# State Innovation Model Testing Awards From the Centers for Medicare & Medicaid Services Innovation Center: Highlighting Rural Focus

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For more information about the Rural Health Value project, contact:
University of Iowa | College of Public Health | Department of Health Management and Policy
www.RuralHealthValue.org | cph-rupri-inquiries@uiowa.edu | (319) 384-3831

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## INTRODUCTION

The Centers for Medicare & Medicaid Services Innovation Center established the State Innovation Models (SIM) initiative in 2012 to support states that are committed to designing and "pre-testing" strategies for health system transformation, or testing delivery and payment models newly implemented in their states. The aim of the SIM initiative was to test and promote multi-payer models for providing patient-centered care, improving care quality, and slowing the projected growth of costs in Medicare, Medicaid, and the Children's Health Insurance Program (CHIP).[1] SIM efforts rested on the unique capacities and authorities of the states under special Medicaid waivers, and their ability to coalesce key stakeholders into the innovation effort.[2] In round one of the initiative that began in 2013, the Innovation Center awarded over $250 million in model test awards to six states to assess state-level models for multi-payer payment and delivery system transformation as proposed in the states' previously designed State Health Care Innovation Plan. In round two beginning in 2014, an additional 11 states received $620 million for that same purpose.[3] Innovation plans specifically included multi-payer delivery and payment models, efforts to improve the quality of services including health IT, evidence-based investments, workforce capacity expansion, enabling policy mechanisms, and effective evaluation.[4]

This paper updates a previously published report (July 2017) and summarizes activities and accomplishments of six states – Arkansas, Colorado, Idaho, Oregon, Minnesota, and Vermont – whose SIM plans included testing efforts specifically targeting rural areas. In some of the state summaries, the rural efforts are specified, while in others, rural efforts are included in broader statewide efforts. The Rural Health Value team draws the reader's attention to rural-relevant themes across the six state SIM efforts described: primary care transformation, including health care homes (PCMH) and behavioral health integration with primary care; and collection and exchange of patient information for care integration, coordination of services, and monitoring of quality. Part 2 of this paper (to be published in April) will incorporate updates on SIM projects from additional states with rural-specific efforts.

**Figure 1 – SIM Model Testing Awards**

## ARKANSAS (ROUND 1, $42 MILLION)

FEBRUARY 2013 – SEPTEMBER 2016

### GOALS

The Arkansas State Innovation Model (SIM) sought to ensure access to services in medically underserved rural communities by increasing technical capacity and the number of providers.

### APPROACH

Arkansas received its SIM grant in February 2013 and used the funds to implement its State Improvement Plan over 42 months. The Arkansas model emphasized patient-centered medical homes (PCMHs) as the hub of comprehensive care, value-based payments that included performance-based coordinated care fees, and graduated payments that reflected the assessed needs of the patient along with cost-control mechanisms that still ensure quality care for consumers.

The Arkansas model was a statewide, comprehensive approach to meet the needs of its population, which is heavily rural. The plan incorporated longstanding state-level goals for rural health, including ensuring access to services and increasing technical capacity and the number of providers in medically underserved rural communities. These goals incorporated streamlined episode-based payment innovations that rewarded the achievement of target outcomes, particularly quality and cost-level benchmarks, with the goal of sustainability for rural providers. Additionally, the State committed to workforce development through increased recruitment and retention of providers to rural regions and promoting technical capacity building among rural providers to promote the adoption of team-based models. For providers that were too small to qualify as PCMHs, Arkansas allowed practices to pool voluntarily to meet the minimum patient panel of Medicaid beneficiaries. Arkansas also promoted the adoption of new health information technology (HIT) and improvements to the State's HIT infrastructure to further increase the quality and cost-effectiveness of rural care.[5]

Arkansas supported its reform model through adoption of four broad based strategies:

1. Delivery system and payment reforms
2. Behavioral health integration
3. Quality measurement and reporting
4. Population health

**Delivery system and payment reforms**

The state's SIM efforts initially focused on developing three main models of care delivery and payment: physical and behavioral episodes of care (EOCs), PCMHs, and health homes to provide care coordination for individuals who use long-term services and supports and with developmental disabilities and serious mental illness. PCMHs and EOCs were designed to act synergistically – with the PCMH model focused on efficient provision of primary care services and care management, and the EOC model used for value-based purchasing of both primary and specialty services. The SIM initiative in Arkansas changed payments for the majority of primary and specialty health care providers in the state in ways that promoted team-based care and care coordination. The payment changes resulted in providers changing their practice patterns and/or staffing structures.[6]

*Retrospective Episode-of-Care Base Payment*

The retrospective EOC payment model is one of the reform payment models implemented in Arkansas, where the Principle Accountable Providers (PAPs) were liable for quality and cost outcomes associated with each episode of care. Through a retrospective payment system, PAPs were given shared savings bonuses or assessed a penalty if the cost and quality outcomes were worse than other PAPs.

