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

2013 2020

Abstract

Background: This study summarizes evaluation results across 17 states in two rounds of the State Innovation Models (SIM) between 2013-2020. The Innovation Center awarded funding to Model Test states 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 relevant stakeholders.

Objective: The aim of this study is to provide the first summary of evaluation results across two rounds of SIM Model Test states. We summarize findings across implementation and impact for 29 delivery and payment models of various types (patient-centered medical homes, accountable care organizations, behavioral health integration, and episodes of care) to expand the evidence base for state-led VBP models.

Methods: Using findings from publicly available, mixed methods evaluation reports for the 17 SIM Model Test states (six states in Round 1 and 11 states in Round 2), we identify key themes that provide background and context to summarize qualitative implementation findings with quantitative VBP impacts across SIM models.

Results: States achieved varying levels of success in implementing VBP models. Part of their success was driven by state readiness from prior experience in Innovation Center models and purposeful legislative and policy actions. Other factors relating to state's success included leveraging Medicaid managed care organization (MCO) and state employee health insurance contracts; convening commercial payers, providers, and other relevant stakeholders to instill flexibility and support model uptake; building consensus on quality measurement alignment; facilitating practice transformation through peer-to-peer learning and technical assistance; enabling team-based care utilizing community health workers and care coordinators with some focus on social determinants of health; and investment in robust heath IT infrastructure. Qualitative findings from providers, beneficiaries, and other stakeholders were generally positive for state efforts supporting care transformation, such as enhanced care coordination, technical assistance, and health IT resources. 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. In some cases, SIM prepared some states to pursue more advanced payment models (i.e. those downside risk). Most states reached over 50% of their Medicaid beneficiaries in 30 VBP models and realized, at least some level of, multi-payer involvement.

Quantitative impacts on 22 VBP models feasible to be analyzed showed meaningful reductions in total spending in eight models which were often accompanied by reductions in inpatient admissions (seven models), emergency department visits (10 models), or readmissions (four models). A few models increased spending (five models) or utilization (seven models) or had no significant changes in spending or utilization (two models). States found their investments in these VBPs models worth continuing as most (13 states) sustained their Medicaid delivery and payment models after SIM awards and federal funding ended through state regulation, purchasing, state plan amendments, Medicaid waivers, and/or MCO contracting. States also continued investments in health IT (13 states) and in some cases workforce investment initiatives (six states) with their own resources.

Conclusions: Policy and implementation lessons learned from SIM are applicable to subsequent Innovation Center state-based and Medicaid-centric models. Results from SIM showed that Medicaid VBP models achieved favorable results similar to Medicare models and that states, in some instances, can reach beyond Medicaid to impact commercial populations. SIM also demonstrated that states are important partners to pursue federal priorities, including pediatric, behavioral health, and rural health and can sustain Federal investments through Medicaid waivers, state legislation, contracting, and state funding. States remain interested in partnering with the Innovation Center in the development of multi-payer, state-based models that include Medicare. States benefit from both financial and technical assistance and may need more time to implement payment reform. These findings serve as a resource for the development of future state-based and Medicaid models.

Table of Contents

I. Introduction

The Affordable Care Act (ACA) established the Center for Medicare and Medicaid Innovation (the Innovation Center) to test and evaluate payment and service delivery models with the goals of reducing spending while maintaining or improving quality of care. Between October 2022- September 2024, the Innovation Center reached almost 57,000,000 beneficiaries with Medicare, Medicaid, and commercial insurance, with more than 192,000 providers participating in model tests[1]. To expand reach even further, CMS set a goal of having most Medicaid beneficiaries in accountable care relationships by 2030, with the Innovation Center helping lead this transformation. Part of this announcement included the Innovation Center's intention to work with states to help drive system transformation and work towards multi-payer alignment.[2] This paper offers timely contributions with a summary of findings from CMS's prior work with 17 states in the development of 30 different care delivery and payment models that, in many cases, reached significant proportions of their state's Medicaid population in value-based arrangements.

States are central to the Innovation Center's efforts to transform care.[3] States are a key partner in health care reform through their ability to create models that address the unique health care context within a region and through various authorities they can use to transform health care broadly. States are payers through their Medicaid programs and purchase commercial insurance for their respective public employees. States invest in systems to improve public health, health information technology, the health care workforce, and health care education. As regulators, states set standards for health care provision, professional training, and credentialing. States have flexibility in how they can approach health reform in ways that are most responsive to local needs, history, values, and populations.

The Innovation Center recognized states as critical partners in innovation through investment in state partnerships with two rounds of the State Innovation Model (SIM) Test awards in 2013 (Round 1)[4] and 2015 (Round 2)[5]. States could apply for a Model Design or a Model Test award, with a readiness to implement value-based payment (VBP) models required for a state to receive a Model Test award.[6] The Innovation Center awarded funding to 17 Model Test awardees[7] charged with testing innovative VBP health care models across multiple payers, broadly transforming their health care systems, improving population health, and engaging a wide range of stakeholders. The goal of value-based payment (VBP) models in SIM was to shift the state's health system from encounter-based service delivery to care coordination, and from volume-based to value-based payment mechanisms. The underlying belief is that better coordinated and more accountable health care leads to higher quality care at lower total cost, and ultimately, to improved population health. Prior published work explored how six states in SIM

[1] CMS Innovation Center, 2024 Center for Medicare and Medicaid Innovation Report Congress: https://innovation.cms.gov/data-and-reports/2024/rtc-2024

[2] CMS Innovation Center, Strategic Direction: https://www.cms.gov/priorities/innovation/about/strategic-direction

[3] Brooks-LaSure C, Fowler E, Seshamani M, Tsai D. 2021. Innovation at the Center for Medicare and Medicaid Services: A Vision for the Next 10 Years: https://www.healthaffairs.org/content/forefront/innovation-centers-medicare-and-medicaid-services-vision-next-10-years

[4] CMS Innovation Center, Notice of Funding Opportunity, State Innovation Models: Funding for Model Design and Testing Assistance: https://innovation.cms.gov/files/x/stateinnovation_foa.pdf

[5] CMS Innovation Center, State Innovation Models: Round Two of Funding for Design and Test Assistance: https://www.cms.gov/priorities/innovation/files/x/stateinnovationrdtwofoa.pdf

[6] SIM had two kinds of awards: Model Test awards and Model Design and Pre-test awards. Model Design and Pre-Test awards provided a way for states to plan and design strategies for future model tests. All Round 2 Model Test states were Round 1 Model Design or Pre-Test awardees. More information about SIM can be found here: https://innovation.cms.gov/innovation-models/state-innovations.

[7] Round 1 states received between $33-$45 million per state ($250 total awarded). Round 2 states received $20-$99 million per state ($620 million total awarded).

Round 1 encouraged payers and providers to implement VBP models[8,9], in addition to claims-based results for VBP models within these six states[10,11, 12,13,14].

The aim of this study is to provide a summary of evaluation results for the SIM Model Test states to serve as a resource to help inform the development of state-led or Medicaid Innovation Center models. We incorporate evaluation findings across the two implementation time periods and a range of payment and delivery model types, including patient-centered medical homes, accountable care organizations, behavioral health integration, and episodes of care, to expand the evidence base for state-based models. In addition, we incorporate beneficiary and provider perspectives on practice transformation efforts.

II. Background

Model Test states took a variety of approaches in their selection of payment and delivery models under SIM, with several pre-SIM factors influencing state investment. First, a state's history with previous or ongoing payment reforms often laid a path to follow. As such, Medicaid and Medicare models, as well as commercial payer investment in payment or service delivery models prior to the Innovation Center's SIM Initiative, shaped states' choices to invest in specific SIM models (Appendix Table 1). Second, legislation or state agency infrastructure pre-dating and during the SIM Initiative often supported their SIM award and activities (Appendix Table 2). Third, states were proactive in seeking Medicaid waivers and state plan amendments through CMS to support the development of SIM-related delivery system and payment models (Appendix Table 3).

Payment and Delivery Models Prior to and Developed Through the SIM Initiative

The majority of states had prior or contemporaneous involvement in Innovation Center models or other types of VBP models in Medicaid, Medicare or both prior to the state's SIM award[15] (see Appendix Table 1). Providers' and states' experience sometimes, but not always, set the stage for expanding upon prior work through SIM. In some cases, states implemented new model types or served new populations, enabled by state legislation or Medicaid waivers. States created the following payment and delivery models across both SIM rounds:

Fourteen states expanded or supported a patient-centered medical homes (PCMH) or Health Home (HH) model in Medicaid through the SIM initiative. Almost all of these states had experience with PCMHs. PCMHs strive to improve health outcomes by delivering primary care that is comprehensive, patient-centered, and emphasizes care coordination and quality of care. In addition to this care delivery model, many states also incorporated a payment model within their PCMH such as shared savings. HHs are primary care practices that serve as a PCMH for

[8] Kissam, S. M., Beil, H., Cousart, C., Greenwald, L.M., Lloyd, J.T. (2019). States encouraging value-based payment: Lessons from CMS's Innovation Models Initiative. *Milbank Quarterly*, Early View. https://pubmed.ncbi.nlm.nih.gov/30957292 doi: 10.1111/1468-0009.12380

[9] Hersey, C.L., Wiecha, N. (2022). Medicaid ACOs and Managed Care: A Tale of 2 States Medicaid ACOs and Managed Care: A Tale of 2 States Medicaid ACOs and Managed Care: A Tale of 2 States. The American Journal of Accountable Care; 10(3): https://doi.org/10.37765/ajac.2022.89233

[10] Lloyd, JT, Kissam SM, Pomepy A. (2019). States Tackling Health Care System Transformation with Federal Support. Milbank Memorial Fund Research into Practice https://www.milbank.org/wp-content/uploads/2019/06/States-Tackling-Health-Care-System-Transformation-Final.pdf

[11] Romaire M, Alterbaurn R, Collins A. (2020). Medicaid Behavioral Health Homes: Lessons Learned and Early Findings From Maine. Psychiatric Services (71): 1179-1187. doi: 10.1176/appi.ps.201900490

[12] Beil H, Feinberg R, Patel SV, Romaire MA. (2019). Behavioral Health Integration with Primary Care: Implementation Experience and Impacts from the State Innovation Model Round 1 States. Milbank Quarterly; (97): 543-582. doi: 10.1111/1468-0009.12379

[13] Hinde JM, West N, Arbes SJ, Kluckman M, West S. (2020). Did Arkansas' Medicaid Patient Centered Medical Home Program Have Spillover Effects on Commercially Insured Enrolles? Inquiry; (57): 1-9. doi: 10.1177/0046958019900753

[14] Toth M, et al. (2020). Early impact of the implementation of Medicaid episode-based payment reforms in Arkansas. Health Services Research (55): 556-567. DOI: 10.1111/1475-6773.13296

[15] The Round 1 funding opportunity announcement (FOA) provided examples of payment and service delivery models states could propose which included Accountable Care, Medical or Health Homes, and Bundled Payments/Payments for Episodes of Care models (https://innovation.cms.gov/files/x/stateinnovation_foa.pdf). The Round 2 FOA encouraged applicants to propose models that directly aligned with one or more existing Medicare programs, demonstrations, and/or models such as ACOs, primary care medical homes, and bundled payment programs (https://www.cms.gov/priorities/innovation/files/x/stateinnovationrdtwofoa.pdf).

individuals with two or more chronic conditions and for individuals with one chronic condition who are at risk for another.

Seven states used prior exposure to Accountable Care Organizations (ACOs) to serve new populations in this type of value-based arrangement. ACO models aim to improve care through the possibility of receiving shared savings if providers meet agreed upon quality metrics and decrease spending. ACOs typically increase emphasis on care coordination and care management intended to lower utilization and thus bring down total spending. While seven states had prior experience with Medicaid ACOs and thirteen states had prior experience within Medicare ACOs, many states chose not to use their SIM awards to implement such models. Round 1 states were more likely to implement ACO models (n=5) than Round 2 states (n=2). The complexity of launching an ACO model within Medicaid managed care organizations (MCOs), which predominate many of the state Medicaid markets, creates a level of difficulty that states may have wanted to avoid.

Five states created behavioral health models. Three states created behavioral health home (BHH) models where BHHs partner with HHs to integrate behavioral health services with primary care services for adults with serious mental illness and children with serious emotional disturbances. Two states used agreements with providers or managed care plans to increase BH integration with physical health providers. Fifteen states used other policy levers to help integrate behavioral health into primary care.

Three states created episodes of care (EOC) models. An EOC is the entire course of treatment for an illness or health event where a provider is held responsible for all the services needed to treat a health event, potentially including services other providers deliver. Three states created episodes of care models to target specialty providers focused on specific populations (e.g. pediatric populations) or conditions (e.g. asthma) to create a holistic approach to health care transformation that complemented their ongoing efforts in primary care within PCMHs.

Building Value-Based Payment Models in the Context of Innovation Center Medicare Models

States engaged with Innovation Center models to achieve multi-payer alignment with their SIM VBP models. As an example, the Innovation Center's Comprehensive Primary Care (CPC) model (2012-2016), which was also intended as multi-payer across Medicare, Medicaid, and commercial payers, influenced the approaches to PCMH Medicaid models in Arkansas, Colorado, Massachusetts, New York, and Ohio. Some of these states built their SIM Medicaid model to be like the CPC model so that primary care providers participating in CPC could meet similar requirements for SIM model participation. This also positioned some of these states to participate in Comprehensive Primary Care Plus (CPC+) including Arkansas, Colorado, Michigan, Ohio, Oregon, Rhode Island, Tennessee, and regions in New York (2017-2021). Coordination between SIM and CPC and CPC+ allowed for states' Medicaid models, which had been either supported and/or created through SIM, to achieve a multi-payer model with Medicare, and in many cases commercial payers. Appendix Table 1 provides more information on states' participation in other Innovation Center models.

State Legislation and Infrastructure Used to Support the SIM Initiative

Pre-existing state infrastructure and legislation provided states with resources and tools to use during their SIM award (Appendix Table 2). As the SIM Initiative was designed to be a state governor-led initiative, state-based legislation and executive orders served as additional methods to support changes in health care. The ACA allowed states to expand Medicaid to nearly all adults up to 138 percent of the federal poverty level. Almost all SIM states had expanded Medicaid at the time of their award or shortly thereafter.[16] **Thirteen states used state legislation to support state-based transformation during SIM.** States created legislation to:

[16] Idaho expanded Medicaid after their SIM award had ended (2020). Tennessee has not expanded Medicaid as of this writing Kaiser Family Foundation, Status of State Medicaid Expansion Decisions, May 8, 2024: Interactive Map: https://www.kff.org/medicaid/issue-brief/status-of-state-medicaid-expansion-decisions-interactive-map/

- test new VBP models (Arkansas, Massachusetts, Minnesota, Ohio, Washington, Vermont);
- align quality measures across payers (Oregon);
- create new care models focused on specialty populations such as behavioral health (Arkansas, Washington), developmental disabilities (Arkansas), and long-term care (Tennessee);
- test innovative methods using certification and reimbursement with non-traditional health workers such as community health and oral health workers (Oregon, Connecticut);
- engage commercial payers (Oregon, Delaware), state employee health plans (Delaware, Massachusetts, Oregon, Washington), and qualified health plans (Delaware, Arkansas, Massachusetts);
- advance health Information Technology (IT) and telehealth (Colorado, Connecticut);
- create a regulatory and certification system (Vermont); and
- test multi-payer models (Delaware, Idaho, Vermont).

Medicaid Waivers used to Support the SIM Initiative

Twelve states used Medicaid waivers and/or state plan amendments (SPAs)[17] within their Medicaid programs to support SIM-related delivery system and payment model development (Appendix Table 3). Most Round 1 states had pre-existing legislation or Medicaid waivers enacted, which enabled them to qualify for Round 1 Model Test awards. Only half of Round 2 states had waivers or legislation in place to support SIM related activities, which may help explain why all Round 2 states qualified for Round 1 Model Design awards (i.e., awards meant for states needing to enhance their readiness for VBP implementation and testing). Such awards allowed for more planning in Round 1 Model Design before qualifying for a Model Test award in Round 2. States' use of Medicaid waivers/SPAs was one of the ways in which states were able to sustain their payment or delivery system models after SIM ended.

