



**Innovation Center State-Based Initiatives:  
A Systematic Review of Lessons Learned**

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## LIST OF ACRONYMS

ACA	Affordable Care Act
ACO	Accountable care organization
APM	Alternative payment model
BHSA	Behavioral health and substance abuse
CHIP	Children’s Health Insurance Program
CHT	Community health team
CHW	Community health worker
CMMI	Center for Medicare & Medicaid Innovation (the Innovation Center)
CMS	Center for Medicare & Medicaid Services
CPC	Comprehensive Primary Care initiative
ECCP	Enhanced care and coordination provider
ED	Emergency department
EHR	Electronic health records
EMR	Electronic medical records
FAI	Financial Alignment Initiative
FFS	Fee-for-service
FQHC	Federally Qualified Health Center Advanced Primary Care Practice Demonstration
HCIA	Health Care Innovation Awards
HIE	Health information exchange
HIT	Health information technology
IAH	Independence at Home Demonstration
LTSS	Long-term services and supports
MAPCP	Multi-Payer Advanced Primary Care Practice Demonstration

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MCO	Managed care organization
MEPD	Medicaid Emergency Psychiatric Demonstration
MIPCD	Medicaid Incentives for the Prevention of Chronic Disease Model
MMP	Medicare-Medicaid Plan
NCQA	National Committee for Quality Assurance
NFI	Initiative to Reduce Avoidable Hospitalizations among Nursing Facility Residents
OB	Obstetrician
PAC	Post-acute care
PBPM	Per beneficiary per month
PCMH	Patient-centered medical home
PCSR	Primary Care Systematic Review
PCP	Primary care physician
PMPM	Per member per month
RFI	Request for Information
ROI	Return on investment
SHIP	State Health Insurance Assistance Programs/ State Health Improvement Plans
SIM	State Innovations Model initiative
SNP	Special Needs Plan
SPA	State plan amendment
SSP	Shared Savings Program
TA	Technical assistance
VBP	Value-based payment/purchasing

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## EXECUTIVE SUMMARY

In a September 2017 Request for Information (RFI), the Centers for Medicare & Medicaid Services (CMS) sought stakeholder input on a new direction for the Center for Medicare & Medicaid Innovation (the Innovation Center, CMMI), including state-based and local innovations and Medicaid-focused models.<sup>1</sup> As noted in the RFI, “(s)tates play a critical role in innovation and delivery of high-quality care,” given their wide reach and policy, regulatory, and convening authority. As such, states are positioned to design models and solutions that account for their own context and history and respond to their needs, values, and populations.

While CMMI has funded many models with a state component and evaluated them individually, no systematic evaluation of findings and promising practices across evaluations has been conducted. CMMI contracted with L&M Policy Research to conduct a qualitative meta-synthesis of findings from select state-based models. We reviewed 47 evaluation reports covering 12 models that CMMI selected and categorized into three groups, based on the state’s primary role in each, as shown in Figure 1.<sup>2</sup>

**Figure 1. Study Models by State Role**

<b>Tier 1: Strong State Role</b>	<ul style="list-style-type: none"> <li>• Multi-Payer Advanced Primary Care Practice Demonstration</li> <li>• Maryland All-Payer Model</li> <li>• State Innovation Models Rounds 1 and 2</li> <li>• Financial Alignment Initiative</li> </ul>
<b>Tier 2: Medicaid-Focused</b>	<ul style="list-style-type: none"> <li>• Strong Start for Mothers and Newborns: Enhanced Prenatal Care Models</li> <li>• Medicaid Emergency Psychiatric Demonstration</li> <li>• Medicaid Incentives for the Prevention of Chronic Disease Model</li> </ul>
<b>Tier 3: Other State Role</b>	<ul style="list-style-type: none"> <li>• Health Care Innovation Awards Round 1 , Behavioral Health and Substance Abuse, Round 1 Meta-Analysis, and Round 2</li> <li>• Initiative to Reduce Avoidable Hospitalizations among Nursing Facility Residents</li> <li>• Primary Care Systematic Review</li> </ul>

Our synthesis of findings from these reports was designed to answer CMS’ research questions about lessons learned, barriers to model success and/or implementation, and opportunities for future state-based models related to the following topics:

- Federal programmatic requirements, model timing and overlap across initiatives
- Organizational/management structures and financial resources

<sup>1</sup> <https://innovation.cms.gov/Files/x/newdirection-rfi.pdf>

<sup>2</sup> The 12 models count PCSR as three models (Comprehensive Primary Care model, Independence at Home, and the Federally Qualified Health Center Advanced Primary Care model); MAPCP is counted separately. A complete listing of the reports with references is provided in Appendix Table 7.



- Involvement of state Medicaid programs and state- and local-level factors
- Use of health IT and data collection/sharing
- Use of innovative staffing models
- Engagement of key stakeholders, including providers and payers
- Beneficiary engagement and social barriers to participation

In our review of the 47 evaluation reports, we first abstracted information for each of the models and used the information to identify and refine themes,<sup>3</sup> then organized the abstracted information within the themes, refining themes across models to produce findings and, finally, we analyzed the abstracted information and interpreted findings across models to derive lessons learned. While each of the models sought to improve health outcomes and quality and lower the cost of care, models differed across several elements: the intervention used to achieve the goals, the payment or funding mechanism, the geographic areas covered, and the number of provider, payer, and beneficiary participants. Models also differed in the degree to which states, payers, and/or providers played key roles in implementation. Familiarity with the interventions, scale, key actors, and payments or incentives involved in each of the models provided an essential foundation for understanding and assessing the evaluation findings.

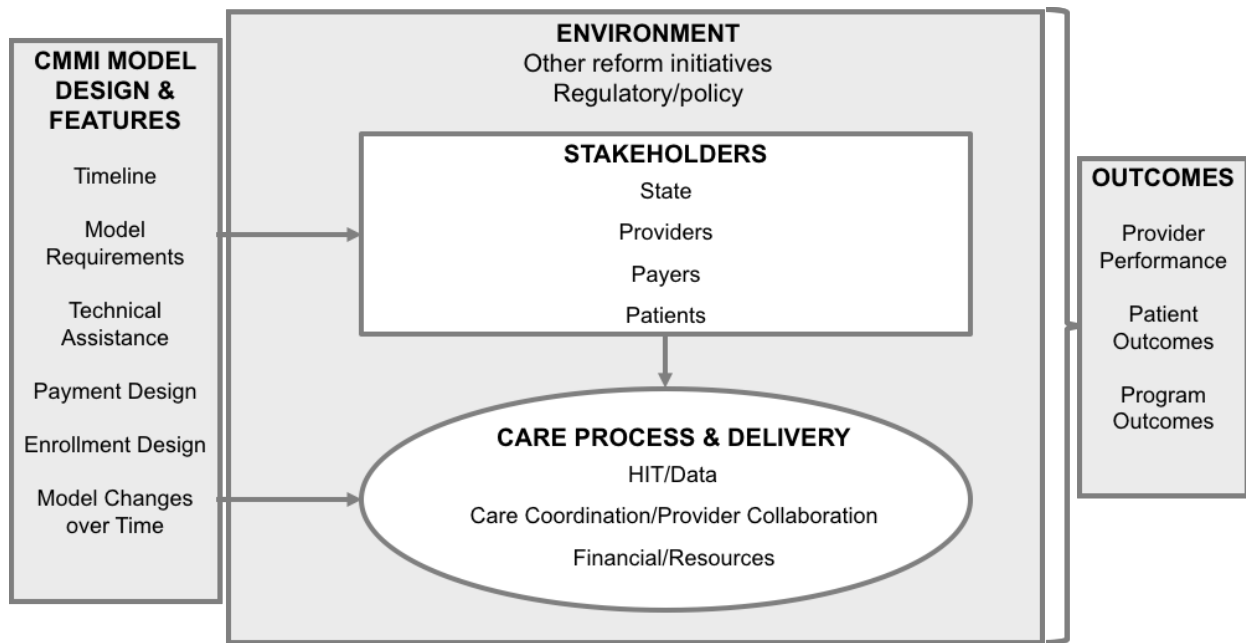
To classify these varying elements and establish a structure for reporting our findings, we developed a conceptual framework that reflects the common themes identified in our review of the model reports. The themes are listed here and embedded in the conceptual framework in Figure 2.

- Theme 1: States as Awardee or Convener
- Theme 2: Model Design and Features
- Theme 3: Health IT and Data
- Theme 4: Care Coordination and Provider Collaboration across Provider Type and Sites of Care
- Theme 5: Financial Resources
- Theme 6: Stakeholder Roles and Engagement
- Theme 7: Environment

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<sup>3</sup> Themes refer to the topics or categories used to organize the findings within and across models.

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**Figure 2. Conceptual Framework**

A synthesis of findings across the 12 models revealed many facilitators and challenges that were common to model implementation, offering relevant insights for designing new or refining existing models with a state role. However, they should be viewed through the larger lens of a healthcare delivery system that is undergoing a non-linear and evolving transformation – notably, lessons from these models disproportionately reflect early adopters and voluntary innovators, those with prior experience and a desire for change. This is true of states as well as other awardee entities that have generally elected to participate and may be well-positioned for the next stage of innovation by a past infusion of resources from CMS. Highlights of the lessons learned and findings follow.

### **States as Awardee or Convener**

State roles varied across the 12 initiatives reviewed. In six of the initiatives, the state served as awardee and convener, leading model design and implementation. In three of these initiatives, the state Medicaid agency served as the lead, placing the state in an active role as payer.

*States can be successful conveners, offering effective leadership and support, prior experience leading complex initiatives, and a platform for decision-making and cross-stakeholder collaboration.*

States participating in the Multi-Payer Advanced Primary Care Practice Demonstration (MAPCP), the Maryland All-Payer model, State Innovations Model initiative (SIM), and Medicaid Incentives for the Prevention of Chronic Disease Model (MIPCD), all had a history of leading collaborative efforts and had established relationships with stakeholders that eased implementation. Maryland’s prior experience with the stakeholder engagement process—fine-

tuned during the Medicare waiver modernization process—informed the creation of two external stakeholder groups for the SIM initiative, while three states in SIM were able to rely on an established stakeholder group such as an advisory board to jumpstart collaborative efforts.

*States are well-positioned to foster delivery system transformation but vary in their experience, readiness for change, and available resources including data infrastructure and regulatory environment.*

Two SIM states relied on market forces already promoting value-based payment approaches rather than state actions, because stakeholders believed the approach would be more effective and anticipated difficulties in passing needed legislation. In MAPCP, one state benefited from strong leadership from the state insurance commissioner, who set regulatory standards for affordability for commercial insurers favorable to the model and facilitated payer participation, while another state suffered from payer attrition, associated in part with lessened pressure from the state and changes in Medicaid that no longer required participation.

*Other entities can lead innovation, with implementation facilitated by state support and CMS providing credibility and essential funding.*

In two MAPCP states, although the state was the awardee, nonprofits played key convener roles, bringing to bear prior experience and strong roots with stakeholders. CMS participation as well as state support remain important regardless of which entity is leading innovation. In Strong Start, partnerships between model sites and state agencies led to expedited Medicaid approval that hastened women’s ability to receive care. In MIPCD, awardees reported that having high-level state leaders as champions helped to minimize state-level bureaucratic obstacles.



### **Model Design and Features**

Regardless of the goals and prioritized populations, all models have common elements (e.g., timeline, technical assistance, payment methods); the choices made with respect to these elements necessarily shape implementation.

*Longer timelines encourage innovation, increasing opportunities for testing of new approaches and refinement of strategies.*

Under the Maryland All-Payer Model, hospitals and physicians reported that the timeline was too rapid and unrealistic. Many SIM states found that the timeline precluded a fully participatory design process and resulted in a reliance on existing models rather than promoting exploration of new ideas. In MAPCP and Initiative to Reduce Avoidable Hospitalizations among Nursing Facility Residents (NFI), informants pointed to the wide scope of activities that required shifts in organization culture and adjustments to care processes, noting that these transformational activities cannot be rushed or achieved quickly.

*Tailored technical assistance, although resource intensive, reduces burden on participant staff and improves program effectiveness.*

Practices participating in several SIM initiatives, MAPCP, Comprehensive Primary Care initiative (CPC), and Federally Qualified Health Center Advanced Primary Care Practice Demonstration (FQHC), valued shared learning opportunities and direct assistance with practice transformation and found these approaches more beneficial in driving practice transformation than traditional forms of less tailored assistance (e.g. expert presentations and lectures).

*Standardized participation requirements and data systems/tools may increase chance of successful implementation but lack of flexibility may prove burdensome under some circumstances.*

Model requirements contributing to implementation included development of a centralized data management system (FAI), use of a uniform screening intake form (Strong Start), and high accountability standards for meeting PCMH requirements for participation (MAPCP). These requirements were found to contribute favorably to enhanced communications and coordination (through the use of a single, centralized, comprehensive patient record, FAI); effective interventions (through the form's ability to identify symptoms for depression, and other priority issues, Strong Start); and favorable outcomes when combined with other program features (MAPCP). However, standardized requirements were sometimes considered burdensome or time-consuming, particularly for certain types of entities, or having the potential to stifle innovation.

*Payment methods that incentivize and reward a consistent set of activities, are flexible enough to allow different levels of risk and reward, and rely on transparent and predictable methodologies reduce burden and increase provider acceptance.*

In SIM R2, models that required low provider payment risk tended to encourage provider participation. For the Maryland All-Payer Model, the state has fine-tuned its payment policies to encourage hospital efforts to reduce avoidable utilization and improve the model's performance. In MAPCP, predictability of payments, or practices receiving the payments they expected, was associated with success.

*Experimenting with multiple, proactive approaches to defining eligibility criteria and tailoring enrollment processes may allow organizations to identify more participants that could benefit from the model.*

In Strong Start, staff tried different approaches to enrolling participants, including in-person outreach at clinics and tailoring the program description and benefits to the needs of different target groups. For other models, creative approaches to streamlining enrollment included obtaining more accurate patient information for enrollment (Health Care Innovation Awards, HCIA, Meta-Analysis) and using a tool to align inflow of patients with clinic capacity (FAI).

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*Making changes to model design and features (e.g., timelines or requirements) during demonstration periods can lead to significant improvements in results, although mid-stream changes may have unintended consequences.*

Seven of the ten HCIA R1 BHSA awardees received extensions to the 3-year initial award period—the extensions allowed four awardees to close out their programs and three awardees to complete their own evaluations and transition their projects to more sustainable sources of funding. In SIM R1, based on the lack of participation of Medicaid managed care plans, the state shifted its focus from a broader primary care initiative to soliciting feedback and designing a Medicaid ACO model that is strongly integrated with Medicaid managed care plans. In Strong Start, some awardees struggled to adapt to mid-course adjustments such as changing data submission requirements or collection/reporting processes. While a degree of flexibility to refine models in response to on-the-ground experience and stakeholder feedback increases engagement and eases implementation, even sought-after changes need to be introduced carefully and communicated clearly so as to allow appropriate adaptations.



### **Health IT and Data**

State resources and support were often cited as critical in supporting HIT adoption. When implemented well, these systems and tools enhanced access to high-quality data, supported care coordination, and accelerated progress toward delivery system transformation. Most often, however, states and program participants cited hampered implementation due to lack of resources, interoperability issues, or legal obstacles.

*States are well-suited to provide support for standardized technologies and leadership in promoting common data formats.*

One of the states participating in FAI developed a web-based clinical support tool that integrated individual-level information from payment and assessment data systems across types of care, facilitating prioritization of enrollment of high-cost, high-risk beneficiaries into health homes and making care coordination easier. Some SIM R1 states also used demonstration funds to develop a variety of analytic platforms to better understand how their delivery models facilitated care coordination.

