August 2017

State Innovation Models (SIM) Round 2

Model Design Final Report

Submitted to

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Acronym List

AAAHC	Accreditation Association for Ambulatory Health Care
ACA	Patient Protection and Affordable Care Act (Affordable Care Act)
ACH	Accountable Community of Health
ACO	accountable care organization
AHCCCS	Arizona Health Care Cost Containment System
AIDS	acquired immune deficiency syndrome
APCD	all-payer claims database
BMI	body mass index
CAHPS	Consumer Assessment of Healthcare Providers & Systems
CalPERS	California Public Employees Retirement System
CCT	Community Care Team
CDC	Centers for Disease Control and Prevention
CHCC	Commonwealth Health Care Corporation
CHIP	Children's Health Insurance Program
CHIS	Comprehensive Health Care Information System
CHPI	California Healthcare Performance Information System
CMMI	Center for Medicare and Medicaid Innovation
CMS	Centers for Medicare & Medicaid Services
CNMI	Commonwealth of the Northern Mariana Islands
COPD	chronic obstructive pulmonary disease
CRISP	Chesapeake Regional Information System for our Patients
D-ACO	Dual Accountable Care Organization
DC MCAC	District of Columbia Medical Care Advisory Committee
DHHS	Department of Health and Human Services
DSM	direct secure messaging
ECHO	Extension for Community Healthcare Outcomes
EGID	Employees Group Insurance Department
EHR	electronic health record
EOC	episode of care
ER	emergency room
ETF	Department of Employee Trust Funds
FCC	Federal Communications Commission
FFS	fee-for-service
FQHC	Federally Qualified Health Center

health IT	health information technology
HEDIS	Healthcare Effectiveness Data and Information Set
HIE	health information exchange
HITECH	Health Information Technology for Economic and Clinical Health Act of 2009
HIV	human immunodeficiency virus
HRSA	Health Resources and Services Administration
HSCRC	Health Services Cost Review Commission
IBIS	Indicator Based Information System
ICN	Integrated Care Network
IHMHP	Indian Health Medical Home Program
IHS	Indian Health Services
LBJTMC	Lyndon Baines Johnson Tropical Medical Center
LTC	long-term care
LTSS	long-term services and supports
MCO	managed care organization
MMC	Medicaid managed care
MU	meaningful use
NCQA	National Committee for Quality Assurance
NIH	National Institutes of Health
NM	New Mexico
OCI	Office of the Commissioner of Insurance
ONC	Office of the National Coordinator for Health Information Technology
P4P	pay for performance
PAP	principal accountable provider
PCMH	patient-centered medical home
PHIC	Population Health Improvement Council
PMPM	per member per month
R&L	Department of Regulation and Licensing
RCO	regional care organization
SAMHSA	Substance Abuse and Mental Health Services Administration
SBIRT	Screening, Brief Intervention, and Referral to Treatment
SCHIP	State Children's Health Insurance Program
SHIP	State Health Care Innovation Plan
SHSIP	State Health System Innovation Plan
SIM	State Innovation Models
SNF	skilled nursing facility

SPA	State Plan Amendment
UWPHI	University of Wisconsin Population Health Institute
VBA	Value-Based Analytics
VDH	Virginia Department of Health
VHI	Virginia Health Information
VIP	Virginia Integration Partners
WAHP	Wisconsin Association of Health Plans
WCHQ	Wisconsin Collaborative for Healthcare Quality
WHA	Wisconsin Hospital Association
WHIO	Wisconsin Health Information Organization
WMS	Wisconsin Medical Society
WNA	Wisconsin Nurses Association
WVHTA	West Virginia Health Transformation Accelerator

Executive Summary

States have the potential to accelerate health care system transformation through the adoption, expansion, and support of innovative delivery system and payment models. These models are expected to transform the current fragmented, encounter-based, health care delivery and payment system to one based on patient-centered, coordinated care and value-based payment, and to ultimately improve health and health care while reducing costs. Since April 2013, the Center for Medicare and Medicaid Innovation (CMMI) has funded the State Innovation Models (SIM) Initiative program two rounds of Model Design/Pre-Test awards. Under Round 1, which began April 1, 2013, CMMI awarded nearly $30 million in SIM Initiative funds to 19 Model Design/Pre-Test states. Under Round 2, which began February 1, 2015, CMMI awarded nearly $48 million in SIM funds to 21 Model Design states[1] (American Samoa, Arizona, California, District of Columbia, Hawaii, Illinois, Kentucky, Maryland, Montana, Nevada, New Hampshire, New Mexico, Northern Mariana Islands, New Jersey, Oklahoma, Pennsylvania, Puerto Rico, Utah, Virginia, West Virginia, Wisconsin). Funding was provided to awardees to develop final State Health System Innovation Plans (SHSIPs). These plans provide a statewide strategy to transform the state health care delivery system through multi-payer payment reform and other state-led initiatives.

CMMI contracted with RTI International and its subcontractors to conduct an independent, federal evaluation of the Round 2 SIM Initiative awards. This evaluation contract includes a review and synthesis of the Round 2 Model Design awardees' final SHSIPs. This report, prepared by RTI and Mission Analytics staff, provides the results of the synthesis.

The RTI team reviewed and abstracted data from SHSIPs, supporting state documents, and state SHSIP Web sites to create a data abstraction document for each Model Design awardee. These data abstractions, along with SHSIPs and supporting data, were used to identify cross-state themes and address three research questions:

1. What health care payment and delivery system models and enabling strategies are proposed in the SHSIPs by the Model Design awardees?
2. What is the geographic and population reach of the SHSIPs?
3. How did the SHSIPs address the policy and regulatory requirements listed in the SIM Round 2 Funding Opportunity Announcement?

[1] The term "state" is used throughout the executive summary to include all model design awardees: states, territories, and the District of Columbia.

ES.1 Aims and goals of the State Innovation Models across states for health care delivery system transformation

State aims for health care delivery transformation generally can be divided into three categories: improving population health, reducing health care spending or increasing the value of health care spending, and improving health care quality and health system performance.

- All SIM Round 2 Model Design states identified improved population health as an aim of their proposed health care delivery transformation activities.
- All SIM Round 2 Model Design states will seek to improve health care savings and value by transforming their health care delivery systems.
- Twelve states (American Samoa, the District of Columbia, Hawaii, Montana, New Jersey, New Mexico, Northern Mariana Islands, Oklahoma, Pennsylvania, Virginia, West Virginia, and Wisconsin) will aim to improve health care quality or health system performance.
- America Samoa, Arizona, and West Virginia described other aims, such as improving the cultural competence of health care providers, increasing patient engagement in health care decision making, and enhancing health information technology (health IT).

ES.2 Delivery systems and payment reforms

Models. All Round 2 Model Design states included one or more of four delivery system and payment models in their SHSIPs as part of their approach to attaining their aims.

- Patient-centered medical homes (PCMHs) were the most common and were proposed in 10 states (American Samoa, Arizona, Illinois, Kentucky, Montana, Nevada, New Hampshire, New Mexico, the Northern Mariana Islands, and Puerto Rico).
- Health homes, a variant on PCMHs focusing on medically complex patients, were proposed in nine states (American Samoa, California, the District of Columbia, Kentucky, Montana, Nevada, New Jersey, Oklahoma, and West Virginia).
- Accountable care organization (ACO) models, bringing together groups of providers to work collaboratively and accept accountability for the cost of care for a defined set of patients, were proposed in eight states (American Samoa, the District of Columbia, Kentucky, Maryland, New Jersey, Oklahoma, Puerto Rico, and West Virginia).
- Episode of care models—in which either a designated provider receives a prospective payment for a specific illness or course of treatment, or total expenditures across participating providers are retrospectively reconciled to a target price—were proposed in five states (California, Kentucky, Oklahoma, Pennsylvania, and Puerto Rico).

Targeted markets. Commonly, states have plans to implement and/or expand value-based payments in the portion of the market where they can directly make changes in purchasing arrangements, either through Medicaid only or through Medicaid and state employee benefit programs. Proposed payer involvement in most states is limited to Medicaid and state employee plans. In relation to PCMH and health home initiatives, five states (American Samoa, Arizona, the District of Columbia, Nevada, and New Jersey) propose to limit payer involvement to Medicaid. California, Kentucky, New Hampshire, and West Virginia will include Medicaid and state employee plans. New Mexico will focus first on Medicaid and Medicare. New Hampshire and Montana also will include commercial payer participation with implementation.

Behavioral health. Fourteen states (American Samoa, Arizona, Hawaii, Illinois, Kentucky, Maryland, Montana, Nevada, New Hampshire, New Mexico, New Jersey, Oklahoma, West Virginia, and Wisconsin) are proposing to improve the delivery of behavioral health care by implementing new programs and/or improving the integration and care coordination of primary and behavioral health care. Some examples include the following:

- Arizona's Indian Health Medical Program and its proposed Indian Health Medical Home Model will reimburse its network of community health centers for primary care, case management, a 24-hour call line, diabetes education, and care coordination for individuals with chronic or complex conditions, including serious mental illness.
- The District of Columbia's health home model is designed to integrate physical health needs into the behavioral health setting. Care teams created by participating behavioral health providers will coordinate a patient's full array of health and social service needs, with the goal of reducing costs and improving the quality of care.
- Kentucky is developing complex chronic condition health homes, focusing on individuals with opiate substance use disorders, who are at risk of developing another chronic condition.
- Montana is directing initial efforts to piloting four Medicaid health homes to provide integrated primary care with mental health and substance use services for individuals 16 to 25 years of age.
- Nevada is implementing health homes for Medicaid beneficiaries with two or more chronic conditions and plans to expand to include health homes for individuals with severe and persistent mental illness. Telehealth usage is planned for health services that are not available locally.

Policy levers. States discussed few legislative and regulatory levers in implementing their delivery system and payment reform models. Most commonly cited were Medicaid Section 1115 demonstrations in the District of Columbia, Montana, New Hampshire, New Jersey, New Mexico, and West Virginia as a policy lever to design PCMH and health home models.

ES.3 Health information technology and data analytic infrastructure

Building health IT and data analytic infrastructure is necessary for supporting delivery and payment reforms. Enabling health IT strategies that states proposed include promoting electronic health record adoption and enhancement, developing statewide health information exchange (HIE) capacity and functionality, developing and expanding telehealth, engaging consumers through technology, developing an all-payer claims database, and integrating public health data and analytics to achieve public health goals.

Health information exchanges. All Round 2 Model Design states proposed strategies to improve HIE infrastructure and connectivity. Even with a broad availability of HIE capabilities, increased coordination of care across the full continuum of health delivery and payment models cannot occur unless providers, pharmacies, laboratories, and hospitals connect their information systems to an HIE. Examples of states' efforts to expand HIE usage include the following:

- Hawaii is seeking to expand HIE usage to include behavioral health providers. The state will leverage its relationship with the Hawaii HIE to encourage use of and connection to Health eNet (direct messaging) and enhance behavioral health capabilities, including adding behavioral health datasets.
- New Hampshire plans to implement an HIE incentive grant program that would provide the first year of HIE membership without charge to allow nonparticipating providers a chance to experience the value of HIE without taking on the initial resource burden.
- Wisconsin is establishing technical assistance resources to help in achieving optimal HIE adoption by federally qualified health centers, rural health centers, Tribal health centers, small hospitals, and home health organizations.
- Arizona, Hawaii, Kentucky, Nevada, New Hampshire, Oklahoma, Pennsylvania, Virginia, West Virginia, and Wisconsin plan to expand HIE connectivity statewide.

ES.4 Workforce Development

Health care delivery system transformation relies on a health care workforce that includes an adequate supply and occupational mix of health care workers. Delivery system transformation also requires workers with the appropriate skills and knowledge to take on new roles or to work effectively as part of a team. Workers practicing at the top of their capabilities means that work is appropriately delegated within a health care setting, freeing up professionals with more education and training to focus on more complex work. Examples of states' efforts in this area include the following:

- Hawaii, Illinois, and Utah will deploy training to improve the capacity of primary care providers to treat behavioral health issues and support the integration of behavioral health and primary care.

- New Hampshire plans to collaborate with Area Health Education Centers—federally funded organizations that educate, recruit, and retain providers—to deliver trainings on team-based care.
- New Jersey will create learning collaboratives for Medicaid ACOs and "learning communities" for providers interested in becoming behavioral health homes.
- American Samoa, Hawaii, New Mexico, Montana, Nevada, Oklahoma, Pennsylvania, and West Virginia propose increasing the use of lower- and mid-level staff to support team-based care. Ten states (California, Hawaii, Illinois, Maryland, Nevada, New Mexico, Montana, Oklahoma, Pennsylvania, and West Virginia) are particularly interested in expanding the use of community health workers, who can connect members of the communities they serve to health and social services.

ES.5 Sustainability

As states undertake efforts to transform health care, ensuring organizational and financial stability is paramount in continuing the momentum and building on the work that has been done during the Model Design award period. States discussed challenges they faced in continuing their work and their concerns include:

Funding. Identifying and securing stable funding to implement and continue SIM transformation activities is a paramount concern to states. Model Design states initially thought funding for a possible Model Test Phase might be available from the Centers for Medicare & Medicaid Services (CMS). When CMS indicated its unavailability, states looked to other sources, such as through Medicaid Section 1115 demonstrations, the Agency for Health Care Quality and Research, and state funding. The alternative is altering or downsizing implementation plans, prioritizing efforts, and incrementally phasing in implementation.

Stakeholder commitment. Stakeholder work groups provided guidance and input on SHSIPs that states were developing. States expressed some concern about the possibility of retaining stakeholder commitment past the Model Design award period and maintaining collaboration necessary to drive progress in the state into implementation. To address this concern, eight states (the District of Columbia, Hawaii, Kentucky, Montana, Nevada, New Mexico, Oklahoma, and Virginia) include potential plans to retain stakeholder engagement. Plans include communication avenues through Web sites, forums, newsletters, and meetings.

Workforce shortages. Workforce provider shortage was discussed by Oklahoma, Nevada, New Jersey, and New Mexico as an implementation challenge. Shortages of physicians, specialists, and physician-to-patient distribution are problematic, particularly in rural areas. Nevada expressed concern that forming a multidisciplinary team of health professionals committed to serving a complex and vulnerable population through PCMHs might prove difficult, due to these shortages. New Jersey was concerned about shortages of behavioral health resources that would impede the integration of primary care and behavioral health services.

Payer participation. Additionally, achieving payer participation beyond Medicaid is a challenge for states. While commercial payers are represented on many states' advisory committees, commercial payers do not seem to have made a commitment to participate in SIM transformation.

1. Introduction

1.1 Brief Description of the State Innovation Models Initiative

Since April 2013, the Center for Medicare and Medicaid Innovation (CMMI) has funded the State Innovation Models (SIM) Initiative to test the ability of state government to accelerate statewide health care transformation in an effort to improve health and health care while reducing costs. CMMI recognizes the authority of states—as regulators, legislators, conveners, and both suppliers and purchasers of health care services—to use a wide array of policy levers, engage a broad range of stakeholders, and build on existing efforts to bring about or accelerate health care system transformation through the adoption, expansion, and support of innovative delivery system and payment models. These models are expected to transform the current, fragmented, encounter-based health care delivery and payment system to one based on patient-centered, coordinated care, and value-based payment, and ultimately to achieve better health care performance, lower health care spending, and healthier populations.

Under the SIM Initiative, CMMI provides states with two types of cooperative agreements—Model Design and Model Test. Under the Model Design awards, states are engaging a diverse group of stakeholders, including public and private payers, providers, and consumers, to design or refine State Health System Innovation Plans (SHSIPs). These plans provide a statewide strategy to "use all available levers to transform the state health care delivery system through multi-payer payment reform and other state-led initiatives." Under the Model Test awards, states are refining, implementing, and testing their SHSIPs.

CMMI has awarded two rounds of Model Design/Pre-Test awards. Under Round 1, which began April 1, 2013, CMMI awarded nearly $30 million in SIM Initiative funds to 19 Model Design/Pre-Test states. Under Round 2, which began February 1, 2015, CMMI awarded nearly $43 million in SIM funds for Model Design awards to 21 states[2] (American Samoa, Arizona, California, District of Columbia, Hawaii, Illinois, Kentucky, Maryland, Montana, Nevada, New Hampshire, New Mexico, Northern Mariana Islands, New Jersey, Oklahoma, Pennsylvania, Puerto Rico, Utah, Virginia, West Virginia, and Wisconsin). Round 2 Model Design awardees received from $750,000 to $3 million to develop a SHSIP. Awards were provided for 12 months, through January 1, 2016, although 16 states requested and received a no-cost extension of 2 to 8 months.

CMMI has contracted with RTI International and its subcontractors to conduct an independent federal evaluation of the Round 2 SIM Initiative awards. This Round 2 evaluation contract includes a review and synthesis of the Round 2 Model Design awardees' final SHSIPs,

[2] The term "state" is used throughout the report to include all model design awardees: states, territories, and the District of Columbia.

developed by RTI and Mission Analytics staff (the RTI team). This report, prepared by RTI, provides the results of the synthesis.

1.2 Structure of Report

The following chapters provide a cross-state synthesis of the major features of the 21 Round 2 Model Design awardee SHSIPs. Data for the synthesis came from review of documents provided by the state and CMMI, including the awardee's applications, quarterly reports, state Web sites (if available), final SHSIPs, and supporting documentation. A short description of each subsequent chapter is provided in the following bullets:

- ***Chapter 2, Methods*** provides the framework for the evaluation and the methodology for conducting the analyses.
- ***Chapter 3, State Health System Innovation Plans*** reviews goals and targets outlined in the SHSIPs, highlighting similarities and differences across awardees; including a description and comparison of the proposed organizational structure and extent of stakeholder engagement in each SHSIP.
- ***Chapter 4, Health Care Payment Delivery Systems*** discusses different approaches awardees have taken in addressing the SIM Initiative aims through the proposed innovation delivery system and payment models. Models include those strengthening primary care (e.g., patient-centered medical homes); integrating primary care with specialty, behavioral health, and long-term care, as well as other community-based services (e.g., accountable care organizations, Accountable Communities of Health).
- ***Chapter 5, Enabling Strategies*** reviews proposed strategies to enable the development or spread of delivery system and payment reform models. Strategies include health information technology investment, data analytic capacity building, workforce development activities, quality measure alignment, and evaluation and sustainability planning.
- ***Chapter 6, Conclusion*** provides a summary of how awardees addressed the research questions in their approach toward health care system transformation.

2. Methods

2.1 Framework for the Evaluation

The RTI team reviewed and abstracted data from the State Health System Innovation Plan (SHSIPs) and other Model Design documents for 21 states. The team used data from the SHSIPs, state data, and supporting document submissions, and state Web sites to complete a data abstraction template that RTI had developed with CMMI's input for each of the awardees. These data abstractions, along with the SHSIPs and supporting data, were used to identify cross-state themes and answer three research questions:

1. **What health care payment and delivery models and enabling strategies are proposed in the SHSIPs by the Model Design awardees?** Health system innovations include health care payment and delivery reforms, such as patient-centered medical homes (PCMHs), accountable care organizations, or episode of care models. Enabling strategies, such as health information technology, health care workforce development, and quality reporting support the implementation of innovative care models.
2. **What is the geographic and population reach of the SHSIPs?** One of the SIM Initiative goals are to transform the preponderance of care at the state level, which includes transitioning from fee-for-service provider payments to alternative, value-based payment models. Understanding the populations that states' health care payment and delivery reforms target provides insight into states' ability to broadly affect health care system change.
3. **How did the SHSIPs address the core elements identified in the SIM Round 2 Funding Opportunity Announcement?** In addition to the defining health care payment and delivery reforms, plans for improving population health, using health information technology (health IT), and quality measure alignment, that have been discussed as part of the first two research questions, CMMI also requested that states describe how state leadership will direct planning and oversight of implementation, ensure stakeholder engagement, and develop plans for monitoring and evaluating SHSIP implementation. Finally, CMMI asked states to specify the policy and regulatory levers that they planned to use to implement activities proposed in their SHSIPs. The RTI team examined the extent to which the states addressed these requirements.

2.2 Document Review

The RTI team received and reviewed SHSIPs and supporting Model Design documents submitted from the 21 states between December 2015 and April 2017. State teams consisted of an abstracter and a senior reviewer, who collected qualitative data from available Model Design documents for each awardee. These documents included the following for each state, but were not limited to:

- SHSIP and accompanying appendices
- Supporting SHSIP draft documents
- State Model Design application
- The state's SIM Initiative Web site, if available
- Quarterly progress reports

The RTI team also consulted HealthIT.gov for context on health IT adoption within each state and conducted Internet searches for additional information on initiatives and organizations referenced in the SHSIPs.

Although the team reviewed all Model Design documents received from CMMI, not all documents were relevant to the cross-state analysis. For all states, the SHSIPs were the key documents for understanding state plans for health care transformations.

2.2.1 Abstraction template

To aid in document review, the RTI team created an abstraction template. The team developed the template after reviewing the SIM Round 1 Model Design final report, the SIM Round 2 funding opportunity announcement, and CMMI's SIM Round 2 Model Design SHSIP development guidance document. The final abstraction template also incorporated feedback from CMMI. The template is a 31-page document that includes detailed sections on the following topics:

- Alignment between SHSIP initiatives and the characteristics that CMMI identifies as representative of a transformed health care delivery system
- Stakeholder engagement in SHSIP implementation and governance
- Proposed health care payment and delivery innovations, such as PCMHs, accountable care models, or episode-based payments
- Population health improvements
- Health IT and data analytics
- Health care workforce development
- Alignment of quality measure efforts across payers
- Plans for monitoring and evaluating SHSIP implementation
- Plans for implementing and sustaining activities proposed in the SHSIP

Sections of the abstraction template on health care payment, delivery models, and enabling strategies include questions about the geographic and population reach of each policy proposed in the SHSIP as well as legislative and regulatory levers that states plan to use to implement proposals described in their SHSIPs.

As previously mentioned, the RTI team assigned one abstracter and senior reviewer pair to abstract data for each state. The abstracter reviewed all available Model Design documents for each state and populated the abstraction template with data from those documents. Afterward, the abstracter sent the abstraction to the senior reviewer, who checked the populated abstraction against the state's SHSIP and other Model Design documents, editing the abstraction as necessary. The senior reviewer returned the abstraction to the abstracter with feedback and edits; the abstracter finalized and edited the SHSIP. Each abstracter-senior reviewer pair also summarized the key activities proposed in each state's SHSIP.

2.3 Cross-State Data Analysis

Information from the data abstraction templates, states' SHSIPs and supporting documentation were used as the basis for a cross-state data analysis. The detailed information provided in the data abstraction template facilitates a cross-section analysis by topic area. Supplementing the abstraction template, abstracters created an extensive series of cross-state tables that are used in the analysis of similarities and differences across SHSIPs. Senior reviewers collated and reviewed relevant sections of each state abstraction to develop cross-state themes in each topic area included in the abstraction template. The Model Design Final Report describes similarities, differences, and themes in proposed health care transformation plans across states and answers the evaluation's three research questions.

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3. State Health System Innovation Plans

3.1 Overall Health Care Transformation Plan

As part of the SIM Round 2 Model Design process, states identified health care delivery system transformation aims: improving population health, reducing health care spending or increasing the value of health care spending, and improving health care quality or health system performance (see ***Table 3-1)***. The RTI team describes and categorizes state health care delivery aims in ***Section 3.1.1***.

Table 3-1. Categories of state transformation plan aims and goals

State	Improve population health	Reduce health care spending or increase the value of health care spending	Improve health care quality and health system performance
American Samoa	✓	✓	✓
Arizona	✓	✓	✓
California	✓	✓	✓
District of Columbia	✓	✓	✓
Hawaii	✓	✓	✓
Illinois	✓	✓	✓
Kentucky	✓	✓	✓
Maryland	✓	✓	✓
Montana	✓	✓	✓
Nevada	✓	✓	—
New Hampshire	✓	✓	—
New Mexico	✓	✓	✓
Northern Mariana Islands	✓	✓	✓
New Jersey	✓	✓	✓
Oklahoma	✓	✓	✓
Pennsylvania	✓	✓	✓
Puerto Rico	✓	✓	✓
Utah	✓	✓	—
Virginia	✓	✓	✓
West Virginia	✓	✓	✓
Wisconsin	✓	✓	✓

Note: ✓ means included in State Health System Innovation Plan (SHSIP); — means not indicated in SHSIP.

In addition, the RTI team assessed the alignment between Round 2 Model Design states' proposed initiatives and CMMI's guidance on the characteristics of a transformed health care delivery system, such as using data to drive health system or ensuring an adequate health care workforce to meet state residents' needs. The correspondence of state initiatives with transformed health care delivery system characteristics is discussed in ***Section 3.1.2***.

States planned governance structures for implementing health care delivery transformation activities. The RTI team's review of the proposed governance structures indicates that, in most states, state agencies will lead implementation of transformation initiatives. States also propose mechanisms for health care stakeholders outside of government to participate in and provide feedback on health care delivery transformation implementation. ***Section 3.2*** identifies stakeholders involved in the leadership and governance of health care delivery transformation and describes state strategies for maintaining stakeholder engagement in the transformation process.

3.1.1 Aims and goals of the State Innovation Models across states for health care delivery system transformation

Improving population health

All 21 SIM Round 2 Model Design states propose to work to improve population health with planned health care delivery transformation activities. In six states (the District of Columbia, Hawaii, Montana, Virginia, West Virginia, and Wisconsin), population health improvement goals were described as reducing health disparities. The disparity groups differed across states: adults and adolescents with mild to moderate behavioral health conditions, covered by Medicaid (Hawaii); vulnerable, low income, and underserved populations, such as American Indians (Montana); the medically underserved (Virginia); older adults (West Virginia); adults with diabetes, hypertension, and depression (Wisconsin); and the homeless (District of Columbia).

Four states (Arizona, the District of Columbia, Hawaii, and New Jersey) defined population health improvement aims for specific vulnerable populations. Arizona aims to improve the health of the state's medically underserved American Indian population via health care delivery transformation. Arizona also intends to improve the health of individuals with chronic physical and behavioral health conditions, with a focus on newly released former inmates. One of the District of Columbia's health care delivery transformation objectives focuses on the health of Medicaid beneficiaries with complex health conditions. New Jersey will improve population health via tobacco cessation for pregnant women.

Population health improvement initiatives across states target specific negative health behaviors and/or chronic health conditions:

- ***Tobacco use***. Seven states (Illinois, Kentucky, Maryland, New Hampshire, New Jersey, Oklahoma, and West Virginia) aim to improve population health by curtailing tobacco use.
- ***Drug-overdose resulting in deaths***. Four states aim to improve population health by reducing drug-associated deaths. While not establishing specific goals, Utah plans to annually measure the rate of prescription overdose deaths. State-specific goals include
  - Reducing the number of drug-overdose deaths by one-quarter (Kentucky);
  - Reducing drug-associated deaths from 12.6 to 11.3 deaths per 100,000 population by 2019 (Pennsylvania);
  - Achieving a 20 percent reduction in the opioid-related mortality rate (Illinois);
  - Reducing the rate of unintentional poisoning deaths involving prescription drugs from 13.3 per 100,000 in 2011 to 11 per 100,000 by 2020 (Oklahoma).
- ***Chronic conditions.*** States plan to address asthma (Maryland, New Hampshire, and Puerto Rico), cardiovascular disease (Kentucky and Nevada), cancer (Kentucky and West Virginia), dental caries (Kentucky), diabetes (Kentucky, New Hampshire, Northern Mariana Islands, Oklahoma, Puerto Rico, and Utah), hypertension (Maryland, Oklahoma, and Puerto Rico), and obesity (Kentucky, Maryland, New Hampshire, Oklahoma, Puerto Rico, and Utah). California proposes implementing Accountable Communities of Health (ACHs) that will locally select to develop programs to address asthma (especially childhood asthma), diabetes, or cardiovascular disease.
- ***Falls.*** Maryland plans to focus on screening, risk assessment, and reduction in falls.

Reducing health care spending or improving the value of health care spending

All SIM Round 2 Model Design states aim to either reduce health care spending or increase the value of health care spending. Twelve states (American Samoa, Arizona, Hawaii, Montana, Nevada, New Jersey, New Hampshire, New Mexico, Northern Mariana Islands, Oklahoma, Puerto Rico, and West Virginia) aim to constrain health care spending. Five states (California, District of Columbia, Pennsylvania, Virginia, and Wisconsin) focus on promoting higher-value health care spending.

Eight states (Arizona, California, the District of Columbia, Hawaii, Maryland, New Jersey, Oklahoma, and Puerto Rico) seek to reduce health care spending or increase the value of the spending for specific populations. Spending reduction goals in Arizona, California, the District of Columbia, Hawaii, Maryland, New Jersey, and Puerto Rico target populations with significant health issues—and resulting, potentially high health care spending.

Populations with behavioral health conditions are a focus of spending reductions in Arizona, the District of Columbia, and Hawaii. Arizona aims to reduce per capita health care spending for individuals with physical and behavioral health conditions and for formerly incarcerated individuals with chronic conditions, including behavioral health diagnoses. One of Hawaii's health care delivery transformation goals was to reduce spending among adolescent and adult Medicaid beneficiaries with behavioral health conditions.