III. Methods

Using findings from mixed methods evaluation reports for the six SIM Round 1 and 11 Round 2 Model Test states, we provide background and context in addition to identifying key themes from summarizing qualitative implementation findings with quantitative impacts from VBP models. Qualitative data included document review, focus groups, and key-informant interviews conducted by independent contractors. Respondents included state officials, payer representatives, health care providers, and beneficiaries that implemented, participated in, or were reached by SIM-related VBP models. Round 1 included both key informant interviews (418 interviews of state officials, payers, providers or provider associations, and consumer advocacy groups) and focus groups (1,002 providers or consumers) to inform five evaluation reports. Round 2 included 847 key-informant interviews and 139 focus groups to inform four evaluation reports.

Quantitative impact estimates included quality (readmissions), utilization (inpatient admissions and emergency department visits), and total spending outcomes for state-specific Medicaid (n=15), Medicare (n=1), and/or commercial (n=7) models. The independent contractors conducted analyses using difference-in-differences methods, which allow for detection of an intervention effect by examining changes over time between respective intervention and comparison groups.[18] We consider estimates with p-values at the 0.10 level or below to have statistical significance appropriate to informing policy. States implemented models at various times, which was dependent on the state and SIM Round. Round 1 occurred 2013-2018. Round 2 occurred 2015-2020. Complete methodological information is available in the SIM Round 1 and Round 2 publicly available reports.[19]

[17] More information regarding Medicaid State Plan Amendments can be found here: https://www.medicaid.gov/medicaid/medicaid-state-plan-amendments/index.html

[18] The only analysis that wasn't able to use a comparison group was the evaluation of Maine Behavioral Health Homes as the state's attribution methodology to construct the intervention group could not be replicated in claims data.

[19] Round 1 evaluation reports can be found here: https://innovation.cms.gov/innovation-models/state-innovations-model-testing. Round 2 evaluation reports can be found here: https://innovation.cms.gov/innovation-models/state-innovations-model-testing-round-two

IV. Implementation Findings

In this paper, we illustrate how states used their authority and influence to implement and scale VBP models. States harnessed their contracting power with Medicaid managed care and state employee health plans. In addition, states used their ability to convene stakeholders and build consensus with commercial payers, most notably regarding quality measure alignment. We highlight how states tailored payment model designs to their unique local contexts; how states supported practices in transforming care delivery processes; focused on pediatric populations and behavioral health investment; discuss the impact this had on consumers, providers, and participating states; present the proportion of populations reached by states in their pursuit of VBP model expansion; and review how states spent SIM funding as well as how they sustained their work after SIM ended.

a. State Contracting Through Medicaid Managed Care and State Employee Health Plans

→ States used Medicaid managed care and state employee contracting to implement VBP models.
→ States used stakeholder feedback to improve MCO contracts to increase VBP model reach.
→ Employee contracting reach represented only a small proportion of the overall state population.

Medicaid Managed Care Contracting

Incorporating VBP model, such as PCMHs and ACOs, into Medicaid managed care contracts emerged as an effective lever for states.[20] States took two approaches to leverage managed care organization (MCO) contracts. In one approach, states wrote specific VBP models into contracts with Medicaid MCOs, often by receiving MCO and stakeholder buy-in to incorporate into contract renegotiations. Massachusetts, Minnesota, Iowa, Michigan, Ohio, Rhode Island, and Tennessee used this approach. Obtaining buy-in from the MCOs prior to writing the contracts allowed the states to move quickly to amend contracts and ensured all parties entered into contract negotiations with a common understanding of the model and where there might be room for negotiation on model specific features. Writing VBP participation into contracts essentially made it mandatory[21] for Medicaid MCOs to participate in the VBP models, which helped increase the reach of VBP across the state.

Policy lever: MCO contracting to increase VBP spread

- Delaware
- Massachusetts
- Minnesota
- Iowa
- Michigan
- Ohio
- Rhode Island
- Tennessee
- Washington

Massachusetts provides a noteworthy example regarding the effectiveness of MCO contracting as a policy lever within SIM Round 1. In the state's first attempt at designing a model, the Primary Care Payment Reform Initiative (PCPRI), Massachusetts received limited MCO participation. This was driven by poor timing with the model being launched at the same time the state was procuring MCO contracts (stretching the MCO's resources and ability to respond), and by a range of concerns among MCOs, such as having primary care providers alone bearing risk for total cost of care. Limited MCO participation had subsequent negative effects on provider participation as providers serving beneficiaries enrolled in MCOs would have received incentive payments from both the MCO and the model, which would have increased their willingness to participate. Ultimately, the PCPRI model reached only six percent the state's Medicaid population. To address the state's limited reach of beneficiaries, Massachusetts engaged in extensive stakeholder engagement, including workgroup meetings with

[20] Not all states use managed care in their Medicaid programs including Arkansas, Connecticut, Idaho, Maine, and Vermont. Using managed care contracts was not a requirement for SIM participation or a needed condition for a state to be successful in implementing and/or expanding VBP payment models. Our purpose is to highlight the use of managed care due its effectiveness as a lever to implement VBP adoption and expansion.

[21] "Mandatory" here refers to legislative and regulatory action undertaken by states and their efforts to expand VBP. Mandatory is not referring to mandatory models implemented pursuant to Section 1115A authority or to formal model expansion pursuant to Section 1115A(c) of the Social Security Act.

MCOs that lasted for over a year. The state pivoted efforts away from PCPRI and created a Medicaid ACO with stronger MCO contract incentives that linked enrollment in the model to beneficiaries' selection of a provider (or the state's assignment of a Medicaid beneficiary to a provider), which subsequently tied that beneficiary to an ACO. This strategy forced MCOs to contract with multiple ACOs else be at risk of losing enrollment of beneficiaries within the MCO. The state also created a range of options for MCOs and providers that allowed for flexibility and was less prescriptive than the state's prior model. The Medicaid ACO model was launched towards the end of the SIM Round 1 award, which incorporated community partners in behavioral health and long-term services and supports (LTSS), and resulted in 56 percent of Massachusetts' total Medicaid population being served.

By the end of the SIM initiative, states that wrote specific VBP models into contracts after convening with Medicaid MCOs were able to reach at least 50 percent of their targeted population. Tennessee and Rhode Island were able to reach 100 percent. A Tennessee payer reflected on how the SIM work allowed for a uniform approach that was seen as beneficial:

> *"*[Greater VBP adoption] w*ould never have happened originally without the SIM grant. We would have had in the marketplace 3 different ACO-like programs from each MCO. At some point in time, that model gives out where each is doing its own, there's a lot of variation in those models, there is proprietary nature of the models. From a standpoint of provider engagement, the SIM grant has enabled one program, one model, one tool."*

A second contracting approach required MCOs to reach a certain, mandated proportion of their patients through VBP payment reform with the paramount goal of universal expansion of value-based care but did not specify a specific delivery system reform or specific performance requirements. Delaware, Michigan, and Washington believed this method allowed for the most flexibility in how MCOs achieved the goals of VBP and obtained MCO and provider buy-in. This method had mixed levels of success in reaching targeted populations in VBP models. Washington reported reaching 75% of their targeted population. Delaware was only able to reach 25 percent, although the state indicated it was a substantial increase in the portion of Medicaid spending flowing through VBP models and the addition of VBP requirements to MCO contracts was only added after initial efforts failed to encourage many MCOs to use VBPs. Michigan had multiple goals and therefore used both approaches to MCO contracting. The state originally required PCMH implementation in MCO contracts, but this payment model was not a VBP model. Michigan subsequently amended contracts to also include MCOs setting VBP goals and provide baseline data. After difficulty in coming to agreement on MCO data reporting to satisfy the requirement to achieve VBP goals, the state decided to leverage its goal-oriented strategy to maintain its PCMH delivery system reform and required MCOs to incorporate the PCMH model into their plans. The state considered their initiative successful as noted by one MCO representative: *"…the state hit a home run. They have brought all the plans along. They have been astronomical in bringing resources in and teaching us and training us and doing focus groups and having us report ... We have brought a lot of groups on [into VBP] as part of that initiative."* However, Michigan was unable to provide an estimate to how many lives were covered in VBP arrangements or the PCMH model by the end of SIM.

State Employee Health Benefits Contracting

Policy lever: State-employee health plan contracting

- Delaware
- Oregon
- Tennessee
- Washington

States used contracts as a lever to increase VBP model reach to their state employee populations. In one approach, states built on models or work done in their Medicaid VBP space and required these same approaches for their state employee contracts. For example, Oregon modified their Medicaid Coordinated Care Model (CCM) program to include state employee health insurance contracts. Tennessee took a similar approach with their state employee health care contracts as they were doing within Medicaid to implement episodes of care. However, implementing similar models in Medicaid and state employee populations requires tailoring both programs for the two different populations. Delaware and Washington provide alternative approaches to contracting for state employee health plans. Delaware worked with third-party administrators that already offered alternative provider contracting arrangements, including ACOs and a Center of Excellence model encouraging patients to obtain specific planned treatments, such as spinal fusions, from a network of providers that accepted bundled rates. Washington implemented a model specific to the state employee population called the Accountable Care Network (ACN) model, as was described in their Health Care Innovation Plan:

"To achieve the…health care innovation aim, Washington State as a purchaser will take a lead role as 'first mover' to accelerate market transformation. Washington will lead by example by changing how it purchases care and services in state purchased insurance programs."

While states' employee plans may have substantial purchasing power, this didn't necessarily translate into high uptake of these models or reach large proportions of state populations. For example, Washington's agency is the largest purchaser in the state but the ACN's coverage of employee benefits reached only 31 percent of those eligible to enroll at the conclusion of SIM, noting that it is difficult or impossible to require employees to enroll into their VBP models when employees are represented by labor unions that negotiate benefits on their behalf (including the extent to which the state can restrict coverage options). Although state employee contracting proved an effective lever, the approach could reach only a small proportion of a state's total population. In Oregon, for example, the CCM model covered 97% of state employees, representing 3 percent of the state's total population.

b. States Convened Stakeholders to Build Consensus

→ Nine states successfully involved commercial payers in SIM payment models.
→ States used flexibility or mandated payers' participation to accelerate VBP adoption.
→ Convening payers facilitated solutions for data reporting requirements, easing provider burden.

Pursuing Multi-Payer Alignment

Some states were successful at incorporating commercial payers directly into their SIM VBP models, such as PCMHs and ACOs. States that were successful in aligning commercial payers in SIM models used three main strategies. The first strategy provided flexibility in model implementation where it made business sense. A second strategy involved states passing legislation that mandated model components across payers. A third strategy that many states used in addition to one of the other strategies was to convene commercial payers. Ultimately, nine states were successful in achieving multi-payer alignment (Arkansas, Colorado, New York, Ohio, Oregon, Rhode Island, Tennessee, Vermont, Washington).

Policy lever: Flexibility in selection of model design features for commercial plans

- Arkansas
- Colorado
- Delaware
- Idaho
- New York
- Ohio
- Oregon
- Tennessee
- Vermont
- Washington

States such as Arkansas, Colorado, Delaware, Idaho, New York, Ohio, Oregon, Tennessee, and Vermont allowed **flexibility for payers to choose payment designs, quality measures, and other features according to their own preferences.** For example, Arkansas allowed private payers to implement select EOCs based on the health care needs of their population. Commercial payers in Idaho and Washington implemented their own models instead of using models developed by the state but worked closely with state leadership and harnessed the infrastructure being developed in SIM. While the use of flexibility to incent commercial payer alignment allowed most of these states to achieve commercial participation, this strategy increased the variability of models offered in the state.

Even with flexibility, commercial participation was not ultimately feasible (Delaware, Idaho) or the level of participation was not always large for some of the models (Ohio). Delaware and Idaho allowed commercial payers to design their own VBP models, however VBP implementation for commercial plans was not achieved. Payers in Delaware cited barriers with the strong negotiating position of large health systems and lack of readiness for VBP by primary care practices. Ohio was successful in reaching their Medicaid population statewide with episode of care (EOC) models, but individual commercial plans used few or none of the episodes, even though the state had received agreement in principle on the model from four commercial plans prior to launching. Ohio was more successful in engaging commercial payers through their prior involvement in CPC and by developing a tailored PCMH model that aligned where possible with the CPC+ model.

The second approach that states used to incent commercial payer participation was to pass legislation or use state authority to mandate model components across payers. For example, Arkansas passed the Health Care Independence Act to require commercial qualified health plans and Medicare Advantage Special Needs Plans serving dually eligible beneficiaries to participate in the state's PCMH program. In 2017, Oregon passed legislation (Senate Bill 934) that required primary care spending rules for state-funded health plans and commercial plans. Rhode Island's Office of the Health Insurance Commissioner regulates insurers adoption of VBP models, leveraging standards that require insurers to invest in primary care and sets targets for model participation. In addition to having 80% of children enrolled in Medicaid into a VBP arrangement, Rhode Island reported that 50% of children in commercial plans and 46% of all commercial payments were covered under a VBP at the end of the SIM award period, successfully meeting the state's set targets. Some states, such as Ohio and Maine, deliberately did not pursue regulatory avenues to require commercial sector participation in SIM and instead focused on consensus building across payers to encourage uptake of activities that spanned multiple payers.

Policy lever: States mandated commercial participation

- Arkansas
- Oregon
- Rhode Island

The third strategy states used was to engage and convene commercial payers on relevant issues to increase participation in SIM. Maine, Minnesota, Oregon, and Vermont exploited their ability to convene large groups of stakeholders by hosting learning collaboratives to address a variety of topics related to model certification requirements, how to integrate behavioral health, data collection related to quality measurement, care coordination, the use of community health workers, and how to improve prevention screening efforts.

Some states offered payer agnostic resources to providers for maximum effectiveness and reach across various populations. For example, Oregon expanded technical assistance and certification support for eligible primary care providers (PCPs) as well as promoted and supported their coordinated care model adoption to commercial plans serving state employees and public educators. Colorado had a similar approach with their Integrated Behavioral Health model as practice transformation activities were meant to affect all patients, regardless of payer.

Policy lever: Convening & engagement with commercial plans

- Colorado
- Delaware
- Idaho
- Maine
- Massachusetts
- Minnesota
- New York
- Oregon
- Tennessee
- Vermont
- Washington

Commercial market composition influenced how states pursued engagement. For example, Colorado and New York had no dominant commercial payer covering the majority or even a plurality of lives in their respective states. Having so many payers can limit a state's ability to influence an outcome given each payers competing business interests. However, Colorado convened their many payers who agreed to support primary care practices in the SIM-funded initiatives through their own existing VBP models. One commercial payer in Colorado explained it this way:

"All of the health plans have participated in earnest and it's just been a really good thing … there's a lot of authentic support for it. It is not formalized; it's really just a voluntary collaborative convened to support payers' own programs and to leverage these federal programs that have been coming along."

New York's focus on commercial payers, rather than Medicaid, was unique among SIM states. However, they struggled to obtain agreement among payers on a payment model. Ultimately, New York obtained agreement in many parts of the states to target PCPs for transformation assistance. As one commercial payer in New York noted:

"In general, I think the positive that has come out of [this].. just bringing the payers together. It's been a great forum and information exchange that historically you don't find between payers. They're competitors, they're at odds, and this has been great to have a common goal that they can all talk about and agree to in one place. That's been really beneficial."

Not all states were successful in achieving multi-payer alignment. Delaware, Idaho, Maine, Massachusetts, and Minnesota initially engaged commercial payers to participate in the SIM Initiative through work groups, advisory committees, and/or public private collaboratives, but were unable to involve commercial health plans in their model. In Minnesota, some payers preferred not to share proprietary information for fear of losing a competitive advantage. Maine had previous multi-payer efforts it had hoped to build on in SIM, however, found a lack of alignment across business goals for commercial payers and were not able to involve payers beyond Medicaid.

Building Consensus on Quality Measure Alignment and Feedback Reports to Ease Provider Burden

New care delivery and payment models used by states often offered financial incentives for performance on quality metrics and many states reported quality metrics to providers to allow for quality improvement. In some cases, quality measures tied to financial incentives demonstrated greater improved performance (Oregon, Arkansas, Vermont). While these activities are in line with spreading value-based models to improve quality for patients, they can also come with some unintended consequences. Providers have concerns with submitting data to multiple quality reporting systems on multiple quality measures that often do not align. For example, each commercial payer has their own set of metrics and reporting systems, on top of what Medicaid or Medicare may

require. Providers found it especially burdensome to submit slightly different versions of the essentially the same metric based on idiosyncratic requirements across payers. Providers also expressed concerns with the timeliness and accuracy of the data feedback reports they received through their participation in state VBP models.

