some officials reported they believed the new convening ability and culture shift would enable Rhode Island to not only achieve its SIM goals but also address more effectively issues outside the SIM Initiative.

I.2 Changes in Outcomes During the State Innovation Model Initiative

I.2.1 Progress toward a preponderance of care in value-based purchasing models and alternative payment models

OHIC monitors delivery system transformation by tracking two key metrics: (1) APM adoption by commercial health plans and (2) percentage of primary care clinicians participating in a PCMH.¹⁷⁴ Under the authority of the OHIC commissioner, Rhode Island developed a 2017–2018 alternative payment methodology plan to set forth OHIC affordability standards. This plan included targets to meet PCP participation and APM adoption objectives. By 2018, the state

¹⁷⁴ The APM target is the aggregate use of APMs as a percentage of annual, commercially insured medical spending. APMs include total-cost-of-care budget models, limited scope of service budget models, episode-based payments, and infrastructure and pay for performance payments. Additional definitions and technical specifications of Rhode Island APMs can be found at State of Rhode Island, OHIC. (2017, January 27). *Rhode Island 2017–2018 Alternative payment methodology plan*. Retrieved from <http://www.ohic.ri.gov/documents/2017-2018-Alternative-Payment-Methodology-Plan-Final.pdf>

intends to have 80 percent of primary care physicians participating in a PCMH and 50 percent of commercial payments to providers made under an APM. According to data provided in the state’s third quarter 2016 progress report to CMMI, 46 percent of PCPs were participating in a PCMH, and 24 percent of commercial payments were made to providers under an APM during the preimplementation period. However, state officials said, as of October 2016, the APM adoption rate for commercial payers has increased to 31.9 percent.¹⁷⁵

Table I-1 presents additional information regarding the extent to which Rhode Island’s payers are participating in the SIM payment and health care delivery models. These values were provided by the state in its third quarter 2016 progress report to CMMI. Medicaid data were not yet available; however, Rhode Island plans to provide CMMI annual updates to these data, to also include Medicaid data.

Table I-1. Payers participating in a value-based purchasing or alternative payment model in Rhode Island, preimplementation figures as of third quarter 2016

Payer	Category 1 Payments: Fee-for-service with no link of payment to quality		Category 2 Payments: Payment linked to quality		Category 3 Payment: Alternative payment models		Category 4 Payment: Population-based payment	
	Number of beneficiaries	Percentage of payments	Number of beneficiaries	Percentage of payments	Number of beneficiaries	Percentage of payments	Number of beneficiaries	Percentage of payments
Commercial	—	36%	—	64%	45,471	24%	0	0%
Medicaid	—	—	—	—	—	—	—	—

Source: Rhode Island third quarter 2016 progress report to CMMI.

Note: Rhode Island does not define payments linked to quality and APMs as mutually exclusive. Therefore, the percentage of payments in Categories 1, 2, and 3 sums to more than 100 percent.

— = relevant data were not provided in data source.

¹⁷⁵ State of Rhode Island, OHIC. (2016, October 18). *Health Insurance Advisory Council, alternative payment methodology advisory committee meeting minutes*. Retrieved from <http://www.ohic.ri.gov/documents/2016-10-18-HIAC-Minutes.pdf>

Provider participation

Table I-2 presents the extent to which Rhode Island’s providers are participating in the SIM payment and health care delivery models. These values were provided in the state’s third quarter 2016 progress report to CMMI; however, the data represent preimplementation status, as Rhode Island provides annual updates for these data to CMMI.¹⁷⁶ Prior to implementation of the SIM Initiative, 46 percent of PCPs were participating in a PCMH providing care for adults, 55 percent were participating in an ACO, and there were no physicians participating in a pediatric PCMH, the primary model supported by Rhode Island SIM Initiative funds. According to state officials, as of October 2016, 50 percent of PCPs were participating in a PCMH and nine pediatric PCMH practices were in place.

Table I-2. Number and percentage of physicians and practices participating in a value-based purchasing or alternative payment model in Rhode Island, preimplementation figures as of third quarter 2016

Provider type	SIM models			SIM-wide	Landscape
	Primary care PCMHs—Adult	ACOs	Primary care PCMHs—Child		Any value-based purchasing or APMs
Network PCPs	524 (46.2%)	623 (54.9%)	0 (0%)	—	808 (71.3%)
Practices	—	—	0 (0%)	—	—

Source: Rhode Island third quarter 2016 progress report to CMMI.

— = relevant data were not provided in data source; ACO = accountable care organization; APM = alternative payment model; PCMH = patient-centered medical home; PCP = primary care provider; SIM = State Innovation Model.

In providing feedback on the feasibility of Rhode Island’s PCP participation and APM adoption goals in the 2017–2018 alternative payment methodology plan, stakeholders were generally in agreement that reaching a 50 percent APM adoption rate by commercial and Medicaid health plans was achievable by 2018. Stakeholders also anticipated an increase in participation from primary care clinicians in PCMHs in future years. However, several interviewees were skeptical that the state could attain 80 percent of the state’s population or 80 percent of providers participating in value-based delivery models by 2018.

One key impediment to greater adoption of PCMH, and other value-based delivery models, was a lack of interest among smaller practices, according to stakeholders. Some informants said that many smaller primary care practices do not have the resources or the infrastructure required to become a PCMH and are reluctant to participate in delivery reform

¹⁷⁶ These data values were not verified by CMMI. Thus, the RTI team cannot attest to their accuracy.

models that might push them to meet unreasonable targets. Furthermore, many independent practitioners are concerned about losing their autonomy and income, as they feel more and more pressure to contract with larger practice entities that manage the funding stream. One strategy noted by state officials to address this obstacle is financing nurse practitioners, possibly embedded in CHTs, to work part-time with small practices to help them meet the PCMH certification requirements. The state also has created a small-practice engagement work group to discuss potential solutions.

I.2.2 Care delivery

During the AR2 analysis period telephone interviews in March and April 2017, most of the Rhode Island SIM strategies were in the early stages of implementation; discussing impact on care delivery and workforce was premature. However, a few stakeholders did offer some preliminary anecdotal results. For example, some of the adult PCMH practices receiving technical assistance related to integrated behavioral health reported increases in screening rates for depression, anxiety, and substance use.¹⁷⁷ Additionally, one provider, who had implemented the behavioral health dashboard in March 2017, reported initial success in identifying patients in need of additional mental health supports.¹⁷⁸

Several stakeholders expressed optimism about the potential impact that training primary care physicians on behavioral health screening and prevention could have on care delivery. Educating primary care physicians and other practitioners on how to use and apply behavioral health and substance use screening tools (SBIRT and others) will help patients access appropriate mental health treatment more quickly and efficiently, noted one informant. Similarly, many interviewees praised the state's investment in the PediPRN program. One provider described PediPRN as a wise approach for not only educating primary care physicians about mental health disorders in children but also addressing the shortage of child psychiatrists in the state.

I.2.3 Coordination of care, quality of care, utilization, and expenditures

Whereas overall, stakeholders perceived that it is too early to see the impact of SIM strategies on quality of care and expenditures, there are some SIM models that stakeholders perceive to have had an immediate impact. For example, some state officials expressed confidence that PCMH-Kids (see **Section I.1.3**) has already had an impact on coordination and quality of care. One state official reported that it was a goal for all nine practices involved in PCMH-Kids to achieve Level 3 NCQA recognition; all but one practice accomplished this

¹⁷⁷ State of Rhode Island. (2017, May 9). *Rhode Island State Innovation Model (SIM) test grant operational plan, version 3*. Retrieved from <http://health.ri.gov/publications/plans/StateInnovationModelTestGrantOperational.pdf>

¹⁷⁸ State of Rhode Island, EOHHS, SIM Workgroup and Partner Agency. (2017, June). *Progress to date*. Retrieved from <http://www.eohhs.ri.gov/Portals/0/Uploads/Documents/AE/ProgressToDate.pdf>

recognition level. Additionally, the state official reported the PCMH-Kids practices already were tracking quality measures.

Several stakeholders cited the PediPRN program (see *Section I.1.5*) as having an immediate impact on quality of care for children with behavioral health needs. State officials indicated pediatricians are reporting positive experiences with this new resource. By mid-March 2017, over 50 consults had been provided; by the end of April 2017, 79 consults had been provided.

In Award Year 3, the state plans to reduce the rate of increase in state health care spending. To accomplish this reduction, the state established the goal of converting 80 percent of the all-payer payment system to VBP by 2018, with 50 percent of payments in alternative payment methodologies. The state has begun providing data that detail the status of this goal for commercial payers; however, similar data have not yet been provided for Medicaid.

I.2.4 Population health

Table I-3 summarizes Rhode Island’s performance on 19 measures over a 3-year baseline period, prior to the start of the SIM Initiative. The table also includes information from the comparison group states: New Jersey, Pennsylvania, and Kentucky. The multistage procedure for identifying the comparison group states is described in detail in *Appendix L*.

Table I-3. Baseline measures of population health in Rhode Island, 2013–2015

Measure		2013–2015 Average	2013–2015 Trend
Health status is fair or poor	Rhode Island	13.1%	
	CG	15.4%	
	National	14.9%	
Ever diagnosed with diabetes	Rhode Island	8.4%	
	CG	9.5%	
	National	9.6%	
Ever diagnosed with hypertension ##	Rhode Island	32.5%	
	CG	32.9%	
	National	31.6%	
Ever diagnosed with asthma	Rhode Island	15.6%	
	CG	14.0%	
	National	13.5%	
Has a functional limitation ##	Rhode Island	18.0%	
	CG	18.5%	
	National	18.2%	

(continued)

Table I-3. Baseline measures of population health in Rhode Island, 2013–2015 (continued)

Measure		2013–2015 Average	2013–2015 Trend
Current smoker	Rhode Island	14.7%	
	CG	18.6%	
	National	16.4%	
Overweight	Rhode Island	63.7%	
	CG	64.7%	
	National	64.4%	
Obese	Rhode Island	26.4%	
	CG	28.7%	
	National	28.5%	
No leisure time physical activity or exercise, past 30 days	Rhode Island	23.8%	
	CG	24.3%	
	National	23.3%	
Limited fruit and vegetable intake, past 30 days	Rhode Island	82.5%	
	CG	85.5%	
	National	83.1%	
Any driving after drinking too much, past 30 days #	Rhode Island	4.2%	N/A
	CG	3.4%	
	National	3.3%	
No checkup, past year	Rhode Island	19.4%	
	CG	26.0%	
	National	29.4%	
No flu vaccine, past year	Rhode Island	53.0%	
	CG	58.4%	
	National	59.6%	
No 65+ flu vaccine, past year	Rhode Island	37.5%	
	CG	37.1%	
	National	39.1%	
No 65+ pneumonia vaccine, ever	Rhode Island	25.5%	
	CG	31.8%	
	National	30.2%	
Among adults with hypertension, no hypertension blood pressure medication ##	Rhode Island	21.2%	
	CG	20.0%	
	National	22.4%	

(continued)

Table I-3. Baseline measures of population health in Rhode Island, 2013–2015 (continued)

Measure		2013–2015 Average	2013–2015 Trend
No 50–75 colorectal cancer screening—no fecal occult blood test (FOBT), past year #	Rhode Island	91.7%	N/A
	CG	92.3%	
	National	90.7%	
No 50–75 colorectal cancer screening—no sigmoidoscopy or colonoscopy, past 5 years #	Rhode Island	38.4%	N/A
	CG	45.5%	
	National	46.0%	
No 50–75 colorectal cancer screening—no sigmoidoscopy or colonoscopy, past 10 years #	Rhode Island	25.3%	N/A
	CG	33.9%	
	National	33.6%	

Source: Behavioral Risk Factor Surveillance System, collected by CDC (2013–2015).¹⁷⁹

Note: To facilitate the comparison of trends over time between the model test state, its comparison group, and the nation, the sparklines for each measure rely on the same scale for the vertical axis for all three groups. Because the vertical scale for the sparklines varies by measure, the sparklines are not comparable across the different measures. Sparklines are not available for outcomes for which data are limited to 2014 (indicated by #). Sparklines for outcomes that are limited to data for 2013 and 2015 (indicated by ##) will be based on data for two points in time and so will appear more stable than outcomes for which data are available for 2013, 2014, and 2015.

CDC = Centers for Disease Control and Prevention; CG = comparison group; FOBT = fecal occult blood test; N/A = not available.

Whereas the percentage of the population reporting fair or poor health remained fairly stable in Rhode Island from 2013 to 2015 (13.1 percent average), the percentage in fair to poor health was slightly lower in Rhode Island relative to the national average (14.9 percent). Additionally, the percentage of population engaging in healthy behaviors, such as consuming fruits and vegetables and not smoking, was slightly higher in Rhode Island relative to the national average.

Rhode Island performed very well on some of the population health measures related to access to health care. The average percentage of Rhode Islanders who reported no check up in the past year (19.4 percent) was 10 percentage points lower than the national average (29.4 percent), and the percentage of Rhode Islanders who reported no flu vaccine in the past year (53.0 percent) was more than 6 percentage points lower than the national average (59.6 percent). Also, the rate of access to pneumonia vaccine for individuals over the age of 65 (25.5 percent), hypertension medication (21.2 percent), and colorectal cancer screening in the past 5 years (22.4 percent) was better for residents of Rhode Island as compared with the national average (30.2 percent, 22.4 percent, and 46.0 percent, respectively). These positive population health measures are likely indicative of the successes of the longstanding PCMH program in Rhode Island.

¹⁷⁹ CDC. (2013–2015). *Behavioral Risk Factor Surveillance System survey data*. Atlanta, GA: U.S. Department of Health and Human Services, CDC.

I.3 Rhode Island Summary

During the AR2 analysis period, Rhode Island continued to use SIM funding to complement existing efforts to transform its health care delivery system through improving population health and supporting the statewide health care delivery system. The state continued to focus most of its SIM investments in health care workforce and health IT-related projects.

Data point to several positive aspects of the SIM Initiative. Stakeholders indicate the state continues to engage in effective SIM governance strategies and that the SIM Initiative continues to foster collaboration among state agencies and other stakeholders. Also, the measure alignment process reportedly has made contract negotiations easier for some payers. The PediPRN project has been well received by primary care physicians. Some practices participating in the PCMH-Kids pilot reported increased rates of development screening, and some providers in the integrated behavioral health pilot reported increased rates of screening for depression, anxiety, and substance use disorder.

Stakeholders also report that some challenges remain. Sustainability for projects, such as the provider directory, are still in question. Furthermore, the challenge of engaging small practices in practice transformation remains. However, state officials and stakeholders are hopeful that the collaborative culture of the SIM Initiative, coupled with the state's successful history of health care reform efforts and strong support from the Governor's Office and other key state officials, will help the state overcome these challenges and achieve its stated SIM goals.

Appendix J: State Innovation Model in Model Test States: Tennessee

Key Results from Tennessee’s State Innovation Model Initiative July 2016–April 2017

- Tennessee successfully met nearly every milestone for the second Annual Report analysis period. The state launched each component of their primary care transformation strategy—patient-centered medical homes, Health Link, and the care coordination tool—on schedule and continued rolling out waves of episodes of care (EOCs) on schedule. In addition, as a part of its long-term services and supports strategy, the state implemented the Enhanced Respiratory Care program, which improved quality life for patients by helping them return to community living, and the Employment and Community first CHOICES program, which aligned incentives to help individuals with intellectual and developmental disabilities achieve employment and community living goals.
- Payer, provider, and consumer advocate stakeholders expressed overall positive sentiments around the SIM implementation progress and pace, as well as the level of dialogue and collaboration with the state. Stakeholders noted that the state had incorporated more of their feedback than during the first analysis period.
- The primary challenge was trying to expand the EOC model into the commercial market. Provider concerns over the mandatory expansion of episodes into the commercial market was reported as the “biggest roadblock” to successful implementation of SIM Initiatives.

This appendix provides an updated overview of the Tennessee SIM Initiative; describes important changes in the state’s SIM Initiative; summarizes implementation and testing successes, challenges, and lessons learned; and discusses early changes or prospects of changes resulting from the SIM Initiative. The findings in this appendix are based on analysis of data collected from key findings from the stakeholder telephone interviews, state document reviews, and state program and evaluation calls. These data were collected between July 1, 2016, and May 18, 2017.

As a source for this appendix, the RTI team conducted 15 key informant interviews from April 17 through May 18, 2017.¹⁸⁰ The key topic areas of the interviews were (1) changes in governance and program administration, (2) progress implementing SIM models and initiatives, (3) participation of payers and providers, (4) progress toward a preponderance of care in the state being provided through an alternative payment model (APM), and (5) early indicators of changes in relevant outcomes. Interviewees included state officials, payers, providers, and consumer advocates involved in the development and implementation of Tennessee’s SIM Initiative. Further details on the analytic approach are available in *Chapter 1*. Information on the number and type of stakeholders interviewed for the state is in *Table 1-1*.

¹⁸⁰ Interviews extended beyond the April 30, 2017 analysis period for this report due to delays scheduling interviewing with several key state officials.

J.1 Implementation Activities

The Tennessee SIM Initiative, known as the Health Care Innovation Initiative, was launched in 2013 to reform health care payment and delivery in the state and to shift to a health system grounded in value-based payment (VBP). Although Tennessee is still in the early stages of health care system transformation under the SIM Initiative, the state made progress from July 2016 through April 2017 in implementing health care payment and delivery reform through episodes of care (EOCs), primary care transformation, and long-term services and supports (LTSS) reform. Tennessee also developed and implemented the preliminary version of a care coordination tool (CCT), oversaw technical assistance (TA) for SIM-related practice transformation, and continued development of a population health plan.

The state noted that all milestones for 2016 were met except for procurement of the quality application vendor, which was delayed from fourth quarter 2016 to third quarter 2017, due to complexities around the data infrastructure and system requirements. Payer, provider, and consumer advocate stakeholders expressed overall positive sentiments around the SIM implementation progress and pace, as well as the level of dialogue and collaboration with the state. As of April 2017, the primary unresolved issue for SIM officials is whether to mandate commercial participation in the EOCs, although providers firmly and vocally advocated against this mandate.

J.1.1 Governance and program administration

The Tennessee Division of TennCare¹⁸¹ was designated by the Governor to lead the Tennessee Health Care Innovation Initiative. Within the Division of TennCare, responsibility for day-to-day leadership of the initiative rests with the director of the Strategic Planning and Innovation Group who reports directly to the deputy commissioner of TennCare. Staff within this group are assigned to implement the primary care transformation and EOC initiatives. The chief medical officer (CMO), along with a second medical director, provide clinical oversight and support to the EOC and primary care initiatives. LTSS payment reform is led by the chief of the Long-Term Services and Supports Branch within the Division of TennCare, and the health information technology (health IT) components are led by the TennCare chief information officer. The Division of TennCare has an interdepartmental contract with the Tennessee Department of Health for development and implementation of the Population Health Improvement Plan (PHIP).

In addition to the Division of TennCare, the Benefits Administration (within the Department of Finance & Administration) is involved with the governance of the Tennessee Health Care Innovation Initiative. The Benefits Administration is responsible for implementation

¹⁸¹ During the analysis period for this report, the Tennessee Division of TennCare was called the Health Care Finance Administration, but we are using the current name of the division for this report.

of the EOCs within the state employee health care contracts and participates in the Technical Advisory Groups (TAGs) and stakeholder meetings around that initiative.

While there was significant turnover within the state, with 8 of 13 TennCare or SIM leadership positions changing during the analysis period, state officials did not believe this turnover caused any difficulties in their implementation and testing of the SIM program because the agency actively pursued succession planning. Most of the individuals appointed to key leadership positions during the Annual Report 2 (AR2) analysis period moved up within the organization and already had SIM Initiative knowledge and experience, allowing Tennessee to maintain continuity. Tennessee now has a new TennCare deputy commissioner who was previously a deputy director within the organization. The current deputy commissioner created two new deputy director positions to assist in the management of TennCare and the SIM Initiative. The director of the Strategic Planning Innovation Group (SPIG) continues to oversee the SIM cooperative agreement and its deliverables and report directly to the deputy commissioner. The previous TennCare CMO stepped away from that role and into a medical director role in summer 2016 in order to devote more of his time to the EOC portion of the SIM Initiative. A new CMO was hired in October 2016. Elsewhere, TennCare has a new chief information officer who has held this position for 10 months. LTSS established a dedicated VBP unit in which an existing staff member was made director, and an assistant director position will be hired soon.

The state also added staff positions to increase internal capacity to implement and sustain SIM activities. SPIG added two staff positions, and LTSS dedicated an existing data analyst to help with VBP initiatives in the newly established unit. Officials reported that the addition of these positions is an important part of the sustainability plan for the SIM reforms. Over time, Tennessee is reducing its reliance on outside consultants and building internal capacity to manage the reforms. At the end of the current analysis period, state officials also reported that they were beginning to consider the movement of SIM functions or work streams from SPIG to operational divisions within the Division of TennCare to further cement the SIM work into the ongoing operations of TennCare.

In summary, although the large turnover of senior staff in the last year largely was the result of internal promotions, and state officials did not report that this turnover affected implementation or testing. Most Tennessee SIM programs have been implemented on time, following the state's schedule with few exceptions.

J.1.2 Stakeholder engagement

Tennessee has a robust stakeholder engagement plan through its TAG structure, which supports the development and implementation of the EOC. The Tennessee Department of Health continues to participate in the TAGs and works to ensure that population health elements are

being incorporated into the SIM Initiative. The Benefits Administration also continues to participate in the TAGs to inform their implementation of the EOC within the state employee health care contracts.

State officials reported a large stakeholder presence in other program designs, beyond the TAG meetings. The state reported that, overall, its SIM Initiative team “has met with over 230 stakeholder groups in more than 900 meetings since 2013.”

There are two payer operations groups that include all three Medicaid managed care organizations (MCOs): the episode operations group and the primary care transformation operations group. As of the beginning of the current analysis period, the primary care transformation operations group was operating with two subgroups: one to focus on Health Link operations, the other to focus on patient-centered medical home (PCMH) operations.

A provider stakeholder group meets monthly and comprises a diverse set of providers across the state. At these meetings, the state makes a presentation focusing on SIM updates, followed by a question-and-answer period.

One area of concern that the state officials mentioned was the sustainability of the EOCs and TAGs. Sustainability of the EOC program after the completion of the award relies on broad participation in the TAGs, which some state officials mentioned as a potential challenge, considering participants are volunteers.

Payer, provider, and consumer advocate stakeholders reported that they had multiple channels through which to provide feedback to the state. Most stakeholders reported involvement in the formal advisory groups and meetings, which allowed them opportunities to provide input and discuss questions and concerns. In addition to these organized opportunities for feedback, many stakeholders also expressed that state officials were readily available to speak over the phone, as needed. Explained one provider, “I have always found that they return the call that day or next, they’re very responsive, and they have been good partners to work with in that way.”

In the first analysis period, the RTI team heard that stakeholders felt that their feedback was often not acted upon. In the current analysis period, however, stakeholders reported that their feedback was considered by the state and often influential in shaping SIM design and implementation. One payer stated, “The state has incorporated our feedback and we have a great dialogue. They ask for advice when they do not have the expertise, and our dialogue has helped improve all initiatives.” Two Medicaid payers confirmed the state’s receptivity to feedback, such as one MCO’s suggestion to more closely align payer and provider quality incentives. A provider stakeholder also gave an example of the state’s responsiveness to the request for better coordination between existing TA resources in the state (e.g., an ongoing Health Resources and Services Administration grant) and assistance provided by Navigant, the state’s TA contractor

under the SIM Initiative. One payer felt that the state became more receptive to stakeholder feedback once implementation began, because they could react to tangible, ongoing work (rather than abstract design issues), and because the stakeholders could provide concrete examples of challenges.

One of the more controversial initiatives during this evaluation period was the expansion of EOCs into the commercial market, which received considerable pushback from provider stakeholders. One provider explained that the state showed some responsiveness to these concerns by delaying mandatory commercial implementation by 1 year, until 2018, and making implementation voluntary until then. Despite differing opinions on next steps in 2018, the provider described a strong working relationship with the state in which providers are given opportunities to comment and weigh in. As for the overall process of working with the state, this provider stated, “We try very hard to work together on everything that we can work together on. The fact that we aren’t on the same page on all things has not hindered that.”

J.1.3 Delivery systems and payment reforms

The Tennessee SIM Initiative’s three overarching strategies include five major payment and delivery reform initiatives: EOC payments for acute or specialist-driven care, PCMHs, health homes (Health Link), a statewide CCT, and LTSS payment reform. At the end of the AR1 analysis period, the state was laying the groundwork for initial implementation and continued testing of all strategies.

Episodes of care

At the beginning of the AR2 analysis period, the state had begun episode implementation in the Medicaid population and aimed to continue initiating six to eight new episodes into the preview period every 6 months, until they reached 75 episodes in some stage of testing by fourth quarter 2019.¹⁸² By April 30, 2017, Waves 1 through 4 of the EOCs were implemented, comprising 19 individual episodes. Waves 1 and 2 were in the accountability period, Wave 3 in the performance period, and Wave 4 in the preview period. Waves 5 and 6 are scheduled to enter the preview period during the future analysis period.

One state official characterized the implementation of EOCs within TennCare as having “tremendous momentum and growing acceptance in the provider community in that this is how we’re doing things.” Design of the Wave 7 episodes is underway. The major deviation during the AR2 analysis period from the implementation plan in place at the end of the AR1 analysis period

¹⁸² Implementation of each EOC begins with a preview period, during which providers receive actionable cost and quality data but are not held financially liable for their performance on the episodes. The goal of this period is to allow providers sufficient time to adjust their behavior. The calendar year following the year in which the preview period began is known as the performance period. During this time, providers are eligible for gain- and risk-sharing, based on their management of cost and quality of care for the designated episodes. Payment calculations are made after the performance period ends, during the accountability period.

was that mandatory provider participation in the commercial EOC reform was delayed until 2018. The primary challenge to implementation of the EOCs was the pushback from providers, who were highly resistant to mandatory expansion of episodes into the commercial market, described by one payer as their “absolute number one ‘please don’t do that’” aspect of the SIM Initiative.