Four states (the District of Columbia, Maryland, New Jersey, and Oklahoma) target achieving spending reductions for individuals with publicly financed health care coverage. The District of Columbia's, Maryland's and New Jersey's spending reduction goals generally target individuals with publicly financed health insurance coverage and complex health conditions. Oklahoma also plans to reduce growth among those with publicly funded coverage. In this case, the state's focus is on Medicaid beneficiaries and public employee health insurance plan enrollees.

Six states (California, Kentucky, Nevada, New Hampshire, Oklahoma, and Puerto Rico) put forward health care delivery system transformation goals that include specific spending reduction targets. Overall, California proposes to reduce its growth rate in health care expenditures to be in line with the gross state product by 2022, yielding savings of $1.4 billion to $1.8 billion over 3 years. Kentucky proposes a two percent savings (cost avoidance that can be attributed to a reduction in the growth of health care costs) over 4 years. Nevada aims to ensure that health care spending does not exceed more than two percent of Nevada's Gross State Product. New Hampshire's goal is to save between $1.2 billion and $2.4 billion in total health care spending—including publicly and privately financed spending—within 5 years of State Health System Innovation Plan (SHSIP) implementation. Oklahoma aims to constrain health care spending growth in Medicaid and the state employee health plan to two percent below national health care spending growth by 2020. Puerto Rico's goal is to limit annual percentage increases in Medicaid and Medicare per-capita expenditures to two percent for the next 5 years and to increase Federal funding caps in these programs to provide parity with funding formulas in the states.

Eight states (California, the District of Columbia, Hawaii, Maryland, Montana, Oklahoma, Puerto Rico, and West Virginia) aim to reduce inappropriate health care utilization, though only California and Montana linked reduced utilization to reduced health care spending. Oklahoma includes health care utilization reduction targets as part of the state's quality-improvement goal. Seven states (the District of Columbia, Hawaii, Maryland, Montana, Oklahoma, Puerto Rico, and West Virginia) seek to reduce rates of inappropriate emergency department visits and preventable hospital admissions. The District of Columbia, Hawaii, and West Virginia aim to reduce avoidable hospital readmissions, and California seeks to reduce rates of inappropriate cesarean deliveries.

Improving health care quality and health system performance

Most SIM Round 2 Model Design states (i.e., American Samoa, California, the District of Columbia, Hawaii, Illinois, Maryland, Montana, New Jersey, New Mexico, the Northern Mariana Islands, Oklahoma, Pennsylvania, Puerto Rico, Virginia, West Virginia, and Wisconsin) aim to use health care delivery transformation activities to improve health care quality or health system performance. Populations included in state aims related to health care quality and health system performance are, in most cases, the same as those discussed above about state aims related to population health and health care spending and value.

California, Maryland, Oklahoma, and Puerto Rico provided measurable targets for improving health care quality. In one of its proposed initiatives, California defined improved maternity care as specific reductions in early elective deliveries (to less than 3 percent) and cesarean deliveries (from 32.8 percent to 30 percent) and increased vaginal birth after cesarean delivery from 9 percent to 11 percent. Maryland's goal is to tie 85 percent of all fee-for-service payments to quality and cost measures by 2018. Oklahoma defined improved health care quality as a 20-percent reduction in the rates of preventable hospitalization and emergency department visits among Oklahoma residents by 2020. Puerto Rico's goals include reducing pediatric asthma related hospitalizations to 350 per 100,000 by 2020 and reducing avoidable emergency room visits and hospitalizations by 25 percent among super utilizers and individuals with multiple chronic diseases.

Other states' aims provided detail on how states define "improved health care quality" or "improved health system performance," but they did not present a numeric target. For example, six states (Illinois, Maryland, Montana, New Jersey, the Northern Mariana Islands, and Wisconsin) seek to improve integration across the health care system. Of these states, four (Illinois, Montana, New Jersey, and Wisconsin) focus on improving the integration of behavioral and physical health. Four states (American Samoa, the District of Columbia, New Mexico, and the Northern Mariana Islands) incorporate improving patient experience of care as part of their health care quality improvement aims. Two states (Montana and Pennsylvania) link increased access to care to improved health system performance. In addition to its maternity care initiative, California proposes to increase the spread of health homes for complex patients and improve access to palliative and hospice care within health homes.

Other states define improved health system performance as transforming rural health care delivery and promoting transparency on health care quality and price (Pennsylvania); improving care coordination (Virginia); linking the state population to primary care providers (West Virginia); and creating a learning health care system (District of Columbia).

Additional aims

American Samoa, Arizona, and West Virginia presented in their SHSIPs health care delivery system transformation aims that did not fit into the three main categories listed above.

Arizona aims to enhance state health information technology (health IT) capabilities and increase health information exchange (HIE). West Virginia aims to enhance state health IT capabilities and increase the use of health IT to provide better information to health care stakeholders. In addition, West Virginia's goal is to enhance the infrastructure and sustainability of the state's health care workforce. American Samoa seeks to incorporate cultural competence into efforts to reform and deliver health care.

3.1.2 Alignment of State Health System Innovation Plan initiatives and the characteristics of transformed health care systems

CMMI has identified 11 characteristics—such as coordinating care across all providers and settings—that describe transformed health care delivery systems.[3] These characteristics address health care payment and delivery reforms, population health, health IT, health workforce development, and patient engagement. Taken together, these characteristics suggest that a transformed health care system—in which primary care plays a central role—provides high-quality, coordinated care to patients engaged in the health care decision-making process.

In a transformed health system, health IT enables the collection of data on health care quality, costs, and population health to inform value-based payments to providers. Health IT and role delegation among health care workers—facilitated by allowing lower- and mid-level health care professionals to practice at the top of their capabilities—help providers deliver high quality care.

The RTI team mapped these characteristics to initiatives proposed in the SHSIPs; each characteristic aligned with initiatives proposed in at least several SHSIPs.

Allowing providers across the state and care continuums to participate in integrated or virtually integrated delivery models

States proposed two key types of initiatives for encouraging provider integration: accountable care organizations (ACOs) and physical and behavioral health integration. Eight states (American Samoa, the District of Columbia, Kentucky, Maryland, New Jersey, Oklahoma, Puerto Rico, and West Virginia) plan to implement or expand ACO models. Also, most states propose initiatives to integrate physical and behavioral health care. (See ***Section 4.1.3*** for more information about ACOs and ***Section 4.1.5*** for a discussion of behavioral health integration.)

[3] U.S. Department of Health and Human Services, Centers for Medicare and Medicaid Services, Center for Medicare & Medicaid Innovation. (2014). *State Innovation Models: Round two of funding for design and test assistance*. Cooperative agreement, initial announcement (CFDA: 93.624). Washington, DC; Centers for Medicare and Medicaid Services. Retrieved April 11, 2017, from https://innovation.cms.gov/Files/x/StateInnovationRdTwoFOA.pdf.

Of the eight states that will implement or expand ACO initiatives, four (Kentucky, Maryland, New Jersey, and Oklahoma) identified the types of providers that will be incorporated into ACO models. All four states included behavioral health providers in ACO models. New Jersey will expand linkages between existing Medicaid ACO primary care providers with behavioral health providers and local hospitals. Kentucky will urge payers and providers to create or expand ACOs and will develop ACOs for Medicaid beneficiaries who use long-term care or long-term services and supports (LTSS). Maryland's model includes linkages between primary and specialty providers, including behavioral health and LTSS. Kentucky will seek to include behavioral health, oral health, physical therapy, and hospice providers and community health workers in ACO models. Similarly, Oklahoma's regional care organizations (RCOs)—which will serve Medicaid and state employee health plan enrollees—will integrate behavioral health and primary care and use nonclinician health workers to assist patients in community settings.

Most SIM Round 2 Model Design states planned to integrate behavioral health and primary care. Some states proposed to achieve physical and behavioral health integration by implementing or expanding Medicaid health home models. A Medicaid home includes a designated provider and a health care team that provide care to Medicaid beneficiaries with chronic conditions.[4] Ten states (American Samoa, California, the District of Columbia, Kentucky, Maryland, Montana, Nevada, New Jersey, Oklahoma, and West Virginia) will either launch new health home models or support existing health home initiatives. American Samoa's SHSIP recommends the creation of health homes but does not provide additional detail on how they will be implemented. Maryland proposes delivery of care through person-centered health homes (similar to Medicaid health homes) as part of its ACO model for the Medicare-Medicaid enrollee population.

Ten states (Hawaii, Illinois, New Hampshire, New Mexico, Oklahoma, Pennsylvania, Puerto Rico, Utah, Virginia, and Wisconsin) planned approaches other than health homes to integrate behavioral and physical health. New Hampshire, New Mexico, Puerto Rico, and Utah propose including primary care and behavioral health providers on the same care team. Puerto Rico's initiative focuses on chronic care management integrated into primary care for super utilizers and patients with special needs. Hawaii, New Hampshire, and Oklahoma suggest utilizing behavioral health providers to support primary care providers, particularly when full integration of behavioral health and primary care is not possible. For example, Hawaii will use telehealth—which allows primary care providers to consult with remote behavioral health providers—to build primary care providers' capacity to treat behavioral health conditions.

[4] U.S. Department of Health and Human Services, Centers for Medicare & Medicaid Services. (n.d.). *Health homes*. Retrieved April 11, 2017, from https://www.medicaid.gov/medicaid/ltss/health-homes/index.html.

Oklahoma's RCOs will use care coordinators to arrange physical health care and behavioral health care for patients with behavioral health needs.

Although the Illinois, Pennsylvania, Virginia, and Wisconsin SHSIPs recommend integrating behavioral health and primary care, they do not describe how they will implement this recommendation. Singularly, Virginia recommends better integration between primary care and oral health; however, the SHSIP does not provide detail on its approach to further integration.

Linking more than 80 percent of payments to providers from all payers to value-based payment models

Most SIM Round 2 Model Design states seek to implement or expand value-based payment models, although only 10 states (California, the District of Columbia, Hawaii, Kentucky, Maryland, Nevada, New Hampshire, Oklahoma, Puerto Rico, and West Virginia) set measurable targets for implementing value-based payment models. See Section 4.1.2, ***Table 4-1***, for an overview of payment and delivery models across states.

Five states (California, Kentucky, Nevada, New Hampshire, and West Virginia) seek to broadly implement value-based payment in publicly and privately financed health insurance coverage. California, Nevada, and West Virginia seek to include 80 percent of provider payments from all payers in value-based payment models. Although not explicitly stated as a goal, New Hampshire's cost savings assume that 85 percent of commercial and Medicaid provider reimbursements will be through value-based payment models 5 years after SHSIP implementation. Kentucky indicates that its proposed payment reforms "ideally" would cover 80 percent of the state's insured population, but Kentucky's commercial payers voluntarily must join the state's payment reform efforts to achieve this target.

The District of Columbia, Hawaii, Maryland, and Oklahoma link provider reimbursement to value only for publicly financed health insurance coverage. By 2020, Oklahoma plans to implement value-based payment for 80 percent of Medicaid and state employee health plan reimbursement. The District of Columbia aims to tie 85 percent of payments to value for Health Home 2 providers—its Medicaid health home program—by Years 4 and 5 of SHSIP implementation. Hawaii is expanding value-based purchasing in its Medicaid managed care (MMC) program, with the goal of tying 80 percent of MMC payments to primary care providers and hospitals to value. Maryland proposes a person-centered health home ACO model for its Medicare-Medicaid enrollee population.

Linking all state residents to a primary care provider who is accountable for quality and for the total cost of their health care

No state provided a plan for assigning *all* state residents to a primary care provider. Nine states plan to link at least some state residents to primary care providers via patient-centered medical homes (PCMHs). Several states seek to increase residents' participation in PCMHs,

without a target number of state residents to be included in PCMH programs. Ten states plan to connect Medicaid beneficiaries with chronic illnesses to health homes. (See ***Section 4.1.2*** for more information about PCMHs and health homes.)

American Samoa, Arizona, Illinois, Kentucky, Montana, Nevada, New Hampshire, New Mexico, and the Northern Mariana Islands propose implementing or expanding PCMH models. The population reach of these initiatives varies across states. Arizona, Illinois, and the Northern Mariana Islands propose PCMH initiatives focused on specific populations—American Indians; pregnant women, children; and patients with diabetes or other chronic diseases, respectively—but other states' PCMH programs likely will serve a broader patient population that states will attempt to grow over time (Kentucky, Montana, Nevada, New Hampshire, and New Mexico).

To increase the population reach of PCMHs, states will adopt strategies to engage providers, payers, and patients. New Mexico and New Hampshire will encourage practices to become PCMHs by creating entities that can provide primary care practices with technical assistance as they become PCMHs (New Mexico) or adopt advanced primary care models (New Hampshire). Kentucky, Nevada, New Hampshire, and New Mexico will seek to obtain agreement across multiple payers on PCMH certification, reimbursement methods, quality reporting requirements, and other aspects of PCMH programs. Montana will seek to expand a pre-existing PCMH initiative that already includes Medicaid and commercial payers. Kentucky will begin to implement its PCMH initiative for Medicaid beneficiaries and state employees and will create incentives for state employees to seek care at PCMHs. Illinois will promote the benefits of PCMHs among consumers and families.

American Samoa, Arizona, California, the District of Columbia, Kentucky, Montana, Nevada, New Jersey, Oklahoma, and West Virginia will implement or expand health home initiatives. Health home initiatives treat Medicaid beneficiaries with complex health care needs and, therefore, serve only a subset of a state's residents. For example, Kentucky proposes a health home model that focuses on Medicaid beneficiaries with an opiate substance use disorder and who are at risk of developing another chronic condition.

Coordinating care across all providers and settings

To coordinate care across providers and settings, states propose implementing either PCMHs or other strategies, such as care transitions models or using lower-level staff for care coordination (without specifying the types of delivery models into which these staff would be integrated).

One of the key functions of PCMHs is to coordinate patient care across the health system.[5] (See ***Section 4.1.2*** for more information about PCMHs and health homes.) Details on PCMH models are sparse in several SHSIPs, because states are still in the planning stages for these initiatives. However, some states—Kentucky and Montana—propose using care teams embedded in PCMH models to coordinate patient care. Kentucky recommends that including clinical and nonclinical professionals in PCMH care teams enables patients to better navigate the health care system. Montana will pilot community resource teams—a nurse located within a PCMH, as well as nonclinical health workers—to improve health care for high-need patients and better integrate medical and behavioral health care.

Several states—Hawaii, Maryland, Nevada, Oklahoma, Pennsylvania, Utah, and Virginia—propose strategies for care coordination that are not PCMH initiatives. Hawaii plans to deploy independent community care teams to support primary care providers (who may not be PCMHs) to ensure that MMC enrollees with behavioral health issues receive the health education, patient education, and social services that they need. Maryland proposes to coordinate care through collaboration across specialties through a care coordination lead, interdisciplinary care teams, and care management that is integrated and delivered in the clinical setting. Nevada and Virginia address care coordination for patients recently discharged from hospitals or other institutional facilities through the implementation of a care transitions model and the expansion of community paramedicine programs, respectively. Nevada also plans to connect patients who are super-utilizers to primary care providers and care teams. Oklahoma's RCOs—ACOs for individuals covered by Medicaid and state employee health plans—will use centralized care coordinators to help patients manage their care. Finally, some states, such as Pennsylvania and Utah, make broad recommendations to use nonclinical community health care workers to facilitate care coordination.

Establishing a high level of patient engagement and quantifiable results on patient experience

Twelve states seek to increase patient engagement in health care decision-making. Ten of these states describe activities that will contribute to patient engagement, and 3 describe opportunities for measuring patient experience.

California, the District of Columbia, Hawaii, Maryland, Montana, Nevada, the Northern Mariana Islands, Oklahoma, Pennsylvania, Virginia, West Virginia, and Wisconsin plan a variety of activities with a patient engagement component. Six states (California, Maryland, Montana, the Northern Mariana Islands, Virginia, and West Virginia) will use care teams or community-based providers to encourage patients to become more engaged in their care. A focus of one of

[5] U.S. Department of Health and Human Services, Agency for Healthcare Research and Quality, Patient Centered Medical Home Resource Center. (n.d.). *5 key functions of the medical home.* Retrieved April 11, 2017, from https://pcmh.ahrq.gov/page/5-key-functions-medical-home.

California's proposed initiatives is to increase engagement in palliative care decision making among individuals enrolled in Medicaid health homes, based on having chronic conditions.

Three states (Nevada, Pennsylvania, and West Virginia) will engage patients through publicly available, data-driven tools that facilitate health care decision making. For example, Pennsylvania is developing a suite of online tools that allow patients to compare price and quality information for episodes of care and specific health care services, such as imaging. The District of Columbia and Pennsylvania plan to increase patient engagement by increasing patient health literacy. Other proposed strategies for increasing patient engagement include motivational interviewing (Hawaii), incentivizing Medicaid patients to adopt healthy behaviors (Nevada), or facilitating patient access to their personal health data (Oklahoma).

Kentucky, Nevada, and New Hampshire will engage in activities to quantify patient experience of care. Kentucky will incorporate measures of patient experience and patient-report outcomes into the quality reporting for the health care payment and delivery reform models, but the specific measures have not yet been determined. Nevada plans to increase the use of patient surveys to measure access to health care. Similarly, New Hampshire will use patient surveys to evaluate patient experiences with the health care delivery models that the state plans to implement.

Encouraging providers to leverage the use of health information technology to improve quality

Seven states (California, the District of Columbia, Montana, Nevada, New Hampshire, Pennsylvania, and West Virginia) will use health IT—including Web-based tools and data repositories—for health care quality reporting initiatives. The District of Columbia, New Hampshire, Pennsylvania, and West Virginia plan to use tools, such as provider score cards or portals, to give providers actionable information on their performance. For example, the District of Columbia will create a Web-based dashboard to allow physician practices and hospitals to submit quality data and view their performance on quality measures. Both Pennsylvania and West Virginia will develop quality reporting tools that can be accessed by providers and consumers. California plans to create a toolkit to identify best practices for its proposed health homes to promote robust electronic health record (EHR) and HIE capabilities.

Montana, Nevada, and Pennsylvania propose repositories to house electronic quality measure data. Users submit queries to these repositories to measure progress on quality improvement. Nevada will create a registry of clinical data to which payers would submit provider-level data. Pennsylvania will collect electronic, clinical-quality measure data for Medicaid beneficiaries, with the goal of linking that data to other data that the state already collects. Montana will implement an HIE pilot project that will enable health care quality data reporting for the state's PCMH program. The Montana SHSIP does not describe how the state will implement this quality data collection effort.

American Samoa, Arizona, Kentucky, New Mexico, the Northern Mariana Islands, Oklahoma, Utah, and Virginia are in the planning stages of using health IT to measure and report on quality. Rather than proposing a strategy for electronic reporting of quality measures, Oklahoma and Kentucky identify organizations who will be responsible for facilitating provider use of health IT for quality reporting. Other states (i.e., New Mexico, the Northern Mariana Islands, and Utah) focus on identifying datasets, such as all-payer claims databases, for generating electronic clinical quality measures. Two states (American Samoa and Virginia) broadly recommend the use of health IT to collect health care quality data and inform health care delivery. Arizona discusses leveraging health IT to measure and improve health care quality in the context of the Model Design process, but the state's SHSIP does not include proposals for moving forward in this area.

Using data to drive health system processes

States proposed two strategies for using data to drive health system processes: promoting HIE and using data analytics to help providers better track patient care, assess provider performance, or track population health priorities. See ***Section 5.1*** for additional detail on HIE and data analytics.

All 21 SIM Round 2 Model Design states incorporate HIE activities into their planned health care delivery system transformation initiatives. HIE facilitates care processes by making data available to guide health care decisions.[6] States with existing HIE systems plan to enhance these systems by including additional data sources, provider types or additional features to facilitate communication across providers. For example, Hawaii plans to include behavioral health data in health care data exchange and increase behavioral health provider use of its HIE. States with less advanced HIE capabilities will focus on activities such as promoting the use of secure messaging between providers.

Thirteen states (American Samoa, Arizona, California, the District of Columbia, Hawaii, Maryland, Montana, Nevada, New Hampshire, the Northern Mariana Islands, Oklahoma, Virginia, and West Virginia) propose using data analysis to inform health system processes. Many states plan to use data analytics to improve population health or facilitate quality measurement, although a few states will use these tools for other purposes. American Samoa proposes the collection and analysis of health data but does not describe how those data can be used.

[6] Williams, C., Mostashari, F., Mertz, K., Hogin, E., & Atwal, P. (2012). From the Office of The National Coordinator: The strategy for advancing the exchange of health information. *Health Affairs*, *31*(3), 527–536. Retrieved April 12, 2017, from http://content.healthaffairs.org/content/31/3/527.abstract.

Six states (the District of Columbia, Hawaii, Montana, Nevada, Oklahoma, and Pennsylvania) will use data analytics to support population health. For example, the District of Columbia will create a dashboard using population health measures from the District's Healthy People 2020 initiative to help providers evaluate the health of their patient panels. The six states (the District of Columbia, Montana, Nevada, New Hampshire, Pennsylvania, and West Virginia) that plan to create dashboards or data repositories to provide insight into provider performance on quality measures, also can use these tools to drive health care quality improvement and, in some cases—such as in West Virginia—to inform payments to providers.

Four states (Arizona, Maryland, the Northern Mariana Islands, and Pennsylvania) propose other data analytics activities that will drive health system processes. The Northern Mariana Islands will incorporate data analytics tools into EHRs. One proposed tool will help providers in the Northern Mariana Islands care for patients with diabetes; another tool will help emergency departments care for patients and streamline emergency department operations. Pennsylvania and Arizona plan to use data to create prescription drug monitoring program tools that will allow providers to identify prescriptions for controlled substances to patients with possible substance use disorders. In Maryland, state law requires prescription drug monitoring program registration for controlled dangerous substances (including opioids) by prescribers and pharmacists by mid-2018.

Integrating population health measures into the delivery system

Twelve states (California, the District of Columbia, Hawaii, Maryland, Montana, New Jersey, New Mexico, Oklahoma, Pennsylvania, Utah, Virginia, and West Virginia) will integrate population health measures into delivery system transformation activities. These population health measures will help states track progress on a broad variety of conditions, including obesity, depression and anxiety, diabetes, hypertension, oral health, behavioral health, and substance abuse. Some states also will measure the provision of preventive care activities, such as immunizations, prenatal and postpartum care, tobacco cessation, weight counseling, and preventive care visits.

States proposed three ways of incorporating population health measures into health care delivery transformation. First, five states (Hawaii, New Jersey, Montana, New Mexico, and Oklahoma) will include population health measures in reporting initiatives tied to proposed health care delivery payment and delivery models. For example, New Mexico's Community-Centered Health Homes—population, health-focused, PCMHs—will report on population health measures. In turn, New Mexico's ACH—regionally based, public-private partnerships focused on social determinants of health—will use population health data from Community-Centered Health Homes to set goals for improving health at the regional level.

Similarly, three states (Maryland, Oklahoma, and Utah) indicated that population health measures will be included in multi-payer, quality measure alignment initiatives. Maryland is

aligning population health measures with its all-payer model, including population-based payment for hospitals, based on outcomes of concern in their communities. Utah used Model Design funding to begin analyses and discussion necessary for developing a common set of behavioral health, obesity, and diabetes quality measures across public and private payers.

Finally, California, the District of Columbia, Hawaii, and Pennsylvania propose creating tools to measure population health. These dashboards will allow providers and other stakeholders to easily assess performance on population health priorities.

Ensuring an adequate health care workforce to meet state resident needs

An adequate health workforce to meet state residents' needs requires a sufficient supply of health care workers with the competencies to treat the patient populations they serve. Recruitment and retention activities help increase health care worker supply, and training and education activities ensure that workers have the skills and knowledge they need to serve patients. See ***Section 5.2*** on health care workforce development activities for additional detail on recruitment and retention and education and training activities.

Nine states will implement a variety of recruitment and retention activities. Five states—Arizona, Nevada, Oklahoma, Virginia, and West Virginia—plan to increase health worker supply by increasing the number of positions in health worker training programs. The increased slots for education and training target physicians (Nevada and Oklahoma), psychiatric nurses (Virginia), other behavioral health professionals (West Virginia), or multiple health professions (Arizona). Another common recruitment and retention strategy is the use of loan forgiveness programs or tax incentives to encourage providers to practice in medically underserved locations, especially rural areas. New Mexico and West Virginia plan to use loan repayment programs or tax incentives to recruit and retain behavioral health professionals and pharmacists (New Mexico) or primary care physicians (West Virginia) in rural areas. The Kentucky, Nevada, and America Samoa SHSIPs also recommend the use of loan repayment programs (Kentucky and Nevada) or other unspecified financial incentives (American Samoa) as a recruiting tool for unspecified health professions.

Finally, some states propose nonfinancial incentives for recruiting and retaining providers. These strategies include making it easier for behavioral health providers licensed in other states to become licensed in a new state (Nevada and New Mexico) or programs that recruit specific populations—such as underrepresented minorities (Utah) or individuals interesting in living in rural areas (Pennsylvania)—into the health professions.

Fifteen SHSIPs included plans to undertake health care workforce education and training. These activities incorporate efforts to train workers already in health care and efforts to reform medical education, especially for students in health care fields. Of these 15 SHSIPs, 11 include plans to train workers already in the health care workforce. Three states (Hawaii, Montana, and

Utah) propose training on behavioral health to improve the skills of behavioral health professionals (Utah and Montana) or primary care providers (Hawaii). Six states (the District of Columbia, New Hampshire, New Mexico, the Northern Mariana Islands, West Virginia, and Wisconsin) will provide training or technical assistance to effectively adopt and use health IT. New Hampshire, New Jersey, Oklahoma, and the District of Columbia will train workers or—in New Jersey's case—develop learning collaboratives on concepts related to transformed models of care delivery, such as team-based care, value-based payments, or ACOs. Utah's SHSIP includes plans for developing provider training on conversations related to end-of-life care.

Nine of the 15 SHSIPs that describe planned training and education activities include proposals for updating health care education. Three states (Arizona, Pennsylvania, and West Virginia) plan to implement educational changes to support the delivery of behavioral health care. Two states (New Mexico and Virginia) plan to either incorporate health care delivery concepts into health care curricula (New Mexico) or create online courses focusing on these concepts (Virginia). Three states (Maryland, New Mexico, and Oklahoma) propose developing or updating training and certification requirements for community health workers (Maryland), social workers (New Mexico) or emerging health professions (Oklahoma). Kentucky's SHSIP recommends that the state partner with health care employers to educate and train workers to meet employer needs. California will train the workforce participating in the health homes initiative for complex patients on delivering palliative care.

Ensuring that providers perform at the top of their capabilities

Providers that perform at the top of their capabilities facilitate the provision of efficient, team-based care. Typically, this means that lower- and mid-level health care providers take on the most expansive roles possible, based on their training, education, and scope of practice regulations. Delegating work in this manner frees up time for providers with higher levels of training to focus on patients with more complex issues. Delegation of work to lower- and mid-level providers also creates additional opportunities for them to educate patients about their health conditions and coordinate patient care.

State policies for ensuring that providers practice at the top of their capabilities fall into two categories: increasing the use of nonphysician health care workers and changing the scope of practice laws. The SHSIPs describe a range of nonphysician professions that could take on expanded roles in the health care system. Six states (California, Hawaii, Maryland, New Hampshire, Nevada, and New Mexico) propose to increase the use of community health workers, front-line workers who do not provide care but can coordinate care or provide patient education. In addition, West Virginia will examine evidence from ongoing pilot programs to determine the best ways to deploy community health workers. Montana's SHSIP proposes deployment of behavioral health coaches to identify patients with mental health issues and provide counseling on health behaviors. Nevada will use community paramedics to provide home-based care to

patients recently discharged from health care facilities and seek to expand the use of advanced practice nurses and physician assistants—Master's-level trained clinicians who can treat many patients who might otherwise be seen by physicians. Pennsylvania's SHSIP also recommends the use of community paramedics to improve access to care but provides no other detail.

The SHSIPs for Kentucky, Oklahoma, and Pennsylvania also include recommendations for exploring legal and regulatory changes that can facilitate providers' performance at the top of their capabilities. For example, Oklahoma will convene an expert group to provide recommendations on scope of practice and competencies for traditional, new, and emerging health professions. Kentucky's SHSIP notes that changes to scope of practice laws benefit team-based care, but the SHSIP does not provide concrete proposals for changing scope of practice. Pennsylvania's SHSIP indicates that the state will explore changes to scope of practice for community health workers and mid-level oral health providers to improve access to care in underserved areas.

3.2 Stakeholder Engagement in State Health System Innovation Plan Governance and Implementation

Most states' SHSIPs include information on the stakeholders that will lead SHSIP implementation.[7] Several SHSIPs also explain how other stakeholders will provide guidance on SHSIP implementation through work groups, committees, or other processes. Finally, some SHSIPs describe plans to ensure that stakeholders remain engaged in health care delivery transformation activities.