In an effort to alleviate provider reporting burden, states pursued many avenues to align quality metrics. These actions included requiring commercial plans to use common measures for specific health conditions, tying measure sets to a specific model, harnessing MCO contracting to require a specific measure set, legislation, as well as engaging stakeholders in feedback and revisions to measures (see Appendix Table 4). States found that early consensus building through stakeholder engagement was important to achieve alignment. Stakeholders particularly praised states that put systems in place for soliciting feedback and updating measure sets regularly (Ohio, Washington, Tennessee). One payer in Ohio reflected,

"On the whole, we realize that asking providers to do very different things than what everyone else is asking them to do doesn't really achieve goals. We hear a lot of feedback from providers that if providers are measured on too many things they won't be successful, so we try to align in a way that makes sense to provide quality and the value we're looking for."

Several states were ultimately successful in achieving at least partial quality measure alignment. States that were successful used the following strategies: allowed flexibility in matching measures across populations served; minimized the number of measures; and developed processes to obtain and respond to stakeholder feedback. Vermont and Arkansas developed a single set of measure constructs across payers, albeit with some variation in measurement required related to the different populations being served by each payer. For example, the required quality metric for developmental screenings for young children is included for Medicaid but not Medicare within Vermont's ACO model, given that the measure is only relevant the Medicaid population. Arkansas aligned Medicaid and commercial payers around measure constructs within the EOC model but left measure specification to payer's discretion based on their existing systems and needs. After lengthy discussions with Medicaid MCOs, Delaware prioritized a small (seven) set of measures pertaining to Medicaid's objectives in primary care and added language to MCO contracts setting annual minimum standards to meet on the measures. These strategies increased payer's willingness to buy into the objectives of alignment and removed barriers to securing VBP contracts with providers. New York modified measures based on payer and provider feedback and considered their quality measure alignment to be one of their major successes with one official putting it this way:

States achieved partial measure alignment:

- Arkansas
- Connecticut
- Delaware
- New York
- Ohio
- Rhode Island
- Tennessee
- Washington
- Vermont

" the advancements we've made in quality measurement. Most of that has to do with alignment, whether or not anybody would call that an advancement or not, I'm not sure. But to be able to get to a place where we have a primary care core set that's being used. It's being understood by commercial insurers, it's being used within the Medicaid VBP arrangements, and what we work with Medicaid plans on, there's some commonality to try to get ahead some of the reporting burden that we were hearing from practices."

Not all efforts in quality measure alignment were successful. For example, Maine's ACO measure set to gauge provider performance had limited uptake, likely related to its voluntary adoption and separate measure requirements for each commercial payer. Providers in Maine noted that the number of measures identified for reporting was overwhelming and unwieldy. Smaller practices may lack resources and infrastructure necessary to report certain quality measures, as was noted by providers in Maine and Vermont. Vermont, however, addressed this by offering practices additional resources for quality measure reporting through provider subgrants to ACOs. Oregon's mandated alignment was limited to a small number of payers that only covered a third of the state's

population and meant that providers within the state continued to face the burden of reporting data to multiple different systems.

States were motivated to align quality measures to reduce burden for providers serving a range of patient populations. Providers were concerned that measures did not apply to their patient population or did not fairly represent the underlying quality of care. As one Massachusetts provider illustrated: *"Until you have an accurate static panel, it really is hard to really trust the quality measures that are coming our way."* States' work on measure alignment was noticed by providers across multiple SIM states, although many providers still reported having to submit data to multiple quality reporting systems on different quality measures. A representative from a New York payer put it this way*: "Some of these groups have complained that certain payers are asking them for 20 or 30 measures and the way they report to one is different than what they have to report for another, so trying to get that number down was a step in the right direction."* Round 2 states took several actions to remedy these concerns including removing measures intended for national specifications, dropping or modifying metrics considered to be problematic, and/or reducing the required number of measures. Many states were partially successful in aligning quality measures (Ohio, Tennessee, Connecticut, Rhode Island, Washington). Most attempts to align quality measures across payers in Round 1 states were unsuccessful except for Vermont.

In an effort to have providers more engaged on the quality measures they were being held accountable for in the VBP models, states developed performance feedback and data reports to regularly share with providers. Reports could be specific to individual patients the provider was serving in the model or could be for the provider's entire patient panel. Many providers found the reports helpful. One Ohio provider put this way: *"We were told they [referral reports] were coming, but nobody was told how to use them effectively. So there's a huge assumption that they [practices] would all go, 'Oh great. Thank you. We're going to go ahead and dive into those babies.' No, no. So it took a long time for people to start using them, but I want to tell you the ones who used them, they found them extremely valuable."*

Arkansas provided quarterly reports for each EOC assigned to a participating provider beginning with aggregated reports and in later years providing individualized patient-level data to help providers understand their performance related to risk sharing. Arkansas also provided standardized reports to participating providers across payers for their EOC models and used a similar system for standardizing PCMH feedback reports to PCMH providers. All Round 1 states planned to sustain performance feedback reports after SIM ended. One provider in Oregon noted: *"I would assume I was taking good care of my diabetics, but I would have no idea if that was true or not. I would have some... percentage in my mind of how well I was doing, but it's really getting the feedback [from performance reports]*."

States provided feedback to providers on quality:

- Arkansas
- Colorado
- Connecticut
- Idaho
- Maine
- Massachusetts
- Minnesota
- New York
- Ohio
- Tennessee
- Washington

c. <u>States Invested in Practice Transformation to Change Beneficiary Experience of Care</u>

→ Flexibilities allowed states to tailor approaches to increase participation of rural, small, or safety net providers.
→ Health IT investment improved care coordination.
→ Investment in care coordinators was used to address Social Determinants of Health.

Payment Model Designs Tailored to State's Unique Needs, Inclusive of Rural Populations

States adapted their model designs to the unique features relevant to local participants and stakeholders. Many factors can vary widely across states, including the sociodemographic make-up of the population and the level of

provider availability. Stakeholders appreciated the flexibility that states used in implementing models across the state, with some states choosing to roll out regionally versus statewide.

Where states launched a statewide model, some tried to account for regional variation in the design. For example, Oregon provided flexibility in the payment model design by allowing individual Coordinated Care Organizations (like an ACO) to determine the type of VBP model they wanted to implement to account for regional variation instead of being proscriptive. This ability allowed states to be more successful at increasing uptake of model participants, especially for those who may not have qualified or chosen to participate in larger, national models. New York originally planned to implement a statewide PCMH model. However, the state struggled to get payers to adopt this approach, so the state opted for a regional approach instead to encourage payers to commit to what eventually became the New York State (NYS) PCMH model. This revised approach proved to be more successful.

Several states specifically designed their payment models to incent safety net providers, such as Federally Qualified Health Centers (FQHCs), and rural providers, to participate**.** Colorado, Idaho, New York, and Washington implemented smaller, targeted models designed to improve access to care in rural communities such as expanding access to specialty care, enhancing primary care provider's capabilities, and expanding or stabilizing the rural workforce. For example, Washington created two payment models for safety net providers that included a Medicaid payment model for FQHCs and a separate multi-payer model for rural hospitals (although this latter model was not ultimately implemented). Additional states that included FQHCs in their models were Colorado, Connecticut, Delaware, Maine, Massachusetts, Ohio, Tennessee, and Vermont.

Policy lever: Flexible model design unique to small, rural, or safety net providers

- Arkansas
- Colorado
- Delaware
- Idaho
- Iowa
- Minnesota
- New York
- Ohio
- Washington

States simplified enrollment criteria for participation or used criteria that did not impose high upfront costs, such as requiring national certification. In Ohio, 35% of practices participating in the state's Medicaid PCMH program were considered rural relative to the 19% of providers considered rural within the state. The state took action, and one Ohio provider said: *"One of the biggest change[s] is the lowering of the threshold and allowing smaller size practices to access the system. And how many have chosen to do that? I don't know the answer to that question; it could be very small, but at least changing that threshold in my mind has been important from a policy standpoint."*

States such as Delaware and Iowa provided flexible terms in Medicaid MCO contracts that allowed them to recruit new practices to VBP models and specifically described rural and small practices as benefiting. As one Delaware provider noted, *"I really think it was a good decision [to not enforce a common, standard VBP model] that actually helped practice transformation move on. I think that any attempt to try to create that type of a payment model would have just made more doctors leave Delaware."*

States used creative tools to provide flexibility in model design that grouped providers together or used virtual options to ensure rural and/or small practices were included in VBP models. Ohio and Arkansas allowed practices to group together to reach minimum panel sizes requirements to participate in the state's Medicaid version of CPC+. Minnesota created two types of participation options in its ACO model; one option designed for larger systems that can bear upside and downside risk; one designed for small, rural, and independent providers with upside risk called the "virtual Integrated Health Plan". Idaho created a virtual PCMH certification option alongside a traditional PCMH track to support rural and frontier areas that required greater integration of telehealth and community health workers. Other states may not have designed their model to specifically include rural providers, but providers in rural areas still chose to participate in the models that were offered broadly within the state (e.g., Maine, Vermont).

Despite flexibilities, some providers working in small, often rural, practices still noted barriers to participation in VBP models. In Arkansas, the state offered practices that lacked the minimum Medicaid patient panel to participate in the PCMH shared savings program to pool together with other smaller practices. Providers in Arkansas focus groups were generally not enthusiastic about this option and practices that did join together to become a single PCMH noted that relatively small pools of providers can suffer disproportionately more when a single doctor performs poorly on either quality or financial measures. Some FQHCs in Washington cited reasons for non-participation in the state's Medicaid payment model due to a reluctance to move away from accustomed approaches, a lack of clear financial benefit to the clinic, and insufficient number of attributed patients to produce reliable performance measures. The state was unable to recruit many rural clinics due to a lack of sufficient infrastructure and only a small portion of patients being attributed to the model.

Policy lever: Tailored recruitment & supports for small or rural providers

- Colorado
- Delaware
- Idaho
- Minnesota
- New York
- Ohio
- Oregon
- Vermont
- Washington

States used recruitment strategies to attract practices with rural primary care providers to either participate in the VBP model or receive benefits from the broader state-based infrastructure investments. Strategies included offering free technical assistance (TA) and practice coaches without requiring participation in a VBP program or PCMH certification first and mini-grants to fund small infrastructure upgrades**.** A few states (Idaho, New York, Oregon) focused efforts on expanding telehealth technology to rural providers while others provided telehealth tools to address workforce shortages, such as supporting Project Extension for Community Healthcare Outcomes (Project EHCO). For example, Oregon expanded a prior telehealth service across a range of projects related to increasing access to specialty services in rural or remote areas of the state, including to enable primary care providers to consult with psychiatric specialists through Project ECHO. Using this national hub and spoke tele-mentoring model, primary care providers (spoke) received didactic presentation via videoconferencing by the specialist (hub) followed by case-based learning while retaining responsibility for the care of their patients. Stakeholders viewed Project ECHO as one of their major accomplishments.

Many of these initiatives received widespread support from stakeholders and were sustained in the short term. These strategies appealed to practices that lacked the readiness or resources for VBP or had not yet embarked on practice transformation. Even with these resources, some rural providers still reported financial and workforce barriers. Provider shortages in rural areas created challenges for patients to access specialists, particularly for mental health, substance abuse, and behavioral health services with the added concern from patients that it may be difficult to maintain anonymity in small rural communities.

Investing in Health IT to Drive Practice Transformation

Many states had previously received federal support[22] to incentivize adoption of electronic health record and health information exchanges or for technical assistance[23] to align health IT and health care transformation activities within the state. States built on that prior assistance to expand access to other provider types, such as behavioral health, that did not qualify for previous programs. A few states had legislation in place related to all-payer claims databases (APCDs), telehealth, and state health IT positions (Arkansas, Colorado, Connecticut, Delaware, Vermont) to address access to care via technology.

[22] CMS's Medicare and Medicaid EHR Incentive Programs (renamed Promoting Interoperability Programs) and the Electronic Prescribing (eRx) Incentive Program, begun in 2011; Office of the National Coordinator for Health Information Technology (ONC) State Health Information Exchange Cooperative Agreement (State HIE) Program, which operated between 2010 to 2014.
[23] ONC's Trailblazer Project between 2011-2013 (Arkansas, Massachusetts, Minnesota, Oregon, Rhode Island).

New or expanded investment in health IT through SIM helped expedite practice transformation and track improvements in population health. States invested in a variety of activities and platforms including APCDs and health information exchanges (HIEs). Providers noted how health IT investment changed and improved how they were providing care. One Idaho provider shared, *"… as long as the patients are participating in the data exchange, which most patients do, and then the other practices, then you can get everything without having to go through a cumbersome request and faxing."*

Policy lever: Invested in APCDs

- Connecticut
- Delaware
- Rhode Island
- Tennessee
- Washington

Policy lever: Invested in health information exchanges

- Arkansas
- Connecticut
- Idaho
- Maine
- Massachusetts
- Michigan
- Minnesota
- New York
- Oregon
- Rhode Island
- Vermont

Expanded use of newly created HIEs enabled more clinicians, nurses, pharmacists, behavioral health care providers, and patients to securely access and share medical information electronically. As one Tennessee state official noted about the state's care coordination tool:

"[Providers] can see a diabetic is supposed to have four foot exams a year, and if someone's only had two, then there's a gap in care there. It would highlight that and show it in red. It also risk stratifies patients, showing who's getting better and who's getting worse, who needs more care, who hasn't seen the doctor in a while, and it shows if they're in the hospital and what they're in for."

States improved data functionality for care coordination using admission, discharge, and transfer (ADT) notifications. Providers across multiple states noted the benefits of state's health IT efforts to expand ADT alerts to exchange clinical information occurring outside of their walls, and consumers also noted benefits of the alerts for coordinated care related to their hospital services. This investment provided the means to overcome communication and data barriers that often lead to unnecessary utilization and ultimately increased spending. As a Tennessee payer described, *"If you're looking at the ADTs, you see this member went to the emergency room and contact him educate him that, 'Hey I was open during these hours you went to the emergency room,' so that it won't happen again and we decrease emergency use."*

Policy lever: Use of ADT notification

- Arkansas
- Connecticut
- Iowa
- Maine
- Massachusetts
- Michigan
- Minnesota
- Oregon
- Tennessee
- Vermont

Peer-to-peer Learning and Technical Assistance to Promote Practice Transformation

Policy lever: Supported peer-to-peer learning and TA

- Arkansas
- Colorado
- Delaware
- Idaho
- Maine
- Massachusetts
- Minnesota
- New York
- Ohio
- Oregon
- Vermont
- Washington

States supported practice transformation through peer-to-peer learning and individualized technical assistance (TA) was considered effective. All Round 1 states provided learning collaboratives to foster connections among providers to help them meet requirements for new models. Providers valued sessions that were didactic in nature and provided opportunities for participants to discuss implementation experiences with one another. Six Round 2 states prompted participation among rural providers by providing technical assistance for practice transformation and peer-to-peer mentoring (along with financial and infrastructure support related to telehealth barriers).

Many Round 1 and Round 2 states provided individualized technical assistance tailored to the unique needs of practices. This support allowed providers to change the way they delivered care, how to collect data for quality measurement, and meet the goals of their respective models. Providers thought these resources were generally positive. One Rhode Island provider put it this way: *"So I can speak for our practice and for myself. It's been extremely transformative. We've really started to move into a different way of being able to care for our patients and expand our teamwork and care coordination*."