- Medicaid provided incentivized payments for coordinated, team-based care for specific conditions and procedures, under the leadership of a designated principal accountable provider.
- Medicaid participated in all episodes of care; commercial payers participated only in those episodes with the greatest impact on their enrollee populations.
- Payments reflected the assessed level of need for each special needs population's enhanced services.
- The State developed prospective, assessment-based institutional services for people with developmental disabilities and physical disabilities requiring long-term services and supports.

*Population-Based Care Delivery*

Population-based care through a PCMH model was designed to account for the state's different types of primary care in order to increase access to care and patient care coordination.

- The SIM plan aimed to provide a majority of Arkansas residents with access to PCMHs to provide team-based, comprehensive care with a focus on chronic care management and preventive services.
- PCMHs specifically aimed to reduce ambulatory ER visits, inpatient admissions, and readmissions.
- Capitated fees and shared savings held physicians responsible for the health of their entire Medicaid population.
- Payments included performance-based care coordination fees and shared-value/quality-based fees.

*Health Homes*

- Individuals with complex/special health needs were provided access to health homes that coordinated with their medical homes to provide medical and wraparound services, with 24/7 access.
- The State implemented an incentivized payment structure based on outcomes, evidence-based practices, and wellness promotion.
- Capitated fees were included to pay for care coordination.

**Behavioral Health Integration**

In the Arkansas behavioral health model, individuals with serious mental illness or serious emotional disturbance received coordinated care through behavioral health homes, while those with less serious mental health problems received PCMH-coordinated medical and behavioral services. Health homes developed integrated plans to coordinate mental health and substance use disorder treatment, LTSS, and medical services.[7] Behavioral Health home and PCMH models tied payments to metrics for achieving behavioral health integration.[8]

**Quality Measurement and Reporting**

PCMH practices receive quarterly reports outlining their performance on process measures, quality measures, number of beneficiaries enrolled, and total costs. The Arkansas SIM initiative required PCMHs

to participate in the EHR Meaningful Use Incentive program, further improving their capacity to report quality metrics.

**Population Health**

The Arkansas SIM office, in collaboration with Arkansas Department of Health (ADH), developed state health improvement plans and metrics for evaluating them by focusing on three major health issues for Arkansas.[7]

- Short life expectancy
- High infant mortality
- Low health literacy

The metrics used to evaluate the health improvement plans included reducing tobacco use, diabetes, obesity, hypertension, substance use, and increasing health literacy. As of the date of this report, the state did not have any results to report due to challenges with developing definitions for population health and sharing of responsibilities between Medicaid and ADH.[5]

**RESULTS**

The Arkansas SIM initiative led to changes in the health system and succeeded in its goals of reforming the system and making it viable for the long-term. The outcomes of the delivery system and payment reform were:[5]

- More than 80 percent of eligible Medicaid beneficiaries were attributed to a PCMH
- Primary care providers, specialists, and community-based service providers worked together to improve patient care coordination, and to meet patient needs and preferences.
- All-cause acute inpatient admissions declined for both commercial insurance and Medicaid beneficiaries.
- Improved care coordination and health quality obtained through PCMH and EOC models reduced unnecessary and inefficient care and reduced the growth in health care costs.
- As of first quarter 2015, 14 retrospective episodes of care had been implemented with an additional 10 in development. The initial benchmark of 50 episodes was determined to be an unrealistic goal for the first 2-3 years of the initiative.
- 2,200 (41 percent) of active patient care physicians have received EOC payments as of December 2018.
- Payers included Medicaid, Blue Cross Blue Shield, and QualChoice.
- 637 primary care physicians (representing 179 practices) were incentivized to save costs.

## COLORADO (ROUND 2, $65 MILLION)

FEBRUARY 2015 – JANUARY 2019

### GOALS

The Colorado State Innovation Model (SIM) sought to transform primary care practices by integrating physical and behavioral health care services in coordinated systems, with value-based payment structures, for 80 percent of residents by 2019. The Colorado model, called the Colorado Framework, focused on integrated physical and behavioral health as a means to achieve increased access to care, improved health outcomes through quality, and reduced costs.

### APPROACH

To accomplish the model's goals, Colorado used SIM funds to improve the state's health care infrastructure. The plan improved the technical capacity of rural providers to transform practices by taking full advantage of advances in information technology and by adopting team-based care models.

The SIM office convened a workgroup dedicated to health care payment reform in rural areas of Colorado. The workgroup included representatives from commercial and public payers, the Governor's office, hospitals, business community, and other stakeholders. The SIM office partnered with the Colorado Department of Health Care Policy and Financing and the Colorado Hospital Association to model fixed budgets for struggling rural hospitals.