3.2.1 Leadership of State Health System Innovation Plan implementation

Eighteen SHSIPs include information on the entities that will lead SHSIP implementation. States proposed four types of governing bodies to oversee proposed, health care delivery transformation activities developed during the Model Design process. Multi-stakeholder committees were the most common governance structure proposed in the SHSIPs, although some states also proposed that state agencies lead SHSIP implementation. Two states proposed the creation of nonprofit organizations to oversee SHSIP implementation. One state proposed that different entities take the lead on executing different policy proposals, spreading the responsibility for SHSIP implementation.

American Samoa, the District of Columbia, Illinois, Kentucky, Montana, Nevada, New Hampshire, New Mexico, and Oklahoma proposed multi-stakeholder committees to govern SHSIP implementation. These committees will include payers, providers, employers, local government officials, tribal leaders, and consumers or consumer representatives. All committees

[7] The SIM Model Design Round 1 evaluation also included information on stakeholder engagement during plan development. However, based on previous CMS guidance, the current evaluation focuses only on stakeholder engagement during SHSIP implementation.

will include some oversight or involvement by state government, although the level of proposed state government involvement in committee operations varies by state. For example, although New Hampshire's state government has conferred state government authority on its proposed SHSIP implementation governing committee, New Hampshire indicates that no more than half of the committee members be from state government. In Nevada, the Department of Health and Human Services (DHHS) will maintain oversight over the multi-stakeholder Population Health Improvement Council (PHIC). In fact, Nevada's SHSIP indicates that Nevada's DHHS initially will manage SHSIP implementation, gradually transferring responsibility to PHIC. In the District of Columbia, a multi-stakeholder committee—the same committee that provides counsel on the District's Medicaid program—will oversee implementation activities that government employees carry out. In Illinois, the Governor-appointed Healthy Illinois 2021 Implementation Coordination Council will include representatives from multiple sectors and provide ongoing oversight and leadership.

State agencies in Arizona, Hawaii, Maryland, the Northern Mariana Islands, Pennsylvania, and Puerto Rico will lead SHSIP implementation. In Arizona and Hawaii, state Medicaid agencies—Arizona's Health Care Cost Containment System and Hawaii's Med-QUEST—will manage health care delivery transformation to promote targeted, health care delivery transformation activities toward Arizona's vulnerable populations and Hawaii's Medicaid enrollees with behavioral health conditions. In Pennsylvania, the Health Innovation Center, a group within the state's Department of Health, will manage SHSIP implementation activities. Whereas the Arizona, Hawaii, and Pennsylvania SHSIPs assign leadership responsibilities to a single state entity, Maryland, the Northern Mariana Islands and Puerto Rico propose that a multiagency group oversee health care transformation activities. In Maryland, overall oversight is provided by the deputy secretaries of Public Health and Health Care Financing (Medicaid) and the Health Services Cost Review Commission. In the Northern Mariana Islands, the group includes members from the Commonwealth Healthcare Corporation, as well the commonwealth's Medicaid agency, public school system, Department of Commerce, and others. In Puerto Rico, policy direction is provided by an 11-member Health Innovation Board that includes the Department of Health, CMS, the Fiscal Control Board, the Office of the Commissioner for Insurance, the Administration for Health Insurance, the health IT designated entity, and others.

Two states—Virginia and West Virginia—propose that nonprofit entities govern SHSIP implementation. Virginia's SHSIP indicates that the Virginia Center for Health Innovation, which directed the SHSIP development process, will lead SHSIP implementation. West Virginia's SHSIP proposes establishing the West Virginia Health Transformation Accelerator (WVHTA) to execute SHSIP policies in that state. Although the Virginia Center for Health Innovation and the WVHTA are nongovernmental organizations, they will collaborate with government agencies and other health care stakeholders to implement SHSIP policies.

Finally, Utah proposes a governance structure in which different SHSIP activities are carried out by different entities. For example, Utah's SHSIP explains that governance of its key Model Design initiatives "has evolved into a federal approach … overseen by invested key stakeholders." Utah's SHSIP recommends several government agencies, advisory committees, and other organizations—such as the nonprofit HealthInsight—to lead work on advanced care planning, value-based payment, health IT, workforce development, and obesity and diabetes reduction. Utah's SHSIP also notes that the state has not yet identified how its behavioral health integration initiative will be governed.

3.2.2 Opportunities for stakeholder participation in State Health System Innovation Plan governance

Besides identifying the entity or entities that will lead SHSIP implementation, 15 states identified additional opportunities for stakeholders to participate in SHSIP governance. These states will use work groups, advisory committees, or other methods to obtain guidance from stakeholders—particularly those from outside of government—during the implementation process.

American Samoa, Arizona, California, the District of Columbia, Hawaii, Illinois, Maryland, Montana, Nevada, New Hampshire, New Mexico, the Northern Mariana Islands, Oklahoma, Pennsylvania, and Utah will use guidance from stakeholders to inform the SHSIP implementation process. Some of these stakeholder advisory groups, such as the District of Columbia's Interagency Council on Homelessness, existed prior to the SIM Model Design process. Other stakeholder groups—including Hawaii's work groups on oral health and workforce development—initially were convened during the SIM Round 2 Model Design process but will continue to meet throughout the SHSIP implementation process. In other cases, stakeholder groupings, such as Nevada's Multi-Payer Collaborative, will be established to help guide SHSIP implementation activities.

Ten states provide information on the overall topics to be addressed by stakeholder advisory groups. Seven SHSIPs (California, New Hampshire, Maryland, the Northern Mariana Islands, New Mexico, Oklahoma, and Pennsylvania) describe stakeholder groups that will advise SHSIP leadership on implementing health care payment and delivery innovations. Hawaii, Illinois, Nevada, and the Northern Mariana Islands will use stakeholder committees to provide advice on population health issues; Hawaii's work group will focus on oral health issues.

Stakeholder work groups and committees providing guidance on SHSIP implementation also will address health IT (the District of Columbia, Illinois, Maryland, Nevada, New Hampshire, the Northern Mariana Islands, and Oklahoma), health care quality (Nevada, Oklahoma, Pennsylvania, and Utah), and health care workforce development (Hawaii and Utah). Other stakeholder group topics include provider issues (Nevada and Oklahoma), patient issues

(Nevada and Oklahoma), quality and price transparency (Pennsylvania), and the relationship between homelessness and health (the District of Columbia).

Eight states mention types of stakeholders who will be involved in providing guidance on SHSIP implementation. Representatives from state agencies will sit on committees of work groups in six states (American Samoa, Hawaii, Nevada, New Hampshire, Oklahoma, and Utah). Six states (Hawaii, Nevada, New Hampshire, Oklahoma, Pennsylvania, and Utah) will seek input from payers and obtain guidance from providers. Consumers will have the opportunity to participate in SHSIP implementation in four states (Hawaii, Oklahoma, Pennsylvania, and Utah), while consumer advocates will serve as advisors to SHSIP leadership in five states (Hawaii, Nevada, New Hampshire, Oklahoma, and Pennsylvania). Other stakeholders who could be involved in SHSIP implementation are tribal councils (New Mexico) or community groups (American Samoa, Hawaii, and Nevada). The SHSIPs provide little information on the population and geographic reach of the stakeholders involved in plan implementation.

Nevada's SHSIP provides a useful illustration of the ways in which stakeholders can influence SHSIP implementation. As noted earlier, Nevada will create a multi-stakeholder PHIC that will manage the SHSIP implementation. PHIC will include a committee called the Multi-Payer Collaborative, which will provide a forum for payers to agree on value-based payment methods and support other SHSIP activities. PHIC will receive guidance from several sources and collaborate with an advisory group that will be created by the Advisory Council on the State Program for Wellness and the Prevention of Chronic Disease. PHIC also may seek guidance from four work groups and two taskforces. The work groups will focus on patient and provider issues, health care payment and delivery innovations, and health care quality. Each work group will include providers, payers, consumer advocates, and representatives from state agencies. Two taskforces will address, respectively, health IT and data, and policy and regulation. These advisory bodies will include stakeholders such as state agencies, payers, providers, consumer advocates, tribal leaders, and other community groups.

State strategies for maintaining stakeholder engagement in State Health System Innovation Plan implementation

In addition to outlining opportunities for stakeholders to participate in SHSIP implementation, 13 states directly addressed the need to maintain stakeholder commitment to SHSIP implementation. In most of these SHSIPs, maintaining continued stakeholder engagement is synonymous with ensuring continued input from stakeholders throughout the SHSIP implementation process.

The SHSIPs for five states (Arizona, New Jersey, Pennsylvania, West Virginia, and Wisconsin) generally recommend that stakeholders stay involved as Model Design implementation progresses. For instance, West Virginia's SHSIP notes that "all stakeholders have the buy-in to continue health transformation efforts from design to implementation" and

that the state "encourages these stakeholders to continue working together." Pennsylvania's SHSIP similarly affirms the need for continued stakeholder engagement but adds that stakeholders should have an incentive to remain involved in implementation. For example, consumer and employer concerns about rising health care costs should translate into their interest in moving health care delivery transformation forward. None of these five SHSIPs describe specific strategies for maintaining stakeholder engagement.

Nine SHSIPs—from the District of Columbia, Hawaii, Illinois, Kentucky, Montana, Nevada, New Mexico, Oklahoma, and Virginia—include plans for maintaining stakeholder engagement. The District of Columbia's plans for ensuring continued stakeholder involvement are the most detailed; the SHSIP indicates that the District of Columbia will provide opportunities for communicating with and obtaining input from stakeholders through Web sites, newsletters, forums, hearings, and other methods. Over the long term, the District of Columbia seeks to encourage consumers and providers to become active participants in health care delivery reform. The District identifies increasing health literacy as a key path forward for engaging consumers in the transformation process. Illinois' vision for implementation includes involvement by stakeholder action teams that participated during the SIM design phase; activities include partnership and collaboration, communication and technical support, monitoring and implementation, and resource development.

Seven SHSIPs briefly discuss methods for ensuring continued stakeholder involvement. Hawaii and Kentucky will obtain feedback from stakeholders as part of monitoring and evaluation efforts. Hawaii, Kentucky, Montana, and Oklahoma will solicit feedback and advice from stakeholders on implementation efforts. New Mexico will work to ensure that stakeholders involved in the planning process—particularly tribal councils—continue to be engaged in the implementation process. The Nevada and Virginia SHSIPs indicate that the organizations leading SHSIP implementation in those states—PHIC and the Virginia Center for Health Innovation, respectively—are responsible for stakeholder engagement in health care delivery transformation efforts.

3.3 Conclusions

State health care transformation plans commonly include initiatives to meet the key goals of improving population health, reducing health care spending or increasing the value of spending, and improving health care quality and system performance. Two key types of initiatives for encouraging provider integration across states are ACOs and physical and behavioral integration. Most states plan to implement or expand value-based payment models. Although no state developed a plan to assign all state residents to a primary care provider, many states propose Medicaid PCMH models and/or health homes. To implement new models, states propose approaches to greater patient engagement, health IT initiatives, workforce development, and stakeholder involvement.

4. Health Care Payment and Delivery System Models

This chapter discusses differing approaches to addressing the SIM Initiative aims through the major delivery system and payment models in State Health System Innovation Plans (SHSIPs).

4.1 Payment and Delivery System Models Across States

The SIM Initiative specifies that a state's transformed health care delivery system include movement of over 80 percent of payments to providers from all payers to fee-for-service (FFS) alternatives that link payment to value. All Round 2 Model Design states are still developing their approaches to meeting the 80 percent goal. Most states present an initial approach in achieving this goal, but the plans are generally limited in scope and described in minimal detail.

In contrast to Round 2 Model Design states' goal of linking 80 percent of payments to value, Round 1 Model Design States were given the goal of tying 80 percent of the state's population to value-based health care. The Round 1 states were more likely to have developed detailed plans for implementing their SIM Initiative; however, a phased-in implementation approach was common across states in both Rounds.[8]

4.1.1 Progress toward 80 percent target

Eight states (the District of Columbia, Hawaii, Maryland, New Mexico, Nevada, Oklahoma, Puerto Rico, and West Virginia) are planning initially to implement or expand value-based payment in the portion of the market where they can directly make changes in purchasing arrangements, either through Medicaid only or through Medicaid and state employee benefit plans. For example, although all Medicaid managed care plans in Hawaii are required to incorporate value-based payments, the state is considering expanding the model to include behavioral health services, provided by primary care and women's health practices, for patients with mild-to-moderate behavioral health needs. Maryland is proposing an Accountable Care Model for its Medicare-Medicaid enrollee population. To achieve its goal of having 80 percent of all state-based health care payments made under a value-based model by 2020, Oklahoma is proposing regional care organizations (RCOs) that will implement value-based payment arrangements for all state-purchased health care (Medicaid and public employees), within local provider networks. Nevada, New Mexico, Oklahoma, and West Virginia clearly stated that they plan to expand to commercial payers, but they are starting with state-funded purchasing.

Only three states—California, Nevada, and West Virginia—explicitly indicated that they will seek to achieve the 80 percent target across *all* payers. Kentucky's payment reform proposals ideally will affect 80 percent of the state's insured population, but commercial payers in the state must voluntarily join the state's payment reform efforts to achieve this goal. While

[8] U.S. Department of Health and Human Services, Centers for Medicare & Medicaid Services. (2014, July 25). State Innovation Models (SIM) initiative evaluation: Model design and model pre-test evaluation report. Retrieved from https://downloads.cms.gov/files/cmmi/SIM-Round1-ModelDesign-PreTest-EvaluationRpt_5_6_15.pdf

not explicitly stating this as a goal, New Hampshire's cost savings assume that 85 percent of commercial and Medicaid provider reimbursements will be through value-based payment models 5 years after SHSIP implementation.

Other states presented very limited or no information on their approach for linking payment to value. American Samoa's goal is for 100 percent of its health care systems to establish quality metrics by 2020, but the territory's SHSIP does not present a plan for implementing a value-base payment system. The Northern Mariana Islands intends to implement a single payer, patient-centered medical home (PCMH), value-based payment model, but its SHSIP states that the plan is still being developed. Although Arizona developed a Medicaid modernization plan in 2014, including actions needed to transform the delivery and payment system, its SHSIP does not describe how value-based payments will be implemented through its SIM activities. Illinois, Montana, Pennsylvania, Utah, Virginia and Wisconsin SHSIPs provide little information to describe their progress and activities toward reaching the goal of tying 80 percent of payments to providers to value; their plans to achieve the goal are still being developed.

Multiple states (Kentucky, Nevada, New Hampshire, New Mexico, and New Jersey) have established stakeholder groups to advise them on the design and implementation of payment and delivery system models toward achieving the goal. For example, in New Jersey, the Delivery System Transformation Workgroup met monthly during the Model Design period and, with representation from the Governor's Office and constituencies in the state's medical community, advised on priority topics for assessing the current delivery system and opportunities for system transformation.

4.1.2 Proposed health care payment, delivery initiatives

Model 2 Design states differ in their proposed health care payment and delivery system payment reform approaches (see ***Table 4-1***). Ten states (American Samoa, Arizona, Illinois, Kentucky, Montana, Nevada, New Hampshire, New Mexico, the Northern Mariana Islands, and Puerto Rico) are proposing PCMH models, and nine states (American Samoa, California, the District of Columbia, Kentucky, Montana, Nevada, New Jersey, Oklahoma, and West Virginia) are proposing health home models in their SHSIPs, through either new initiatives or enhancement to existing programs. American Samoa, Kentucky, Montana, and Nevada are proposing new PCMH and health home models. PCMHs provide whole person-oriented care to meet most of a patient's health care needs, with care delivered using a coordinated, team-led approach. Health homes are a variant on PCMHs, focusing on medically complex patient populations. Section 2703 of the Patient Protection and Affordable Care Act (ACA) gave states the statutory authority to provide health homes for Medicaid enrollees with chronic conditions, through an amendment to the Medicaid State Plan.

Table 4-1. Proposed payment and delivery system models across states

State	Patient-centered medical home	Health Home	Accountable care model	Episodes of care	Other
American Samoa	✓	✓	✓	—	Self-insurance trust fund
Arizona	✓	—	—	—	—
California	—	✓	—	✓	—
District of Columbia	—	✓	✓	—	—
Hawaii	—	—	—	—	Value-based purchasing model
Illinois	✓	—	—	—	—
Kentucky	✓	✓	✓	✓	—
Maryland	—	—	✓	—	—
Montana	✓	✓	—	—	—
Nevada	✓	✓	—	—	Multi-payer, super-utilizer care coordination
New Hampshire	✓	—	—	—	—
New Jersey	—	✓	✓	—	—
New Mexico	✓	—	—	—	Integrated rural health care delivery model
Northern Mariana Islands	✓	—	—	—	Universal basic, single-payer health plan
Oklahoma	—	✓	✓	✓	—
Pennsylvania	—	—	—	✓	—
Puerto Rico	✓	—	✓	✓	Group prenatal care, chronic kidney disease prevention and renal medical neighborhood, special needs and super utilizer care coordination
Utah	—	—	—	—	—
Virginia	—	—	—	—	Specific model designs not yet developed: integrated behavioral and primary care, complex care for high utilizers, integrated oral health and primary care, care transitions
West Virginia	—	✓	✓	—	—
Wisconsin	—	—	—	—	Specific model designs not yet developed: considering FFS with P4P and care coordination payments

FFS = fee for service; P4P = pay for performance.

Note: ✓ means included in a State Health System Innovation Plan (SHSIP); — means not indicated in SHSIP.

Other less commonly proposed approaches include accountable care organizations (ACOs), proposed by eight states (American Samoa, the District of Columbia, Kentucky, Maryland, New Jersey, Oklahoma, Puerto Rico, and West Virginia), and episodes of care (EOCs) models proposed by five states (California, Kentucky, Oklahoma, Pennsylvania, and Puerto Rico). Accountable care systems bring together groups of providers—including physicians, hospitals, and other health care practitioners—to work collaboratively and accept accountability for the cost of care for a defined set of patients. In EOC payment models, either a designated provider receives a prospective payment for an illness or course of treatment, or total expenditures across participating providers are retrospectively reconciled to a target price. Ten states (American Samoa, California, District of Columbia, Kentucky, Montana, Nevada, New Jersey, Oklahoma, Puerto Rico, and West Virginia) propose more than one of these four payment and delivery system model approaches. Pennsylvania is proposing only an EOC initiative.

American Samoa and the Northern Mariana Islands included other models that provide new global funding approaches. American Samoa will create a self-insurance trust fund for its entire population, funded through a per-member per-month (PMPM) approach that allows for payment for off-island care. Although initially this approach is expected to increase cost, the territory anticipates that the PMPM approach ultimately will control costs as patients receive more appropriate care. The Northern Mariana Islands is proposing a Local Access to Care Program that includes universal coverage through local, integrated, health care systems for the population that does not have health insurance coverage through other sources. However, neither territory has developed the specifics of the payment models needed to implement these initiatives.

Six states (Hawaii, Nevada, New Mexico, Puerto Rico, Virginia, and Wisconsin) are proposing other models, or their models are not yet sufficiently specified to categorize the initiative into one of the four most common payment and delivery system model categories. New Mexico is developing a model targeting its rural communities—the Preserving Access to Rural Care initiative—to pilot alternative payment and delivery systems in remote hospital communities. The initiative would improve the viability of the rural hospitals by expanding their mission to include more than acute care services and thereby promote local community access to a baseline of health care services. An initiative in Nevada focuses on targeting high utilizers of care; the state anticipates assigning almost all to a primary care provider in 2016.

Round 1 Model Design and Pre-Test states and Round 2 Model Design states proposed similar health care payment and delivery system payment reform approaches. All Round 1 Model Design and Pre-Test states included one or more of four major delivery system and payment models in their State Health Care Innovation Plans (SHIPs): (1) PCMHs, (2) health homes for medically complex populations, (3) integrated or accountable care systems, and (4) EOC payment models. PCMH initiatives were most commonly proposed in Round 1 (13 of 19 states). Health homes were proposed in four states, accountable care systems in eight states,

and EOC models in three states. EOC models were never the sole approach proposed in any Round 1 Model Design state approach.

In addition, many Round 1 Model Design states' SHIPs included delivery system enhancements to one or more dimensions of care delivery, such as expansion of behavioral health services or long-term services and supports (LTSS), integration of these services with physical health services, or care for special population groups (e.g., pregnant women, individuals at the end of life, and medically or socially complex patients).

Proposed patient-centered medical homes

Among the 10 states proposing PCMH initiatives, four have existing PCMH programs (Arizona, Kentucky, Montana, and New Mexico) (***Table 4-2***). These states are expanding and building upon their current programs.

Table 4-2. Existing state patient-centered medical homes, Section 2703 health home initiatives

State	Medicaid PCMH program	Multi-payer PCMH programs	State plan amendment for ACA Section 2703 health homes
American Samoa	—	—	—
Arizona	✓	✓	—
California	—	✓	—
District of Columbia	✓	✓	✓
Hawaii	✓	✓	—
Illinois	—	—	—
Kentucky	—	✓	✓
Maryland	—	✓	✓
Montana	✓	✓	—
Nevada	—	—	—
New Hampshire	—	—	—
New Mexico	✓	—	✓
Northern Mariana Islands	—	—	—
New Jersey	✓	✓	✓
Oklahoma	✓	✓	✓
Pennsylvania	✓	✓	—
Puerto Rico	—	—	—
Utah	—	—	—
Virginia	—	✓	—
West Virginia	✓	—	✓
Wisconsin	✓	—	✓

ACA = Patient Protection and Affordable Care Act; PCMH = patient-centered medical home.

Note: ✓ means included in State Health System Innovation Plan (SHSIP); — means not indicated in SHSIP.

PCMH model designs are in various stages of development across states. Montana and Nevada intend to implement multi-payer PCMH models but are focusing first on Medicaid health homes. Montana has both commercial and Medicaid PCMH initiatives, but its SHSIP did not present a description of its newly proposed multi-payer model. Nevada's PCMH model is being developed through a multi-payer collaborative, using a phased approach. Characteristics being considered include tiered PMPM payments (enhanced PMPM FFS payments or shared savings arrangements), quality incentives, and infrastructure supports.

Illinois, New Hampshire, New Mexico, Kentucky, and Puerto Rico are in the early stages of developing their new PCMH initiatives:

- Illinois' goal is to create a PCMH model to provide preventive and primary care for women, adolescents, and children, including children with special health care needs. However, the model has not yet been developed.
- New Hampshire is in the initial stages of planning an Advanced Primary Care model, drawing from CMS's Comprehensive Primary Care initiative and the National Committee for Quality Assurance's (NCQA's) PCMH models, to promote quality improvement, care coordination, and value-based payment; however, the level and type of integration is not yet specified.
- New Mexico's goal is to develop accountable health communities that include PCMHs that deliver high-quality, patient-centered, coordinated care, within a standard set of criteria. New Mexico's initial design activities are to define a uniform, statewide PCMH model, identify a set of reporting metrics on core performance outcomes, and ultimately develop one model that can be used across providers and payers. As the PCMHs build capacity, they will be encouraged to expand their mission and take a more active role in the community.
- Kentucky's proposed Medicaid and government employee PCMH model design is being developed through a multidisciplinary steering committee charged with defining quality metrics, patient attribution, and payment methodologies that can be harmonized with the PCMH approaches previously put in place by commercial payers.
- Puerto Rico is developing two PCMH pilot initiatives to be implemented initially in 10 PCMHs; one focusing on pediatric asthma and the second on adult diabetes management.

Arizona is establishing the Indian Health Medical Home Program (IHMHP) for Medicaid beneficiaries in the American Indian Health Program. The IHMHP is intended to be aligned with the existing Indian Health Services PCMH model, the Improving Patient Care program, and build on the current delivery model of health care services for American Indians through Indian health facilities and nontribal providers. As a first goal of the IHMPH, and proposed in Arizona's modification to its current Section 1115 Medicaid demonstration, the IHMHP will reimburse its network of community health centers for primary care, case management, a 24-hour call line,

diabetes education, and care coordination for individuals with chronic or complex conditions, including serious mental illness. Although the existing Section 1115 Medicaid demonstration developed the methodology for reimbursing primary care providers, Arizona still is designing its approach for paying other providers.

Because of limited resources, the Northern Mariana Islands and American Samoa are focusing on specific patient populations. The goal in the Northern Mariana Islands is to use PCMHs to address diabetes management and later expand its model to include other chronic diseases. The PCMH initiative will establish linkages with existing community-based organizations, including health centers, to integrate health care, support, and community services. The American Samoa model is focusing on high-cost, health care utilizers; the appropriate PCMH model design is still being explored and was not described.

Proposed health home models

New health home initiatives are proposed in nine states (***Table 4-1***). The health home initiatives commonly focus on individuals with multiple conditions that span physical and behavioral health treatment needs. Of the nine states proposing health home models, four states (the District of Columbia, Kentucky, New Jersey, and West Virginia) are expanding existing health home programs.

In addition to a more broad-based PCMH program, California, Kentucky, Montana, and Nevada are focusing on improving health care delivery to individuals with complex or chronic conditions and designing health home initiatives that promote physical and behavioral health integration early in the transformation process. California and Kentucky are developing complex chronic condition health homes. California's multi-payer initiative seeks to reduce emergency room visits and hospitalizations in this population and will integrate palliative care where appropriate to bring this capacity into the health homes.

Kentucky is focusing on individuals with opiate substance use disorders, who are at risk of developing another chronic condition. Similarly, Montana is directing initial efforts to piloting four Medicaid health homes to provide integrated primary care with mental health and substance use services to individuals 16 to 25 years of age. Anticipated components spanning the care continuum include care coordination and health promotion; comprehensive transitional care from inpatient to other settings and follow-up; individual and family support; and referral to community and social support services, with telehealth used to link services. Montana expects to expand the program based on the lessons learned through the pilot.

Nevada is implementing health homes for Medicaid beneficiaries with two or more chronic conditions and plans to later expand the program to include health homes for individuals with severe and persistent mental illness. The state anticipates using telehealth to deliver necessary services that are not available locally. Nevada will share its initial experience with

nonpublic payers for their consideration in replicating the models. West Virginia proposes to expand the state's current health home initiative to Medicaid beneficiaries with costly, chronic conditions.

New Jersey proposes an expansion of its current Medicaid behavioral health home initiative. Similarly, the District of Columbia's initiative is an expansion of its current Medicaid home health model, to include a new, high-need patient population: individuals with severe mental illness. Primary care providers will be paid a monthly rate to deliver care coordination services; eventually, they will be held accountable for their patient population. The District of Columbia's health home model is designed to integrate physical health needs into the behavioral health setting. Participating behavioral health providers will create care teams to address and coordinate a patient's full array of health and social service needs, with the goal of reducing costs and improving the quality of care.

Existing patient-centered medical homes and Section 2703 health home initiatives

Eight states propose to expand their current PCMH or health home initiatives through their SIM award (Arizona, California, the District of Columbia, Kentucky, Montana, New Jersey, New Mexico, and West Virginia). The existing initiatives are described below.

Arizona's new Medicaid IHMHP PCMH initiative is aligning with *Improving Patient Care*, the Indian Health Service's PCMH model. The goal is to expand available services and create a new medical home reimbursement methodology for the American Indian patient population.

California's health home initiative will build on a robust network of PCMHs that provide care to a cross-section of the patient population. The overall goal of these care delivery models is to provide patient-centered, coordinated care, and proactively, provide preventive, primary, routine, and chronic care management. Most of New Mexico's Medicaid population also is enrolled in PCMHs. Montana has both commercial and Medicaid PCMH initiatives

Through a CMS Health Care Innovation Award, Kentucky participated in a primary care redesign project across 15 communities in support of care coordination among PCMHs, specialty practices, and hospitals, with the goal of creating "medical neighborhoods." Kentucky will bring this earlier effort to its SIM initiative, in relation to testing the PCMH model, reporting on quality measures, cost reductions, and patient satisfaction.

Other states are proposing to expand existing health home programs. New Jersey proposes an expansion of its current Medicaid behavioral health home initiative. Similarly, the District of Columbia's initiative is an expansion of its current Medicaid home health model, to include individuals with severe mental illness. West Virginia proposes to expand the state's current health home initiative to Medicaid beneficiaries with costly, chronic conditions. The

focus of West Virginia's existing Medicaid health home project had been members in a six-county region who suffer from bipolar disorder and who may have hepatitis B or C.

Proposed PCMH and health home models for special emphasis populations

Many of the PCMH and health home initiatives across the states focus on special patient populations (***Table 4-3***). Most notable, Kentucky, Montana, New Jersey, and West Virginia are focusing on patient populations with behavioral health conditions to address their behavioral and physical health needs. California, Nevada, and the District of Columbia focus on improved care management for individuals with complex chronic diseases. American Indians with chronic and complex conditions are the special emphasis population in Arizona.

Criteria for patient-centered medical homes provider recognition

Among the 15 states proposing new PCMH or health home models, 5 states (Kentucky, Nevada, New Hampshire, New Mexico, and New Jersey) describe their recognition criteria in their SHSIPs (***Table 4-4)***. Kentucky and New Hampshire mention meeting NCQA PCMH criteria. In other states, details may be lacking, because the model is in an early stage of development.