Policy lever: Individualized TA

- Arkansas
- Colorado
- Connecticut
- Delaware
- Idaho
- Maine
- Massachusetts
- Michigan
- New York
- Ohio
- Oregon
- Rhode Island
- Tennessee
- Washington

States Enabled Team-based Care, Some Focused on Social Determinants of Health

SIM investment expanded clinical staff to include care coordinators, social workers, and community health workers (CHWs) to create a team-based care delivery model. Fourteen states augmented existing care coordinator programs to address a broader range of referral needs. As a Colorado provider reflects, *"We're starting to screen for social needs and actually learning a lot about the community. … we've come to find out that there's a lot more need for that kind of screening and providing resources."*

Though not unique to SIM, investment in CHWs played a prominent role in states' work to transform their health care systems**.** A few states used CHWs to address patient's social determinants of health (SDoH). For example, Michigan relied on care coordinators, case managers, CHWs, and other practice staff to assess a patient's social needs with SDoH screening tools. As one Michigan PCMH provider indicated:

> *"We have a care manager [who's] in our office [approximately] four days a week to help with those [non-medical] patient needs. With implementing the social determinants of health screening form, we've been able to identify more and get more people the assistance they need. I think a lot of patients don't realize that those things can be provided or that we can direct them to a route where they can get assistance."*

Policy lever: Augmented existing care coordinator programs

- Arkansas
- Colorado
- Connecticut
- Delaware
- Idaho
- Iowa
- Maine
- Massachusetts
- Michigan
- Minnesota
- Oregon
- Rhode Island
- Tennessee
- Vermont

Some states used CHW to develop close relationships within the communities they serve and provide frontline public health services. Connecticut, Idaho, Michigan, and Rhode Island subsidized training, certification, and funding for CHW positions in clinical settings. For example, Idaho SIM funds were used to deploy CHWs to clinical and community settings in rural and underserved areas of the state to increase the capacity of health care teams and improve health equity. As a Connecticut provider noted, *"When [CHWs] make that connection, you see what a huge gift it is for that person or for their family. There's that tangible connection of support and something that above and beyond what most of the beneficiaries would think would be available from a health system and really kind of meeting them where they're at."*

Policy lever: Invested in CHWs

- Connecticut
- Idaho
- Iowa
- Maine
- Michigan
- Minnesota

Maine, Minnesota, and Oregon integrated new workforce roles into primary care practices to improve chronic disease management and patient experience. Some providers in Maine and Minnesota noted that they were uncertain how to use CHWs effectively because their functions were unclear and seemed to duplicate those of care coordinators in the office. To address this, Maine and Minnesota hosted trainings and learning events on how providers can use CHWs to address social determinants of health.

d. Improving Pediatric Care

- → Given that children represent a large proportion of Medicaid recipients, states needed to address pediatric care balancing differing health care needs for adult populations.
- → Most states included pediatric stakeholders in their convening efforts.
- → All 17 states included at least 1 pediatric quality measure to assess care.
- → Sixteen states included pediatric populations within their broader payment models.
- → Six states tailored initiatives or models specific to pediatric populations.

With a large proportion of children in each state covered by Medicaid (ranging from 30-50% in most SIM states),[24] states needed to balance children's needs with those of the broader adult populations. Children's health care needs are unique to their developmental stage and often require pediatric providers focus on well-care visits, vaccinations, family-centered care, and behavioral health integration to a larger extent than providers caring for adults, who more often focus on chronic disease management. Including children in payment reforms primarily designed to address the needs of the adult population could mean that pediatric factors are not well addressed. Similarly, adult populations tend to have higher spending than pediatric populations, creating complications for constructing appropriate benchmarks and payment amounts for payers.

Most states engaged pediatric stakeholders in their convening efforts including children's pediatric primary care providers and children advocates. For example, Colorado convened a SIM Pediatric Stakeholder Group during the SIM Initiative to make recommendations about alternative payment models focused on child health promotion, though ultimately such payment models were not developed.

All states included at least 1 pediatric focused quality measure in the menu of measures to assess providers. These measures commonly included well-child and adolescent visits, developmental screenings, immunizations,

[24] Kaiser Family Foundation estimates based on the 2008-2022 American Community Survey, 1-Year Estimates: https://www.kff.org/medicaid/state-indicator/rate-by-age-3/

weight (body mass index) assessments, as well as other measures such as appropriate use of asthma medication, testing for children with pharyngitis, fluoride varnish, and depression screening.

Some states created pediatric focused initiatives to support children's well-being outside of the payment models being designed in the state. For example, Connecticut's Health Enhancement Communities included key activities focused on improving child well-being and improving healthy weight and physical fitness. Colorado (behavioral health transformation collaboratives), Rhode Island (Autism Project), and Ohio (fostered partnerships between primary care practices and schools) launched school-based initiatives. Tennessee and Rhode Island provided technical assistance to pediatric practices for pediatric specific topics.

A few states tailored their models specifically to pediatric conditions. For example, Arkansas, Ohio, and Tennessee had EOC models focused on asthma, pediatric pneumonia, upper respiratory infections, attention-deficit/hyperactivity disorder (ADHD), oppositional defiant disorder (ODD), otitis media, pediatric pneumonia, or acute lower respiratory infection.

Rhode Island implemented a delivery system and payment reform as part of their SIM Initiative designed exclusively for children (PCMH-Kids) to extend the state's earlier work of a PCMH model focused on the adult population. The program was designed to further behavioral health integration with primary care through care coordination and new health information technology. By the end of SIM, Rhode Island reported improvements in developmental screening and counseling in its PCMH-Kids model, and participating providers praised the model for helping to improve care coordination, enhance the referral process, and connect providers and children to the appropriate resources. However, the per-member per-month (PMPM) payment providers received for PCMH-Kids was 70% less than those received by providers in adult practices. Even with the introduction of additional Medicaid financing to alleviate this difference (increasing the PMPM from $3.00 to $3.50), practices reported that it did not cover the true cost of caring for the pediatric population.

Policy lever: Inclusion of pediatric populations within boarder payment models

- Arkansas
- Colorado
- Connecticut
- Delaware
- Idaho
- Iowa
- Maine
- Massachusetts
- Michigan
- Minnesota
- New York
- Ohio
- Oregon
- Tennessee
- Vermont
- Washington

Policy lever: Tailored pediatric payment models

- Arkansas
- Ohio
- Rhode Island
- Tennessee

Ohio's PCMH originally did not separate out children and adults but had both included in the wider Ohio CPC model. However, pediatric stakeholders did not believe the model's risk adjustment methods accurately captured the health needs of pediatric patients and expressed concern that adult-focused models and measures were being applied to the pediatric population. In response, the state created an Ohio CPC Kids track (that began after the SIM award completed) where eligible practices received an enhanced PMPM payment and were assessed on pediatric-focused quality and utilization measures, in addition to those measures used in the broader Ohio CPC model.

"All of this I think is great theory. It simply doesn't work when you take adult focused improvement efforts and apply them to kids. The pediatric implications for the adult focused episodes and [Ohio] CPC have not translated to pediatrics. The definitions don't work. The savings have not been generated … We've not been able to unlock those payments to come all the way through to those of us who did the work. And it was quite time consuming." —Ohio provider

Most SIM states (n=16) with Medicaid models such as PCMHs, ACOs, and EOC included pediatric populations and pediatric providers, even if the model was not specifically designed for the pediatric population. In Arkansas, a third of the PCMH's practices were pediatric and over 60% of practices were family-based practices, suggesting that the PCMH covered a large proportion of children. Minnesota's had two pediatric focused providers involved

(Children's Hospital and Clinics of Minnesota and Gillette Children's Specialty Healthcare) in its ACO model. Providers at these institutions noted that there were fewer opportunities to contain health care spending within the pediatric population relative to an adult population because average expenditures for children are lower than expenditures for adults in both the Medicaid and commercial populations. Tennessee's MCOs enrolled all children in TennCare into a pediatric PCMH or into a family-based PCMH. PCMHs were responsible for well-child checkups, dental checkups and services, medical services, behavioral health services, and screenings. Tennessee's PCMH model provided all PCMH providers the opportunity for gainsharing based on meeting quality metrics without varying their formula based on the patient population.

A few states created projects focused on pediatric behavioral health, **many of which used telehealth**, that were largely seen as successful within the state and were sustained after SIM ended. Massachusetts expanded a prior initiative through SIM called the Massachusetts Child Psychiatry Access Project (MCPAP), which is a telephonic consultation initiative that enhances the capacity of pediatricians and primary care physicians to deliver behavioral health services to children and postpartum mothers. MCPAP and MCPAP for Moms were both sustained through state legislature appropriations.

Policy lever: Pediatric behavioral health projects

- Massachusetts
- Oregon
- Rhode Island

Rhode Island established the Pediatric Psychiatry Resource Network (PediPRN), a telephone consultation service to help pediatric PCPs better serve their patients with behavioral health conditions. Following the end of the SIM Initiative, Rhode Island state officials received a waiver that would enable Medicaid reimbursement for this telephone based psychiatric consultation. PediPRN received strong support from providers and other stakeholders with one state official putting it this way, *"… PediPRN has probably the best chance of having a long-term impact on the delivery of behavioral health care, just by the fact that the earlier you're able to identify and intervene, the less impact that has on the adult system…"*

Oregon also launched a child psychiatry consultation clinic pilot with SIM funds for rural clinics that were located 50 miles or more from a pediatric inpatient facility. The project spanned 30 sessions and included topics such as child psychiatric assessment, psychotropic prescribing, specific mental health issues, and making referrals. Participants reported a high degree of learning across various topics with screening for patients with mental health disorders having the highest percentage of participants reporting learning (89 percent) and the lowest percentage of participants (39 percent) learning for the topic on prescribing and managing medications for co-occurring mental health and substance use.

e. Transforming Behavioral Health

→ Beneficiaries spoke to the changes in their care because of SIM, such as access to same-day appointments, though perspectives were mixed around access to care for behavioral health and specialty care.

→ Providers attributed their behavior changes, such as expanded access to primary care, to SIM funding as part of larger transformation efforts, although challenges persisted.

States used a variety of means to incent transforming practices in their behavioral health integration (BHI) efforts (see Appendix Table 1, Behavioral Health). Five SIM states created a behavioral health model during SIM such as behavioral health homes for serious mental illness or integrating financing of behavioral health care within comprehensive managed care plans to increase integration and access to providers. Fifteen states supported innovations in behavioral health care outside of a traditional payment model by promoting behavioral health screening tools in primary care settings, facilitated communication and referral streams between primary care and behavioral health providers through telehealth or telephone initiatives, encouraged colocation of behavioral health providers and PCPs, provided grants, and/or TA.

Policy lever: BH payment models

- Colorado
- Maine
- Minnesota
- Tennessee
- Washington

States used TA and peer-to-peer learning to help primary care and behavioral health providers transition to integrated care models. For example, Colorado and Tennessee used practice facilitators/coaches to offer training on how to change workflows to account for and best utilize multidisciplinary teams. This investment had the effect of helping PCPs become more comfortable with treating patients with mental health and substance abuse needs. Similarly, behavioral health advisors became more adept at talking with their patients about their physical health needs and making sure primary care services were received. One Colorado primary care provider shared their views this way, *"I think that she's [practice coach] been great in just helping us … When I say SIM is not a burden, the reason it's not a burden is because our CHITA [clinical health information technology advisor] and our practice coach have worked with us."*

Policy lever: Support outside of BH payment models

- Arkansas
- Colorado
- Connecticut
- Delaware
- Idaho
- Maine
- Massachusetts
- Minnesota
- New York
- Ohio
- Oregon
- Rhode Island
- Tennessee
- Vermont
- Washington

Providers stated that SIM helped open lines of communication and facilitate relationship building necessary to coordinate behavioral health care outside of primary care setting. For example, following up on referrals to specialists by helping providers connect "outside of practice walls." Using their convener status, states encouraged several stakeholders to engage at the same table, which was key to making strides in integrating behavioral health and primary care services. Vermont's SIM ACO model required greater care coordination and integration of providers across the participating health systems, beyond the primary care model that was previously established. The state's investment in practice transformation support and provider engagement through SIM opened the communication channels between different types of providers statewide. This was evident from a behavioral health provider in Vermont who said*, "…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."*

f. Beneficiary and Provider Perspectives

Beneficiary Perspectives

Beneficiaries noticed changes to their care through practice transformation efforts. Beneficiaries viewed care coordination positively with some perceiving an ease in having their electronic records being available across their care team. When compared to the start of the SIM initiative, more Medicaid beneficiaries in focus groups reported they could get same-day appointments at their primary care practice at the end of SIM, which beneficiaries noted with satisfaction. A patient in Vermont said, *"The Health Center's really nice in that they also do walk-in visits and stuff like that, so if I have an emergency for something I can show up and generally I only have to wait half an hour to an hour to get in to see somebody same day."*

Part of the expansion of team-based care has included an increase in the use of nurse practitioners (NP) and physician assistants (PA) to alleviate shortages in primary care and provide patients with greater access to care. While beneficiaries liked same day-appointments, they also valued seeing their same providers over time. Some patients were frustrated with not being able to see their physician when they received health care services but instead were seen by an NP or PA. A beneficiary in Massachusetts illustrates this concern, *"In the 4 years that I've been going to [doctor's office], I've only seen her a handful of times. I usually see a PA [physician's assistant], you know a physician's assistant or a nurse practitioner. I really would like to see my own doctor."*

State's efforts related to SDoH were noted by beneficiaries as mostly beneficial and over time these beneficiaries had a greater degree of openness to answering these questions to accept assistance with identified needs. A Michigan beneficiary said, *"It is a big relief when you have somebody to help you. I made a big step from being homeless to a house owner."* Medicaid beneficiaries were positive about case managers that exceeded expectations to ensure patients had housing, food, and timely access to their medications. A Health Link beneficiary in Tennessee talked about their experience with a caseworker, *"Yeah, she's pretty good. She 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."*

Despite state efforts, some Medicaid beneficiaries still experienced barriers to gaining access to behavioral health and specialty care. As noted by many primary care-based providers, much of these issues were driven by broader shortages in behavioral health providers. A beneficiary in Minnesota explains, *"So that's where Duluth, Minnesota, is right now. Mental health, they need 500 more beds. They're shipping people to the cities, to Grant, to St. Cloud. You have to go through the emergency room to get to the psych ward."*

Beneficiaries experienced long wait times to see specialists, behavioral health providers, and providers who were unwilling to accept Medicaid insurance. A beneficiary in Massachusetts illustrated this experience, saying, *"Once again, it all goes back to financially what I've had to deal with, because a lot of people that I tried to outreach to, do not take my MassHealth [for behavioral health care]. They do not. They say MassHealth and they laugh almost, and you're like, 'Well, damn.'"*

Beneficiaries spoke positively about health IT related changes for improved care coordination. Patients particularly noted PCPs being aware of hospital admissions and EHRs helping physicians track information across various health care systems. As one beneficiary in Minnesota noted, ***"****It's all one computer system. When they pull up your record, they see every doctor. Notes from every doctor that you've seen within the system****."***

Evidence-based care, monitored by quality measures tied to financial incentives, met with some dissatisfaction among beneficiaries at times. A beneficiary in Arkansas illustrates an example of this type of concern*, "He won't give me antibiotics. I'll ask him, even the nurse is like, 'You sound like you've got bronchitis,' and the doctor's like, 'You're fine.' Wouldn't give me a prescription for a z-pak, he wouldn't give it to me. He told me to take some Mucinex and cough medicine."*

Provider Perspectives

Across a range of interviews and focus groups, there is clear evidence that participation in care delivery and payment models resulted in changes in the way providers delivered care in SIM states. Providers in focus groups across most SIM states mentioned many implemented strategies that helped them to care for their patient panels more appropriately. These included strategies discussed above (learning collaboratives and technical assistance, advancements in health IT, coordination with behavioral health, support for team-based care) but also included prevention-focused care, medication management, and expanded access to primary care, such as through extended hours. Providers understood the need and the movement to transform health care and, in some cases,

embraced the changes led by their states. As one Idaho primary care provider said: *"… we know it's the new reality, and we also know it's a better way of providing health care. It's a more efficient way of providing health care, and it's a less costly way of providing health care."*

Providers also noted challenges that persisted, some of which predated SIM and some of which related to new payment models. Despite some success of aligning quality measures and efforts to ameliorate burden in some states, new payment models in Colorado, Connecticut, Delaware, Massachusetts, Minnesota, and Vermont increased the reporting requirements on providers. For example, one provider in Vermont reflected, *"Time-consuming processes resulting from Vermont's initiatives are causing some providers to see fewer patients in any day and provide less care to needy patients. Some even say they are burning out."* In one of the mandatory models, providers became wary of treating Medicaid patients, as providers risked financial penalties that resulted from factors the providers felt were outside of their control. An Arkansas provider explained,

> *"It makes you apprehensive about taking a Medicaid patient who's further along in a pregnancy. My concern is …with some of these programs is that I will be financially penalized for this mother's overuse of emergency services and what I fear that my only response is going to ultimately be… well I'm not going to be able to provide care for this patient. You're going to have to go to some other doctor's office and then therefore I can check that off as I'm not going to have to worry about being financially penalized because it's not my problem anymore."*

g. Populations Reached through VBP Expansion

→ States had varying levels of success in reaching targeted populations in VBP models; 9 states reached >50% of their Medicaid populations through SIM; 3 additional states reached >20%.