*States can provide direct funding for HIT implementation activities to improve adoption.*

Many of the states participating in SIM R1 offered financial support to support electronic health record (EHR) adoption: three states provided funds to behavioral health and other provider types to establish or improve their EHRs while other states invested demonstration funds in health insurance exchanges (HIEs) to support delivery system reform models, with providers citing event notification services as particularly useful in improving care coordination. As part of MAPCP, all states leveraged funding from other sources to fund portions of the Patient-centered medical home (PCMH) initiative or complementary initiatives (e.g., implementing EHRs).

*States can leverage their mandate authority to require, and thus accelerate, provider participation in data reporting and HIT adoption.*

As described in the Primary Care Systematic Review (PCSR), existing infrastructure such as a state or regional HIE, sometimes accompanied by a legislative mandate, increased the pace of practice transformation. Some of the SIM R1 states mandated that providers participate in data reporting and health IT and provided direct funding of related initiatives as a way to ensure implementation. In one MAPCP state, practices attributed HIT advancement including EHR adoption, in part, to the state's requirement that practices attempt to connect to the state HIE.

*States can often amend state regulations to remove legal obstacles to data sharing, and develop analytic platforms or event notification systems to assist providers.*

Several SIM states used legislation or regulations related to consent to increase the ability of providers to share electronic health information. One of these states also developed a toolkit for providers to aid in understanding the legal aspects of disclosure of patient information and in developing policies for training staff. Despite some successes, models still faced challenges in sharing data and in timely notification of patient use of resources at other facilities.

*Even when states have more limited roles, they can advance one-on-one agreements or partnerships to progress HIT implementation and data sharing.*

In HCIA R2, program staff began working with a hospital to receive timely EHR notifications of ED visits and inpatient admissions, allowing program staff to begin coordinating post-hospital discharge care while patients were still in the hospital. At least one of the HCIA R2 awardees agreed upon a process for exchanging claims data with the state Medicaid agency, allowing direct access to claims data and negating the need to request information from individual managed care organizations (MCOs).



### **Care Coordination and Collaboration across Provider Type and Sites of Care**

New or refined staff roles focused on care coordination were credited with driving much of the improved care coordination that providers and patients experienced. However, resistance to change on the part of physicians and other providers, ambiguity about care coordinators' roles, and inadequate payments were sometimes cited as obstacles to effectively using non-physician providers. Conflicting incentives for providers also inhibited their ability to improve quality, constrain costs, and maintain continuity of care.

*Clearly defined roles, careful identification of appropriate staff, and training support help promote effective integration.*

Evaluators for SIM R1 and MAPCP agreed that care coordinator roles must be well-defined, including delineating specific functions and boundaries, to ensure staff are as effective in their roles as possible. Several model reports (Strong Start, HCIA R1 BHSA, and NFI) noted the importance of deliberate selection of care coordinator staff (based on attributes such as

experience with the priority population, community roots, and strong communication skills) and of providing training to support integration and adaptation.

*Provider buy-in is critical: varied strategies can help overcome resistance and integrate staff into existing workflows.*

Educational webinars, training sessions, and active leadership support were employed successfully to familiarize providers with the benefit of new functions in Strong Start and HCIA R1 BHSA initiatives. Training staff with varied backgrounds together helped dissolve divisions across different types of staff (e.g., physicians, nurses, social workers), as reported in the HCIA R2 Meta-Analysis.

*Ongoing reimbursement as well as the removal of obstacles that limit their roles is needed to allow full use of care coordinators.*

Several models (e.g., HCIA R1, MAPCP) encountered challenges related to lack of reimbursement for care coordination services and new staff types, though state legislation in one state authorized Medicaid reimbursement for the three emerging professions (CHWs, community paramedics, and dental therapists) being supported under its SIM Initiative. Other models faced obstacles imposed by state licensing limiting the care coordinators roles.

*Strategies to promote provider collaboration, including sharing of patient data, improved communications, and alignment of incentives across provider sites, may accelerate progress toward better patient outcomes.*

Across several models (SIM R1 and R2, MAPCP, HCIA R1), strategies to integrate and facilitate stronger relationships between behavioral health and primary care included encouraging communication through telehealth initiatives and physical co-location, skills training to promote new care coordination responsibilities, and using EHRs and HIEs to share and integrate data. One-third of Medicaid Emergency Psychiatric Demonstration (MEPD) states described improved communications across provider sites pertaining to discharge planning and care; these improvements were ascribed to having a specific case manager or a transition team that was in charge of the patient follow-ups.

## **\$ Financial Resources**

Across the board, stakeholders benefited from newly available financial resources supporting infrastructure development, delivery system transformation activities, and provision of innovative services. Still, inadequate funding levels and low reimbursement rates, as well as difficulties in identifying sustainable sources of program funding, were commonly voiced concerns across models.<sup>4</sup>

<sup>4</sup> Throughout the report, we distinguish between “funding” and “payment/reimbursement.” Funding refers to lump-sum or grant amounts that are not linked to specific beneficiaries and were often provided to awardees at model start-up. Payment or reimbursement is per service or per capita at the beneficiary level.

*Without adequate funding, awardees may not be able to implement the models as designed; lags in funding can cause early implementation delays.*

In MAPCP and SIM, states were able to make infrastructure investments that aided providers and practices in implementing or improving EHRs and in fostering partnerships across community entities. FAI funding helped many states develop programs to assist beneficiaries enroll in and select plans, while one state accessed additional funds through federal financing. Several awardees in HCIA R1 BHSAs cited the lag in receipt of funding from CMS caused early implementation delays such as deferred initiation of patient recruitment and staff hiring.

*Low reimbursement rates provide weak compensation for delivering key services and sustaining models for high-need populations.*

Under FAI, health plans voiced concern that capitation rates did not align properly with the care models to meet the care needs of beneficiaries or sufficiently compensate for the expected additional workload. In MAPCP, practices felt that the care management fee was inadequate to sustain practice enhancements while trying to improve quality and continued patient care. For some HCIA R1, the lack of ongoing reimbursement for telemedicine, care coordination services, and new staff types (e.g., health coaches and patient navigators) made sustainability challenging.



### **Stakeholder Roles and Engagement**

Across stakeholders and models, successful engagement strategies varied but benefited from being tailored to the particular circumstances and needs of participants and stakeholders. Because achieving program goals often relies on providers changing their practices and behavior, particular attention is required to develop strategies to motivate and incentivize that change.

*Communication involving all stakeholders is critical and facilitated by prior collaborations or proactive efforts to promote dialogue with new partners through outreach and education, inclusive governance structures, or establishing channels for seeking input.*

In some of the MAPCP initiatives where payers had already collaborated in previous efforts, model implementation was able to build on existing relationships among stakeholders to ease the burden of transformation for practices. Similarly, HCIA R1 BHSAs awardees' prior experience with partners in similar projects made implementation easier. In the HCIA R1 Meta-Analysis, evaluators noted that new programs struggled with implementation and found that time necessary to forge strong relations with new partners was an unanticipated challenge for many awardees.

*Providers can be engaged through multiple pathways including administrative and clinical leadership roles and education about the benefits of the model.*

Strong leadership was highlighted as key to gaining buy-in from the full range of staff and providers in the Strong Start model. Similarly, some HCIA R1 BHSAs awardees said strong leadership—based on expertise in the intervention, experience with target population(s), and accessibility—was a key facilitator of program implementation. Several models, including SIM R1, Strong Start, and HCIA R1 BHSAs gave examples of using provider and staff education and



training in the model and its goals and purpose to promote provider understanding and engagement. Two awardees in one Strong Start model reported lukewarm interest from leadership as the main factor preventing continuation of the model and successful NFI implementation was often hindered when facility staff or leadership resisted aspects of the initiative.

*Payer engagement is facilitated by prior experience in similar models or the involvement of other payers, particularly Medicare and/or Medicaid; payers are generally more interested in models with a clear business case or path and timeline to accruing evidence.*

Across states participating in MAPCP, the entry of Medicare as a payer was generally viewed as positive because it brought additional funds and added legitimacy, encouraging other payers to participate. In SIM R2, the states that focused first on implementing a common measure set for Medicaid payers and models progressed further on measure implementation than other states that first sought agreement among payers before proceeding to implement a measurement plan. Lack of evidence and data was problematic for payers in MAPCP as well as in some of the SIM R1 states, leading in part to low engagement.

*Patient engagement and participation improves when providers adapt communication and care delivery to meet their particular needs and circumstances.*

In a number of models (MAPCP, Strong Start, HCIA R1 BHSA), patients facing multiple socioeconomic barriers such as lack of adequate housing, food insecurity, and unmet dental and behavioral health needs were challenging to reach and engage. Tailored outreach strategies based on culture, language, health literacy and social risk factors combined with multiple modes of approach (e.g., in-person, cell-phone, via community-based resource networks) increased beneficiary participation in the MIPCD model as well as in Strong Start.

## Environment

Features of the state or local environment provide important context and may facilitate or confound implementation. Synergies in funding, information exchange, and delivery and payment reforms from previous or concurrent initiatives generally facilitated model start-up and implementation. States sometimes adopted regulations and policies to facilitate and sustain change though existing state policies, particularly related to Medicaid, were also seen as barriers to implementation in a number of states or models.

*Leveraging funding, infrastructure, partnerships, and other structures and processes from previous or concurrent reform initiatives facilitates start-up and implementation of delivery and payment reforms.*

States participating in MAPCP and SIM realized cross-benefits related to funding, infrastructure, and data reporting. Stakeholders across the states generally felt that other ongoing initiatives were complementary and dovetailed with the multi-payer PCMH initiatives, strengthening the primary care base on which the larger reforms were built. As an example, one group began producing practice feedback reports with medical and pharmacy claims data for primary care

practices across the state as part of the state's SIM initiative, which benefited both MAPCP demonstration and non-demonstration practices.

*Changes in policies and regulations can aid implementation through coverage of, and adequate reimbursement for, innovative services and functions.*

One of the SIM states gained strong provider participation through a legislative mandate requiring Health Insurance Marketplace qualified health plans (QHPs) to participate in PCMHs, while another state used SIM funds to prepare practices for participation in newly legislated behavioral health homes. One of the HCIA R1 BHSA awardees benefited from policies in several states supporting the use of telemedicine, which helped to increase demand for the program's tele-psychiatry services. Changes in state Medicaid policy affected multiple Strong Start awardees, including changes to Medicaid and WIC coverage for equipment and prescriptions important for participants; a transition to Medicaid managed care that resulted in improved access to transportation services; and a requirement for MCOs to include at least one birth center in their network which increased Medicaid volume at some sites.

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## BACKGROUND AND PURPOSE

As part of its continuing effort to accelerate the volume to value transformation of the healthcare system, in September 2017, The Center for Medicare & Medicaid Services (CMS) released a Request for Information (RFI) to gather stakeholder input on “a new direction for the Innovation Center to promote patient-centered care and test market driven reforms that empower beneficiaries as consumers, provide price transparency, increase choices and competition to drive quality, reduce costs, and improve outcomes.”<sup>5</sup> CMS will use the feedback as it works to develop new models, focusing on the eight focus areas outlined in the RFI.

One of the eight focus areas identified in the RFI was state-based and local innovation, including Medicaid-focused models. As noted in the RFI, “(s)tates play a critical role in innovation and delivery of high-quality care,” given their wide reach and unique policy, regulatory, and convening authority. Across states, their role in healthcare delivery can vary; not only are states at different stages of readiness with respect to innovation, but they face different budgetary constraints, have different legislative histories and have different regulatory mechanisms at their disposal. States can use these tools to develop model designs and solutions that account for the variation in context and history and respond to their unique needs, values, and populations.

To inform future state-based models, it is important to examine this underlying variation and have a clear picture of the state role, relevant state policies, and other state-specific features that may influence model outcomes as well as those aspects of model implementation that are agnostic to the state setting. The Center for Medicare & Medicaid Innovation (the Innovation Center, CMMI) has funded many models with a state component and, while there have been individual evaluations for these initiatives, there has been no systematic effort to look across these initiatives to leverage findings and promising practices. To this end, CMMI contracted with L&M Policy Research to conduct a qualitative meta-synthesis of findings from a select set of state-based initiatives to better understand overall lessons learned, barriers to model success and/or implementation, and opportunities for future state-based models. Specifically, within the broad domains of barriers to model success and/or implementation and opportunities for future models, CMS requested that L&M address a number of research questions related to barriers to model implementation and overall lessons learned. The sub-domains or themes relevant to these research questions include:

- Federal programmatic requirements, model timing and overlap across initiatives
- Organizational/management structures and financial resources
- Involvement of state Medicaid programs and state- and local-level factors
- Use of health IT and data collection/sharing
- Use of innovative staffing models
- Engagement of key stakeholders, including providers and payers (Medicaid and commercial)

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<sup>5</sup> <https://innovation.cms.gov/Files/x/newdirection-rfi.pdf>

- Beneficiary engagement and social barriers to participation

With these areas of interest in mind, this report presents the results of the study, focusing on the lessons learned across state-based initiatives (or models with significant state roles) using qualitative findings from selected CMMI evaluations. We first describe our methodological approach to reviewing the evaluation reports, including extracting relevant findings and organizing them to address CMMI's questions. We then identify and discuss the lessons learned to inform development of state-based models for innovations in payment and delivery reform. Finally, we present the synthesized findings about barriers to and facilitators of model success.

## OVERVIEW OF APPROACH, CONTEXT, AND LIMITATIONS

This section provides a brief description of the approach to reviewing the evaluation reports and abstracting and organizing relevant information, the variation in the context within which models were implemented, and the study limitations. More detail is provided in Appendix A.

### Methods in Brief

We reviewed 47 evaluation reports covering 12 models that CMMI selected and categorized into three groups, based on the state’s primary role, as shown in Figure 3.<sup>6</sup>

**Figure 3. Study Models by State Role**

<b>Tier 1: Strong State Role</b>	<ul style="list-style-type: none"> <li>• Multi-Payer Advanced Primary Care Practice Demonstration</li> <li>• Maryland All-Payer Model</li> <li>• State Innovation Models Rounds 1 and 2</li> <li>• Financial Alignment Initiative</li> </ul>
<b>Tier 2: Medicaid-Focused</b>	<ul style="list-style-type: none"> <li>• Strong Start for Mothers and Newborns: Enhanced Prenatal Care Models</li> <li>• Medicaid Emergency Psychiatric Demonstration</li> <li>• Medicaid Incentives for the Prevention of Chronic Disease Model</li> </ul>
<b>Tier 3: Other State Role</b>	<ul style="list-style-type: none"> <li>• Health Care Innovation Awards Round 1 , Behavioral Health and Substance Abuse, Round 1 Meta-Analysis, and Round 2</li> <li>• Initiative to Reduce Avoidable Hospitalizations among Nursing Facility Residents</li> <li>• Primary Care Systematic Review</li> </ul>

We used a three-phase approach to review and synthesize qualitative findings from the evaluation reports. Our goal with this approach was to implement a consistent process for identifying key findings of each model, comparing and contrasting models, and inferring lessons learned across them.

*Phase 1: Model-Specific Abstraction.* To understand each of the models, the team documented information on the model and evaluation features, e.g., describing the intervention, funding, and key actors. Then, with the research questions as a guide, we identified “Facilitators and Challenges” within each report, sorting them by themes (the themes were driven by CMS’s research questions). Themes were initially derived based on Tier 1 models.

<sup>6</sup> The 12 models count PCSR as three models (Comprehensive Primary Care model, Independence at Home, and the Federally Qualified Health Center Advanced Primary Care model); MAPCP is counted separately. A complete listing of the reports with references is provided in Appendix Table 7.

*Phase 2: Cross-Model Analysis.* The project team refined the themes (to reflect additional findings from Tier 2 models) and classified the facilitators and challenges for each model under subthemes using abstracted information as specific examples.