Linkages to community-based entities

As a component of their PCMH or health home models, eight states (Arizona, California, the District of Columbia, Kentucky, Montana, New Mexico, the Northern Mariana Islands, and Puerto Rico) describe their plans to include linkages to community-based resources to provide support services for patients. Arizona plans to partner with the Arizona Urban Indian Health Program, a network of community-based health centers, to provide physical and behavioral health services for its Medicaid PCMH initiative.

California, Kentucky, and Montana consider a core element of the care team to be clinical and nonclinical, community-based services and resource providers. California will encourage health homes to include community health workers on staff, referral to community and social support services, and individual and family support (including establishing authorized representatives). Kentucky will encourage primary care providers to coordinate with nonclinical community resources, including community health workers and peer support specialists, to help meet patient needs. In Montana, PCMH nurses will work in teams with community health workers, coaches, and volunteer care extenders to go where the patient is living and provide needed wraparound services.

Table 4-3. Model Design states with proposed special emphasis patient-centered medical homes or health home models

State	PCMH special emphasis area	Role of ACA Section 2703 health homes in primary care transformation
Arizona	American Indian population with complex and chronic conditions	—
California	—	Individuals with complex health conditions, includes palliative care services
District of Columbia	—	Current focus on individuals with severe mental illness. New program to focus on individuals with chronic health conditions (including HIV/AIDS, diabetes); later, chronic homelessness
Illinois	Women, adolescents, and children	—
Kentucky	Complex or chronic physical and behavioral health conditions	Focus on individuals with an opiate substance use disorder and who are at risk of developing another chronic condition
Montana	—	Pilot of 4 health homes focused on the behavioral health integration including primary care, mental health, and substance abuse services for persons aged 16 to 25
Nevada	—	State planning grant to implement for individuals with complex chronic conditions; later, individuals with severe and persistent mental illness
Northern Mariana Islands	Initially, diabetes management; later, other chronic disease management	—
New Jersey	Children with serious emotional disturbance and at least one chronic medical condition, and adults with serious mental illness who are at risk of high service utilization due to chronic illness or disability	Care improvement and cost reduction by providing high-quality, continuous, behavioral health services and reducing avoidable acute hospital care
Oklahoma		Patients with complex needs and adults with severe mental illness and children with emotional disturbance
Puerto Rico	Low-income children with asthma and other chronic conditions; diabetes management	—
West Virginia	Chronic conditions	Current focus on individuals who suffer from bipolar disorder and who may have or be at risk for hepatitis B or C. Expansion to focus on other chronic conditions, particularly those that are described as “costly”

ACA = Patient Protection and Affordable Care Act; AIDS = acquired immune deficiency syndrome; HIV = human immunodeficiency virus; PCMH = patient-centered medical homes.
Note: — means not indicated in State Health System Innovation Plan (SHSIP). Table includes only states that have PCMH special emphasis areas and/or health homes in their SHSIP.

Table 4-4. Comparison of patient-centered medical homes recognition criteria

State	PCMH recognition criteria
Kentucky	Adoption of NCQA certification criteria; additional Kentucky-specific components related to social determinants of health
Nevada	Comprehensive care, provided by primary care teams, consisting of various types of providers; patient-centeredness through shared decision making and a whole-person approach; coordinated care across the broader health system; accessible services after hours; and quality and safety achieved through commitment to evidence-based medicine, clinical decision-support tools, and technology for monitoring population health
New Hampshire	Drawn from CMS's Comprehensive Primary Care initiative and NCQA certification criteria: empanelment of active patients to a provider or care team, risk stratification, care management via care plans, care coordination across providers, patient access after hours, patient-centered care, and systematic quality improvement
New Mexico	Creation of a "glide path" toward certification for practices that do not have the resources; PCMH certification required from a nationally recognized body, such as NCQA, the Joint Commission, or AAAHC.
New Jersey	Existing certification that uses the Department of Human Services Division of Mental Health and Addiction Services' certification criteria for behavioral health providers: have EHRs, participate (or work toward participating) in existing HIEs, and have affiliation agreements with regional hospitals; full or partial colocation of primary care established within 3 years of initial certification

AAAHC = Accreditation Association for Ambulatory Health Care; CMS = Centers for Medicare & Medicaid Services; EHR = electronic health record; HIE = health information exchange; NCQA = National Committee for Quality Assurance; PCMH = patient-centered medical homes.

Note: Table includes only states that indicated PCMH recognition criteria in their State Health System Innovation Plan.

PCMH models in the Northern Mariana Islands and Puerto Rico, and health home models in the District of Columbia and New Mexico, include the development of linkage arrangements and referrals to community resources to address social determinants that affect patient health, which the clinical team does not have the skills or resources to address directly. The Northern Mariana Islands diabetes-focused PCMH includes working with community health workers, patient navigators, and health coaches to provide transportation, childcare, and culturally appropriate motivational approaches and to engage family and friends in the care team. Puerto Rico states that its Pediatric Asthma PCMH will include coordination with community agencies and resources, but the specific entities are not described. The District of Columbia health home model for chronically ill and chronically homeless populations will focus on building partnerships between physical health and permanent supportive housing providers. The New Mexico SHSIP states that bidirectional linkages between the health home and community services are considered essential and will be provided by community health workers or care coordinators.

Scope of payer involvement in patient-centered medical homes and health homes

With few exceptions, proposed payer involvement in most states is limited to Medicaid and public employee plans. Five states (American Samoa, Arizona, the District of Columbia, Nevada, and New Jersey) propose to limit their payer involvement for their PCMH initiative to Medicaid. California, Kentucky, New Hampshire, and West Virginia will include Medicaid and state employee plans. New Mexico will focus first on Medicaid and Medicare, while Montana and New Hampshire will start with commercial payers. Puerto Rico specifies that its proposed Pediatric Asthma PCMH will include all payers, while the participating payers for its Comprehensive Diabetes Management PCMH are not specified.

In the Northern Mariana Islands, approximately one-third of the population is uninsured. Most of the uninsured are non-U.S. citizens and, therefore, ineligible for Medicaid and Medicare, resulting in the commonwealth government being their primary payer. The commonwealth intends to develop a single payer model for the entire population that includes support from patients, employers, and Medicaid.

Populations and geographic regions targeted by patient-centered medical homes and health homes

States differed in populations that are proposed to be the focus of targeted models. American Samoa, California, Nevada, the Northern Mariana Islands, and the District of Columbia are focusing their PCMH and health home initiatives on high-cost health care utilizers with chronic conditions. New Mexico and New Jersey target individuals with serious mental illness; Arizona's SIM Initiative focuses on the American Indian population; and Illinois focuses on women, adolescents, and children.

Montana, Nevada, and New Hampshire emphasized the need to improve the availability of services in rural areas, including community outreach teams and telehealth. Montana is particularly concerned about addressing behavioral health needs in rural areas that lack sufficient behavioral health practitioners in the local community. Nevada is concerned about lack of services in rural areas, especially for complex and vulnerable populations. New Hampshire described its rural population as facing demographic and socioeconomic challenges, combined with inadequate local health care availability and greater distances from needed services.

4.1.3 Accountable care models

American Samoa, the District of Columbia, Kentucky, Maryland, New Jersey, Oklahoma, Puerto Rico, and West Virginia propose to implement accountable care models that would bring together groups of providers to work collaboratively and accept accountability for the cost of care for a defined set of patients (see ***Table 4-5***).

Table 4-5. Comparison of accountable care models across Model Design states

State	Proposed initiatives	Proposed populations served	Key features of accountable care model
American Samoa	ACOs	Medicaid beneficiaries	—
District of Columbia	Not currently proposed, identified as a possible future option	—	—
Kentucky	ACOs	Two programs proposed: 1) multi-payer2) Medicaid targeting LTSS/LTC populations; individuals with complex or chronic physical and behavioral health comorbid conditions	—
Maryland	ACOs	Medicare-Medicaid enrollees	Years 1 and 2: ACOs can earn rewards for producing savings and quality gains, Year 3: ACOs expected to take meaningful risk for financial losses that may arise.
New Jersey	ACO expansion	Medicaid beneficiaries	Savings to be calculated for all beneficiaries in the geographic area regardless of eligibility category or managed care plan enrollment; not required to bear financial risk beyond initial investments and operating costs; incorporated as nonprofit entities governed by representatives of area providers and community members
Oklahoma	RCOs	Medicaid beneficiaries; public employees, retirees, and their dependents	Risk-bearing care delivery entities accountable for the total cost of care for patients within a region
Puerto Rico	ACOs	Not decided but may be used for prenatal care, pediatric asthma, diabetes, chronic liver disease and/or high utilizers	—
West Virginia	Not currently proposed, identified as a possible future option	Chronic condition, high-cost super-utilizers	—

ACO = accountable care organization; LTC = long-term care; LTSS = long-term services and supports; RCO = Regional care organizations

Note: — means not indicated in State Health System Innovation Plan (SHSIP). Table includes only states that included accountable care models in their SHSIP.

Oklahoma and Maryland have made progress in developing their implementation approach. In Oklahoma, RCOs will receive fully capitated payment for attributed members within their geographic region and be accountable for integrated and coordinated health care services. No single delivery system model is prescribed, and Oklahoma will establish regionally based care delivery organizations with a care delivery strategy that accounts for local variation in available resources and needs. Oklahoma is building its SIM Initiative on existing programs that provide case management to their Medicaid population (SoonerCare, developed pursuant to a Section 1115 Medicaid demonstration), three regional pilot Health Access Networks of safety net providers, and the CMS-funded Comprehensive Primary Care Initiative.

Maryland is proposing the Dual Accountable Care Organization (D-ACO) model for Medicare-Medicaid enrollees. D-ACO includes a Medicaid integrated delivery network, shared savings, and care coordination. To be implemented in selected geographic regions in 2019, the model includes collaboration across primary and specialty providers, including physical health, behavioral health, and LTSS, through person-centered health homes (like Section 2703 health homes), interdisciplinary care teams, and care management that is integrated and delivered at the clinical setting. Primary care providers can include LTSS and behavioral health providers.

Kentucky has determined the framework, delivery system, and population focus for its approach. The state will be soliciting innovative ideas and evidence-based approaches for its implementation through a request for information.

Four states anticipate developing an accountable care model but did not provide details of their anticipated approach in their SHSIP. American Samoa and West Virginia identified the populations to be served (described in ***Table 4-5***) but have not yet developed the features of their models. The District of Columbia is considering an accountable care model, but few details were reported. Puerto Rico proposes piloting this approach with three practices by 2020, but the features of the model are not yet developed.

New Jersey is not proposing a new accountable care model but used the Round 2 Model Design Initiative to support its current Medicaid ACO activities, including data access, developing quality measures, enhancing an existing learning network, and identifying needs for implementation. Another activity was meeting with ACO leadership to identify assistance needed for implementation and develop an evaluation and monitoring strategy. New Jersey's FY 2017 budget includes a $3 million investment in three certified Medicaid ACOs ($1 million each).

Additional features of new accountable care model plans are limited to Oklahoma, Maryland, and Kentucky, because the plans in other states considering this approach are in more preliminary stages of development.

Sharing risk

Among the accountable care models proposed by states, only Oklahoma and Maryland discuss the proposed risk arrangement. The Oklahoma RCO model is a regionally based care delivery model in which organizations operate under a comprehensive risk contract with the state. The regional entities will have discretion about risk arrangements that will be implemented with their participating providers. Oklahoma will use a global budget to pay RCOs for the complete costs of health care for all members within the geographic region. The global budget will consist of a risk-adjusted, capitated PMPM payment for covered services. Oklahoma will cap the PMPM growth rate to ensure that cost targets are met. Separate methodologies will be developed for Medicaid and public employee covered populations. RCOs will be eligible for performance bonuses for meeting selected quality performance measures. Each participating region will propose how it will reimburse affiliated providers.

In Maryland, a total-cost-of-care target will be established for each D-ACO's designated beneficiary population to calculate savings or losses. Initially, D-ACOs can earn rewards for producing savings and meeting quality targets and will not be at risk for net benefits. Beginning in Year 3, downside risk will be added. However, the reward-risk formula will be skewed more toward incentive bonuses than penalty. Through a stop-loss feature, D-ACOs will be protected from the possibility that individual, high-cost cases could lead to aggregate losses or deplete otherwise deserved savings.

Scope of payer involvement

Maryland, New Jersey, and Oklahoma initially or currently limit their ACO payer involvement. The Oklahoma RCO model will be limited initially to Medicaid and public employees (including retirees and dependents). The state anticipates that private market payers eventually may join. The Maryland D-ACO initiative is limited to payments for Medicare-Medicaid beneficiaries. New Jersey's ACOs are limited to Medicaid.

Whereas Puerto Rico does not specify the payer involvement for its ACO initiative, the goals of the Kentucky ACO plan are to encourage payers to add their populations to existing ACOs, support the creation of new ACOs, and expand their scope to include at-risk populations. Kentucky will establish a multi-payer "open door" policy, in which payers can add their populations to the ACO, if the ACO desires.

Populations and geographic regions targeted by accountable care models

In Oklahoma, regionally based care is the focus of its RCO model that will be implemented initially for Medicaid and public employees. The model will include Federally Qualified Health Centers (FQHCs), county health departments, and other entities, with the goal of creating a "medical neighborhood."

The Maryland D-ACO initiative will focus on Medicare-Medicaid beneficiaries, excluding beneficiaries who are intellectually or developmentally delayed. The state plans to implement the program in a limited number of selected regions.

The Kentucky ACO initiative will concentrate on individuals with significant behavioral health comorbidities and target their behavioral health providers. A second focus will be individuals receiving LTSS and their providers, including hospice services.

4.1.4 Episode of care payment models

California, Kentucky, Oklahoma, Pennsylvania, and Puerto Rico are the only states that include an EOC initiative in their SHSIPs. In an EOC, either a designated provider receives a prospective payment for an illness or course of treatment, or total expenditures across participating providers are retrospectively reconciled to a target price.

California's planned initiative focuses on maternity care across payers, with an emphasis on deliveries and the significant cost and quality concerns that are related to unnecessary cesarean deliveries. The initiative plans to develop a publicly shared hospital quality reporting system, a single payment for "birth," and greater education for expectant mothers in support of having a healthy birth.

Oklahoma intends to implement multi-payer EOCs and will encourage private payers to adopt the model. The Oklahoma RCOs (described in ***Section 4.1.3***) will participate in five EOCs: asthma, prenatal care, total joint replacement, chronic obstructive pulmonary disease, and congestive heart failure. Oklahoma will designate a provider as the principal accountable provider (PAP), who will be responsible for quality outcomes and the total cost of care for a given episode over time. PAPs will be evaluated on their performance for all patients attributed to that episode, relative to cost benchmarks and quality standards.

Kentucky's, Pennsylvania's and Puerto Rico's EOC models are not yet developed. In Kentucky, the methodology and conditions will be developed based on a five-phase strategy that includes guidance from a multidisciplinary steering committee. EOCs will be implemented for Medicaid and the Kentucky Employee Health Plan, and subsequently expanded to other payers. The Pennsylvania initiative will be developed with guidance from a stakeholder group. In Puerto Rico, EOCs are being considered, but are not yet developed, for the delivery of prenatal care, care for pediatric asthma, diabetes, and chronic liver disease, and to serve high utilizers.

4.1.5 Delivery service enhancements

States proposed various delivery service enhancements in new models and through existing initiatives to provide particular types of care, (e.g., behavioral health) and care for special populations (e.g., pregnant women, individuals at the end of life, medically or socially complex patients). Behavioral health integration and enhanced services for medically and socially complex patients are most common. See ***Table 4-6*** for details.

Table 4-6. States providing delivery service enhancements

State	Behavioral health	Long term services & supports	Maternity care	End-of-life care	Care for medically or socially complex patients	Other
American Samoa	✓	—	—	—	Self-insured plan for non-Medicaid residents to cover off-island services	Medicaid SPA to pay non-U.S. providers for medically necessary procedures; Telehealth
Arizona	✓	—	—	—	Care coordination for American Indians; Individuals transitioning out of incarceration	Telehealth
California	—	—	✓	✓	✓	—
District of Columbia	—	—	—	—	✓	—
Hawaii	✓	—	—	—	—	Telehealth; oral health access (future goal)
Illinois	✓	—	✓	—	✓	—
Kentucky	✓	✓	—	✓	—	Community Innovation Consortium
Maryland	✓	—	—	—	—	—
Montana	✓	—	—	—	—	Enhanced collaborative care model, which includes telehealth
Nevada	✓	—	—	—	—	Telehealth
New Hampshire	✓	—	—	—	—	—
New Mexico	✓	—	—	—	—	Alignment of primary and oral health care
Northern Mariana Islands	—	—	—	—	—	—
New Jersey	✓	—	✓ smoking cessation	—	—	—
Oklahoma	✓	—	—	—	—	—
Pennsylvania	—	—	—	—	—	—
Puerto Rico	✓	—	✓	—	✓	—
Utah	—	—	—	—	—	—
Virginia	—	—	Telehealth for high-risk obstetrical care	—	—	—
West Virginia	✓	—	—	—	✓	—
Wisconsin	✓	—	—	—	✓	—

SPA = State Plan Amendment

Note: ✓ means included in the State Health System Innovation Plan (SHSIP); — means not indicated in SHSIP.

Behavioral health care

Fifteen states propose to improve the delivery of behavioral health care by implementing new programs or improving the integration and care coordination of primary care and behavioral health (see ***Table 4-6***). Physical and behavioral health integration is proposed in American Samoa, Arizona, Illinois, Maryland, Montana, Nevada, Oklahoma, Hawaii, and New Hampshire. In several states, health home initiatives focus on addressing the unmet needs of patients with the most severe needs, while initiatives in other states propose to increase the behavioral health treatment capacity for a broader patient population. Initiatives in individual states are discussed in more detail below.

New health home initiatives in Kentucky and Nevada focus on patient populations with serious behavioral health care treatment needs. The Kentucky health home initiative is for individuals with an opiate substance-use disorder and at risk of developing another chronic condition. Nevada proposes a global, statewide, integrated behavioral health care system that includes adults and youth and spans prevention, early intervention, and treatment for persons with serious and persistent mental illnesses. The SHSIP introduces value-based reimbursement for its Certified Community Behavioral Health Clinic grant initiative funded by the Substance Abuse and Mental Health Services Administration (SAMHSA).

Illinois, Maryland, Hawaii, Montana, and Oklahoma are considering models to promote improved physical and behavioral health integration. Of these states, Montana, Oklahoma, and Hawaii are proposing initiatives to improve access to services in rural areas. Illinois proposes to improve integration at the local level through creation of local, behavioral health planning councils and Centers of Behavioral Health Excellence that will participate in determining the most appropriate health care delivery model strategies. Maryland's D-ACO model includes physical and behavioral health integration.

The Montana health home plan integrates primary care, mental health, and substance use services for youths and young adults, aged 16 to 25. Also in Montana, the Extension for Community Healthcare Outcomes project (Project ECHO) is a technology-enhanced model to provide collaboration between specialists at a hub and remote primary care providers seeking to increase specialized knowledge in treating complicated conditions. A goal of the initiative is to use technology and protocols to overcome access challenges resulting from Montana's size and rural population. A pilot project has been launched in two community-health centers using Project ECHO technology and protocols to provide psychiatric expertise and consultation with remote collaborative care teams. Montana is also proposing community resources teams using "hotspotting" to bring together a PCMH nurse with community health workers and coaches to deliver an array of wraparound services to super-utilizers. Pilots have been implemented and will be evaluated, with expansion anticipated.

In the proposed Oklahoma model, all providers, including RCOs, are required to conduct behavioral health screenings for clinical depression and substance use disorders. If a patient receives a behavioral health or substance abuse diagnosis, the provider will immediately connect the patient to a care coordinator, who will organize a plan to address physical and behavioral health care needs, including referrals to mental health providers, substance abuse treatment, community support groups, and pharmacy support programs.

In contrast with other states, Hawaii and Puerto Rico focus on more common mental health concerns. Hawaii is concentrating on increasing the capacity of Medicaid primary care and women's health providers to treat adults and children with mild to moderate behavioral health needs through training, health information technology (health IT), telehealth services, and value-based payments such as pay-for-performance to primary care providers, which are intended to promote behavioral health integration. Adequate referral networks in rural and provider shortage areas are also a concern. Consequently, Hawaii is considering (1) tele-mental health to increase access and (2) care coordinators to improve cultural competency. A goal is to increase evidence-based practices: screening for depression and anxiety; Screening, Brief Intervention, and Referral for Treatment (SBIRT) for substance misuse; and motivational interviewing. Puerto Rico proposes depression screening targets as a component in each of its new delivery system initiatives.

Long-term services and supports

Kentucky is the only state that is proposing to focus on individuals receiving LTSSs. Kentucky's ACO initiative will include this patient population and encourage ACOs to target relevant providers, including hospice care.

Maternity care

Five states include initiatives focusing on pregnant women (California, Illinois, Virginia, New Jersey, and Puerto Rico). As discussed above, California is proposing an EOC model to reduce unnecessary cesarean deliveries. Illinois includes maternity care within a larger focus of providing PCMHs for women of reproductive age. Virginia is proposing a delivery system enhancement related to obstetric care for high-risk Medicaid and uninsured women. The initiative includes treatment for behavioral health needs, psychosocial wraparound services, and use of telehealth services when needed. In New Jersey, a pilot program is being tested to promote smoking cessation among pregnant women enrolled in Medicaid managed care organizations (MCOs). Being conducted as a randomized controlled trial, the program is comparing usual care with incentives for attending prenatal visits and verified abstinence. Puerto Rico is proposing a group prenatal care initiative, a centering pregnancy model, in which providers see women who are the same gestational age in a group. This approach is intended to promote efficiencies in delivering care and greater opportunities for patient education.

End-of-life care

California and Kentucky propose service delivery enhancements related to end-of-life care. California is proposing to incorporate palliative care services as a component of its health homes for complex patients initiative and more generally, provide training opportunities to the frontline medical workforce on providing palliative care. As a component of its goal to improve LTSSs, Kentucky will encourage ACOs to target relevant providers, including hospice care, to promote the creation of comprehensive care teams.

Care for medically or socially complex patients

American Samoa is seeking a Medicaid state plan amendment to allow Medicaid funds to be used to pay non-U.S.–based physicians and facilities for medically necessary procedures. Because of its location, the territory stated that this approach would reduce costs associated with travel for medical care not available on the islands. The territory also proposes to develop a self-insurance plan, with a modest cost-sharing, to finance and provide a mechanism for off-island treatment for the uninsured population.

Arizona, the District of Columbia, and Puerto Rico propose care enhancements for patients with complex needs. In Arizona, the American Indian population may receive care from Indian Health Service and other providers. To improve care to medically complex and other patients, the state proposes to improve care coordination, including enhancements to health IT. For those transitioning out of incarceration, Arizona is developing an approach to discharge planning and care coordination prior to release to improve access to care in the community. The District of Columbia is proposing to expand its current health home model first to individuals with chronic health conditions and later to the chronically homeless. Puerto Rico is proposing to test integrated service delivery models for patients with chronic kidney disease and for special needs and super utilizer groups of patients.

Other

States are proposing enhancements to existing models that focus on improving the delivery of care, in contrast to expanding the populations that are served. Kentucky's Community Innovation Consortium is a forum for communities and providers to develop new delivery system and payment model demonstrations focused on achieving its value-based payment goals with multi-payer, provider, and consumer leadership and support. The consortium is intended to create partnerships that support sustainable transformation approaches.

American Samoa, Arizona, Hawaii, and Nevada propose to enhance their use of telemedicine to address limitations in available local providers with needed expertise. See ***Chapter 5*** for details about telehealth.

Wisconsin mentioned connecting people to community and social resources as a goal. However, this goal is not included as an initiative, because a barrier to implementation that the

state has not yet been able to overcome is purchasers' expressed reluctance to pay "extra" for care coordination and supports that they say "should already be happening."

Building on ongoing federal and state initiatives

State's SHSIPs lacked detail on how their delivery system enhancements are building on ongoing federal and state initiatives. Commonly, they are expansions to their Medicaid programs. Hawaii's departments of health and human services has a grant from the Governor's Office to align programs and funding around a multigenerational, culturally appropriate approach that invests early and concurrently in children and families to nurture well-being and improve health outcomes.

4.1.6 Legislative and regulatory policy levers across payment and delivery models

Across states, few legislative and regulatory policy levers were discussed as a consideration in the development of new payment and delivery models. In relation to PCMHs and health homes, the District of Columbia, Montana, New Hampshire, New Jersey, New Mexico, and West Virginia commonly identify their Medicaid Section 1115 demonstration as a policy lever to design new care models.

Nevada passed legislation designed to expand the number of PCMHs in the state by defining the PCMH model. The Nevada law emphasizes enhanced access to preventive care, allows incentives between insurers and PCMHs, and requires public linkages for improved patient education about the PCMH model.

In 2009, New Mexico passed an amendment to its Public Assistance Act that directed the superintendent of insurance to convene a task force to explore incentives for a medical home-based, managed care model. This amendment laid the groundwork for New Mexico's subsequent Section 1115 Medicaid demonstration and testing innovative payment and delivery models.

Puerto Rico will request U. S. congressional intervention to increase its Medicaid and Medicare statutory spending caps. This increase will allow Puerto Rico to change its Medicaid and Medicare funding formulas to increase its federal funding to be more consistent with higher funding levels provided to the states.

Maryland anticipates that, for Medicaid involvement in its D-ACO model, it may need a State Plan Amendment or waiver. No other state discussed building its ACO or EOC models based on ongoing federal or state legislative or policy initiatives.

In relation to the implementation of model components, Arizona telehealth expansion was achieved through a state law passed in 2016 that expands existing, private insurance coverage requirements for health care services, provided through telemedicine, to apply

anywhere in the state. Previously, Arizona state law required commercial health insurers to cover telemedicine services only in rural regions.

The Hawaii plan is supported by recent legislative changes requiring Medicaid MCOs to provide improved access to and reimbursement for telehealth, as broadly as allowable under federal law.

New Jersey eliminated regulatory restrictions that allowed the state to issue a "shared space waiver" to improve the ability of FQHCs to provide behavioral health services. The state is examining other regulations related to enhancing the provision of primary care services in behavioral health facilities. However, the implementation status of the new delivery model is unknown.

4.2 Integration with Community-Based Services and Public Health Strategies

Most states provide strategies for accessing community-based services and promoting public health. The initiatives are generally foundational and focus on developing stakeholder groups and data analytics to determine priority area and feasible options for implementing new programs. An exception in some cases is priority populations, such as individuals with behavioral health concerns, rural residents, and patients with multiple chronic conditions, who are the focus of state delivery system models to some extent. For many population health concerns, while goals have been established, implementation approaches have not. For example, California's goal is to leverage investments in its health care workforce in relation to training community-based and other lower cost workers to play an enhanced role in care delivery, and support ongoing placement efforts in underserved areas through scholarships, loan repayment and direct placement.

4.2.1 Priority areas and health status disparities

Individuals with behavioral health and substance use treatment needs that are concurrent with chronic physical health concerns serve as the priority area most commonly discussed in states' SHSIPs. States expressed concerns about current limitations to providing these individuals with services to promote more appropriate use of health care services and access to stabilizing psychosocial supports. In some cases, the rurality of the state results in an inadequate health workforce, so that telehealth, resource outreach teams, community health workers, and health care extenders are being considered to fill gaps.

Health care disparity groups identified across states include the American Indian population and the justice-involved population in Arizona; American Indians with behavioral health needs in Montana; racial and ethnic minorities in need of greater cultural competency in their healthcare encounters in American Samoa; rural, low-income elderly in Nevada and New

Mexico with chronic medical conditions and poor access to needed health care services; and the homeless population in District of Columbia.

4.2.2 Strategies for improving population health

In addition to proposals to improve access to health care through new health care financing and delivery models, population health strategies in the states include plans for integration and coordination with community resources, and a process for selecting and prioritizing local needs improvement projects. Strategies also include bringing together multiple stakeholders from different roles in health care delivery, academia, and the community.

A key component is access to public health data to help identify and address population health needs. Kentucky's Health Data Trust, an all-payer claims database, will include public health and personal health information that will allow the state to track the status of its population health goals. Kentucky is considering integrating school-based data into the database. Similarly, Nevada is proposing to develop additional data analytics capacity to promote population health. Pennsylvania will develop a dashboard to track progress towards meeting population health outcome goals. Utah proposes a clinical data project to develop an infrastructure that can serve both public health disease surveillance and health care system needs.

New Mexico's strategy involves developing local capacity and health care delivery models concurrently. The state will develop regionally based Accountable Communities of Health (ACHs) and aligned primary care and behavioral health PCMHs. The state's goal is for the PCMHs to evolve into community-centered health homes and ultimately come together with the ACHs on joint population health endeavors.