→ States are limited to what populations they can affect and focused on innovations for Medicaid beneficiaries.

CMS ambitiously charged states with reaching 80 percent of their respective state populations in value-based care to incent broad transformation across multiple systems, payers, and populations. **Though not all states reached the 80 percent threshold, almost all states increased the number of Medicaid beneficiaries served by VBP models** (see Appendix Table 5). SIM resulted in a broad expansion of PCMHs, ACO, and behavioral health models that touched large numbers of Medicaid, and in some cases, commercial beneficiaries in payment models that were tied to quality incentives. Almost all Round 1 states[25] and five of the Round 2 states[26] reached more than 50 percent of their Medicaid populations through SIM. Three states reached at least 20 percent of their target by the end of their award, including Maine, Connecticut, and Iowa. A few states did not report population reach estimates in a similar format (making direct comparisons infeasible), but reported their success related to the state's population (Colorado[27], New York[28]), providers participating in VBP models (Delaware[29]), proportion of payments

[25] Arkansas, Massachusetts, Minnesota, Oregon, and Vermont
[26] Idaho, Ohio, Rhode Island, Tennessee, and Washington
[27] The state did report approximately 14 percent of Colorado's population received care from practices targeted by SIM.
[28] New York did not report the proportion of their state population covered by value-based payments, but estimates ranged from 50 to 80 percent across all payers.
[28] Rhode Island's PCMH program denoted here (PCMH kids) served a pediatric population.
[29] Delaware did not report lives covered by their PCMH model by payer. The state did report 80 percent of PCPs were in pay-for-performance arrangements.

in VBP arrangements (Washington[30]), or summarized all SIM efforts outside of a model touching a proportion of Medicaid beneficiaries in the state (Idaho[31], Michigan[32]).

States have limitations to the populations they can reach through reforms, but states also made choices about what not to prioritize as part of their SIM work. Most SIM states did not concentrate their attention on the Medicare and Medicaid dually eligible population,[33] which may be because Medicare is the primary payer for most health care services for those eligible for both programs. As states do not set Medicare policy, they would have less ability to effect care for those in Medicare who were also enrolled in Medicaid.[34] Perhaps more remarkably, states did not use their SIM awards to design models of care for those receiving Medicaid long-term services and supports (LTSS). As Medicaid is the primary payer for LTSS, and as LTSS comprise over 20 percent of Medicaid spending,[35] the lack of focus on this population is noteworthy.[36]

Many states were looking to CMS to create offerings that allowed them to participate in Medicare models as part of SIM or after SIM ended to provide opportunities to innovate and create alignment for other payers such as Medicaid. As an Iowa ACO representative notes: "*Medicare drives the boat in terms of PCMH [the patient centered medical home concept], quality, the data strategies. It definitely is keeping us the most focused on what we need to do to be successful. And then those benefits bleed over to different contracts … Medicaid and commercial."* Ultimately, nine SIM states[37] joined CPC+ (which was contemporaneous to Round 2) to achieve this goal. However, in both rounds, states were frustrated that Medicare was not "at the table" to participate in SIM models.

States have limitations in reaching certain populations. States do not typically lead in Medicare payment models, aside from a few unique exceptions. Similarly, states do not lead health care change for their Veteran populations. Though states regulate private insurers, they are mostly limited to encouraging VBP model growth through their state employee populations, usually through contracting. Therefore, it is not surprising that states made the most progress in reaching the largest proportion of the state population by innovating within Medicaid models.

[30] Washington reported that 75 percent of payments made via Medicaid MCOs were in a value-based arrangement in 2019.
[31] Idaho did not report lives covered by their PCMH model by payer. The state did report 89 percent of Medicaid beneficiaries to be in some form of value-based payment arrangement.
[32] Michigan reported approximately 18 percent of Medicaid beneficiaries to be in value-based payment arrangements.
[33] Arkansas, Maine, Oregon, Vermont included those dually eligible for Medicare and Medicaid in their payment reform models although they were not the primary or sole focus of these models. Oregon's Coordinated Care model served 54% of the Medicare-Medicaid beneficiaries in the state.
[34] The Medicare-Medicaid Coordination Office implemented the Financial Alignment Initiative for Medicare-Medicaid enrollees of which some SIM states are awardees (Colorado, Massachusetts, Michigan, Minnesota, New York, Ohio, Rhode Island, Washington).
[35] https://www.medicaid.gov/medicaid/long-term-services-supports/index.html#:~:text=Medicaid%20is%20the%20primary%20payer,services%20and%20supports%20(LTSS).
[36] Though some states engaged LTSS providers and advocates or invested in their LTSS infrastructure, such as Tennessee's direct care workforce, no state implemented a payment or delivery model directly suited to this population during its SIM award. After SIM concluded, Arkansas and Massachusetts, launched new payment models for LTSS providers that followed prolonged negotiation with these stakeholders.
[37] The following SIM states participated in CPC+: Arkansas, Colorado, Michigan, New York, Ohio, Oregon, Rhode Island, and Tennessee.

h. Investment and Sustainability

→ States either concentrated SIM resources towards working with payers to implement new models or balanced support for new models with investments in infrastructure that benefited other areas of the health care system.
→ States that had state legislation in place and/or use of Medicaid waivers and SPAs were more likely to sustain their VBP models after SIM ended.
→ States varied in their priorities in what to fund after the SIM award ended. Some efforts ended when no future funding was secured.

State's Allocation of SIM Funding and Perspectives on the SIM Initiative

States used one of two pathways to transform their health policy environment; 1) concentrating resources toward working with payers to implement new care delivery and payment models or 2) balancing support for new models with investments in infrastructure that benefited other areas of the health care system. Analysis of SIM award spending by states reflects these two different approaches. Nine states[38] concentrated SIM spending (50% or more) on payment models and delivery system transformation. Eight states[39] spread their funding more evenly across a range of activities, including payment models, delivery system transformation, health IT and data analytics, and population health efforts. States also drew on other funding and resources such as those within the state, from federal matching funds under Medicaid demonstrations and waiver authority, and from public-private partnerships. No pattern of spending ascertains a narrative regarding what levels of spending lead to outcomes. Instead, spending patterns show how states prioritized their awards. For example, relative to other states, Iowa (~25 %) and Michigan (~35%) invested greater proportions of their awards on population health activities which corresponded to their stated goals.

Overall, state officials and stakeholders had positive impressions of the efforts and results from the SIM initiative. A stakeholder in Vermont stated*, "The SIM project, by having work groups, even though it was a complex project and resource intensive, created mechanisms for bring[ing] representatives of diverse groups together to talk about significant issues and recommendations to take."*

Stakeholders and state officials remarked on their state's ability to focus resources on topics that were important in using their SIM funds. For example, respondents from Idaho noted that SIM contributed to their population health improvement plan and sharpened the focus on population health and population health outcomes. One official put it this way, *"When you have something like the SIM grant [i.e., award] that brings them [people] together to talk about the whole person care and focus and community focus, it was really beneficial."*

The ambitious goals that CMS set out in SIM allowed states to focus on a range of topics and gave attention and resources to address these issues comprehensively. A stakeholder in Minnesota illustrates this: *"The narrative has changed in Minnesota about 'What is health?.' There has been a big shift in the awareness of social determinants……SIM provided a venue and some funding opportunities to accelerate those conversations, and to put them into practice…"*

[38] Arkansas, Delaware, Colorado, Massachusetts, Maine, Ohio, Oregon, Tennessee, New York
[39] Connecticut, Idaho, Iowa, Michigan, Minnesota, Rhode Island, Vermont, Washington

Sustainability and Next Steps after SIM

States that had legislation in place and/or use of Medicaid waivers and SPAs were more likely to sustain their VBP models after SIM ended. Most states (n=13) found ways to sustain the VBP models, such as PCMHs and ACOs, presented here. In Round 1, Arkansas, Massachusetts, Maine, Minnesota, and Oregon either passed legislation, pursued a Medicaid SPA, and/or renewed a Medicaid waiver (including 1115 waivers) to sustain their models. Three Round 1 states (Arkansas, Oregon, and Vermont) passed legislation to further investments in new payment models. As noted by an Oregon state official, *"While SIM funding ends, this work will continue to be ongoing, largely because of infrastructure and relationships…".* Massachusetts received additional federal funding through a CMS Delivery System Reform Incentive Program (DSRIP) to continue to support the Medicaid ACO after SIM concluded.

Sustained SIM Medicaid VBPs:

- Arkansas
- Connecticut
- Iowa
- Massachusetts
- Maine
- Michigan
- Minnesota
- Ohio
- Oregon
- Rhode Island
- Vermont
- Tennessee
- Washington

Vermont's approach to sustainability was notable with the development the CMS Innovation Center Vermont All-Payer ACO model. Towards the conclusion of SIM Round 1 (but separate from their work on SIM), Vermont negotiated with CMS officials within the Innovation Center to modify targets within the Medicare Next Generation ACO model and develop statewide targets for the new All-Payer ACO Model. In tandem, the state negotiated with CMS officials within Medicaid related to the renewal of a 1115 waiver for the Medicaid Next Generation ACO program. The All-Payer ACO Model began a pre-implementation period in 2017 overlapping the state's final months in SIM.

Round 2 states had slightly different approaches to sustainability. Connecticut, Iowa, Michigan, Ohio, Rhode Island, Tennessee, and Washington planned to use state resources, Medicaid waivers and SPAs, and/or contracting through managed care to sustain their care delivery or payment models. This last approach is noteworthy and holds considerable promise as over 70 percent of Medicaid beneficiaries are served by an MCO.[40] As a Tennessee state official commented about their SIM work: *"We're invested in it no matter what … We just believe in it. We're just going to keep doing it."* Washington was awarded a DSRIP in 2017 and planned to use its award to sustain successes in Medicaid, such as Integrated Managed Care.

Sustained SIM investments:

- Arkansas
- Connecticut
- Idaho
- Iowa
- Maine
- Massachusetts
- Michigan
- Minnesota
- Oregon
- Rhode Island
- Tennessee
- Vermont
- Washington

Four states, Colorado, Delaware, Idaho, and New York, did not sustain their VBP models. Colorado was unable to obtain sustainable funding either through additional state or federal funding. Delaware did not continue their work with additional funding, but the resources and tools developed as part of their award were available for practices moving forward. As one state official in Delaware explained, *"As we look to sustain our progress and efforts made in payment reform, the lessons learned from the multiple challenges in achieving alignment among payers highlight the critical need for providers and payers to move forward together in unison and supporting broad participation across provider types and communities."* Idaho considered their award a one-time investment and chose not to enlarge their PCMH program. New York did not sustain their work, but the standards established in their PCMH program would have to be met moving forward for new PCMH practices.

Sustainability in commercial populations took a variety of approaches. Oregon and Washington planned to continue their ACO models through contracts for state employee health benefits. Arkansas passed legislation to

[40] Kaiser Family Foundation, 10 Things to Know About Medicaid Managed Care, 2023: https://www.kff.org/medicaid/issue-brief/10-things-to-know-about-medicaid-managed-care/

align commercial payers to their PCMH whereas Rhode Island received support from commercial payers for continuation of their PCMH model.

Several states, 13 of the 17, sustained their SIM investments in several additional areas beyond VBP models. Health IT was the most common infrastructure component sustained by SIM states. These efforts were seen as successful because they provided actionable information for providers and payers. As one Tennessee payer notes: *"If you're looking at the ADT, you see this member went to the emergency room and contact him educate him that, 'Hey I was open during these hours you went to the emergency room,' so that that won't happen again and we decrease emergency use."* Connecticut, Rhode Island and Washington passed or planned to pass legislation to sustain their APCD infrastructure. Connecticut, Maine, and Massachusetts sustained their HIE investments with state funds. Similarly, Connecticut, Iowa, Maine, Massachusetts, Michigan, and Tennessee sustained their ADT systems through state funding. Arkansas, Minnesota, Oregon and Vermont relied on provider investment for ADT sustainability.

Stakeholder enthusiasm of workforce investment for Community Health Workers (CHWs) allowed for sustainability in a few states. Six states (Connecticut, Idaho, Maine, Michigan, Minnesota, and Rhode Island) sustained their investment in CHWs via state funding. As a provider in Connecticut remarks, *"having access to the CHWs in the various settings that they're deployed … they are wonderful assets. I think that because we're a complex organization because of the state's landscape, it's hard to do things sometimes. They've been proven flexible. They reduce the activation energy to actually get things done."*

V. Quantitative Impact Results

Below we present quantitative findings for both rounds of SIM presented by the type of VBP model implemented and type of payer population reached. Table 1 presents the findings[41] for three model design (PCMHs, ACOs, BHI) of state-specific models for both rounds of SIM, where available. Results for EOCs that were able to be analyzed are also summarized below.[42]

PCMH and ACO models

Four[43] of the eight PCMH models in Arkansas, Connecticut, Delaware, and Ohio showed favorable decreases in Medicaid inpatient admissions and/or emergency department (ED) visits. Connecticut and Ohio significantly reduced Medicaid readmissions. ACO models (3 of 3) showed similar decreases in either Medicaid inpatient admissions and/or emergency department visits in Maine, Minnesota, and Vermont and Minnesota reduced readmissions. This lower utilization is coupled with significant decreases in total Medicaid spending in Connecticut, Delaware, Ohio and Vermont. Idaho 's PCMH also reduced total spending but did not show significant changes in the utilization measures examined. A few states had unfavorable findings, such as increased inpatient admissions and ED visits in the PCMH model in Massachusetts, increased inpatient admissions in Minnesota's ACO and Michigan's PCMH model, and increased total spending and inpatient admissions in the PCMH model in Rhode Island. A few states had non-significant findings in some of these measures: five states had non-significant changes in total spending[44], four states had non-significant changes in inpatient admissions[45], five states had non-significant changes in ED visits[46] and five states had non-significant changes in readmissions[47] (although four of the state analyses did not examine this measure).

[41] The findings here only pertain to spending and utilization as most quality-of-care measures were not consistent across models and states. See the full evaluation reports for outcomes not presented here.
[42] All analyses presented here include a comparison group as part of a difference-in-differences approach except for the Maine BHI which used a pre-post design.
[43] Arkansas, Connecticut, Delaware, and Ohio
[44] Arkansas, Maine, Massachusetts, Minnesota, Oregon
[45] Oregon, Connecticut, Delaware, Idaho
[46] Arkansas, Oregon, Idaho, Michigan, Rhode Island
[47] Delaware, Idaho, Maine, Michigan, Vermont

These quantitative findings, at least somewhat, correspond to results from the qualitative analyses for most states. Site visit data and subsequent analyses found that model participants were working towards expanded access to primary care through extended hours and care coordination. Medicaid beneficiaries in many SIM states noted that they appreciated being able to receive same-day appointments but disliked being seen by providers that were not their regular physicians. Beneficiaries also noted positive experiences with health IT changes that enabled care coordination, particularly post-discharge from the hospital. These efforts, along with state's efforts to incent team-based (care coordinators and CHWs) and prevention-focused care, are hypothesized to lead to avoidance of the ED, readmissions, and other unnecessary inpatient utilization. However, not all care delivery changes were seen as beneficial, for example beneficiaries were not always able to see their same doctor over time and were seen by NPs/PAs to compensate for primary care shortages. Beneficiaries also still mentioned access to care issues, particularly within rural areas and in accessing specialty care.

Table 1. Impact estimates for PCMH, ACO, and BHI models in SIM

				Total Spending	Inpatient Admissions	ED Visits	Readmissions
PCMH	Round 1	Medicaid	Arkansas				--
			Massachusetts				--
			Oregon				--
		Commercial	Arkansas				
	Round 2	Medicaid	Connecticut				
			Delaware				
			Idaho				
			Michigan	--			
			Ohio				
			Rhode Island				--
		Commercial	New York				
			Rhode Island				--
ACO	Round 1	Medicaid	Maine				
			Minnesota				
			Vermont				
		Commercial	Minnesota				
			Oregon				
	Round 2	Commercial	Washington				
BHI	Round 1	Medicaid	Maine				
	Round 2	Medicaid	Colorado				
			Tennessee				
			Washington				--
		Commercial	Colorado				
		Medicare	Colorado				

Notes: Green boxes indicate favorable outcomes with statistical significance at the 0.10 level, though some findings are of increased levels of statistical significance. Orange boxes indicate unfavorable outcomes with statistical significance at the 0.10 level, though some findings are of increased statistical significance. Gray boxes indicate a lack statistical significance. "--" indicates that the outcome was not analyzed. ACO=Accountable Care Organization, BHI= Behavioral Health Integration, ED =Emergency Department PCMH=Patient-Centered Medical Home. Episodes of Care are not included in the above because they did not uniformly examine the outcomes presented here. BHI findings for Tennessee and Washington are limited to those with Serious Mental Illness for ease of comparability across states. Rhode Island's PCMH model was for pediatric populations. Data to conduct analyses for Iowa's ACO program were not available in time for the evaluation. Results for Maine's behavioral health model used a pre-post design only, and were not relative to a comparison group as the state's attribution methodology could not be replicated in claims data.