*Phase 3: Synthesis and Interpretation.* As a final step, the team identified commonalities and differences within the cross-model examples of facilitators and challenges collected for each theme, working together to draw inferences for future CMMI initiatives.

The final set of themes—used to extract and organize relevant report data into broad categories of factors affecting model implementation—were:

- Theme 1: States as Awardee or Convener
- Theme 2: Model Design and Features
- Theme 3: Health IT and Data
- Theme 4: Care Coordination and Provider Collaboration across Provider Type and Sites of Care
- Theme 5: Financial Resources
- Theme 6: Stakeholder Roles and Engagement
- Theme 7: Environment

## Study Context

The team took care to contextualize findings across the 12 models examined, which varied in the interventions, scale, key actors, and payments or incentives. Familiarity with these features provided an essential foundation for understanding and assessing the evaluation findings but also complicates drawing of inferences across models. Key variation included:

- *Interventions.* All of the models sought to improve health and quality and lower the cost of care but differed in the specific intervention selected to achieve the goals. Most of the models focused on a care delivery intervention, such as care coordination (sometimes including a patient-centered medical home, PCMH), while others relied on a payment incentive to drive change. Models also differed in the degree to which CMMI, as opposed to awardees, specified the model design.
- *Model Scale.* The models reviewed are heterogeneous in scale and coverage—models were convened in differing numbers of states, with varied geographic reach within each state, and involved different types and numbers of payers, providers, and beneficiaries.
- *Model Actors.* Models also differed in the degree to which states, payers, and/or providers played key roles in model implementation. The state served as the awardee/convener for six models while, for three models, CMS was the convener, with primary responsibility for model design. In other models, a variety of entities were the awardees and oversaw model implementation at multiple provider sites.

- *Model Funding, Payment, and Incentives.* Funding approaches varied across models and, in some instances, also differed by individual awardee. Some models provided start-up funds for infrastructure development and implementation, while others added per beneficiary per month (PBPM) payments to existing reimbursement for services provided. Some models also included a performance- or risk-based payment.

## Limitations

This study had several limitations. In addition to the variation in the models described above, the evaluations utilized different methods for collecting and analyzing qualitative data. The findings are based on differing activities (e.g., key informant interviews versus site visits versus focus groups), involving differing numbers of interviews with differing audiences, and the team was unable to assess the relative strength of the evidence for each finding. Thus, the project team did not weight the evidence of any individual model more heavily when identifying examples, but rather considered the findings from all CMS-identified models and evaluations equally regardless of the size of the model or the data collection modality.

For information about model implementation, the team relied solely on existing qualitative research reports and did not collect any primary data. Working with qualitative data is inherently subjective; our conclusions were drawn only from the approaches that other evaluators chose to use for the evaluations and the findings that they chose to include in their reports. From these reports, we made further decisions during our reviews on which of those findings to abstract for analysis and which findings warranted inclusion in this report.

Finally, the models examined reflect early adopters and voluntary innovators, those with prior experience and a readiness for change. This is true of states as well as other awardee entities that have generally elected to participate and may be well-positioned for the next stage of innovation by a past infusion of resources from CMS. In several of the models, evaluation findings document that organizations with fewer resources, and those with limited or no experience, faced greater obstacles in the many activities required for model implementation. The reports reviewed for this effort provide little information regarding those states that have not yet engaged in innovation. Table 1 shows the number of states participating in Tier 1 and Tier 2 initiatives—those initiatives that have the most prominent state roles. Overall 34 states (including the District of Columbia) are represented in our findings.

**Table 1. Number of States Participating in Tier 1 and Tier 2 Models with Strong State Role**

<b>17 states</b>	<b>Participate in 0 models</b>
<b>18 states</b>	Participate in <b>1</b> model
<b>7 states</b>	Participate in <b>2</b> models
<b>9 states</b>	Participate in <b>3–4</b> models

Despite these limitations, the variety of models and evaluation methods involved in this study presents an opportunity to observe patterns from a diverse universe of scenarios. Through the

team's qualitative meta-synthesis, we were able to draw valuable conclusions to better understand barriers, facilitators and opportunities associated with success in these models and inform future state-based CMMI initiatives.



## LESSONS LEARNED

A synthesis of findings across the 12 models revealed many facilitators and challenges that were common to model implementation. The lessons learned from these facilitators and challenges offer relevant insights for designing new or refining existing models with a state role. However, it should be noted, when considering future applications of these lessons learned, that these models disproportionately reflect early adopters and voluntary innovators, those with prior experience and a desire for change. This is true of states as well as other awardee entities that have generally elected to participate and may be well-positioned for the next stage of innovation by a past infusion of resources from CMS. In several of the models, evaluation findings document that organizations with fewer resources, and those with limited or no experience, faced greater obstacles in the many activities required for model implementation. The reports reviewed for this effort provide little information regarding those states that have not yet engaged in innovation.

As noted throughout the analysis, state roles in the models can range from being a lead awardee to a supporting and more peripheral stakeholder. Regardless of the specific role, broadly speaking, states can be well positioned for: 1) offering leadership by providing visibility and encouraging wide participation, 2) serving as a base for collaboration and financial resources, and 3) structuring a regulatory and policy environment hospitable to innovation. More detailed lessons, organized by the key areas impacting model implementation, are presented below and include examples to illustrate some of the different ways in which facilitators and challenges related to each area unfolded in particular models. These examples are intentionally brief and are described in more detail in the Findings sections of the report. Moreover, the examples below are derived from models of markedly different scopes and sizes and should be viewed as illustrative rather than as reflective of the broader importance of the particular issue across all models.



### States as Awardee or Convener

State roles varied across each of the 12 initiatives covered in the evaluation reports. In six of the initiatives, the state was a major player, serving as awardee and convener, with a critical role in model design and implementation. Additionally, the state Medicaid agency served as the lead for three of these initiatives, which involved significant Medicaid redesign efforts and placed the state in an active role as payer. Building on existing collaborative efforts and relationships as well as model-specific experience, states can contribute to timelier and smoother implementation, providing and leveraging resources for infrastructure development or mitigating regulatory barriers to benefit implementation. However, states were not always able to achieve effective collaboration among stakeholders with varied agendas. Further, state agencies were sometimes unable or unwilling to provide the leadership, regulatory relief, and management needed for model implementation.

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***States can be successful conveners, offering effective leadership and support, prior experience leading complex initiatives, and a platform for decision-making and cross-stakeholder collaboration.***

States participating in MAPCP, the Maryland All-Payer model, SIM, and MIPCD all had a history of leading collaborative efforts and had established relationships with stakeholders that eased implementation. As well, six of the eight MAPCP states already had multi-payer PCMH initiatives, while the other two states had multi-stakeholder collaborations with broader primary care or care coordination emphases, strengthening the foundation on which the initiatives were built. Maryland's prior experience with the stakeholder engagement process—fine-tuned during the Medicare waiver modernization process—informed the creation of two external stakeholder groups for the SIM initiative, while three states in SIM were able to rely on an established stakeholder group such as an advisory board to jumpstart collaborative efforts.

***States are well-positioned to foster delivery system transformation but vary in their experience, readiness for change, and available resources including data infrastructure and regulatory environment.***

Two SIM states chose to rely on market forces that are already promoting value-based payment approaches (notably, workforce education and training, health IT tools and value-based metrics to help providers and payers make purchasing decisions, and infrastructure to link providers with community resources) rather than state actions, because stakeholders believed the approach would be more effective and anticipated difficulties in passing needed legislation. In MAPCP, one state benefited from strong leadership from the state insurance commissioner, who set regulatory standards for affordability for commercial insurers favorable to the model and facilitated payer participation, while another state suffered from payer attrition, associated in part with lessened pressure from the state and changes in Medicaid that no longer required participation. Some MIPCD programs and Strong Start awardees in certain states faced challenges in navigating Medicaid reimbursement or obtaining coverage/reimbursement for services related to the model, which varied widely by state. It is likely that some states with less experience leading innovation will require additional time and resources — one SIM state found that, while it was ultimately not ready to lead a large statewide innovation effort, the planning activities it undertook in the Design and Pre-Test phase revealed connections between existing or planned innovation activities across the state that had not been previously recognized by stakeholders.

***Other entities can lead innovation, with implementation facilitated by state support and CMS providing credibility and essential funding.***

In some circumstances, state efforts may benefit from partnerships with independent third-party organizations (such as a community nonprofit) that are able to more effectively gain broad stakeholder participation and collaboration. In two of the MAPCP states, although the state was the awardee and official convener, nonprofits played key convener roles, bringing to bear prior experience and strong roots with stakeholders. These organizations do not have access to the same level of financial resources or the ability to directly influence regulation and policy, so CMS participation as well as state support remain important. In Strong Start, partnerships

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between model sites and Medicaid and other state agencies led to expedited Medicaid approval that hastened women's ability to receive care. In MIPCD, awardees reported that having high-level state leaders as champions helped to minimize state-level bureaucratic obstacles.

*For additional examples of findings to support lessons learned related to the state as awardee or convener, see pages [35–38](#). For examples of findings related to state policy and regulation, see pages [101–105](#).*



## Model Design and Features

Regardless of the various goals and prioritized populations, all models have common elements (e.g., timeline, technical assistance, payment methods, as shown in Figure 1 in the Findings section); the choices made with respect to these model design elements necessarily shape the implementation process. Across models, informants cited the importance of allowing sufficient time to test and adapt approaches, consistency and transparency in methods for eligibility and payment, and flexibility, as needed, to change requirements in response to experience and feedback. Model features that are complex, based on inconsistent requirements or incentives, or fail to recognize participants' particular circumstances and needs can cause undue burden on participants and detract from model implementation.

### ***Longer timelines encourage innovation, increasing opportunities for testing of new approaches and refinement of strategies.***

Under the Maryland All-Payer Model, hospitals and physicians reported that the timeline was too rapid and unrealistic; however, hospitals that had more time to develop and refine strategies that work under a fixed revenue model appeared to have more sophisticated or advanced strategies than the later-implementing hospitals. Many SIM states found that the timeline precluded a fully participatory design process and resulted in a reliance on existing models rather than promoting exploration of new ideas. In MAPCP and NFI, informants pointed to the wide scope of activities that required shifts in organization culture and adjustments to care processes, noting that these transformational activities cannot be rushed or achieved quickly.

### ***Tailored technical assistance, although resource intensive, reduces burden on participant staff and improves program effectiveness.***

Practices participating in several SIM initiatives, MAPCP, CPC, and FQHC, valued shared learning opportunities and direct assistance with practice transformation and found these approaches more beneficial in driving practice transformation than traditional forms of less tailored assistance (e.g. expert presentations and lectures). Strong Start awardees also reported benefits from shared learning opportunities; specifically, shared learning opportunities focused on promising practices around developing "opt out" enrollment policies, messaging to promote buy-in among staff and providers, and ideas for adapting programs to specific needs of the site and priority enrollee population helped to increase program enrollment. While these tailored strategies were more resource-intensive, less tailored assistance was often reported as too general and often caused frustration from participants.

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***Standardized participation requirements and data systems/tools may increase chance of successful implementation but lack of flexibility may prove burdensome under some circumstances.***

Model requirements contributing to implementation included a uniform screening intake form (Strong Start), high accountability standards for meeting PCMH requirements for participation (MAPCP), and development of a centralized data management system (FAI). Multiple Strong Start awardees noted that the intake form's ability to identify symptoms for depression, and other priority issues led to effective interventions. However, some awardees noted that the required forms were time-consuming and challenging for sites with fewer staff. While MAPCP's high accountability standards (based on independent audits or assessments) were found, in some instances, to be associated with favorable outcomes, practices voiced concerns about the standards imposing burden, creating challenges for rural practices, and potentially stifling innovation. For FAI, implementation of care coordination data systems varied among states and MMPs, with communication between providers and beneficiaries improving in one state that required a single, centralized, comprehensive record. In several states where time and resources were not available, workarounds were created or MMPs experienced problems exchanging data.

***Payment methods that incentivize and reward a consistent set of activities, are flexible enough to allow different levels of risk and reward, and rely on transparent and predictable methodologies reduce burden and increase provider acceptance.***

In SIM R2, models that required low provider payment risk, e.g., upside only or FFS rates with additional fees, tended to encourage provider participation. For the Maryland All-Payer Model, the state has fine-tuned its payment policies to encourage hospital efforts to reduce avoidable utilization and improve the model's performance, increasing the reward for meeting the annual readmission reduction target and introducing penalties for failing to do so. In MAPCP, predictability of payments, or practices receiving the payments they expected, was associated with success. Provider practices also reported that payers incentivizing a consistent set of practice activities reduced the need to respond to multiple, potentially competing, demands or incentives.

***Experimenting with multiple, proactive approaches to defining eligibility criteria and tailoring enrollment processes may allow organizations to identify more participants that could benefit from the model.***

In Strong Start, many awardees moved away from opt-in enrollment to using an opt-out approach and reported a positive impact on enrollment. Strong Start staff also tried different approaches to enrolling participants, including in-person outreach at clinics and tailoring the program description and benefits to the needs of different target groups. Several MIPCD states adopted multiple recruitment strategies to increase enrollment and made changes to the size, type, or distribution of beneficiary incentives, incorporated cultural and linguistic awareness into their recruitment, and built partner relationships to expand their reach. For other models, creative approaches to streamlining enrollment included obtaining more accurate patient information for enrollment (HCIA Meta-Analysis) and using a tool to align inflow of patients with clinic capacity (FAI).

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***Making changes to model design and features (e.g., timelines or requirements) during demonstration periods can lead to significant improvements in results, although mid-stream changes may have unintended consequences.***

Seven of the ten HCIA R1 BHSA awardees received extensions to the 3-year initial award period—the extensions allowed four awardees to close out their programs and three awardees to complete their own evaluations and transition their projects to more sustainable sources of funding. In SIM R1, based on the lack of participation of Medicaid managed care plans, the state shifted its focus from a broader primary care initiative to soliciting feedback and designing a Medicaid ACO model that is strongly integrated with Medicaid managed care plans. In response to challenges in meeting its enrollment targets, particularly for participants in rural and underserved areas, one HCIA R2 awardee expanded the program to an additional state and dedicated significant resources to recruiting and engaging providers. While a degree of flexibility to refine models in response to on-the-ground experience and stakeholder feedback increases engagement and eases implementation, even sought-after changes need to be introduced carefully and communicated clearly so as to allow appropriate adaptations. In the Maryland All-Payer model, flexibility was important but also produced some concern about responding to changes and led to a tension between the need for mid-course refinements in model policies and the need for policy stability. In Strong Start, some awardees struggled to adapt to mid-course adjustments such as changing data submission requirements or collection/reporting processes (e.g., data submission not electronic until later on). Strong Start evaluators also faced challenges due to multiple mid-implementation changes that affected the design.

*For additional examples of findings to support lessons learned related to the model design and features, see pages [41–55](#).*



**Health IT and Data**

All models incorporated health information technology and data systems and tools, though the range and sophistication were uneven both across and within models. In some instances, these tools helped accelerate participants' progress toward practice transformation and delivery system reform. When implemented well, these systems enhanced access to high-quality data and supported care coordination efforts. Additionally, the ability to share data across sites facilitated model implementation and care delivery. Most often, however, states and program participants cited hampered implementation due to lack of resources, interoperability issues, or legal obstacles. Because of the substantial financial investments required and the benefits of standardized approaches, state resources and support were often cited as critical in supporting HIT adoption.