Providers expressed several concerns about EOC reform, including a lack of transparency from the state in providing data from the first performance period, and limited confidence that the savings associated with episodes—particularly those with a small spend—would justify the resources needed for design and implementation. Providers also expressed concern that an EOC model would be less effective in a state like Tennessee, which is primarily managed care, versus a state like Arkansas, which implemented episodes but in a fee-for-service environment. Explained one provider stakeholder, “Right now, in regard to episodes, we want the state to stop and consider what sort of changes to the program might make it less burdensome and more meaningful.” This same stakeholder stated that, if the state does pursue mandatory expansion of episodes into the commercial market in 2018, providers would reevaluate their strategy and may take up their concerns with the state legislature.

Payers also had concerns about the EOC model. Payers noted that the volume of episodes was overwhelming, and keeping track of the phase they were in for each episode wave was difficult. They also felt that the structure and goals of the EOCs were more difficult to communicate than those of PCMHs and Health Link, largely because there is not a single audience across all the episodes.

State officials engaged in frequent discussions with providers and the legislature during the last months of the AR2 analysis period to address provider concerns about how EOCs will roll out in the commercial market. Officials noted that providers had more money at stake in their commercial markets, compared to their Medicaid populations, and were therefore concerned about the potential for downside risk if EOCs were expanded to these markets. Providers expressed specific concerns around being held accountable for total costs of an episode, including facility costs. State officials stated that commercial participation in EOCs was currently voluntary, and that communication with providers would be key to navigating the “delicate path forward” on this issue.

Primary care transformation

Both components of primary care transformation, PCMHs and Health Link, were implemented according to schedule. The PCMH model launched in 29 practices on January 1, 2017. Tennessee plans to open the application period on May 1, 2017 for practices to join the second round of PCMH, which will begin January 1, 2018. Health Link includes 21 practices. Tennessee contracted with Navigant to provide the practice transformation training and support to PCMH and Health Link providers; Navigant recently held three regional conferences with

both PCMH and Health Link providers. According to state officials interviewed, the state was optimistic that they would see increased savings and quality improvement from both programs, and providers were very positive about most aspects of these initiatives.

One area of concern among Health Link providers is the payment structure, which includes a higher payment during the initial 7 months of member enrollment to account for the intensive work to initiate coordinated care. Providers expressed concern to the legislature, and as a result of this pushback, state officials reported they extended the duration of the higher payment level to a full 12 months.

In addition to the SIM primary care components, Tennessee was selected as a Comprehensive Primary Care Plus (CPC+) state and had statewide participation in this payer model beginning in January 2017. The state applied for CPC+ knowing that the program would complement its existing SIM infrastructure. Whereas the state was quite pleased to be selected as a CPC+ region, the designation caused confusion for some providers who were also a part of the PCMH program. State officials said they received provider feedback that CMMI officials told providers that PCMH “is the same as CPC+” and that providers are unable to enroll in both. The state contacted acting CMS leadership and is looking to align the state’s CPC+ program closer to the PCMH model that currently exists in the SIM Initiative. At the close of the AR2 analysis period, Tennessee and CMMI continued to work through issues related to CPC+ and PCMH alignment, with a stated goal of having as many CPC+ practices as possible become part of the SIM PCMH. The state is working to make that enrollment possible during 2017 to improve the synergy of the both initiatives.

Long-term services and supports

Tennessee state officials reported that one of their greatest success with LTSS payment reform during the AR2 analysis period was the implementation of the Enhanced Respiratory Care (ERC) program. From 2011 to 2015, TennCare documented a major increase in the cost of ventilator services included in its Medicaid LTSS benefit. In 2014, TennCare announced that it would be contracting with Eventa, LLC, to conduct on-site assessments of all nursing facilities (NFs) receiving ERC reimbursement.¹⁸³ Following these site visits, TennCare developed new quality metrics and began collecting quality data late in 2014. After analyzing the collected data, TennCare substantially changed their payment methodology for beneficiaries receiving ERC services in NFs. On July 1, 2016, these new rates went into effect. TennCare stressed that NFs that perform at the highest levels, in terms of quality and patient outcomes, receive a higher reimbursement from the ERC program than previously received under the ERC per diem.¹⁸⁴

¹⁸³ *TennCare plan for improving enhanced respiratory care quality*. (2016). Retrieved from <https://www.tn.gov/content/dam/tn/tenncare/documents/ERCQualityImprovementPlan.pdf>

¹⁸⁴ Ibid.

The NF Quality Improvement in Long-Term Services and Supports (QuILTSS) program has been operational the longest of the five components of LTSS payment reform, with initial activities started in 2013. State officials reported that QuILTSS resulted in more quality improvement activities on the part of NFs, more choices for residents, and increased satisfaction on the part of NF residents. The officials also indicated that the CMS five-star ratings for Tennessee NFs are better now than before NF QuILTSS. Although the state cannot document that this is due to NF QuILTSS, officials do believe it had a positive impact. Originally, the state planned to move in January 2017 to prospective payments to NFs based on quality; this is now scheduled for July 2018. State officials indicated that the process to introduce changes in the proposed payment methodology was the reason for the delay, specifically requiring more time for stakeholder engagement in the rate modeling process.

QuILTSS for home- and community-based services (HCBS) providers has been more challenging to implement, except for the Employment and Community First program, which was implemented in July 2016 and designed with VBP methodologies built into its model. The primary challenges in HCBS revolve around the number and diversity of providers involved. Building provider capacity to collect and use data is a necessary first step, and this takes significant amounts of funding resources, time, and effort.

The Behavioral Health Crisis Prevention, Intervention, and Stabilization program, operational since January 2016, includes a monthly case rate that incentivizes more efficient crisis care and prevention. For the second phase of VBP in this model, the state plans to use eight quality measures as the basis for VBP. Tennessee may choose to implement the measures in phases.

Policy levers

The state used multiple policy levers to promote adoption of its SIM-related initiatives, including contract requirements and payment incentives. For the EOC implementation, the state mandated, through contracts with its three MCOs, that the MCOs must implement EOCs statewide. The state also made strides on the commercial side, requiring the two carriers contracted with the state employee health plan to implement EOCs. However, the state employee plan is likely to implement a smaller number of EOCs than TennCare.

The state also uses payment incentives to PCMH, Health Link, and LTSS providers as policy levers. Higher or additional payments are used to incent providers to become PCMH or Health Link providers. Within LTSS, the higher payments are used to incent movement to the performance goals set by the state. Stakeholders felt that the care management fee paid by the state from non-SIM funds to participating practices was an effective lever for promoting adoption of SIM reforms. One payer noted that the fee was quite substantial and served as a strong financial incentive for provider buy-in. Another payer agreed, stating that “it does take payment to a practice to get their attention.”

In addition to these policy levers, the state also used levers outside the policy realm to promote SIM adoption. The state reported that its most important lever was to use its role as a convener. Since the start of the SIM Initiative, Tennessee has held over 1,000 meetings with outside groups, including provider associations, commercial payers, and state employee benefit representatives. The state felt that the extensive engagement with stakeholders and communication made a huge difference in adoption of the SIM initiatives. Another lever cited by some state officials is the use of quality metrics and reporting. State staff developed feedback loops with providers for them to receive and understand their data and performance, as well as influence changes to improve the reporting and payment models.

Stakeholders also said that, in general, levers are most effective when they are aligned with the providers' existing business models. One payer explained that, "We see the biggest gains when the measurement and reimbursement structure is in tune with the business that's actually being delivered." The payer felt that this type of alignment was stronger in the PCMH than the EOC model.

Participation

For the most part, Tennessee met their target participation goals for the models, and payer and provider stakeholders expressed support for the SIM Initiative, despite some challenges around participation by commercial payers in the EOC model. For the EOCs, the new TennCare MCO contract mandate—that the plans incorporate EOCs into their payment methodologies—yielded full participation. For the state employee health plan on the commercial side, all two carriers will participate in the EOC program, although participation by their providers is voluntary in the 2017 contract year. In LTSS, participation in the new HCBS rates and ERC program is mandatory for enrolled providers. For NF QuILTSS, facilities do not have to participate, but if they do not, they are not eligible for quality adjustments. Participation in the PCMH program met expectations with 29 practices enrolled for the first year, where the target was 20-30 practices. For Health Link, the state exceeded its participation goal, with all community mental health centers (CMHCs) in the state and some non-CMHC providers. Whether the state will expand the number of Health Link providers in the future is unknown, but qualifying providers will be able to apply to join the program.

Even though Tennessee met participation goals, providers expressed several barriers to their participation in SIM initiatives, largely related to cost, impact, and practice capabilities. One provider noted that practices would be more likely to engage with SIM reforms, if the state outlined opportunities for savings. Additionally, this stakeholder felt that practices needed to be able to see a clear path to improving care, stating that, "The best lever for us is clear evidence that what they are doing has a positive impact on the care that patients in Tennessee are receiving." Providers suggested that the state better communicate learnings and best practices from the EOC efforts. One provider representative explained that some practices are hesitant

about participating in the PCMH model because they are concerned about the adequacy of the health IT capabilities and their ability to interpret data received.

Despite some stated hesitation, providers expressed an overall desire to be a part of the ongoing shift toward value-based care. One stakeholder noted that many practices had been moving toward a PCMH model prior to the SIM Initiative, which eased the barriers to participation in this aspect of the SIM Initiative. Furthermore, providers explained that many providers see the benefits of a VBP environment, and “there is a lot of desire [among providers] to move in that direction, because there is a belief that this is the future of primary care.”

An increased spotlight on the SIM program and pushback from providers led the Tennessee legislature to take a closer look at some of the SIM programs. Many state officials reported that, as a result of increased legislative attention, they felt like it was necessary to make programmatic concessions to providers, primarily within the EOC and Health Link programs. The strategies state officials used to meet these challenges are to continue and even increase the amount of communication that they have with the provider community and modify the implementation timeline and approach (e.g., voluntary commercial participation in 2017) to prevent any attempts to shut down reform completely.

J.1.4 Health information technology and data infrastructure

At the end of the AR1 analysis period, the state was focused on refining and implementing the CCT and developing quality metrics and reporting based on clinical data. Altruista was hired as the CCT vendor in March 2016, and the state implemented an 8-week pilot of the tool in 10 practices by summer 2016. In the current analysis period, the state focused on implementation of the CCT. The CCT launch for PCMH and Health Link providers occurred on schedule in January 2017 but with some interim lack of functionality. Specifically, persuading individual hospitals to share the admission, discharge, and transfer (ADT) forms with the state proved more difficult than planned. The state has now reached agreement with the Tennessee Hospital Association (THA) to obtain all hospital ADT information through the THA portal. The state had a goal of achieving 50 percent of THA member hospitals sending ADT data for the CCT by January 1, 2018. However, the state now believes this arrangement with THA will allow them to reach 100 percent of THA member hospitals by January 1, 2018.

The primary lever Tennessee will employ to incent use of the CCT among practices for whom it is not mandatory (i.e., non-PCMH and non-Health Link practices) is its value proposition and that providers connect and receive data at no cost. State officials believe that the CCT has significant value for practices, wherever they are on the spectrum of sophistication. If they are small practices without an electronic health record (EHR), the tool gives them critical information they can use to improve care. If they already have an EHR, the state hopes to be able to find ways to have the CCT integrate with those EHRs. Provider feedback regarding the CCT

was very positive. PCMH and Health Link providers are the first to use CCT and are required to participate. Beginning in 2018, all providers will be able to apply for access to CCT.

The second SIM-related health IT strategy is development of quality applications (quality apps), which are envisioned as tools to collect clinical quality data that are not available in medical claims. Tennessee issued a request for proposal to select a vendor to develop and implement quality apps in December 2016 and selected Edifecs to perform the work. State officials held one kick-off meeting with Edifecs. State officials believe that development of the measures used in the quality apps will allow them to engage with providers on measures that providers believe are important to improved outcomes and will further engage them proactively in payment reform. The state understands that data collection will be difficult, because the data will have to come from medical records and other nonclaims sources. The state believes the results will be worth the effort.

In addition to the CCT and quality apps, the state worked to increase the health IT infrastructure of behavioral health providers. The state carved out an enhanced payment of \$61 (maximum) per month for Health Link providers for the first year to complete population ramp-up activities, including the move from the International Classification of Diseases-9 (ICD-9) to ICD-10 coding, which is required to participate in Health Link.

Stakeholders noted a few opportunities to address barriers to health IT implementation. In discussing upcoming plans for health IT in Tennessee, several stakeholders expressed concern that practices were hesitant to embrace health IT and engage with the data provided. However, a consumer advocate noted that (1) providers are more likely to adopt and engage with data systems when the data within them are actionable, and (2) a state action plan to help providers understand the data would help to encourage broader provider buy-in to health IT. This stakeholder felt that the data provided by TennCare require extensive time and resources on the provider side to interpret and act upon. A payer further highlighted that when data are tied to financial incentives, payers and providers have more of a reason to adopt the technology.

Finally, one of the major challenges that the state faced is the functionality of its all-payer claims database (APCD). Following the Supreme Court decision in *Gobeille v. Liberty Mutual Insurance Company*,¹⁸⁵ Tennessee needed to make major changes to its existing APCD. Considering an opinion from the state attorney general, Tennessee decided to make claims submission voluntary into the APCD. Consequently, few payers are reporting claims in the APCD, and the state does not believe its APCD is useful. As of the end of the AR2 analysis period, the state has not taken regulatory action related to the APCD at the request of the

¹⁸⁵ *Gobeille v. Liberty Mutual Insurance Company*, 136 S. Ct. 936 (2016).

legislature. The legislature will be convening a task force to decide the next steps for the APCD; however, state officials believe that the result will resemble a partial claims database.

J.1.5 Practice transformation and workforce development

Primary care practice transformation in Tennessee consists of its PCMH and Health Link strategies. SIM-related workforce development focuses on the training inherent in practice transformation and LTSS direct care workforce capacity development. Also, although EOCs are not considered a formal primary care practice transformation strategy, paying specialty providers based on quality will require these providers to “quarterback” the care of someone throughout the entire episode, which may involve practice transformation.

During the AR2 analysis period, the state progressed with PCMH TA and Health Link implementation. Tennessee signed a contract with Navigant, its practice transformation vendor, in November 2016, which began supporting the 21 Health Link organizations and the 29 enrolled PCMH practices in January 2017. The state launched the Health Link program on December 1, 2016; however, the Medicaid State Plan Amendment (SPA) to receive federal funding for the health homes was not approved until January 1, 2017. As of January 1, 2017, 21 providers were enrolled in the Health Link program.

Tennessee requires participating PCMH and Health Link providers to attend at least three of the four training conferences and expects providers to participate in individualized, on-site coaching. The state considers the trainings to be a part of the program and uses an ‘opt-out’ model, where providers must provide a good reason to not attend the training. State officials reported that trainings in the AR2 reporting period were both well attended and well received by providers.

State officials reported that practice transformation is more challenging among behavioral health providers—for whom this type of innovation is a newer direction—but expressed confidence that gradual change is possible. During interviews with the evaluation team, officials described behavioral health providers in Tennessee as never having been a part of value-based purchasing agreements. The state felt that communication is a key piece in helping implement the Health Link program. The state participated in practice transformation trainings with Navigant to best help providers and reported hearing anecdotal evidence that change is happening at the provider level. State officials suggested that the mindset at the management level began to change, but it will take time to trickle down to individual providers. The most difficult barrier is coordinating the care between behavioral health providers and primary care providers, with anecdotal evidence suggesting that primary care providers are reluctant to see beneficiaries with serious mental illness.

Stakeholder feedback was mixed as to whether the state’s practice transformation and workforce development efforts during the AR2 evaluation period had progressed far enough to

have an impact on care delivery and workforce capacity. Several payers were unaware of any formal SIM activities in this area, and one asserted that “SIM has not had a lot of focus on workforce development.” Another agreed that this was an underdeveloped aspect of the SIM Initiative and expressed doubts that the state’s efforts would lead to a workforce sufficient to meet the demands of health system transformation. However, a third payer felt that the state had done a very good job promoting practice transformation and workforce development and that Navigant had been strategically engaged to coach, educate, and communicate with providers. “If a provider doesn’t know about these programs,” explained this payer, “it’s not for [the state’s] lack of trying.”

Leadership for LTSS in Tennessee developed a workforce development strategy to address ongoing challenges in the long-term care system. These challenges include lack of portability of existing training, problems with retention of skills learned, and a lack of consistency among providers conducting the training. State officials contracted with Go Long Consulting to develop training targeted to LTSS direct support professionals, based on CMS guidance. Over 200 stakeholders, state officials, and the consultant participated in developing the curriculum. At the end of the current analysis period, the state was selecting a learning management system platform on which to host the curriculum. Completion of the curriculum will require an independent assessment of the competencies gained through training by requiring a live demonstration of the skills for a separate assessment center. The state’s vision is that this training will result in certification that can carry college credits toward completion of an associate’s degree.

Finally, the state will develop a registry of certified workers to address the portability issue. Facilities and community-based providers can hire certified staff, with the knowledge that the staff have the necessary skills and training. The state will launch four pilot training sites in 2018, and a statewide launch is anticipated in 2019.

J.1.6 Population health

State officials described Tennessee’s population health initiative as having activities within all three population health buckets, which were adapted by CMS from the Centers for Disease Control and Prevention’s (CDC’s) population health activities classification system¹⁸⁶: clinical approaches, innovative patient-centered care, and community-wide initiatives. They described the state’s EOC, PCMH, and LTSS payment reform strategies as transforming clinical approaches. In addition, the Health Link initiative and the CCT are the state’s approaches to improve patient-centered care. Finally, Tennessee uses the statutorily mandated State Health Plan as its community-wide population health strategy for the SIM Initiative.

¹⁸⁶ Auerbach, J. (2016, May/June). The 3 buckets of prevention. *Journal of Public Health Management and Practice*, 22(3), 215–218. doi: 10.1097/PHH.0000000000000381

The main lever for the population health portion of the SIM Initiative in Tennessee is its State Health Plan, which provides direction for stakeholders on the state's priorities for policies, programs, services, and funding streams. The Tennessee Department of Health fully integrated the SIM PHIP with its State Health Plan. Whenever changes are made in the SIM PHIP, they also will be updated in the Tennessee State Health Plan. The state claimed that this symbiotic relationship will allow expansion of its scope of practice to a "true population health approach." The 2015 edition of the Tennessee State Health Plan was formally submitted to the Governor on July 1, 2016.

J.1.7 Quality measurement alignment

Tennessee used MCO contracts to achieve measure alignment across all three TennCare MCOs in its SIM programs. Prior to SIM, the three TennCare MCOs were using different metrics and different data systems, which made it very difficult for providers to look at their entire patient population. With the CCT, providers receive reports on the same quality measures and same thresholds across their entire Medicaid patient panel. The state's goal is that the success of the SIM Initiatives in the Medicaid populations will motivate the MCOs to incorporate the same quality metrics into their other lines of business, to enhance alignment of metrics across payers. In addition, Tennessee aligned quality metrics with CMS core measures and used Healthcare Effectiveness Data and Information Set (HEDIS) measures, where possible, for the Health Link and PCMH programs.

In its application to CMMI for CPC+, the state explained that it was not going to align its SIM Initiative fully with the CPC+ model, as Tennessee was committed to the existing PCMH and Health Link framework. As part of its CPC+ work, the state is planning to move many of its CPC+ providers into PCMH and is discussing with CMMI how to best implement these changes. The state plans to make the CPC+ and PCMH programs "complement" each other, rather than fully align with each other.

The upcoming implementation of voluntary EOCs in the commercial market in the last quarter of 2017 should enhance the alignment of quality measures across TennCare and commercial payers. For the commercial EOC program, one of the payers (Cigna) already had a national EOC program that they were testing and looked to continue that model in Tennessee. The state discussed EOC with Cigna, which worked to better align their measures to the TennCare model. Nevertheless, the Cigna EOC model is not fully aligned with what TennCare is doing.

For LTSS, the state focused on measure alignment within service types/settings and, to the extent appropriate, across settings in its QuILTSS program. The state also developed new quality measures for its LTSS programs and led efforts to align measurements statewide. The state efforts introduced quality reporting to some NFs that previously had not invested

financially in that sphere. For example, the state reported that many NFs had never conducted member satisfaction surveys before the QuILTSS program. For those facilities that did conduct surveys, the state reported that few of them acted to implement changes based on those survey results. At the end of this analysis period, roughly half of the NF quality measures were performance based, and Tennessee plans to increase that percentage throughout the SIM period.

J.1.8 Lessons learned and looking forward

Although the state is still early in its implementation of most of the SIM Initiatives, state officials and stakeholders shared many lessons learned. With respect to implementation of EOCs, officials believed communication between the state and providers had been good but conceded that they should have communicated earlier and more frequently about commercial market implementation. The state maintained that from the beginning, the Governor was explicit that the EOC program would include both the Medicaid and commercial markets, but the state relied heavily on health plans to communicate this message to providers.

Several state officials suggested that having discussions with providers earlier about their intention to implement EOCs into the commercial market might have helped ease political pushback. Payer and provider stakeholders also reiterated that the state's push for mandatory expansion of EOCs into the commercial population reduced provider support for the initiative. Multiple stakeholders echoed the need for stronger collaboration with providers, given the pushback from this population to commercial EOC implementation. One stakeholder suggested that development of an action plan to respond to concerns and, to help providers better understand the EOC data they receive, would contribute to overall success of this initiative.

Several state officials and stakeholders felt that more attention should have been paid to the data collection aspects of the SIM Initiative. Specifically, state officials wished they had better understood the capacity-building work that was necessary for community-based, long-term care providers to be able to collect and use data. Officials stated that payment reform cannot be implemented in the absence of data collection, and progress was slower because of slow adoption of data collection protocols by providers. From the provider side, stakeholders felt that the state should have thought through health IT issues—such as data integrity, data validation, and how to line-up claims data with EHR data—a bit further before implementation.

State officials discussed several challenges related to timeliness and sustainability when working with consultants, vendors, and partner organizations. When discussing state capacity, one state official expressed concern that the state had relied heavily on consultants in the early stages of implementation. According to the official, using consultants hindered sustainability of the initiatives, because the state did not develop a permanent team from the beginning. A few officials expressed concern about not having vetted the CCT vendor more thoroughly earlier, so the state could mitigate risks to a full and on-time implementation. State officials also thought

they should have worked with THA earlier in the process to figure out how to acquire hospital data earlier.

One provider expressed the need for better coordination around practice transformation assistance, because multiple TA resources are offered to providers—from Navigant, under the SIM Initiative, and from initiatives in place prior to and concurrent with the SIM Initiative. Health centers reported feeling overwhelmed by the demands of all the trainings. Another provider suggested that having one vendor providing a single performance report per EOC, rather than multiple reports from multiple payers, would have increased providers' ability to understand and act on the data received.

State officials also reported that, if they were to give advice to another state about behavioral health homes, they would say to start simple and improve communication with providers. A major reason for the emphasis on simplicity, at least in the preliminary stages of implementation, is that implementing the data requirements of a complex array of choices in the health plan computer systems is technically demanding.

State officials elaborated that their Health Link design requires providers to select from six different options to file a claim for their activity payment.¹⁸⁷ They suggested that two might have been enough to start with, with the option to modify in the future if greater specificity is needed. When discussing Health Link, state officials also suggested that they would have either communicated the provider bonus payment differently, to avoid the pushback on its time-limited nature, or perhaps not done it at all. Overall, the state officials said they were trying to balance being too prescriptive with changes against being too flexible to provider and payer complaints and suggestions. Finding the right middle ground is a challenging and essential goal.

When providing advice to other states implementing similar models or strategies, all payers also encouraged being slow and careful in designing the initiative and not “biting off more than you can chew.” Although one payer acknowledged that the large scope of the SIM Initiative in Tennessee was largely due to their responsiveness to the CMS funding criteria, they encouraged other states to not implement as many components, all at the same time. Payers also expressed some hesitation whether the results would justify the large financial investment and encouraged other states to conduct an initial, cost-effectiveness assessment to determine which EOCs to implement.

Providers urged other states to spend time with stakeholders when designing the models to understand not only what resources are needed but also what resources are already in place, to promote better utilization of the state's existing foundation for this work. A consumer advocate

¹⁸⁷ These six options are activities based on the federal Health Home services outlined in Section 2703 of the Patient Protection and Affordable Care Act (ACA): health promotion, comprehensive care management, care coordination, patient and family support, referral to community and social supports, and transitional care/follow-up.

cautioned states to prepare for significant resistance from providers and health plans, especially commercial market plans. To partially address this, the stakeholder encouraged states to focus on alignment between payers without trying to make every detail the same; this type of flexibility is necessary for commercial insurers to participate.

All state officials that the evaluation team spoke with saw opportunities, as well as challenges, as they continue to test the SIM Initiative. Officials most deeply involved with the EOCs believe that there is great opportunity to “sell” this initiative to providers, now that more waves are in the performance period, data are available to demonstrate improvements for patients, and there are few to no negative consequences for providers. A second area of opportunity was the increased coordination between primary care and behavioral health. With the early implementation of the PCMH and Health Link programs and the addition of CPC+ to primary care transformation, several Tennessee officials believe that this is their best opportunity to improve care coordination.

Another opportunity is the continued alignment on quality metrics that Tennessee hopes to see with the CCT and implementation of quality apps. The CCT allows providers to access data for their entire patient population through a single tool, whereas they previously had to go through separate data systems for each of the three Medicaid MCOs. Quality apps will allow providers to measure performance using richer and more detailed quality metrics and information. Officials also stated that the CCT has unrealized potential to improve the quality of care for complex patient populations and analyze population health data; being able to utilize the full value of this tool for providers is a critical opportunity.