California also proposes to create ACHs. Initially, California is proposing two or three regional pilot ACHs to be models of how population health can be advanced through collaborative, multi-institutional efforts that promote a shared responsibility for the health of the community. Because the specific goals of each pilot will be determined locally, the focus of each and related core measures is not yet determined. However, the emphasis will be on chronic conditions that have demonstrated health disparities—such as diabetes, cardiovascular disease, asthma—or a specific population, such as children, who could benefit from community-based prevention, social services, and other supports and who are often unaware of these resources.

4.2.3 Strategies for addressing adult core measures

Across Round 2 Model Design states, SHSIPs presented goals for improving adult population health measures about tobacco use (17 states), obesity (17 states) and diabetes (18 states). See ***Table 4-7*** for details.

Table 4-7. States addressing adult core measures

State	Reducing tobacco use	Reducing obesity	Reducing diabetes	Other
American Samoa	✓	✓	✓	Evidence-based screenings
Arizona	✓	✓	✓	—
California	✓	✓	✓	Pilot ACHs to select one of the measures
District of Columbia	—	—	—	—
Hawaii	✓	✓	✓	—
Illinois	✓	✓	✓	Mental health, substance abuse
Kentucky	✓	✓	✓	Cancer deaths, deaths from drug overdose, cardiovascular disease
Maryland	✓	✓	—	Hypertension screening, falls, asthma and addiction-related ER visits, heart disease related mortality
Montana	✓	—	✓	Chronic disease self-management education
Nevada	✓	✓	✓	Cardiovascular disease
New Hampshire	✓	✓	✓	Heart disease, cancer screenings, substance abuse
New Jersey	✓	—	—	—
New Mexico	✓	✓	✓	—
Northern Mariana Islands	—	✓	✓	—
Oklahoma	✓	✓	✓	Hypertension
Pennsylvania	✓	✓	✓	Substance abuse
Puerto Rico	—	✓	✓	Cancer
Utah	✓	✓	✓	—
Virginia	✓	✓	—	Influenza vaccination, cancer screenings, disability-free life expectancy
West Virginia	✓	✓	✓	Hypertension, cancer
Wisconsin	—	—	✓	—

ACH = Accountable Community of Health; ER = emergency room

Note: ✓ means included in the State Health System Innovation Plan (SHSIP); — means not indicated in SHSIP. The District of Columbia does not discuss adult core measures in its SHSIP.

A common goal across states is to reduce or eliminate tobacco use. For example, Hawaii assists all adult tobacco users through a free tobacco telephone quitline. For people with mental illnesses, Hawaii also provides peer and professional adult and child mental health providers with training to become tobacco cessation treatment and referral resource specialists. In addition to existing initiatives, a new educational program is aimed at reducing smoking among pregnant

mothers. In Oklahoma, patient copays for tobacco treatment counseling were eliminated, and tobacco cessation medications approved by the U.S. Food and Drug Administration are made available at no cost. A New Jersey priority is a pilot program for smoking cessation among pregnant women enrolled in Medicaid MCOs. Being conducted as a randomized controlled trial, the program is comparing usual care with incentives for attending prenatal visits and verified abstinence. American Samoa is developing a tobacco cessation intervention intended to improve the cultural competence of providers. A strategy in West Virginia is to create regional and statewide networks to support clinician and provider education and training in proven tobacco cessation treatment.

To address obesity, states commonly proposed initiatives about exercise and nutrition. Oklahoma and Virginia strategies focus on promoting local planning to redesign communities to support more active life styles and greater access to nutritious and affordable foods. West Virginia proposes to increase the proportion of practices that have adopted evidence-based protocols for assessing, treating, and managing obesity and providing referral to behavioral health and community resources. New Mexico proposes community-based interventions for older residents, which blend clinical interventions, self-management programs, and community supports. Pennsylvania intends to integrate population health outcomes with value-based payment methodologies.

Four examples of state initiatives in states to promote diabetes prevention and reduction follow. To reduce the prevalence of diabetes, the strategy in Oklahoma is to increase provider awareness of prediabetes and diabetes prevention strategies through education on screening and greater use of electronic health records for clinical decision support. Wisconsin and the Northern Mariana Islands are focusing on reducing diabetes that is comorbid with hypertension. Utah proposes to explore the availability of data that can be used to calculate National Quality Forum diabetes measures and how they can be used for improved population health.

4.2.4 Strategies for addressing childhood core measures

Strategies for childhood population measures primarily focused on obesity (13 states) (***Table 4-8***). Strategies in Oklahoma to reduce childhood obesity include improved snack policies, physical activity breaks in school classrooms, and active afterschool programs. Hawaii has created a childhood obesity prevention task force to lead state efforts. West Virginia plans to increase the proportion of providers who can track children who meet physical activity goals, including a follow-up process to reset or affirm the goals and progress. The New Mexico SHSIP states that communities may choose to implement access to high-quality, affordable child care with nutritional foods. Nevada is planning for greater community awareness of the services offered through its Obesity Prevention and School Health Program, which will be promoted through implementation of the plan.

Table 4-8. States addressing childhood core measures

State	Reducing childhood obesity	Preventing early dental caries	Addressing maternal depression	Other
American Samoa	✓	—	—	—
Arizona	—	—	—	—
California	✓	—	—	Pediatric asthma
District of Columbia	—	—	—	—
Hawaii	✓	—	—	—
Illinois	✓	—	—	—
Kentucky	✓	✓	—	—
Maryland	✓	—	—	—
Montana	—	—	—	Age-appropriate immunization
Nevada	✓	✓	—	Prenatal care, well-child visits, immunizations
New Hampshire	✓	✓	—	Preterm birth, asthma, injury prevention, alcohol misuse
New Jersey	—	—	—	—
New Mexico	✓	—	✓	Early childhood development
Northern Mariana Islands	—	—	—	—
Oklahoma	✓	—	—	
Pennsylvania	✓	✓	—	—
Puerto Rico	—	—	—	Pediatric asthma; preterm birth, low birthweight
Utah	✓		✓	
Virginia	—	—	✓	Teen pregnancy, kindergarten success, racial disparity in infant mortality rates
West Virginia	✓	—	—	—
Wisconsin	—	—	—	—

ACH = Accountable Community of Health.

Note: ✓ means included in State Health System Innovation Plan (SHSIP); — means not indicated in SHSIP. Arizona, the District of Columbia, New Jersey, the Northern Mariana Islands, and Wisconsin did not discuss childhood core measures in their SHSIPs.

4.2.5 Public and private agency roles in state approaches

Broadly, payers support population health improvement plans through their value-based payment initiatives (PCMHs, health homes, and ACOs). States identify that implementation assistance will be required from providers and local community organizations. For children, providers and schools are key.

Several states are proposing to bring together stakeholders to advance their states' initiatives. In American Samoa, government agencies and health care providers (Lyndon Baines Johnson Tropical Medical Center, Department of Health, American Samoa Government, American Samoa Power Authority, and Department of Public Works) plan to form a committee to better understand infrastructure needs in the community and share data to improve population health. Kentucky will create a Community Innovation Forum to bring together leaders of local community health initiatives with payers, providers, and consumers to develop new delivery system and payment model demonstrations focused on population health, which can be integrated into existing health care environments.

Nevada is proposing a Population Health Improvement Council comprising state agency staff, public health experts, payers, providers, employers, consumers and advocates, and other stakeholders to reach consensus on outcome measure methodology, targeted improvements, and provider payment models. New Hampshire's Regional Health Initiatives will include public health networks, behavioral and social services, health care, citizens, and others to develop integrated, community-based approaches to promote population health. Oklahoma state agencies are collaborating with local county health departments to develop and implement evidence-based interventions to address obesity, diabetes, heart disease, and stroke. Based on these findings, the state will determine how best to incorporate local health department representation into RCO governance and community boards.

In Arizona, the state is intending to integrate the criminal justice infrastructure into its health care delivery model for justice-involved individuals. The Arizona health care administration will be located within county probation offices or Department of Corrections parole offices to assist with transition into the community and navigation of the health care system.

4.3 Conclusions

States commonly have begun the process of developing payment and delivery system models that promote linking 80 percent of payments to providers into value-based payment arrangements. As an initial effort, states propose to begin in the portion of the market where they can make changes, namely, Medicaid and state employee benefit plans. Across states, new PCMH and health home initiatives are most often proposed, as is greater coordination of physical and behavioral health, and improving service availability in rural areas. States include integration of community-based services and public health strategies, but these initiatives are often less fully described.

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5. Enabling Strategies

All states proposed strategies to enable the development or spread of delivery and payment system reforms and increase their effectiveness. These strategies generally aim to enhance the infrastructure that supports care delivery and the flow of information available to health care providers, payers, and consumers. The proposed strategies varied considerably across the states, but generally included activities in one or more of the following categories: health information technology (health IT) infrastructure and data aggregation and analytics, workforce development, and quality measure alignment.

5.1 Health Information Technology and Data Analytics

Building health IT and data analytic infrastructure capacity is key to providing the foundation needed for health care delivery system and payment reform proposed by Round 2 Model Design states' State Health System Innovation Plans (SHSIPs).

5.1.1 Health information technology

Enabling health IT strategies are well under way in most states as a result of the federal Health Information Technology for Economic and Clinical Health Act of 2009 (HITECH). Many state-led programs and initiatives either predate HITECH or were developed soon afterward to leverage HITECH investments. SHSIPs mentioned the Office of the National Coordinator of Health Information Technology (ONC) state health information exchange (HIE) and Regional Extension Center Cooperative Agreements, ONC HIE Challenge Grant Programs, and the ONC Community Interoperability and Health Information Exchange Program.

In addition, several Round 2 Model Design states (California, Hawaii, Oklahoma, Pennsylvania, and Utah) had prior ONC Beacon Community awards to advance the use of health IT. Consequently, all states had some mix of a pre-existing state health IT strategic plan, state health IT initiatives, or regional health IT projects at the start of the planning process.

Overview of planned health information technology activities

As shown in ***Table 5-1***, each state has a different set of strategies planned for implementation to meet their infrastructure needs. Enabling health IT strategies proposed by SHSIPs can be categorized as

- promoting further electronic health record (EHR) adoption or enhancing the use of EHRs by improving the completeness and accuracy of data entered and improving standardization;
- further developing statewide HIE capacity and functionality;
- developing telehealth development and expanding its use;

Table 5-1. Planned health information technology activities

State	Electronic Health Record adoption/use	Health Information Exchange	Telehealth	Consumer engagement through technology	All-payer claims database	Public health analytics
American Samoa	✓	✓	✓	—	—	—
Arizona	✓	✓	✓	✓	—	✓
California	✓	✓	✓	✓	—	✓
District of Columbia	—	✓	—	—	—	✓
Hawaii	✓	✓	✓	—	✓	—
Illinois	✓	✓	✓	—	—	—
Kentucky	—	✓	✓	✓	✓	✓
Maryland	✓	✓	✓	✓	✓	✓
Montana	—	✓	✓	—	—	✓
Nevada	✓	✓	✓	✓	✓	✓
New Hampshire	✓	✓	—	✓	✓	—
New Jersey	✓	✓	—	—	—	✓
New Mexico	✓	✓	✓	—	✓	✓
Northern Mariana Islands	✓	✓	✓	✓	✓	✓
Oklahoma	✓	✓	✓	✓	✓	✓
Pennsylvania	✓	✓	✓	✓	✓	✓
Puerto Rico	✓	✓	✓	✓	—	✓
Utah	—	✓	✓	—	✓	✓
Virginia	✓	✓	✓	✓	✓	✓
West Virginia	✓	✓	✓	✓	✓	—
Wisconsin	✓	✓	✓	✓	✓	✓

Note: ✓ means included in the State Health System Innovation Plan (SHSIP); — means not indicated in SHSIP.

- engaging consumers through technology;
- developing an all-payer claims database; and
- integrating public health data and analytics to achieve public health goals

SHSIPs identified a vision for how health care delivery would be supported by future health IT, but, although most states discussed the enabling health IT strategies required for plan implementation, few provided details or a timeline for implementation. Furthermore, discerning from SHSIPs between the health IT strategies that were attributable to the SIM planning process and what may have already been in progress was sometimes difficult.

Electronic health records

The ability to electronically share individual clinical information among multiple providers through EHRs serves as a fundamental component of coordinated care envisioned under most models of health care delivery and value-based payment. As of October 2015, Round 2 Model Design states varied with respect to the percentage of professionals (physicians, nurses, and physician assistants) and hospitals within the state receiving payments under the Medicare or Medicaid EHR Incentive Programs (see ***Table 5-2***).

Compared to professionals, hospitals in all states are much further along with EHR adoption. Among the 19 state awardees included in this report that are eligible to receive payment under the Medicare and Medicaid electronic health record incentive programs, the average participation rate by professionals was 56 percent, slightly lower than the national average of 57 percent. Wisconsin, with an 80 percent participation rate by professionals, is significantly higher than other Round 2 Model Design states, which had participation rates ranging from 41 percent in Nevada to 64 percent in Illinois and New Hampshire.

Hospital participation rates among the 19 Round 2 Model Design states that are eligible to receive payment under the Medicare and Medicaid EHR incentive programs, ranged from 76 percent in Hawaii to 100 percent in the District of Columbia, Illinois, and Utah. The average participation rate by hospitals in Round 2 Model Design states was 94 percent, slightly lower than the national average of 95 percent.

Seventeen Round 2 Model Design states have strategies to expand the adoption and use of EHRs, as shown in ***Table 5-1***. Arizona, Hawaii, New Jersey, and Wisconsin proposed to focus EHR adoption efforts on small, independent, and rural practices, which make up most practices that have yet to adopt EHRs. Nevada, New Hampshire, New Mexico, and West Virginia also have proposed efforts to enhance the functionality of EHRs. Common state strategies to increase EHR adoption—and the selection and implementation of robust EHR systems that would meet requirements for meaningful use (MU) and interoperability—include technical assistance, grants and the promotion of state and federal incentive programs, and improved broad-band connectivity.

Nine states (California, Maryland, Nevada, New Hampshire, New Jersey, New Mexico, the Northern Mariana Islands, West Virginia, and Wisconsin) discussed providing technical assistance in their efforts to enhance EHR adoption. New Jersey will develop a learning network to provide technical assistance, which includes support for the implementation of EHRs toward the goal of achieving MU, with a special emphasis on primary care providers in underserved areas. Technical assistance in Wisconsin will focus on behavioral health and long-term care providers who are not eligible for EHR incentive payments and may not need all the certified EHR technical functionality associated with MU. These providers still should adopt and use

Table 5-2. Model Design state professionals and nonfederal acute care hospitals paid under Medicare or Medicaid electronic health record incentive programs, as of 2015

State	Percentage of professionals	Percentage of hospitals
American Samoa [a]	—	—
Arizona	51%	96%
California	59%	89%
District of Columbia	60%	100%
Hawaii	56%	76%
Illinois	64%	100%
Kentucky	54%	90%
Maryland	53%	96%
Montana	46%	95%
Nevada	41%	91%
New Hampshire	64%	88%
New Mexico	56%	93%
Northern Mariana Islands	—	—
New Jersey	47%	95%
Oklahoma	60%	92%
Pennsylvania	60%	95%
Puerto Rico	—	—
Utah	56%	100%
Virginia	54%	95%
West Virginia	51%	94%
Wisconsin	80%	98%
Model Design State Average	**56%**	**94%**
National Average	**57%**	**95%**

Source: U.S. Department of Health and Human Services[9]

[a] U.S. Territories (except for Puerto Rico, beginning in 2016) are not eligible to participate in the Medicare EHR Incentive Program, but are eligible to participate in the Medicaid EHR Incentive Program.[10] As of 2015, nine providers in American Samoa registered for and one was paid under the Medicaid EHR incentive program; 32 providers in the Northern Mariana Islands registered for and 18 were paid under the Medicaid EHR incentive program.

Note: — means not identified in U.S Department of Health and Human Services data.

Note: Professionals include physicians, nurse practitioners, and physician assistants. Hospitals are nonfederal, acute care facilities.

[9] U.S. Department of Health and Human Services, Office of the National Coordinator for Health Information Technology. (2015, December). *Office-based health care professional participation in the CMS EHR incentive programs*. Health IT Quick-Stat #44, Retrieved from https://dashboard.healthit.gov/quickstats/pages/FIG-Health-Care-Professionals-EHR-Incentive-Programs.php.

[10] U.S. Department of Health and Human Services, Centers for Medicare & Medicaid Services. (2016a). Can hospitals in the U.S. Territories (Puerto Rico, Guam, Virgin Islands, Northern Mariana Islands, and American Samoa) qualify for the Medicare and Medicaid Electronic Health Record (EHR) Incentive Program? CMS FAQ2717. Retrieved from https://questions.cms.gov/faq.php?id=5005&faqId=2717.

EHRs for care coordination and quality measurement and improvement. The initial focus is on 252 behavioral health practices with 3 or more providers and 301 skilled nursing facilities, which would cover approximately 50 percent of Wisconsin's active Medicaid-enrolled behavioral health providers and 75 percent of active Medicaid-enrolled long-term care provider organizations.

Eight states (American Samoa, Arizona, Hawaii, Illinois, Maryland, Pennsylvania, Virginia, and Wisconsin) will target other types of providers for EHR adoption, including behavioral health providers, mobile care teams, long-term care providers, skilled nursing facilities, and community health workers. Pennsylvania will incentivize nursing facility and home health providers to use EHRs. Arizona, Illinois, Virginia, and Wisconsin emphasized efforts aimed at increasing EHR uptake by behavioral health providers as a means of improving the integration and coordination of behavioral health with primary care, fostering efficient clinical practice, and reducing administrative duplication.

Several states with large rural areas and territories are trying to address connectivity, a significant issue in increasing EHR adoption. Hawaii, for example, which notes high EHR adoption within large health systems on Oahu, will support adoption efforts on the outer islands and in rural areas through the Medicaid and Medicare EHR Incentive Programs—by providing technical assistance and improving broad-band infrastructure and high-speed internet connectivity—and through practice supports to increase effective use, reduce costs, and ensure interoperability. The Northern Mariana Islands are still recovering from two disasters in 2015 that disrupted telecommunication services: a break in the Commonwealth's only fiber optic network, which disconnected them from all off-island communication, and Typhoon Soudelor, which caused damage to many major telecommunication networks. Although some providers on the Northern Mariana Islands could implement an Indian Health Services (IHS) Resource and Patient Management System EHR, their systems are not operational, because poor telecommunication connectivity from their islands to Saipan results in long system delays. To ensure that providers have the necessary connectivity, the Northern Mariana Islands have made improving the telecommunication infrastructure a priority. This infrastructure is needed to expand the use of EHRs and technical assistance to providers to improve EHR functionality.

Health information exchange

In addition to EHR adoption, a health IT infrastructure must be in place to facilitate the exchange of information among providers, pharmacies, laboratories, and hospitals. Even with a broad availability of HIE capabilities, increased coordination of care across the full continuum of health delivery and payment models cannot occur unless providers, pharmacies, laboratories, and hospitals connect their information systems to an HIE.

Table 5-3 shows the percentage of hospitals able to share laboratory results electronically with providers outside their system, an important functionality for HIE and a critical component of the care coordination required for transformation to value-based delivery and payment models. Twelve of the 18 Round 2 Model Design states that reported were below the national average of 76 percent in late 2015 (Arizona, California, Hawaii, Illinois, Maryland, Montana, New Hampshire, New Mexico, New Jersey, Oklahoma, Utah, and West Virginia).

Table 5-3. Model Design states hospitals sharing laboratory results electronically with providers outside their systems, as of 2015

State	Percentage
American Samoa	—
Arizona	58%
California	71%
District of Columbia	82%
Hawaii	71%
Illinois	75%
Kentucky	85%
Maryland	74%
Montana	57%
Nevada	81%
New Hampshire	68%
New Mexico	39%
Northern Mariana Islands	—
New Jersey	68%
Oklahoma	69%
Pennsylvania	83%
Puerto Rico	—
Utah	70%
Virginia	94%
West Virginia	72%
Wisconsin	80%
Model Design State Average	**72%**
National Average	**76%**

Source: U.S. Department of Health and Human Services.[11]

Note: — means not identified in U.S Department of Health and Human Services data. Prior to SIM Round 2 Model Design awards, states varied in their state exchange capabilities, with 12 states having directed and query-based exchange capabilities, as shown in ***Table 5-4***.

[11] U.S. Department of Health and Human Services, Office of the National Coordinator for Health Information Technology. (2016b, September). *Non-federal acute care hospital health it adoption and use*. Health IT Dashboard. Retrieved from https://dashboard.healthit.gov/dashboards/hospital-health-it-adoption.php.

Table 5-4. State exchange capabilities, as of 2013

State	Directed, broadly available	Directed, pilot or regions	Query-based, broadly available	Query-based, pilot or regions
American Samoa	—	—	—	—
Arizona	✓	—	—	—
California	—	✓	—	✓
District of Columbia	✓	—	✓	—
Hawaii	✓	—	—	—
Illinois	✓	—	—	—
Kentucky	—	—	✓	—
Maryland	✓	—	✓	—
Montana	✓	—	✓	—
Nevada	✓	—	—	—
New Hampshire	✓	—	—	—
New Jersey	✓	—	—	✓
New Mexico	—	✓	✓	—
Northern Mariana Islands	✓	—	—	—
Oklahoma	✓	—	✓	—
Pennsylvania	✓	—	—	✓
Puerto Rico	—	—	—	—
Utah	✓	—	✓	—
Virginia	✓	—	✓	—
West Virginia	✓	—	✓	—
Wisconsin	✓	—	✓	—

Source: U.S. Department of Health and Human Services[12] and State Health System Innovation Plans (SHSIP)
Note: ✓ means identified in data source; — means not identified in data source or SHSIP

[12] U.S. Department of Health and Human Services, Office of the Secretary, Office of the National Coordinator for Health Information Technology. (2013). State HIE implementation status. Retrieved from https://www.healthit.gov/policy-researchers-implementers/state-hie-implementation-status.

Strategies to improve health information exchange infrastructure and connectivity. All Round 2 Model Design states proposed strategies to improve HIE infrastructure and connectivity. States often envisioned multiple phases that included short- and long-term strategies as part of a roadmap to identify, implement, and refine a SIM health IT plan to support health care delivery and payment transformation efforts. Mapping the current flow of information and assessing gaps within states are important components to data roadmaps used by some states in developing their strategies for HIE expansion.

The District of Columbia, for example, is developing a comprehensive data map that details the flow of information among and between health IT users in the District's landscape. Results will be used to identify and craft solutions to address points of access to HIE that are absent or underdeveloped. This comprehensive data map will be used to capture existing District HIEs, which include smaller-scale HIE pathways that cluster data between and among circles of providers and systems. The data map also will illustrate the storage centers and data flows of each HIE system and the degree of connectivity among them. This data infrastructure documentation will identify gaps in data access and transmission. Then the current infrastructure will be updated to remedy gaps, designate new HIE entities, and/or new HIE initiatives, increase the centralized data warehouse capabilities and create a patient care profile that includes aggregated clinical, pharmacy, and social service data in a single document to support improved coordination. This will provide a more robust HIE connectivity, electronic clinical quality measurement, specialized registries, and population health monitoring.

Puerto Rico also has plans to develop a unified Puerto Rico HIE roadmap that would (1) analyze and address the role and structure of the HIE state designated entity; (2) harmonize and, as needed, revise the scope of health IT projects being managed out of various government agencies to ensure they are supportive of the care and value-based payment methods proposed in the SHSIP; (3) bolster public health registry capabilities; (4) optimize the use of available funding streams; and (5) become financially self-sustaining.

Utah also used SIM funding to conduct a Utah Department of Health interoperability and analytic needs assessment of 23 public health information systems aligned to ongoing projects, informant interviews, and National Information Exchange Model Readiness Assessment. SIM funding was used to align Utah projects with the federal health IT roadmap.

Proposed strategies to encourage provider connection to a health information exchange. Potential strategies for expanding HIE use are similar to strategies proposed for EHR adoption—technical assistance and incentives. Wisconsin is establishing technical assistance resources to achieve the optimal adoption and efficient use of shared technology services (e.g., HIE), with Federally Qualified Health Centers (FQHCs), rural health centers, tribal health centers, small hospitals, and home health organizations identified as priorities for receiving technical assistance. Kentucky will provide onsite technical assistance through its Community

Innovation Consortium Initiative, targeting small and rural hospitals and providers in underserved areas. Pennsylvania will rely on managed care organizations (MCOs) or other service delivery models to provide technical assistance to their providers. New Hampshire plans to implement an HIE incentive grant program that would provide the first year of HIE membership without charge to allow nonparticipating providers a chance to experience the value of HIE without taking on the initial resource burden.

Nevada also is working to increase provider connection. As cited in their SHSIP, all FQHCs and major, urban, acute care hospitals, about half of the critical access hospitals and rural hospitals, laboratories, and testing facilities are connected to HealtHIE Nevada, but only an estimated 18 percent of physician offices are connected. To expand its use among physician offices, Nevada plans to use enhanced federal funding available through the Medicare and Medicaid EHR incentive programs to connect Medicaid providers.

States with less advanced health information exchange infrastructure to promote provider use of directed exchange. Point-to-point transmission of secure health information electronically between care providers requires a lower infrastructure investment, as compared to query-based exchange. For example, the Commonwealth of Northern Mariana Islands HIE will focus on expanding utilization of direct secure messaging (DSM) to ensure healthcare providers can access and update patient information. The second priority for the territory's HIE includes the secure exchange of EHRs with interfaces in a single clinical data repository and interfaces to public health data systems. To ensure that all providers implement DSM, the Commonwealth intends to mandate that all Medicaid providers use DSM for transmissions and inquiries involving public health information.

In states with more advanced HIEs, states proposed (1) the expansion of HIE to include additional types of data (e.g., public health data, outpatient clinical data, claims data); (2) additional types of providers (e.g., long-term care, behavioral health, public health); (3) statewide HIE connections; and (4) enhancements for bidirectional exchange.

Three states (Maryland, New Mexico, and Pennsylvania) include additional types of data. In Pennsylvania, public health reporting does not occur through the HIE. Several state agencies share responsibility for providing various public health programs. Each agency independently collects, stores, and analyzes health-related data, but the ability to communicate with health care providers and to each other is limited. However, through Pennsylvania's planned Public Health Gateway, a direct link between hospital EHRs and state agencies, including the department of health, will allow a secure interface for the submission of public health data, such as immunizations, syndromic surveillance, and laboratory test results. Pennsylvania has a prescription drug monitoring program, housed in the Office of the Attorney General, that collects Schedule II drug information and primarily has been used for law enforcement purposes. The department of health is developing a new prescription drug

monitoring program that will expand the schedules of drugs that are tracked and provide qualified prescribers and dispensers access to their patients' prescription medication history through a secure electronic system, allowing medical professionals to make informed treatment and referral decisions.

New Mexico has plans to include additional types of data by consolidating department of health data and developing a data exchange with Medicaid. The result will be a comprehensive system that standardizes input or output methodologies, identifies all data held by the department of health, merges that data into a cohesive dataset, and then unites data exchanges with Medicaid and other state agencies. The all-payer claims database (APCD) will be connected to the system.

Maryland's health IT system, the Chesapeake Regional Information System for our Patients (CRISP), is working to include data from skilled nursing facilities (SNFs). The long-term plan is to include data on encounters, laboratory results, medications, pressure ulcers, infections, and discharge summaries that would be available to connected providers and hospitals through the CRISP Integrated Care Network (ICN).

Arizona, Hawaii, and Maryland to expand health information exchange with other types of providers. Arizona seeks to expand care integration and decrease system fragmentation through enhanced care coordination and expanded use of HIE for American Indian providers. The Arizona Health Care Cost Containment System (AHCCCS) worked with Indian health organizations on care coordination and connectivity challenges and opportunities and held discussions at the national level with IHS Office of Information Technology leadership. Consequently, an architecture was identified for secure data-sharing between the Arizona HIE and Indian health organizations in Arizona using the IHS EHR and the national IHS HIE.

Hawaii is seeking to include behavioral health providers. The state will leverage its relationship with the Hawaii HIE to encourage use of and connection to Health eNet (direct messaging) and enhance behavioral health capabilities, including adding behavioral health datasets. To ensure proper and secure use, the HIE will develop and monitor Health eNet data sharing policies and train onboard providers to use the service, increasing HIE usage for behavioral health providers.

Maryland is working to expand care integration through a strategy to connect all 230 SNFs in the state to CRISP. To encourage SNFs connection, the state is proposing a SNF Data Exchange Program that will help SNFs offset the costs of initially connecting to CRISP. Payments under the program will be tied to achieving set milestones. The first milestone is tied to signing the CRISP participation agreement and an interfacing agreement with their health IT developer. The second milestone is tied to going live with clinical data feeds. Under the proposed program, providers will be required to continue sending data for a minimum time

period or face a potential financial penalty. Funding for the program will be supported through Medicaid HITECH 90/10 funds.