***States are well-suited to provide support for standardized technologies and leadership in promoting common data formats.***

One of the states participating in FAI developed a web-based clinical support tool that integrated individual-level information from payment and assessment data systems across types of care, facilitating prioritization of enrollment of high-cost, high-risk beneficiaries into health homes

and making care coordination easier. And, according to the PCSR, several states in SIM and MAPCP worked to mitigate the lack of access to timely claims data by implementing local or statewide HIEs that provided discharge notifications. Some SIM R1 states also used demonstration funds to develop a variety of analytic platforms to better understand how their delivery models facilitated care coordination (e.g., in one state, the state developed an analytics engine and algorithms to track achievement). By accessing the state's ED data system, one HCIA R1 BHSA awardee was able to obtain comprehensive data to understand the full range of patients' needs and improve coordination with PCPs and other community providers.

***States can provide direct funding for HIT implementation activities to improve adoption.***

Many of the states participating in SIM R1 offered financial support, often in the form of grants, to support EHR adoption. Three states provided funds to behavioral health and other specific provider types to establish or improve their EHRs; other states invested demonstration funds in HIEs to support delivery system reform models, with providers citing event notification services (via HIEs or another mechanism) as particularly useful in improving care coordination. As part of MAPCP, all states leveraged funding from sources other than participating payers to fund portions of the PCMH initiative, or complementary initiatives including one state that made substantial investments in HIT that enabled practices to implement EHRs.

***States can leverage their mandate authority to require, and thus accelerate, provider participation in data reporting and HIT adoption.***

As described in the PCSR, existing infrastructure such as a state or regional HIE, sometimes accompanied by a legislative mandate, increased the pace of practice transformation. Some of the SIM R1 states mandated that providers participate in data reporting and health IT and provided direct funding of related initiatives as a way to ensure implementation. In one MAPCP state, practices attributed HIT advancement including EHR adoption, in part, to the state's requirement that practices attempt to connect to the state HIE.

***States can often amend state regulations to remove legal obstacles to data sharing, and develop analytic platforms or event notification systems to assist providers.***

Several SIM states used legislation or regulations related to consent to increase the ability of providers to share electronic health information. One of these states also developed a toolkit for providers to aid in understanding the legal aspects of disclosure of patient information and in developing policies for training staff. Despite some successes, models still faced challenges in sharing data and in timely notification of patient use of resources at other facilities.

***Even when states have more limited roles, they can advance one-on-one agreements or partnerships to progress HIT implementation and data sharing.***

In HCIA R2, program staff began working with a hospital to receive timely EHR notifications of ED visits and inpatient admissions, which allowed program staff to visit patients in the hospital and start coordinating post-hospital care. At least one of the HCIA R2 awardees was able to arrange an agreement with the state Medicaid agency on the process for exchanging claims data,

allowing direct access to claims data on all Medicaid recipients, negating the need to request information from individual MCOs.

*For additional examples of findings to support lessons learned related to HIT and data, see pages [58 – 65](#).*



### Care Coordination and Collaboration across Provider Type and Sites of Care

New or refined staff roles focused on care coordination were central features of most initiatives. Irrespective of titles and credentials, across the models, these new staff (referred to as care coordinators) were credited with driving much of the improved care coordination that providers and patients experienced. Additionally, strategies fostering provider collaboration, such as integration of behavioral health and primary care, accelerated progress toward increased enrollment and improved outcomes.

However, resistance to change on the part of physicians and other providers, care coordinator role ambiguity, and identifying and recruiting appropriate staff as well as sustaining payments were sometimes cited as obstacles to effectively using non-physician providers. As well, conflicting incentives within and across provider types inhibited ability to improve quality, constrain costs, and maintain continuity of care.

***Clearly defined roles, careful identification of appropriate staff, and training support help promote effective integration.***

Evaluators for SIM R1 and MAPCP agreed that care coordinator roles must be well-defined, including delineating specific functions and boundaries, to ensure staff are as effective in their roles as possible. Several model reports (Strong Start, HCIA R1 BHSA, and NFI) noted the importance of deliberate selection of care coordinator staff (based on attributes such as experience with the priority population, community roots, and strong communication skills) and of providing training to support integration and adaptation. Allowing sufficient time for personnel to adapt to their new roles was also deemed important in the PCSR; in HCIA R2, one awardee hired a nurse trainer to expedite the learning curve of new care coordination staff.

***Provider buy-in is critical: varied strategies can help overcome resistance and integrate staff into existing workflows.***

Educational webinars, training sessions, and active leadership support were employed successfully to familiarize providers with the benefit of new functions in Strong Start and HCIA R1 BHSA initiatives. Informal training modalities such as shadowing and mentoring can be useful. Also, training staff with varied backgrounds together helped dissolve divisions across different types of staff (e.g., physicians, nurses, social workers), as reported in the HCIA R2 Meta-Analysis. Though requiring sufficient time to pass, in MAPCP and other models, providers experienced the value of the new care coordinator roles through direct experience, recognizing the gaps in care filled and the benefits to workload and patients.

***Ongoing reimbursement as well as the removal of obstacles that limit their roles is needed to allow full use of care coordinator roles.***

Several models (e.g., HCIA R1, MAPCP) encountered challenges related to lack of reimbursement for care coordination services and new staff types, though state legislation in one state authorized Medicaid reimbursement for the three emerging professions (CHWs, community paramedics, and dental therapists) being supported under its SIM Initiative. Other models faced obstacles imposed by state licensing limiting the care coordinators roles.

***Strategies to promote provider collaboration, including sharing of patient data, improved communications, and alignment of incentives across provider sites, may accelerate progress toward better patient outcomes.***

Across several models (SIM R1 and R2, MAPCP, HCIA R1), strategies adopted to help integrate and facilitate stronger relationships between behavioral health and primary care included encouraging communication through telehealth initiatives and physical co-location, skills training to promote new care coordination responsibilities, and use of EHRs and HIEs to share and integrate data. Other strategies were aimed at creating shared incentives across provider sites, including the use of behavioral health-focused quality measures in several SIM states to increase alignment between behavioral specialists and PCPs. In the Maryland All-Payer model, where all sites shared incentives to coordinate care, by the second year of the initiative, there was an increased focus on relationships among hospitals and across inpatient, outpatient and PAC providers. One-third of MEPD states described improvements in patient communications as evidenced in both enhanced discharge planning processes and stronger linkages to aftercare services. The strategies that these states employed were to have frequent patient follow ups post discharge to assess patient needs and two of the states described assigning patients to a specific case manager or a transition team that was in charge of the patient follow ups, e.g., helping with medical or medication needs, transportation, and make follow-up appointments.

*For additional examples of findings to support lessons learned related to care coordination and collaboration, see pages [67 – 76](#).*

## **\$ Financial Resources**

The financial resources for implementation of new payment and delivery models may include startup funding for infrastructure, often augmented by leveraging state resources, or other initiatives or sources, as well as ongoing financing of service delivery extending beyond the program period. Across the board, stakeholders benefited from newly available financial resources supporting infrastructure development, delivery system transformation activities, and provision of innovative services. Still, inadequate funding levels and low reimbursement rates as



well as the difficulties in identifying sustainable sources of program funding were commonly voiced concerns across models.<sup>7</sup>

***Without adequate funding, awardees may not be able to implement the models as designed; lags in funding can cause early implementation delays.***

Leveraging funds and resources—from other reform initiatives, states or federal sources—may help participants address low funding levels to support start up and implementation costs and activities. For example, in MAPCP and SIM, a number of states were able to make infrastructure investments that aided providers and practices in implementing or improving EHRs and in support of other practice transformation activities, including fostering partnerships across community entities and providing data through HIE improvements. Funding available through FAI helped many states develop programs to help beneficiaries enroll in and select plans, however to support the development of care coordination services, one state turned to and accessed additional funds through federal financing. Additionally, several awardees in HCIA R1 BHSAs cited the lag in receipt of funding from CMS caused early implementation delays such as deferred initiation of patient recruitment and staff hiring. In MAPCP, five states reported ongoing payment challenges that impacted implementation: one state delayed Medicaid payments during a transition to a new information management system, and another state’s delays in implementing a related initiative resulted in community workers not being paid. Delayed payments distracted practices from quality improvement activities and adversely affected overall practice operations.

***Low reimbursement rates provide weak compensation for delivering key services and sustaining models for high-need populations.***

Under FAI, health plans voiced concern that capitation rates did not align properly with the care models to either meet the care needs of beneficiaries or sufficiently compensate for the expected additional workload. In MAPCP, practices felt that the care management fee was inadequate to sustain practice enhancements while trying to improve quality and continued patient care. For some HCIA R1, the lack of ongoing reimbursement for telemedicine and for care coordination services and new staff types such as health coaches, patient navigators, and CHWs made sustainability challenging.

*For additional examples of findings to support lessons learned related to financial incentives and resources, see pages [79–82](#).*



## **Stakeholder Roles and Engagement**

Across models, stakeholders included CMS/CMMI, state and local agencies, a range of healthcare provider facilities and healthcare professionals, public and commercial payers, community-based organizations, and beneficiaries. While the specific roles of each stakeholder

<sup>7</sup> Throughout the report, we distinguish between “funding” and “payment/reimbursement.” Funding refers to lump-sum or grant amounts that are not linked to specific beneficiaries and were often provided to awardees at model start-up. Payment or reimbursement is per service or per capita at the beneficiary level.

varied across models, active participation of providers and payers, and sometimes beneficiaries, was necessary for model implementation. Because achieving program goals often relied on providers changing their practices and behavior in a variety of ways, particular attention is required to develop strategies to motivate and incentivize that change. Across stakeholders and models, successful engagement strategies varied but benefited from being tailored to the particular circumstances and needs of participants and stakeholders; in particular, engagement strategies had to convey the direct benefits of the model to them and reduce perceptions of participation burden.

***Communication involving all stakeholders is critical and facilitated by prior collaborations or proactive efforts to promote dialogue with new partners through outreach and education, inclusive governance structures, or establishing channels for seeking input.***

In some of the MAPCP initiatives where payers had already collaborated in previous efforts, they were able to build on existing relationships among stakeholders to ease the burden of transformation for practices. Similarly, HCIA R1 BHSA awardees' prior experience with partners in similar projects or experience with other mental health integration, primary care redesign, and care coordination programs made implementation easier because they had a pre-existing network of partners that aided understanding of partners' perspectives. The PCSR Final Report found that successful collaboration among multiple stakeholders required model conveners to clearly communicate the roles and responsibilities of the various payers and providers as well as the goals and strategies of CMS. In the HCIA R1 Meta-Analysis, evaluators noted that new programs somewhat struggled with implementation and found that time necessary to forge strong relations with new partners was an unanticipated challenge for many awardees.

***Providers can be engaged through multiple pathways including administrative and clinical leadership roles and education about the benefits of the model.***

Strong leadership was highlighted as a facilitator for sustainability in the Strong Start model and key to gaining buy-in from the full range of staff and providers. Similarly, some HCIA R1 BHSA awardees said strong leadership was a key facilitator of program implementation, both at the administrative level and for clinical leaders, such as physician champions. Valued characteristics of leadership included expertise in intervention, experience with target population(s), and accessibility. The HCIA R1 Meta-Analysis found that organizational leaders that were already well-known and trusted by colleagues and partners facilitated the implementation of innovations. The PCSR report noted that practice "champions" improve staff buy-in and facilitate transformation, with many key informants reporting that a practice champion was key to successful practice transformation. Several models, including SIM R1, Strong Start, and HCIA R1 BHSA gave examples of using provider and staff education and training in the model and its goals and purpose to promote provider understanding and engagement. Two awardees in one Strong Start model reported lukewarm interest from leadership as the main factor preventing continuation of the model. Successful NFI implementation was often hindered when facility staff or leadership resisted aspects of the initiative or seemed to have low engagement with certain initiative components and goals.

***Payer engagement is facilitated by prior experience in similar models or the involvement of other payers, particularly Medicare and/or Medicaid; payers are generally more interested in models with a clear business case or path and timeline to accruing evidence.***

Across states participating in MAPCP, the entry of Medicare as a payer was generally viewed as positive because it brought additional funds and added legitimacy, encouraging other payers to participate. However, in several MAPCP states, maintaining voluntary participation by private payers was an ongoing challenge associated, in part, with state policy/regulatory changes. In SIM R2, the states that focused first on implementing a common measure set for Medicaid payers and models progressed further on measure implementation than other states that first sought agreement among payers before proceeding to implement a measurement plan. Lack of evidence and data was problematic for payers in MAPCP as well as in some of the SIM R1 states, leading in part to low engagement.

***Patient engagement and participation improves when providers adapt communication and care delivery to meet their particular needs and circumstances.***

Tailored outreach strategies based on culture, language, health literacy and social risk factors combined with multiple modes of approach (e.g., in-person, cell-phone, via community-based resource networks) increased beneficiary participation in the MIPCD model as well as in Strong Start. In the former, states reported the importance of increasing access to all possible participants by making sure they offered culturally appropriate suggestions, treatment options, and services and provided material in languages other than English. Awardees in two of the Strong Start models discussed the challenges presented by lack of childcare and transportation. Relatedly, in a number of models (MAPCP, HCIA R1 BHSA, Strong Start), patients facing multiple socio-economic barriers such as lack of adequate housing, food insecurity, and unmet dental and behavioral health needs were challenging to reach and engage.

*For additional examples of findings to support lessons learned related to stakeholder roles and engagement, see pages [85–98](#).*

## Environment

Features of the state or local environment provide important context and may facilitate or confound implementation. Synergies in funding, information exchange, quality and performance reporting, and delivery and payment reforms from previous or concurrent initiatives generally facilitated start-up and implementation of models. States sometimes adopted regulations and policies to facilitate and sustain change. The changes the states focused on in their regulations and policies varied from improving HIT adoption rates, supporting partnership requirements, promoting payment policy and coverage changes, and facilitating payer participation and adoption of consistent metrics. However, we also found examples, albeit more limited, where participants reported that health care reform efforts competed for their limited resources. Existing state policies, particularly related to Medicaid, were also seen as barriers to implementation in a number of states or models.

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***Leveraging funding, infrastructure, partnerships, and other structures and processes from previous or concurrent reform initiatives facilitates start-up and implementation of delivery and payment reforms.***

States participating in MAPCP and SIM realized cross-benefits related to funding, infrastructure, and data reporting. Stakeholders across the states generally felt that other ongoing initiatives were complementary and dovetailed with the multi-payer PCMH initiatives, strengthening the primary care base on which the larger reforms were built. As an example, one group began producing practice feedback reports with medical and pharmacy claims data for primary care practices across the state as part of the state's SIM initiative, which benefited both MAPCP demonstration and non-demonstration practices.

***Changes in policies and regulations can aid implementation through coverage of, and adequate reimbursement for, innovative services and functions.***

One of the SIM states gained strong provider participation through a legislative mandate requiring Health Insurance Marketplace qualified health plans (QHPs) to participate in PCMHs, while another state used SIM funds to prepare practices for participation in newly legislated behavioral health homes. States also used legislative mandates to promote MAPCP initiatives (in five states) or EHR mandates (one state). One of the HCIA R1 BHSA awardees benefited from policies in several states supporting the use of telemedicine, which helped to increase demand for the program's tele-psychiatry services. Changes in state Medicaid policy affected multiple Strong Start awardees, including changes to Medicaid and WIC coverage for equipment and prescriptions important for participants; a transition to Medicaid managed care that resulted in improved access to transportation services; and a requirement for MCOs to include at least one birth center in their network which increased Medicaid volume at some sites. Due to the emphasis on care coordination, a shift to Medicaid managed care also helped make potential partners more receptive to the new program for one HCIA R2 awardee.