More than 300 Primary Care Practices across the State of Colorado in three cohorts participated in practice transformation to integrate behavioral health and primary care services, and to prepare for value-based payment arrangements with payers**.** The first cohort of 100 practices launched in March 2016. The second cohort of 156 practices was launched in September 2017, and the third cohort of 88 practices was launched in June 2018. Of those, 92, 144, and 83 practices from each cohort, respectively, completed the SIM program. Thirty percent of the 319 completing practices were defined by the state to be rural.[8]

The state focused on a "four pillar" approach to increase access to integrated care in coordinated systems supported by value-based payments. The "four pillars" are:

1. Payment Reform
2. Practice Transformation
3. Population Health
4. Health Information Technology (HIT)

**Payment Reform**

The state recognized the need to shift payment models away from fee-for-service to those that reward value in order to sustain patient access to integrated, whole-person health care. The SIM office worked with payers to expand the Alternative Payment Model (APM) Framework. The guiding principle of the APM Framework was to drive a shift toward shared-risk and population-based payment models, in order to incentivize delivery system reforms that improve the quality and efficiency of patient-centered care. The SIM Office engaged seven private and public payers in a multi-payer collaborative to implement at least one value-based payment model for each of the participating primary care practices. The SIM office allowed the payers flexibility in designing the payment models to reflect the changing landscape in

payment models. They believed that empowering practices by focusing on developing their own skills to negotiate with payers would be more valuable in the long-term than setting up a SIM-specific APM.[9]

An evaluation workgroup surveyed practices to explore their level of preparedness for alternative payment methods. The survey also asked practices to assess the degree to which the implementation of value-based payments influenced improvements in practice-level outcomes such as quality and access to care.

The survey and subsequent actions of the workgroup generated recommendations for elements of any value-based payment strategy:

- Maintain five key primary care functions (Access/Continuity; Care Management; Comprehensiveness/Coordination; Patient/Caregiver Engagement; and Planned Care and Population Health).
- Require the use of Certified Electronic Health Records Technology.
- Align and simplify measures and data aggregation efforts.
- Base performance-based incentive payments on patient experience, clinical quality, and improved outcomes and utilization.
- Advance the use of technology at the point of care to support a focus on outcomes.
- Continue practice transformation technical assistance for providers.

The SIM office conducted evaluations to determine whether the implementation of payment reforms within certain value-based payment categories influenced outcomes.

**Practice Transformation in Primary Care**

Participating primary care practices were matched with a Practice Facilitator and a Clinical HIT advisor to guide and support integration and practice transformation. Practices were also matched with SIM-funded regional health connectors (RHCs) who helped connect practices with resources in their communities. The SIM office established a set of practice site program targets for Clinical Quality Measures (CQM) including depression screening, alcohol and drug screening, tobacco use screening, hemoglobin control, hypertension management, adult obesity screening, and asthma medication management.[10]

In addition to supporting practice transformation in primary care practices, the SIM office launched an innovative bi-directional health home effort in Colorado:

- The pilot program created integrated health homes in four Community Mental Health Centers (CMHCs) across the state.
- CMHCs provide comprehensive behavioral and physical health care to stabilize and manage illness and support recovery.

**Population Health**

The SIM office supported community efforts to reduce stigma, promote coordination of primary care and public health, reduce barriers to accessing integrated physical and behavioral health care, and connect clinical and community supports.

The Population Health Workgroup issued a call to action to improve behavioral health awareness and guided SIM efforts to improve health outcomes at the community and population level.[8] Working with SIM leadership, they identified a set of population health measures to track over the course of the SIM

effort. Measures data were collected using a representative statewide survey and covered health issues such as depression, substance use, obesity, diabetes, maternal depression, suicide death rates, injuries, death from falls, and early childhood screening.

The SIM office supported community-based mental health efforts to raise awareness, reduce stigma and promote health through grants to eight local public health agencies and two behavioral health transformation collaboratives.

The SIM's Regional Health Connector Program created clinical-community linkages in rural areas. An RHC is a program that sought to improve the health of Colorado populations by connecting residents to health systems. RHCs brought medical professionals to rural areas to build local coalitions to address opioid misuse. They also facilitated partnerships between providers and community organizations especially in rural and underserved areas.

**Health Information Technology**

The SIM office built a sustainable health information system that provided a strong foundation for future HIT efforts in rural areas. It supported the development of the Shared Practice Learning and Improvement Tool, an electronic CQM reporting solution. It also:

- Partnered with a multi-payer collaborative to provide SIM practices access to Stratus, a data aggregation tool designed to provide care teams access to patient-centered insights.
- Funded the development of the VISION Tool that allowed users to better identify and understand issues related to social determinant of health.
- Funded two health systems in rural areas to accelerate provision of whole-person care through use of health information technology.
- Expanded access to broadband communication and carried out a telehealth strategy focused on electronic consultations (e-consults).

**RESULTS**

Accomplishments across the four pillars include:

- More than 85 percent of participating practices, including those in rural areas, indicated that the SIM office assisted the practice site's improvement in the integration of behavioral and physical health care.
- All required SIM measures were reported by 95 percent of SIM practice sites.
- Broadband capability was expanded by 203 sites across the state by September 2018.
- Grants to integrate care were awarded to 85 primary care practice sites.
- Most providers (81 percent) agreed that access to APM helped them achieve their practice transformation goals.
- Analysis of practice transformation factors and changes in CQMs showed statistically significant improvement in 6 of the 14 practice-site-reported CQMs during SIM participation.