State officials also reported that the development of the Tennessee Vital Signs Dashboard is an opportunity to engage new sectors in the discussion about improving the health of Tennesseans. They believe that by using this dashboard, they can effectively engage both education and business communities to support population health improvement initiatives that are both part of and beyond the SIM Initiative.

Looking ahead, state officials saw implementation of the EOCs within the commercial market as a major, outstanding challenge. One aspect of this challenge is the political pushback from providers to modify at least the timeframe—and perhaps the overall design—for implementation, as they go forward. Officials remained hopeful that they would not have to change the design, but that had not yet been decided as of April 30, 2017. Another challenging aspect of commercial EOC implementation is within the commercial market. Most covered lives are part of self-insured arrangements, and the health plans, therefore, function as administrators for the employer or other purchaser. Consequently, engaging the employers, as well as health plans and providers, may be necessary to complete execution of this strategy, which will require time and resources to gain buy-in from this additional stakeholder group.

In addition to the commercial market EOC implementation, the state identified two outstanding challenges around performance improvement and initiative sustainability. State officials felt they would face challenges in determining how to institutionalize continued performance improvement in value-based purchasing. Specifically, they will need to determine how to revise thresholds for performance as providers begin to improve quality, without creating a situation in which providers feel they can never excel. Officials also expressed concerns around the sustainability of stakeholder engagement efforts, specifically the TAGs. The TAG process has been a critical component of the EOC implementation and success within TennCare, but this labor-intensive process relies on the volunteer participation of payers and providers. Several state officials stated that TAG will be difficult to sustain.

Looking ahead, stakeholders expressed optimism that the SIM Initiative would produce change in the Tennessee health care system but urged the state to continually assess progress as testing continues. Both payers and providers noted the importance of evaluating the status of all the components of the SIM Initiative and, when needed, correcting course or slowing the pace. Explained one provider, “After each step, I’d like the state to evaluate where things are and not get ahead of themselves.” This provider acknowledged that the state was generally receptive to slowing things down, based on provider feedback. One provider highlighted the need to pause further implementation of the episodes until the state could better understand the ideal number of episodes, the ideal number of reports provided to providers, and the most effective ways to measure quality for downstream EOC providers. On the PCMH side, a payer noted that the model has strong potential to change delivery of care in Tennessee, but the state must ensure that an additional 30 to 35 practices sign up to reach enough patients to see statewide impact. For the CCT, a provider discussed the need to evaluate at the end of 2017 whether primary care providers are changing their behavior to meet the measures and whether the state selected the right measures.

One provider also felt that Medicaid expansion was an issue that would potentially shape testing in the future, because many providers had hoped that the SIM Initiative would help build a foundation for expansion in Tennessee. This provider explained that providers saw Medicaid reform as a necessary first step toward expansion, because state leadership had expressed a need to reform the state’s health care system before it could support an expanded Medicaid population. This provider felt that the promise of Medicaid expansion in Tennessee was one of the reasons that providers cooperated with the SIM Initiative and did not push back earlier in the process. However, expansion remains an uncertain issue, and some providers felt disheartened that more progress has not been made. This may, in turn, affect ongoing provider buy-in to the SIM Initiative.

J.2 Changes in Outcomes During the State Innovation Model Initiative

J.2.1 Progress toward a preponderance of care in value-based purchasing models and alternative payment models

Stakeholders expressed mixed opinions on the state’s goal of moving 80 percent of all patients’ care into VBP or APMs. The majority expressed doubt that Tennessee will be able to meet the 80 percent benchmark by 2019, calling the goal “extreme” or “very high.” Although nearly everyone agreed that the state made substantial progress with TennCare recipients and state employees, several stakeholders pointed to slower progress with commercial payers. Several interviewees referenced difficulty recruiting providers in the commercial market as the primary roadblock to 80 percent participation. The state believes that they will achieve preponderance of care for the total health care system but that achieving the goal may take longer than the end date of the SIM Model Test period due to push back from providers regarding implementation of EOCs by commercial payers.

Even so, Tennessee state officials believe they can achieve the preponderance of care threshold within the TennCare population more quickly. One official expressed a belief that the state has reached a “tipping point” in its movement toward VBP models in the TennCare population; that is, engagement in value-based models will only rise for TennCare beneficiaries going forward. Several others said the EOC, Health Link, and PCMH initiatives are all live, and participant numbers continue to increase.

Table J-1 presents available information on the extent to which Tennessee’s population was participating in the SIM payment and health care delivery models in the baseline period (January 2015 to January 2016). These values were provided by the state in its third quarter 2016 progress report to CMMI.¹⁸⁸ In the pre-SIM implementation baseline period, 100 percent of Tennessee’s Medicaid population—comprising 22.6 percent of Tennessee’s general population—was involved in Medicaid VBP, defined as any Category 2–4 payment system based on the Health Care Payment Learning and Action Network APM framework. The value includes all the Medicaid beneficiaries in Tennessee, because all TennCare beneficiaries are eligible for an EOC, if they have a diagnosis that triggers an episode. The state reports that 66,022 TennCare beneficiaries had an episode in the baseline period. As of April 30, 2017, the state had not yet reported values for Award Year 2 or for the other payment models, which started after the baseline period.

¹⁸⁸ These data values were not verified by CMMI. Thus, the RTI team cannot attest to their accuracy.

Table J-1. Populations reached by a value-based purchasing or alternative payment model in Tennessee, as of third quarter 2016

Payer type	SIM models				Landscape	
	Primary care PCMHs	Health homes for medically complex patients	EOC payment models	LTSS	SIM-wide	Any value-based purchasing or APMs
Medicaid	—	—	66,022 ^a (4.4%)	—	1,490,000 (100%)	100%
Statewide	—	—	66,022 (1.0%)	—	1,490,000 (22.6%)	—

Source: Tennessee third quarter 2016 progress report.

^a The state reports that 66,022 beneficiaries had an episode in the baseline period. However, all 1,490,000 Medicaid beneficiaries are eligible for an episode, if they have a diagnosis or event that triggers an episode. Consequently, 100% of the Medicaid population is reached by a value-based purchasing model.

— = relevant data were not provided in data source; APM = alternative payment model; EOC = episode of care; LTSS = long-term services and supports; PCMH = patient-centered medical home; SIM = State Innovation Model.

Table J-2 presents the extent to which Tennessee’s payers are participating in the SIM payment and health care delivery models during the baseline period (January 2015 to January 2016). These values were provided by the state in its third quarter 2016 progress report to CMMI.¹⁸⁹ The state reports that 13 percent to 16 percent of providers received payments (gain sharing) for the three episodes launched in the first wave (perinatal, acute asthma exacerbation, and total joint replacement); 7.6 percent to 10.6 percent of providers were penalized for these same episodes. One hundred percent of payments to providers for these episodes were a part of the APM. The providers for the episodes not included in these counts did not receive gain or risk sharing, however. As of April 30, 2017, the state had not yet reported values for Award Year 2 or for the other payment models, which started after the baseline period.

¹⁸⁹ These data values were not verified by CMMI. Thus, the RTI team cannot attest to their accuracy.

Table J-2. Payers participating in a value-based purchasing or alternative payment model in Tennessee, as of third quarter 2016

Payer	Category 1 Payments: Fee-for-Service with No Link of Payment to Quality ^a		Category 2 Payments: Payment Linked to Quality		Category 3 Payment: Alternative Payment Models			Category 4 Payment: Population-Based Payment	
	Number of Beneficiaries	Percentage of Payments	Number of Beneficiaries	Percentage of Payments	Number of Beneficiaries	Percentage of Payments	Percentage of Penalties	Number of Beneficiaries	Percentage of Payments
Medicaid	0 ^a	0%	—	—	21,058 (perinatal)	13.3%	9.2%	—	—
					12,616 (acute asthma exacerbation)	14.1%	10.6%		
					329 (total joint replacement)	16.0%	7.6%		

Source: Tennessee third quarter 2016 progress report.

^a Tennessee’s Medicaid program is 100% managed care, so there are no fee-for-service payments.

Note: The percentage of payments provided by Tennessee is defined differently than the values provided by other Model Test states. In this table, the values represent percent of providers who received payments (gain sharing).

— = relevant data were not provided in data source.

Provider participation

Table J-3 presents the extent to which Tennessee’s providers are participating in the SIM payment and health care delivery models. These values were provided by the state in its third quarter 2016 progress report to CMMI. ¹⁹⁰ Seventy-five of the 108 hospitals in Tennessee were involved in the EOC model, and 99.7 percent of the NFs participate in the LTSS initiative. The state reports that 21 practices are participating in the Health Link program. The state has not yet reported values for Award Year 2 or for the other payment models.

¹⁹⁰ These data values were not verified by CMMI. Thus, the RTI team cannot attest to their accuracy.

Table J-3. Number of physicians and practices participating in a value-based purchasing or alternative payment model in Tennessee, as of third quarter 2016

	Primary care PCMHs	Health homes for medically complex patients	EOC payment models	LTSS	SIM-wide	Any value- based purchasing or APMs
Practices	—	21	—	—	21	—
Hospitals	—	—	75 (69.4%)	—	75 (69.4%)	—
Nonhospital providers	—	—	3,149	292 ^a (99.7%)	3,441	—

Source: Tennessee third quarter 2016 progress report

^a There are 292 out of 293 NFs participating in the LTSS-NF model.

— = relevant data was not provided in data source; APM = alternative payment model; EOC = episode of care; LTSS = long-term services and supports; NF = nursing facility; PCMH = patient-centered medical home; SIM = State Innovation Model.

J.2.2 Care delivery

In general, payer, provider, and consumer advocate stakeholders believed that more time is required to see the results of the practice transformation and workforce development components of the SIM Initiative on care delivery. Even so, provider stakeholders did note that providers started to think about their patient population and the use of data differently. Providers are considering not only the patients who come in but also their entire patient panel, which they can see more readily using the CCT. According to one provider stakeholder, looking at all attributed patients “... has been a paradigm shift—how can we reach out and begin to influence care patterns for patients that needed to be reached out to and are attributed to our practice?”

J.2.3 Coordination of care, quality of care, utilization, and expenditures

Tennessee expects to see a noted improvement in quality, utilization, and expenditures throughout the health care delivery system. The state reports seeing improvements in costs and quality through the EOC program for TennCare, noting that, “the three EOCs that were part of Wave 1 have demonstrated cost savings and quality improvements.” TennCare published first-year results of the three Wave 1 episodes on October 5, 2016, and reported that costs were \$6.3 million less than the previous year, when costs—in the absence of EOCs—could be assumed to increase by 3 percent.¹⁹¹ Costs for perinatal care were down 3.4 percent, 8.8 percent for asthma exacerbation, and 6.7 percent for total joint replacement (hip and knees).¹⁹² Data on quality improvements were not available.

¹⁹¹ After the AR2 analysis period, the state revised its first-year results of the three Wave 1 episodes to report a \$6.1 million savings between 2015 actual episode cost and 2014 actual episode cost.

¹⁹² TennCare’s new approach to payment shows savings. (2016, October 5). Press release. Retrieved from <https://www.tn.gov/tenncare/news/2016/10/5/tenncare-s-new-approach-to-payment-shows-savings.html>

There was no broad consensus among stakeholders on the impact of the EOC initiative. Some stakeholders felt that EOC had the potential to impact outcomes, whereas other stakeholders were more skeptical about any meaningful impacts. One of the payers said that the data from the first wave of episodes suggested some meaningful impact on expenditures and quality of care but cautioned that the effects were highly episode dependent and did not account for the administrative cost of the reforms. Another stakeholder noted that changes in perinatal care were likely due to a concurrent effort to reduce C-sections in the state, rather than the perinatal episode.

Whereas the state and most stakeholders are optimistic about the improvement of care coordination, quality, utilization, and expenditure outcomes with the primary care transformation initiatives (PCMH, Health Link, and CCT), all stakeholders said that not enough time has elapsed to see any real impact. The state cautioned that, because both programs launched on January 1, 2017, there are few measures they can point to that directly show quality improvement. Stakeholders noted that changing provider and consumer behavior would take time to see an impact on expenditure and utilization outcomes. According to one payer, “It’s hard work to get providers to embrace the changes.” Nonetheless, relative to the other payment reforms, stakeholders were most encouraged about the potential for the PCMH program and the CCT to improve outcomes.

In addition, state officials reported improved quality of care with the LTSS initiative. State officials reported that the new respiratory care payment structure resulted in an overall reduction in ventilator utilization; a substantial increase in the wean rate for individuals on ventilators, including patients who had been on ventilators for 2 years or more; and fewer days from admission to wean. These three measures combined demonstrate improved quality of life for patients, who can return to community living. Also, the state saw an increase in CMS star quality ratings for its NFs throughout the QuILTSS period. Although the state cannot directly correlate the improved star ratings to its VBPs, officials can report that the response from NFs was overwhelmingly positive and that there is a new focus on delivering person-centered care.

J.2.4 Population health

Table J-4 shows Tennessee’s baseline population health outcomes based on 19 measures from the 3 years prior to the implementation of Tennessee’s s SIM award. The table also includes information from the comparison group states: Kentucky, Georgia, and South Carolina. The multistage procedure for identifying the comparison group states is described in detail in *Appendix L*.

Table J-4. Baseline measures of population health in Tennessee, 2013–2015

Measure		2013–2015 Average	2013–2015 Trend
Health status is fair or poor	Tennessee	19.1%	
	CG	17.7%	
	National	14.9%	
Ever diagnosed with diabetes	Tennessee	11.8%	
	CG	11.0%	
	National	9.6%	
Ever diagnosed with hypertension ##	Tennessee	37.3%	
	CG	36.7%	
	National	31.6%	
Ever diagnosed with asthma	Tennessee	12.4%	
	CG	13.8%	
	National	13.5%	
Has a functional limitation ##	Tennessee	21.0%	
	CG	21.3%	
	National	18.2%	
Current smoker	Tennessee	20.9%	
	CG	20.6%	
	National	16.4%	
Overweight	Tennessee	68.5%	
	CG	66.1%	
	National	64.4%	
Obese	Tennessee	32.5%	
	CG	30.9%	
	National	28.5%	
No leisure time physical activity or exercise, past 30 days	Tennessee	28.9%	
	CG	25.9%	
	National	23.3%	
Limited fruit and vegetable intake, past 30 days	Tennessee	87.2%	
	CG	86.5%	
	National	83.1%	
Any driving after drinking too much, past 30 days #	Tennessee	3.6%	NA
	CG	3.0%	
	National	3.3%	

(continued)

Table J-4. Baseline measures of population health in Tennessee, 2013–2015 (continued)

Measure		2013–2015 Average	2013–2015 Trend
No checkup, past year	Tennessee	24.7%	
	CG	29.0%	
	National	29.4%	
No flu vaccine, past year	Tennessee	55.4%	
	CG	59.2%	
	National	59.6%	
No 65+ flu vaccine, past year	Tennessee	33.0%	
	CG	36.7%	
	National	39.1%	
No 65+ pneumonia vaccine, ever	Tennessee	28.7%	
	CG	29.5%	
	National	30.2%	
Among adults with hypertension, no hypertension blood pressure medication ##	Tennessee	17.9%	
	CG	19.4%	
	National	22.4%	
No 50-75 colorectal cancer screening—no fecal occult blood test (FOBT), past year #	Tennessee	91.2%	NA
	CG	91.3%	
	National	90.7%	
No 50-75 colorectal cancer screening—no sigmoidoscopy or colonoscopy, past 5 years #	Tennessee	45.2%	NA
	CG	45.5%	
	National	46.0%	
No 50-75 colorectal cancer screening—no sigmoidoscopy or colonoscopy, past 10 years #	Tennessee	34.6%	NA
	CG	33.0%	
	National	33.6%	

Source: Behavioral Risk Factor Surveillance System, collected by the CDC.¹⁹³

Note: To facilitate the comparison of trends over time between the model test state, its comparison group, and the nation, the sparklines for each measure rely on the same scale for the vertical axis for all three groups. Since the vertical scale for the sparklines varies by measure, the sparklines are not comparable across the different measures. Sparklines are not available for outcomes for which data are limited to 2014 (indicated by #). Sparklines for outcomes that are limited to data for 2013 and 2015 (indicated by ##) will be based on data for two points in time and so will appear more stable than outcomes for which data are available for 2013, 2014 and 2015.

CDC = Centers for Disease Control and Prevention; CG = comparison group; FOBT = fecal occult blood test; N/A = not available.

¹⁹³ CDC. (2013–2015). *Behavioral Risk Factor Surveillance System Survey Data*. Atlanta, Georgia: U.S. Department of Health and Human Services, CDC.

The measures suggest that, compared with national averages, the percentage in fair to poor health was still higher in Tennessee, although the percentage of the population reporting fair or poor health decreased in Tennessee from 2013 to 2015.¹⁹⁴ Tennessee has room for improvement in the population health areas being targeted by the SIM Initiative payment and delivery reforms. Likewise, the comparison group had a higher percentage of the population in fair to poor health relative to the national average. Additionally, the percentage of population engaging in healthy behaviors—such as exercising, consuming fruits and vegetables, and not smoking—was lower in both Tennessee and the comparison group, relative to the national average. Participation in a PCMH may improve these healthy behaviors in Tennessee over time.

The EOC program also may impact the population health measures in Tennessee over time. The portion of the population having had a colonoscopy was comparable in Tennessee and its comparison group, relative to the national average. The colonoscopy episode may improve those rates over time, after it is launched. The Tennessee population, along with its comparison group, had higher rates of obesity and hypertension, relative to the national average, which may put the population at higher risk for heart disease. The cardiac episodes in the second wave of EOC could improve care for patients with heart disease. Fewer people in Tennessee are diagnosed with asthma, relative to the comparison group and national average (whose rates were similar); however, the asthma episode could improve care for people in Tennessee who have an asthma diagnosis.

In general, payer, provider, and consumer advocate stakeholders believed that more time is required to move the needle on population health. All stakeholders reported that seeing changes in population health measures would take years. As reported in **Section J.1.6**, state officials are hopeful that the local public health infrastructure within the state can help PCMH providers to achieve better population health outcomes in rural areas.

J.3 Tennessee Summary

Although the AR2 analysis period was early in Tennessee’s SIM testing timeline, there was a sense of hopefulness and optimism among many state officials and other stakeholders at this stage of testing. One provider characterized this sentiment by asserting,

“This is an opportunity to transform the way that care is delivered that will ultimately hold the promise of better quality, managing costs, and having better outcomes. There is great opportunity, and I’m really proud of Tennessee for stepping up and doing this work.”

¹⁹⁴ CDC. (2013–2015). *Behavioral Risk Factor Surveillance System Survey Data*. Atlanta, Georgia: U.S. Department of Health and Human Services, CDC.

The primary challenge over the AR2 analysis period was trying to expand the EOC model into the commercial market. Provider concerns over the mandatory expansion of episodes into the commercial market was reported as the “biggest roadblock” to successful implementation of SIM initiatives. The state concedes that they should have communicated with providers earlier and more often about commercial market implementation. Now that Waves 1 through 4 of the EOCs were implemented with promising outcomes on quality and cost savings for select episodes, officials believe that they can sell the initiative to providers. Some stakeholders remain skeptical that EOC will have any meaningful impacts, however, and cite concurrent activities as contributing to some of the positive outcomes.

The consensus among stakeholders was that the primary care transformation activities—PCMHs and the CCT in particular—offer the most promise in impacting utilization, expenditures, and quality of care over time. The first wave of the PCMH and Health Link models fully launched in early 2017; however, the state and stakeholders felt it was too early to see any specific impacts yet.

In addition to the SIM primary care transformation activities, Tennessee was selected as a CPC+ state in early 2017. The state is working to make many CPC+ practices a part of SIM PCMH during 2017 to improve the synergy of the both initiatives.

Tennessee state officials reported that one of their greatest successes with LTSS payment reform during the AR2 analysis period was the implementation of the ERC program, which improved quality life for patients by helping them return to community living.

Ultimately, Tennessee built strong momentum in implementing its aggressive SIM initiatives and remains undeterred in its goal of substantially moving most delivery systems to a value-based approach by 2019.

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Appendix K: State Innovation Model in Model Test States: Washington

Key Results from Washington's State Innovation Model Initiative July 2016–April 2017

- Washington advanced its delivery system and payment reform models during the second Annual Report analysis period. As of April 2017, the state had expanded the accountable care networks for public employees to four new counties (nine total) and was expanding the integration of physical and behavioral health for Medicaid managed care beneficiaries to additional regions. Washington reached agreements with 16 Federally Qualified Health Centers and one rural health clinic to implement a new Payment Model for Medicaid managed care patients, and the state began providing data and other support to two provider networks to enable the networks to each create an integrated, multi-payer database.
- All nine regional Accountable Communities of Health were implementing at least one SIM Initiative-funded project.
- The Practice Transformation Support Hub (the Hub) began operation during fourth quarter 2016, providing practices with coaching, regional health connectors to facilitate access to clinical-community practice improvement resources, and a Web-based resource portal.
- State officials stated that they did not yet have quantitative results demonstrating improvements in the delivery of care from their SIM Initiative. However, they cited reports from stakeholders in the Southwest region (the first to implement integrated managed care) that care was improving, including reports of improved access to primary care and more robust care management that considered both the physical and behavioral health needs of enrollees.

This appendix provides an updated overview of the Washington SIM Initiative; describes important changes in the state's SIM Initiative; summarizes implementation and testing successes, challenges, and lessons learned; and discusses early changes or prospects of changes resulting from the SIM Initiative. The findings in this appendix are based on the analysis of data collected from key findings gained via stakeholder telephone interviews, state document reviews, and state program and evaluation calls. These data were collected between July 1, 2016, and April 30, 2017.

As a source for this appendix, the RTI team conducted 19 key informant interviews from April 7 through May 8, 2017.¹⁹⁵ The key topic areas were (1) changes in governance and program administration, (2) progress implementing SIM models and initiatives, (3) participation of payers and providers, (4) progress toward a preponderance of care in the state being provided through an alternative payment model (APM), and (5) early indicators of changes in relevant outcomes. Interview participants included state officials, payers, providers, and consumer advocates involved in the development and implementation of Washington's SIM Initiative.

¹⁹⁵ The RTI evaluation team needed to obtain key stakeholders' perspectives on the SIM Initiative for this annual report, but there were delays in scheduling some of the interviews because of interviewee availability. Thus, interviews extended beyond the April 30, 2017, analysis period for this report and were completed by May 8, 2017.

Further details on the analytic approach are available in *Chapter 1*. Information on the number and types of stakeholders interviewed for the state is in *Table 1-1*.

K.1 Implementation Activities

Washington's SIM Initiative (referred to as *Healthier Washington*) has three strategies: (1) implement provider payments that reward value, (2) increase the integration of physical and behavioral health care, and (3) improve community health through a collaborative regional approach. Washington's strategies for achieving these goals center on testing four new payment and delivery system reforms (all referred to as payment models [PMs]), as well as the ability of nine Accountable Communities of Health (ACHs) to coordinate and foster system transformation within their individual regions. Washington is supporting the PMs and ACHs with other strategies, including a Practice Transformation Support Hub (the Hub) and improved access to data and measurement resources via an Analytics, Interoperability, and Measurement (AIM) initiative.

By April 30, 2017, the Washington Health Care Authority (HCA) was engaged in developing and testing the four PMs and infrastructure to support their implementation. The PMs are PM1: integration of physical and behavioral health through Medicaid managed care; PM2: Medicaid value-based payment (VBP) models for Federally Qualified Health Centers (FQHCs), rural health clinics (RHCs), and critical access hospitals (CAHs); PM3: an accountable care program for public employees; and PM4: provision of multi-payer data to providers to promote use of VBPs. To support delivery system transformation, the ACHs were implementing regional projects. The regional approach is intended to foster innovation and allow partners to develop initiatives tailored to their organizational needs and the needs of the population they serve. The Hub and AIM were delivering technical support and data to support statewide and more regional needs.

K.1.1 Governance and program administration

The Washington SIM Initiative continued to be governed by an executive leadership team comprising the director of the HCA, the secretary of the Department of Social and Health Services (DSHS), the secretary of the Department of Health (DOH), and a senior health policy advisor to the Governor. The HCA leads the SIM Initiative, develops delivery and payment reform models, and operates the AIM project. The DOH leads the Hub and the Plan for Improving Population Health (P4IPH). DSHS, which administers behavioral health services, provides clinical expertise and data to support Medicaid managed care integration. The Governor's Office provides policy guidance and assistance with stakeholder concerns.

Two major staffing changes occurred during the second Annual Report (AR2) analysis period. First, in April 2017, the HCA director announced that she would leave her position in

June 2017.¹⁹⁶ Interviewees anticipated that the departure would not negatively affect the continued implementation of the SIM Initiative. Second, HCA created and filled a state tribal liaison position for the term of the SIM award to coordinate with the governments of the 29 federally recognized tribes in Washington.

K.1.2 Stakeholder engagement

Most stakeholders supported the state's overall goals for the SIM Initiative, although, as discussed below, some expressed specific concerns about individual strategies. Many stakeholders reported that Washington's new Medicaid Transformation Demonstration Waiver¹⁹⁷ is an important lever for accelerating, enhancing, and sustaining the delivery system reforms developed under the SIM Initiative.

Washington's primary strategy for engaging stakeholder leaders is through its 60-member Health Innovation Leadership Network (HILN) advisory group. HILN includes representatives of providers, businesses, health plans, unions, consumers, local community organizations, local governments, and tribal entities. The original purpose of HILN was to champion the goals of *Healthier Washington* by providing guidance and feedback to the state. In early 2017, HCA shifted the role of HILN from an advisory group to an action-oriented group. Specifically, in late 2017, all HILN members will be asked to commit to taking an action of their choice to advance value within their own organization (e.g., incorporate reporting the state's common measure set outcome into their contracts with commercial health plans for employee coverage).