*For additional examples of findings to support lessons learned related to environment, see [pages 100 – 105](#).*

## FINDINGS: OVERVIEW

In this section, we present a synthesis of facilitators and challenges to model implementation from our review of the qualitative findings in 47 selected evaluation reports. Our findings are organized around the main themes/factors in the conceptual framework—state role, model design, HIT, care coordination and collaboration across provider types and sites of care, financial/resources, stakeholders, and environment, which are shown in Table 2, along with the key project questions addressed in each section. For each theme, we summarize the main findings about facilitators of and challenges to model implementation that were gleaned from reviewing the evaluation reports. Facilitators are defined as factors that enabled implementation of the model or resulted in stakeholders’ favorable experiences. Challenges are defined as impediments to stakeholders’ implementing or sustaining the model. After providing the summary findings at the beginning of each section, we array examples from across the models grouped by subthemes. While we present a broad cross-section of model-based examples, all topics are not applicable to or addressed in all models and all pertinent model examples from the evaluation reports reviewed are not presented here.

**Table 2. Key Factors Affecting Model Implementation and Related Research Questions**

<b>Finding 1: States as Awardee or Convener</b>	What attributes as awardee/convener did states offer for successful implementation? What state attributes contributed to variation in their approach and effectiveness?
<b>Finding 2: Model Design and Features</b>	How did timing implementation or overlap of models play a role? What federal or other program requirements promoted successful implementation? What other elements of model design influenced implementation?
<b>Finding 3: Health IT and Data</b>	How did Health IT issues impede model success?  How was Health IT successfully used or incorporated? How was high quality data collected or acquired?
<b>Finding 4: Care Coordination and Collaboration across Provider Type and Sites of Care</b>	What do findings present regarding organizational or management structures that facilitate success? How did innovative staffing models (e.g., using community health workers) foster success? How did alignment of model incentives across provider types and sites of care affect implementation?
<b>Finding 5: Financial Resources</b>	What financial barriers prevented model success?

<p><b>Finding 6: Stakeholder Roles and Engagement</b></p>	<p>Were there difficulties in engaging providers and/or payers?          What strategies were deployed to successfully engage stakeholders?          What factors led to the successful engagement of payers?          What beneficiary-level or social barriers prevented program success?</p>
<p><b>Finding 7: Environment</b></p>	<p>How did participation in other reform initiatives affect implementation?          What state-level barriers prevented model success?          What state or local factors led to successful implementation?</p>

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**Finding 1: As the convener, the state offered prior experience, facilitated decision-making, and provided leadership for implementation.<sup>8</sup>**

The role of the state varied across each of the 12 initiatives covered in the evaluation reports. In six of the initiatives, the state was a major player, serving as awardee and convener, with a critical role in model design and implementation. In the Maryland All-Payer Model, the two rounds of State Innovation Model (SIM) awards, and MAPCP, state agencies developed proposals, designed models, convened stakeholders, and provided leadership throughout implementation. The state agencies serving as the lead varied across these initiatives, depending on the state and the specific intervention. In Maryland, the All-Payer Model grew out of a waiver codified in the 1970s that exempts Maryland from the Inpatient Prospective Payment System and the Outpatient Prospective Payment System and allows Maryland to set rates for these services. The Maryland hospital rate-setting program has been overseen by the Health Services Cost Review Commission (HSCRC) since 1971. For SIM and MAPCP, the lead depended on the history of the initiative. For example, in one state, the MAPCP initiative was in the Office of the Health Insurance Commissioner (OHIC) which had received a 2006 grant to convene stakeholders and conceptualize the project. While the Lieutenant Governor of one state led SIM R1 model design efforts and oversaw the model leadership team, the team included members from the Office of the Healthcare Advocate, the Department of Mental Health and Addiction Services and the Medicaid administrator. Additionally, the state Medicaid agency served as the lead for three initiatives involving significant Medicaid redesign efforts (FAI, MEPD and MIPCD). For these models, the state not only served as the awardee and convener, but also played an active role as payer. Across these models, the state acting as awardee and convener offered several potential benefits to implementation but also faced limitations:

- ***State as Key Stakeholder with Prior Experience:*** Building on existing collaborative efforts and relationships, as well as model-specific experience, contributed to timelier and smoother implementation.
- ***State Providing Platform for Decision-Making and Cross-Stakeholder Collaboration:*** States were often able to play an important role in streamlining decision-making processes and supporting relationships among stakeholders, but states were not always able to achieve effective collaboration among stakeholders with varied interests.
- ***State Agency Leadership and Support:*** In some cases, state agencies provided leadership to initiatives, but state agencies were sometimes unable or unwilling to provide the leadership and management needed for model implementation.

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<sup>8</sup>This report benefits not only from the great efforts of the evaluators in collecting and synthesizing a tremendous amount of information but in the synthesis work of SIM and PCSR analysts who laid the ground for thinking about the role of the state in implementation.

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## Finding 1 Examples: States as Awardee or Convener

This section contains model-specific examples of facilitators and challenges related to states as awardees and conveners.

### **State as Key Stakeholder with Prior Experience**

#### *Examples of states with history of multi-stakeholder collaboration*

All eight states participating in **MAPCP**<sup>9</sup> had a history of collaborative efforts with payers, providers, and other stakeholders, though the specific focus and partnerships varied. Similarly, under the Medicaid Incentives for the Prevention of Chronic Disease Model (**MIPCD**), states' established relationships with existing Medicaid providers and/or state departments facilitated implementation. And, for the Maryland **All-Payer Model**, the state agency's many years of experience working with hospitals across the state was seen as a major factor in both the approval of and implementation of the model. Although some hospitals' patience with the effort waned after the first year, accumulated positive perceptions of state agency staff helped to maintain confidence in the undertaking. Moreover, Maryland's experience with the stakeholder engagement process—fine-tuned during the Medicare waiver modernization process—informed their creation of two external stakeholder groups for the SIM initiative. Most **SIM R1** Model Design and Pre-Test states had at least some prior experience in convening health care stakeholders—this experience served as a foundation for developing the SIM Initiative Plan and provided a jumpstart to identifying action steps and policy levers. Three states were able to rely on an established stakeholder group (e.g., an advisory board); in three other states, a prior state-based initiative focused on health system change served as the foundation of the SIM Initiative. In other states, there were previous efforts that at least familiarized stakeholders with some knowledge of the health care system and reform priorities and allowed state leadership to draw on existing relationships to recruit participants for planning. One of the lessons learned put forward from the SIM R1 pre-test phase was to build on existing models and accumulated evidence as a basis and rationale for a larger initiative. At the same time, informants cautioned to allow for innovation and not be constrained by previous models. In some states, the Financial Alignment Initiative (**FAI**) demonstration design relied on existing care management arrangements (e.g., through existing relationships with Area Agencies on Aging, experience from Programs of All-inclusive Care of the Elderly (PACE) and Medicare-Medicaid Plans' (MMPs)'), and through contracts with community-based organizations.

#### *Examples of states with prior model-specific experience*

In addition to a history of collaboration, six of the eight states participating in **MAPCP** already had multi-payer PCMH initiatives (the focus of **MAPCP**), while the other two states had multi-stakeholder collaborations with broader primary care or care coordination emphases. Similarly, for the Maryland **All-Payer Model**, the state agency and all payers and providers had prior experience in the build and implementation phases given Maryland's prior all-payer system.

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<sup>9</sup> Throughout the report, in each “example” subsection, the first mention of a model is bolded.



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Under **MIPCD**, states were able to facilitate implementation by building on existing chronic disease prevention programs.

*Examples of other entities leading innovation with state support*

In two of the MAPCP states, although the state was the awardee and official convener, nonprofits played key convener roles, bringing to bear prior experience and strong roots with stakeholders. One state's MAPCP Demonstration was built on a preexisting regional initiative seeking to strengthen the region's primary care system. The State Department of Health (DOH) provided executive leadership, with the nonprofit providing program oversight including monitoring practice performance, aggregating clinical and financial data, planning for long-term sustainability, and serving as the central hub for sub-regional care management activities. In partnership with another MAPCP state, a central network serves as the organization overseeing operations of community-based networks, which evolved from earlier Medicaid programs designed to support primary care practices; four of the regional networks serve participating MAPCP counties. The central network supports primary care practices and hospitals through care coordination, disease and care management, and quality improvement resources as well as analyzing data to identify the patients that would benefit most from care management efforts. These organizations are well-situated to lead innovation but do not have access to the same level of financial resources or the ability to directly influence regulation and policy, so that CMS participation as well as state support remain important. In other situations, entities leading innovation also benefit from state support. In Strong Start, partnerships between model sites and Medicaid and other state agencies led to expedited Medicaid approval that hastened women's ability to receive care. In MIPCD, awardees reported that having high-level state leaders as champions helped to minimize state-level bureaucratic obstacles. Several awardees under HCIA R1 BHSA noted the difficulty of developing an innovative service delivery model without having supportive financing and policy arrangements in place at both the state and federal level.

***State Providing Platform for Decision-Making and Cross-Stakeholder Collaboration***

*Examples of states' effective decision-making*

In **MAPCP**, three of the eight states modified their governance models to streamline decision making and improve their initiatives. Stakeholder engagement and decision-making processes created in one state gave all participants an equal voice and built strong relationships that kept payers committed. This cross-payer alignment was much stronger than other states and was seen as key to success. The **SIM R1** Initiative provided states with resources to facilitate dialogue and build relationships between the state and key stakeholders. Additionally, states were able to bring together primary care and behavioral health providers to connect outside of practices. In two states, these resources led to the development of relationships and communication channels between state agencies that, prior to the SIM Initiative, had largely been silo-ed. Also, developing governance and stakeholder work groups enabled states to bring together providers, payers, and purchasers for discussion.

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### *Examples of effective collaboration among stakeholders*

In **SIM R2**, most states used a single work group to engage all stakeholders in the measure alignment decision process, and this approach worked well for states to derive common measure sets. A single work group allowed for expediency of information sharing, clear accountability for decisions delegated to one entity, and minimized the time to arrive at decisions and implement mid-course corrections. Establishing effective administrative processes was key for implementation of **MIPCD**. For example, one state held recurring meetings with program staff and found it extremely helpful to ensure consistency across its five main partners. Also, **MIPCD** informants mentioned the importance of developing collaborative partnerships during the planning phase; these partnerships included local mental health authorities, care coordinators, advocacy groups, and state representatives who provided input and assistance in recruitment. In **SIM R1**, timely communication from state agencies with payers, providers, and consumers—ensuring that all stakeholders understood the need for change—was viewed as essential for success. In **MAPCP**, state leadership was deemed critical in several states. For example, one state developed a stakeholder engagement process to bring together providers and payers that offered a neutral platform for engagement. The state also used its influence to make sure all major payers in the region participated in the initiative. As part of **SIM R1**, one state achieved multi-payer PCMH through multiple channels, chief among them a private and public payer collaboration with a dominant commercial payer in the market that focused on developing, facilitating, supporting, and advancing the state's PCMH and Episode of Care models.

### *Examples of states struggling with collaboration*

In **SIM R1**, states sometimes faced barriers in collaborating and achieving consensus with multiple, diverse stakeholders, including public and private payers, primary care and specialty providers, major health systems, and consumers or consumer advocates. While, in some instances, stakeholders indicated that meetings required too much of a time commitment, stakeholders also expressed concern that the decision-making process was not sufficiently open. States found that communication and collaboration strategies worked best when tailored to particular stakeholder needs and to the phase of the process. **MIPCD** informants said that it was important to ensure that all parties involved in program implementation were engaged in design. After facing issues in working with participants who were poor or had mental illness, one state concluded that—had it established partnerships with its smoking cessation and weight control partners earlier on—it could have conducted trainings that might have alleviated these issues. One state's **SIM** initiative focused on the Medicaid population but faced early challenges when the Department of Health (DOH), which was involved in health issues across the state, was not initially included in planning. During the SIM Design and Pre-Test phase, another state found that, despite stakeholder agreement on the need for change, undertaking a joint initiative was challenging without a history of collaboration to build on. Stakeholders suggested that additional time was needed to build trust and align incentives and that collaborative efforts might be more likely to take hold at the local and regional levels.

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## **State Agency Leadership and Support**

### *Examples of effective state leadership*

In **Strong Start**, partnerships between model sites and Medicaid as well as other state agencies helped the sites assist in the application process for Medicaid benefits. Expedited Medicaid approval allowed women to begin prenatal care and benefit from longer treatment. **MIPCD** awardees reported that having high-level state leaders as champions helped to minimize state level bureaucratic obstacles—one state had several state agency directors working to help expedite contracting and establish a stakeholder relations process. Due to many decades of experience working with Maryland hospitals and the confidence hospitals had in agency staff, the state agency leading implementation of the Maryland **All-Payer Model** was credited with the state's ability to obtain approval and implement the Model. In **MAPCP**, one state benefited from strong leadership from the state insurance commissioner; a small insurance market also eased the process for convening payers and reaching consensus. The insurance commissioner also set regulatory standards for affordability for commercial insurers, which increased spending on primary care and promoted initiatives that supported the PCMH program.

### *Examples of less effective state leadership*

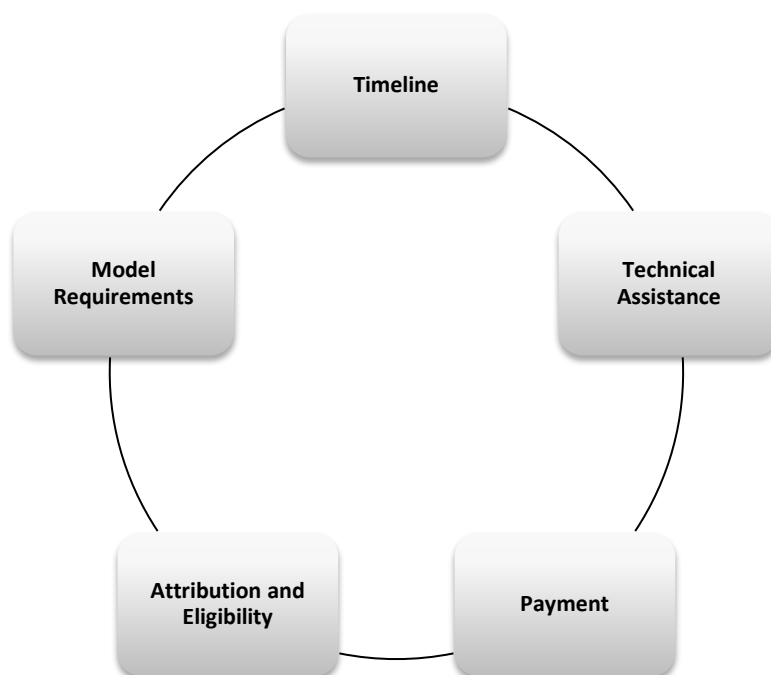
All of the **MIPCD** states reported facing administrative barriers in working with states—such as contracting issues, releasing RFPs and securing contracts, having to create and submit materials to IRBs and hiring staff—that delayed implementation. One state faced a hiring delay because the award coincided with contract negotiations between the state and its employees. **MIPCD** state program staff also found it difficult to oversee providers; one state faced challenges with providers located hundreds of miles away, while another found it difficult to manage more than 150,000 providers with different reporting requirements and issues to address in moving forward.

In addition to administrative issues, state politics also has the potential to present challenges to implementing statewide initiatives. Six of the eight **MAPCP** states elected new governors during the initiative and, based on differing agendas, the initiatives became lower priorities for some of the newly elected state executives and legislators. For example, a new administration in one state dissolved the office in charge of the **MAPCP** initiative, resulting in some turnover for **MAPCP** implementation staff. The mandate requiring Medicaid Managed Care Organizations (MCOs) to participate was also lifted, resulting in some payers (and then some practices) discontinuing their participation in the initiative.

