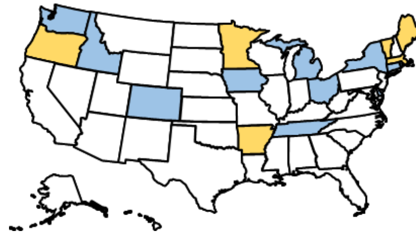
CMS
CENTERS FOR MEDICARE & MEDICAID SERVICES
CENTER FOR MEDICARE & MEDICAID INNOVATION

A Summary of State Innovation Models (SIM) Evaluation Results across 17 States

2013-2020

Executive Summary

State Innovation Models: A Summary



Round 1
2013-2018
$33-$45 million per state
$250 million total awarded

Round 2
2015-2020
$20-$99 million per state
$620 million total awarded

Introduction

The CMS Innovation Center awarded funding to 17 awardees (known as Model Test states) across two rounds of the State Innovation Model (SIM) that operated between 2013-2020.[i] As awardees, states were charged with testing innovative value-based payment (VBP) health care models across multiple payers, broadly transforming their health care systems, improving population health, and engaging a wide range of stakeholders. This paper summarizes Round 1[ii] and Round 2[iii] qualitative and quantitative findings to expand the evidence base for state-based models.

Background

Participating states took a variety of approaches in their selection of payment and delivery models under SIM. Several factors influenced state investment approaches:

- ✓ A state's history with previous or ongoing payment reforms in Medicaid, Medicare, and commercial insurance payers shaped states' choices to invest in specific SIM models.
- ✓ Legislation or state agency infrastructure pre-dating and during the SIM Initiative often supported their SIM award and activities.
- ✓ States' use of Medicaid waivers and state plan amendments through CMS supported the development and sustainability of SIM-related delivery system and payment models.

A majority of states had involvement in VBP models in Medicaid, Medicare, or both prior to SIM. States' prior experience influenced which of the 29 payment and delivery models they created through their SIM award:

- ✓ Fourteen states expanded or supported a **patient-centered medical home** (PCMH) or Health Home (HH) model in Medicaid through the SIM initiative. Almost all had experience with PCMH.
- ✓ Many states had prior experience with **Accountable Care Organizations** (ACOs), although only seven states chose to expand on this experience to serve new populations during SIM.
- ✓ Five states created **behavioral health (BH) models** that integrated BH care with physical care provided within primary care. Additionally, fifteen states used other policy levers to **integrate behavioral health into their primary care** efforts.
- ✓ Three states used **episodes of care** (EOC) models to target specialty care providers to create a holistic approach to health care transformation that complemented ongoing efforts in primary care.

Synthesis of Qualitative and Quantitative Findings

Analyses of payment models operating under SIM for Medicaid and commercial populations illustrate meaningful reductions in total spending in eight payment models, increases in spending in five models,

and no change among ten models (see Table 1). Changes in spending were tied to significant changes in utilization categories such as inpatient admissions, emergency department (ED) visits, and readmissions.

Table 1. Impact estimate counts for PCMH, ACO, & BHI models in SIM states

Models	Total Spending			Inpatient Admissions			ED Visits			Readmissions	
	Dec	Inc	NC	Dec	Inc	NC	Dec	Inc	NC	Dec	NC
PCMH	5	1	5	3	4	5	3	2	7	2	5
ACO	1	2	3	2	2	2	5	--	1	1	5
BHI	2	2	2	2	1	3	2	1	3	1	4
Total	**8**	**5**	**10**	**7**	**7**	**10**	**10**	**3**	**11**	**4**	**14**

Notes: The number in each box represents the number of models (not the number of states) that were associated with a particular outcome. In Colorado (BHI) and Rhode Island (PCMH), the models were payer agnostic, but regression analyses examined the models by payer, which are included in the counts for the total in this table. Green boxes indicate favorable outcomes with statistical significance at the 0.10 level, though some findings had higher levels of statistical significance. Orange boxes indicate unfavorable outcomes with statistical significance at the 0.10 level. Gray boxes indicate no change or a lack statistical significance. Results for readmissions were not available from six models as it was not assessed in the independent evaluation. ED=emergency department PCMH=patient centered medical home; ACO=accountable care organization; BHI=behavioral health integration.