Eleven Round 2 Model Design states to expand health information exchange connectivity statewide. Arizona, Hawaii, Kentucky, Nevada, New Hampshire, Oklahoma, Pennsylvania, Puerto Rico, Virginia, West Virginia, and Wisconsin plan to expand HIE connectivity statewide. Oklahoma, for example, has two nonprofit HIEs that cover a large geographic area; however, neither operate statewide, so their data systems are not operable. Oklahoma has proposed a conceptual framework to incorporate the existing HIEs and develop a new state-agency interoperability system that would be statewide and leverage existing resources. Public health data would be exchanged with the nonprofit HIEs, and county health departments could exchange electronic data with private providers. Each HIE would exchange data through the health information network using a Master Patient and Provider Index. Clinical data would be matched with Medicaid claims data and other patient-centric data through the health information network Master Patient and Provider Index to enable linking of needed information in support of the value-based payment model.

Maryland, New Hampshire, and Virginia to incorporate enhancements for bidirectional data exchange and interoperability. Maryland's ICN, which is part of CRISP, is being developed through cooperation and collaboration by payers and providers. ICN provides an overarching set of shared health IT infrastructure to support interoperability and care management initiatives in support of achieving the Triple Aim and the goals of Maryland's All-Payer Model. The ICN infrastructure will connect providers in multiple settings—from hospitals and physician practices to long-term care facilities—with the necessary information to improve health outcomes and reduce costs by providing tools, data, and services to support care coordination. As the state's designated HIE, CRISP has connectivity with 69 hospitals, including all 47 of Maryland's acute care hospitals. In addition to hospital data, the HIE also contains laboratory data from 30 of the 47 hospital-based laboratories and Maryland's two main private laboratories. CRISP contains radiology imaging data and has master patient index capability, maintaining unique identifiers within their master patient index for more than 10.5 million patients. The master patient index links individual patients across multiple providers and health systems, facilitating the coordination of care. Maryland providers can utilize the online portal to obtain discharge summaries, consultation and operative notes, laboratory results, transfer summaries, histories, and other information.

New Hampshire plans to incorporate enhancements for bidirectional data exchange by connecting providers to a larger health neighborhood, which currently does not exist. New Hampshire will develop an e-Referral system to create a connection between health care and community-based organizations through a bidirectional feedback loop. The e-Referral program electronically connects providers to community-based organizations; the community-based

organization follows up with the patient to provide services; and, finally, the community-based organization sends feedback to the provider on outreach efforts with the patient and reports on utilization of services.

Virginia plans to establish interoperability among disparate health IT systems by expanding the existing HIE, ConnectVirginia, to include data from the Medicaid Management Information System, Medicare, and commercial payers; integrating Virginia's existing APCD with ConnectVirginia to merge clinical information into the APCD; increasing sharing of EHRs; and establishing a governance model built by a public-private partnership to coordinate health IT initiatives.

Telehealth

Telehealth is an important component in the advancement of improved, patient access to care delivery that supports and enables advancements to help transform health delivery. Eighteen of the Round 2 Model Design states (American Samoa, Arizona, California, Hawaii, Illinois, Kentucky, Maryland, Montana, Nevada, New Mexico, the Northern Mariana Islands, Oklahoma, Pennsylvania, Puerto Rico, Utah, Virginia, West Virginia, and Wisconsin) proposed an expansion of telehealth.

Some states are working to expand broadband access to make telehealth a viable option for care and referral. American Samoa, for example, recently doubled its internet bandwidth through a fiber-optic network project, trying to make fast internet widely available. Ultimately, American Samoa would like to develop a telehealth option to make off-island specialists available to cases that need to be evaluated for additional care.

Other states, such as Utah that already had an existing telehealth network, planned to increase bandwidth and expand services to additional rural safety net providers, small practices, and unaffiliated providers. Utah planned to deploy a new statewide video conferencing platform in October 2016, which will be easy to use, secure, workable on mobile devices, and interoperable with existing legacy telehealth equipment.

Connecting primary care providers and patients in rural and frontier areas with specialists through telehealth also is being planned or expanded upon by eight states (Hawaii, Kentucky, Nevada, Montana, New Mexico, Oklahoma, Virginia, and Utah). Hawaii and Kentucky are considering tele-dentistry. Kentucky is considering its use with accountable care organizations (ACOs), while Hawaii has plans to expand school-based preventive dental programs through a combination of traditional dentistry, telehealth, and dental hygiene. Oklahoma will incorporate "provider to provider" strategies to connect rural primary care practices with academic medical centers and specialists to provide consult services through video and teleconferencing. Oklahoma will use telehealth to deliver distance learning, grand rounds, and other educational content to residency training sites.

SHSIPs for Hawaii, Illinois, New Mexico, Montana, Utah, and Virginia envision utilizing telehealth to advance the integration of behavioral health and primary care. Montana has proposed a pilot that would use the Extension for Community Healthcare Outcomes project (Project ECHO) to provide psychiatric expertise and consult to remote collaborative care teams. Utah also would provide virtual behavioral health consultations with psychiatrists to primary care physicians in both rural and urban settings. New Mexico has a pilot project planned with the Department of Health Public Health Offices in frontier areas lacking behavioral health providers. The Public Health Office will provide a secure area, schedule the appointments, and supply basic equipment usage training to the patient, allowing them to use telemedicine for a percentage of their counseling sessions.

Four states (Hawaii, Virginia, Wisconsin, and West Virginia), are planning to use telehealth for remote patient monitoring. Wisconsin plans to use telehealth by hospitals for remote patient monitoring at home, while Hawaii encourages MCOs to support technology-enabled home health monitoring. Virginia's SHSIP discusses implementing a pilot for remote patient monitoring of high-risk obstetric and chronic disease patients. West Virginia will enhance the use of telehealth by combining remote care coordination and health monitoring technology in coordinating transitions from inpatient hospital settings to long-term care facilities and other health care settings.

Consumer engagement through technology

Twelve states (Arizona, California, Kentucky, Maryland, Nevada, New Hampshire, the Northern Mariana Islands, Pennsylvania, Puerto Rico, Oklahoma, West Virginia, and Wisconsin) proposed to increase consumer empowerment and engagement in their own care through enhanced access to their personal health information, typically through personal health record portals. Kentucky plans to develop a "Citizen Portal," as part of a larger, ongoing quality health information framework, to provide consumers with a vehicle to view personal health records through the Kentucky HIE. Nevada will deploy a patient portal that will include educational information about disease states, prevention, wellness, and general health topics, along with a portable health record that will permit the patient access to centralized information that follows the patient, rather than the payer. Nevada also will develop a single-access patient portal to simplify patient access to personal health information across providers.

Several states have proposed developing tools to assist patients with health care decision making. West Virginia, for example, will develop a uniform, online provider "scorecard" of quality and cost information, based on medical claims data. The scorecard would be available to health care consumers, as well as payers and providers, to help consumers make informed health care choices based on provider quality and outcomes. California is working to create an online physician ranking platform to connect consumers to patient rating sites with surveys of patient experience to help people in choosing physicians and medical groups.

Legislative and regulatory policy levers

As mentioned in ***Section 4.1.6***, telehealth expansion in Arizona and Hawaii was supported by state legislative action. In Arizona, private insurance coverage requirements for telemedicine will require commercial health insurers coverage for services anywhere in the state. The Hawaii legislation requires Medicaid MCOs to provide reimbursement for telemedicine services. Nevada also passed telehealth legislation in 2015 that defines telehealth services and requires coverage of services to the same extent as services provided in person, with coverage required by commercial insurers and Medicaid.

Wisconsin and West Virginia use contractual requirements that include language with MCOs regarding the adoption and use of shared technology services by Medicaid providers in their networks to support coordinated care for members. West Virginia plans to use the Advanced Primary Care Arrangements to drive interoperability by specifying the health IT interoperability requirements of providers participating in related programs.

5.1.2 Data analytics

Quality and cost analysis and reporting

The feasibility of implementing some of the proposed value-based payment and delivery models relies on the state, providers, and payers making investments in data analytic capabilities. Maryland, New Hampshire, Oklahoma, Utah, Virginia, and Wisconsin have existing multi-payer analytic capability by having an operational APCD, as shown in ***Table 5-5***.

States with an existing APCD proposed enhancements in their SHSIPs to improve accessibility and support linking clinical and payment data, and performance assessment at provider and populations levels, to support value-based payments. New Hampshire's APCD, Comprehensive Health Care Information System (CHIS), has data related to health and utilization of health care services across the state, but in its current format, the data are difficult to access. Many community agencies and providers do not have the resources for comprehensive data analytics of the CHIS data. Through the transformation center, a new, accessible data reporting platform would be established that uses CHIS data as its foundation and builds on it by incorporating additional public datasets, such as transportation and criminal justice data.

Table 5-5. Status of all-payer claims databases in Model Design states

Model Design state	APCD operational	APCD in planning or implementation	Strong interest	No current activity
American Samoa	—	—	—	✓
Arizona	—	—	✓	—
California	—	—	—	✓
District of Columbia	—	—	—	✓
Hawaii	—	✓	—	—
Illinois	—	—	✓	—
Kentucky	—	✓	—	—
Maryland	✓	—	—	—
Montana	—	✓	—	—
Nevada	—	✓	—	—
New Hampshire	✓	—	—	—
New Mexico	—	✓	—	—
Northern Mariana Islands	—	—	—	✓
New Jersey	—	—	✓	—
Oklahoma	✓	—	—	—
Puerto Rico	—	—	—	✓
Pennsylvania	—	✓	—	—
Utah	✓	—	—	—
Virginia	✓	—	—	—
West Virginia		✓	—	—
Wisconsin	✓	—	—	—

Source: APCD Council[13] and State Health System Innovation Plans (SHSIPs).

Note: APCD = all-payer claims database.

Note: ✓ means included in APCD Council data or SHSIP; — means not indicated in APCD Council data or SHSIP.

[13] University of New Hampshire, All-Payer Claims Database (APCD) Council. (2017). Interactive state report map. Retrieved from http://www.apcdcouncil.org/state/map.

5.2 Workforce Development

Health care delivery system transformation relies on a health care workforce that includes an adequate supply and occupational mix of health care workers. Delivery system transformation also requires workers with the appropriate skills and knowledge to take on new roles or to work effectively as part of a team.

5.2.1 Overview of health care workforce activities

SIM Round 2 Model Design states proposed five categories of health care workforce strategies to facilitate health care innovation and transformation:

- Health care workforce data collection
- Health care education and training
- Facilitating workers' practice at the top of their capabilities
- Recruitment and retention of health care workers
- Other health care workforce redesign activities

Each type of activity can enable the provision of more efficient, higher quality care. Health care workforce data collection allows states to obtain a more accurate picture of health care workforce supply by profession, often at the state and substate levels. These data provide insights that can inform policies that affect health care access and health care workforce supply. Health care workforce and training activities help ensure that students in the health professionals and individuals who are already part of the health workforce have the skills and knowledge to address pressing health care needs—such as behavioral health—or to function effectively within new models of care. Workers practicing at the top of their capabilities means that work is appropriately delegated within a health care setting, freeing up professionals with more education and training to focus on more complex work. This delegation of work—to mid-level providers, such as nurses, or paraprofessionals, such as community health workers—is essential to the functioning of team-based health care delivery models. Recruitment and retention activities can help reduce health workforce shortages and, in turn, can improve access to care for medically underserved populations.

As ***Table 5-6*** shows, all Round 2 Model Design states have proposed some health care workforce activities. Five states (Kentucky, New Mexico, Oklahoma, Pennsylvania, and Puerto Rico) have indicated that they will carry out all key types of health workforce development initiatives: health care workforce data collection, health care education and training, facilitating workers' practice at the top of their capabilities, and recruitment and retention of health care workers.

Table 5-6. Planned workforce development activities

Model Design state	Improve ability to collect data on health care workforce supply	Health care workforce education and training	Facilitate workers' practice at the top of their capabilities	Recruit and retain health care workers	Other
American Samoa	—	—	✓	✓	—
Arizona	—	✓	—	✓	✓
California	—	✓	✓	✓	—
District of Columbia	—	✓	—	—	—
Hawaii	—	✓	✓	—	—
Illinois	—	✓	✓	✓	—
Kentucky	✓	✓	✓	✓	—
Maryland	—	✓	✓	✓	—
Montana	—	✓	✓	—	—
Nevada	—	—	✓	✓	✓
New Hampshire	—	✓	✓	—	—
New Jersey	—	✓	—	—	—
New Mexico	✓	✓	✓	✓	—
Northern Mariana Islands	—	✓	—	—	—
Oklahoma	✓	✓	✓	✓	✓
Pennsylvania	✓	✓	✓	✓	—
Puerto Rico	✓	✓	✓	✓	—
Utah	—	✓	—	✓	—
Virginia	—	✓	—	✓	—
West Virginia	—	✓	✓	✓	✓
Wisconsin	—	✓	—	—	—

Note: ✓ means included in a State Health System Innovation Plan (SHSIP); — means not identified in SHSIP.

Across all types of proposed state health workforce strategies, two cross-cutting themes emerged. First, Model Design Round 2 states showed a strong interest in using health workforce strategies to strengthen behavioral health. In fact, 14 states (Arizona, Hawaii, Illinois, Kentucky, Montana, Nevada, New Hampshire, New Jersey, New Mexico, Pennsylvania, Utah, Virginia, West Virginia, and Wisconsin) proposed conducting workforce activities related to the behavioral health workforce. Second, states indicated a central role for community health workers and other nonphysician health care workers in health care transformation. Ten states (California, Hawaii, Illinois, Maryland, Nevada, New Mexico, Montana, Oklahoma, Pennsylvania, and West Virginia) proposed implementing activities related to community health

workers; other states recommended policies that involve other mid-level providers, such as physician assistants, nurses or paramedics.

5.2.2 Health care workforce data collection

Five states (Kentucky, New Mexico, Oklahoma, Pennsylvania, and Puerto Rico) plan to improve their health care workforce data collection capabilities. Round 2 Model Design states will use health care workforce data collection activities to better inform health care policy and planning. For example, Oklahoma's SHSIP indicates that the state will use health care workforce data to describe and mitigate health care workforce shortages at the substate level. Similarly, Pennsylvania's SHSIP notes that the state will use its health workforce data to inform state policies for recruiting and retaining clinicians. Puerto Rico's health care workforce data collection activities are formative, with plans to implement technological modifications that will provide routine workforce reporting to the licensure board, followed by convening a stakeholder work group to develop a data analysis plan to provide a comprehensive understanding of workforce capacity and need and inform decision making.

States that plan to undertake health care worker data collection activities aim to collect higher quality, more actionable data. For instance, Kentucky will collect "core data fields" needed to conduct meaningful data analysis. Pennsylvania will develop health care workforce data collection activities that conform to federal standards and will standardize data collection across different professions. Oklahoma used the SIM Model Design process to review its health workforce data collection activities, with the goal of improving the quality and availability of state data.

In New Mexico, Oklahoma, and Pennsylvania, state agencies—such as Oklahoma's Office of Primary Care and Rural Health Development—will direct this work. In Kentucky, the multi-stakeholder SIM Governing Body, which includes representatives from government agencies, will oversee the state's workforce data collection activities. Puerto Rico currently collects this data through its Department of Health, but plans to establish a single, accountable body, responsible for health workforce development, that would report to the Secretary of Health.

Four of the five SHSIPs (Kentucky, New Mexico, Oklahoma, and Puerto Rico) do not specify which health occupations will be tracked as part of data collection activities. However, health care workforce data collection typically has a statewide geographic reach and covers a range of health care occupations. For instance, Pennsylvania's SHSIP indicates that the state already collects data on physicians, nurses, physician assistants, dentists, and dental hygienists.

5.2.3 Health care workforce education and training

Nineteen states (Arizona, California, the District of Columbia, Hawaii, Illinois, Kentucky, Maryland, Montana, New Hampshire, New Jersey, New Mexico, the Northern Mariana Islands, Oklahoma, Pennsylvania, Puerto Rico, Utah, Virginia, West Virginia, and Wisconsin) proposed health care workforce education and training efforts—the most common health workforce development activity included in the SHSIPs. Training also was the most common workforce activity among SIM Round 1 Model Design states. Health care workforce education and training encompasses reforming health care education—especially for future health care professionals—and providing training for individuals already in the health care workforce. The goal of health workforce training and education is to develop a health care workforce with the appropriate skills and knowledge to provide high quality, efficient care in a transformed health care delivery system.

Training for workers already in the health care workforce

Fourteen states (California, the District of Columbia, Hawaii, Illinois, Maryland, Montana, New Hampshire, New Jersey, New Mexico, the Northern Mariana Islands, Oklahoma, Utah, West Virginia, and Wisconsin) proposed health worker training on four topics: behavioral health, adoption and use of health IT, new models of health care delivery, and end-of-life care.

Hawaii, Illinois, Montana, and Utah plan to train health care professionals on behavioral health. Hawaii, Illinois, and Utah will deploy training to improve the capacity of primary care providers to treat behavioral health issues and support the integration of behavioral health and primary care. For example, Hawaii will consider training primary care and women's health providers about integrating behavioral health care into primary care practice. Hawaii will work with a third-party vendor to provide this training in person and online to physicians and nonphysician primary care providers. Illinois is considering developing a program that engages primary care and family practice providers who give early behavioral health identification and intervention care in training other healthcare providers.

Montana, and Utah propose behavioral health trainings targeted to behavioral health professionals. A Montana private nonprofit organization, Western Montana Addiction Services, will provide training to behavioral health and social services professionals on caring for adolescents who have substance abuse disorders and behavioral health conditions. To help address the lack of diversity within Utah's behavioral health workforce, Utah's SHSIP recommends training to improve the cultural competency of behavioral health providers.

California, the District of Columbia, New Hampshire, New Mexico, the Northern Mariana Islands, Utah, West Virginia, and Wisconsin will provide health IT training to health care providers. Some SHSIPs provide information about the topics to be covered by health IT training. California, New Hampshire, and the Northern Mariana Islands will provide training on

EHR adoption and use. The District of Columbia will develop training to help providers use health IT to improve health care quality and reduce providers' administrative burden. Utah proposes to train behavioral health providers regarding federal rules on confidentiality in substance abuse treatment and the impact of these confidentiality rules on HIE. The SHSIPs do not specify the health care occupations that will be targeted for health IT training, although New Mexico states that the providers receiving health IT trainings will be those organizations receiving technical assistance from a new patient-centered medical home (PCMH) technical assistance center.

California, the District of Columbia, Maryland, New Hampshire, New Jersey, and Oklahoma will undertake efforts to build provider capacity to engage in practice transformation. New Hampshire plans to collaborate with Area Health Education Centers—federally funded organizations that educate, recruit, and retain providers—to deliver trainings on team-based care. California will work to transform care fragmentation to a more holistic system by training multiprofessional teams to deepen language and cultural competence, prioritize equity and prevention, and prepare trainees for practice in underserved urban, rural, and geographically isolated places. Similarly, Oklahoma will train providers on team-based care, targeted toward rural providers. The District of Columbia will train clinicians on team-based care and other topics, such as value-based payment, and train nonclinicians, such as social services providers, on working with clinicians on care teams. Maryland will develop and incentivize the use of physician training programs in new health care models focused on population health management and population health metrics. Maryland also will establish community-based clinical and nonclinical training sites to train participants in health integration. Finally, New Jersey will create learning collaboratives for Medicaid ACOs and "learning communities" for providers interested in becoming behavioral health homes.

Utah and California proposed training on topics besides behavioral health, health IT, and practice transformation. Utah's SHSIP recommended creating a multi-stakeholder group, which will include insurers, health care providers, and others, to identify ways to train providers to discuss preferences for end-of-life care with patients. California has plans to train its incumbent workforce in palliative care in partnership with the Institute for Palliative Care at the California State University, San Marcos, and the California HealthCare Foundation. Through this partnership, they will disseminate palliative care training and curricula through professional societies and training programs that can reach physicians, nurses, social workers, and frontline workers, such as community health outreach workers.

Reforms to health care education

Nine states (Arizona, Maryland, Montana, New Mexico, Oklahoma, Pennsylvania, Puerto Rico, Virginia, and West Virginia), will enhance educational programs for health care workers. Four states will carry out health care education activities that focus on behavioral health; two

states propose incorporating health care delivery transformation concepts into curricula for health care professionals; and four states will address training and certification for nonphysician health care workers. One state's SHSIP includes a broad recommendation for reforming health care education in partnership with the state's employers.

Arizona, Pennsylvania, Puerto Rico, and West Virginia proposed updating health care education to meet state behavioral health needs. Arizona's SHSIP recommends that state educational institutions create curricula to facilitate integration of behavioral health care into primary care practice. Similarly, Pennsylvania proposes improving behavioral health education for primary care providers. Puerto Rico will work with its institutions of higher learning to develop a curriculum for public health physicians and allied health professionals to teach and enhance their knowledge and skills in behavioral health. West Virginia's SHSIP recommends increases in state support for educating social workers and other mental health professionals.

New Mexico and Virginia proposed incorporating health care delivery transformation into health care professional education. New Mexico's SHSIP recommends the inclusion of concepts like care coordination, care integration, and team-based care into curricula. Virginia proposes the creation of online certificate programs—available through one of the state's universities—for care coordination, transformational leadership, and health behavior coaching.

Maryland, Montana, New Mexico, and Oklahoma addressed training and certification requirements for nonphysician providers. To increase the number of behavioral health providers who can practice independently, New Mexico will reduce the number of supervised hours of practice that social workers must complete to be fully licensed. Oklahoma will convene work groups to develop suggestions for training and certifying workers in emerging professions, such as community health workers. Similarly, planning is underway in Montana to define core competencies and develop a curriculum for training community health workers. Maryland's work group recommended a two-tiered structure to accommodate the varying levels of education and technical skills that may be necessary for hospital-based community workers, but unnecessary for community-based community workers. Based upon the tier, recommendations also were made for the level of training required for certification.

Kentucky's SHSIP recommended reforming health care education in partnership with employers, to ensure that workers have the appropriate skills and knowledge to meet employer needs. Kentucky does not specify the health care occupations to which this recommendation applies.

5.2.4 Facilitating worker practice at the top of their capabilities

Fourteen states (American Samoa, California, Hawaii, Illinois, Kentucky, Maryland, Montana, Nevada, New Hampshire, New Mexico, Oklahoma, Pennsylvania, Puerto Rico, and West Virginia) identified strategies to facilitate worker practice at the top of their capabilities.

These efforts encourage delegation of tasks and the shifting of health care worker roles, with the goal of delivering team-based, patient-centered care. Increased use of lower- and mid-level staff to provide patient care, and changes to laws and regulations that govern provider roles—activities that facilitate worker practice at the top of their capabilities—are incorporated into several SHSIPs.

American Samoa, California, Hawaii, Illinois, Maryland, Montana, Nevada, New Mexico, Oklahoma, Pennsylvania, Puerto Rico, and West Virginia proposed increasing the use of lower- and mid-level staff to support team-based care. States are particularly interested in expanding the use of community health workers, who can connect members of the communities they serve to health and social services. Community health workers also can coordinate care, conduct community outreach, and provide health education.[14]

Eleven states (California, Hawaii, Illinois, Maryland, Montana, Nevada, New Mexico, Oklahoma, Pennsylvania, Puerto Rico, and West Virginia) planned to incorporate community health workers into health care delivery. The Hawaii, Illinois, and Oklahoma SHSIPs provide the most detail about how community health workers will be deployed. Hawaii, Illinois, and Puerto Rico will include community health workers as part of community care teams, which will serve patients with behavioral health needs. The Oklahoma SHSIP proposes a community health worker program for planned regional care organizations (RCOs) for individuals covered by Medicaid and the state employee health plan. Stakeholder input will help define community health worker functions within Oklahoma's regional care organizations and determine how to reimburse community health workers under Medicaid. Montana's SHSIP included a recommendation to identify reforms to provider payment to support the use of community health workers.

California, Maryland, Nevada, New Mexico, and Pennsylvania recommended deploying community health workers to improve patient access to care or coordinate patient care. West Virginia will evaluate evidence generated from existing health workforce initiatives to determine best practices for educating and using community health workers. California is planning to use the Accountable Community Care pilot as a means of identifying how best to utilize community health workers, focusing on their ability to help build trust and communication between patients and providers, help patients manage their health and navigate the care system, and create a bridge between the health care system and community and social services.

States also are interested in expanding the roles of other nonphysician clinician occupations in health care delivery. For instance, New Mexico seeks to expand the use of pharmacy technicians. Montana proposed expanding the use of behavioral health coaches. Nevada's and Illinois' SHSIPs indicate that these states seek to increase the use of physician

[14] American Public Health Association. (n.d.). *Community health workers*. Retrieved from https://www.apha.org/apha-communities/member-sections/community-health-workers.

extenders, such as advanced practice nurses and physician assistants. To combat the shortage of mental health providers, Illinois also plans to leverage the role of psychologists that can prescribe medication on a limited basis. Nevada also proposes increasing the use of community paramedics to improve patient transitions between health care settings. Pennsylvania's SHSIP recommends the use of community paramedics, although the SHSIP does not provide additional details on how to implement community paramedics.

Kentucky, Oklahoma, and Pennsylvania briefly described legal and regulatory approaches for facilitating worker practice at the top of their capabilities. Kentucky and Oklahoma proposed exploring changes to scope of practice laws, while Pennsylvania proposed changes to regulations to support the use of community health workers and dental health providers, such as dental hygienists.

5.2.5 Recruitment and retention of health care workers

Fourteen Round 2 Model Design states (American Samoa, Arizona, California, Illinois, Kentucky, Maryland, Nevada, New Mexico, Oklahoma, Pennsylvania, Puerto Rico, Utah, Virginia, and West Virginia) plan to undertake recruitment and retention activities to address health care workforce shortages. Recruitment and retention activities will focus on increasing available slots within existing health care training programs and supplying financial incentives to providers who practice in underserved areas or deliver care—such as behavioral health—that is in shortage.

Arizona, Nevada, Oklahoma, Virginia, and West Virginia will expand existing training programs. For example, Nevada and Oklahoma will increase the number of available slots for medical school or for physician residency training. Arizona will increase its participation in an existing multistate program that trains students in several health professions. Virginia and West Virginia will increase the size of their behavioral health workforces. Virginia will expand a program for psychiatric nurses, and West Virginia's SHSIP recommends additional slots and training for mental health specialists, mental health nurses, and social workers.

American Samoa, California, Illinois, Kentucky, Maryland, Nevada, New Mexico, Puerto Rico, and West Virginia plan to create or expand financial incentives to increase health care workforce supply. For instance, Illinois discussed designing a loan repayment and forgiveness program. Kentucky, Nevada, and West Virginia will build on and/or expand existing loan repayment and forgiveness programs to recruit and retain primary care physicians in rural areas. California will leverage programs through the Health Professions Education Foundation to provide scholarships, loan repayments, and programs for health professional students and graduates who will provide health care in underserved areas of the state.

Similarly, Maryland will provide incentive programs through loans, tax credits, loan repayment, and professional visa programs for health care providers who serve in rural and underserved areas. New Mexico will examine reforms to existing loan repayment programs, with the goal of increasing the supply of medical and behavioral health professionals in rural areas. New Mexico also expressed interest in allowing behavioral health providers and pharmacists to participate in a pre-existing tax incentive program that encourages providers to practice in rural areas. Puerto Rico proposed providing a tax incentive to promote the retention of medical professionals in exchange for community services and full participation in SIM Model sites in medically underserved areas. American Samoa will use financial incentives to recruit U.S.-trained health care professionals to the territory but does not provide details on the financial incentives or the types of health professionals to be recruited.

States also presented other recruitment and retention strategies for reducing shortages of behavioral health providers. New Mexico and Nevada propose easing licensure reciprocation requirements for behavioral health providers, making it easier for providers licensed in other states to practice in New Mexico and Nevada. Oklahoma will investigate strategies to recruit and retain behavioral health providers; Pennsylvania will develop programs to identify and train individuals interested in providing health care in rural areas; and Utah will identify strategies for recruiting underrepresented minorities into the behavioral health professions.

5.2.6 Other workforce development activities

Arizona, Nevada, Oklahoma, and West Virginia proposed other health workforce activities that cannot be categorized as data collection, education and training, facilitating practice at the top of workers' capabilities, or recruitment and retention. Oklahoma and West Virginia plan to set up committees to identify and research health workforce issues and produce actionable recommendations on health care workforce for policymakers. Arizona will seek to reduce administrative requirements in Arizona's Medicaid managed care program for behavioral health workers, with the goal of giving those workers more time to see patients. Nevada's Multi-Payer Collaborative—which includes the state's public insurers and public employee health plan—will seek to educate the public about nurse call centers. Nevada's SHSIP indicates that nurse call centers have the potential to reduce health care spending by reducing emergency department use.

Legislative and regulatory policy levers

Twelve states (Arizona, California, Hawaii, Illinois, Maryland, Nevada, New Hampshire, the Northern Mariana Islands, New Jersey, Oklahoma, Pennsylvania, and West Virginia), as shown in ***Table 5-7***, identified legislative, regulatory, and other levers that could be used to implement health care workforce development activities.