**Finding 2: Implementation benefited from model features that allowed sufficient time to test and adapt approaches, consistent and transparent methods to reduce burden, and flexibility to change requirements in response to experience and feedback.**

CMMI supports the development and testing of a broad range of innovative health care payment and service delivery models. Regardless of models' goals and target populations and how specific design features are determined, a similar set of common elements (Figure 1)—timeline, technical assistance (TA), payment, attribution and eligibility, and model participation requirements—provide a framework for findings that emerged from analysis of facilitators and challenges related to model design.<sup>10</sup>

**Figure 4. Elements of Model Design that Affect Implementation**



Informants across models cited the importance of allowing sufficient time to test and adapt approaches, consistency and transparency to simplify methods and reduce burden, and flexibility, as needed, to change requirements in response to experience and feedback. Based on our review of the evaluation reports, we identified the following facilitators and challenges related to model design elements:

- **Timeline:** Implementation required sufficient time to allow for refinement of strategies, integration of new roles, and testing of new relationships while lack of sufficient

<sup>10</sup> While we rely on these categories to organize our discussion, we acknowledge that they are interrelated. For example, we discuss eligibility criteria and enrollment as part of “Attribution and Eligibility,” but many of the rules governing eligibility could be viewed as Model Requirements.

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implementation time discouraged testing of new approaches, limited opportunity to demonstrate results, and increased burden on participants.

- **Technical assistance:** Tailored TA improved program effectiveness and decreased burden on program participants through providing useful information (e.g., through tools or data) or best practices. While tailored strategies were more resource-intensive, TA that was too general often caused frustration.
- **Design of payment methodology:** Payment methods that incentivized and rewarded a consistent set of activities, were flexible enough to allow different levels of risk and reward, and relied on transparent and predictable methodology, reduced provider burden. Payment methodologies that included factors not under an entity's control, were based on measures that are not well-accepted, or were perceived as unfair or lacking in transparency, may have reduced participation or satisfaction with model.
- **Enrollment or attribution methodology:** Model enrollment designs that included multiple approaches, tailored strategies to specific populations, an in-person component, and provided adequate data on the target populations contributed to increased enrollment. When programs had difficulties identifying and enrolling a sufficient number of eligible patients, implementation may have been derailed and evaluation limited. In addition, too much flexibility for payers or patients may have caused issues for providers in terms of knowing which patients they were responsible for and being able to demonstrate results.
- **Model requirements:** Requiring common systems and certifications, establishing participation requirements that select appropriate participants, and holding participants accountable increased likelihood of successful implementation. Models with unclear goals or onerous requirements for participation were challenging for stakeholders to implement.
- **Changes over time:** Flexibility to refine model when needed—whether with respect to timeline, model features, or payment structure—was helpful, but even if well-intentioned, changes in policies or processes were difficult for stakeholders to adjust to during program implementation, particularly without sufficient notice.

## Finding 2 Examples: Model Design and Features

This section contains model-specific examples of facilitators and challenges related to model design and features.

### *Timeline for Model Implementation*

#### *Examples of longer time periods and demonstration extensions facilitating implementation and continuation of the model*

Under the Maryland **All-Payer Model**, Total Patient Revenue hospitals that had more time to develop and refine strategies that work under a fixed revenue model appeared to have more sophisticated or advanced strategies than the later-implementing Global Budget Revenue (GBR) hospitals. Provider practices in **MAPCP** also viewed time as a facilitator as they introduced new roles into the practices; time was necessary to allow care managers to be trusted by physicians (even more so for part-time care managers) and for physicians to see health improvements in patients who they worked with.

For both MAPCP and the Initiative to Reduce Avoidable Hospitalizations among Nursing Facility Residents (**NFI**), continuation of the models was valued as a chance to prove the benefits of each of the models. This was true for the four MAPCP states affected by Medicare's decision to extend the demonstration period—increasing these states' ability to sustain the model by providing continued funding—and for the Enhanced Care and Coordination Provider (**ECCP**) awardees who were enthusiastic about the prospect of continuing their efforts in Phase 2 of the demonstration (which started after the first 4-year stint ended) and having more time to produce concrete evidence to support the benefit of the model. The majority of **HCIA R1 Behavioral Health and Substance Abuse (BHSA)** awardees also reported that demonstration extensions allowed them to complete their own evaluations and transition their projects to more sustainable sources of funding.

#### *Examples of challenges modifying operations, workflow, staffing, and culture attributed to a timeline that was too short*

Under the Maryland **All-Payer Model**, many hospital leaders and physician focus group participants thought the pace of change required by the new model was too rapid and unrealistic and that the state agency did not understand the time (and financial resources) required to make changes. During health care plan development for states participating in **SIM R1**, many states found that it was difficult to conduct a fully open and participatory process within a constrained timeline, concluding that a more condensed timeline tended to result in building off of existing ideas rather than exploring newer or more controversial ideas. For example, one state focused on reinforcement of the existing Coordinated Care Model (CCM) and spreading key features of the model to new payers and populations. Similarly, one of the key facilitators to successful implementation for **NFI** was time; awardees noted that, given the wide scope, required shift in organization culture, and adjustments to care processes (e.g., medication reconciliation, encouraging end-of-life conversations, use of advance directives) significant time was needed and implementation could not be rushed or achieved quickly. All but one of the **MIPCD** states

encountered implementation issues that forced them to modify or delay their timeline with several states moving to a staggered implementation across participating states. From this experience, states learned the value of anticipating possible issues and developing alternate strategies and contingency plans as planned. One of the states found that the staggered timeline allowed them to work individually with sites which they found to be more effective. **HCIA R1 BHSA** awardees encountered challenges to timely implementation, including: slow recruitment of provider sites, challenges in identifying staff members with needed qualifications and experience, high staff turnover, lengthy provider licensing and credentialing processes, difficulty in obtaining legal agreements related to cross-state licensure, and extreme weather events such as Hurricane Sandy. As reported in the Primary Care Systematic Review (**PCSR**), some participants were overwhelmed by the pace of change required for the initiatives. CPC had nine milestones per year, some practices left the initiative after being overwhelmed by these goals. Little early progress in the FQHC Demonstration due to lack of established milestones by CMS led to a rushed pace at the end of the initiative. One of the **HCIA R2** awardees found that start-up took longer than expected. Because of the time required to hire staff, establish participant enrollment processes, and design and debug the checklist and other enhancements to the electronic medical record (EMR) systems, the early focus of the program staff was to get systems in place quickly. This was a priority so that providers and care managers could start engaging individuals, but it resulted in the need to later rework hastily developed tools and program protocols. One state in the **SIM** Design and Pre-Test phase found that, without a prior history of collaboration, the timeline for model design was too short to allow for building of trust and aligning of incentives required for such an effort.

*Examples of needing additional time beyond the end of the model to show results*

In **SIM R2** stakeholders—payers, providers, state divisions/departments, and community-based organizations—discussed short implementation schedules as a key challenge. The three-year timeline of the **SIM** test period was considered to be too short for improvements in population health to be evident, especially since evidence may be needed to secure ongoing support for the programs from other public and private sources. This same concern was voiced by interviewees across states and stakeholder groups participating in **MAPCP**, who were concerned that three years was not enough time to show positive results. They noted the complexity of implementing multi-payer PCMH initiatives in terms of time and resources; in states where practices were still working to attain PCMH recognition during the first two years, there was only one year to show improvements in practice transformation and care management. In **NFI**, some ECCP leaders also indicated that more time would be needed to observe positive effects of the Initiative than the current four-year time span: because model nurses worked for the model participants, rather than the nursing facilities, the knowledge and skill transfer required an ongoing and significant amount of time for both sides. In **HCIA R1 BHSA**, some respondents emphasized that results of the program may come after the intervention period.

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## **Technical Assistance**

### *Examples of learning collaboratives or other shared learning opportunities*

For **MAPCP** participating practices, shared learning opportunities or learning collaboratives were highly valued, as was direct assistance with practice transformation activities. Similar support for practice transformation assistance and learning collaboratives was found in several **SIM** initiatives—practice transformation support that emphasized peer-to-peer learning and individualized TA was considered more beneficial in driving practice transformation than traditional forms of instruction such as expert presentations and lectures. Four states convened learning collaboratives as part of SIM-related support to transforming care delivery, while another state's primary care home staff performed one-to-one verification site visits with practices to help providers meet PCMH. **Strong Start** awardees also benefited from shared learning opportunities with respect to promising practices around developing "opt out" enrollment policies, messaging to promote buy-in among staff and providers, and ideas for adapting programs to specific needs of the site and priority enrollee population. In **CPC** and **FQHC**, as reported in **PCSR**, practices especially valued one-on-one assistance and peer-to-peer learning opportunities.

### *Examples concerning training*

Overall, TA in the form of training was discussed less frequently than other forms of TA. In **MIPCD**, states discussed the importance of recognizing when providers needed additional training in order to be able to participate in the programs and to provide program services. Two **HCIA R2** awardee sites used tele-mentoring to increase the capacity of primary care providers by facilitating training and the exchange of information through telemedicine.

### *Examples focused on the need for tailored TA*

While TA was often well-received by model participants, some **MAPCP** participating practices found the learning collaboratives too time consuming and repetitive or inappropriate for their practice's level of medical home sophistication. There was also some dissatisfaction expressed with aspects of TA in **SIM R2**: some states reported that the TA did not always go beyond publicly available resources, while in other cases, some states reported wanting more summary-level information focusing only on the information that would lead to helping them make decisions. Looking across the models examined in **PCSR**, evaluators found that providing the one-on-one coaching and peer-to-peer learning collaboratives that practices value can be resource-intensive. As a result, one-on-one assistance often focused on practices that needed more help and was less commonly provided to more advanced, higher-performing practices. In **CPC**, the time and expense of face-to-face peer-to-peer gatherings led to a reduction in frequency of these activities across years. Some practices also felt they did not receive enough training in how to interpret and use feedback data.



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## **Payment Methodology**

### *Examples related to performance-based payments and risk level*

For **SIM R1**, states used payment options that offered providers flexibility and choice in (1) the level of risk for patient health care costs or (2) the timeline for taking on risk. For example, one state's strong stakeholder engagement has led to sustained progress for its value-based payment models. Through collaborative planning, the state gave providers flexibility in how they participated in the SIM-supported Medicaid and commercial Accountable Care Organization Shared Savings Programs (ACO SSPs), including an initial option to take on one- or two- sided risk through the Medicaid SSP. The **PCSR** final report noted that payment encouraged provider participation. In **SIM R2**, models that required low provider payment risk, e.g., upside only or FFS rates with additional fees for services, tended to encourage provider participation. For the Maryland **All-Payer Model**, the state agency continues to fine-tune its payment policies to encourage hospital efforts to reduce avoidable utilization and improve the model's performance—during the implementation period, the state increased the reward for meeting the annual readmission reduction target and introduced penalties for failing to do so. Providers participating in **MAPCP** stressed the importance of consistency, flexibility, and predictability of the payment methodology. Flexibility of varying recognition standards and payment methodologies allowed states to define expectations for advanced primary care in alignment with state and local priorities. In addition, predictability of payments, or practices receiving the payments they expected, was associated with success. Provider practices also reported that payers incentivizing a consistent set of practice activities reduced the need to respond to multiple, potentially competing, demands or incentives. The **PCSR** concluded that practices need different levels of support at different levels of transformation: up-front payments or higher payments at the beginning to support capital and labor investments may be necessary to pay for the costs of care managers and small practices may need higher PBPM rates than larger practices. Shared savings paired with PBPM in later years can potentially be used to incentivize additional improvements in efficiency and quality.

### *Examples emphasizing issues with incentives*

The Maryland **All-Payer Model** payment methodology was revised to better target incentives for controlling costs and use, particularly regarding changes in the market that can affect costs and which are not under hospitals' control. Across **MAPCP** states, providers voiced varying concerns about the design of performance incentives. In the one state with shared savings, some practices were frustrated that despite improvements on quality measures, they did not qualify for all of the shared savings payments they had expected. Practices perceived the process for calculating shared savings as lacking transparency and suggested that differences in shared savings payments may have resulted from variations in methodology rather than practice performance. In another state, with a different form of performance incentives, practices felt that the performance-based targets were difficult or unrealistic. In a different state, there were conflicts between payers and providers with regard to how much of payments should be risk-based, with payers generally wanting more and providers wanting less. In most of the states that did not generate net savings, participating payers incentivized different sets of activities or types

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of priority patients, so there was an overall lack of consistency. This finding suggests that expecting practices to respond to multiple competing incentives may be counterproductive and require practices to spread themselves too thinly across multiple objectives. In **NFI**, although there were no financial incentives directly given to the participating facilities, they were expected to encourage staff to participate in the education, trainings, and other activities needed for implementation of the Initiative. A second phase of the Initiative is being implemented, in which the external assistance is being supplemented by direct payment to facilities for treating residents with any of the defined set of conditions in the facility. Practitioners in the facilities also receive extra payment to certify the eligibility of the residents. The degree to which a direct incentive affects the rates of utilization and spending will be evaluated.

#### *Examples citing operational concerns*

In **SIM R1**, providers had several concerns about value-based models, including the long turnaround times for payments from states to practices (sometimes up to two years due to claims processing lags); difficulty meeting some of the targets; and lack of alignment in what payers asked for across multiple programs, increasing data reporting burden on providers. Two problems with shared savings were noted in findings from the **PCSR**—their timing and uncertainty, with practices needing to make upfront investments despite a significant lag for receiving shared savings, even if forthcoming, because they are based on results.

#### **Enrollment or Attribution Methodology**

##### *Examples about sources for referrals or for conducting outreach*

Many **Strong Start** awardees used a combination of externally-focused outreach and “in-reach” (identifying eligible women to recruit among the awardee’s existing patient base) strategies for reaching potential patients. Five awardees enhanced enrollment by increasing in-person outreach at obstetrician (OB) clinics or using daily clinic schedules to identify women likely to be eligible, reducing the need for clinic physicians and nurses to refer women. By year two, many awardees moved away from opt-in enrollment to using an opt-out approach and reported a positive impact on enrollment. In **HCIA R2**, one awardee attempted to increase enrollment by briefly introducing the program to patients in the hospital, providing information to take home. After discharge, the same information was again sent to the home, and a nurse health coach called the patients to recruit them. Another awardee found that enrolling acute care patients through the Emergency Department (ED) was challenging so, on a pilot basis, hired and trained physician assistants who worked in the hospital ED to moonlight for the program on top of their regular jobs. As reported in the **HCIA R1 Meta-Analysis**, awardees used a variety of strategies to obtain better patient information for enrollment. For one awardee, innovation staff collected patient phone numbers at the initial educational session with patients and used the information to update the health care system's EHR. Another awardee supplemented the information they received from the state database with their own health system databases and asked partnering MCOs to share contact information for patient follow up.

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### *Examples of tailoring recruitment methods*

**Strong Start** awardees trying to identify the most effective enrollment practices found that tailoring recruitment techniques by population and patient circumstances was effective. At one site, care managers found that taking cues from the patient and tailoring the description of the program was key to enrollment success. When recruiting women with fewer medical, economic, and psychosocial needs, awardees generally described the model as a way to contribute to research and help other pregnant women. Another site also found this approach successful with women who had prior pregnancies and felt confident that they could handle the current pregnancy. In contrast, for women with greater needs and/or less confidence, a better approach was to emphasize how the program could improve their prenatal experience, connect them to resources, and help their baby.

### *Examples of relying on tools or technology to streamline enrollment*

For **FAI**, the state's assessment of each health home's capacity to serve new enrollees enabled the demonstration to align enrollment inflow with the growth of health home care coordination resources (e.g., if the state determined a health home did not have sufficient capacity to accept new enrollees in a given month, the individuals were enrolled in a subsequent month).