Patient Centered Medical Homes (PCMHs) & Accountable Care Organizations (ACOs) in Medicaid

PCMH models in Connecticut, Delaware, Idaho, Ohio, as well as an ACO model in Vermont showed significant reductions in total spending. Respondents within these states noted the beneficial use of team-based care and investments in advancing health IT capabilities to connect beneficiaries and providers to data for care management. However, providers and patients also noted continued issues with access to care for specialty providers and behavioral health services. Total spending did not change in five state models (PCMHs: Arkansas, Massachusetts, Oregon; ACOs: Maine, Minnesota), although some of these models had promising reductions in inpatient admissions or ED visits after observing the intervention for 1-2 years. One state, Rhode Island, saw significant increases in total spending, although providers within the state noted that the monthly payment was too low to make effective change in their practices.

> *"…She [the caseworker] do[es] house visits. And when I was in the hospital, she actually came to the hospital to see me. And also set me up with—like Mental Co-Op will pick you up for your appointments, So now, when I'm going to my doctors' appointments or have to get tests done or anything, she set it up where they come and pick me up. I don't have to ride the bus no more."* – Tennessee beneficiary

Behavioral Health Integration (BHI) in Medicaid

> *"…the SIM grant [leveled] that playing field a lot more than it was, giving voice to entire delivery systems as opposed to siloed care delivery."* - Behavioral health provider in Vermont

BHI analyses in SIM show promising, yet mixed, results. One could expect unnecessary utilization and subsequent spending to decrease with increased screening and care coordination, as was shown in two payer populations within Colorado. Alternatively, integrated care for those with both behavioral and physical health needs could lead to increased utilization and spending, particularly in the short-term (evident in Maine and Tennessee among beneficiaries with serious mental illness). Maine stakeholders viewed the state's behavioral health homes as a success, although Tennessee respondents noted difficulty implementing their BHI model. Washington only showed reductions in ED visits, but stakeholders said the model removed access barriers and increased the number of behavioral health providers. Colorado, however, demonstrated that their investments in practice transformation were associated with robust favorable impacts.

Episode of Care (EOC) models in Medicaid
Three states created episodes of care models to target specialty providers focused on specific populations (e.g. pediatric populations) or conditions (e.g. asthma, pregnancy). Arkansas, Tennessee, Ohio implemented 14, 43, and 48 different episodes within Medicaid and to some extent in commercial payers. Here, we summarize results available for perinatal episodes analyzed across the three states. In general, perinatal episode models showed favorable improvements in quality measures in Arkansas, Tennessee and Ohio. However, there were unfavorable increases in inpatient visits during pregnancy and readmissions in Arkansas. Providers in Arkansas reported shifting caring for non-pregnancy-related conditions to admissions separate from the delivery to keep episode costs for the delivery down.

The Unique Role of States and Policy Implications for Future Reforms

Most of the states in SIM reached over 50% of their Medicaid beneficiaries in VBP models and realized, at least some level of multi-payer involvement. States leveraged managed care contracting as a powerful tool; Massachusetts, Minnesota, Ohio, Oregon, Tennessee, Vermont, and Washington used managed care to reach a majority of their respective Medicaid populations. However, managed care is not the only effective mechanism to spread Medicaid VPB models. Some Medicaid fee-for-service (FFS) SIM states employed state plan amendments (SPAs) or waivers to spread VBP. States also leveraged their role as payers to mandate VBP reforms into contracts for state employee benefits.