Analyses of the commercially insured populations for PCMH and ACO models show some favorable results but are not consistently as robust as Medicaid findings. Some models showed favorable results such as New York, which had decreased total spending and inpatient admissions, and Washington and Minnesota's reductions in ED visits. A few states had unfavorable findings with increased inpatient admissions and ED visits in the PCMH models in Rhode Island, increased spending in Oregon's ACO model, and increased total spending and inpatient admissions in Minnesota's ACO model for commercially insured populations. One state, Arkansas, had non-significant findings for all measures examined in the commercial PCHM model, although this analysis was focused on measuring the spillover effects from the practice-wide transformation efforts in the state's Medicaid model.

Behavioral Health Integration

Behavioral health integration results do not present a consistent pattern, but Colorado presents the most cohesive set of findings within a given state. For both Medicaid and commercially insured populations, Colorado reduced total spending and inpatient admissions but did not change ED visits or readmissions. Primary care and behavioral health clinicians reported increase in the identification of patient's physical and behavioral health needs, which may have gone undetected prior to Colorado's intervention. Colorado's BHI intervention within the Medicare population only showed a reduction in ED visits with no other changes in total spending or utilization. Two states

(Maine[48] and Tennessee) had unfavorable increases in Medicaid spending which were hypothesized to be related to initial increased access to care among a previously underserved population with serious mental illness that may decrease over time. Providers and state officials viewed Maine's Behavioral Health Homes as a success in that the model granted the providers flexibility to provide better care through a capitated payment to reimburse for case management, which was launched in conjunction with health IT support, practice transformation assistance, connection to the state's HIE, quality feedback reports to providers, and coordination with the state's HHs. Tennessee respondents noted the difficulty in implementing the model which may have limited effectiveness despite an increase in behavioral health visits. Washington's BHI intervention decreased ED visits for Medicaid beneficiaries but did not change total spending or inpatient admissions among a broader population of beneficiaries with a range of mental health conditions. Washington's BHI showed only reductions in emergency department (ED) visits, but stakeholders viewed the model's implementation to have removed an access barrier and increased the number of behavioral health providers. A subgroup analysis (results not shown in Table 1) on beneficiaries with serious mental illness in Washington showed significant increases in total spending and inpatient admissions along with a reduction in ED visits, which was explained by the efforts to identify gaps in care and connect patients to additional services.

Episodes of Care

This paper includes a limited number of results for a few EOCs in the three states that implemented this model type. Here, we summarize results available for the episodes that were feasible to be analyzed during the evaluation contracting period, which included perinatal episodes in Arkansas, Ohio and Tennessee; upper repository infection episodes in Arkansas; and episodes for acute asthma in Ohio and Tennessee.

Arkansas episodes for upper respiratory infection for adults and children showed some improvements in quality and utilization (declines in antibiotic use and dispensing, increased use of appropriate care for children and use of strep tests for pharyngitis). However, these positive findings were accompanied by increased ED visits, often driven by parents who noted dissatisfaction when their child did not receive an antibiotic prescription at their physician visit and sought antibiotics for their children elsewhere.

EOC for acute asthma exacerbation were examined for Ohio and Tennessee for adults and children[49], but the results were either unfavorable or not statistically significant. There were declines in follow-up visits within the post-trigger window and receipt of appropriate asthma medication in Ohio and Tennessee and increased repeat acute asthma exacerbation in Tennessee. Providers had limited engagement with the EOC models in Ohio and Tennessee. For example, in Ohio only a small percentage opened feedback reports and financial incentives may not have been large enough to change provider behavior.

Perinatal episodes[50] were examined in all three states, and all three showed some favorable results (Table 2). Group B streptococcus screenings increased in Arkansas and Ohio. HIV and chlamydia screenings increased and ED visits decreased in Arkansas, however the state's EOCs were also associated with unfavorable increases in inpatient visits during pregnancy and readmissions. Providers in Arkansas reported shifting caring for non-pregnancy-related conditions to admissions separate from the delivery to keep episode costs for the delivery

[48] Results for Maine's BH model used a pre-post design only without a comparison group.

[49] Arkansas implemented acute asthma exacerbation episodes in their second wave of episodes (2014), making it infeasible to evaluate in the SIM Round 1 Model Test evaluation contract.

[50] Episode definitions can vary. Here is how Tennessee defined the perinatal episode: "The perinatal episode revolves around women who give birth, and the trigger event is the birth of a live infant. All pregnancy-related care including prenatal visits, lab tests, ED visits, medications, ultrasound imaging, delivery of the baby (professional and facility components) and post-partum care are included in the perinatal episode. A complete perinatal episode begins 40 weeks (280 days) prior to the delivery and ends 60 days after the mother is discharged from the hospital following the birth of her infant." More information on Tennessee's episodes can be found here: https://www.tn.gov/content/dam/tn/tenncare/documents2/PeriSumm2019V3.pdf

down. Finally, Tennessee saw a decrease in Caesarian-section births but Arkansas and Ohio showed no change for this measure.

Table 2. Impact Estimates for Perinatal Episode of Care Models in SIM States, 2013-2020

		C-Section	GBS Screen	HIV Screen	Post-Delivery Follow-up
Round 1	**Arkansas**				
Round 2	**Ohio**				
	Tennessee		--	--	

Notes. 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, though some findings had higher levels of statistical significance. Gray boxes indicate a lack statistical significance. "--" indicates that the outcome was not analyzed. C-Section=Caesarean Section, GBS=Group B Streptococcus, HIV=Human Immunodeficiency Virus.

VI. Discussion

Below we elaborate on the how these study findings inform policy and implementation lessons learned that are useful to inform future Innovation Center model design. After which we present discussion of health care outcomes within SIM Medicaid and commercial populations and compare these results to similar Medicare models. Lastly, we note strengths and limitations to our approach.

The Unique Role of States and Policy Implications for Future Reforms

History was a guide to state's SIM investments, but it was not determinative. For example, though several states had a history of ACO activity at the time of their award, many chose not to pursue similar models with their SIM awards. Ohio considered the development of ACOs to be too big a change for their health care system to successfully accept. Multiple Round 2 states had a history of ACOs, but only one pursued such a model with their SIM award. Some states took a wide approach in how they used their SIM award covering multiple populations with a variety of models. Examples include Arkansas, Ohio, Oregon, Tennessee, and Washington. States also used the SIM opportunity to pursue more specific health care goals or serve specific populations. Colorado, for example, centered their award almost entirely on multi-payer behavioral health integration.

States showed Medicaid managed care contracting to be a powerful tool, but not absolute in its effectiveness to increase the spread of VBP models. Several states used managed care to reach a majority of their respective Medicaid populations (Massachusetts, Minnesota, Ohio, Oregon, Tennessee, Vermont, and Washington). Much of this was done through constructive discussion leading to fruitful negotiations with MCOs. However, managed care is not the only effective mechanism to spread Medicaid VPB models, as was evident in the three Medicaid FFS SIM states (Arkansas, Connecticut, Idaho). Arkansas reached 51 percent of their Medicaid beneficiaries through its PCMH. Idaho reported reaching a majority by the end of their SIM award. Connecticut reached only 20 percent.

States leveraged their position as payers to mandate reforms into Medicaid managed care contracts and state employee benefits. Beyond contracting, states passed legislation to sustain models and ensure infrastructure investments, notably in Health IT and the health care workforce, continued 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. Providers and other stakeholders provided a range of feedback allowing for improvements to be built into state models moving forward.

States mainly used voluntary models to engage providers and, in some cases, created risk-bearing entities. State contracting allowed for a mixture of voluntary and mandatory approaches to provide some flexibility to providers. In a few cases, states chose mandatory models harnessing state legislation or MCO contracting. Mandatory approaches tended to result in greater numbers of Medicaid beneficiaries being served in value-based care arrangements. States chose a variety of models to test, but notably fell within the sphere of primary care using PCMH and ACO models. There was some, limited interest in behavioral health integration models although more

broadly states integrated behavioral health providers through other strategies. Notably, only three states sought to address specific health care processes seeking to improve specialty care through EOC. States that chose to focus on both primary care and specialty care (Arkansas, Ohio, and Tennessee) were able to cover majorities of their Medicaid populations in VBP. Though such penetration was a goal of SIM it was not guaranteed. Finally, as mentioned above, there was limited interest in pediatric-only models (beyond episodes of care focused on a pediatric population and a PCMH for kids) or to test models for LTSS value-based care. Ultimately, states set the course for what reforms they were interested in and the populations they wanted to serve better.
States took a variety of approaches in deciding what models would include upside and/or downside risk. Arkansas, Connecticut, and Ohio had upside risk in their PCMH models. However, Massachusetts, Michigan and Tennessee included downside risk as part of their PCMH models. ACO models in Maine, Minnesota, and Vermont had upside risk, but the ACO in Washington had downside risk. All EOC in Arkansas and Ohio had downside risk, but some EOC in Tennessee had upside risk while others also had downside risk. Models in states that are not listed here did not assume any (upside or downside) risk but instead provided incentive payments or had other criteria and support (e.g. National Committee for Quality Assurance [NCQA] certification).

SIM prepared providers and states to continue further along the path of alternative payment models. The SIM Initiative helped a range of stakeholders within the state (e.g., Medicaid, 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. In so doing, states and providers within those states developed a potential foundation for future state-level health care reform initiatives, including participation in Innovation Center models. For example, practices that participated in SIM related PCMH models in Arkansas[51] joined CPC+ as SIM was ending.

Many states and/or their providers were able to move further along the alternative payment model (APM) spectrum [52] towards the end of SIM or after SIM ended into models that included downside risk after having gained experienced in upside risk models during SIM. For example, Minnesota developed "version 2.0" of the ACO model launched at the end of their SIM award where ACOs received a small prospective payment in addition to upside and downside risk with a significant amount of savings contingent on quality after testing an upside risk model in SIM. Vermont shifted from a delayed retrospective payment ACO model with upside risk in SIM to a prospective capitated payment in the subsequent Vermont All-Payer Model. Ohio was considering adding downside risk into their PCMH model and possibly expanding the model to include the pediatric population. In addition, there was evidence that SIM made it more likely for providers to participate in Medicare APMs. For Round 2 states, primary care practices in SIM were statistically more likely to participate in Medicare APMs after controlling for prior participation in Medicare APMs and other practice characteristics.[53]

Taking the above points together, states can and will be a part of the continued expansion of value-based care to help realize total health care system transformation. As one Ohio state official put it:

"I think it's safe to say that the landscape today is very different than it was when we started. And I think it's in part what we have been able to do with our [SIM Initiative] models and from a broad sense … The landscape is fundamentally different … I am seeing providers across the state being more thoughtful now about value and

[51] Arkansas considered its participation in CPC as Wave 1 of their process to encourage primary care practices to become PCMHs. The state's own PCMH model, developed with SIM funding, became Wave 2 and was designed to share most characteristics of CPC but engage more pediatric practices due to the majority of Medicaid beneficiaries being children. The state enrolled 111 practices in its Medicaid PCMH (2 of which had participated in CPC), all of which participated in CPC+.
[52] Health Care Payment Learning & Action Network, Alternative Payment Model Framework: https://hcp-lan.org/workproducts/apm-refresh-whitepaper-final.pdf
[53] This analysis was only part of the Round 2 evaluation.

making it a pillar of their organization. And for those providers who have yet to think that way, they're actually behind the ball now, and they're having to play catch up."

Policy Lessons Learned from SIM

The findings above present critical policy lessons learned in developing new Innovation Center models.

States can implement VBP models and achieve favorable, though somewhat limited, results, at least in the short-term. The Medicaid findings above are notable as any model serving this population must be led by the state which can take part in the savings achieved through lower spending. Medicare-only models do not allow for state savings as any reductions in utilization or expenditures would accrue to CMS. **These results show that SIM models fare no better or worse than similar** 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 CPC and 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. (See "SIM in the Context of Medicare Models" section below for further discussion).

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 of all children, are Medicaid beneficiaries[54]; 40 percent of adults on Medicaid have behavioral health needs;[55] and one in five people in the US live in rural areas[56]. As such, states can play a key role in expanding VBP to these populations as they have an inherent interest in lowering 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), 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 investment 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 are committed to practice transformation in Medicaid, though many states needed flexibility in their selection of model design features within each state and the implementation timeline. Flexibility could include being able to tailor model design features to the local contexts or it could mean allowing the state to redesign the model after initial implementation efforts were unsuccessful. States also need flexibility related to the model

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

[55] 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.

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

implementation timeline to absorb any unexpected delays as well as longer time periods for measuring effects through evaluation to ensure impact estimates are created for more mature models.

States appreciated the flexibility in designing their own versions of payment models. They 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 smaller panels of providers 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's 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 MCOs, and thus low coverage of Medicaid beneficiaries, they chose to revise their original plans to redesign 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 needed to abandon parts of their original plans particularly where the plans were not in alignment with stakeholder's interests. Examples of states that needed to revise their original plans include Massachusetts, New York, Michigan, and Vermont. After receiving limited interest by providers and MCOs in the PCPRI (i.e., PCMH) model and thus low coverage of Medicaid beneficiaries (6%), Massachusetts pivoted to creating an ACO model that was more successful in recruiting providers and MCOs as well as covering a larger proportion (56%) of the state's Medicaid population. New York's Advanced Primary Care model received little interest from payers and providers necessitating them to abandon these efforts and transition to what became their NCQA PCMH model. Michigan originally had an Accountable Systems of Care model meant to improve quality through care coordination. Ultimately, this model was phased out of Michigan's work as stakeholders thought it was duplicative of risk-bearing already included in Medicaid managed care plans. Vermont originally planned to implement episodes of care, but these efforts were ultimately abandoned due to, at least in part, stakeholders noting possible misalignment with other initiatives.

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. For example, the lack of needed data created delays to starting Maine's Accountable Communities model. The need to negotiate with hundreds of collective bargaining units created delay in spreading Oregon's CCMs model. Colorado originally wanted to recruit 400 practices for their integrated behavioral health model, but only ended up recruiting 319. Arkansas wanted to implement 50 EOC, Ohio also wanted to implement 50 EOCs, and Tennessee wanted 75 EOCs. Respectively, 14, 43, and 48 episodes were ultimately implemented.

The evaluations of both rounds of SIM revealed possible advantages to a longer testing period. Several 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, like what is done in Innovation Center Medicare model evaluations. Further, several stakeholders contended that four years was not enough time 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. 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 Medicaid 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 MOM and 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.[57] Using lessons learned from several past state-based and Medicaid models, the Transforming Maternal Health (TMaH)[58], Innovation in Behavioral Health (IBH)[59], and States Advancing All-Payer Health Equity Approaches and Development (AHEAD)[60], and Making Care Primary (MCP)[61] models are all planning longer implementation and testing periods.

Depending on the level of readiness for health reform, states can benefit from both financial and technical assistance. SIM 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) Model, AHEAD, TMaH, and IBH models all built in a range of technical assistance to aid the participants in implementing 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 could participate. State staff did not always have the bandwidth or experience with designing a payment or care delivery model for Medicare that would meet the needs and requirements of CMS. 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 with Medicare participation.[62] Recent models such as AHEAD and MCP provide new

[57] Each model has its own terminology in denoting as ramp-up ("implementation" in SIM) and a separate period when VBP models are evaluated ("testing" in SIM). Please refer to each model's page for more information.
[58] CMS Innovation Center, Transforming Maternal Health (TMaH) Model Web page: https://www.cms.gov/priorities/innovation/innovation-models/transforming-maternal-health-tmah-model
[59] CMS Innovation Center, Innovation in Behavioral Health (IBH) Model Web page: https://www.cms.gov/priorities/innovation/innovation-models/innovation-behavioral-health-ibh-model
[60] 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
[61] CMS Innovation Center, Making Care Primary (MCP) Model Web page: https://www.cms.gov/priorities/innovation/innovation-models/making-care-primary
[62] Maryland's All-Payer and Total Cost of Care Models, Vermont All-Payer Model, and Pennsylvania Rural Health Model

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[63] and MCP.[64]

Health Care Outcomes from SIM

Analyses of VBP models operating under SIM illustrate meaningful reductions in total spending in 8 models, increases in spending in 5 models, and no change among 10 models. Changes in Medicaid spending should be interpreted with the caveat that reductions in spending may not necessarily be a primary goal. Instead, more appropriate utilization is often a priority in addition to increasing benefits for covered lives. Further, capitated care relationships used in managed care contracts may limit the ability to reduce spending directly to the state or CMS. However, lowered spending attributable to these models could eventually bring down spending trends that are the basis for constructing capitated payments.