### *Examples related to stringency of eligibility criteria*

Some **Strong Start** sites experienced issues with eligibility requirements, finding that a high proportion of patients were not eligible for Medicaid/Children's Health Insurance Program (CHIP), including those with undocumented status and those with presumptive or pending status, or those who did not meet clinical criteria (too few risk factors for preterm birth or screened too late to meet gestational age limit). Persistent low enrollment meant that model sites were unable to benefit from economies of scale and struggled to find sufficient opportunities to establish the Strong Start model of care as a key aspect of their sites' prenatal care approach. Six **HCIA R1 BHSA** awardees also reported significant difficulties in enrolling the targeted number of participants because it was difficult to find eligible participants in the community or unexpected problems narrowed the pool of potential participants. For two of these awardees, low enrollment led to difficulties with program staffing. For other **HCIA R1** awardees (reported in the **HCIA R1 Meta-Analysis**), enrollment projections turned out to be infeasible because the model design limited the potential pool of participants. In some instances, the target population already consisted of a small subset of patients, and the eligibility criteria further limited the potential participants. For at least one **HCIA R2** awardee, recruitment and enrollment lagged partly as a result of a narrowly defined target population, the timing of patient recruitment discussions, and changes in Medicare payment guidelines. The patient population was required to meet all program requirements and be too acutely ill to be treated in traditional outpatient care, yet not so sick that they needed intense care that could not be provided at home.

### *Examples related to characteristics of target population*

For many of the **HCIA R1** awardees, access barriers, such as transportation, homelessness, and complex health conditions, hindered patients' ability to participate. Other barriers included

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distrust of the health care system because of mental health issues or negative experiences with health care providers. For example, one awardee reported distrust rooted in historic mistreatment of racial and ethnic minorities in the community. An **HCIA R2** awardee struggled with enrollment, reporting that dual-eligible beneficiaries were often difficult to reach and connect to services because they lived in isolated conditions with caregivers who were unable to enroll them or participate actively in the program.

*Examples of enrollment processes being difficult to integrate into practice*

Many **Strong Start** awardee sites faced enrollment challenges, with some sites reporting that they struggled to incorporate the enrollment process into their workflow. Being dependent for enrollment on midwives, obstetricians, and other prenatal care providers was also a problem, with providers often failing to screen or make referrals. The lack of a Spanish-speaking facilitator also limited appeal for Latina patients. Most **HCIA R1 BHS**A awardees faced challenges in establishing an effective referral process. For other **HCIA R1** awardees (**Meta-Analysis**), the timing of enrollment did not fit well with clinical settings and patient needs. For example, several awardees planned to enroll patients during an ED visit, but learned that patients were reluctant to enroll in the innovation while they (or their caregivers) were making important health care decisions. One of the **HCIA R2** awardees encountered timing barriers in the enrollment process with patients being discharged early in the day, making it difficult for program staff to meet with them before they left the hospital. Another awardee found that the original psychosocial assessment tool took too long to administer, resulting in a change in instruments.

*Examples involving lack of information or technology*

In **FAI**, states faced numerous challenges and cumbersome efforts to redesign eligibility, enrollment, and data systems to integrate Medicaid and Medicare eligibility and enrollment systems. They also found that beneficiaries' freedom to enroll/disenroll monthly resulted in fluctuating enrollee populations and limited the plans' ability to manage care and positively impact long-term outcomes. For some **HCIA R1** awardees (**Meta-Analysis**), lack of data hindered awardees' ability to identify and enroll patients. Several awardees discovered that EHRs, provider files, or state databases lacked complete or correct contact information for potential participants. One of the **HCIA R2** awardees found that the EMR-based set of criteria for identifying eligible patients missed many eligible patients.

*Examples of patient attribution not working as expected*

For models where beneficiaries were attributed to practices through claims-based processes rather than directly enrolled, the design of attribution methods created some challenges. In **MAPCP**, the attribution process was confusing to some practices, with beneficiaries assigned to them often not matching the list of Medicare beneficiaries they thought should have been assigned to them. There were also (sometimes related) payment issues, with lack of agreement between providers and payers about the timeliness and accuracy of the attribution lists slowing payments or resulting in rejected claims and budget issues. Similar issues concerning patient attribution were described in the findings from the **PCSR**. The number of patients attributed to

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practices was far lower than practices expected, possibly due to patients seeing multiple providers, living in different locations by season, or cycling on/off Medicaid. Practices found this uncertainty in identifying and attributing eligible patients to specific practices to be challenging, creating uncertainty around expected financial impacts. Based on these findings, the **PCSR** suggested that providing more education to practices on attribution policies may create more transparency and provide more certainty to practices.

### **Model Requirements**

#### *Examples related to uniform standards for participation*

With respect to PCMH standards, **MAPCP** model requirements for certification and recertification processes were identified as providing a framework for accountability in one state. Having high accountability standards for ensuring that practices met PCMH requirements through independent audits or assessments was a feature found, in combination with the absence or presence of other features, among states with favorable effects across outcomes. Two MAPCP model requirements appeared to contribute to success—requiring practices to be certified PCMHs when they entered the demonstration and not allowing new entrants into the demonstration after the start date. Most states that generated net savings required practices to be certified PCMHs when they entered the demonstration, whereas most of the states that failed to generate net savings allowed practices a grace period of 6, 12, or 18 months to meet this requirement. Most states in MAPCP with net savings did not allow new entrants into the demonstration after the start date; practices may become more effective the longer they are operating as PCMHs, because it gives them time to refine workflows and define care manager duties. Participation in MAPCP also required incorporating care managers/coordinators; this was viewed as important as these roles were seen as the most transformative/valuable part of the model.

#### *Examples for developing and/or using common tools*

In **FAI**, some states required MMP investment/participation in developing centralized data management functions with consolidated enrollee records; the expectation of the requirements furthered the ability of MMPs to track enrollees statewide and allowed plans to integrate information from different settings. However, although the general model requirements were the same for all FAI states, implementation of care coordination data systems varied among states and MMPs. In one state, to facilitate care coordination, MMPs were required to maintain a single, centralized, comprehensive record. Plans and community-based organizations reported that the centralized patient record helped increase communication between various providers and beneficiaries though plans additionally reported that the external centralized patient record was generally not accessed to the extent hoped. In several states, because time and resources were not available to create a centralized management system, workarounds for using unintegrated systems were created or MMPs experienced problems exchanging data with county agencies that administer LTSS and behavioral health services. In **Strong Start**, a universal screening intake form and an emphasis on education were considered to be key. The model's emphasis on education was most influential, specifically the educational components addressing normal/abnormal signs during pregnancy, healthy behaviors, gestational development, and

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childbirth preparation. Educational components were identified as facilitators for increasing rates of breastfeeding and reducing C-section rates. Awardees commonly described how women were educated about the signs and symptoms of pregnancy and labor, which led them to access more appropriate care, which in turn reduced triage and ED visits.

*Examples describing standardization versus flexibility in approaches*

In one of the **MAPCP** states, the requirement for multi-payer participation and reliance on the shared savings payment model defined common goals with which everyone agreed and provided an approach for achieving those aims in terms of payment and delivery reform as well as fostering collaborative relationships. However, in terms of how interventions were implemented, most awardees in **HCIA R1 BHS**A perceived the ability to vary the approach as having a positive or neutral effect on the success of the innovations; in general, awardees tried to balance standardizing programs and allowing sites to customize to their specific needs, including allowing sites to adapt staffing to existing staffing structure and preferences.

*Examples involving requirement for multi-payer participation*

Looking across several multi-payer initiatives, the **PCSR** describes the benefits and limitations of requiring payer participation. The study concludes that it may be easier to design and implement single-payer initiatives because design decisions do not require approval by other payers but multi-payer initiatives offer the benefit of being able to provide more financial resources to practices. Key informants felt that multi-payer structures helped practices transform by increasing both the financial resources to practices and the number of patients in a practice that were covered by modified care protocols. To avoid having to respond to multiple care management initiatives and quality measures, **CPC** required that all changes made as part of the initiative be delivered to all patients in the practice. While the efforts in gaining participation and consensus on a standardized set of harmonized quality measures may be substantial, this greatly increases the benefits of a multi-payer structure.

*Examples related to defining model goals and requirements*

In the Maryland **All-Payer Model**, there were some challenges in coming to agreement on the specifics of the model to propose to CMS and in negotiations with CMS over terms of the model. In defining the requirements, some hospitals and payers needed to be convinced that maintaining the all-payer provisions originally granted through the old Medicare waiver was critical to the stability of the Maryland health system. Over time, there was a tension between the need for mid-course refinements in model policies and the need for policy stability. In **SIM R2**, there was a lack of consensus on the definition of population health between key stakeholders and states; their definitions did not always mesh with CMMI's definition of population health. The lack of a clear population health definition made it difficult to design a program that met CMMI's expectations for addressing population health.

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### *Examples related to transformation and certification requirements*

The redesign process culminating in practice transformation and PCMH certification required for **MAPCP** participation was time consuming and required staff and patients to take on new tasks (such as using EHRs to create registries of patients to target for care management), working as part of a team, or having registered nurses do clinical charting and care plan development. Informants noted the burdens associated with preparing and compiling documentation to gain (and then maintain or renew) recognition as a PCMH by the National Committee for Quality Assurance (NCQA); in one state, some practices let certification lapse in the final demonstration year, saying it was not worth the additional resources. Some smaller practices reported fatigue and lessened enthusiasm due to ongoing demands of meeting initiative standards while providing patient care; other practices noted that the considerable effort required to meet accreditation requirements left little time to engage in quality improvement efforts. Some practices reported being unable to focus on improvements to patient care until the third year of the demonstration. For a small minority of practice staff, the added burdens of being part of a PCMH led to staff turnover—either to more traditional practices or retirement. MAPCP evaluators found that there were disadvantages to having practices that were not certified participate in the demonstration: in one state, the lack of favorable results may be explained in part by that state's decision to allow practices to join on a rolling basis and, more broadly, allowing new, less-experienced PCMHs practices to join throughout the demonstration period may have brought down overall average impacts in states that did not generate net savings. Practices in states that allowed a grace period for PCMH recognition may have spent the early part of the demonstration focused on achieving certification and developing new care processes, rather than delivering care using refined approaches from the outset. In **SIM R2**, stakeholders in one state noted that the rigorous PCMH accreditation standards deterred some practices from participation and in **CPC** practices felt that there were too many milestone requirements in the approach used to support and monitor transformation.

### *Examples related to billing practices*

Billing requirements for services provided by practices participating in **MAPCP** varied across states. In a state where some payers required practices to submit claims to receive care management payments (rather than paying practices a monthly lump sum to cover the demonstration fees for all of a practice's attributed patients), billing was burdensome enough that many practices chose to forego demonstration payments entirely. In interviews in this state, providers reported that their billing systems were not set up to generate a claim without a face-to-face visit, and the cost to modify their billing systems exceeded their expected revenue from the demonstration payments. There was also some confusion in several of the states related to interaction between Medicare billing policies and model-related payments to practices—while practices were allowed to bill using the Medicare Chronic Care Management code, it resulted in their per member per month (PMPM) payment being partially recouped.

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### *Examples related to reporting requirements*

**Strong Start** awardees struggled to comply with demonstration data requirements (e.g., the burden of collecting and submitting program monitoring and collecting participant level data), especially the intake and exit forms. The intake form was described as "exceptionally long" and required collecting sensitive information in the first patient encounter. Some awardees said they were unaware of the full scope of the data collection burden ahead of time and did not adequately design/allocate funding or staff to the task. The data collection was particularly acute for sites with lean staffing models or staff shortages.

### *Examples related to eligibility criteria and enrollment processes*

In **MIPCD**, states found enrollment challenging: only two states met their enrollment goals while, overall, states met approximately 70 percent of their enrollment goals. Evaluators noted that a shortfall in enrollment led to a higher share of expenses being allocated to administrative costs. Delays in program implementation contributed to enrollment challenges and one state found that relying primarily on providers for program recruitment was problematic due to providers' competing priorities. States also found that recruitment needed to be more active, with multiple targeted strategies. One informant commented that "if you build it, they will come" does not necessarily apply to prevention programs.

### *Examples related to restrictions on use of program funds*

Although CHWs were a central component of several states' **SIM** Initiatives, three states found the financing of CHWs problematic because SIM award funds could not be used to provide health care services. Even in cases where practices were already paying for CHW services through grant funding, the long-term viability of these alternative funding sources was uncertain. Also, while **SIM R2** funds could be used for implementation-related needs around use of telehealth services, the funds could not be used for purchase of telehealth equipment, making implementation of the model intervention more challenging. For one of the **Strong Start** models, the awardees felt strongly that CMS should consider allowing them to use Strong Start funds for patient incentives. Though raffle items and incentives were considered valuable tools for both recruitment and retention, several awardees noted that it was difficult to incorporate them consistently into their programs because they depend on the availability of donations or non-Strong Start grant funds.

### *Examples involving logistical issues*

In **MIPCD**, administrative challenges included obtaining IRB approval, implementing partner and vendor contracts, reimbursing partners for participant services they provided, and coordinating partners' roles and responsibilities. One of the **HCIA R2** awardees also faced challenges with obtaining IRB approval, resulting in implementation delays. Additional delays related to the IRB process were also reported with respect to implementing the participant satisfaction survey and the data collection mode was changed in order to expedite the IRB process. Also, in **MIPCD**, because of the logistical issues and because enrollment was lower than anticipated, administrative costs were substantially higher than CMS expectations. Some

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providers also struggled with the logistics of selecting, managing, and distributing incentives. **Strong Start** awardees encountered logistical and implementation challenges related to: recruitment, scheduling group appointments, not being able to provide childcare, finding space for group sessions, and identifying funding for snacks/supplies, etc.<sup>11</sup>

### **Model Change**

#### *Examples involving changes to eligibility criteria to increase size of target population*

Some of the HCIA awardees combated low program enrollment by broadening the criteria for eligibility. Two **HCIA R1 BHSA** awardees expanded enrollment criteria to increase the number of participants enrolled during the program's first year and continued to make additional changes, including mid-implementation changes to service delivery structure and protocol and adding additional staff members after particular positions proved to be positive additions. From the **HCIA R1 Meta-Analysis**, after realizing the number of abdominal surgeries performed at the critical access hospital was insufficient for enrollment, one awardee decided to provide specialized follow up for individuals receiving all types of surgery rather than just abdominal surgery. In **HCIA R2**, one awardee loosened the requirement for a pre-existing dementia diagnosis and expanded the catchment area. Awardees made other adjustments, including abandoning a control group and enrolling all eligible individuals and streamlining the enrollment process, thus shortening the time before participants received the intervention. For another HCIA R2 awardee, the algorithm for identifying eligible participants in the EMR system was further improved and the eligibility criteria were modified so that patients who had previously declined participation became eligible for the program if they were hospitalized again. The length of time that patients were given to decide to participate was increased from two to four weeks and the disenrollment policy also was liberalized so that patients who did not upload data for as long as two weeks were no longer disenrolled; rather, coaches continued to work with them and encourage them to upload their data. Across the three **Strong Start** models, as discussed above in challenges to eligibility criteria, CMMI allowed awardees to relax a number of eligibility criteria to increase the number of women who could enroll in the model. Changes included eliminating the requirement that women be identified with an additional risk factor beyond their Medicaid status, moving gestational age cutoff from 28 to 29 weeks with some exceptions for later enrollment, and allowing women residing in rural areas to enroll and receive phone encounters. In one **Strong Start** model, about half of the awardees increased the number of participating sites during the second year of implementation, with some reporting that they did so specifically to reach their enrollment goal. Several **MIPCD** states made changes to approaches for beneficiary recruitment, screening, enrollment, and eligibility. States adopted multiple recruitment strategies and made changes to the size, type, or distribution of beneficiary incentives, incorporated cultural and linguistic awareness into their recruitment, and built partner relationships to expand their reach.