Beyond contracting, some states passed legislation to sustain models and ensure that infrastructure investments- – notably health IT and health care workforce – could be sustained after SIM. As conveners, states brought together payers, providers, and consumers to help guide their efforts. States worked with relevant stakeholders to align quality metrics wherever possible to lead their states through this transformation.

The SIM Initiative helped a range of stakeholders within the state (e.g., state Medicaid office, Governor's office), private sector (e.g., commercial insurers), and provider community (e.g., pediatrics, behavioral health, primary care) develop relationships and networks. Provider training, practice transformation, technical assistance, and learning collaborative programs all contributed to strengthening relationships and building networks of providers experienced in implementing value-based delivery and payment system reform.

Many states and/or their providers were able to move further along the alternative payment model (APM) spectrum[iv] towards the end of SIM or after SIM ended into models that included down-side risk after having gained experienced in one-side risk-based models during SIM. In so doing, states and providers within those states developed a potential foundation for future state-level health care reform initiatives, including participation in subsequent Innovation Center models. For example, several SIM states have been selected to participate in States Advancing All-Payer Health Equity Approaches and Development (AHEAD) and Making Care Primary (MCP).

There were several policy and implementation lessons that emerged from evaluating both Rounds of SIM Model Test states, which are reviewed below.

Policy Lessons Learned from SIM

States can implement VBP models and achieve favorable, though somewhat limited, short-term results. These results show that SIM models perform similar to Medicare models. For example,

Medicare ACO models, such as Pioneer and the ACO Investment Model (AIM), both reduced ED visits similar to Medicaid and commercial ACO models in SIM. The Medicare PCMH models, such as the Comprehensive Primary Care (CPC) and Comprehensive Primary Care Plus (CPC+) models, reduced ED visits and inpatient admissions, though this was the case in only a minority of SIM models. Just as any one Medicare model does not seem to be the obvious way to pursue VBP across the delivery system, the same is true for similar state-led models.

State-led models can reach beyond the Medicaid population. The results for commercial populations support efforts to move to greater alignment of payers around VBP models, meaning state efforts do not need to be solely focused on Medicaid. For example, Colorado's flexible approach to VBP design incented commercial payer participation in an integrated behavioral health model that showed significant reductions in total spending in both Medicaid and commercial populations. Transformation across payers can occur in concert with each other as noted in the implementation findings above.

States are important partners to pursue federal priorities, including pediatric, behavioral health, and rural health. Thirty million children, amounting to 39 percent[v] of all children, are Medicaid beneficiaries; 40 percent[vi] of adults on Medicaid have behavioral health needs; and one in five people in the US live in rural areas[vii]. As such, states can play a key role in expanding VBP to these populations as they have an inherent interest in lower spending and improving quality. The SIM experience shows that some states were ready and willing to expand health care and payment reform to these populations though impact estimates show mixed findings. Subsequent models, such as the Pennsylvania Rural Health Model (PARHM), Integrated Care for Kids (InCK) Model, Community Health Access and Rural Transformation (CHART) Model, and the Innovation in Behavioral Health (IBH) Model are examples that were collectively informed by lessons learned by the Innovation Center over time from working closely with states.

States can sustain Federal investments through Medicaid waivers, state legislation, contracting, and state funding. Most states (13 out of 17) sustained the payment models and investments in additional areas (such as health IT) that were developed during SIM.

Implementation Lessons Learned from SIM

States appreciated the flexibility in designing their own versions of payment models. States adapted the design of models based on the needs of their provider communities (e.g., simplified enrollment criteria). They also tested various approaches to reach different types of providers (e.g., unique risk sharing options for pediatric versus family practices) or allowed small panels to group together for risk sharing. Several states specifically designed their payment models to incent rural providers to improve access to care in rural communities. However, flexibility creates longer implementation timelines and variation across participants that can create downstream implications for CMS' ability to test and evaluate the models.