## IDAHO (ROUND 2, $40 MILLION)

FEBRUARY 2015 – JANUARY 2019

### GOALS

The state of Idaho received funding under the second round of the SIM initiative. Idaho aimed at achieving a statewide transformation of the health care system through the establishment of Patient-Centered Medical Homes (PCMH).[11] The PCMH is a model of delivery of primary health care services in an efficient and integrated manner. Health care providers practicing under this model use decision support tools, engage patients in their own care, and can measure their performance and conduct activities for quality improvement as per patients' needs.[12] This new transformation was intended to establish efficient and integrated primary care services for the residents of Idaho in a cost-effective manner.

### APPROACH

The Idaho SIM included four specific aims:

1. Achieving a statewide integrated, efficient and coordinated system of health care delivery through practice transformation with the help of PCMHs.
2. Supporting health care providers with expanded connectivity through electronic health information exchange and creation of a health data infrastructure.
3. Reducing health care spending and enhancing the use of Value-Based Payment (VBP) models for reimbursement of practitioners throughout Idaho.
4. Sustaining the PCMH model in clinical practices throughout Idaho.

**Practice transformation**

Idaho Practice transformation activities included provision of technical assistance and training to primary care practitioners to help them achieve recognition as a PCMH*. Idaho introduced virtual PCMH certification alongside a traditional PCMH track to support locations with limited resources and to engage rural practitioners. The certification was used to support rural and frontier areas requiring integration of telehealth and community health workers. SIM-funded technical assistance included coaching calls, collaborative learning sessions, webinars, a peer mentorship program, and an online portal. Training was also provided to further enhance the capabilities of already established PCMH practices.[13] By the end of the test model, the state aimed to build 180 nationally recognized PCMH practices, including 75 Virtual PCMHs.

**Electronic Health Exchanges & Health data infrastructure**

To expand practice connectedness Idaho used the existing Idaho Health Data Exchange (IHDE) and invested in enhancing that capacity. The increased investment in technical assistance provided opportunities to PCMH providers to better connect with extended care teams, including specialists and hospital-based service providers.[13,14]

**Enhanced payment arrangements & health care spending**

Improvements in Idaho's payment model were not originally designed as part of the SIM initiative. Payment advancements happened due to the changes Medicaid brought through its Healthy

*Idaho PCMH certification used national recognition requirements (NCQA) with state-specific metrics to meet the unique needs of their practices and patients.

Connections payment model implemented in 2016.[15] Under Healthy Connections, reimbursement was based on the PCMH capabilities of providers with higher payments given to providers belonging to higher PCMH "tiers". Providers could obtain better payment rates by moving to higher tiers by adding PCMH capabilities such as an IHDE connection. The SIM initiative helped clinics develop advanced PCMH capabilities resulting in higher tier levels of reimbursement.[16]

**Sustainability of the efforts**

The Healthcare Transformation Council of Idaho (HTCI) was established in 2019 to help sustain the transformation efforts that began under the SIM Initiative and to promote the growth of the PCMH model. The HTCI's goal is to increase the proportion of value-based payments in Idaho from 29 percent to 50 percent by 2023, and to provide leadership and coordination to continue Idaho's VBP payment transformation.[12] Although, the HTCI planned to continue promoting person-centered health care delivery system, no future PCMH cohorts were planned.[14]

**RESULTS**

Idaho's practice transformation activities included provision of technical assistance, training and IHDE connectivity to primary care practitioners. Clinics throughout Idaho were transformed into PCMHs or enhanced their PCMH capabilities. Specifically, Idaho was successful in engaging 165 clinics to develop or enhance their PCMH capabilities. Additional training was provided to 107 community health workers (CHWs), and 13 new community health emergencies medical services (CHEMS) were established. Through investment in CHWs and CHEMS, Idaho was able to provide patient-centered care in rural and frontier communities who had been overlooked by previous transformation models.[13] Efforts were made to share best practices and expand health care coordination resulting in the state recognizing 48 clinics as virtual PCMHs. The PCMHs that received support showed a positive impact on outcomes for adult beneficiaries (e.g., a decrease of 11.21 inpatient admissions per 1,000 adult Medicaid beneficiaries compared to patients assigned to non-participating clinics) (see figure 1).