The SIM Initiative has not succeeded in convincing large employers to adopt VBP (the Boeing Company's implementation of VBP predates the SIM Initiative). Large employers, such as Amazon, Recreational Equipment, Inc. (REI), and Microsoft, were described as unwilling to revise their approach to providing health benefits because of concerns about hiring and retaining technical staff. The Washington Roundtable,¹⁹⁸ which is composed of major private sector employers, was considering convening a health care committee. Stakeholders thought that such a

¹⁹⁶ Washington State HCA. (2017, April 26). *Dorothy Frost Teeter announces departure from Health Care Authority*. News Release. Retrieved July 11, 2017, from <https://www.hca.wa.gov/about-hca/dorothy-frost-teeter-announces-departure-health-care-authority>

¹⁹⁷ In January 2017, CMS approved Washington's Medicaid Transformation Demonstration that provides \$1.5 billion in federal funding for 5 years to test innovative models of service delivery. Washington will implement three initiatives under the Demonstration: system transformation through ACHs, new long-term services and supports, and foundational community support services. Source: Washington State HCA. (2017). *Medicaid transformation demonstration, fact sheet*. Retrieved from <https://www.hca.wa.gov/assets/program/medicaid-demonstration-i1-factsheet.pdf>
<https://www.hca.wa.gov/assets/program/medicaid-demonstration-i2-factsheet.pdf>
<https://www.hca.wa.gov/assets/program/medicaid-demonstration-i3-factsheet.pdf>

¹⁹⁸ The Washington Roundtable is a nonprofit organization comprising senior executives of major private sector employers in Washington. The Roundtable is a group of members whose goal is to work together to address important public policy issues to support the state's economic vitality and foster opportunity. Source: Washington Roundtable. Retrieved November 17, 2017, from <http://www.waroundtable.com/>

committee might be a productive forum for discussing employers' reluctance to consider VBP for their employees.

Persuading small practices to transition to value-based care has also been challenging. An interviewee explained that the transition for providers to value-based care would be easier if they were engaged in both "the design of various efforts and in changing how they deliver care." For example, providers could participate in one of their ACH's regional health improvement projects.

State administrative and community-level stakeholders acknowledged that engaging consumers is important but challenging. The ACHs are the main vehicle for engaging consumers in delivery system reforms. For example, Washington expects ACHs to include consumer input in regional health improvement project selection. However, an interviewee commented that engaging consumers can be challenging because they tend to care about changes that impact them directly (e.g., costs, access, experience, outcomes of care) rather than more systems-level VBP reforms. Some interviewees also considered the federal SIM grant stipulation against using funds for stipend payments to be a barrier to ACH consumer engagement. Stipends for transportation, childcare, and food might have enabled greater consumer participation.

While tribes have significant involvement in some ACHs, overall, tribal representation on ACH boards has been mixed. To begin addressing this concern, the HCA issued the *Model ACH Tribal Collaboration and Communication Policy*¹⁹⁹ that, among other things, required each ACH board to reserve one spot for a tribal representative.

K.1.3 Delivery systems and payment reforms

Washington plans to lead reform by first changing the way the HCA pays for and delivers services to Medicaid beneficiaries and public employees, anticipating that private payers and purchasers will adopt reforms that demonstrate effectiveness. The state is testing five new payment and delivery system reforms in its SIM Initiative. Four of these reforms are referred to as PMs. PM1 and PM2 focus on Medicaid. PM3 focuses on the Public Employee Benefits Board (PEBB) state and local government health plan. PM4 primarily provides technical support (including data) to enable provider organizations and networks to enter into alternative payment arrangements with multiple payers, as discussed in **Section K.1.4**. ACHs, which are Washington's fifth reform, were created to coordinate and support transformation at the regional level.

¹⁹⁹ Washington State HCA. (2016, November 8). *Model ACH Tribal collaboration and communication policy*. Retrieved from <https://www.hca.wa.gov/assets/program/Model-ACH-Tribal-Collaboration-Communication-Policy.pdf>

During the AR2 analysis period, all PMs and delivery reform plans progressed (**Table K-1**). As of April 30, 2017, Washington was expanding the regions of the state included in the Medicaid integration of physical and behavioral health services (PM1), was implementing per member per month (PMPM) Medicaid payments for the first voluntary group of FQHCs and RHCs (PM2), had developed recommendations for a new delivery system and PM for CAHs (PM2), had added new counties and members to the PEBB Accountable Care Program (PM3), and had reached agreements with two provider networks to test the Greater Washington Multi-payer model (PM4). Additionally, ACHs in all nine regions were conducting at least one Regional Health Improvement Project. The specific progress made under each delivery system and payment reform is summarized below.

Table K-1. Washington’s progress on State Innovation Model delivery system and payment reforms, as of April 2017

Activity	Target	Approach	Progress as of June 2016 (end of previous analysis period)	Progress between July 2016 and April 2017 (end of current analysis period)
PM1: Medicaid integration of physical health and BH	Medicaid MCO enrollees to be in a regionally based integrated system by 1/1/20	Contract with two or three MCOs in each of 9 ACH regions	Implemented in Southwest Washington region; planning for expansion to other regions (ongoing)	Evaluating MCO contract proposals to serve North Central Washington region effective 1/1/18; seeking additional regions to voluntarily join by 1/1/19 (ongoing)
PM2: Volume-to value-based purchasing: FQHCs and RHCs	Medicaid MCO enrollees served by FQHCs and RHCs	Move FQHC and RHCs that voluntarily agree from a per visit PM to PMPM	Negotiating PM2 approach for incorporation into MOUs between Medicaid and FQHCs/RHCs	MOU completed; 16 FQHCs/1 RHC signed MOUs; model implementation anticipated on 7/1/17.
PM2: Volume to value: CAHs	CAHs	Create a new facility type to allow CAHs to pilot a multi-payer PM that recognizes the broad role of CAHs in delivering services	Working with DOH, Washington State Hospital Association, and CAHs to develop PM recommendations	Authorizing legislation passed; recommendations issued; discussions begun with Medicare (ongoing); implementation goal 2018
PM3: Accountable Care Program	PEBB members	Contract with two provider systems to create ACNs that will be at-risk for quality of care and health outcomes	Implemented as a plan option in 5 counties beginning 1/1/2016: ~12,000 enrollees	Implemented in 9 counties (4 new); ~15,000 enrollees had chosen an ACN as of 11/25/2016 (the end of open enrollment for the 2017 benefit year).

(continued)

Table K-1. Washington’s progress on State Innovation Model delivery system and payment reforms, as of April 2017 (continued)

Activity	Target	Approach	Progress as of June 2016 (end of previous analysis period)	Progress between July 2016 and April 2017 (end of current analysis period)
PM4: Greater Washington Multi-Payer Initiative	Patients served by a participating network of providers	Provider networks to receive integrated data from multiple payers to promote care coordination, quality improvement, and risk sharing; the SIM Initiative will fund technical assistance and infrastructure.	Implementation delayed	Model redesigned and modified to a more limited implementation; HCA contracted with two networks (one urban, one rural). In addition to Medicaid and PEBB data, networks secured agreement from 2 payers to participate.
ACH	Statewide	Contract with one public/private partnership in each of 9 regions to support local delivery system and population health initiatives	All ACHs established governance structure; signed contracts with HCA; completed needs assessment.	All ACHs implementing one SIM Initiative-funded project (ongoing); also, separately developing additional projects as part of the Medicaid Transformation Demonstration (project plans due October 2017).

ACH = Accountable Community of Health; ACN = Accountable Care Network; BH = behavioral health; CAH = critical access hospital; DOH = Department of Health; FQHC = Federally Qualified Health Center; HCA = Health Care Authority; MCO = managed care organization; MOU = memorandum of understanding; PEBB = Public Employees Benefits Board; PM = Payment Model; PMPM = per member per month; RHC = rural health clinic; SIM = State Innovation Model.

Payment Model 1: Medicaid integration of physical and behavioral health. Washington is adding mental health and substance use disorder (SUD) services to physical health services included in its Medicaid managed care organizations (MCOs), in support of enrollees receiving fully integrated care (PM1). The HCA is phasing in PM1 in each of the nine ACH regions. The counties that form each region may voluntarily join the program before 2020, but if they do not volunteer, they are required to join in 2020. In each region, the state contracts with two to three MCOs to deliver integrated care to almost all Medicaid beneficiaries and a Behavioral Health Administrative Services Organization (BH-ASO) to manage the region’s behavioral health crisis system. The BH-ASO serves all individuals (not just Medicaid beneficiaries).²⁰⁰ MCO payments

²⁰⁰ HCA has stated that it will consider implementing other models in other areas of the state, at the request of the local community. However, this is the model it is using in the Southwest and North Central regions.

are tied to performance, at first for reporting accurate encounter data but ultimately for performance on measures drawn from the common measure set, as discussed in **Section K.1.7**.

HCA implemented PM1 in the Southwest region in April 2016, designating the region an “early adopter” (two counties; approximately 120,000 Medicaid beneficiaries). As of April 2017, HCA was evaluating proposals from MCOs and a BH-ASO for January 1, 2018 implementation in the North Central “mid-adopter” region (three counties; approximately 76,000 beneficiaries). HCA was also seeking additional regions to volunteer to become mid-adopters by January 2019. State officials and other stakeholders reported that newly approved Medicaid Transformation Demonstration waiver-funded incentives for managed care integration, only available to ACHs from regions with counties that elect to implement PM1 before 2020, are a powerful lever for convincing counties to volunteer as mid-adopters.²⁰¹

Most state officials and payers acknowledged that the shift from the current system to PM1 is potentially disruptive to Medicaid beneficiaries and their providers, but they believed that the benefits of integrated behavioral and physical health treatment would ultimately justify the shift. Interviewees expressed three specific concerns. One stakeholder explained that beneficiaries in integrated managed care have a smaller number of MCOs (i.e., two to three) from which to choose, whereas prior to integration, beneficiaries could choose from up to five MCOs. Other stakeholders expressed concerns that interruptions in treatment—caused by behavioral health providers having to change their billing systems to accommodate the MCO requirements—could result in increased emergency room (ER) and inpatient utilization, at least initially. One stakeholder was concerned that counties in integrated managed care regions no longer had ongoing oversight of the delivery of behavioral health services, which are critical to many other county responsibilities, such as justice-related services.

To help avoid potentially negative consequences during the transition to the new system, state officials tested the utility of an Early Warning System (EWS) in the Southwest region. The EWS gathered information from various sources and stakeholders to quickly surface potential implementation problems. State officials were pleased with the results and plan to incorporate this feature in all new regions.

The Southwest “early adopter” PM1 region focused first on financial integration, with service integration to follow. Even so, a few state officials cited early reports supporting a positive impact on service delivery. Stakeholders reported improved access to primary care and that local care managers were starting to consider both the behavioral and physical health needs of enrollees. Behavioral health providers reported that the new connections between the

²⁰¹ Washington State HCA. (2017). Incentives for mid-adopters of integrated managed care. *Healthier Washington*. Retrieved June 20, 2017, from <https://www.hca.wa.gov/assets/program/Incentives-and-basic-facts.pdf>

behavioral and physical health systems were increasing communication, making it easier to help clients get physical health care.

State officials observed that behavioral health providers would have benefited from additional assistance to develop contracts with MCOs or implement new billing systems. Two state officials observed that SUD providers needed more assistance than other providers. One official reported that early data were indicating a possible decline in the use of SUD treatment services and attributed it to their "...current [lower] level of sophistication and the decades long approach of more grant management [than billing for services]." This official was optimistic that, as SUD providers became more familiar with MCO processes (e.g., prior authorization), the trend could reverse. Because of this experience, behavioral health providers in other regions will be offered more technical assistance to support implementation. ACHs in the Southwest and North Central regions were reported to have already proven to be a valued resource for providers, and this was anticipated to also prove true in other regions. All regions will also have assistance from the Hub (see *Section K.1.5*).

Payment Model 2: Encounter-based to value-based payment. PM2 seeks to move three types of providers further along the continuum of VBP. HCA plans to pilot a PMPM PM for services provided to Medicaid MCO enrollees by FQHCs and RHCs. HCA also plans to establish a new facility type designation for CAHs that would enable them to pilot a multi-payer VBP model starting in 2018.

As of June 2016, HCA was working with FQHCs and RHCs to develop the PMPM model. While implementation was planned for early 2017, stakeholders reported that negotiations were slow. However, by April 30, 2017, the HCA had signed memoranda of understanding (MOUs) to begin testing the model with 13 FQHCs and 1 RHC in July 2017.

Under the existing PM, payment to each FQHC and RHC for Medicaid MCO enrollees comes from three sources: (1) an amount negotiated between the clinic and the MCO, (2) a monthly enhancement that is a pass-through to the clinic from the HCA via the MCOs, and (3) an annual reconciliation to the clinic to ensure that each clinic receives the same amount of revenue under the managed care system, as it would have under fee for service (FFS) (to meet longstanding federal requirements for FQHC payments).

Under the new PM (PM2), HCA calculates a clinic-specific PMPM rate to incent clinics to adopt innovative models of care that will increase their capacity to more efficiently provide primary care services and, thus, serve more MCO enrollees with fewer primary care provider (PCP) face-to-face visits. Under PM2, common performance measurement requirements incorporated into the payment methodology across FQHCs, RHCs, and their Medicaid MCOs are intended to incent improved delivery of care. Participating clinics will continue to receive payments from the MCOs and monthly enhancement payments. The annual reconciliation

process will change from a retrospective settlement to a prospective adjustment, which state officials anticipate also will reduce the administrative burden for participating clinics. Participating FQHCs and RHCs are being given claims data dashboards to track their quality measure performance. One state official reported that a challenge in producing the measures for the clinics was obtaining current patient attribution from MCOs to identify the Medicaid enrollees who were using a specific FQHC or RHC clinic as their PCP.

Interviewees identified factors that weighed into each clinic's decision to join the pilot. Reasons against participation included a reluctance to move away from an accustomed approach, concluding that the model would not financially benefit the clinic, and among small clinics, not having enough attributed patients to produce reliable performance measures, affecting their payment structure.

Reasons for participation included a desire to influence the development of a new model that many believed all FQHCs and RHCs would ultimately be required to implement, concluding that the model would financially benefit the clinic, and already having the infrastructure to more efficiently provide primary care services and better integrate care, such as a system for producing panel management reports from the clinic's electronic health records (EHRs). One interviewee specified three provisions of the MOU he believed were key to securing the participation of the first group of clinics that volunteered: (1) payment will not be less under the new model than it would have been under the per-visit model, (2) an FQHC can choose to return to the per-visit model, and (3) the pilot period was sufficient to provide clinics time to recoup their investment costs.

CAH payment reforms are in development. Through the Washington Rural Health Access Preservation (WRHAP) Project, HCA worked with the state hospital association and 14 CAHs to develop the model. The goal is to test a VBP model that allows CAHs to deliver care that meets the needs of their rural populations, particularly primary care, ER, and long-term care. WRHAP released recommendations for a phased approach to moving CAHs to the new model by 2021. Between 2018 and 2021, services would be paid by a combination of PMPM, per diem, population-based, and other PMs aligned across participating payers.²⁰² In April 2017, the State Legislature passed Substitute House Bill (SHB) 1520 (Chapter 198, Laws of 2017) in support of the new approach,²⁰³ which authorized HCA to pilot an alternative service and payment system for CAHs. WRHAP recommendations emphasize the importance of Medicare's participation in the model. During the AR2 analysis period, state officials started the process of securing

²⁰² See the "January 2017 WRHAP report 'Delivering High-Value Healthcare Services in Rural Areas of Washington State'" in Washington State HCA. (2017, revised June 23, 2017). *Washington State Innovation Models project: Round 2 model test awardee end of year report period: February 1, 2016 to January 31, 2017* (p. 19). Retrieved from <https://www.hca.wa.gov/assets/program/sim-y2annualreport.pdf>

²⁰³ Washington Rural Health Access Preservation Pilot—Critical Access Hospitals—Payment, SHB 1520. 1 Wash. PL §198 (2017).

Medicare's participation, which is not guaranteed and requires negotiations with CMS. State officials reported that they were making progress and that implementation was expected in 2018.

Payment Model 3: Accountable Care Program. The Accountable Care Program was implemented in 2016, starting with one five-county region. HCA contracted with two Accountable Care Networks (ACNs): University of Washington Medicine ACN and Puget Sound High-Value Network. Both entities agreed to risk-based contracts, assuming financial and clinical risk for PEBB member enrollees. In 2016, approximately 12,000 PEBB members chose an ACN option. On January 1, 2017, these two networks became available to PEBB members in four additional counties, bringing a total of nine counties under the Accountable Care Program; enrollment increased to approximately 15,000 PEBB members in 2017.²⁰⁴

The ACN contracts require the two networks to improve service delivery and care coordination, including using evidence-based care strategies and shared decision-making. PEBB enrollees who obtain services from their ACN pay lower premiums and deductibles compared to the traditional preferred provider organization (PPO) plan, with no cost-sharing for primary care visits. The ACNs accepted risk for the care delivered to their members, including achieving an expected level of annual savings. If an ACN achieves greater savings than the target, it may keep a portion of that savings; if it achieves less savings, it must pay a portion of that deficit. The portion of savings retained or deficit paid is based on the ACN's performance on 15 measures from the common measure set (discussed in **Section K.1.7**), and member experience survey data.²⁰⁵

Washington's goals for PM3 include spreading the program to up to six new counties (for a total of 15) by the end of the SIM Initiative. The barriers to expansion are engaging additional health systems and identifying counties with sufficient public employees to be viable. One official believed that approximately 80 percent of newly eligible PEBB members and 20 percent of eligible current members chose to join an ACN and that with additional decision tools, such as a cost calculator, those percentages would increase.

One official thought that the ACN model would be of interest to private purchasers. One payer was interested in leveraging these networks and the investment made by HCA to further develop the model with private purchasers, rather than creating new configurations. The sustainability of the networks could be enhanced by increasing the number of participating providers. One stakeholder thought that certification by the Medicare Access and Children's Health Insurance Program (CHIP) Reauthorization Act of 2015 (MACRA) could create an

²⁰⁴ Washington State HCA. (2017, May 2, rev. June 23). *Washington State Innovation Models project: Round 2 model test awardee end of year report, period: February 1, 2016, to January 31, 2017*. (p. 8). Retrieved June 20, 2017, from <https://www.hca.wa.gov/assets/program/sim-y2annualreport.pdf>

²⁰⁵ Washington State HCA. (2017, April). *Connecting provider payments to value: How the Accountable Care Program works*. Retrieved June 20, 2017, from <https://www.hca.wa.gov/assets/program/ACP-QIM-fact-sheet.pdf>

additional incentive for providers to join. However, MACRA’s health information technology (health IT) requirements will force payers to reach agreement with Medicare on enhancements.

Accountable Communities of Health. Through the SIM Initiative, HCA created nine regional ACHs that together cover the entire state. The ACHs bring together providers, social service agencies, public health, and other partners at the regional level and lead health systems and community capacity building, care delivery redesign, and population health prevention and promotion activities.

By the end of the AR2 analysis period, interviewees reported that most ACHs had incorporated as a 501(c)3 or limited liability corporation,²⁰⁶ had an executive director, and had hired additional staff, such as program managers. Initially, ACHs anticipated using shared staffing or in-kind support from community organizations. However, they learned that even with a few dedicated staff, there was “more development, more commitment and shared vision when there was a team.” While ACHs have a uniform contractual obligation to the state, each is allowed flexibility in its organizational structure, such as the composition of its governing board.

One challenge for ACHs was understanding the leadership role that HCA wanted them to play. One state official noted as a challenge, “the desire for the state to dictate terms in the ACH world, where we are trying to create self-sustaining and mobilized collaboratives around the state, capable of carrying out and sustaining health transformation. There has always been a temptation [toward] dictating and turning it into a grant program.”

Providers also noted the significant role of ACHs in the SIM Initiative. As explained by an RHC, “If I can’t get the money from the ACH for Payment Model 1, then I probably can’t do Payment Model 2, because chances are, if you’re going to integrate your physical and behavioral health, it’s not just moving somebody into your office.” Some ACHs are also taking a lead role in the move to fully integrated managed care in their regions, through the vehicle of PM1.

According to a state official, the Medicaid Transformation Demonstration waiver will act as an “accelerant” for Washington’s SIM strategy. For example, the Demonstration toolkit makes the ACH’s role in implementing VBP more explicit and provides them with resources to fulfill that role. Additionally, the incentives for the timely implementation of integrated managed care that were created with Medicaid Transformation Demonstration funding incent counties to both adopt PM1 before 2020 and fund ACHs to help providers build the infrastructure needed for implementation (e.g., billing systems, health IT systems, education).

²⁰⁶ Per 45 CFR §75.455, “organization costs” are an unallowable use of SIM funds, and as such, ACHs did not use SIM funding to support organization costs, such as incorporation fees.

K.1.4 Health information technology and data infrastructure

Advances in health IT and related data infrastructure are an important focus of Washington's SIM Initiative. Major activities include the Greater Washington Multi-Payer Initiative (PM4), AIM, and activities related to the development of an all-payer claims database (APCD).

Payment Model 4: Greater Washington Multi-Payer Initiative. Although it is referred to as a PM, the Greater Washington Multi-Payer Initiative was implemented as an integrated, multi-payer database strategy and not a PM, per se. PM4's goal is to "test whether increasing providers' access to patient data across multiple payers increases adoption of value-based reimbursement arrangements." The state refers to PM4 as a PM because new VBP arrangements among commercial payers are anticipated to develop as a result.

During the AR2 analysis period, Washington reduced the scope of PM4. Initially envisioned as a comprehensive statewide database, the project ultimately began as a pilot. The HCA engaged two provider networks (one urban and one rural). Each network agreed to develop an integrated, multi-payer database and engage private payers. The urban network is the Northwest Physician Network, the state's largest multidisciplinary independent provider network. The rural network is Summit Pacific, a rural hospital. Both networks are partnering with their provider organizations.

The state is sharing Medicaid claims and enrollment data with the networks and plans to provide comparable data from PEBB and Medicare. The networks secured agreements from two commercial payers to also participate. Challenges include data sharing, staffing, and infrastructure. A state official noted that participating networks need data from commercial plans that do not want their proprietary data shared with competing plans, and thus, the infrastructure must include secure data platforms. The state also needs a long-term approach to securing Medicare data. One state official worried that purchasing data from outside plan administrators (e.g., Milliman for PEBB data) might be too expensive to sustain over the long term.

Provider capacity is also a challenge to the full implementation of PM4. One payer said it had invested in providing practices with data, analytic and reporting capacity, and technical support, but many providers were still unable to use integrated data sets. A provider concurred, noting that implementing the model requires resources to secure a data vendor, perform data analytics, and integrate new technology into their operations.

Analytics, Interoperability, and Measurement. AIM is Washington's strategy to bring together health IT and data infrastructure efforts. As reported in the first AR, hiring an AIM director and analytic staff was challenging because employees with the needed skills are in high demand in Washington's technology sector. In late 2015, the state changed the civil service

classification of the AIM positions to enable DOH, DSHS, and HCA to increase their allowable salary range. The AIM director was hired in Spring 2016.

In January 2017, HCA awarded a contract to Truven Health Analytics, Inc. to implement an initial master data management solution to support AIM, including both metadata management and master data management capabilities. AIM also procured the Tableau Enterprise Server to support DOH's development of data dashboards. The dashboards provide ACHs with interactive public health data on populations (e.g., Medicaid beneficiaries) and measures (e.g., the common measure set) that can be filtered by ACH region, county, and demographic characteristics. ACHs received data specific to their region by June 2016 and are using the data to help target community interventions and identify critical issues.

An infrastructure challenge noted by one state official was that it is challenging to create state data systems that both support integrated care and connect individual patient treatment data to broader outcomes.²⁰⁷ Through the SIM Initiative, the state has taken steps toward building a data warehouse that will support these two goals by linking data from its clinical data repository. This warehouse could eventually include data from a future APCD. These steps included inventorying EHRs and developing data entry compatibility across providers. One state official said that HCA is trying to secure the state portion of a federal match to further the data warehouse.

Two policy levers support AIM's goals. The Medicaid Transformation Demonstration requires each ACH to have a data analyst and a data-sharing agreement with HCA. The requirements were described as aligning with the state's efforts to establish data-sharing agreements with ACHs. One stakeholder noted that Washington's robust and relatively new Medicaid Management Information System has also served as a lever.

K.1.5 Practice transformation and workforce development

The Hub is both a resource portal for providers and a vehicle to provide practice transformation. In November 2016, Qualis Health was awarded the contract to provide both a health connector in each of the ACH regions and practice coaching, assistance, and training. A Resource Portal launched in January 2016.

During the AR2 analysis period, the Hub provided hands-on technical assistance to practices. State officials described the Hub as "gaining traction," and "getting off the ground." Qualis Health began "deploying the coach/connector role in each region." Practices were enrolled. A payer thought the Hub's greatest value was in providing technical assistance to practices for business-related activities and documentation, both within and outside of EHRs.

²⁰⁷ The SIM award provided seed money for enhancing data systems but not the entire investment. Those investments have an ongoing maintenance that the state also needs to be able to fund.

The payer spoke to a key challenge expressed by a state official: making a clear business case to practices and providers for engaging in practice transformation.

Hub coaches. Hub coaches provide assistance to practices, including links to additional resources. Small-to-medium-sized practices and practices implementing PMs are given priority. Assistance requests included clinical workflows, data systems and reporting, and improving IT capacity to meet MCO EHR requirements. One interviewee noted that coaching has made the most progress where coaches have the strongest community relationships.