Some states had to rethink or abandon parts of their SIM activities. Where states found limited interest among providers or managed care organizations, and thus low coverage of Medicaid beneficiaries, they chose to revise their original plans to redesign payment incentives or create new models that were more appealing to providers and payers to cover a larger proportion of the state's Medicaid population. In some cases, states abandoned parts of their original plans particularly where the plans were not in alignment with stakeholders' interests.

Some states' model implementation work took longer than anticipated or states settled on smaller uptake. Delays in recruitment of providers, providing data to model participants, negotiating with payers, and implementing complex models (e.g., episodes of care) often resulted in delays or smaller footprints for models relative to a given state's original plans.

The evaluations of both rounds of SIM revealed a possible advantage for a longer testing period. Several evaluation impact estimates only cover 1-2 years of post-implementation. Though longer analytic periods may not necessarily result in different findings, it would still benefit the Innovation Center to have had more time to quantitatively evaluate the models once fully implemented (after any initial ramp-up activities). More time would also have allowed for feedback with awardees on each of the model's performance on outcomes (favorable or unfavorable) for continuous improvement purposes, similar to what is done in Innovation Center Medicare model evaluations. Further, several stakeholders contended that four years was not enough time to evaluate to create reliable evidence, particularly for interventions focused on enhanced primary care and preventive health care that can take time to show downstream impacts.

Relevance to Successive Innovation Center Models

Lessons learned from SIM have relevance to future development of Innovation Center models.

States and Medicaid providers may need more time to implement payment reform coupled with milestones to ensure achievement of model goals. Both rounds of SIM were designed to have just one year of implementation as part of a four-year award, although many states requested no-cost extensions. The final three years were designed for testing and evaluating. As noted above, many states needed more time to obtain the necessary waivers, SPAs, or to pass state legislation prior to developing and implementing payment models. Even once in place, extensive stakeholder engagement was needed to ensure cooperation with payers and providers in care redesign efforts. The Innovation Center's use of milestones and monitoring state's progress were important to ensure states worked toward mutually beneficial goals as laid out in the original funding announcement.

For the Maternal Opioid Misuse (MOM) and the Integrated Care for Kids (InCK) models, the Innovation Center developed sustainability timelines for awardees to have more time implementing the model and developing payment models to bolster the chances of success during the model testing phase. As such, longer planning and development periods (usually multiple years) were built into the models before the longer model testing periods. Using lessons learned from several past state-based and Medicaid models, the Transforming Maternal Health (TMaH)[viii], Innovation in Behavioral Health (IBH)[ix], States Advancing All-Payer Health Equity Approaches and Development (AHEAD)[x], and Making Care Primary (MCP)[xi] models are all planning longer implementation and testing periods.

Depending on the level of readiness for health reform, states benefit from both financial and technical assistance. SIM Model Test showed that states were not always ready on their own to implement VBP models, particularly on a broad scale. Through use of SIM funds, states provided technical assistance to a range of different types of providers, which was highly praised by stakeholders. However, state staff could also have benefited from intense technical assistance in designing and launching care delivery and payment reform, including from Federal partners.

The Community Health Access and Rural Transformation (CHART), AHEAD, TMaH, and IBH models all built in a range of technical assistance to aid the participants in implementing these new models. The

amount of funds offered in new models, all of which have longer implementation time periods, is smaller relative to the investments originally available in SIM (e.g., MOM, InCK, TMaH, IBH, AHEAD). SIM funds were awarded to the state's Governor's office to implement broad system transformation across the entire state among a range of patient populations. More recently, the Innovation Center has awarded cooperative agreements to provider organizations or state Medicaid agencies to implement delivery-system reform on a smaller scale to more targeted populations (e.g., CHART, MOM, InCK, TMaH, IBH), which may relate to the smaller funding amounts used in newer models relative to SIM.

States remain interested in partnering with the Innovation Center in the development of multi-payer state-based models that include Medicare. The Innovation Center learned that states wanted a pathway for obtaining Medicare participation in multi-payer health reform efforts but need the model to be tailored to their local circumstances. Multiple SIM states sought Medicare participation from the Innovation Center during SIM, but most states were unable to develop a state-specific model where Medicare would participate. Absent Medicare participation in SIM, many Round 2 Test states opted to participate in other Innovation Center offerings (e.g., CPC+).