By the end of the award period, most of the participating providers were connected to the IHDE and were able to use data from that system to improve patient care. Due to these improvements, 154 PCMH providers (approximately 93%) were able to exchange data electronically with the IHDE. In addition, 111 practices were able to establish a stable bi-directional connection to share data with other institutions and health care providers. Although providers were able to use the IHDE data to improve individual patient care, the data system lacked the ability to produce reports useful for quality improvement activities.[13]

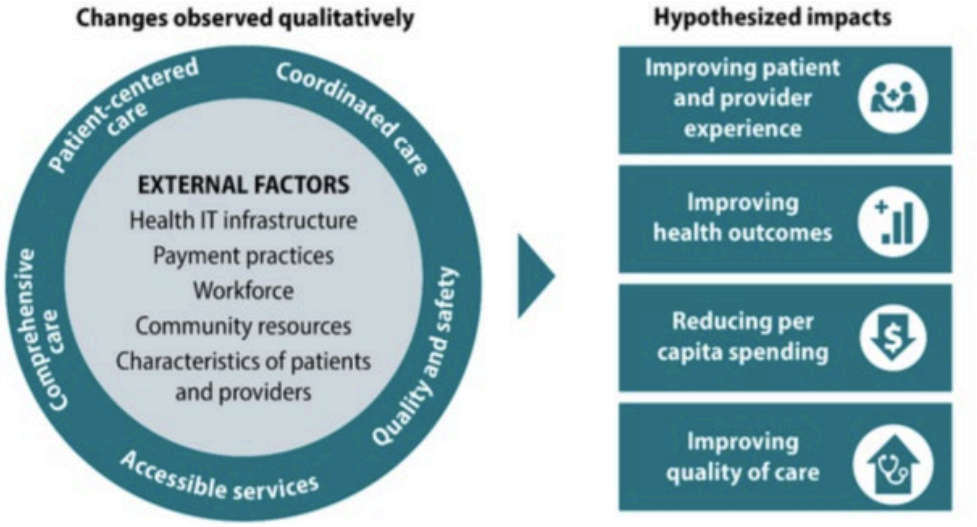
With the help of Medicaid's distinct Healthy Connection payment model, the SIM initiative was able to build the capabilities of providers through technical assistance and facilitating health information technology, resulting in advanced PCMH practices and better reimbursement, resulting in increasing VBP usage, as measured by percent of covered lives and of all payments made through VBP.[16] For example, in 2019, the state reported that across all payers, 90.9 percent of covered beneficiaries were served by a provider reimbursed through a VBP model compared to 58.1 percent in 2015. Similarly, 37.8 percent of all payments were made through VBP in comparison to 24 percent previously.[16]

Analysis of claims data showed a decrease of 11.2 inpatient admissions per 1,000 adult Medicaid beneficiaries assigned to participating clinics during the first two years of implementation compared to those assigned to non-participating clinics. Similarly, a decrease of 108 ED visits per 1,000 adult

beneficiaries in the practice transformation support group was observed during the first two years of implementation in comparison to non-participating practices.[15]

After the award period, Idaho did not recruit more primary care practices to participate in PCMH transformation and instead focused primarily on VBP expansion.[1212] Challenges with health IT also persisted throughout the SIM Initiative. Although most participating practices were connected to the IHDE by the end of the award period and PCPs were using that data to improve patient care the quality of the IHDE data was found to be insufficient to enable statewide data analytics.[13]

**Figure 1:** *Modified Agency for Healthcare Research and Quality framework for evaluating patient-centered medical home effectiveness*




**Source:** AHRQ (Agency for Healthcare Research and Quality, 2013, March). *The medical home: What do we know, what do we need to know? A review of the earliest evidence on the effectiveness of the patient- centered medical home model* https://pcmh.ahrq.gov/page/medical-home-what-do-we-know-what-do-we-need- know-review-earliest-evidence-effectiveness-of-the-patient-centered-medical-home-model

## MINNESOTA (ROUND 1, $45 MILLION)

FEBRUARY 2013 – DECEMBER 2017

### GOALS

Minnesota identified the following goals for the State Innovation Model (SIM) award, to be achieved by the end of 2017:[17]

1. Ensure every Minnesotan has the option to receive team-based, coordinated patient-centered care that increases and facilitates access to medical care, behavioral health care, and other services while lowering costs.
2. The majority of providers participate in an Accountable Care Organization (ACO) or a similar model that holds them accountable for costs and quality of care.
3. The alignment of financial incentives for providers across payers promoting increased access, improved quality, and reduced costs.
4. Communities, providers, and payers have started implementing new collaborative approaches to setting and achieving clinical and population-level health improvement goals.

### APPROACH

The Minnesota approach included:[18]

- Health IT
- Integrated Health Partnerships
- Practice Transformation
- Accountable Communities for Health

#### Health IT

The Minnesota Accountable Health Model invested in e-health to increase care coordination, quality improvement, and providers' ability to securely exchange data for treatment purposes. Minnesota's SIM funding supported three main areas of e-health:

1. Privacy, security, and consent management for electronic health information exchange grants to:
    - ensure health care professionals have access to education and technical assistance on privacy, security, and consent management practices.
    - identify opportunities for improvement in current patient consent processes.
    - share health information in a safe and secure manner that is consistent with both state and federal law.
2. E-health community collaborative program engaging ACOs or other organizations with experience in value-based models to support the secure exchange of medical and health-related information.
3. E-health roadmap to advance the Minnesota Accountable Health Model in four priority areas: behavioral health, long-term and post-acute care, local public health, and social services.