Table 5-7. States with identified workforce legislative and regulatory policy levers

State	State legislation	Medicaid Section 1115	Medicaid State Plan Amendment	Federal grants	State/regional grants
Arizona	✓	—	—	✓	✓
California	—	—	—	—	✓
Hawaii	—	—	—	—	✓
Illinois	✓	✓	—	—	—
Maryland	✓	—	—	—	✓
Nevada	✓	✓	✓	—	—
New Hampshire	—	✓	—	—	—
Northern Mariana Islands	—	—	—	—	✓
New Jersey	—	—	—	✓	—
Oklahoma	✓	—	—	—	—
Pennsylvania	✓	—	—	✓	—
West Virginia	✓	—	—	—	—

Note: ✓ means included in a State Health System Innovation Plan (SHSIP); — means not identified in SHSIP.

Some states identified legislative levers that will help states recruit and retain clinicians (Arizona, Nevada, and Pennsylvania), facilitate worker practice at the top of worker capabilities (Arizona, Illinois, Maryland, Nevada, and West Virginia), and allow for the implementation of other health workforce activities (Oklahoma).

Three states (Arizona, Nevada, and Oklahoma) enacted laws that will facilitate clinician recruitment and retention. Arizona and Nevada state governments enacted laws related to licensing reciprocity, making it easier for licensed health professionals from other states to practice in Arizona and Nevada (and vice versa) and benefiting recruitment and retention efforts. Nevada passed a law providing funding to create a medical degree program at the University of Nevada Las Vegas and enacted laws that allow the practice of community paramedicine and create licensing for community health workers. The Oklahoma state government passed a law that created a new health workforce body within a larger state committee that addresses workforce and economic issues. This new subcommittee will be able to provide information and recommendations on health workforce issues to the Oklahoma state government.

Six states (Arizona, Illinois, Maryland, Nevada, Pennsylvania, and West Virginia) will use legislative levers to help recruit and retain providers and facilitate worker practice at the top of worker capabilities. Pennsylvania intends to leverage changes to state and federal law to obtain funding for recruitment and retention of oral health providers. Arizona, Nevada, and West Virginia will utilize legislative levers to facilitate worker practice at the top of worker

capabilities. The Arizona and West Virginia SHSIPs highlight laws that allow Master's-level nurses in these states to practice without supervision from physicians. Recommendations from work groups on community health workers, established in 2015 through state legislation in Maryland and Illinois, will be used to advance developing scope of practice, training requirements, and a potential certification process in each state.

Three states (Nevada, New Hampshire, and Pennsylvania) described regulatory levers for implementing health workforce development activities. New Hampshire, and Nevada indicate that amendments to existing Social Security Act Section 1115 demonstration waivers could support health care workforce activities. Nevada's SHSIP also explains that the state's Medicaid State Plan Amendment could be used to ensure reimbursement for services provided by community health workers or community paramedics, incentivizing the increased use of these health care workers. Pennsylvania will consider regulatory changes to facilitate reimbursement of community health worker services.

Arizona, California, Hawaii, Maryland, the Northern Mariana Islands, New Jersey, and Pennsylvania described other levers—including federal and state funding opportunities—for implementing health care workforce development activities. The Arizona and New Jersey SHSIPs note that federal Transforming Clinical Practice Initiative grants can facilitate worker training on health care delivery transformation. Hawaii received a federal grant to expand its community health worker education program, and Pennsylvania's state government will help the coal-mining communities apply for federal funds that can be used for health workforce development. Arizona will use its participation in the Western Interstate Commission for Higher Education—which includes a program that allows health care professional students to receive out-of-state education at a lower cost—as part of its recruitment and retention efforts. Maryland will provide grant programs to promote rural workforce development through its state Rural Health Prosperity Fund. California will make scholarships available to health professional students that provide care in underserved areas.

5.3 Quality Measure Alignment

5.3.1 Overview of quality measure alignment processes across states

Status of quality measure alignment efforts

Although most Round 2 Model Design states discussed plans to establish a common set of quality metrics that would be used by payers participating in SIM-related delivery system and payment models, quality measure alignment efforts across states were in varying levels of formative development. Some states—such as Montana, which will expand upon the alignment efforts among payers that occurred under its existing PCMH program—plan to build on existing efforts. SHSIPs often included workgroups and advisory committees that had wide stakeholder

involvement from varied payers to assist in establishing quality metrics to align with the SIM Initiative and promote the standardization of measure sets and streamlined reporting.

Several states (i.e., Illinois, Montana, New Jersey, Oklahoma, and Virginia) developed potential quality alignment measures to serve as the baseline for future committee work with SIM implementation. Other states (i.e., California, Kentucky, Maryland, New Mexico, Pennsylvania, and West Virginia) considered potential conditions and population health goals to be addressed in developing and aligning quality measures but were not going to select specific quality measures or begin alignment efforts until SIM implementation occurred; then, an advisory committee would be developed to work on the alignment process.

Other states were vague, mentioning potential conditions and the need for future alignment efforts, although providing little detail. State efforts included commercial payer participation on committees and work groups but were not to the point where these payers had bought into the alignment process.

Measures included in quality measure alignment effort

States, such as Illinois, New Jersey, Oklahoma, and Virginia, that had dedicated resources to alignment activities, generally took a tiered approach in developing potential quality measures for alignment, starting with an inventory and assessment of existing quality measures across payers and programs and proceeding in stages.

Illinois, in their work group, conducted a review and assessment of measures within the Department of Public Health and Medicaid programs in developing its recommended list of quality measures. Whereas the state plans to ultimately move toward multi-payer quality measure alignment, the first step will be to align and implement those measures internally. Once fully implemented, these measures will provide a means to develop a statewide, multi-payer measurement strategy that includes appropriate behavioral health and behavioral health integration measures, which the state will select as a SIM priority.

New Jersey, Oklahoma, and Virginia conducted their measure inventories and assessments across relevant programs and payers. Initially, New Jersey sought to identify state and federal quality and efficiency improvement initiatives and create an inventory of metrics required under each initiative. The list was then deduplicated, and the most commonly used metrics were identified. The New Jersey Advisory Committee conducted a quality metric review of the 786 measures used in 18 state programs to determine metric meaningfulness and usability, based on four considerations: (1) the relative importance for value-based system improvement; (2) the degree to which reporting requirements varied across payers; (3) metrics where reporting burden might outweigh their importance; and (4) where other opportunities to streamline measurement and reporting may exist. The result was 31 metrics that were sent to the committee

and governing state authorities for consideration when New Jersey moves forward with implementation, with the understanding that the quality alignment process is evolving.

Virginia also pointed out challenges in trying to ensure alignment between state-selected and nationally recommended measures. Less than a month after Virginia had developed recommendations for clinical quality measures, CMS and America's Health Insurance Plans released a new proposed set of core measures. Virginia found less than optimal overlap between the two sets of measures, which they considered to be illustrative of the dynamic nature of developing measures for potential alignment.

States plan to build on existing quality and alignment initiatives. West Virginia, for example, will use the measures developed through the CMS Core Quality Measures Collaborative as a starting point to begin aligning quality measures. The state will use the West Virginia Health Innovation Collaborative—a preexisting, public-private partnership used to share health care best practices in a "grand rounds" fashion—to publicly vet the CMS collaborative's quality measures. As a partner with West Virginia, the West Virginia Health Transformer Accelerator also will work across payers to promote quality measure alignment.

Table 5-8 shows potential measures states have included in their quality measure alignment efforts. As a precursor to selecting specific measures, states identified conditions and services to be addressed through the quality measures. The table includes states that focus on specific conditions and plan to develop measures after SIM implementation.

Table 5-8 also provides potential data sources for reporting quality measures. States often rely on claims data, provider surveys, and EHRs. Identifying data sources for public reporting is not well developed among states.

Eight states (California, Maryland, Nevada, New Hampshire, New Mexico, Pennsylvania, Virginia, and West Virginia) are planning to make data on quality measures available to the public, primarily on Web sites. New Hampshire, Pennsylvania, and West Virginia are considering developing a quality scorecard that would summarize providers' performance on a common set of quality measures across payers, while California and Maryland are planning a dashboard that would provide aggregate data on quality metrics.

Table 5-8. Potential conditions and services, populations, data sources, and public reporting of quality measures

State	Conditions and services in measures	Populations addressed in measures	Data sources for measures	Plans for public reporting
American Samoa	Diabetes, obesity, smoking, preventive screenings, hypertension, reduction in comorbidities	State population	Department of Public Health, LBJTMC	—
Arizona	Hospital admissions and readmissions, emergency department visits, childhood immunizations, behavioral health referrals and coordination	American Indians, justice involved populations	Tribal providers, primary care and community mental health providers, Medicaid providers	—
California	Measures from Let's Get Health California dashboard, special focus on maternity, complex conditions, palliative care	Statewide population	CHPI, which provides data from Anthem Blue Cross, Blue Shield of California, United Healthcare, CalPERS, Medicare	Dashboard on Web site
District of Columbia	Asthma, behavioral health, cancer, cardiovascular, care coordination, child health, diabetes, maternal and infant health, oral health, prevention, sexual health	State population	Initial phases to rely on claims-based measures and available uniform survey results	—
Hawaii	Behavioral health, diabetes, obesity, tobacco use, oral health	Children, adolescents, and adults in Medicaid	Hawaii HIE, MCOs	—
Illinois	Behavioral health, integration of physical and behavioral health services, developmental screening in first 3 years of life, weight screening for children and adolescents	Medicaid, behavioral health populations, justice involved populations, children and adolescents	Medicaid MCOs	—

(continued)

Table 5-8. Potential conditions and services, populations, data sources, and public reporting of quality measures (continued)

State	Conditions and services in measures	Populations addressed in measures	Data sources for measures	Plans for public reporting
Kentucky	Smoking, obesity, cancer deaths, cardiovascular deaths, oral health, drug overdose, mental health, and diabetes	State population	Kentucky Health Data Trust, medical claims data	—
Maryland	Measures that align population health measures with the state's All Payer Model	State population with focus on adults and frail elders	Clinical data from EHRs, the HSCRC, hospitals, SNFs, claims data, and surveys	Public-facing "State Health Improvement Process" Web site
Montana	Hypertension, tobacco use, diabetes, immunizations, depression screening	State population	PCMH practices, Medicaid and CHIP claims data	—
Nevada	Preventive services, emergency department utilization, obesity, diabetes, cardiovascular health, tobacco use, behavioral health outcomes	State population	CAHPS Hospital, clinician, and health plan surveys	Dashboards and public reports
New Hampshire	Clinical measures	State population	Providers, claims	Web-based public site to view aggregate CHIS data
New Jersey	Preventable ER visits, medication reconciliation, readmissions, mental health, obesity, immunizations, prenatal and postpartum care, well-child visits, high blood pressure, diabetes, substance abuse, ischemic vascular disease, cervical cancer, BMI, chlamydia, breast cancer, colorectal cancer, tobacco use	Adult and pediatric	Billing, EHR	—

(continued)

Table 5-8. Potential conditions and services, populations, data sources, and public reporting of quality measures (continued)

State	Conditions and services in measures	Populations addressed in measures	Data sources for measures	Plans for public reporting
New Mexico	Diabetes, obesity, tobacco, behavioral health	State population, American Indian population	PCMHs	A staged approach to public reporting, beginning with regional and population-level data results
New Mexico	Diabetes, obesity, tobacco, behavioral health	State population	—	A staged approach to public reporting, beginning with regional and population-level results
Northern Mariana Islands	—	—	—	—
Oklahoma	Tobacco use, diabetes, hypertension, obesity, behavioral health, medication adherence, behavioral health, children's health, substance abuse	Populations with chronic and high-cost conditions	Providers of Medicaid, EGID, and other payers	—
Pennsylvania	Access to care, birth outcomes, childhood immunizations, heart disease, obesity	State population	—	Web portal for consumers to view physician and/or facility quality metrics
Puerto Rico	Prenatal care, emergency department visits, asthma, kidney disease, diabetes prevention, behavioral health integration, blood pressure	Special needs population, super utilizers, pediatric population	—	—
Utah	Depression, alcohol and drug dependence, obesity, diabetes, advanced care planning	State population	Utah Health Information Network Clinical HIE database, APCD, HEDIS, the Intermountain Healthcare Information Systems, including their EHR system and the Select Health payer system.	—

(continued)

Table 5-8. Potential conditions and services, populations, data sources, and public reporting of quality measures (continued)

State	Conditions and services in measures	Populations addressed in measures	Data sources for measures	Plans for public reporting
Virginia	Prenatal and postpartum care, screening and prevention, health access, dental, behavioral health tobacco diabetes, cancer, cardiovascular, cerebrovascular disease (e.g., high blood pressure, asthma, bronchitis, COPD), musculoskeletal conditions (e.g., osteoporosis, arthritis)	State population	The Virginia APCD and the Virginia Hospital Inpatient Discharge Database. Clinical quality measures from the VDH and VHI for Medicaid, Medicare, private health plans	Reporting monitoring trends in health system performance to VIP and stakeholders
West Virginia	Use CMS Core Quality Measures Collaborative as a starting point and develop	Medicaid, CHIP, Public Employees	Medicaid MCOs, CHIP, State Employee data	Provider scorecard—accessible by providers and consumers through Web portal
Wisconsin	—	—	—	—

APCD = all-payer claims database; BMI = body mass index; CAHPS = Consumer Assessment of Healthcare Providers & Systems; CalPERS= California Public Employees' Retirement System; ; CHIP = Children's Health Insurance Program; CHIS = Comprehensive Health Care Information System; CHPI=California Healthcare Performance Information System; COPD = chronic obstructive pulmonary disease; EGID = Employees Group Insurance Department; EHR = electronic health record; ER = emergency room; HEDIS = Healthcare Effectiveness Data and Information Set; HIE = health information exchange; HSCRC= Health Services Cost Review Commission; LBJTMC = Lyndon Baines Johnson Tropical Medical Center; MCOs= managed care organizations; PCMH = patient-centered medical home; SNFs= skilled nursing facilities; VDH = Virginia Department of Health; VHI = Virginia Health Information; VIP = Virginia Integration Partners.

Note: — means not indicated in a State Health System Innovation Plan.

5.3.2 Legislative and regulatory policy levers

Only four states (Arizona, Oklahoma, New Hampshire, and Wisconsin) identified a policy lever for implementing quality measure alignment across payers. For all four states, this lever was through contractual requirements with their MCOs or RCOs for state-purchased health care. Oklahoma has developed a tiered approach to encourage alignment. RCOs contracting with Oklahoma will be required to report on a set of quality measures and meet established quality targets to be paid all or a portion of their withheld capitation payment. If they report on and meet targets for additional quality metrics, they can receive bonus payments beyond the capitated payment.

5.4 Monitoring and Evaluation

5.4.1 Overview of monitoring and evaluation efforts

Round 2 Model Design states commonly developed a monitoring and evaluation framework that would be expanded and enhanced as their SHSIPs are implemented. Monitoring plans that initially tracked deliverables during the design phase will be expanded to track milestones through implementation. Evaluations will assess the impact of SHSIP implementation, in terms of progress in health system transformation, health care quality and population health improvement, along with cost and value-based return on investment. States plan to use monitoring and evaluation to assess progress, identify and address barriers, and potentially adjust resources in support of the SHSIP objectives, utilizing the monitoring and evaluation as a dynamic process.

West Virginia' evaluation and monitoring plan, for example, serves two core functions: (1) provides a basis for evaluating and monitoring the impact and effectiveness of the SHSIP interventions and (2) provides continuous feedback to foster improvement and necessary adjustments, modifications and enhancements to the SHSIP during implementation. The ongoing evaluation will use a scorecard of measures that reflect the impact of the interventions and actions outlined in the SHSIP.

Measure sets that states use may include those related to cost, utilization, process, and outcome, as indicated in ***Table 5-9***. Eighteen states plan to use outcome measures; 19 states, process measures; 14 states, utilization measures; and 16 states, cost measures.

Table 5-9. Monitoring and evaluation measures

State	Measure set				Monitoring measures publicly reported
	Cost measures	Utilization measures	Process measures	Outcome measures	
American Samoa	—	✓	✓	✓	—
Arizona	✓	—	✓	✓	—
California	✓	✓	✓	✓	✓
District of Columbia	✓	✓	✓	✓	—
Hawaii	✓	✓	✓	✓	✓
Illinois	✓	—	✓	✓	—
Kentucky	✓	✓	✓	✓	—
Maryland	✓	✓	✓	✓	✓
Montana	✓	✓	✓	✓	—
Nevada	—	—	✓	✓	✓
New Hampshire	✓	✓	✓	✓	✓
New Mexico	✓	✓	✓	✓	—
Northern Mariana Islands	—	—	✓	✓	—
New Jersey	—	—	—	—	—
Oklahoma	✓	✓	✓	—	—
Pennsylvania	—	✓	✓	✓	—
Puerto Rico	✓	✓	✓	✓	—
Utah	✓	—	✓	✓	—
Virginia	✓	✓	—	✓	—
West Virginia	✓	—	✓	—	—
Wisconsin	✓	✓	✓	✓	—

Note: ✓ means included in a State Health System Innovation Plan (SHSIP); — means not identified in SHSIP.

Cost measures may reflect incurred cost, based on payer data, and avoided cost projections, using predictive tools and evidence-based metrics to evaluate the extent to which the SHSIP has achieved cost savings and cost offsets. State metrics will be adapted based on their programs and initiatives. Virginia's measures were developed to reflect system-wide performance, but they note that when possible, these measures will be calculated for communities in which specific interventions could be implemented and tested. Oklahoma's program will look at 11 multi-payer performance metrics for monitoring implementation. Because health IT is a key component of Oklahoma's SHSIP, metrics of health IT implementation and utilization also will be incorporated, along with progress in developing and

implementing statewide databases, the use of data systems to report to providers, and the extent to which those health IT systems are integrated across communities, including EHR utilization.

Few states will provide public reporting on implementation progress. Five states (California, Hawaii, Maryland, Nevada, and New Hampshire) will publicly report on program indicators on their state Web sites. New Hampshire will develop an online dashboard for reporting on implementation progress. The other four states will report on implementation metrics on their Web sites.

Multiple data sources will be used for monitoring and evaluation, as shown in ***Table 5-10***. Patient, caregiver, and provider surveys will be used to assess satisfaction. Focus groups may be convened and used to define the patient experience of care and to foster feedback. The use of these types of tools will allow an in-depth analysis of patient and caregiver experiences of care and identify gaps and opportunities for improvement.

Kentucky and New Hampshire provide examples of states that will combine and link data from several sources. Kentucky plans to use data from the Kentucky Health Data Trust, which will combine and link multiple data sources: claims from Medicaid, Medicare, the state employee health plan, commercial carriers, and self-insured plans; vital statistics; Kentucky All Schedule Prescription Electronic Reporting; Kentucky Health Benefits Exchange; Department of Behavioral Health; Developmental and Intellectual Disabilities; and public universities. The Kentucky Health Data Trust is in the developmental stage, with plans for full implementation by the end of 2017. New Hampshire will use data from CHIS, its APCD, and data integrated from the Department of Transportation and the state justice system.

Eleven states (American Samoa, the District of Columbia, Hawaii, Illinois, Kentucky, Maryland, Oklahoma, Pennsylvania, Utah, West Virginia, and Wisconsin) will use interviews, surveys, and focus groups in addition to quantitative data.

Table 5-10. Plan for monitoring and evaluating activities proposed in State Health System Innovation Plans

State	Proposed Activities
American Samoa	**Evaluator:** State agencies, LBJTMC **Qualitative and Quantitative Methods** *Qualitative*: Quality and efficiency performance targets *Quantitative:* Cost-efficiency performance targets including risk-adjusted, total cost of care; percentage of inpatient admissions; inpatient readmissions laboratory utilization and ambulatory surgery utilization; preventive care **Data sources for evaluation:** Health surveys and claims data
Arizona	**Evaluator:** State **Qualitative and Quantitative Methods:** — **Data sources for evaluation:** —
California	**Evaluator:** To be determined **Qualitative and Quantitative Methods:** *Qualitative*: Progress penetrating care delivery systems, performance metrics *Quantitative*: Utilization and cost metrics **Data sources for evaluation:** Cost and quality reporting system, other data sources to be determined
District of Columbia	**Evaluator:** Monitoring by DC MCAC; Evaluation of Health Home 2 by an independent contractor (to be hired) **Qualitative and Quantitative Methods:** *Qualitative*: Beneficiary experience, types of staffing models, community linkages, provider challenges, participation levels *Quantitative:* Utilization, cost analysis, cost effectiveness **Data sources for evaluation:** Focus groups, interviews, site visits, and data collected by the District of Columbia
Hawaii	**Evaluator:** State **Qualitative and Quantitative Methods:** *Qualitative*: Patient experience, provider participation *Quantitative:* Utilization, cost analysis, population health outcome analysis **Data sources for evaluation:** MCOs, CCTs, patient and provider surveys
Illinois	**Evaluator:** State **Qualitative and Quantitative Methods:** *Qualitative*: Process measures in each intervention area, performance on common quality measure set *Quantitative*: Outcome measures analysis in each intervention area, expenditure analysis of physical and behavioral health integration. **Data sources for evaluation:** Administrative claims, clinical data, provider surveys, databases from State agencies

(continued)

Table 5-10. Plan for monitoring and evaluating activities proposed in State Health System Innovation Plan (continued)

State	Proposed Activities
Kentucky	**Evaluator:** State agencies monitoring; external evaluator (to be hired) **Qualitative and Quantitative Methods:** *Qualitative:* Stakeholder perceptions of implementation and improvement opportunities *Quantitative*: Outcome evaluation of utilization, impact of initiatives on health status and costs **Data sources for evaluation:** Informant interviews, public document review, Kentucky Health Data Trust, which combines multiple data sources (implementation by end of 2017)
Maryland	**Evaluator:** D-ACOs **Qualitative and Quantitative Methods:** *Qualitative*: Assessment programmatic improvements, areas of deficiency, beneficiary experience *Quantitative*: Health outcomes analysis, cost analysis, utilization, and model effectiveness **Data sources for evaluation:** Performance reports from D-ACOs, administrative claims and cost data
Montana	**Evaluator:** Governor's Council **Qualitative and Quantitative Methods:** — **Data sources for evaluation:** Not specified; possible use of planned data warehouse for Medicaid and State Employee Health Plan data
Nevada	**Evaluator:** PHIC for monitoring; independent contractor to be hired **Qualitative and Quantitative Methods:** *Qualitative*: Changes in provider behavior, patient experience *Quantitative*: Clinical outcome analysis **Data sources for evaluation:** —
New Hampshire	**Evaluator:** Governance Board/Council **Qualitative and Quantitative Methods:** *Qualitative*: Process goals within operational plan, progress on population health metrics *Quantitative*: Utilization, cost reduction analysis, financial modeling **Data sources for evaluation:** New public data reporting Web site to use data from CHIS; APCD as the foundational database; and other sources (i.e., transportation data, criminal justice data)
New Mexico	**Evaluator:** Monitoring by Stakeholder Steering Committee and System Management Team; external evaluation **Qualitative and Quantitative Methods:** *Qualitative*: Quality metrics, patient experience, provider process indicators *Quantitative*: Utilization, improvement analysis of clinical outcomes, cost of care analysis, cost reduction analysis **Data sources for evaluation:** The Department of Health's IBIS, HealthInsight NM, Human Services Department, Medical Assistance Division's Medicaid Data Services, Medicare, commercial payers, focus groups, informant interviews
Northern Mariana Islands	**Evaluator:** State agencies **Qualitative and Quantitative Methods:** *Qualitative*: Tracking project activities, performance measures *Quantitative*: Intermediate and long-term outcomes, impacts, and effectiveness **Data sources for evaluation:** Proposed claims and clinical data warehouse

(continued)

Table 5-10. Plan for monitoring and evaluating activities proposed in State Health System Innovation Plan (continued)

State	Proposed Activities
New Jersey	**Evaluator:** — **Qualitative and Quantitative Methods:** — **Data sources for evaluation:** —
Oklahoma	**Evaluator:** State governing body **Qualitative and Quantitative Methods:** *Qualitative*: Tracking progress toward goals, patient and provider satisfaction metrics, quality and population health metrics, health IT implementation and utilization metrics *Quantitative*: Predictive utilization and cost modeling **Data sources for evaluation:** Interviews, focus groups, assessment of provider participation, payers covering, and consumers receiving care under the RCO and EOC models, inpatient and outpatient hospital utilization, provider services, prescription data, quality data, VBA data, Medicaid data, State Employee data
Pennsylvania	**Evaluator:** State Health Innovation Center, Catalyst for Payment Reform **Qualitative and Quantitative Methods:** *Qualitative*: Metrics related to value-based payment, price, quality transparency, health care delivery system transformation adoption, population health, health IT adoption, expansion, and utilization *Quantitative*: Not specified **Data sources for evaluation:** Commercial payer data, data from catalyst research (including surveys from commercial payers) qualitative findings (e.g., from APCD Council)
Puerto Rico	**Evaluator:** To be determined **Qualitative and Quantitative Methods:** *Qualitative*: Quality metrics, demographics *Quantitative*: Utilization analysis **Data sources for evaluation:** EHRs, health insurance carriers, other data sources to be later specified
Utah	**Evaluator:** University of Utah **Qualitative and Quantitative Methods:** *Qualitative*: Plan implementation milestone tracking, quality measures, advanced care planning assessment, beneficiary experience *Quantitative*: Health outcome, cost of care and cost reduction analysis **Data sources for evaluation:** Stakeholder engagement sessions, group discussions, direct observation, program records, interviews
Virginia	**Evaluator:** — **Qualitative and Quantitative Methods:** *Qualitative*: System performance measures: not specified *Quantitative*: Utilization, expenditure analysis **Data sources for evaluation:** Specific clinical metric; hospital discharge data; paid claims data; data from Medicaid, Medicare, or CDC/VD; surveys

(continued)

Table 5-10. Plan for monitoring and evaluating activities proposed in State Health System Innovation Plan (continued)

State	Proposed Activities
West Virginia	**Evaluator:** WVHTA **Qualitative and Quantitative Methods:** *Qualitative*: Tracking progress of SHSIP implementation, quality and population health metrics, patient experience *Quantitative*: Cost effectiveness and cost reduction analysis **Data sources for evaluation:** Providers and practices, patients and families or caregivers, payers, community organizations, and researchers
Wisconsin	**Evaluator:** State **Qualitative and Quantitative Methods:** *Qualitative*: Implementation progress, utilization, quality metrics *Quantitative:* Pre-post comparison of interventions, causal effect of SIM components on health outcomes, cost and resource use analysis **Data sources for evaluation:** Administrative claims, surveys, key informant interviewees, site visits • Wisconsin Department of Health: Medicaid/SCHIP (BadgerCare) enrollment, utilization and HEDIS measures, chronic disease, health, disease control, vital statistics, health professions workforce surveys • Wisconsin R&L: Professional boards and workforce data • WCHQ: provider-reported metrics on shared quality measures, from clinical data (charts) • WHIO: Multi-payer claims database • WHA: Hospital and health system care delivery, quality, and pricing information, workforce data • WMS: Provider directory • WNA: Nursing supply and practice information • Wisconsin ETF: State employee data • Wisconsin OCI: Health plan and insurance carrier data • WAHP: Wisconsin's provider-owned, state-based health plans • UWPHI: Aggregated county-based data on health, health care, and social determinants • Wisconsin Office of Rural Health: Rural provider and critical access hospital survey data

CCTs= Community Care Teams; CDC = Centers for Disease Control and Prevention; CHCC= Commonwealth Health Care Corporation; CHIS = Comprehensive Health Care Information System; CNMI = Commonwealth of the Northern Mariana Islands; D-ACOs=Dual Accountable Care Organizations; DC MCAC = District of Columbia Medical Care Advisory Committee; EOC = episode of care; ETF = Department of Employee Trust Funds; HEDIS = Healthcare Effectiveness Data and Information Set; IBIS = Indicator Based Information System; IHS = Indian Health Service; LBJTMC = Lyndon Baines Johnson Tropical Medical Center; MCO = managed care organization; NM = New Mexico; OCI = Office of the Commissioner of Insurance; PHIC = Population Health Improvement Council; R&L = Department of Regulation and Licensing; SCHIP = State Children's Health Insurance Program; SHSIP = State Health System Innovation Plan; SIM = State Innovation Models; UWPHI = University of Wisconsin Population Health Institute; VBA = Value-Based Analytics; VDH = Virginia Department of Health; WAHP = Wisconsin Association of Health Plans; WCHQ = Wisconsin Collaborative for Healthcare Quality; WHA = Wisconsin Hospital Association; WHIO = Wisconsin Health Information Organization; WMS = Wisconsin Medical Society; WNA = Wisconsin Nurses Association; WVHTA = West Virginia Health Transformation Accelerator;

Note: — means not identified in a SHSIP.

In designing their evaluations, states are considering applicable evaluation frameworks and prior program evaluations. Maryland, for example, noted that they will use evaluation strategies such as those conducted for CMS's Financial Alignment Demonstrations to inform their approach to evaluating the Maryland models. By leveraging applicable evaluation strategies from other programs, Maryland's intent is that the state and interested parties potentially will be able to compare the Maryland models with similar models elsewhere. While Maryland's Dual Accountable Care Organization model has no equivalent, Maryland noted that its evaluations for Medicare ACOs may provide an applicable comparison.