Hub connector. The Hub connector helps providers find practice transformation support that is not available through the Hub itself (e.g., practice transformation resources available through other entities or funding supports). According to one state official, the state is learning that the Hub's connector role is its most unique contribution.

Hub Web-based resource portal. The Hub Web-based resource portal, which is maintained by the University of Washington's Department of Family Medicine Primary Care Innovation Lab, was launched in January 2017, to positive feedback. The portal is an interactive platform to help primary and behavioral health practices by disseminating best practices, identifying local resources, and supporting interaction among clinical practices. The Hub is working to achieve better integration of postings on the portal with information available from the coach connectors.

Hub use. ACHs are using the Hub in multiple ways. ACHs found the Hub helpful in convening meetings, engaging providers, and providing technical assistance. A state official saw ACHs' opinions on how best to use connectors to assist with regional practice transformation as vital to Hub planning. A payer felt that the Hub's prioritization of assisting regions moving toward fully integrated managed care was a good strategy and one that has shown some early success.

The Hub was described as successfully balancing simplifying information with clarifying complex issues, such as how providers can improve their financial status and avoid penalties. Despite this, engaging the provider community has been a challenge. A state official felt that providers' lack of engagement and necessary skills to implement the new models were the largest obstacles to practice transformation. The official further stated that although practices are interested in transformation, they lack a clear understanding of its value.

The Health Workforce Sentinel Network (Network) supports ACH efforts to address workforce needs. The Network updates its assessment of demand for health care skills and roles every 4 months. Actionable findings are disseminated to employers via the Network Web site, through an interactive analysis tool. The Network reported that, from April 1, 2017, to May 15,

2017, many providers in rural areas lacked the capacity to conduct the foundational activities needed for value-based care.²⁰⁸

K.1.6 Population health

State officials indicated that Washington’s SIM Initiative addresses population health through a systemic approach that focuses on incentives and partnerships to address social determinants of health and achieve the state’s health transformation goals. The state is using two primary strategies: ACHs and the P4IPH. These two strategies relate to CMS’s adaptation of the Centers for Disease Control and Prevention’s (CDC’s) definition of the three buckets of prevention:²⁰⁹ traditional clinical approaches, innovative patient-centered care, and community-wide health. ACHs’ health improvement projects focus on health care system delivery issues, such as improving access through innovative patient-centered care approaches and the implementation of evidence-based services and clinic-community linkages. P4IPH addresses community-wide health. An accompanying planning guide offers steps to operationalize the P4IPH’s strategies through clinical approaches and care coordination.

Accountable Communities of Health. In June 2016, the AIM team launched data dashboards to help ACHs identify health improvement projects that met community needs. ACHs and stakeholders worked together to select their projects. By July 2016, all ACHs had submitted proposals, and all were implementing their approved projects. Examples of areas of focus include behavioral health coordination for youth and chronic disease prevention and management.

Stakeholders described ACHs as neutral “engagement hubs” for bringing together entities at a local level. Although ACHs were originally intended to focus on population health, one state official noted that ACHs are taking on greater roles in delivery system and payment reform, particularly because of the key responsibilities they have been given in relation to the Medicaid Transformation Demonstration waiver. Stakeholders commented that at least initially, advancing delivery system and payment reform will likely take precedence over more traditional population health efforts.

The development of ACH capabilities is supported by other SIM Initiative strategies. Stakeholders indicated that ACHs are using the Hub to connect with providers for population health improvement efforts and broader delivery system reforms. The AIM team identified data analytic needs and provide technical assistance on projects. The HCA supports ACHs through weekly calls to discuss operational challenges and foster peer-to-peer learning and technical

²⁰⁸ Washington State Sentinel Network. (2017, December) *Findings as reported by geographic region*. Retrieved December 21, 2017, from <http://www.wtb.wa.gov/healthsentinel/findings-ach-map.asp>

²⁰⁹ Auerbach, J. (2016). The 3 buckets of prevention. *Journal of Public Health Management and Practice*, 22(3), 215–218. doi: 10.1097/PHH.0000000000000381

assistance. The Community Center for Health and Evaluation, a research institute, assists ACHs in aligning their projects with the outcomes included in the common measure set.

Most stakeholders believed that ACHs hold promise for advancing population health improvements, but some identified challenges. For example, one stakeholder thought that health care organizations might be overrepresented and social services organizations underrepresented on some ACH boards, which could lessen the focus on social determinants of health.

Plan for Improving Population Health. The P4IPH is the state’s strategic plan for population health priorities; it operationalizes the state’s Prevention Framework. Developed in 2014, the Prevention Framework is a “blueprint” for population health improvement, focusing on chronic disease prevention and management and behavioral health. The Prevention Framework conducted a priority-setting process in mid-2016 that determined the initial areas of focus of the P4IPH as diabetes prevention and treatment, with a secondary focus on well-child visits.

To help ACHs and other stakeholders utilize the P4IPH, DOH launched a population health planning guide in September 2016 that discusses how to address issues through a population health approach. Recommended strategies are organized by health focus areas (diabetes, obesity, tobacco use, and well-child visits). The guide is a Web-based tool containing regularly updated population health resources. It was transitioned in early 2017 from the DOH Web site to the Hub Web portal.

Financial and policy levers for population health. The state uses SIM funding to provide each ACH with grants, which ACHs supplement with funding from other organizations. Each ACH received \$50,000 in SIM funding for implementing their local health improvement projects. In the future, the Medicaid Transformation Demonstration waiver will provide ACHs with funding to undertake additional projects, including health systems capacity building, care delivery redesign, and prevention and health promotion.

Policy levers are also used to promote population health with local partners. For example, one state official noted that DOH’s contracts with community partners, such as local health jurisdictions, include incentives to use the population health guide.

Stakeholders referenced the common measure set (see ***Section K.1.7***) as a lever to align population health and the health care delivery system. State officials noted that the common measure set is currently clinically oriented, whereas population health efforts are focused on social determinants of health. Stakeholders mentioned that discussions to incorporate nonclinical measures into future measure sets have begun. Data analytics through AIM and the ACHs’ data dashboards also hold promise for linking health data with other data, such as housing availability and characteristics.

K.1.7 Quality measurement alignment

The *Washington State Common Measure Set for Health Care Quality and Cost* (referred to as the common measure set) was established pursuant to Chapter 223 of the Laws of 2014.²¹⁰ As of June 2016, the common measure set was being used for public reporting and purchasing. The Performance Measures Coordinating Committee, co-chaired by HCA and the Washington Health Alliance, updates the measure set each year. The 2017 set of 56 measures included immunizations, primary care, behavioral health, effective management of chronic illness, ensuring appropriate care, effective hospital-based care, and health care spending. Most of these measures were drawn from nationally recognized measure sets. The measure set can be used to assess performance at the state, regional, plan, hospital, and medical group levels.²¹¹ The measures are publicly reported on Web sites (e.g., <http://www.wacommunitycheckup.org>) and in written reports.

The common measure set supports the performance goals of Washington's VBP efforts. As of April 2017, the measures were incorporated into MCO contracts, the FQHC and RHC MOUs implementing PM2, and PEBB ACN contracts. The ACH agreements require projects to align with at least one of the common measures.^{212,213} ACH payments will, over time, come to be based partially on measures drawn from the common measure set.²¹⁴

Requiring the same performance measures to factor into Medicaid MCO, FQHC, and RHC payments creates an incentive to work together. Alignment of ACH projects with the common measure set creates a lever to engage Medicaid MCOs in ACH activities, as success has potential benefits for both. Finally, HCA makes performance on priority conditions in the *Healthier Washington's* population health plan available to the public via dashboards maintained by AIM.

Most stakeholders supported using the common measure set in purchasing. One payer, although supportive of the concept, worried that some health plans already have their own VBP arrangements in place. Switching to Washington's measure set might necessitate a health plan

²¹⁰ Health Care Delivery System, E2SHB 2572. 1 Wash. SL §223 (2014).

²¹¹ Washington State HCA. (2017). *Washington state common measure set*. Retrieved from <https://www.hca.wa.gov/assets/program/2016.12.20.Common-Measure-Set-Health-Care-Quality-Cost-Approved.pdf>

²¹² Washington State HCA. (n.d.). State Innovation Model contractual guidelines for accountable communities of health. *Healthier Washington* (p 11). Retrieved May 25, 2017, from <https://www.hca.wa.gov/assets/program/contractual-guidelines-for-ach.pdf>

²¹³ Washington State HCA. (2016, December 30). Medicaid transformation project toolkit, draft for public comment. *Healthier Washington*. Retrieved May 25, 2017 from <https://www.hca.wa.gov/sites/default/files/program/medicaid-transformation-toolkit.pdf>

²¹⁴ Washington State HCA, with DSHS. (2015, August 24). *Washington State Medicaid transformation waiver application* (p. 41). Retrieved May 25, 2017, from <https://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Waivers/1115/downloads/wa/medicaid-transformation/wa-medicaid-transformation-state-demo-app-82415.pdf>

renegotiating its contracts with some payers or prevent it from standardizing operations across states. Some health plans had resolved this issue by also calculating these other measures.

State officials have started talking to private payers and purchasers (i.e., health plans and employers) about adopting at least a portion of the common measure set into their VBP arrangements. One state official reported that HCA is considering developing model contract language that purchasers could use to incorporate the measures into their contracts.

K.1.8 Lessons learned and looking forward

Developing Accountable Communities of Health needed a mix of flexibility and standardization. Striking the right balance between offering communities the flexibility to develop an ACH that reflects community relationships and goals and the need to standardize ACH operations was difficult. Flexibility resulted in a “lovely chaos” during implementation, but over the long run, flexibility is hoped to produce greater opportunity because each ACH is integrated into its community rather than imposed from the outside. ACHs are a new model, and there were no footsteps to follow in their development. A state official expressed the belief that by working together, the ACHs can better address common challenges and more quickly spread promising practices among organizations.

Purchasing is a key policy lever. Washington uses state purchasing as a key policy lever. As one stakeholder summed it up, “If you are not willing to change how the money flows, who is accountable, or how the money is integrated, I don’t think you can achieve long-term, sustainable, systemic reform.” Using the common measure set as an anchor for all VBP purchasing models promoted alignment across the various components of *Healthier Washington* and, more broadly, the actors in the state’s health care system.

Coordinating purchasing and practice transformation is critical to their success. Coordinating the purchasing and practice transformation components of Washington’s SIM Initiative was crucial because the two components are synergistic. The provider payment changes resulting from new PMs build the business case for practice transformation, and the practice transformation assistance enables smooth implementation of the PMs. The design is unfolding in practice, but delays in implementing some PMs impeded provider recruitment for practice transformation.

Private sector purchasers are slow to adopt value-based payment. It has been difficult to entice private purchasers (i.e., employers) to follow the state’s lead in moving into VBP. Some employers, especially small employers without staff skilled in administering VBP, believe it would be too difficult to implement a new PM. Other employers prefer to avoid the risk of testing a new model or want to offer a rich health benefit package to gain a competitive edge in attracting the best talent. As of April 2017, state officials were in discussions with purchasers and payers and were developing strategies to promote greater participation.

Communicating the vision of a multifaceted initiative to external and internal stakeholders is difficult. Washington’s SIM Initiative has multiple components that must come together for comprehensive transformation; understanding how they work together and which agency to contact for each effort can be challenging. State agencies’ operations staff were not always fully aware of leadership’s vision for the Initiative. One lesson was to clearly articulate the goals of not only the individual components but also how the components fit together to achieve the overall goals. Some state officials believed they needed to inculcate the SIM Initiative’s goals into the day-to-day work of more state staff. Through these increased efforts, as the SIM Initiative moved from vision to operation, stakeholders could more easily see how the components would fit together to transform the system.

Washington established its structure for delivery system transformation through the State Innovation Model Initiative; the Medicaid Transformation Demonstration waiver will amplify the transformations. The Medicaid Transformation Demonstration waiver will build on the SIM Initiative, and some stakeholders had difficulty distinguishing between the two. The demonstration was described by one state official as, “...added fuel, to push system transformation even further [than the SIM Initiative].”

Behavioral health providers needed support to transition to integrated managed care. To implement PM1, behavioral health providers and MCOs had to develop business relationships with each other. Many behavioral health providers found that they had to implement new billing systems and procedures. The transition was even more difficult for SUD treatment programs than for mental health providers. As a result, providers needed support to function within the new system.

K.2 Changes in Outcomes During the State Innovation Model Initiative

K.2.1 Progress toward a preponderance of care in value-based purchasing models and alternative payment models

Washington’s goal for reaching a preponderance of care is moving 80 percent of state-financed health care and 50 percent of commercial health care to VBP by 2019. Per the HCA value-based roadmap, the interim goal for state-financed, value-based care is 30 percent for 2017. HCA did not determine an interim goal for the commercial market.

As the purchaser for Medicaid and PEBB public employees, the state is moving its purchasing of care from volume to value for these groups. The state is incrementally contracting with MCOs for PM1, FQHCs and RHCs for PM2, and ACNs for PM3 and including VBP requirements in contract language. The HCA is also using Medicaid Transformation Demonstration funding to create incentives for MCOs to establish VBP arrangements with providers.

As of April 2017, the state was preparing to survey commercial payers to track their progress toward reaching preponderance of care. Interviewees believed that the commercial market would meet the 2019 goal, because at baseline, Kaiser Permanente plans, which cover approximately 25 percent of the commercial market, were all value based, and 20 percent to 30 percent of other commercial health plans were also value based. Several interviewees remarked that the success of reaching preponderance of care may depend on the choice of Learning and Action Network (LAN) framework definitions.

Interviewees reported that it was challenging to convince private payers to shift to VBP. One concern was competition in the technology job market. Employers view health benefits as part of their package for attracting employees. They were concerned that changing health benefits could create a barrier to attracting needed talent. Other barriers were collective bargaining agreements, general inertia, and fear of risk. One response to the challenge of increasing private payers' use of VBP may be to better communicate its benefits to private companies. Additionally, some companies were thought to be waiting to see how possible changes to health care financing at the federal level were going to be resolved.

Another challenge is that rural providers, especially large providers such as hospitals, are hesitant to enter into VBP arrangements. Less competition in rural than urban areas can result in rural providers having more power in contract negotiations. An interviewee thought that increasing support to commercial payers and creating incentives for rural providers to move to VBP would help to resolve the issue. To increase the adoption of VBPs across multiple payers, the state contracted with two physician networks, one urban and one rural, as a data integration demonstration under PM4.

Table K-2 presents available information on the extent to which Washington's population was participating in the SIM payment and health care delivery models. These values were provided by the state.²¹⁵ Statewide, 5.7 percent of Washington's Medicaid beneficiaries were enrolled in behavioral health integrated care models through PM1, and 28.3 percent of PEBB members in the five-county area eligible for enrollment in the accountable care plan were enrolled in an ACO through PM3.

²¹⁵ These data values were not verified by CMMI. Thus, the RTI team cannot attest to their accuracy.

Table K-2. Populations reached by a value-based purchasing or alternative payment model in Washington, as of Award Year 1, fourth quarter 2016

Payer type	SIM models			Landscape
	ACOs	BH integrated care models	SIM-wide	Any value-based purchasing or APMs
Medicaid		112,224 (5.7%)	112,224 (5.7%)	112,224 (5.7%)
State employee plans	47,102 (28.3%)		47,102 (28.3%)	47,102 (28.3%)
Statewide	47,102 (28.3%)	112,224 (5.7%)	159,326 (34.0%)	159,326 (34.0%)

Source: Washington SIM quarterly progress report for fourth quarter 2016

ACO = accountable care organization; APM = alternative payment model; BH = behavioral health; SIM = State Innovation Model.

Table K-3 presents data on Washington’s payer participation in the SIM payment and health care delivery models. The state reported that 13 percent of Medicaid payments were in LAN Category 3 (APMs) and 4 percent were in LAN Category 4 (population-based payments). Among commercial payers, including state employee plans, the state reported that 1 percent of payments were in LAN Category 3 (APMs) and 12 percent were in Category 4 (population-based payments). Because the percent of payment data across rows does not add to 100 percent, some data may be missing.

Table K-3. Payers participating in a value-based purchasing or alternative payment model in Washington, as of Award Year 1, fourth quarter 2016

Payer	Category 1 Payment: FFS with no link of payment to quality		Category 2 Payment: Payment linked to quality		Category 3 Payment: APMs		Category 4 Payment: Population-based payment	
	Number of beneficiaries	Percentage of payments	Number of beneficiaries	Percentage of payments	Number of beneficiaries	Percentage of payments	Number of beneficiaries	Percentage of payments
Medicaid	270,986	26%	136,967	0%	131,486	13%	155,605	4%
Commercial	859,218	31%	194,790	4%	155,605	1%	392,231	12%

Source: Washington SIM quarterly progress report for fourth quarter 2016.

APM = alternative payment model; FFS = fee for service.

Table K-4 presents data on Washington’s provider participation in the SIM payment and health care delivery models. These values were provided by the state.²¹⁶ Because denominators are not presented, physician percent participation in ACOs is not determinable. The model with the greatest physician participation is the PM3 ACO model (27,705); the PM1 behavioral health integrated care model has the lowest participation (1,286). The state reported 1,424 practices participating in PM1. Table K-4 also indicates that all VBP and APMs in the state can be attributed to the SIM Initiative. Specifically, 28,991 physicians and 1,424 practices (7.5 percent) are participating in a SIM Initiative-based VBP or APM.

Table K-4. Number of physicians and practices participating in a value-based purchasing or alternative payment model in Washington, as of Award Year 1, fourth quarter 2016

Provider type	SIM models		Landscape	
	ACOs	BH integrated care models	SIM-wide	Any value-based purchasing or APMs
Physicians	27,705	1,286 (4.9%)	28,991	28,991
Practices		1,424 (7.5%)	1,424 (7.5%)	1,424 (7.5%)

Source: Washington SIM quarterly progress report for fourth quarter 2016.

Note: Some percentages cannot be calculated because of insufficient data concerning the denominator in the data source.

ACO = accountable care organization; APM = alternative payment model; BH = behavioral health; SIM = State Innovation Model.

K.2.2 Care delivery

Stakeholders felt that it was too early in the new practice transformation activities to reach conclusions about changes in care delivery. Regarding PM1, one official stated that stakeholders in the Southwest region were reporting improved access to primary care, care management was becoming more robust, and care managers were considering both behavioral health and physical health needs of enrollees. Similarly, behavioral health providers reported that the new connections and better communication between the behavioral and physical health systems were making it easier to help their clients obtain physical health care.

K.2.3 Coordination of care, quality of care, utilization, and expenditures

Stakeholders reported that none of their efforts have progressed to the point where they have data that show improved care coordination, quality of care, utilization, or expenditures. State officials and other stakeholders, however, emphasized that they believed that the process

²¹⁶ These data values were not verified by CMMI. Thus, the RTI team cannot attest to their accuracy.

improvements that contractors were required to implement would ultimately produce improvements in these areas.

One indicator that cuts across models is *Healthier Washington*'s systematic effort to gather anecdotes showing the impact of the initiative.²¹⁷ Stakeholders shared stories of prompt access to care within the Accountable Care Program, a new opioid-response system in the Olympic Peninsula, and a physician within the Accountable Care Program who helped a patient make treatment choices. One stakeholder believed that these stories foreshadow real improvements in the delivery of care that will eventually be confirmed by changes in performance measures.

A key goal of Washington's SIM Initiative is lowering health care expenditures in tandem with better health and better care. Specifically, Washington is aiming to have annual health care cost growth be two percent less than the national health expenditure trend. State officials commented that the various PMs hold promise but that the SIM Initiative was still in the early phases of implementation and, therefore, had not yet made any quantifiable impact on care expenditures.

K.2.4 Population health

Table K-5 shows Washington's baseline population health outcomes based on 22 measures from the 3 years prior to the implementation of Washington's SIM award. The table also includes information from comparison group states: Arizona, California, and Virginia. The multistage procedure for identifying the comparison group states is described in detail in Appendix L. The measures suggest that, in terms of national averages, Washington compares favorably on measures of health by greater than two percentage points, averaged from 2013 to 2015, in relation to ever diagnosed with hypertension, being a current smoker, being overweight or obese, no leisure time physical activity in the past 30 days, and no colorectal screening. Washington underperforms the national average by more than two percentage points in relation to having a functional limitation, no checkup in the past year, no flu vaccine, no medication among adults with hypertension, not having a personal doctor, mental health ever not good in the past 30 days, and impairment due to poor physical or mental health in the past 30 days.

²¹⁷ See *Voices of a Healthier Washington* at <https://www.hca.wa.gov/about-hca/healthier-washington/voices-of-a-healthier-washington>

Table K-5. Baseline measures of population health in Washington, 2013–2015

Measure		2013–2015 Average	2013–2015 Trend
Health status is fair or poor	Washington	13.0%	
	CG	13.1%	
	National	14.9%	
Ever diagnosed with diabetes	Washington	7.9%	
	CG	8.5%	
	National	9.6%	
Ever diagnosed with hypertension ##	Washington	29.0%	
	CG	29.7%	
	National	31.6%	
Ever diagnosed with asthma	Washington	14.7%	
	CG	13.6%	
	National	13.5%	
Has a functional limitation ##	Washington	21.9%	
	CG	17.9%	
	National	18.2%	
Current smoker	Washington	14.0%	
	CG	14.6%	
	National	16.4%	
Overweight	Washington	62.0%	
	CG	61.7%	
	National	64.4%	
Obese	Washington	26.2%	
	CG	25.5%	
	National	28.5%	
No leisure time physical activity or exercise, past 30 days	Washington	17.4%	
	CG	20.0%	
	National	23.3%	

(continued)

Table K-5. Baseline measures of population health in Washington, 2013–2015 (continued)

Measure		2013–2015 Average	2013–2015 Trend
Limited fruit and vegetable intake, past 30 days	Washington	81.9%	
	CG	81.3%	
	National	83.1%	
Any driving after drinking too much, past 30 days #	Washington	3.2%	N/A
	CG	3.3%	
	National	3.3%	
No checkup, past year	Washington	36.0%	
	CG	31.4%	
	National	29.4%	
No flu vaccine, past year	Washington	57.2%	
	CG	60.4%	
	National	59.6%	
No 65+ flu vaccine, past year	Washington	39.3%	
	CG	39.6%	
	National	39.1%	
No 65+ pneumonia vaccine, ever	Washington	24.3%	
	CG	27.5%	
	National	30.2%	
Among adults with hypertension, no hypertension blood pressure medication ##	Washington	31.0%	
	CG	26.8%	
	National	22.4%	
No 50-75 colorectal cancer screening—no fecal occult blood test (FOBT), past year #	Washington	88.6%	N/A
	CG	88.3%	
	National	90.7%	
No 50-75 colorectal cancer screening—no sigmoidoscopy or colonoscopy, past 5 years #	Washington	48.7%	N/A
	CG	46.3%	
	National	46.0%	
No 50-75 colorectal cancer screening—no sigmoidoscopy or colonoscopy, past 10 years #	Washington	32.5%	N/A
	CG	33.3%	
	National	33.6%	

(continued)

Table K-5. Baseline measures of population health in Washington, 2013–2015 (continued)

Measure		2013–2015 Average	2013–2015 Trend
Does not have a personal doctor	Washington	23.5%	
	CG	22.5%	
	National	20.7%	
Mental health ever not good, past 30 days	Washington	35.9%	
	CG	32.2%	
	National	32.6%	
Impairment due to poor physical or mental health, past 30 days	Washington	23.0%	
	CG	20.8%	
	National	20.4%	

Source: Behavioral Risk Factor Surveillance System, collected by CDC (2013–2015).²¹⁸

Note: To facilitate the comparison of trends over time between the model test state, its comparison group, and the nation, the sparklines for each measure rely on the same scale for the vertical axis for all three groups. Because the vertical scale for the sparklines varies by measure, the sparklines are not comparable across the different measures. Sparklines are not available for outcomes for which data are limited to 2014 (indicated by #). Sparklines for outcomes that are limited to data for 2013 and 2015 (indicated by ##) will be based on data for two points in time and so will appear more stable than outcomes for which data are available for 2013, 2014, and 2015.

CDC = Centers for Disease Control and Prevention; CG = comparison group; FOBT = fecal occult blood test; N/A = not available.

The P4IPH targets diabetes, and the state already outperforms the national average in rates of diabetes (7.9 percent vs. 9.6 percent). However, 36 percent of Washington’s population has not had a checkup in the past year, compared with 29.4 percent for the national average.

SIM strategies have not been in place long enough to effect change. For example, incentives for achieving improvements in the areas of diabetes and well-child visits were added into Medicaid MCO and PEBB contracts only in 2017. Some payers noted the importance of a collective commitment to investing a portion of any shared savings into population health initiatives to achieve population health outcomes. One state official’s opinion was that the state’s progress in linking population health and PM implementation within the SIM Initiative will help the state achieve the goals of the Triple Aim.²¹⁹ However, another state official expressed concern about the significant amount of time involved in implementing financial incentives that reward investments in community health. Stakeholders believed that ACHs are poised to impact population health because as they mature, they will be collaborating and communicating more

²¹⁸ CDC. (2013–2015). *Behavioral Risk Factor Surveillance System survey data*. Atlanta, GA: U.S. Department of Health and Human Services, CDC.

²¹⁹ *Healthier Washington metrics and driver diagram*. Retrieved November 19, 2017, from https://www.hca.wa.gov/assets/program/hw_driver_diagram.pdf

effectively as entities and developing new partnerships. Most stakeholders thought that the tools and infrastructure to improve population health are in place and would impact outcomes in possibly 4 to 5 years, especially on issues, such as diabetes, that are a focus across the SIM Initiative. Some ACHs have already begun to demonstrate some early results. Additionally, one state official noted that population health will be advanced through the Medicaid Transformation Demonstration waiver because the state will be required to meet certain performance targets, such as chronic disease prevention and management.