#### Integrated Health Partnerships

Prior to the current Minnesota Accountable Health Model, the Minnesota Department of Human Services' (DHS) Medicaid ACO demonstration (referred to as Integrated Health Partnerships, IHP) was a testing ground to provide partnerships with better data analytics to lower health care costs and improve quality of care.

As part of the SIM effort, the IHP program was expanded to include innovative investments in provider alternative payment arrangements:

- Population-based prospective care coordination payment
- Exchange of electronic clinical event notifications between IHPs and providers
- Contract incentives to strengthen partnerships with community supports and social services organizations
- Increase system accountability for patient population health outcomes

**Practice Transformation**

A variety of tools were used to foster practice transformation under the Minnesota model:[5]

1. Emerging professions integration grant and toolkit – Used to hire emerging professions such as Nurse Assistants and Physical Therapists and integrate them into the workforce; and, provided information to potential employers about hiring emerging professions practitioners and successfully integrating them into care coordination models.
2. Practice transformation grants – Provided direct funding to primary care, behavioral health, and other providers integrating primary care, behavioral health, and social services.
3. Practice facilitation grants – Provided executive coaching and leadership training, organizational assessment, and training for more professions to serve in patient-centered teams.
4. Learning communities' grants – Granted funding to help integrate behavioral health services with primary care, integrate pediatric care with behavioral health, and conduct quality improvement activities in rural practices.
5. Oral health access grant – Given for activities to improve oral health access and preventative care for health centers in urban and rural areas.

**Accountable Communities for Health**

Accountable Communities for Health (ACH) supported three main areas of investment:

1. Accountable Communities for Health – Supported community-based care coordination and population-based prevention strategies to address community health care needs.
2. The Accountable Communities for Health Learning Collaboratives – Provided technical assistance and facilitated peer learning between 15 Accountable Communities for Health to increase knowledge and capabilities related to patient-centered, coordinated, and accountable care.
3. Accountable Communities for Health Expansion Grants – Supported health models, and services and support systems that have positive effects on health and promote sustainability.

**RESULTS**

The State Health Access Data Assistance Center (SHADAC) at the University of Minnesota School of Public Health was contracted to conduct the state evaluation of Minnesota's SIM initiative. A synopsis of the SHADAC report follows:[19]

**Health IT**

- Providers reported implementation of health IT improved continuity of care. Care teams reported timely sharing of information among teams resulted in reduced hospitalization.

- Health IT reduced administrative costs for providers. Providers interviewed by SHADAC thought that their organization's administrative costs associated with printing, faxing, and mailing were reduced because of investment in health IT.
- Health IT helped strengthen relationships between collaborative partners. Providers interviewed by SHADAC thought that they had increased their knowledge of the role played by collaborative partners in the community and the data available to them.
- The number of state certified Health Information Exchange organizations increased significantly because the state required SIM grant recipients to connect to a state certified health IT service provider to allow electronic exchange of data. As of 2017, there were 20 organizations certified as health information organizations, or health data intermediaries.

**Integrated Health Partnerships**

- The number of SIM organizations participating in Alternative Payment Method (APM) arrangements increased. In a survey of 77 SIM awards recipients, 31 percent reported an increase in their level of APM participation.
- According to state actuarial analysis, cost savings and shared savings for IHPs resulted in $212.8 million in total cost savings between 2013 and 2016.
- Inpatient costs were reduced after the implementation of IHP and ACO alignment.

**Practice Transformation**

The number of patients with disabilities receiving high quality, patient-centered, coordinated care increased. The certified health care homes program funded through the SIM grant provided a platform where providers, families, and patients worked together to improve the quality of life and health outcomes for people with complex health conditions.

- SIM grantees reported an increase in care coordination capacity. A survey of 38 organizations participating in SIM team-based coordinated care programs found that 85 percent of respondents thought that their organization's care coordination abilities were somewhat or much better than before the implementation of SIM practice transformation.
- SIM grant recipients were able to increase data collection abilities. SIM grant funds allocated for practice transformation were used to develop new data collection activities to support care coordination and improve the quality of care.
- Providers reported that their communications were improved, both within organizations and with external providers, after the implementation of practice transformation activities.

**Accountable Communities for Health**

- The ACH strengthened collaborations and partnerships among partner organizations and providers. Out of 70 organizations surveyed, 89 percent believed that there was an increase in the number of collaborations resulting from ACH under SIM.
- The quality of care was improved with 78 percent of survey respondents reporting that they believed that this was the result of the ACH care coordination processes.
- ACH participants reported a sense that the activities improved social determinants of health with 84 percent of surveyed providers indicating that they would continue to participate in the ACH care coordination processes.
- The vast majority of surveyed providers (80 percent) indicated that patient health outcomes and utilization indicators percent improved because of ACH under SIM.