During and after SIM, the Innovation Center worked with select SIM Model Design and Test states that were ready to develop tailored models that brought in Medicare participation.[xii] Models such as AHEAD and MCP provide new pathways for multiple states to participate while also allowing flexibilities for state specific contexts, particularly within Medicaid. These models focus on multi-payer alignment with Medicare and potentially commercial payers, to ensure broad system transformation. Notably, several SIM states have been selected to participate in AHEAD[xiii] and MCP.[xiv]

Conclusion

State health care contexts, prior history with payment reform, prior legislation, Medicaid waivers and SPAs, and stakeholder engagement with payers and providers all played a role in the state's ability to successfully to implement value-based payment models. States were able to effectively use policy levers and create partnerships to implement 29 payment and delivery models and achieve multi-payer alignment. Many partnerships were sustained after SIM. In addition, quantitative impact estimates showed that the investment in state partnerships to implement VBP models yields outcomes like Innovation Center models implemented for Medicare populations. State-led transformation efforts related to care coordination, workforce development, health IT investment, behavioral health integration, and enhanced primary care supported the implementation of VBP models; many of which had lasting effects after SIM investments ended. Findings from SIM can be used to inform future state-based Innovation Center models.

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[i] States could apply for a Model Design or a Model Test award, with a readiness to implement VBP models required for a state to receive a Model Test award.

[ii] Round 1 states: Arkansas, Maine, Massachusetts, Minnesota, Oregon, Vermont

[iii] Round 2 states: Colorado, Connecticut, Delaware, Idaho, Iowa, Michigan, New York, Ohio, Rhode Island, Tennessee, Washington

[iv] Health Care Payment Learning & Action Network, Alternative Payment Model Framework: https://hcp-lan.org/workproducts/apm-refresh-whitepaper-final.pdf

[v] Kaiser Family Foundation, Health Insurance Coverage of Children 0-18: https://www.kff.org/other/state-indicator/children-0-18/?dataView=0¤tTimeframe=0&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%22asc%22%7D

[vi] Kaiser Family Foundation, Medicaid Coverage of Behavioral Health Services in 2022: Findings from a Survey of State Medicaid Programs: https://www.kff.org/mental-health/issue-brief/medicaid-coverage-of-behavioral-health-services-in-2022-findings-from-a-survey-of-state-medicaid-programs/#:~:text=Nearly%2040%25%20of%20the%20nonelderly,because%20of%20their%20low%20incomes.

[vii] Center for Disease Control and Prevention, About Rural Health: https://www.cdc.gov/rural-health/php/about/index.html

[viii] CMS Innovation Center, Transforming Maternal Health (TMaH) Model Web page: https://www.cms.gov/priorities/innovation/innovation-models/transforming-maternal-health-tmah-model

[ix] CMS Innovation Center, Innovation in Behavioral Health (IBH) Model Web page: https://www.cms.gov/priorities/innovation/innovation-models/innovation-behavioral-health-ibh-model

[x] CMS Innovation Center, States Advancing All-Payer Health Equity Approaches and Development (AHEAD) Model Web page: https://www.cms.gov/priorities/innovation/innovation-models/ahead

[xi] CMS Innovation Center, Making Care Primary (MCP) Model Web page: https://www.cms.gov/priorities/innovation/innovation-models/making-care-primary

[xii] Maryland's All-Payer and Total Cost of Care Models, Vermont All-Payer Model, and Pennsylvania Rural Health Model

[xiii] Vermont, Connecticut, New York, and Rhode Island participated in SIM and have been selected to participate in AHEAD.

[xiv] Colorado, New York, Minnesota, Massachusetts, and Washington participated in SIM and have been selected to participate in MCP.