K.3 Washington Summary

Washington began testing its four delivery system and payment reform models during the AR2 analysis period. The models are being implemented incrementally, giving Washington the opportunity to use lessons learned to modify and adjust program parameters going forward. The state was successful in advancing Medicaid and public employee benefits initiatives in which it was the payer. Specifically, HCA reviewed MCO proposals to implement integrated physical and behavioral health managed care (PM1) into the second of nine regions. In Southwest Washington, the first PM1 region, an early lesson that emerged was that behavioral health and SUD providers needed substantial support to change their billing and reporting to meet the requirements of MCO payers. The HCA completed negotiations and signed MOUs with a first cohort of 16 FQHCs and one RHC that volunteered to implement value-based purchasing for their Medicaid MCO patients (PM2). The public employee benefit program, PEBB, expanded its Accountable Care Program from a five- to a nine-county region (PM3). Finally, two provider networks began piloting a program of data integration from multiple payers to promote quality improvement and risk sharing (PM4).

Washington has implemented several initiatives to support health care delivery system and payment reform innovation in the state. Nine ACHs, developed through a mixture of statewide standardization and locally determined structure and priorities, were operational and implemented at least one funded project. The Hub was launched, including practice transformation coaching, connector services, and a Web-based resource portal. While all Hub services were increasingly used by practices, connecting users to services not available directly through the Hub was considered a unique attribute. The spread of VBP to a larger segment of commercial payers was less successful. The common measure set was identified as a tool to engage commercial health plan administrators and payers with the state going forward, by aligning health system performance through using the same outcome metrics. Key levers in Washington were legislative mandates, purchasing, and the state leading by example through establishing new payment and delivery system models. Washington's ability to spread its initiatives and achieve its preponderance of care goals will rely largely on successful outcomes in these new models.

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Appendix L: Comparison Group Selection

This appendix provides further details on the comparison state selection.

Table L-1 shows the comparison states for each Round 2 Model Test state rank-ordered by Euclidean distance scores. A comparison state was eligible to be in multiple comparison groups—that is, if a state was selected as a comparison state for one Model Test state, it was not excluded from selection for the comparison group of another Model Test state. Together, the RTI team and CMMI reviewed the lists for potential problems. The RTI team removed comparison states from the ranking for one of two reasons: (1) lack of recent Medicaid claims or encounter data or (2) poor face validity. Each eliminated state was replaced with the next state in rank order. Thus, the highlighted states in Table L-1 represent the comparison states selected for each Model Test state.

Table L-2 shows the set of variables used in the comparison state selection. The variables represent CMS initiatives, state initiatives, population characteristics, health system characteristics, and baseline characteristics such as care coordination/quality, access to care, and population health measures.

Tables L-3 and **L-4** show the mean values of selected variables for the SIM Round 2 Model Test states and their comparison groups.

Table L-1. Selected comparison states for Model Test states, using Euclidean distance

Rank of comparison state	Model Test states										
	CO	CT ^a	DE ^b	IA ^c	ID	MI	NY ^d	OH ^e	RI ^f	TN	WA ^g
1	UT	MD	MD	NE	MT	PA	IL	MO	MD	KY	AZ
2	AZ	NH	KY	MD	UT	AZ	CA	KS	NJ	GA	CA
3	MT	PA	AZ	WI	SD	KY	PA	KY	PA	SC	NM
4	MD	NJ	PA	KS	WY	MD	NJ	GA	NH	NC	VA
5	CA	WI	SC	MO	KS	MO	MD	PA	KY	MO	NV
6	IL	VA	WI	ND	NE	KS	WI	WI	KS	KS	MD
7	NV	AZ	MO	SD	NV	SC	AZ	AZ	VA	OK	KS

^a Maryland was excluded at CMS’s request because of concern regarding the confounding effect from the Maryland All-Payer Model for hospitals. New Hampshire was excluded because of Medicaid data availability. Wisconsin was excluded because of poor face validity at the direction of CMS.

^b Maryland was excluded at CMS’s request because of concern regarding the confounding effect from the Maryland All-Payer Model for hospitals.

^c Nebraska and Kansas were excluded because of Medicaid data availability. Maryland was excluded at CMS’s request because of concern regarding the confounding effect from the Maryland All-Payer Model for hospitals. Wisconsin was rejected as a comparison state because it was sensitive to the inclusion of variables in the Access to Care Domain used in the distance function for the comparison state selection procedure. When variables in the Access to Care Domain were not considered, Wisconsin was no longer ranked highly.

^d Illinois was excluded because of Medicaid data availability.

^e Kansas was excluded because of Medicaid data availability.

^f Maryland was excluded at CMS’s request because of concern regarding the confounding effect from the Maryland All-Payer Model for hospitals. New Hampshire was excluded because of Medicaid data availability.

^g New Mexico was excluded at the direction of CMS.

Yellow highlighting = comparison states selected for each Model Test state; AZ = Arizona; CA = California; CO = Colorado; CT = Connecticut; DE = Delaware; GA = Georgia; IA = Iowa; ID = Idaho; IL = Illinois; KS = Kansas; KY = Kentucky; MD = Maryland; MI = Michigan; MO = Missouri; MT = Montana; NC = North Carolina; ND = North Dakota; NE = Nebraska; NH = New Hampshire; NJ = New Jersey; NM = New Mexico; NV = Nevada; NY = New York; OH = Ohio; OK = Oklahoma; PA = Pennsylvania; RI = Rhode Island; SC = South Carolina; SD = South Dakota; TN = Tennessee; UT = Utah; VA = Virginia; WA = Washington; WI = Wisconsin; WY = Wyoming.

Table L-2. Final set of variables used in comparison state selection

Shorthand	CMS initiative	Field description	Year	Source
SIM1	Round 1 of the SIM Initiative	State participation in initiative: no=0, MD/pre-test=1, MT=2	2013	CMMI
SIM2	Round 2 of the SIM Initiative	State participation in initiative: no=0, MD=1, MT=2	2015	CMMI
TCPI	Transforming Clinical Practices Initiative	#	2015	CMMI
HCIA_cmbd	Number of HCIA awards for Round 1 and Round 2	#		
fed_init	Count of federal initiatives (APACO, CCTP, CFAI, CPCI, FQHC, MAPCP, MEPD, MFFSFAI, MIPCD, MSSP, PACO)	#	2015	CMMI
Shorthand	State initiatives	Field description	Year	Source
Chw	Community health worker initiatives	State-led initiative: no or no data=0, yes=1	2015	NASHP
acctble_cre	Accountable care activities	State-led initiative: no=0, yes=1	2012	NASHP
mcaid_init	Count of Medicaid initiatives (ACA, ACO, DSRIP, Dual eligible, EOC, PCMH)	#	2014–2015	KFF
Shorthand	Population characteristic	Field description	Year	Source
Urban	Population living in urban areas	%	2010	Census
Income	Average median annual income	\$	2014	Census
Unemp	Unemployment rate	%	2014	KFF
income_disp	A value of 0 represents total income equality and 1 indicates complete income inequality (Gini coefficient)	0–1	2014	United Health Foundation
hs_grad	Percentage of incoming ninth-graders who graduate in 4 years from a high school with a regular degree	%	2014	United Health Foundation
Elderly	Percentage of the population over 65	%	2013	Administration on Aging
Census_region	Census region	West=1, Midwest=2, South=3, Northeast=4	2015	Census

(continued)

Table L-2. Final set of variables used in comparison state selection (continued)

Shorthand	Health care system characteristic	Field description	Year	Source
hlth_spnd	Health spending per capita (spending data are at the Personal Health Care level and are defined as total spending on health care goods and services; excludes health spending on government administration, net costs of health insurance, government public health activity, noncommercial research, and investment in structures and equipment)	\$	2009	KFF
spnd_comm	Spending per privately insured individual (spending data are at the Personal Health Care level and are defined as total spending on health care goods and services; excludes health spending on government administration, net costs of health insurance, government public health activity, noncommercial research, and investment in structures and equipment)	\$	2009	CMS
spnd_mcare	Medicare spending per enrollee	\$	2013	IOM
grwth_mcare	Average percent growth in Medicare spending per enrollee	%	2011–2013	IOM
spnd_mcaid	Medicaid spending per enrollee	\$	2011	KFF
grwth_mcaid	Average growth in Medicaid spending	%	2010–2014	KFF
budg_mcaid	Medicaid expenses as a percentage of state budgets	%	2013	RWJF
mc_mcare	Medicare Advantage enrollees as a percent of total Medicare population (includes local HMO, local PPO, PPO Demonstration (relevant through 2005), PFFS, Regional PPO, MSA, Cost, and other demonstration contract)	%	2015	KFF
tru_med_man	Beneficiaries in true comprehensive Medicaid managed care	%	2013	KFF
mc_mcaid_type	Types of Medicaid Managed Care in Place in 2015	Types of managed care in place in 2015: none=0, MCO=1, PCCM=2, MCO and PCCM=3	2015	KFF
mc_mcaid_mco	Share of Medicaid Population in MCO systems in 2015	% or N/A	2015	KFF
mc_mcaid_xpnsn_geo	Medicaid MC geographic population expansions in 2015	Geographic expansion: no=0, yes=1	2015	KFF
mc_mcaid_xpnsn_grps	Medicaid MC population expansion, add new groups in 2015	Added new groups: no=0, yes=1	2015	KFF
mc_mcaid_xpnsn_mand	Medicaid MC population expansion, new mandatory enrollment in 2015	New mandatory enrollment: no=0, yes=1	2015	KFF

(continued)

L-4

Table L-2. Final set of variables used in comparison state selection (continued)

Shorthand	Health care system characteristic	Field description	Year	Source
mcaid_xpnsn	Medicaid expansion status	State decision to expand Medicaid: no=0, yes=1, discussions=2	2015	KFF
chng_elig_stnd	Changes to eligibility standards in FY2015 [Table 2]	Change from beneficiary perspective: negative=-1, positive=1, no change=0	2015	KFF
xstng_copay	Existing Medicaid Copay Changes [Table 4]	Change in existing Medicaid copay: decrease=-1, increase=1, both=2, no change=0	2015	KFF
xstng_premium	Existing Medicaid Premium Changes [Table 4]	Change in existing Medicaid premium: decrease=-1, increase=1, both=2, no change=0	2015	KFF
xpnsn_copay	Expansion Medicaid Copay Changes [Table 4]	Change in Medicaid expansion copay: decrease=-1, increase=1, both=2, no change=0	2015	KFF
xpnsn_premium	Expansion Medicaid Premium Changes [Table 4]	Change in Medicaid expansion premium: decrease=-1, increase=1, both=2, no change=0	2015	KFF
mcaid_bnfts	Medicaid benefit changes in 2015 [Table 19]	Change in Medicaid benefits: restrictions/eliminations=-1, enhancements/additions=1, none reported=0	2015	KFF
mcaid_spec_rate	Medicaid specialist provider rate changes in 2015 [Table 15]	Change in Medicaid specialist rates: restricted=-1, increased=1, no change=0	2015	KFF
mcaid_dent_rate	Medicaid dentist provider rate changes in 2015 [Table 15]	Change in Medicaid dentist rates: restricted=-1, increased=1, no change=0	2015	KFF
mcaid_mco_rate	Medicaid MCO provider rate changes in 2015 [Table 15]	Change in Medicaid MCO provide rates: restricted=-1, increase=1, no MCO=2, no change=0	2015	KFF

(continued)

Table L-2. Final set of variables used in comparison state selection (continued)

Shorthand	Health care system characteristic	Field description	Year	Source
mc_mcaid_qual_init	Count of managed care Medicaid quality initiatives from previous codebook	#	2014–2015	KFF
ehr_obp	Office-based providers with basic electronic health record systems	%	2013	Health IT
ind_insur_comp_hhi	Individual insurance market competition Herfindahl Hirschman Index	#	2013	KFF
sm_gr_insur_comp_hhi	Small group insurance market competition Herfindahl Hirschman Index	#	2013	KFF
lg_gr_insur_comp_hhi	Large group insurance market competition Herfindahl Hirschman Index	#	2013	KFF
HMO_rate	State HMO penetration rate	%	2015	KFF
mcaid_aged	Percentage of Medicaid enrollees 65 and over	%	2011	KFF
mcaid_disabled	Percentage of Medicaid enrollees who are disabled	%	2011	KFF
mcaid_adult	Percentage of Medicaid enrollees age 19–64	%	2011	KFF
mcaid_child	Percentage of Medicaid enrollees who are children	%	2011	KFF
HPSA	Percentage of population in a designated health professional shortage area	%	2015	HRSA
Shorthand	Baseline care coordination/quality measures	Field description	Year	Source
mrtly_mcare	30-day mortality among Medicare beneficiaries hospitalized for heart attack, heart failure, or pneumonia	#	2009–2011	Commonwealth
prvt_hosp_mcare	Discharge rate among the Medicare population for diagnoses that are amenable to non-hospital-based care	%	2014	United Health Foundation
hosp_readmit	Percentage of inpatient readmissions within 30 days of an acute hospital stay during the reference period	%	2013	IOM
ed_visits	Inpatient or hospital outpatient emergency department visits	# per 1,000 population	2013	IOM
PQI_total	Prevention Quality Indicator (diabetes, COPD or asthma, hypertension, congestive heart failure, dehydration, bacterial pneumonia, UTI, asthma in younger adults, lower extremity amputation)	# per 100,000	2013	IOM

(continued)

Table L-2. Final set of variables used in comparison state selection (continued)

	Shorthand	Baseline access to care measures	Field description	Year	Source
	usoc_adl	Adults with a usual source of care	%	2012	Commonwealth
	med_dnt_chl	Children with a medical and dental preventive care visit in the past year	%	2011	HRSA
	cvrg_empl	Population with employer-sponsored coverage	%	2013	KFF
	cvrg_ind	Individually covered population (includes individuals and families that purchased or are covered as a dependent by nongroup insurance and individuals covered by private insurance from outside the household for which the origin (ESI/non-group is unknown)	%	2013	KFF
	cvrg_mcaid	Population with Medicaid coverage	%	2013	KFF
	elig_mcaid_preg	Medicaid income eligibility limits in 2015	%	2015	KFF
	elig_mcaid_adult_dep_child	Medicaid income eligibility limits for parents with dependent children	%	2015	KFF
L-7	elig_mcaid_adult_wochild	Medicaid Income eligibility limits for adults without children	%	2015	KFF
	elig_mcaid_chip_child	Medicaid and CHIP upper income eligibility limits for children as a percentage of federal poverty level	%	2015	KFF
	cvrg_mcare	Population with Medicare coverage	%	2013	KFF
	Uninsrd	Uninsured population	%	2013	KFF
	hosp_bed	Available hospital beds	# per 1,000 population	2013	KFF
	acpt_mcaid	Physicians accepting new Medicaid patients	%	2013	NCHS
	Primary care physicians	Number of primary care physicians (including general practice, family practice, OB-GYN, pediatrics, and internal medicine) per 100,000 population	# per 100,000	2014	HRSA
	Pa	Total number of physician assistants	# per 100,000	2013	HRSA
	Np	Total number of nurse practitioners	# per 100,000	2013	HRSA
	sop_np_dx	Scope of practice laws allow nurse practitioners to diagnose and treat patients without physician involvement	Permissive state laws: no=0, yes=1	2015	KFF
	sop_np_rx	Scope of practice laws provide nurse practitioners with independent prescribing authority	Permissive state laws: no=0, yes=1	2015	KFF

(continued)

Table L-2. Final set of variables used in comparison state selection (continued)

Shorthand	Baseline access to care measures	Field description	Year	Source
sop_pa_rx	Scope of practice laws provide physician assistants with full prescribing authority	Permissive state laws: no=0, yes=1	2014	KFF
pct_enrol_ind	Percentage of the market share in individual market	%	2013	KFF
pct_enrol_lg	Percentage of the market share in large group market	%	2013	KFF
pct_enrol_sm	Percentage of the market share in small group market	%	2013	KFF
Shorthand	Baseline population health measures	Field description	Year	Source
life_lost	Number of years of potential life lost prior to age 75 per 100,000 population	# per 100,000 population	2014	NCHS
pre_term	Babies born before 37 weeks gestation	%	2014	United Health Foundation
Diabetes	Adults who responded yes to the question “Have you ever been told by a doctor that you have diabetes?”	%	2014	United Health Foundation
health_status_disp	Difference in the percentage of adults aged 25 and older with vs. without a high school education who report their health is very good or excellent	%	2014	United Health Foundation
Hypertension	Adults who have been told by a health professional they have high blood pressure	%	2014	United Health Foundation

ACA = Patient Protection and Affordable Care Act; ACO = accountable care organization; APACO = Advance Payment Accountable Care Organization Model; CCTP = Community-Based Care Transitions Program; CFAI = Capitated Financial Alignment Initiative; CHIP = Children’s Health Insurance Program; CMMI = Center for Medicare and Medicaid Innovation; CMS = Centers for Medicare & Medicaid Services; COPD= chronic obstructive pulmonary disease; CPCI = Comprehensive Primary Care Initiative; DSRIP = Delivery System Reform Incentive Payment; EOC = episode of care; ESI = employer-sponsored insurance; FQHC = federally qualified health center; FY = fiscal year; HCIA = Health Care Innovation Award; health IT = health information technology; HMO = health maintenance organization; HRSA = Health Resources and Services Administration; IOM = Institute of Medicine; KFF = Kaiser Family Foundation; MAPCP = Multi-Payer Advanced Primary Care Practice; MC = managed care; MCO = managed care organization; MEPD = Medicaid Emergency Psychiatric Demonstration; MFFSFAI = Managed Fee-for-Service Financial Alignment Initiative; MIPCD = Medicaid Incentives for Prevention of Chronic Diseases; MSA = Medical Savings Account; MSSP = Medicare Shared Savings Program; NASHP = National Academy for State Health Policy; NCHS = National Center for Health Statistics; NR = not reported; OB-GYN = obstetrician-gynecologist; PACO = Pioneer Accountable Care Organization; PCCM = primary care case management; PCMH = patient-centered medical home; PFFS = private fee-for-service; PPO = preferred provider organization; RWJF = Robert Wood Johnson Foundation; SIM = State Innovation Models; UTI = urinary tract infection.

Table L-3. Comparing all non-State Innovation Model states with selected comparison states on selection variables for Colorado, Connecticut, Delaware, Iowa, and Idaho

Variable	All non-SIM	CO	CO's CG	CT	CT's CG	DE	DE's CG	IA	IA's CG	ID	ID's CG
TCPI	2.5	2.0	2.0	3.0	3.0	2.0	3.0	4.0	2.0	2.0	1.7
HCIA_cmbd	5.15	8.00	3.00	6.00	7.33	5.00	7.33	7.00	5.00	4.00	3.00
fed_init	4.48	7.00	4.33	7.00	6.67	3.00	6.67	6.00	5.00	4.00	3.33
Chw	0.58	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.67	0.00	0.67
acctble_cre	0.24	1.00	0.33	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.33
mcaid_init	1.21	3.00	1.00	1.00	1.00	1.00	1.00	2.00	1.33	3.00	1.00
Urban	0.74	0.86	0.79	0.88	0.75	0.83	0.75	0.64	0.84	0.71	0.68
Income	54069	60940	54580	70161	68245	57522	68245	57810	61373	53438	55846
Unemp	6.58	6.80	6.00	7.80	6.43	6.70	6.43	4.60	7.70	6.20	4.60
income_disp	0.46	0.46	0.45	0.50	0.46	0.45	0.46	0.44	0.45	0.44	0.44
hs_grad	80.42	82.00	80.33	86.00	86.33	77.00	86.33	89.00	78.67	84.00	82.33
Elderly	0.14	0.12	0.14	0.15	0.15	0.16	0.15	0.16	0.14	0.14	0.14
West	0.27	1	1	0	0	0	0	0.00	0.33	1	0.67
Midwest	0.24	0	0	0	0	0	0	1.00	0.33	0	0.33
South	0.39	0	0	0	0.33	1	0.33	0.00	0.33	0	0
Northeast	0.09	0	0	1	0.67	0	0.67	0.00	0.00	0	0
hlth_spnd	6778	5994	5702	8654	7687	8480	7687	6921	6820	5658	6242
spnd_comm	3732	3726	3168	4264	3936	4031	3936	3575	4169	3140	3047
spnd_mcare	9272	8552	8486	9099	9185	9265	9185	8201	9118	8165	8085
grwth_mcare	0.06	0.06	0.06	0.07	0.06	0.06	0.06	0.07	0.06	0.07	0.06
spnd_mcaid	9359	9133	9264	9225	9611	8561	9611	9555	9336	9115	9200
grwth_mcaid	-3.24	-1.64	-3.99	-3.77	-3.25	-0.62	-3.25	-2.27	-4.43	-4.67	-3.83
budg_mcaid	0.22	0.22	0.22	0.22	0.25	0.17	0.25	0.20	0.20	0.28	0.18
mc_mcare	0.24	0.37	0.30	0.25	0.18	0.08	0.18	0.15	0.27	0.32	0.23

(continued)

Table L-3. Comparing all non-State Innovation Model states with selected comparison states on selection variables for Colorado, Connecticut, Delaware, Iowa, and Idaho (continued)

Variable	All non-SIM	CO	CO's CG	CT	CT's CG	DE	DE's CG	IA	IA's CG	ID	ID's CG
tru_med_man	0.67	0.95	0.83	0.00	0.44	0.84	0.44	0.82	0.66	0.95	0.80
mc_mcaid_type	1.39	3	1.33	0	1	1	1	3.00	1.67	2	1.67
mc_mcaid_mco	58.30	8.5	50.03	0	80.6	90	80.6	12.00	72.33	0	20.93
mc_mcaid_xpnsn_geo	0.09	1	0	0	0	0	0	0.00	0.33	0	0
mc_mcaid_xpnsn_grps	0.24	0	0	0	0.33	0	0.33	0.00	0.00	0	0
mc_mcaid_xpnsn_mand	0.09	0	0	0	0	0	0	0.00	0.00	0	0
mcaid_xpnsn	0.48	1	0.67	1	1	1	1	1.00	0.67	0	0.33
chnng_elig_stdnd	0.27	0	0.33	0	0.67	0	0.67	0.00	-0.33	0	0.33
xstng_copay	0.03	0	0	0	-0.33	0	-0.33	0.00	0.00	0	0
xstng_premium	0.03	0	0	0	0	0	0	0.00	0.00	0	0
xpnsn_copay	0.03	0	0	0	0	0	0	1.00	0.00	0	0
xpnsn_premium	0.03	0	0	0	0	0	0	1.00	0.00	0	0
mcaid_bnfts	0.48	1	0.33	1	1	1	1	0.00	0.67	0	0
mcaid_spec_rate	0.12	1	0.33	-1	-0.33	1	-0.33	0.00	-0.33	1	0.67
mcaid_dent_rate	0.09	1	0.67	0	0	1	0	0.00	0.00	0	1
mcaid_mco_rate	0.79	0	1.33	2	0.33	1	0.33	1.00	0.33	2	1.67
mc_mcaid_qual_init	1.91	3	1.33	0	2.33	2	2.33	0.00	2.33	0	0.33
ehr_obp	0.48	0.39	0.55	0.3	0.45	0.47	0.45	0.66	0.46	0.42	0.57
ind_insur_comp_hhi	4311	1792	2970	2858	4785	3760	4785	7128	3365	3498	3772
sm_gr_insur_comp_hhi	4101	2223	2537	2829	4326	4965	4326	4726	2949	3614	3229
lg_gr_insur_comp_hhi	4541	2997	3373	2249	3656	4216	3656	5964	3432	5112	3892
HMO_rate	0.23	0.166	0.22	0.074	0.28	0.27	0.28	0.11	0.35	0.084	0.15
mcaid_aged	0.09	0.07	0.07	0.14	0.09	0.06	0.09	0.07	0.09	0.07	0.07
mcaid_disabled	0.16	0.13	0.13	0.1	0.20	0.11	0.20	0.14	0.14	0.16	0.14

(continued)

Table L-3. Comparing all non-State Innovation Model states with selected comparison states on selection variables for Colorado, Connecticut, Delaware, Iowa, and Idaho (continued)

Variable	All non-SIM	CO	CO's CG	CT	CT's CG	DE	DE's CG	IA	IA's CG	ID	ID's CG
mcaid_adult	0.21	0.22	0.26	0.35	0.21	0.43	0.21	0.31	0.28	0.14	0.19
mcaid_children	0.54	0.59	0.54	0.4	0.51	0.4	0.51	0.48	0.50	0.62	0.59
HPSA	0.21	0.16	0.28	0.11	0.08	0.22	0.08	0.20	0.16	0.29	0.22
mrtlty_mcare	12.52	11.86	12.48	11.81	12.10	11.83	12.10	12.63	12.39	13.16	12.50
prvt_hosp_mcare	59.00	38.2	42.07	56.7	55.7	53.9	55.7	55.70	52.13	36.4	46.17
hosp_readmit	0.17	0.14	0.15	0.18	0.18	0.23	0.18	0.17	0.18	0.16	0.14
ed_visits	623.09	583	560	712	606	882	606	689	666	612	509
pqi_total	14185.42	9805	11913	14933	14815	14488	14815	16829	15825	13108	10722
usoc_adl	0.77	0.77	0.74	0.86	0.86	0.87	0.86	0.83	0.78	0.71	0.75
med_dnt_chl	0.67	0.70	0.63	0.80	0.75	0.72	0.75	0.71	0.66	0.59	0.61
cvrg_empl	0.49	0.52	0.48	0.56	0.54	0.50	0.54	0.54	0.52	0.50	0.51
cvrg_ind	0.06	0.09	0.07	0.05	0.06	0.04	0.06	0.07	0.06	0.09	0.09
cvrg_mcaid	0.14	0.12	0.14	0.14	0.12	0.21	0.12	0.14	0.12	0.12	0.11
elig_mcaid_preg	1.91	2.00	1.56	2.63	2.28	2.17	2.28	3.80	2.45	1.38	1.48
elig_mcaid_adult_dep_child	0.83	1.38	0.78	2.01	1.38	1.38	1.38	1.38	1.25	0.27	0.50
elig_mcaid_adult_wochild	0.57	1.38	0.46	1.38	1.38	1.38	1.38	1.38	1.25	0.00	0.00
elig_mcaid_chip_child	2.53	2.65	2.24	3.23	3.21	2.17	3.21	3.80	2.78	1.90	2.27
cvrg_mcare	0.15	0.12	0.14	0.15	0.15	0.17	0.15	0.14	0.15	0.13	0.15
Uninsrd	0.13	0.13	0.15	0.09	0.10	0.07	0.10	0.09	0.13	0.14	0.12
hosp_bed	2.79	1.96	2.49	2.17	2.42	2.20	2.42	3.18	2.11	2.08	3.46
acpt_mcaid	0.76	0.70	0.79	0.75	0.78	0.80	0.78	0.90	0.78	0.87	0.87
Pcp	114	121	96	167	148	113	148	86	130	80	101

(continued)

Table L-3. Comparing all non-State Innovation Model states with selected comparison states on selection variables for Colorado, Connecticut, Delaware, Iowa, and Idaho (continued)

Variable	All non-SIM	CO	CO's CG	CT	CT's CG	DE	DE's CG	IA	IA's CG	ID	ID's CG
Pa	54	50	51	74	65	74	65	53	48	45	54
Np	32	47	38	48	44	36	44	30	33	43	46
sop_np_dx	0.52	1.00	1.00	1.00	0.67	0.00	0.67	1.00	1.00	1.00	0.67
sop_np_rx	0.36	1.00	1.00	1.00	0.67	0.00	0.67	1.00	0.67	1.00	0.67
sop_pa_rx	0.73	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
pct_enrol_ind	0.18	0.23	0.24	0.16	0.13	0.11	0.13	0.26	0.14	0.23	0.25
pct_enrol_lg	0.56	0.56	0.50	0.54	0.60	0.63	0.60	0.51	0.65	0.56	0.48
pct_enrol_sm	0.26	0.21	0.27	0.30	0.26	0.27	0.26	0.23	0.21	0.21	0.27
cholesterol_test	75.63	76.40	71.57	83.10	80.17	81.00	80.17	75.70	77.27	69.30	71.63
life_lost	7554	5991	6916	5603	6546	7729	6546	6309	6759	6310	6984
pre_term	11.87	10.40	11.00	9.70	10.80	12.30	10.80	11.50	11.90	10.30	10.70
Diabetes	10.10	6.50	8.50	8.30	9.70	11.10	9.70	9.30	9.20	8.40	7.97
health_status_disp	27.61	36.50	29.97	30.70	27.33	28.80	27.33	30.30	29.60	32.70	25.57
Hypertension	32.81	26.30	28.07	31.30	32.20	35.60	32.20	31.40	31.90	29.40	28.07
Count of indicators improved in comparison group		52	58	41	39	60					

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CG = comparison group; CO = Colorado; CT = Connecticut; DE = Delaware; IA = Iowa; ID = Idaho.