## OREGON (ROUND 1, $45 MILLION)

SEPTEMBER 2012 – SEPTEMBER 2016

### GOALS

The goal of the Oregon State Innovation Model (SIM) grant was to strengthen and support the state's coordinated care model and to begin implementing its key elements. This was to be accomplished by restructuring the state's existing care model and the health systems' business model to better manage and coordinate care. SIM funds were used to strengthen existing systems and to improve care.[5]

### APPROACH

Oregon used SIM funds to strengthen its delivery system and promote change. Specific elements were.[5]

- Innovation and Rapid Learning
- Delivery System Innovation
- Patient-Centered Primary Care Home Program (PCPCH)
- Payment Models
- Health IT Infrastructure
- Quality Measurement and Reporting

**Innovation and Rapid Learning**

SIM grant funds were used to provide resources and technical assistance to Oregon's 16 Coordinated Care Organizations (CCOs) and to spread major elements of the model to other payers and populations. Strategies included launching the Transformation Center as a vehicle for stakeholder engagement and expanding the PCPCH program. The Transformation Center facilitated learning, shared innovation practices, provided direct technical assistance on topics such as behavioral health, and primary care, and promoted adoption of alternative payment models.

**Delivery System Innovation**

The Oregon Health Authority, in collaboration with major stakeholders in the state, developed a plan to reform Oregon's Health care system. They used SIM funds to support the Coordinated Care Model (CCM) as its vision for better health care. The major attributes of the model included:[20]

- Using best practices to manage and coordinate care
- Sharing responsibility among providers, payers, and health consumers
- Increasing transparency in price and quality
- Measuring performance
- Paying providers for better quality care and health
- Achieving a sustainable rate of health care expenditure growth

**Patient-Centered Primary Care Home Program**
The PCPCH was Oregon's version of the medical home model. Oregon established a PCPCH standards advisory committee which defined six core attributes:

- Access
- Accountability
- Comprehensiveness
- Continuity
- Coordination and integration of services
- Person-and-family-centered approach

**Payment Models**
Payment model reform included plans to spread CCM features through qualified health plans offered on the state's Health Insurance Marketplace. The Patient-Centered Primary Care Homes that Oregon developed were scattered among the state's 16 CCOs. State officials viewed PCPCH as a foundation to the success of CCOs. They used SIM resources to provide technical assistance to PCPCHs to upgrade their capacity. The advantages of the CCOs are that they are local and are accountable for the health outcomes of the population they serve. They are governed by a partnership of health care providers, community members, and other stakeholders in the health system. They integrated behavioral health services with primary care by establishing contractual agreements with behavioral health providers. The state also promoted payment reform in primary care by requiring all payers to spend a set percentage of their overall spending on primary care services.[21]

**Health IT Infrastructure**
The state invested significant resources in health IT. This was seen as essential for the support of the CCM in the collection and exchange of patient information for care integration, coordination of services, and monitoring of quality. SIM funds also financed planning for robust and financially sustainable state health IT services to support coordinated care. The state's Emergency Department Information Exchange was implemented in all Oregon hospitals with a goal of identifying frequent users of emergency department services and to help direct them to appropriate care settings. The state also made SIM funds available to support five telehealth pilots and expanded capacity for videoconferencing between primary care providers and specialists as a solution to health care professional shortages in rural communities.

**Quality Measurement and Reporting**
The state devoted significant SIM resources to support Oregon Health Authority (OHA) data analytics capability. Data analytics included collecting and analyzing CCO metrics and generating regular reports to improve performance and care for patients. The state tracked CCO performance to demonstrate the success of CCM and encourage commercial payers to adopt the model and establish it as a standard care model for all state residents.

**RESULTS**

Oregon surpassed its goal of expanding the PCPCH and succeeded in its goal of spreading CCM beyond Medicaid. As of March 2017, 67 percent of eligible primary care providers were practicing in 659 PCPCH clinics. Other outcomes of the SIM project included:[5]

- The state leveraged its purchasing power to implement selected elements of the CCM in health plans offered to state employees and educators accounting for 6 percent of the state's population.
- By March 2017, 83 percent of the state's providers were reported to be engaged by CCOs.
- CCOs served 85 percent of all Medicaid enrollees and 54 percent of Medicare-Medicaid enrollees.
- The state reported that 97 percent of state employees were enrolled in health plans with CCM features. But most of those opted to remain in plans with the least restrictive network, therefore limiting the CCM impact on cost and quality.
- By the end of 2016 only 35.9 percent of payments CCOs made to providers were not fee-for-service, falling short of the state goal of 57 percent by end of the SIM's test period.
- Integration of behavioral health with primary care were significant, resulting in increased screening for depression, and drug and alcohol misuse.
- All Oregon Acute Care hospitals were connected and had access to the real-time ED notification system through SIM funding.