Changes in spending were related to significant changes in utilization categories such as inpatient admissions, ED visits, and readmissions. Seven models reduced inpatient admissions, seven models increased admissions, and 10 models show no change in this measure. Ten models reduced ED visits, three models increased ED visits, and 11 models saw no change. Few models (four) improved readmissions; most (14) saw no significant changes in this measure.

The findings present some evidence of favorable results for reductions in acute-care utilization in PCMH and ACO models. These results are consistent with favorable findings of increased primary care visits in some PCMH models (Arkansas, Massachusetts, Oregon, Connecticut and Rhode Island, results not shown) and reduced specialty care visits in some ACO models (Maine, Minnesota, and Vermont[65], results not shown). The impact estimates correspond broadly with the qualitative findings presented above. Respondents noted the beneficial use of community health workers (Colorado, Connecticut, Idaho, Minnesota, Massachusetts, Rhode Island) and care coordinators (Tennessee), investments in practice transformation (Delaware), learning collaboratives and technical assistance (Rhode Island, Vermont) that aided in care coordination, and investments in advancing health IT capabilities to connect beneficiaries and providers to data for care management (Maine, Oregon, Minnesota, Tennessee) are noteworthy examples that correspond to the findings in Table 1. However, providers and patients also noted continued issues with access to care, particularly for specialty providers and behavioral health services. While providers appreciated the upfront payment that allowed them to provide care more effectively, providers in some states (Ohio, Rhode Island) still felt the payments were too low to fully transform their practices.

Behavioral health integration analyses do not necessarily provide straightforward hypotheses for the direction of results. One could expect unnecessary utilization and subsequent spending to decrease with greater care coordination. Alternatively, integrated care for those with both behavioral and physical health needs could lead to increased utilization and spending, particularly in the short-term. Like other models, the present findings show some promising, yet mixed, results for more appropriate utilization. Tennessee respondents noted the difficulty in implementing the model which may have limited effectiveness despite an increase in behavioral health visits (results not shown). Colorado, however, shows that their investments in practice transformation were associated with robust favorable impacts. The mixed findings shown here are similar to those presented elsewhere.[66]

[63] Vermont, Connecticut, New York, and Rhode Island participated in SIM and have been selected to participate in AHEAD.
[64] Colorado, New York, Minnesota, Massachusetts, and Washington participated in SIM and have been selected to participate in MCP.
[65] Rutledge, R.I., Romaire, M.A., Hersey, C.L., Parish, W.J., Kissam, S.M., Lloyd, J.T. (2019). Medicaid Accountable Care Organizations in four states: Implementation and early impacts. *Milbank Quarterly*, Early View. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6554509/
[66] Office of the Assistant Secretary for Planning and Evaluation, Primary and Behavioral Health Care Integration Program: Impacts on Health Care Utilization, Cost, and Quality, 2019: https://aspe.hhs.gov/sites/default/files/migrated_legacy_files//187846/PBHCIP.pdf

Cross-state evaluation results for EOC models were limited to the perinatal models, which showed some promising improvements in quality measures but potential unintended consequences in Arkansas. Results for other EOC models were mixed in Arkansas for upper respiratory infections and asthma EOCs were unfavorable in Tennessee and Ohio.

SIM in the Context of Medicare Models

Comparing these results to a synthesis of Medicare models,[67] along with other Innovation Center evaluation reports, allows us to examine similar model designs across Medicare and Medicaid. Here, we summarize themes across PCMH, ACO, and EOC models in Medicaid and Medicare models with mention of themes in commercial populations where available. Like evaluations involving primarily Medicare populations, findings are mixed and do not present a single path forward in state-led or Medicare transformation.

The mixed findings for Medicaid PCMH models in SIM resemble evaluation results of Medicare medical home models. The CPC and CPC+ models reduced ED visits and inpatient admissions, though this was the case in only a minority of SIM models. Half of the SIM PCMH models reduced Medicaid total spending and one reduced commercial spending. Neither CPC nor CPC+ reduced Medicare expenditures. Though the Multi-payer Advanced Primary Care Practice demonstration (MAPCP) demonstration reduced Medicare spending and inpatient admissions, it showed no effect on ED visits.[68]

Medicare ACOs share similar findings to results for Medicaid ACOs in SIM. All SIM ACO models showed reductions in ED visits and two out of three showed decreased hospital admissions akin to the Pioneer ACO Model and the ACO Investment Model (AIM). Though both Pioneer and AIM reduced spending, only one SIM state's ACO model (Vermont) showed a decline in Medicaid spending. Notably, similar results have been found in Medicare findings for Vermont's All-Payer ACO model, which began after the SIM model ended.[69]

SIM commercial findings align with Medicare ACO findings in the Advanced Payment ACO model, which increased spending. Two out of the three commercial SIM ACO models increased spending while the remaining state had no significant changes in spending. Two states reduced ED visits, similar to Pioneer and AIM ACO, for the ACOs covering state employees.

Comparing the Medicaid EOC results in SIM to the Medicare episode-based model findings (Bundled Payments for Care Improvement [BPCI], BPCI-Advanced [BPCI-A], and the Comprehensive Care for Joint Replacement [CJR]) is not as straightforward as the other SIM comparisons. The episodes and populations served are fundamentally different (e.g. pregnant women in Medicaid versus older adults in Medicare). However, improvements in quality of care seen in the Medicaid perinatal episodes correspond to improvement in complication rates and unplanned readmissions for lower extremity joint replacements episodes in the CJR model.[70] One possibility that may be driving these differences is the mandatory nature of the Medicaid EOC models and the required Medicare participation of CJR hospitals. Holding providers financially accountable in this manner for specific outcomes may be driving these changes. However, it is worth noting that some providers in Round 2 stated that the penalties were not severe enough to be considered effective. BPCI and BPCI-A, both voluntary models, have showed improvements in other utilization categories, but not robust improvements in quality of care.

[67] CMS, Synthesis of Evaluation Results across 21 Medicare Models, 2012-2020: https://www.cms.gov/priorities/innovation/data-and-reports/2022/wp-eval-synthesis-21models

[68] CMS Evaluation of the Multi-Payer Advanced Primary Care Practice (MAPCP) Demonstration, Final Report: https://downloads.cms.gov/files/cmmi/mapcp-finalevalrpt.pdf

[69] CMS, Evaluation of the Vermont All-Payer Accountable Care Organization Model, Third Evaluation Report: https://www.cms.gov/priorities/innovation/data-and-reports/2023/vtapm-3rd-eval-full-report

[70] CMS, Evaluation of the Comprehensive Care for Joint Replacement Model, Fourth Report: https://www.cms.gov/priorities/innovation/data-and-reports/2021/cjr-py4-annual-report

Limitations and Strengths

This analysis had strengths and limitations. Qualitative findings were generally positive for state efforts supporting care transformation, such as enhanced care coordination, technical assistance, and health IT resources, however they may not be representative of all perspectives within the state. Additionally, these efforts were part of each state's broader health care transformation efforts and could not be teased apart from larger payment model changes to determine their effectiveness. Impact analyses tended to represent the early years of the interventions and were not able to observe later performance years due to delays in accurate and complete Medicaid data being available for analysis. Further, these analyses tended to not represent statewide populations but correspond to where providers or MCOs within the state decided to participate or related the proportions of a populations where payers participated. Many states have conducted their own analyses to examine the effect of their efforts on outcomes, and these could supplement our findings with updated data. Results from SIM may not be applicable to other states, particularly where the historical context in health care reform differs. Analysis of activities that states continued after SIM ended is limited to information available in the various independent evaluation reports and were not tracked after the independent evaluation contracts ended. Contextual factors in each state after SIM ended may have changed and are therefore beyond the scope of this analysis.

The summary also had strengths. To date, the wide range of SIM models have not been comprehensively summarized across both rounds. We were able to draw on a wealth of rigorous data collection and analyses conducted through the independent evaluation of each of the SIM models. Results from these evaluations were summarized across both Round 1 and Round 2 to draw broader themes than those focused on in the respective evaluation reports.

VI. 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 implement value-based payment models. States were able to effectively use policy levers and create partnerships to implement Medicaid VBP models and achieve multi-payer alignment; many of which were sustained after the SIM. In addition, quantitative impact estimates showed that the investment in state partnerships to implement 29 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.

References

Gavin, N., et al. (2014). State Innovation Models (SIM) Initiative (Round 1) evaluation: Model Test Base Year Annual Report. http://downloads.cms.gov/files/cmmi/SIM-Round1-ModelTest-FirstAnnualRpt_5_6_15.pdf

Gavin, N., et al. (2016). State Innovation Models (SIM) Initiative (Round 1) Evaluation: Model Test Year Two Annual Report. https://downloads.cms.gov/files/cmmi/sim-round1-secondannualrpt.pdf

RTI International. (2017). State Innovation Models (SIM) Initiative (Round 1) Evaluation: Model Test Year Three Annual Report. https://downloads.cms.gov/files/cmmi/sim-rd1mt-thirdannrpt.pdf

RTI International. (2018). State Innovation Models (SIM) Initiative (Round 1) Evaluation: Model Test Year Four Annual Report. https://downloads.cms.gov/files/cmmi/sim-rd1-mt-fourthannrpt.pdf

RTI International. (2018). State Innovation Models (SIM) Initiative (Round 1) Evaluation: Model Test Year Five Annual Report. https://downloads.cms.gov/files/cmmi/sim-rd1-mt-fourthannrpt.pdf

RTI International. (2017). State Innovation Models (SIM) Initiative Round 2 evaluation: Model Test First Annual Report. https://downloads.cms.gov/files/cmmi/sim-round2test-firstannrpt.pdf

RTI International. (2018). State Innovation Models (SIM) Initiative Round 2 evaluation: Model Test Annual Report Two. https://downloads.cms.gov/files/cmmi/sim-round2test-secondannrpt.pdf

RTI International. (2020). State Innovation Models (SIM) Initiative Round 2 evaluation: Model Test Annual Report Three. https://downloads.cms.gov/files/cmmi/sim-rd2-test-ar3.pdf

RTI International. (2021). State Innovation Models (SIM) Initiative Round 2 evaluation: Model Test Final Report. https://www.cms.gov/priorities/innovation/data-and-reports/2021/sim-rd2-test-final

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Appendix Table 1. Payment and Delivery Models Prior to and Developed During the SIM Initiative

State		Pre-SIM alternative payment models	Model(s) and Activities Implemented during SIM Initiative
Round 1	Arkansas	Multi-payer PCMH (CPC, CPC+)	Multi-payer PCMH and EOC
	Maine	Multi-payer PCMH (MAPCP), Medicare ACOs, Medicaid HHs	Medicaid BHH/HH and ACO
	Massachusetts	Medicare ACOs, Multi-payer PCMH	Medicaid Primary Care Payment Reform (PCMH) and ACO
	Minnesota	Multi-payer PCMH (MAPCP), HHs, Medicare and Medicaid ACOs	Medicaid BHH/HH, Accountable Communities for Health, and ACO
	Oregon	Multi-payer PCMH (CPC, CPC+), Medicaid ACO	Multi-payer PCMH, accountable communities for health, BHI at health plan level, and multi-payer ACO
	Vermont	Multi-payer PCMH (MAPCP) Medicare ACOs, Medicare EOC	Multi-payer PCMH and ACO
Round 2	Colorado	Multi-payer PCMH (CPC, CPC+) Medicare and Medicaid ACOs, Medicare EOC	Payer agnostic BHI
	Connecticut	Medicaid & Medicare ACOs, Medicare (FQHC) and Medicaid PCMH, Medicare EOC	Medicaid PCMH
	Delaware	Medicare ACOs, Medicare EOC	Payer Agnostic TA for PCMH, BHI, population health infrastructure
	Idaho	Medicare (FQHC), commercial, and Medicaid PCMHs, Medicare EOC	Medicaid PCMH
	Iowa	Medicare, commercial, and Medicaid ACOs, Medicare (FQHC) and Medicaid PCMHs, Medicare EOC	Population health infrastructure, Medicaid ACO
	Michigan	Medicare ACOs, Multi-payer PCMHs (MAPCP, commercial plan PCMH, CPC+, FQHC), Medicare EOC	Medicaid PCMH, population health infrastructure
	New York	Multi-payer ACOs and PCMHs (MAPCP, CPC, state PCMH model, CPC+), Medicare EOC	Payer agnostic PCMH
	Ohio	Medicare ACOs, Multi-payer PCMH (CPC, CPC+, FQHC), Medicare EOC	PCMH, Medicaid EOC
	Rhode Island	Multi-payer PCMH (MAPCP, CPC+) Medicaid and Medicare ACOs, Medicare EOC	Multi-payer PCMH
	Tennessee	Medicare ACOs, Multi-payer PCMH (CPC+, FQHC), Medicare and commercial EOC	PCMH, Multi-payer EOC
	Washington	Medicare PCMH (FQHC), Medicare EOC	ACO-type model for state employees, value-based payment for FQHCs, BHI in Medicaid managed care, population health infrastructure

Notes: ACO=accountable care organization; BH=behavioral health; BHI=behavioral health integration; HH=health homes; CPC=Comprehensive Primary Care; CPC+= Comprehensive Primary Care Plus; EOC=episodes of care; FQHC=Federal Qualified Health Centers; MAPCP=Multi-Payer Advanced Primary Care; PCMH=patient centered medical homes; TA=technical assistance

Patient-centered Medical Homes (PCMH)

A history of PCMH investment influenced the activity of several states. Maine, Michigan, Minnesota, New York, Rhode Island, and Vermont participated in Multi-payer Advanced Primary Care Practice demonstration (MAPCP), a CMS primary care demonstration aimed to test whether advanced primary care payments reduced unnecessary health care utilization and expenditures in Medicare, Medicaid, and among some commercial payers (2011-2014). State

officials in Maine and Minnesota used experience gained in MAPCP to extend their health homes (HH) in Medicaid as did Vermont with its PCMH program across multi-payers.

The passage of the Affordable Care Act in 2010 created the Innovation Center as well as opportunities for states related to Medicaid expansion, qualified health plans, as well as Section 2703 health home models available to states under a state plan amendment. The Innovation Center's Comprehensive Primary Care (CPC) model (2012-2016), which was also intended as multi-payer across Medicare, Medicaid, and commercial payers, influenced the approach taken by Arkansas, Colorado, Massachusetts, New York, and Ohio in their respective PCMH Medicaid models. These states built their Medicaid model to be similar to the CPC model, so that primary care providers participating in CPC could meet similar requirements for SIM model participation. Though Idaho did not participate in MAPCP or CPC, the state built on an existing PCMH model through their SIM award.

Accountable Care Organizations (ACO)

Prior establishment of Medicare and Medicaid ACOs in states had less influence on whether states expanded or developed new ACO models during their SIM award. The Innovation Center tested the Pioneer (Medicare) ACO model starting in 2012, which had model participants in Massachusetts, Michigan, Minnesota, and New York. The ACA permanently authorized the Medicare Shared Savings Program (SSP) beginning in 2012. Multiple Medicare SSP ACOs were in SIM states prior to SIM, although few states launched Medicaid ACO models during their SIM award. Those that were launched were predominately found in Round 1 states (Massachusetts, Maine, Minnesota, and Vermont) and done so to align with the existing Medicare ACOs. State officials in Maine noted that they designed their Accountable Communities program to be similar to Medicare SSP. Vermont's Blueprint for Health aligned quality measures used in Medicare SSP with the state's Medicaid and commercial ACOs. The state also used previous experience in Medicare SSP to build flexibility in how providers participated in the SIM-supported Medicaid and commercial ACO SSPs. Minnesota used design elements similar to SSP and Pioneer, such as how to phase in downside risk, in implementing their version of an ACO through the Integrated Health Partnership (IHP) initiative.