Table L-4. Comparing all non-State Innovation Model states with selected comparison states on selection variables for Michigan, New York, Ohio, Rhode Island, Tennessee, and Washington

Variable	All non-SIM	MI	MI's CG	NY	NY's CG	OH	OH's CG	RI	RI's CG	TN	TN's CG	WA	WA's CG
TCPI	2.5	5.0	3.3	4.0	4.7	1.0	2.3	2.0	3.3	3.0	2.7	5.0	3.3
HCIA_cmbd	5.15	10.00	5.33	21.00	12.67	8.00	3.00	3.00	8.00	5.00	3.33	10.00	11.00
fed_init	4.48	8.00	5.33	10.00	8.00	8.00	4.33	8.00	6.00	6.00	4.00	7.00	6.00
Chw	0.58	1.00	1.00	1.00	1.00	0.00	0.67	1.00	0.67	0.00	0.67	1.00	1.00
acctble_cre	0.24	0.00	0.00	1.00	0.67	0.00	0.00	0.00	0.33	0.00	0.00	0.00	0.33
mcaid_init	1.21	3.00	1.00	4.00	1.33	2.00	1.00	3.00	2.33	2.00	1.00	2.00	2.33
Urban	0.74	0.75	0.76	0.88	0.87	0.78	0.63	0.91	0.87	0.66	0.67	0.84	0.87
Income	54069	52005	49071	54310	56859	49644	49111	58633	65527	43716	45757	59068	52142
Unemp	6.58	8.80	7.90	7.70	8.50	7.40	6.43	9.50	7.40	8.20	8.03	7.00	7.93
income_disp	0.46	0.46	0.47	0.51	0.48	0.47	0.46	0.48	0.47	0.48	0.47	0.46	0.48
hs_grad	80.42	77.00	82.33	78.00	84.00	84.00	85.67	76.00	86.33	83.00	74.67	79.00	77.67
Elderly	0.14	0.15	0.15	0.14	0.14	0.15	0.15	0.16	0.15	0.15	0.14	0.14	0.14
West	0.27	0.00	0.33	0	0.33	0.00	0.33	0	0	0.00	0.00	1	1
Midwest	0.24	1.00	0.00	0	0.33	1.00	0.33	0	0	0.00	0.00	0	0
South	0.39	0.00	0.33	0	0	0.00	0.33	0	0.33	1.00	1.00	0	0
Northeast	0.09	0.00	0.33	1	0.33	0.00	0.00	1	0.67	0.00	0.00	0	0
hlth_spnd	6778	6618	6587	8341	6908	7076	6672	8309	7602	6411	6129	6782	6107
spnd_comm	3732	3609	3675	4559	3726	3742	3298	3868	3837	3733	3580	3774	3448
spnd_mcare	9272	10262	9911	9508	9764	10365	9154	8830	9766	10159	9829	7959	8758
grwth_mcare	0.06	0.07	0.06	0.06	0.06	0.07	0.06	0.06	0.06	0.06	0.07	0.06	0.06
spnd_mcaid	9359	9616	9519	7900	8993	9658	9441	8645	9359	9704	9716	8455	9163
grwth_mcaid	-3.24	-1.86	-3.08	-4.49	-2.86	-2.48	-3.83	-2.17	-3.19	-2.18	-4.01	-3.92	-3.05
budg_mcaid	0.22	0.26	0.26	0.29	0.25	0.29	0.19	0.25	0.23	0.31	0.22	0.12	0.27

(continued)

Table L-4. Comparing all non-State Innovation Model states with selected comparison states on selection variables for Michigan, New York, Ohio, Rhode Island, Tennessee, and Washington (continued)

Variable	All non-SIM	MI	MI's CG	NY	NY's CG	OH	OH's CG	RI	RI's CG	TN	TN's CG	WA	WA's CG
mc_mcare	0.24	0.32	0.34	0.37	0.32	0.38	0.19	0.35	0.21	0.34	0.26	0.30	0.36
tru_med_man	0.67	0.71	0.74	0.76	0.64	0.70	0.78	0.75	0.74	1.00	0.71	0.67	0.75
mc_mcaid_type	1.39	1.00	1.00	1	2.33	1.00	1.33	3	1	1.00	1.00	3	1.67
mc_mcaid_mco	58.30	77.00	82.77	77.8	66.57	78.30	62.00	87.7	81.67	100.00	77.47	79	83.93
mc_mcaid_xpnsn_geo	0.09	0.00	0.00	1	0.33	0.00	0.00	0	0	0.00	0.00	0	0
mc_mcaid_xpnsn_grps	0.24	0.00	0.33	1	0.67	0.00	0.00	0	0.67	0.00	0.00	0	0
mc_mcaid_xpnsn_mand	0.09	0.00	0.00	1	0.33	0.00	0.00	0	0	0.00	0.00	0	0
mcaid_xpnsn	0.48	1.00	1.00	1	1	1.00	0.67	1	1	0.00	0.33	1	1
chnge_elig_std	0.27	0.00	0.33	0	0.33	0.00	0.67	0	0.67	0.00	0.00	0	0
xstng_copay	0.03	0.00	0.00	0	0	0.00	0.00	0	0	0.00	0.00	0	-0.33
xstng_premium	0.03	0.00	0.00	0	0	0.00	0.00	0	0	0.00	0.00	0	0
xpnsn_copay	0.03	0.00	0.00	0	0	0.00	0.00	0	0	0.00	0.00	0	0
xpnsn_premium	0.03	1.00	0.00	0	0	0.00	0.00	0	0	0.00	0.00	0	0
mcaid_bnfts	0.48	0.00	0.67	1	1	0.00	0.00	0	1	0.00	0.33	0	0.67
mcaid_spec_rate	0.12	1.00	0.00	0	-0.33	0.00	0.33	0	-0.33	0.00	0.00	0	0
mcaid_dent_rate	0.09	0.00	0.00	0	-0.33	0.00	0.33	0	0	-1.00	0.00	0	0
mcaid_mco_rate	0.79	1.00	0.67	1	0.33	1.00	1.00	1	0.33	-1.00	0.00	1	1
mc_mcaid_qual_init	1.91	4.00	2.67	3	3.67	4.00	1.33	2	3	2.00	2.67	2	3
ehr_obp	0.48	0.48	0.45	0.4	0.52	0.52	0.47	0.4	0.33	0.41	0.41	0.61	0.53
ind_insur_comp_hhi	4311	3234	3936	2271	3298	2623	3905	8680	4493	2830	4288	3200	3394
sm_gr_insur_comp_hhi	4101	3871	2988	2649	2728	2468	4201	5796	3658	4953	4299	2415	2277
lg_gr_insur_comp_hhi	4541	3139	3041	1702	3387	2293	4105	5969	3424	5597	5222	2617	2721
HMO_rate	0.23	0.37	0.31	0.37	0.35	0.33	0.19	0.221	0.305	0.31	0.29	0.31	0.44

(continued)

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Table L-4. Comparing all non-State Innovation Model states with selected comparison states on selection variables for Michigan, New York, Ohio, Rhode Island, Tennessee, and Washington (continued)

Variable	All non-SIM	MI	MI's CG	NY	NY's CG	OH	OH's CG	RI	RI's CG	TN	TN's CG	WA	WA's CG
mcaid_aged	0.09	0.06	0.09	0.11	0.09	0.08	0.10	0.13	0.11	0.09	0.09	0.07	0.08
mcaid_disabled	0.16	0.16	0.21	0.12	0.15	0.17	0.21	0.2	0.19	0.18	0.20	0.15	0.11
mcaid_adult	0.21	0.27	0.24	0.4	0.3	0.25	0.15	0.22	0.21	0.21	0.18	0.21	0.33
mcaid_children	0.54	0.51	0.46	0.37	0.46	0.50	0.55	0.45	0.50	0.52	0.53	0.57	0.49
HPSA	0.21	0.17	0.22	0.17	0.16	0.11	0.22	0.15	0.07	0.18	0.22	0.18	0.33
mrtly_mcare	12.52	12.09	12.36	12.21	12.01	12.12	12.63	12.70	11.79	12.58	12.70	13.25	12.30
prvt_hosp_mcare	59.00	64.50	67.40	59.2	57.7	71.70	67.10	60.4	59.07	73.10	69.70	39.30	46.87
hosp_readmit	0.17	0.19	0.18	0.16	0.17	0.19	0.17	0.18	0.18	0.18	0.18	0.16	0.18
ed_visits	623.09	750	681	554	592	775	633	744	648	684	690	574	598
pqi_total	14185.42	15884	17130	10796	11827	17812	15184	13099	14671	17224	16808	10056	14257
usoc_adl	0.77	0.84	0.81	0.83	0.81	0.81	0.78	0.87	0.85	0.79	0.78	0.77	0.73
med_dnt_chl	0.67	0.68	0.69	0.73	0.71	0.71	0.67	0.77	0.74	0.71	0.66	0.72	0.66
cvrg_empl	0.49	0.53	0.47	0.48	0.50	0.47	0.47	0.50	0.54	0.45	0.47	0.49	0.42
cvrg_ind	0.06	0.05	0.05	0.06	0.07	0.06	0.07	0.09	0.06	0.05	0.05	0.07	0.06
cvrg_mcaid	0.14	0.16	0.17	0.21	0.17	0.15	0.14	0.15	0.13	0.17	0.15	0.13	0.19
elig_mcaid_preg	1.91	2.00	1.94	2.23	2.15	2.05	1.78	1.95	2.28	2.00	2.08	1.98	2.10
elig_mcaid_adult_dep_child	0.83	1.38	1.38	1.38	1.38	1.38	0.76	1.38	1.38	1.03	0.81	1.38	1.38
elig_mcaid_adult_wochild	0.57	1.38	1.38	1.38	1.38	1.38	0.46	1.38	1.38	0.00	0.46	1.38	1.38
elig_mcaid_chip_child	2.53	2.17	2.46	4.05	3.01	2.11	2.44	2.66	3.32	2.55	2.28	3.17	2.57
cvrg_mcare	0.15	0.15	0.16	0.15	0.14	0.17	0.16	0.16	0.15	0.17	0.16	0.15	0.15
Uninsrd	0.13	0.11	0.14	0.09	0.12	0.13	0.12	0.09	0.11	0.13	0.15	0.11	0.17
hosp_bed	2.79	2.53	2.75	2.86	2.45	2.87	3.44	2.14	2.51	3.12	2.78	1.75	1.89
acpt_mcaid	0.76	0.70	0.78	0.57	0.69	0.79	0.79	0.71	0.62	0.76	0.76	0.71	0.73

(continued)

Table L-4. Comparing all non-State Innovation Model states with selected comparison states on selection variables for Michigan, New York, Ohio, Rhode Island, Tennessee, and Washington (continued)

Variable	All non-SIM	MI	MI's CG	NY	NY's CG	OH	OH's CG	RI	RI's CG	TN	TN's CG	WA	WA's CG
Pcp	114	122	111	167	129	125	103	177	151	124	105	127	112
Pa	54	44	60	63	41	56	65	64	50	96	58	49	45
Np	32	40	35	51	30	21	36	30	36	21	26	34	28
sop_np_dx	0.52	1.00	0.67	1.00	0.00	0.00	0.67	1.00	0.67	1.00	0.33	1.00	0.67
sop_np_rx	0.36	0.00	0.33	1.00	0.00	0.00	0.33	1.00	0.33	0.00	0.00	1.00	0.67
sop_pa_rx	0.73	1.00	0.67	1.00	1.00	1.00	0.67	1.00	1.00	1.00	0.33	1.00	1.00
pct_enrol_ind	0.18	0.11	0.19	0.02	0.13	0.15	0.22	0.06	0.12	0.22	0.20	0.16	0.19
pct_enrol_lg	0.56	0.68	0.57	0.79	0.67	0.44	0.52	0.65	0.61	0.48	0.53	0.69	0.62
pct_enrol_sm	0.26	0.21	0.24	0.19	0.21	0.41	0.27	0.29	0.27	0.30	0.26	0.15	0.19
cholesterol_test	75.63	79.40	75.73	81.30	75.60	78.20	74.70	81.90	79.93	81.10	77.67	74.50	72.93
life_lost	7554	7574	7995	5737	6533	7928	8088	6049	6632	9168	8615	5912	7053
pre_term	11.87	11.80	11.70	10.70	10.80	12.10	11.63	11.00	11.40	12.50	13.03	9.90	10.90
Diabetes	10.10	10.40	10.47	10.60	10.07	10.40	9.30	9.30	9.70	12.20	11.30	8.60	10.53
health_status_disp	27.61	29.70	28.37	35.30	30.93	25.40	26.70	27.20	28.30	32.10	27.70	37.50	35.87
Hypertension	32.81	34.60	34.50	31.50	30.83	33.50	33.23	33.80	32.53	38.80	37.50	30.40	29.63
Count of indicators improved in comparison group			55		56		38		49		61		50

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CG = comparison group; MI = Michigan; NY = New York; OH = Ohio; RI = Rhode Island; TN = Tennessee; WA = Washington.

Appendix M: Population Health Data Analysis

M.1 Behavioral Risk Factor Surveillance System Data Preparation

The Behavioral Risk Factor Surveillance System (BRFSS) is an annual, state-based telephone survey conducted by state health departments and guided by the Centers for Disease Control and Prevention (CDC).²²⁰ The survey is used to collect data for U.S. residents ages 18 and older on health insurance coverage, health risk behaviors, health status, and preventive health practices. The survey is made up of a core set of questions, optional modules, and state-added questions. Core questions are asked by all states in a given year. States can choose to add optional question modules and approved individual questions to their survey in a given year.

Because the analyses will compare trends in outcomes over time for the Model Test states and their respective comparison groups of states, the first task was to prepare the BRFSS data by adjusting for changes in the sampling design and weighting of the BRFSS over time. To do this, we used the method developed under the federal evaluation of the SIM Initiative Round 1, which applies an iterative proportional fitting process, commonly referred to as “raking,” to adjust the existing BRFSS weights using a consistent set of variables over time and across states for all analysis years.²²¹ Raking is an iterative adjustment of survey sampling weights to make the composition of the sample match the known composition of the population for a predetermined set of characteristics. Raking differs from the more standard poststratification in that sampling weights are adjusted to make the sample total for a given characteristic (e.g., marital status) equal to the population total, one characteristic at a time, iterating until the sample composition matches that of the population for the whole set of characteristics.²²²

CDC substituted poststratification with raking in the BRFSS beginning in 2011. In implementing the raking procedure, we adjusted the weights in the BRFSS using the following population characteristics and targets from the American Community Survey (ACS) for each state and year: gender, age, race/ethnicity, educational attainment, marital status, household

²²⁰ CDC. (2013). *The BRFSS data user guide*. Atlanta, GA: U.S. Department of Health and Human Services, CDC. Retrieved from https://www.cdc.gov/brfss/data_documentation/pdf/UserguideJune2013.pdf

²²¹ In the SIM Initiative Evaluation Model Test Year 3 Annual Report, the RTI team found that imposing consistent raking of the BRFSS weights across time reduces shifts in key outcome trends after 2010 that correspond to the changes in the BRFSS design. Furthermore, the revised weights yielded trends in key outcomes in the BRFSS that corresponded more closely to those in the ACS and Current Population Survey (CPS), for which survey design shifts in 2010 were not a factor.

²²² Pierannunzi, C., Town, M., Garvin, W., Shaw, F. E., & Balluz, L. (2012). Methodologic changes in the Behavioral Risk Factor Surveillance System in 2011 and potential effects on prevalence estimates. *Morbidity and Mortality Weekly Report*, 61(22), 410–413.

income, employment status, and number of children.^{223,224} The ACS provides large nationally representative samples of the civilian noninstitutionalized population in each state in each year. The variables included in the raking procedure are those that can be defined consistently between the BRFSS and the ACS. The reweighting was done using the `ipfweight` command in Stata.^{225,226} As a check on the reweighting of the BRFSS data, we compared the estimates from the BRFSS using the revised weights to estimates from national surveys for self-reported health status (using the Current Population Survey [CPS]) and the uninsurance rate (using the ACS) for each of the Model Test states. We found that the trends over the baseline period based on the BRFSS using the revised weights track closely with the CPS and ACS data for each of the Model Test states (data not shown).

To date, we have reweighted the BRFSS data for the baseline period of 2013–2015. We will conduct similar adjustments as CDC releases additional years of the BRFSS over the evaluation period.

M.2 Generating Propensity Score Weights for the Comparison Groups

Once we had the reweighted BRFSS data, the first step was to construct the sample for the comparison group for each Model Test state, which combined the three comparison states for that state into a single data set. We adjusted the weights for the observations in those three states so that the observations from the three comparison states contribute equally to the comparison group. Observations in the Model Test state were not affected by this adjustment. The formula for constructing the balanced population weight (BPW) is as follows:

$$\text{BPW}_j = \left[\frac{\text{(sample size of all comparison states in the comparison group)}}{\text{number of comparison states}} \right] / \text{(sample size of comparison state } j) \quad (\text{M.1})$$

$\text{BPW}_j=1$ if $\text{Model Test}=1$. These BPWs ensure that no comparison state dominates the comparison group. Because some states are included in multiple comparison groups, this reweighting process creates a separate set of BPWs for each Model Test comparison group.

²²³ Because of missing data for several of the key variables included in the poststratification, we first imputed values for the missing data using the multiple imputation (`mi`) command in Stata.

²²⁴ In the SIM Round 2 Evaluation Design Report, we proposed including urbanicity as one of the variables in the raking procedure. However, high levels of missing data for that measure led us to drop that variable from the analysis.

²²⁵ Bergmann, M. (2011). *IPFWEIGHT: Stata module to create adjustment weights for surveys*. (Statistical Software Components, S457353). Boston, MA: Boston College Department of Economics.

²²⁶ StataCorp. (2013). *Stata: Release 13*. Statistical Software. College Station, TX: StataCorp LP.

Next, we used propensity score weights to make the sample of adults in the relevant comparison group look like the sample of adults in the Model Test state.²²⁷ By doing this, any unobserved differences between the Model Test state and its comparison group are less likely to be the result of differences in who is in the sample and more likely to be the result of differences in the state policies. This was done with a logistical regression that predicted being in the Model Test state as a function of gender, age, race/ethnicity, educational attainment, marital status, household income, employment status, and number of children.²²⁸ For each Model Test state and its corresponding comparison states, the model takes the general form of equation M.2:

$$SIM_{is} = g(\gamma_0 X_{is}, \epsilon_{is}), \quad (M.2)$$

where, for a given calendar year of BRFSS data, SIM_{is} indicates whether respondent i resides in a given Model Test state, X_{is} includes the individual and household characteristics of respondent i , and ϵ_{is} is an error term. Based on the estimated coefficients of the model, the predicted probability (p) of whether individual i resides in the Model Test state (i.e., the propensity score) was used to reweight the comparison group sample using the inverse probability of treatment weight (IPTW). The IPTW weight was calculated using equation M.3 as

$$p/(1-p), \quad (M.3)$$

where p is the predicted probability of being in the Model Test state. The IPTW weight is 1 for those in the Model Test states. The final weight (FW) was constructed by multiplying the raking weight, IPTW weight, and BPW for observations in the comparison group (equation M.4). As with the BPW weights, observations in the Model Test state were not affected by this adjustment in constructing the FWs, as in equation M.4:

$$FW_i = \text{raking weight} * 1 * 1 \text{ for individual } i \text{ if Model Test} = 1$$

$$FW_i = \text{raking weight} * p / (1-p) * BPW_i \text{ for individual } i \text{ if Model Test} = 0, \quad (M.4)$$

Reweightings were done separately for each set of comparison states for each year. Observations in the comparison group that had a lower predicted value (p) than the lowest value

²²⁷ Rosenbaum, P. R., & Rubin, D. B. (1983). The central role of the propensity score in observational studies for causal effects. *Biometrika*, 70(1), 41–55.

²²⁸ The variable categories were defined as follows: male or female; age 18–44, 45–64, or 65+; white, non-Hispanic or other; 4 years of college and more or less than 4 years of college; married, widowed/separated/divorced, or never married; household income less than \$15,000, \$15,000–\$19,999, \$20,000–\$24,999, \$25,000–\$34,999, \$35,000–\$49,999, \$50,000–\$74,999, or \$75,000 or more; employed or not employed; and no children, one child, or two or more children. The number of categories used for some variables was limited by states that had small minority populations and small numbers of observations with very low incomes or less than a high school degree.

in the Model Test state were dropped from the sample.²²⁹ After the FWs were constructed, the absolute standardized differences between groups were calculated. An absolute standardized difference less than or equal to 0.10 indicated acceptable balance.²³⁰ As would be expected, the distributions of demographic and socioeconomic characteristics for the comparison groups are closely aligned with the distributions of these characteristics of the relevant Model Test state after propensity score weighting, as shown in *Tables M-1–M-11*.

²²⁹ Very few observations were dropped for this reason. Delaware’s comparison group had the most observations dropped because of this issue: Over the entire sample period, 265 observations had propensity scores lower than the minimum propensity score in Delaware itself, which accounted for just 0.1 percent of observations. Colorado had 27, Connecticut 30, Iowa 26, Idaho 54, Michigan 22, New York 15, Ohio 14, Rhode Island 17, Tennessee 77, and Washington 43 observations dropped for this reason.

²³⁰ Austin, P. (2011). An introduction to propensity score methods for reducing the effects of confounding in observational studies. *Multivariate Behavioral Research*, 46(3), 399–424.

Table M-1. Summary of sample characteristics for the Model Test state and comparison group before and after propensity score reweightings: Colorado, 2013–2015

	Model Test state	Comparison group, before propensity score reweighting	Absolute standardized differences from Model Test state, before propensity score reweighting	Comparison group, after propensity score reweighting	Absolute standardized differences from Model Test state, after propensity score reweighting
Female					
Male	49.5%	49.2%	0.01	49.5%	0.00
Female	50.5%	50.8%	0.01	50.5%	0.00
Age					
18–44	49.4%	49.8%	0.01	49.4%	0.00
45–64	34.0%	31.8%	0.05	34.0%	0.00
65+	16.6%	18.3%	0.05	16.5%	0.00
Race/ethnicity					
Non-white or Hispanic	27.2%	22.6%	0.11	27.4%	0.00
White, non-Hispanic	72.8%	77.4%	0.11	72.6%	0.00
Educational attainment					
Fewer than 4 years of college	64.2%	73.2%	0.19	64.2%	0.00
4 years of college or more	35.8%	26.8%	0.19	35.8%	0.00
Marital status					
Married	54.1%	55.9%	0.04	54.1%	0.00
Widowed, separated, divorced	18.7%	18.7%	0.00	18.7%	0.00
Not married	27.2%	25.4%	0.04	27.2%	0.00
Household income					
Less than \$35,000	22.9%	26.5%	0.08	22.9%	0.00
\$35,000–\$74,999	30.7%	33.9%	0.07	30.7%	0.00
\$75,000 or more	46.4%	39.6%	0.14	46.4%	0.00
Employment status					
Not employed	33.4%	37.6%	0.09	33.4%	0.00
Employed	66.6%	62.4%	0.09	66.6%	0.00
Number of children					
No children	64.5%	62.2%	0.05	64.5%	0.00
1 child	15.8%	15.4%	0.01	15.8%	0.00
2 or more children	19.7%	22.5%	0.07	19.7%	0.00

Note: Column 1 summarizes the characteristics of the Model Test state. Columns 2 and 3 summarize the characteristics of the comparison group before and after propensity score reweighting, respectively.