With its Round 2 SIM Model Design award, California contracted with a consulting group to develop an Accountable Community of Health (ACH) Evaluation Framework, which provides a methodology or "road map" for communities, funders, or government agencies interested in conducting an evaluation of local ACH initiatives or interpreting the results of such an evaluation. This Evaluation Framework tool also was developed to guide implementation, assess progress, and evaluate long-term impact for any communities exploring becoming an ACH.

5.5 Sustainability Planning

As states undertake efforts to transform health care, ensuring organizational and financial stability is paramount in continuing the momentum and building on the work that has been done during the Model Design award period. This section provides state timelines for implementing the activities in their SHSIPs, potential challenges states will need to address for implementation, funding sources for SHSIP activities, and potential savings that states will accrue with implementation.

5.5.1 Timeline for implementing activities proposed in State Health System Innovation Plan

Fifteen states provided a timeline for full implementation of their SHSIPs. The Northern Mariana Islands provided a planned start date of 2015, but did not indicate when full implementation was planned. States planned for a phased approach, as shown in ***Table 5-11***. Kentucky, for example, established a 2-year timeframe from 2017 through 2019 for implementation and will phase in its SIM delivery system models. Kentucky will begin implementation of Medicaid health homes and PCMHs in 2017 through the end of 2019. The launch of an ACO for the long-term services and supports/long-term care populations and Wave 1 of episodes of care (EOCs) will be implemented in early 2018, with Wave 2 EOCs implemented in 2019. Additionally, quality measure set development will occur from 2017 through mid-2018. In late 2018 to 2019, the SIM Quality Committee will determine necessary data sources and infrastructures for measure reporting, develop specifications and work plans for each payer, and develop specifications and a work plan for statewide quality measure reporting.

Table 5-11. Timeframe for implementing State Health System Innovation Plan

State	Planned implementation start date	Full implementation of SHSIP
American Samoa	—	2020
Arizona	—	—
California	2015	3 years
District of Columbia	—	5 years
Hawaii	2016	5 years
Illinois	—	5 years
Kentucky	2017	2 years
Maryland	2017	2023
Montana	—	—
Nevada	2016	2021
New Hampshire	—	2020
New Jersey	—	—
New Mexico	—	2020
Northern Mariana Islands	2015	—
Oklahoma	2016	6 years
Pennsylvania	2016	2019
Puerto Rico	2018	2020
Utah	—	—
Virginia	—	—
West Virginia	2016	6 years
Wisconsin	2016	5 years

SHSIP = State Health System Innovation Plan.

Note: — means not identified in a SHSIP.

New Mexico and Wisconsin provide examples of states that project a 5-year timeline for implementation. New Mexico, for example, plans to phase in its PCMH over 5 years, with four communities projected to start up or expand per year. In the first 2 years, the emphasis will be on working with large hospitals and PCMHs in urban communities with adequate resources and readiness for data exchange. Once this phase has been implemented, and an assessment provides lessons learned about how different payment methodologies are working, health IT needs, workforce capacity, and the development of PCMHs in other parts of the state will be advanced. A monitoring plan and process will be implemented simultaneously, as components of the SHSIP are rolled out.

Wisconsin also provided a 5-year implementation timeline. In Year 1, the operational design will be completed, the leadership organization will be established, funding identified and secured, and work begun on preparing pilot projects for launching. Years 2 to 3 in Phase II will

see pilot projects started, with Phase III in Years 3 to 5 moving the pilot projects to statewide implementation.

5.5.2 Potential challenges to implementation identified in State Health System Innovation Plans

Identifying potential sources and securing stable funding to implement and continue SIM transformation activities is a predominant challenge identified by states. Several Model Design states mentioned in their SHSIPs that they had initially thought funding for a possible Model Test Phase might be available from CMS. When CMS indicated this potential funding source would not be available, states considered pursuing other funding sources and possibly altering or downsizing implementation plans. Consequently, some states decided to take an incremental approach to health system transformation. For example, Wisconsin's implementation strategy took an incremental approach to advance initiatives at the community level. Other states narrowed their focus. Hawaii, for example, decided to prioritize initiatives that can be realized within Medicaid's authority with limited resources over the next 5 years. States' fiscal challenges and changing state environments also were mentioned as a concern in SHSIPs. Illinois, for example, has a multimillion-dollar, state budget deficit, which caused the state to reconsider and reprioritize its SIM activities to focus on behavioral health and physical health integration.

State fiscal challenges also resulted in questions about whether dedicated state staff could be retained to continue working through program implementation, and in changing political climates, whether support for health transformation activities would be maintained. To address this concern, Virginia provided state funding for staff for1 year after the conclusion of the SIM model design award to ensure that work on SIM-related activities would continue.

Another challenge was uncertainty about whether states could retain the stakeholder commitment and collaboration necessary to drive progress in the state. West Virginia expressed hope that stakeholders would not abandon their vision for better health care, because the catalyst of the SIM process in West Virginia was an understanding across many stakeholder groups that the status quo of health care delivery and payment in the state was unsustainable.

Oklahoma, Nevada, New Jersey, and New Mexico discussed workforce provider shortage as an implementation challenge. Shortages of physicians, specialists, and physician-to-patient distribution are problematic, particularly in rural areas. Nevada expressed concern that forming a multidisciplinary team of health professionals committed to serving a complex and vulnerable population through PCMHs might prove difficult, due to these shortages. New Jersey's concerns were related to shortages of behavioral health resources, which would impede the integration of primary care and behavioral health services.

Additionally, achieving payer participation beyond Medicaid is a challenge for states. While commercial payers are represented on many state advisory committees, commercial payers do not seem to have made a commitment to participate in SIM transformation.

5.5.3 Funding sources for implementing activities proposed in State Health System Innovation Plan

Table 5-12 provides potential funding sources and estimated costs for the implementation of SHSIP activities in Round 2 Model Design states. American Samoa, Arizona, California, Kentucky, Puerto Rico, and West Virginia provided estimates of the funding needed to implement SHSIP activities, along with potential funding sources. American Samoa's estimate was the lowest, at $2.3 million, while Arizona's estimate was the highest, at $21.9 billion. Eight more states, while not providing an estimate of overall cost, provided estimates for potential funding sources.

Table 5-12. Funding sources for implementing activities proposed in each State Health System Innovation Plan

State	Total estimated funding needed to implement SHSIP activities	Potential funding source #1	Potential funding source #2	Potential funding source #3	Other funding sources
American Samoa	$2.3M	Projected Medicaid/CHIP savings	Projected Medicare savings	Projected local funds savings	Projected private/patient revenue savings
Arizona	$21.9B	Medicaid Section 1115 demonstration	—	—	—
California	$60M	SIM Model Test award	—	—	—
District of Columbia	—	—	—	—	—
Hawaii	—	Fair share support from MCOs	Medicaid cost savings from lower expenditures for physical conditions	Medicaid matching funds	Grant opportunities through SAMHSA and HRSA
Illinois	—	—	—	—	—

(continued)

Table 5-12. Funding sources for implementing activities proposed in each State Health System Innovation Plan (continued)

State	Total estimated funding needed to implement SHSIP activities	Potential funding source #1	Potential funding source #2	Potential funding source #3	Other funding sources
Kentucky	$35M to $70M for ACO and EOCs only	HIE funding for public health reporting as part of MU	CMS funding as part of Kentucky's recently approved Implementation Advance Planning Document, extending through 2017	Funding stream from Kentucky's health benefit exchange	—
Maryland	—	—	—	—	—
Montana	—	CMS Quality Innovation Network-Quality Improvement Organizations Special Innovation Project Grant	SAMHSA Block Grants	Section 2703 Health Home	Robert Wood Johnson Foundation; Montana Health Care Foundation
Nevada	—	—	—	—	—
New Hampshire	$30M	—	—	—	—
New Jersey	—	New Jersey state budget for FY2017	Agency for Healthcare Quality and Research	The Nicholson Foundation	CMS Transforming Clinical Practice Initiative
New Mexico	—	—	—	—	—
Northern Mariana Islands	—	FCC Healthcare Connect Fund	FCC Rural Health Care Program	Department of Human Services	ONC, Medicaid SPA, Mariana Public Land Trust, HRSA, Schwartz Center for Compassionate Healthcare, Aetna Foundation, Robert Wood Johnson Foundation State Coverage Initiatives, CDC, NIH, CMS, Department of the Interior

(continued)

Table 5-12. Funding sources for implementing activities proposed in each State Health System Innovation Plan (continued)

State	Total estimated funding needed to implement SHSIP activities	Potential funding source #1	Potential funding source #2	Potential funding source #3	Other funding sources
Oklahoma	—	Medicaid Section 1115 demonstration	Savings generated out of the model or by a fixed plan fee assessed to the RCO	Fees from participating health sector entities	—
Pennsylvania	—	State funds	Providers, payers, and CMS	—	—
Puerto Rico	$100M	SIM Model Test	—	—	—
Utah	—	Medicaid 90/10 funding	National Governor's Association Technical Assistance	Proposal to SAMHSA to implement the SBIRT evidence-based approach in primary care settings	—
Virginia	—	Agency for Healthcare Research and Quality	Virginia General Assembly	$1.6M from Governor and General Assembly to Virginia Center for Health Innovation to work on 3-year Virginia Health Innovation Plan	—
West Virginia	$175M	—	—	—	—
Wisconsin	—	—	—	—	—

ACO = accountable care organization; B = billion; CDC = Centers for Disease Control and Prevention; CHIP = Children's Health Insurance Program; CMMI = Center for Medicare and Medicaid Innovation; CMS = Centers for Medicare & Medicaid Services; EOC = episode of care; FCC = Federal Communications Commission; HIE = health information exchange; HRSA = Health Resources and Services Administration; M = million; MCO = managed care organization; MU = meaningful use; NIH = National Institutes of Health; ONC= Office of the National Coordinator for Health Information Technology; RCO = regional care organization; SAMHSA = Substance Abuse and Mental Health Services Administration; SBIRT = Screening, Brief Intervention and Referral to Treatment; SHSIP = State Health System Innovation Plan; SIM = State Innovation Models; SPA=State Plan Amendment.

Note: — means not identified in SHSIP.

Few states provide allocations for health care transformation. Sources of potential funding included state legislative allocations in New Jersey, Pennsylvania, and Virginia. Existing Medicaid Section 1115 demonstrations were mentioned by Arizona and Oklahoma as potential funding sources for implementing delivery and payment models. Virginia and New Jersey received funds from the Agency for Health Care Quality and Research for advancing primary care initiatives.

Other federal and private funding sources identified by states are targeted to program components of the SHSIP, rather than being available for overall system transformation. Kentucky would use federal 90/10 matching HIE funds for implementing its Kentucky HIE. Montana discussed Section 2703 funding for health homes, noting that the federal financial participation rate for the first eight quarters was 90 percent. Montana also planned to use federal block grant funding from SAMHSA for behavioral health homes; private funds from the Robert Wood Johnson Foundation assist in supporting Montana's Project ECHO. Private funds from the Montana Health Care Foundation will fund additional support to Montana's efforts to support integrated behavioral health.

American Samoa and Hawaii projected funding through lower costs and program savings in their Medicaid and Children's Health Insurance Program (CHIP) programs that could be used to fund SIM activities, although this would be insufficient to fund all program implementation efforts in American Samoa. America Samoa stated that they did not have sufficient funds to completely fund program implementation activities and had hoped for subsequent SIM funding to continue these efforts.

Eleven of the 21 Model Design states projected savings in the financial analysis of implementing their SHSIPs, as shown in ***Table 5-13***. Program savings refer to the dollar value of the cost avoidance, which can be attributed to a reduction in the growth of healthcare costs from implementing the initiatives.

States that projected savings used varying methodologies for calculating those amounts. Nevada, for example, calculated the total costs of their Medicaid, CHIP, and public employee benefit program to be $2.1 billion per year; the projected potential savings or cost avoidance of 1 percent would equate to approximately $21.8 million. Puerto Rico used cost reduction targets across several programs (i.e., prenatal and pediatric care, diabetes management, chronic kidney disease prevention, integrated health care delivery, and a program for super utilizers) to calculate cost avoidance savings over 3 years of approximately $95 million.

Table 5-13. Projected savings from activities proposed in each State Health System Innovation Plan

State	Projected savings from SHSIP	Length of time from implementation date to achievement of projected savings estimate
American Samoa	$626k to $3.1M	—
Arizona	$170.7M	—
California	$1.4B to $1.8B	3 years
District of Columbia	—	—
Hawaii	—	—
Illinois	—	—
Kentucky	$104.1M to $270.5M	—
Maryland	—	—
Montana	$10.8M from Project ECHO Pilot + $2.3M from Community Resource Team Pilot	4 years and 2 years, respectively
Nevada	$21.8M	1 year
New Hampshire	$1.2B to $2.4B	5 years
New Mexico	$74.4M	5 years
Northern Mariana Islands	—	—
New Jersey	—	—
Oklahoma	$350M for the Medicaid program	5 years
Pennsylvania	—	—
Puerto Rico	$95M	3 years
Utah	—	—
Virginia	—	—
West Virginia	$956.9M	5 years
Wisconsin	—	—

B = billion; ECHO = Extension for Community Healthcare Outcomes; k = thousand; M = million; SHSIP = State Health System Innovation Plan.
Note: — means not identified in SHSIP.

California looked for cost avoidance savings in health homes for complex patients, maternity care, and palliative care. Savings were not calculated for ACOs, because this initiative consists of two to three pilots and was considered of insufficient size to calculate savings. Recommended target reductions were established for each initiative from published studies, or based on recommendations from experts in the field, and then applied to the estimated participation rate for each program, resulting in an estimated savings between $1.4 billion and

$1.8 billion over 3 years. Most of the savings ($1.14 billion to $1.49 billion) is estimated to come from health homes for complex patients, because this initiative involves the costliest persons.

In considering possible program savings, American Samoa, Kentucky, and West Virginia did not have state data to use. American Samoa completed projections using averages in the United States and calculated a 1–5 percent savings for each activity. In West Virginia, the SIM team used national studies to estimate the parameters and categories of potential savings through the SHSIP initiatives to arrive at potential savings of $956.9 million over 5 years. Similarly, Kentucky looked to other states that had implemented ACOs and EOCs and relied on Arkansas, in large part, for its analysis, because Arkansas had established models with adequate data for analysis. Kentucky's projections showed a range of potential savings between $56.8 million and $113.1 million for its ACO and between $47.2 million and $157.5 million for the EOC implementation by the end of 2019. These savings offset the assumed investment costs of $35 million to $70 million.

Oklahoma's forecast estimates the potential savings achievable through utilization and provider reimbursement changes produced by the proposed innovations across the state's healthcare system. They reviewed claims and enrollment data, along with other publicly reported information, for populations that would be impacted by SIM implementation. Oklahoma developed projections of future expenditures under a baseline scenario using actuarial cost models, and then projected expenditures with the Oklahoma Model in place to calculate the potential savings between the two scenarios. Oklahoma anticipates that full implementation will begin in 2019, with 2018 serving as the base year.

New Hampshire's financial analysis projects a savings range of $1.2 billion to $2.4 billion over its first 5 years of implementation. Their estimates are based on data about the size of the New Hampshire health insurance market, using available Medicaid, commercial, and Medicare data and actuarial assumptions about population growth, provider payment increases, utilization changes, and payment and practice reform initiatives.

Arizona's base data, summarized by category of service, was provided by the AHCCCS and blended for federal fiscal years 2011 and 2012 to serve as the base, and then trended forward by 2.1 percent annually, consistent with AHCCCS' historical overall trend rate in the past 3 years, to January 2017, the midpoint of the project period. Savings estimates were provided using applicable studies published in peer-reviewed journals for similar interventions. Arizona considers the cost savings estimates to be illustrative, because they are based on applying savings figures described in the journal articles.

New Mexico used state-level data from the Medicaid database, which were adjusted using national averages. The analysis focused on results gained should an HIE, PCMH, and programs using community health workers be implemented. And, like Arizona, New Mexico

estimated savings using applicable, published research studies to estimate program impact, which resulted in an estimated savings across the three programs of $74.4 million over 5 years.

Montana used state level data also for target populations. Like Arizona and New Mexico, Montana used published research evaluating the cost impact of each of the proposed delivery models and applied those study results in determining potential savings.

5.6 Conclusions

All Model Design states proposed enabling strategies to enhance the infrastructure that supports care delivery and the flow of information available to health care providers, payers, and consumers. Strategies varied across states, but generally included health IT infrastructure, data analytics, workforce development, and quality measure alignment.

All awardees proposed strategies to improve HIE infrastructure, and due to ongoing efforts and funding availability in this area, HIE was a common focus among states. Mapping the current flow of information and assessing gaps within states often provided roadmaps used by states in developing strategies for HIE expansion. Health IT initiatives, such as promoting furthering EHR adoption, advancing HIE capacity, and developing and expanding telehealth usage were often part of a strategy to improve connectivity and improve access to care in rural, underserved areas. Part of those efforts include expanding HIE to other types of providers, such as behavioral health providers, to promote the integration of behavioral health with primary care.

All Model Design states also have proposed some health care workforce activities. Cross-cutting themes in workforce strategies included using health workforce strategies to strengthen behavioral health, with 14 states conducting workforce activities that related to behavioral health workforce. A second theme was the central role that states saw for community health workers into healthcare delivery, with 10 states proposing activities related to this group.

Although most Model Design states discussed plans to establish a common set of quality metrics among all payers that would be participating in a SIM-related delivery system, quality alignment efforts across states were in varying levels of formative development, with only five states (Illinois, Montana, New Jersey, Oklahoma, and Virginia) that had developed potential quality alignment measures to serve as the baseline for future committee work with SIM implementation. Additionally, while commercial payers often were included in states' advisory and working committees, getting commercial interest and buy-in has not yet generally occurred in states.

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6. Conclusion

Awards by CMMI were made to Round 2 Model Design states to provide them with the financial and technical support to design proposals for successful statewide transformation. State aims for health care delivery transformation included three categories: improving population health, reducing health care spending or increasing the value of health care spending, and improving health care quality and health system performance. This conclusion provides a summary of how these awardees addressed the three research questions in their approach to achieving health care system transformation, as described in their State Health System Innovation Plans (SHSIPs), supporting documentation, and state Web sites. These research questions consider core elements of system transformation that the CMS funding opportunity asked states to address:

1. What health care payment and delivery innovation models and enabling strategies are proposed in the SHSIPs by the Round 2 Model Design awardees?
2. What is the geographic distribution and population reach of the SHSIPs?
3. How did the SHSIPs address the core elements of health care transformation identified in the SIM Round 2 Funding Opportunity Announcement?

6.1 What Health Care Payment and Delivery Models and Enabling Strategies Are Proposed in the State Health System Innovation Plans by the Model Design Awardees?

All Round 2 Model Design states included one or more of four delivery system and payment models (patient-centered medical homes [PCMHs], health homes, accountable care organizations [ACOs], and episodes of care [EOCs]) in their SHSIPs as part of their approach to achieving health care system transformation. PCMHs were proposed in 10 states (American Samoa, Arizona, Illinois, Kentucky, Montana, Nevada, New Hampshire, New Mexico, the Northern Mariana Islands, and Puerto Rico). Health homes also were proposed in nine states (American Samoa, California, the District of Columbia, Kentucky, Montana, Nevada, New Jersey, Oklahoma, and West Virginia). ACO models were proposed in eight states (American Samoa, the District of Columbia, Kentucky, Maryland, New Jersey, Oklahoma, Puerto Rico, and West Virginia), as were EOC models in five states (California, Kentucky, Oklahoma, Pennsylvania, and Puerto Rico).

Additional models were proposed by American Samoa, the Northern Mariana Islands, New Mexico, and Nevada. American Samoa and the Northern Mariana Islands proposed a model that included new global-funding approaches. New Mexico is developing a model targeting its rural communities. And, a model proposed by Nevada focuses on targeting high utilizers of care.

All awardees proposed enabling strategies to enhance the infrastructure that supports care delivery and the flow of information available to health care providers, payers, and consumers. Strategies varied across states, but generally included health information technology (health IT) infrastructure, data analytics, workforce development, and quality measure alignment.

All Round 2 Model Design states proposed strategies to improve health information exchange (HIE) infrastructure and connectivity. Seventeen states (American Samoa, Arizona, California, Hawaii, Illinois, Maryland, Nevada, New Hampshire, New Jersey, New Mexico, the Northern Mariana Islands, Oklahoma, Pennsylvania, Puerto Rico, Virginia, West Virginia, and Wisconsin) have strategies to expand the adoption and use of electronic health records (EHRs). Eight states (American Samoa, Arizona, Hawaii, Illinois, Maryland, Pennsylvania, Virginia, and Wisconsin) will target behavioral health providers, mobile care teams, long-term care providers, skilled nursing facilities, and community health workers for EHR adoption. Eleven Model Design states (Arizona, Hawaii, Kentucky, Nevada, New Hampshire, Oklahoma, Pennsylvania, Puerto Rico, Virginia, West Virginia, and Wisconsin) plan to expand HIE connectivity statewide.

States' SHSIPs addressed efforts to ensure an adequate health workforce with a sufficient supply of health care workers who have the necessary competencies to treat the patient populations they serve. Nineteen states plan to undertake health care workforce education and training. Fourteen states will implement a variety of recruitment and retention activities. Across states, there was strong interest in using health workforce strategies to strengthen behavioral health, as evidenced by 14 states that planned workforce activities related to the behavioral health workforce. States also saw a central role for community health workers and other nonphysician health care workers in health care transformation. Ten states (California, Hawaii, Illinois, Maryland, Nevada, New Mexico, Montana, Oklahoma, Pennsylvania, and West Virginia) planned to incorporate community health workers into health care delivery.

Quality measure alignment activities were in varying levels of formative development. Illinois, Montana, New Jersey, Oklahoma, and Virginia developed potential quality alignment measures to serve as the baseline for future committee work with SIM implementation. California, Kentucky, Maryland, New Mexico, Pennsylvania, and West Virginia considered potential conditions and population health goals to be addressed in developing and aligning quality measures, but were not going to select quality measures or begin alignment efforts until SIM implementation occurred. At that point, an advisory committee would be developed to work on the alignment process.

Other states discussed potential conditions and mentioned the need for future alignment efforts, although providing little to no detail about future steps in the alignment process. In some Model Design States—such as California, Illinois, Maryland, Montana, New Jersey, New Mexico, Oklahoma, Pennsylvania, Virginia, West Virginia—efforts included commercial payer

participation on committees and work groups, but were not to the point where these payers had bought into the alignment process.

6.2 What Is the Geographic and Population Reach of the State Health System Innovation Plans?

Proposed payer involvement in most states is limited to Medicaid and public employee plans, which limits the reach of their SHSIPs to those populations. In relation to PCMH and health home initiatives, five states (American Samoa, Arizona, the District of Columbia, Nevada, and New Jersey) propose to limit payer involvement to Medicaid. California, Kentucky, New Hampshire, and West Virginia will include Medicaid and state employee plans. New Mexico will focus first on Medicaid and Medicare. New Hampshire and Montana also will include commercial payer participation with implementation.

Round 2 Model Design states are targeting vulnerable populations through their health care delivery models. American Samoa, California, Nevada, the Northern Mariana Islands, and the District of Columbia are focusing their PCMH and health home initiatives on high-cost health care utilizers with chronic conditions. New Mexico and New Jersey target individuals with serious mental illness; Arizona's initiative focuses on the American Indian population and on newly released inmates; Illinois focuses on women, adolescents, and children. Kentucky's ACO will concentrate on individuals with significant behavioral health comorbidities and individuals receiving long-term services and supports.

Fifteen states (American Samoa, Arizona, Hawaii, Illinois, Kentucky, Maryland, Montana, Nevada, New Hampshire, New Mexico, New Jersey, Oklahoma, Puerto Rico, West Virginia, and Wisconsin) are proposing to improve the delivery of behavioral health care by implementing new programs and/or improving the integration and care coordination of primary and behavioral health care.

6.3 How Did the State Health System Innovation Plans Address the Policy and Regulatory Requirements Listed in the State Innovation Models Round 2 Funding Opportunity Announcement?

In addition to the defining health care payment and delivery reforms, plans for improving population health, using health IT and quality measure alignment, which have been discussed as part of the first two research questions, CMMI also requested that states describe how state leadership will direct planning and oversight of implementation, ensure stakeholder engagement, and develop plans for monitoring and evaluating SHSIP implementation. Finally, CMMI asked states to specify the policy and regulatory levers that they planned to use to implement activities proposed in their SHSIPs. The RTI team examined the extent to which the states addressed these requirements.

Multi-stakeholder committees were the most common governance structure proposed in the SHSIPs. American Samoa, Illinois, Kentucky, Nevada, Montana, New Hampshire, New Mexico, Oklahoma, and the District of Columbia proposed multi-stakeholder committees, consisting of payers, providers, employers, local government officials, tribal leaders, and consumers or consumer representatives to govern SHSIP implementation. State agencies in Arizona, Hawaii, Maryland, the Northern Mariana Islands, Pennsylvania, and Puerto Rico will lead SHSIP implementation.

Fifteen states (American Samoa, Arizona, California, the District of Columbia, Hawaii, Illinois, Maryland, Montana, Nevada, New Hampshire, New Mexico, the Northern Mariana Islands, Oklahoma, Pennsylvania, and Utah) discussed using guidance from stakeholders to inform the SHSIP implementation process. Six states (Hawaii, Nevada, New Hampshire, Oklahoma, Pennsylvania, and Utah) will seek input from payers and providers. Consumers and/or consumer advocates will have the opportunity to participate in SHSIP implementation in six states (Hawaii, Oklahoma, New Hampshire, Nevada, Pennsylvania, and Utah), Tribal councils will be included in New Mexico, and community groups will be included in three states (American Samoa, Hawaii, and Nevada).

Round 2 Model Design states developed a monitoring and evaluation framework that will be expanded and enhanced as their SHSIPs are implemented. Measure sets show 18 states using outcome measures,14 states using utilization measures, 19 states using process measures, and 16 states using cost measures.

Round 2 Model Design states looked to Medicaid Section 1115 demonstrations, state legislation, and contract requirements as policy levers to be used in implementing SHSIP components. Montana, New Hampshire, New Jersey, New Mexico, West Virginia, and the District of Columbia cited Medicaid Section 1115 demonstrations as a policy lever to design service delivery models. State legislation in Arizona and Nevada is proposing licensing reciprocity, making it easier for professionals from other states to come and practice in their states. Pennsylvania intends to leverage changes to state and federal law to obtain funding for recruitment and retention of oral health providers. Arizona, Oklahoma, New Hampshire, and Wisconsin plan to use contractual requirements with their managed care organizations or regional care organizations (RCOs) for implementing quality measure alignment across payers. Oklahoma has developed a tiered approach to encourage alignment. RCOs contracting with Oklahoma will be required to report on a set of quality measures and meet established quality targets to be paid all or a portion of their withheld capitation payment. If RCOs report on and meet targets for additional quality metrics, they can receive bonus payments beyond the capitated payment.

6.4 Final Thoughts

After the Round 2 Model Design performance period, the question that remains to be answered is whether states will continue with efforts toward health care transformation that were initiated and underway during this timeframe. Fifteen states (American Samoa, California, the District of Columbia, Hawaii, Illinois, Kentucky, Maryland, Nevada, New Hampshire, New Mexico, Oklahoma, Pennsylvania, West Virginia, and Wisconsin) provided a timeline for phased-in implementation of their SHSIP from 2 to 6 years, out to 2023 for some states.

But, only seven states (American Samoa, Arizona, California, Kentucky, New Hampshire, Puerto Rico, and West Virginia) provided estimates of the funding needed to implement SHSIP activities, along with potential funding sources. Eight more states, while not providing an estimate of overall cost, did provide estimates for potential funding sources. Few states provided allocations for health care transformation—only New Jersey, Pennsylvania, and Virginia provided state legislative allocations. Existing Medicaid Section 1115 demonstrations were mentioned by Arizona and Oklahoma as potential funding sources for implementing delivery and payment models. Virginia and New Jersey received funds from the Agency for Health Care Quality and Research for advancing primary care initiatives. Other federal and private funding sources identified by states are targeted to program components of the SHSIP, rather than being available for overall system transformation.

Model Design states agreed that identifying potential sources and securing stable funding to implement and continue SIM transformation activities is a predominant challenge, especially since a third round of SIM Model Test funds through CMMI are unlikely. States that have been unable to find sufficient funding sources, have considered, and in some cases pursued, taking an incremental approach to health system transformation or narrowing the focus of their implementation plans. Hawaii, for example, decided to prioritize initiatives that can be realized within Medicaid's authority with limited resources over the next 5 years.

Eleven states included a financial analysis in their SHSIP that included cost saving projections that ranged from $626,000 in American Samoa to $956.9 million over 5 years in West Virginia. States that can demonstrate cost savings through cost avoidance, while providing high-quality care have a persuasive argument for potential state funding and funding through other sources, particularly if they can garner multi-payer support. Hopefully, these states will be able to secure that financial support and continue the health system transformation efforts developed during this SIM Model Design phase.

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