Only two Round 2 SIM states created an ACO model under SIM. Washington created an ACO for state employees to integrate physical and behavioral health care. Iowa used Medicaid MCO contracts to incorporate VBP arrangements between MCOs and five ACOs in the state that served the Medicaid population. Many Round 2 states had ACOs existing within their states prior to SIM, including four states (Colorado, Iowa, New York, and Rhode Island) that had a history of ACOs within their Medicaid programs prior to SIM. However, most Round 2 states chose not to expand or create a new ACO model under SIM. Some Round 2 states used other related policy levers, such as aligning quality measures in Medicaid models with existing ACOs (Rhode Island), or health plan contracting arrangements with providers incentivizing ACOs (Delaware), and health plan contracting arrangements for state employees (Connecticut), although many of these strategies did not ultimately materialize.

Behavioral Health Integration (BHI) Models

Given the heavy focus of PCMHs prior to SIM, some states used SIM funds to incorporate care delivered by other providers, including behavioral health providers, into value-based payment models to improve care coordination across the broader delivery system. For example, state officials in Maine noted building on their experience in MAPCP to extend their health homes to behavioral health organizations where behavioral health homes partnered with HHs to integrate behavioral health services for adults with serious mental illness and children with serious emotional disturbances with primary care services. Washington, spurred by action from the state's legislature requiring behavioral health integration for Medicaid enrollees by 2020, integrated financing of

behavioral health care within comprehensive managed care plans. Using a Medicaid State Plan Amendment, Tennessee built on previous experience lead by Federally Qualified Health Centers and community mental health centers to implement their BHI program named Health Link, which required coordination between primary care and mental health providers to deliver integrated care to patients with serious mental health conditions. In total, only five SIM states (Colorado, Maine, Minnesota, Tennessee, Washington) had a behavioral health model during SIM. Maine, Minnesota, Tennessee used behavioral health homes which required coordination between primary care practices and mental health providers, to deliver integrated care to patients with mental health conditions (often for more serious mental health conditions). In many of these models, participating behavioral health organizations submitted data on quality measures and met certain requirements, but payment was not tied to quality. Payers in Colorado created an agreement to reimburse primary care practices for implementing BHI strategies. Washington integrated financing of behavioral health care within comprehensive managed care plans to increase integration and Medicaid patient's access to both behavioral and physical health providers.

However, many states supported innovations in behavioral health care outside of a traditional payment model. This included providing grants in Minnesota as well as twelve states providing technical assistance, peer-peer learning, learning collaboratives, and/or training to behavioral health providers (Arkansas, Colorado, Connecticut, Delaware, Oregon, Maine, Massachusetts, Minnesota, Rhode Island, Tennessee, Vermont, Washington). Six states facilitated communication and referral streams between primary care providers (PCPs) and behavioral health providers through telehealth or telephonic initiatives (Colorado, Oregon, Massachusetts, Rhode Island, Tennessee, Washington) and seven states encouraged colocation of behavioral health providers and PCP (Colorado, Connecticut, Delaware, Rhode Island, Oregon, Massachusetts, Tennessee). Five states implemented behavioral health screening tools in primary care settings (Connecticut, Delaware, Michigan, Rhode Island, and Tennessee). All six Round 1 states also used contractual relationships with newly formed ACOs or through managed care or state employee health plans to incorporate behavioral health related services or performance metrics (Arkansas, Maine, Massachusetts, Minnesota, Oregon, Vermont).

Episodes of care (EOC) models

While Medicare's Bundled Payments for Care Improvements (BPCI) Initiative had begun in 2013, few SIM states chose to implement similar payment and care delivery arrangements within their Medicaid programs. Three states (Arkansas, Ohio, Tennessee) implemented EOC models to round out their holistic approach to health care transformation and enacted numerous episodes covering a broad range of conditions (number of episodes implemented: Arkansas 14; Ohio 43; Tennessee 48). While Tennessee and Ohio based their EOC models on Arkansas's EOC models, Arkansas implemented its models in a Medicaid FFS system, whereas Tennessee and Ohio implemented theirs through Medicaid managed care organizations. Ohio also implemented EOC in its Medicaid FFS program.

EOC were used to target specialty providers to encourage high-quality, patient-centered, and cost-effective care by creating accountability of care across all services for a given episode. EOC allowed states to focus not just on specific populations, but also on specific conditions. Arkansas and Ohio's investment in EOCs with specialty providers was intended to complement their investment in their PCMH model with primary care providers. Tennessee went a step further with the inclusion of improving LTSS quality of care. All three states included perinatal episodes in their first waves of episodes implemented. Ohio and Tennessee also implemented asthma EOC in their first waves. Arkansas implemented these episodes in their second wave.

Appendix Table 2. State Legislation and Infrastructure used to Support the SIM initiative, Round 1 & 2 states*

State		State legislation and infrastructure
Round 1	Arkansas	Health Care Independence Act required QHPs to participate in Medicaid PCMH program (2013); State law authorized the Health Care Reform Task Force (2015); Arkansas Healthcare Transparency Initiative Act (2015); Act 775 authorized new care model for BH needs & developmental disabilities (2017)
	Maine	--
	Massachusetts	Chapter 224 required APMs in Medicaid, state employee health plans, and health insurance marketplace health plans (2012)
	Minnesota	First Special Session Article 16 Section 19 amended 2008 Health Reform Act to mandate Department of Health to test delivery systems (2010)
	Oregon	Oregon Health Authority created state agency encompassing Medicaid & state employee health plans (2009); SB 231 mandated the Primary Care Payment Reform Collaborative (2015); SB 440 established Health Plan Quality Metrics Committee (2015); HB 2024 enabled certification & reimbursement for CHWs as traditional health workers to provide preventive oral health (2015); SB 934 required primary care spending by state-funded health plans; authorized similar rules on commercial plans; required payments from CCOs in CPC+ to all PCPCHs in their networks (2017)
	Vermont	Act 128 provided health reform goals and expanded Blueprint for Health (2010); Act 48 established Green Mountain Care Board (2011); Act 107 requirements for telemedicine coverage (2012); Act 135 regional system of opioid addiction treatment (2012); Act 54 exploration of an all-payer model (2015); State Act 113 created a regulatory and certification system for ACOs
Round 2	Colorado	EO B2015-008: Created the Office of eHealth Innovation and eHealth Commission (2015); HB 15-1029 Health care delivery via telehealth statewide (2017); SB 18-002 Financing rural broadband deployment (2018); SB 18-024: BH provider loan forgiveness
	Connecticut	SB 811 enacted with broad implications on health care and health IT in the state, aiming to control costs and improve transparency for patients (2015); Public Act 16-77 enacted, creating a statewide Health IT Officer position to coordinate all state health IT initiatives (2016); CHW SB 126, defining role of CHWs and requiring examination of the feasibility of certifying CHWs
	Delaware	Delaware Center for Health Innovation established (2014); SB 238 Health Care Claims Database established (2016); Medicaid and commercial Pay for Value pilot launched (2016); Governor signs HJR 7 legislation authorizing health care spending benchmark (2017); EO creating Health Care Delivery and Cost Advisory Group for benchmark development (2018)
	Idaho	EO created the Idaho Medical Home Collaborative to pilot and test the feasibility of a multi-payer PCMH model within the state (2010); EO establishing Idaho Healthcare Coalition, comprises key stakeholders to guide SIM Initiative (2014)
	Iowa	Statewide Alert Notification (2015); Iowa Health Information Network (2017)
	Michigan	Reinventing Michigan's health care system: Blueprint for health innovation (2014). Michigan Health Information Network (2010),
	New York	PCMH model that predated SIM (2013)
	Ohio	Provision in Ohio Revised Code require 50% of Medicaid managed care plan payments be value based by 2020 (2015)
	Rhode Island	EO 15-08 established Working Group to Reinvent Medicaid (2015); Office of Health Insurance Commissioner (OHIC) requires commercial insurer APM targets (2015); OHIC requires commercial plans to include contractual requirement that providers adopt SIM aligned measure set
	Tennessee	Governor announces Tennessee Health Care Innovation Initiative (2013); Long-Term Community Care Community Choices Act (2008)
	Washington	HB 2572 directs the Health Care Authority to increase value-based contracting for Medicaid and public employees (2013); SB 6312 full integration of BH in Medicaid managed care by 2020 (2013); Chapter 223 of 2014 laws: State Health Care Innovation Plan; Chapter 225 of 2014 laws: phased implementation of VBP & Medicaid BHI be implemented by 2020. 60 member Health Innovation Leadership Network advisory group (2015)

*ACO=Accountable Care Organization; APM=alternative payment models; BH=behavioral health; BHI=behavioral health integration; CCO=Coordinated Care Organizations; CHW=community health worker; CPC+=Comprehensive Primary Care Pulse; EO= Executive Order; HB=House Bill; IT=information technology; MCO=managed care organization; PCMH=patient centered medical home; PCPCHs=Patient-Centered Primary Care Home; QHP=; SB=Senate Bill; SSP=Shared Saving Program; VBP=value-based payment

Appendix Table 3. Medicaid Waivers used Prior to and During the SIM initiative, Round 1 and 2 states*

	State	CMS Medicaid Waivers and State Plan Amendments (SPAs)
Round 1	Arkansas	SPA for EOCs (2012) and PCMH (2014); 1115 waiver to enroll "Medicaid expansion" adults in QHPs
	Maine	SPAs for HHs (2013) and BHHs (2014)
	Massachusetts	1115 wavier for ACO pilot (2016) and amended for ACO models and DSRIP protocol
	Minnesota	SPA for BHH services (2016)
	Oregon	1115 waiver for CCOs (2012) and renewed (2017)
	Vermont	SPAs for HHs (2013) and ACO SSP (2015) and 1115 wavier renewed (2013); All-Payer ACO Model agreement with CMS (2016)
Round 2	Colorado	--
	Connecticut	--
	Delaware	--
	Idaho	SPA for PMPM payment structure approved (2016)
	Iowa	--
	Michigan	--
	New York	Waiver to transform primary care received by Medicaid beneficiaries (2014); SPA to offer new supplemental payments PMPM to Advanced Primary Care practices (2018); DSRIP program (2014)
	Ohio	SPA for episode-based payments (2017) and Medicaid participation in CPC+ (2018)
	Rhode Island	1115 waiver to support development of Medicaid Accountable Entity (AE) organizations (2016); SPA to implement Health System Transformation Project to support and incentive program for hospitals and nursing home, a health workforce development program, previously called Medicaid AE (2016)
	Tennessee	1915(c) HCBS waiver amendment to implement several approaches to improving quality and promoting value-based purchasing for LTSS (2017); SPA federal funding for health homes (2017); Health Link BH home SPA (2017)
	Washington	1115 waiver for Medicaid Transformation Demonstration that provided $1.5 billion in Federal funding to test innovation models of service delivery (2017) related to DSRIP

* ACO=accountable care organization; BH=behavioral health; BHH= behavioral health home; CMS=Centers for Medicare and Medicaid Services; CPC+=Comprehensive Primary Care Plus; CCO=Coordinated Care Organizations EOC=episodes of care; HH=health home; DSRIP=Delivery System Reform Incentive Program; LTSS=long-term services and supports; PCMH=patient centered medical home; PMPM=per member per month; QHP= qualified health plans; SPA=state plan amendment; SSP=shared savings program

Appendix Table 4. Policy Levers States used to Align Quality Measures among Commercial Health Plans

Policy lever	**State involvement**
Requiring use of common measures	Rhode Island
Tying measure sets to a specific model	Connecticut, Ohio, Rhode Island, Tennessee, Washington
Harnessing MCO contracting to require measures	Iowa, Ohio, Rhode Island, Tennessee
Legislation	Ohio
Engaging stakeholder in measure development	Arkansas, Colorado, Connecticut, Delaware, Iowa, Maine, New York, Ohio, Oregon, Rhode Island, Tennessee, Vermont, Washington

Appendix Table 5. Medicaid Beneficiaries Rached through SIM VBP Models, Round 1 and 2 states*

State		Medicaid beneficiaries touched by SIM Models			
		Patient Centered Medical Homes	Accountable Care Organizations	Behavioral Health Integration	Episodes of Care
Round 1 (2013-2018)	Arkansas	51%	--	--	15%
	Maine	--	20%	4%	--
	Massachusetts	6%	56%	--	--
	Minnesota	58%	--	--	--
	Oregon	75%	24%	--	--
	Vermont	70%	46%	--	--
Round 2 (2015-2020)	Colorado[71]	--	--	NR	--
	Connecticut	20%	--	--	--
	Delaware[72]	NR	--	--	--
	Idaho[73]	NR	--	--	--
	Iowa[74]	--	45%	--	--
	Michigan[75]	NR	--	--	--
	New York[76]	NR	--	--	--
	Ohio	47%	--	--	54%
	Rhode Island[77]	80%	--	--	--
	Tennessee	37%	--	47%	100%
	Washington[78]	--	--	NR	--

*NR=denotes data were not reported, "--"=denotes not applicable

Oregon reached most of their Medicaid population through their respective PCMH (75 percent) and Coordinated Care Models (85 percent). Similarly, the PCMH models in Arkansas, Minnesota, Vermont, and Rhode Island[79] reached most (at least 50 percent) of each state's Medicaid population. Massachusetts reached 56 percent of the commonwealth's total Medicaid population being served by its ACO. Mandatory episodes of care models reached a sizable portion of the Medicaid populations in Ohio (54 percent), and Tennessee where all (100 percent) of Medicaid beneficiaries were eligible to receive care under this

[71] Colorado did not report lives covered by their BHI model by payer. The state did report approximately 14 percent of Colorado's population received care from practices targeted by SIM.

[72] Delaware did not report lives covered by their PCMH model by payer. The state did report 80 percent of PCPs were in pay-for-performance arrangements.

[73] Idaho did not report lives covered by their PCMH model by payer. The state did report 89 percent of Medicaid beneficiaries to be in some form of value-based payment arrangement.

[74] Iowa ACOs were not evaluated due to time limitations.

[75] Michigan reported approximately 18 percent of Medicaid beneficiaries to be in value-based payment arrangements.

[76] New York did not report the proportion of their state population was covered by value-based payments, but estimates ranged from 50 to 80 percent across all payers.

[77] Rhode Island's PCMH program denoted here (PCMH kids) served a pediatric population.

[78] Washington did not report lives covered by their BHI by payer. The state reported that 75 percent of payments made via Medicaid MCOs were in a value-based arrangement in 2019.

[79] Rhode Island's PCMH served a pediatric population.

payment mechanism. By reaching 37 percent through their PCMH model and 47 percent through their BHI model, Tennessee reported reaching 80 percent of Medicaid beneficiaries through a combination of all their SIM activity. Ohio reported 47 percent of Medicaid beneficiaries were in their PCMH and a total of 72 percent of Medicaid beneficiaries were covered by VBP at the end of SIM.

Some states chose to report their progress in ways that better suited the approach to their SIM award. Idaho reported that their SIM-funded PCMH program reached approximately 44 percent of the state's population and 89 percent of the state's Medicaid population was covered by a VBP model by the end of their award.[80] Delaware reported progress by providers not by beneficiaries reached. By award's end, the state reported 80 percent of PCPs to be in pay-for-performance arrangements, 34 percent to be in shared savings contracts, and 14 percent to be in total capitation contracts. Washington reported reaching over 75 percent of its Medicaid beneficiaries in MCOs were paid through VPB models, almost reaching their self-initiated goal of 90 percent.

Colorado only reached approximately 14 percent of the state's population through their BHI model though the state reported reaching 57 percent of the targeted population. Similarly, Maine reached just 4 percent and 20 percent through its Medicaid BHI and ACO programs, respectively. Connecticut reached around 20 percent of its Medicaid population in their PCMH program. Iowa reported reaching 45 percent of Medicaid covered lives under a value-based payment arrangement by the end of their SIM award. Michigan estimated approximately 18 percent of Medicaid beneficiaries were in VBP arrangements via MCO contract requirements. Respondents in New York reported that the 80 percent goal had not been met but might have been as high as 50 percent for the state population.

[80] Idaho counted beneficiaries to be in VBP arrangements even if the PMPM care management fees amounted to the entirety of the Medicaid VBP model spending. These fees represent a very small proportion of overall Medicaid spending. Thus, only approximately 17 percent of total Medicaid spending was paid under a PMPM arrangement by the end of Idaho SIM.