## VERMONT (ROUND 1, $45 MILLION)

FEBRUARY 2013 – JUNE 2017

### GOALS

The Vermont State Innovation Model (SIM) plan reforms Vermont's health care system through care integration, payment reform, and financial incentive promoting value-based care. The overall goal is the Institute for Healthcare Improvement's Triple Aim: better care, better health, and lower health cost.[22]

### APPROACH

The model builds on pre-existing programs to expand and improve care coordination, value-based payment reform, and health data infrastructure. The Vermont Health Care Innovation Project (VHCIP) was established to execute the SIM plan. The Vermont State Regional Care Collaboratives (RCCs) developed partnerships with three Accountable Care Organizations (ACOs) – Community Health Accountable Care, Vermont Collaborative Physicians, and OneCare Vermont – to support state-wide collaborative structures. Those organizations focused on three principal strategies: redesigning payment models, practice transformation, and creating a supporting heath data infrastructure.[23]

**Payment model design**

During the four years of SIM funding the VHCIP:[4]

- Developed and recommended standards for Vermont-specific Medicaid and Commercial Shared Savings Programs and Medicaid pay-for-performance models.
- Researched and developed Episodes of Care payments models, but ultimately decided not to pursue the model.
- Worked with ACOs to build their infrastructure and provider capacity through funding of health care systems that will enhance alternative payment models
- Aligned quality measures across payers to facilitate collection and reporting.
- Implemented two new Shared Savings Program (SSP) ACOs: a Medicaid SSP, and a Commercial SSP. The ACOs were eligible to receive a portion of any savings if they met performance quality measures.

In addition, special initiatives addressed specific needs. For example, a Health Home initiative addressed needs of Medicaid beneficiaries with opioid addiction. The initiative was supported by two payment models: a bundled monthly rate for central hubs and a capacity-based payment for primary sites (spokes). Similar programs within the Medicaid program included Community Health Teams, and Support and Services at Home. VHCIP worked on a Medicaid pathway model, a planning process designed to systematically review payment models and delivery system expectations; and to support integration of physical health, long-term services and supports, mental health, and substance use disorder treatment.[24] The model also included integrating long-term services and supports, and other specialized services, into the continuum of care to improve beneficiary outcomes.

**Practice transformation**

Projects to foster practice transformation included:

- Supporting learning collaboratives of Vermont providers to share best practices
- Training for front-line care coordinators
- Supporting regional collaborations to reform health care

- Supporting a Care Models and Care Management Work Group which surveyed staffing levels and types of personnel engaged in care management
- Assessing provider supply to predict supply trends and inform strategic planning

**Health Data Infrastructure**

The goal of the Vermont SIM plan included guided investments in the expansion and integration of Information Technology.[5]

- VHCIP worked to expand the development of Electronic Health Records (EHR) and other data systems to support the integration of services.
- Gaps in infrastructure connectivity were addressed and robust clinical data reporting was supported through Vermont's Health Information Exchange (VHIE).
- The VHCIP developed two tools to support better communication: the Blueprint Clinical Registry, and the Patient Ping event notification system. Blueprint Clinical Registry included a data entry portal for self-management support programs and tobacco cessation programs. Patient Ping was an electronic notification system to alert providers when their patients have been admitted or discharged from the emergency department or changed care setting.
- Two telehealth pilots were launched – one to facilitate medication-assisted treatment for patients with opioid addiction, and the other to link visiting nurse organization telemonitoring system data with VHIE.

**RESULTS**

The state's final SIM report identified the following results.[23]

**Care Integration**

- As a result of care integration, Medicaid beneficiaries in Vermont had substantially lower rates of utilization relative to comparison groups.
- Commercially insured Vermont residents had lower rates of visits to primary care providers and some specialists. Visit rates increased for some specialists.
- Vermont SIM-supported quality of care measures – hospitalization rates and mammography screening – saw improvements.
- Pharmacy spending for commercially insured residents decreased.

**Payment Reform and Financial Incentive Structures**

- As of December 2016, the state's ACO model served 46 percent of the Medicaid population, 13 percent of the Commercial population, and 44 percent of the Medicare population.
- Vermont SIM initiative reported that as of December 2016, Patient-Centered Medical Homes reached 70 percent of the Medicaid population, 37 percent of the Commercial population, and 59 percent of the Medicare population.
- Vermont included a new population health measure in its all-payer ACO model. The measure, Accountable Communities for Health Model, focusses on all patients' health within a certain geographic area.
- As of December 2016, 996 providers participated in the Medicaid SSP, and 1,105 providers participated in the commercial SSP.

**Health Data Infrastructure**

- The Patient Ping event notification system was used by one ACO, all 14 Vermont hospitals, 16 skilled nursing facilities, and more than 250 individual practices at the end of the SIM initiative.
- SIM funding improved the transfer of data among Vermont's payment programs, coordination of patient care, and measurement of quality metrics.
- Lack of interoperability prevented most providers from using VHIE. In a state-funded evaluation of VHIE, 91 percent of providers believed that VHIE was critical for Vermont, but only 19 percent thought it was meeting the needs of their organization.
- The state focused on implementing a behavioral health data repository through EHR expansion, and Health Information Exchange connectivity.

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