Table M-2. Summary of sample characteristics for the Model Test state and comparison group before and after propensity score reweightings: Connecticut, 2013–2015

	Model Test state	Comparison group, before propensity score reweighting	Absolute standardized differences from Model Test state, before propensity score reweighting	Comparison group, after propensity score reweighting	Absolute standardized differences from Model Test state, after propensity score reweighting
Female					
Male	48.0%	47.9%	0.00	48.0%	0.00
Female	52.0%	52.1%	0.00	52.0%	0.00
Age					
18–44	42.6%	44.7%	0.04	42.6%	0.00
45–64	37.8%	36.1%	0.04	37.8%	0.00
65+	19.6%	19.2%	0.01	19.6%	0.00
Race/ethnicity					
Non-white or Hispanic	28.2%	32.3%	0.09	28.3%	0.00
White, non-Hispanic	71.8%	67.7%	0.09	71.7%	0.00
Educational attainment					
Fewer than 4 years of college	63.8%	67.3%	0.07	63.8%	0.00
4 years of college or more	36.2%	32.7%	0.07	36.2%	0.00
Marital status					
Married	51.7%	52.6%	0.02	51.7%	0.00
Widowed, separated, divorced	18.7%	18.6%	0.00	18.7%	0.00
Not married	29.6%	28.8%	0.02	29.6%	0.00
Household income					
Less than \$35,000	19.5%	22.2%	0.07	19.5%	0.00
\$35,000–\$74,999	25.7%	28.3%	0.06	25.7%	0.00
\$75,000 or more	54.8%	49.4%	0.11	54.8%	0.00
Employment status					
Not employed	35.2%	36.8%	0.03	35.2%	0.00
Employed	64.8%	63.2%	0.03	64.8%	0.00
Number of children					
No children	63.0%	62.0%	0.02	63.0%	0.00
1 child	17.7%	18.1%	0.01	17.7%	0.00
2 or more children	19.3%	19.9%	0.01	19.3%	0.00

Note: Column 1 summarizes the characteristics of the Model Test state. Columns 2 and 3 summarize the characteristics of the comparison group before and after propensity score reweighting, respectively.

Table M-3. Summary of sample characteristics for the Model Test state and comparison group before and after propensity score reweightings: Delaware, 2013–2015

	Model Test state	Comparison group, before propensity score reweighting	Absolute standardized differences from Model Test state, before propensity score reweighting	Comparison group, after propensity score reweighting	Absolute standardized differences from Model Test state, after propensity score reweighting
Female					
Male	47.4%	48.2%	0.02	47.4%	0.00
Female	52.6%	51.8%	0.02	52.6%	0.00
Age					
18–44	43.5%	44.6%	0.02	43.5%	0.00
45–64	35.5%	35.0%	0.01	35.5%	0.00
65+	21.0%	20.5%	0.01	21.0%	0.00
Race/ethnicity					
Non-white or Hispanic	32.6%	22.9%	0.22	32.6%	0.00
White, non-Hispanic	67.4%	77.1%	0.22	67.4%	0.00
Educational attainment					
Fewer than 4 years of college	71.3%	75.2%	0.09	71.3%	0.00
4 years of college or more	28.7%	24.8%	0.09	28.7%	0.00
Marital status					
Married	50.6%	52.1%	0.03	50.5%	0.00
Widowed, separated, divorced	20.6%	21.2%	0.02	20.6%	0.00
Not married	28.8%	26.7%	0.05	28.9%	0.00
Household income					
Less than \$35,000	22.9%	30.4%	0.17	22.8%	0.00
\$35,000–\$74,999	31.7%	33.1%	0.03	31.7%	0.00
\$75,000 or more	45.4%	36.5%	0.18	45.4%	0.00
Employment status					
Not employed	39.0%	41.6%	0.05	39.0%	0.00
Employed	61.0%	58.4%	0.05	61.0%	0.00
Number of children					
No children	65.5%	64.7%	0.02	65.6%	0.00
1 child	16.6%	16.9%	0.01	16.6%	0.00
2 or more children	17.8%	18.4%	0.01	17.8%	0.00

Note: Column 1 summarizes the characteristics of the Model Test state. Columns 2 and 3 summarize the characteristics of the comparison group before and after propensity score reweighting, respectively.

Table M-4. Summary of sample characteristics for the Model Test state and comparison group before and after propensity score reweightings: Idaho, 2013–2015

	Model Test state	Comparison group, before propensity score reweighting	Absolute standardized differences from Model Test state, before propensity score reweighting	Comparison group, after propensity score reweighting	Absolute standardized differences from Model Test state, after propensity score reweighting
Female					
Male	49.2%	49.5%	0.01	49.2%	0.00
Female	50.8%	50.5%	0.01	50.8%	0.00
Age					
18–44	47.0%	49.8%	0.06	46.9%	0.00
45–64	33.6%	32.4%	0.02	33.6%	0.00
65+	19.4%	17.8%	0.04	19.5%	0.00
Race/ethnicity					
Non-white or Hispanic	14.4%	15.0%	0.02	14.4%	0.00
White, non-Hispanic	85.6%	85.0%	0.02	85.6%	0.00
Educational attainment					
Fewer than 4 years of college	76.5%	73.1%	0.08	76.5%	0.00
4 years of college or more	23.5%	26.9%	0.08	23.5%	0.00
Marital status					
Married	58.7%	57.9%	0.01	58.7%	0.00
Widowed, separated, divorced	19.5%	17.9%	0.04	19.5%	0.00
Not married	21.8%	24.2%	0.06	21.8%	0.00
Household income					
Less than \$35,000	30.0%	25.9%	0.09	30.0%	0.00
\$35,000–\$74,999	37.6%	34.5%	0.07	37.6%	0.00
\$75,000 or more	32.4%	39.6%	0.15	32.4%	0.00
Employment status					
Not employed	38.8%	34.3%	0.09	38.8%	0.00
Employed	61.2%	65.7%	0.09	61.2%	0.00
Number of children					
No children	63.6%	62.2%	0.03	63.7%	0.00
1 child	15.0%	15.0%	0.00	15.0%	0.00
2 or more children	21.4%	22.8%	0.03	21.4%	0.00

Note: Column 1 summarizes the characteristics of the Model Test state. Columns 2 and 3 summarize the characteristics of the comparison group before and after propensity score reweighting, respectively.

Table M-5. Summary of sample characteristics for the Model Test state and comparison group before and after propensity score reweightings: Iowa, 2013–2015

	Model Test state	Comparison group, before propensity score reweighting	Absolute standardized differences from Model Test state, before propensity score reweighting	Comparison group, after propensity score reweighting	Absolute standardized differences from Model Test state, after propensity score reweighting
Female					
Male	49.0%	49.4%	0.01	49.0%	0.00
Female	51.0%	50.6%	0.01	51.0%	0.00
Age					
18–44	44.3%	46.3%	0.04	44.3%	0.00
45–64	35.4%	34.4%	0.02	35.3%	0.00
65+	20.3%	19.3%	0.03	20.3%	0.00
Race/ethnicity					
Non-white or Hispanic	10.3%	14.0%	0.11	10.3%	0.00
White, non-Hispanic	89.7%	86.0%	0.11	89.7%	0.00
Educational attainment					
Fewer than 4 years of college	74.4%	74.2%	0.01	74.4%	0.00
4 years of college or more	25.6%	25.8%	0.01	25.6%	0.00
Marital status					
Married	57.5%	55.4%	0.04	57.5%	0.00
Widowed, separated, divorced	19.1%	18.8%	0.01	19.1%	0.00
Not married	23.4%	25.8%	0.06	23.4%	0.00
Household income					
Less than \$35,000	26.2%	27.5%	0.03	26.2%	0.00
\$35,000–\$74,999	35.1%	33.9%	0.03	35.1%	0.00
\$75,000 or more	38.6%	38.7%	0.00	38.6%	0.00
Employment status					
Not employed	33.2%	32.9%	0.01	33.2%	0.00
Employed	66.8%	67.1%	0.01	66.8%	0.00
Number of children					
No children	65.5%	66.1%	0.01	65.5%	0.00
1 child	14.6%	14.9%	0.01	14.6%	0.00
2 or more children	19.9%	19.0%	0.02	19.9%	0.00

Note: Column 1 summarizes the characteristics of the Model Test state. Columns 2 and 3 summarize the characteristics of the comparison group before and after propensity score reweighting, respectively.

Table M-6. Summary of sample characteristics for the Model Test state and comparison group before and after propensity score reweightings: Michigan, 2013–2015

	Model Test state	Comparison group, before propensity score reweighting	Absolute standardized differences from Model Test state, before propensity score reweighting	Comparison group, after propensity score reweighting	Absolute standardized differences from Model Test state, after propensity score reweighting
Female					
Male	48.1%	48.2%	0.00	48.1%	0.00
Female	51.9%	51.8%	0.00	51.9%	0.00
Age					
18–44	43.7%	44.6%	0.02	43.7%	0.00
45–64	36.5%	35.0%	0.03	36.6%	0.00
65+	19.8%	20.5%	0.02	19.8%	0.00
Race/ethnicity					
Non-white or Hispanic	21.5%	22.9%	0.03	21.5%	0.00
White, non-Hispanic	78.5%	77.1%	0.03	78.5%	0.00
Educational attainment					
Fewer than 4 years of college	74.3%	75.2%	0.02	74.3%	0.00
4 years of college or more	25.7%	24.8%	0.02	25.7%	0.00
Marital status					
Married	51.3%	52.1%	0.02	51.2%	0.00
Widowed, separated, divorced	20.2%	21.2%	0.03	20.2%	0.00
Not married	28.6%	26.7%	0.04	28.6%	0.00
Household income					
Less than \$35,000	29.6%	30.4%	0.02	29.6%	0.00
\$35,000–\$74,999	33.8%	33.1%	0.01	33.8%	0.00
\$75,000 or more	36.6%	36.5%	0.00	36.6%	0.00
Employment status					
Not employed	41.8%	41.6%	0.00	41.8%	0.00
Employed	58.2%	58.4%	0.00	58.2%	0.00
Number of children					
No children	65.0%	64.7%	0.01	65.0%	0.00
1 child	16.1%	16.9%	0.02	16.1%	0.00
2 or more children	18.9%	18.4%	0.01	18.9%	0.00

Note: Column 1 summarizes the characteristics of the Model Test state. Columns 2 and 3 summarize the characteristics of the comparison group before and after propensity score reweighting, respectively.

Table M-7. Summary of sample characteristics for the Model Test state and comparison group before and after propensity score reweightings: New York, 2013–2015

	Model Test state	Comparison group, before propensity score reweighting	Absolute standardized differences from Model Test state, before propensity score reweighting	Comparison group, after propensity score reweighting	Absolute standardized differences from Model Test state, after propensity score reweighting
Female					
Male	47.5%	48.2%	0.01	47.5%	0.00
Female	52.5%	51.8%	0.01	52.5%	0.00
Age					
18–44	46.6%	45.8%	0.02	46.6%	0.00
45–64	34.8%	35.4%	0.01	34.8%	0.00
65+	18.6%	18.8%	0.01	18.6%	0.00
Race/ethnicity					
Non-white or Hispanic	41.5%	40.3%	0.02	41.5%	0.00
White, non-Hispanic	58.5%	59.7%	0.02	58.5%	0.00
Educational attainment					
Fewer than 4 years of college	66.9%	68.9%	0.04	66.9%	0.00
4 years of college or more	33.1%	31.1%	0.04	33.1%	0.00
Marital status					
Married	47.6%	51.4%	0.08	47.6%	0.00
Widowed, separated, divorced	18.1%	18.1%	0.00	18.1%	0.00
Not married	34.3%	30.5%	0.08	34.3%	0.00
Household income					
Less than \$35,000	25.1%	23.0%	0.05	25.1%	0.00
\$35,000–\$74,999	27.3%	28.4%	0.02	27.3%	0.00
\$75,000 or more	47.6%	48.7%	0.02	47.6%	0.00
Employment status					
Not employed	38.3%	38.1%	0.00	38.3%	0.00
Employed	61.7%	61.9%	0.00	61.7%	0.00
Number of children					
No children	63.6%	61.4%	0.05	63.6%	0.00
1 child	17.2%	17.9%	0.02	17.2%	0.00
2 or more children	19.2%	20.7%	0.04	19.2%	0.00

Note: Column 1 summarizes the characteristics of the Model Test state. Columns 2 and 3 summarize the characteristics of the comparison group before and after propensity score reweighting, respectively.

Table M-8. Summary of sample characteristics for the Model Test state and comparison group before and after propensity score reweightings: Ohio, 2013–2015

	Model Test state	Comparison group, before propensity score reweighting	Absolute standardized differences from Model Test state, before propensity score reweighting	Comparison group, after propensity score reweighting	Absolute standardized differences from Model Test state, after propensity score reweighting
Female					
Male	48.0%	47.9%	0.00	48.0%	0.00
Female	52.0%	52.1%	0.00	52.0%	0.00
Age					
18–44	43.8%	46.0%	0.04	43.8%	0.00
45–64	36.2%	35.3%	0.02	36.3%	0.00
65+	19.9%	18.6%	0.03	19.9%	0.00
Race/ethnicity					
Non-white or Hispanic	17.5%	21.9%	0.11	17.6%	0.00
White, non-Hispanic	82.5%	78.1%	0.11	82.4%	0.00
Educational attainment					
Fewer than 4 years of college	75.0%	75.7%	0.02	74.9%	0.00
4 years of college or more	25.0%	24.3%	0.02	25.1%	0.00
Marital status					
Married	51.5%	52.7%	0.02	51.5%	0.00
Widowed, separated, divorced	21.2%	21.8%	0.01	21.2%	0.00
Not married	27.2%	25.5%	0.04	27.3%	0.00
Household income					
Less than \$35,000	29.3%	32.0%	0.06	29.3%	0.00
\$35,000–\$74,999	33.4%	33.8%	0.01	33.4%	0.00
\$75,000 or more	37.3%	34.2%	0.07	37.3%	0.00
Employment status					
Not employed	38.6%	40.5%	0.04	38.6%	0.00
Employed	61.4%	59.5%	0.04	61.4%	0.00
Number of children					
No children	64.8%	63.9%	0.02	64.9%	0.00
1 child	16.7%	17.5%	0.02	16.7%	0.00
2 or more children	18.5%	18.7%	0.01	18.4%	0.00

Note: Column 1 summarizes the characteristics of the Model Test state. Columns 2 and 3 summarize the characteristics of the comparison group before and after propensity score reweighting, respectively.

Table M-9. Summary of sample characteristics for the Model Test state and comparison group before and after propensity score reweightings: Rhode Island, 2013–2015

	Model Test state	Comparison group, before propensity score reweighting	Absolute standardized differences from Model Test state, before propensity score reweighting	Comparison group, after propensity score reweighting	Absolute standardized differences from Model Test state, after propensity score reweighting
Female					
Male	47.8%	48.0%	0.00	47.8%	0.00
Female	52.2%	52.0%	0.00	52.2%	0.00
Age					
18–44	44.0%	44.1%	0.00	44.0%	0.00
45–64	36.3%	36.3%	0.00	36.3%	0.00
65+	19.7%	19.6%	0.00	19.7%	0.00
Race/ethnicity					
Non-white or Hispanic	22.6%	25.4%	0.07	22.6%	0.00
White, non-Hispanic	77.4%	74.6%	0.07	77.4%	0.00
Educational attainment					
Fewer than 4 years of college	69.7%	71.3%	0.04	69.7%	0.00
4 years of college or more	30.3%	28.7%	0.04	30.3%	0.00
Marital status					
Married	48.4%	52.7%	0.09	48.4%	0.00
Widowed, separated, divorced	20.5%	19.8%	0.02	20.5%	0.00
Not married	31.1%	27.5%	0.08	31.1%	0.00
Household income					
Less than \$35,000	25.5%	26.3%	0.02	25.5%	0.00
\$35,000–\$74,999	28.8%	29.9%	0.02	28.8%	0.00
\$75,000 or more	45.7%	43.7%	0.04	45.7%	0.00
Employment status					
Not employed	36.8%	39.2%	0.05	36.8%	0.00
Employed	63.2%	60.8%	0.05	63.2%	0.00
Number of children					
No children	64.8%	62.4%	0.05	64.8%	0.00
1 child	17.5%	18.1%	0.02	17.5%	0.00
2 or more children	17.7%	19.5%	0.05	17.7%	0.00

Note: Column 1 summarizes the characteristics of the Model Test state. Columns 2 and 3 summarize the characteristics of the comparison group before and after propensity score reweighting, respectively.

Table M-10. Summary of sample characteristics for the Model Test state and comparison group before and after propensity score reweightings: Tennessee, 2013–2015

	Model Test state	Comparison group, before propensity score reweighting	Absolute standardized differences from Model Test state, before propensity score reweighting	Comparison group, after propensity score reweighting	Absolute standardized differences from Model Test state, after propensity score reweighting
Female					
Male	47.7%	47.6%	0.00	47.7%	0.00
Female	52.3%	52.4%	0.00	52.3%	0.00
Age					
18–44	45.6%	45.7%	0.00	45.6%	0.00
45–64	35.0%	35.2%	0.00	35.0%	0.00
65+	19.4%	19.1%	0.01	19.4%	0.00
Race/ethnicity					
Non-white or Hispanic	22.6%	27.6%	0.11	22.6%	0.00
White, non-Hispanic	77.4%	72.4%	0.11	77.4%	0.00
Educational attainment					
Fewer than 4 years of college	76.2%	76.1%	0.00	76.1%	0.00
4 years of college or more	23.8%	23.9%	0.00	23.9%	0.00
Marital status					
Married	52.4%	51.7%	0.02	52.4%	0.00
Widowed, separated, divorced	22.4%	22.0%	0.01	22.4%	0.00
Not married	25.1%	26.3%	0.03	25.1%	0.00
Household income					
Less than \$35,000	33.0%	33.2%	0.00	33.0%	0.00
\$35,000–\$74,999	34.2%	33.7%	0.01	34.2%	0.00
\$75,000 or more	32.8%	33.1%	0.01	32.8%	0.00
Employment status					
Not employed	41.0%	41.7%	0.02	41.0%	0.00
Employed	59.0%	58.3%	0.02	59.0%	0.00
Number of children					
No children	64.6%	64.4%	0.00	64.6%	0.00
1 child	17.6%	17.7%	0.00	17.6%	0.00
2 or more children	17.8%	17.9%	0.00	17.8%	0.00

Note: Column 1 summarizes the characteristics of the Model Test state. Columns 2 and 3 summarize the characteristics of the comparison group before and after propensity score reweighting, respectively.

Table M-11. Summary of sample characteristics for the Model Test state and comparison group before and after propensity score reweightings: Washington, 2013–2015

	Model Test state	Comparison group, before propensity score reweighting	Absolute standardized differences from Model Test state, before propensity score reweighting	Comparison group, after propensity score reweighting	Absolute standardized differences from Model Test state, after propensity score reweighting
Female					
Male	49.4%	48.4%	0.02	49.4%	0.00
Female	50.6%	51.6%	0.02	50.6%	0.00
Age					
18–44	47.4%	47.9%	0.01	47.5%	0.00
45–64	34.4%	33.5%	0.02	34.4%	0.00
65+	18.1%	18.6%	0.01	18.1%	0.00
Race/ethnicity					
Non-white or Hispanic	26.0%	44.6%	0.40	26.0%	0.00
White, non-Hispanic	74.0%	55.4%	0.40	74.0%	0.00
Educational attainment					
Fewer than 4 years of college	68.7%	70.3%	0.04	68.6%	0.00
4 years of college or more	31.3%	29.7%	0.04	31.4%	0.00
Marital status					
Married	53.9%	51.1%	0.06	53.9%	0.00
Widowed, separated, divorced	19.3%	19.2%	0.00	19.3%	0.00
Not married	26.9%	29.7%	0.06	26.8%	0.00
Household income					
Less than \$35,000	22.7%	25.0%	0.05	22.6%	0.00
\$35,000–\$74,999	30.6%	30.3%	0.01	30.6%	0.00
\$75,000 or more	46.7%	44.7%	0.04	46.7%	0.00
Employment status					
Not employed	37.7%	39.1%	0.03	37.7%	0.00
Employed	62.3%	60.9%	0.03	62.3%	0.00
Number of children					
No children	65.1%	62.9%	0.04	65.1%	0.00
1 child	16.1%	16.9%	0.02	16.1%	0.00
2 or more children	18.9%	20.2%	0.03	18.8%	0.00

Note: Column 1 summarizes the characteristics of the Model Test state. Columns 2 and 3 summarize the characteristics of the comparison group before and after propensity score reweighting, respectively.

M.3 Behavioral Risk Factor Surveillance System Measures

Table M-12 provides detailed information on the measures used in the analysis, including the years the measures are available and the set of Model Test states they are reported for.

Table M-12. Detailed summary of outcome measures from the Behavioral Risk Factor Surveillance System

Measure	Specification	Frequency	Model Test States
Health Status			
Health status is fair or poor	Percentage of adults whose self-reported general health status was fair or poor	Each year	All
Mental health ever not good, past 30 days	Percentage of adults whose self-reported mental health was not good for one or more of past 30 days	Each year	CO, WA
Impairment due to poor physical or mental health, past 30 days	Percentage of adults who reported that poor physical or mental health impaired usual activities for one or more of last 30 days	Each year	CO, WA
Health Conditions			
Ever diagnosed with diabetes	Percentage of adults who were ever told they have diabetes ^a	Each year	All
Ever diagnosed with hypertension	Percentage of adults who were ever told they have high blood pressure ^b	Odd years	All
Has a functional limitation	Percentage of adults who reported having functional limitations due to physical, mental, or emotional problems	Odd years	All
Ever diagnosed with asthma	Percentage of adults who were ever told they have asthma	Each year	All
Risk Factors			
Current smoker	Percentage of adults who reported currently smoking	Each year	All
Current smoker, every day	Percentage of adults who reported smoking everyday	Each year	IA
Former smoker	Percentage of adults who reported being former smokers	Each year	IA
Among current smokers, has not tried to quit, past year	Percentage of current smokers who reported not having made an attempt to quit in the last year	Each year	IA
Overweight	Percentage of adults who reported being overweight, based on BMI	Each year	All
Obese	Percentage of adults who reported being obese, based on BMI	Each year	All
No leisure time physical activity or exercise, past 30 days ^c	Percentage of adults who reported not doing any leisure time physical activity or exercise in the last 30 days	Each year	All
Limited fruit and vegetable intake, past 30 days	Median intake of fruit and vegetables less than five times per day	Odd years ^d	All

(continued)

Table M-12. Detailed summary of outcome measures from the Behavioral Risk Factor Surveillance System (continued)

Measure	Specification	Frequency	Model Test States
Any driving after drinking, past 30 days	Percentage of adults who reported driving after having too much to drink at least once in the past 30 days	Even years	All
Health Care Access			
Does not have a personal doctor	Percentage of adults who did not report having one or more personal doctors or health care providers	Each year	NY, WA
Preventive Services			
No checkup, past year	Percentage of adults who reported not having visited a physician for a routine checkup in the last year	Each year	All
No flu vaccine, past year	Percentage of adults who reported not having received a flu vaccine	Each year	All
No 65+ flu vaccine, past year	Percentage of adults ages 65+ who reported not having received a flu vaccine within the past year	Each year	All
No pneumonia vaccine, ever	Percentage of adults ages 65+ who reported not having received a pneumonia vaccine ever	Each year	All
Among adults with hypertension, no hypertension blood pressure medication	Percentage of adults who reported having hypertension but not taking medicine for high blood pressure control	Odd years	All
No 50-75 colorectal cancer screening—no FOBT, past year	Percentage of respondents ages 50–75 who reported not having had an FOBT within the last year	Even years	All
No 50-75 colorectal cancer screening—no sigmoidoscopy or colonoscopy, past 5 years	Percentage of respondents ages 50–75 who reported not having had a sigmoidoscopy or colonoscopy within the last 5 years	Even years	All
No 50-75 colorectal cancer screening—no sigmoidoscopy or colonoscopy, past 10 years	Percentage of respondents ages 50–75 who reported not having had a sigmoidoscopy or colonoscopy within the last 10 years	Even years	All

Source: BRFSS, collected by CDC (2013–2015).²³¹

^a Does not include respondents who were told they have diabetes only while they were pregnant and respondents who were told they have borderline diabetes or prediabetes.

^b Does not include respondents who were told they have high blood pressure only while they were pregnant.

^c This measure of exercise is included in the analysis because it is measured consistently throughout the analysis period. Other measures of exercise, such as duration and frequency of moderate activity and vigorous activity, are not measured consistently across years.

^d Changes to the fruit and vegetable consumption survey questions implemented in 2011 may impact observed trends in this outcome measure.

BMI = body mass index; BRFSS = Behavioral Risk Factor Surveillance System; CDC = Centers for Disease Control and Prevention; CO = Colorado; FOBT = fecal occult blood test; NY = New York; WA = Washington.

²³¹ CDC. (2013–2015). *Behavioral Risk Factor Surveillance System survey data*. Atlanta, GA: U.S. Department of Health and Human Services, CDC.

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