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<sup>11</sup> These challenges were identified for the Group Prenatal Care Model.

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### *Examples related to payment incentives and methods*

In response to hospital leadership/provider concerns, the state agency leading the Maryland **All-Payer Model** changed the methodology related to quality-based payment, potentially avoidable utilization, market shift adjustments, and other aspects of payment methods. In Phase 2 of the **NFI**, facilities will receive extra payment for treating six defined conditions in the facility rather than transferring residents. Practitioners will also receive extra payments to certify the eligibility of the residents. The Payment Reform is being tested along with continuing ECCP practices and as stand-alone incentives. The degree to which a direct incentive affects the rates of utilization and spending will be evaluated. In **MIPCD**, the number of states providing incentives to providers and clinics to recruit participants increased from the three states planning to do so from the outset to six.

### *Examples describing changes in other program features*

A number of HCIA R2 awardees altered aspects of their programs in response to implementation experience. One **HCIA R2** awardee adapted its model to meet observed participant needs by moving some care coordination staff to evening or weekend shifts, when they may be more likely to reach people, as well as by promoting the program at community events. Another awardee was able to increase awareness of the program and referrals by expanding the geographic range of the program and gaining participation from one of the clinic's family medicine physician champions. Other awardees altered their programs by increasing the staff-to-participant ratio and introducing the use of lay navigators; restructuring staffing responsibilities, standardizing care processes, and changing workflows; condensing trainings to take less time away from patient care; expanding the amount of time that social workers dedicated to the program and expanding the focus of the program to address socioeconomic barriers to care. Another awardee has implemented telemedicine and other technologies, and they have restructured the care coordination teams to make it easier for them to interact with program participants and their families. Other awardees also added providers or sites or increased staff hours. In **FAI**, CMS made significant efforts to revise national model notices to make them more readable and user-friendly in response to enrollee feedback.

### *Examples related to timeline*

For **MAPCP**, Medicare's decision to extend the demonstration period increased states' ability to sustain the model by providing continued funding (for the 4 states accepting extension). For **Strong Start**, most awardees received no cost extensions to prolong service provision that took them through CY 2016, with 10 awardees ending in early 2017. Seven of the ten **HCIA R1 BHSa** awardees received extensions to the 3-year initial award period—the extensions allowed four awardees to close out their programs and three awardees to complete their own evaluations and transition their projects to more sustainable sources of funding.

### *Examples related to payment methods*

Under the Maryland **All-Payer Model**, there was some tension between the need for mid-course refinements in payment policies and the need for policy stability. The global budgeting

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methodology is complex and continues to be refined through adjustments aimed at improving the accuracy and perceived fairness of the overall model. At the same time, hospital leadership believe the model methodology is overly complex, that HSCRC's policies shift with only limited advance notice, and that final policies are not established until well into implementation periods. Hospitals universally expressed some inability to plan for and comply with HSCRC policies.

*Examples related to general redesign of approach*

In **SIM R1**, states' flexible to change based on early results helped improve the direction of activities. For example, one of the key challenges faced by one state was scaling the Primary Care Payment Reform Initiative to the entire Medicaid population, which was the result of the lack of participation from any Medicaid managed care plans. Because of this, the state shifted its focus to soliciting feedback and designing a Medicaid ACO model that is strongly integrated with Medicaid managed care plans. In response to challenges in meeting its enrollment targets, particularly for participants in rural and underserved areas, a **HCIA R2** awardee expanded the program to an additional state and dedicated significant resources to recruiting and engaging providers. Several awardees found that changes made to improve processes often had unanticipated effects on other aspects of the program. For example, one awardee changed recruitment and enrollment criteria to include patients within 72 hours of discharge rather than only at discharge, but this introduced logistical challenges and required new policies because the patients were at home rather than at the hospital. Similarly, another awardee implemented a streamlined enrollment process that shifted enrollment functions away from the program evaluators to the MCCs; this increased the MCC's workload so that the awardee had to contract with additional MCCs to distribute the caseload more equitably. Ultimately, this change helped to ensure that the MCCs have enough time for the monthly follow-up home visits with existing participants. In another example, program staff from an awardee believed that children who were enrolled in the ambulatory model would have less intense needs than children in the intensive model and that the ambulatory model could therefore support more participants with fewer program staff. In implementation, children in both models had similar levels of need, which required revisions to the nurse-to-participant ratio and to the enrollment targets.

*Examples related to reporting requirements*

In **Strong Start**, awardees struggled to comply with CMMI demonstration (program and evaluation) data requirements, especially given that many requirements were not introduced until after awardees had begun operating their programs. Awardees also struggled to adapt to mid-course adjustments such as changing data submission requirements or collection/reporting processes (e.g., data submission not electronic until later on). Changing requirements negatively impacted awardees' ability to submit data in a timely manner; many awardees had not budgeted sufficient staff time to enter/monitor data collection.

*Examples related to evaluability*

For **Strong Start**, evaluators cautioned that variation in enrollment processes and eligibility criteria (e.g., whether a site used an opt-in vs. opt-out approach, the fact that birth centers attracted more proactive and educated women) introduced potential for selection bias among

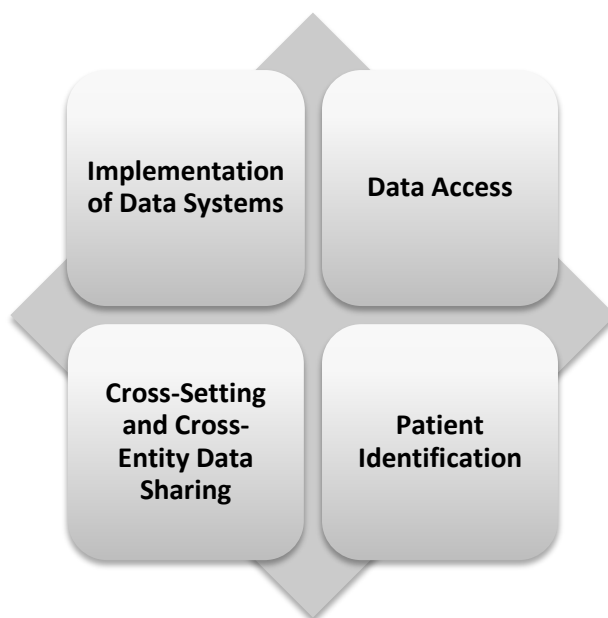
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participants. In addition, they noted that enrollees may have been receiving care management and home visiting services provided by other funders. For one of the **HCIA R2** awardees, leaders noted that variation across the two sites in program implementation—despite a shared philosophy and close collaboration between teams—may raise issues for the purposes of measuring impact. Another **HCIA R2** awardee was challenged by the limited number of participants and associated sample size in the program’s study, preventing the awardee from being able to detect statistically significant prevalence of the target condition and estimate costs.

**Finding 3: Access to data systems and high-quality data facilitated model implementation and the provision of care, while uneven infrastructure development across states and initiatives often hampered implementation.**

Each of the key topics related to health information technology—data systems, data access, data sharing, and patient identification (shown in Figure 2 below)—are related and in some cases overlapping. All models relied on development or use of data systems and tools, which was uneven across states and initiatives, and often hampered implementation. When systems were implemented—often with state resources—access to high-quality data was enhanced and supported care coordination efforts. As well, the ability to share data across sites facilitated model implementation and the provision of care.

**Figure 5. HIT Tools and Capabilities Affecting Program Implementation and Operation**



These issues provide insights into key tactical considerations that should be considered and planned for when implementing a model. In summary, we found:

- **Implementation of Data Systems:** HIT tool adoption and data reporting and sharing requirements accelerated demonstration participants' progress toward practice transformation and delivery system reform. However, the high cost and slow pace of infrastructure implementation was compounded by incompatibility of participant data systems. In addition, lagging participation in health information exchanges (HIEs) exacerbated challenges across numerous states.
- **Data Access:** Demonstration participants' access to timely data provided opportunities to improve performance, increase efficiency, and identify patient needs. Conversely, states' or payers' lack of timeliness in producing data, coupled with participation issues or

misalignment across quality measures or struggles in accessing data, hindered participants' capacity to respond to gaps in care.

- ***Cross-Setting/-Entity Data Sharing:*** Data- and event-sharing across providers and settings was a core aspect of comprehensive care coordination, improving population health, and encouraging providers to adopt new models of payment. Lack of interoperability and effective data sharing across platforms and organizations raised data protection and privacy concerns among some entities; however, consequences on care coordination efforts were more widespread.
- ***Patient Identification:*** Well-developed data infrastructure coupled with use of multi-source data was key to identifying which individuals would benefit most from enhanced services such as care management. Delays and inaccuracy of data from states/CMS contractors challenged patient outreach and enrollment functions and made rapid-cycle adjustments to care management strategies difficult.

### **Finding 3 Examples: Health IT and Data**

This section contains model-specific examples of facilitators and challenges related to stakeholders' use of HIT while participating in models.

#### ***Implementation of Data Systems***

##### *Examples of use of HIT tools*

Across the models encompassed by the **PCSR**, high-functioning HIT facilitated practice transformation through improved documentation, referral, population management and care coordination processes. Some **MAPCP** participants expanded their use of EHR systems when they created patient registries, calculated quality measures and identified areas for improvement, and generated population-based reports to identify patient needs. Additionally, EHR implementation—in a state where comprehensive EHR adoption was not yet widespread—facilitated practice transformation. EHRs that integrated combinations of behavioral health, physical health, and telehealth data were featured in the **HCIA R1 BHS** and **HCIA R2** evaluation reports. Integrated EHRs were viewed as vital tools for supporting care coordination, facilitating cross-provider information exchange or communications between providers and patients, and monitoring opportunities for operational improvements within the program. In the **Strong Start** model, EHRs helped facilitate some awardees' ability to generate reports using demonstration data for the purposes of program improvement, tracking utilization of program patients, or communicating across providers.

##### *Examples of state support for health IT advancement*

State participation requirements intended to support/encourage health IT adoption, provider participation and observance of privacy and confidentiality requirements facilitated health care transformation in **SIM R1** states. Some of the **SIM R1** states mandated that providers participate in data reporting and health IT and provided direct funding of related initiatives as a way to ensure implementation. For example, states provided funding to providers to meet EHR adoption and data reporting requirements, and some states also helped facilitate data sharing consent policies. Other **SIM R1** states invested demonstration funds in HIEs to support delivery system reform models, with providers citing event notification services (via HIEs or another mechanism) as particularly useful in improving care coordination; still other states used demonstration funds to develop a variety of analytic platforms to better understand how their delivery models facilitate care coordination (e.g., in one state, the state developed an analytics engine and algorithms to track achievement).

##### *Examples related to tools and technology*

One of the states participating in **FAI** developed a web-based clinical support tool that integrates individual-level information from payment and assessment data systems covering primary, acute, LTSS, behavioral health, and social services. Having all of this information in one place and accessible to health home care coordinators facilitates the State's ability to prioritize enrollment of high-cost, high-risk beneficiaries into health homes and makes care coordination easier.

Several states participating in **SIM R1** also provided technology-related solutions, in the form of toolkits as well as support in the use of health IT and data analytics. Two states stood out in their recent **SIM** initiative efforts to support organizations and providers in using health data. To address providers' concerns about conflicts between State Law and HIPAA, the state's **SIM** Initiative funded a Privacy, Security and Consent Management for Electronic Health Information Exchange grant to create the Foundations in Privacy toolkit. In **MAPCP** and also as reported in **PCSR**, practice feedback reports including beneficiary-level utilization data and practice-level performance on quality measures were identified as important areas of TA, with many practices across **FQHC**, **Independence at Home Demonstration (IAH)**, **CPC**, **MAPCP**, **SIM**, and **HCIA** awardees saying that they had adapted or changed their activities based on the reports. Key informants to the evaluations emphasized their interest in receiving “tangible tools and practical, concrete options or solutions for issues.” To improve technology support, in **CPC**, “affinity groups” were created connecting practices with vendors to discuss issues and get support. A **CPC** key informant thought this idea could be pushed further by organizing practices around their health IT vendors. The **CPC+** expansion of **CPC** includes a provision for electronic health record (EHR) vendor support of participating practices.

#### *Examples of intensity of resource consumption associated with health IT implementation*

**SIM R1** participants cited high implementation costs for infrastructure as a barrier: most states reported that health IT efforts required significant investment of time and money. Implementation delays related to health IT tools, specifically functioning EHR components, compromised provider engagement in some **HCIA R2** programs. Unexpectedly high costs of implementing and supporting health IT interventions that were originally absorbed by **NFI** awardee sites raised questions about the likelihood that individual nursing facilities could sustain the health IT solutions post-demonstration.

#### *Examples of incompatible systems and system integration barriers*

In **FAI**, slow implementation of data management systems by payers (i.e., **MMPs**) to support centralized enrollee tracking and care management activities delayed delivery of care coordination services; similarly, in **SIM R2** states, health IT initiatives to support population health goals fell behind schedule. Incompatible data systems used by participants also posed a challenge to achieving functional data systems. **SIM R2** participants found that some health IT systems were inadequate for initiatives and updating or changing the infrastructure for the sake of the demonstration was costly. Infrastructure limitations challenged **PCSR** models' ability to leverage multi-payer data. Practices lacked the necessary infrastructure to aggregate data across payers, and as a result struggled to reconcile different formats, definitions, and outcomes. Other infrastructure limitations, namely low rates of technology integration and slow implementation, plagued some **NFI** sites. Of the few **NFI** awardees that had health IT interventions, protracted implementation of software and tools used to support the **NFI** was in part attributed to less technology savvy staff than anticipated, which amplified challenges associated with the lack of user-friendliness of some tool interfaces. **PCSR** and **HCIA R2** evaluators cited similar challenges with implementation of health IT tools that necessitated extended planning, testing, and rollout processes. Interoperability of EHRs, particularly for smaller practices, was an



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ongoing challenge for models in the PCSR. For HCIA R2 awardees, the activities, staff time, and leadership engagement necessary to adapt EHRs to accommodate model-based data collection and support functions were daunting for hospitals' and practices' health IT staff. Similarly, the **HCIA R1 Meta-Analysis** revealed that integration of clinical decision support tools within awardees' EHRs required that IT staff engage in "constant tweaking" to maintain proper functionality.

#### *Examples of data extraction and data usability barriers*

Struggles with EHR systems was a common theme in the **HCIA R2** and **HCIA R1 BHSAs** reports. For example, HCIA R2 awardees experienced difficulty obtaining EHR information on transitional and chronic care management that was to be extracted and used for program improvement and evaluation. As a result, awardees' ability to make short-term course corrections in program operations was limited. HCIA R1 BHSAs evaluation reports highlighted data usability challenges, such as the inability to share data among providers within a given program, hindering full collaboration among clinicians. Relatedly, care managers and behavioral health providers reported dissatisfaction with missing and inconsistent data elements in the EHRs. Across HCIA R1 BHSAs and HCIA R2, difficulties with data extraction and data usability prompted staff to develop manual work arounds. Evaluators for both models offered a range of illustrative examples: staff completing EHR data entry in the office rather than real-time during patient home visits because of EHR connectivity problems; tracking and documenting care management activities in Excel worksheets rather than using the site's partially-functional care coordination software; and, entering duplicative information in EHR systems and other health IT tools that are not compatible across sites. The evaluation reports noted the significant documentation burden associated with these work-arounds, and awardees stated that time spent on documentation could have otherwise been spent on care coordination, had the health IT systems been fully functional.

#### *Examples of low participation in HIEs and data repositories intended for care coordination*

Evaluators for **SIM R2** found that low provider participation in statewide HIEs used for data collection created unanticipated challenges for the demonstration. In **SIM R1**, one state reported that only one-third of providers were connected to the state's HIE, so data available to support care transitions was limited. **MAPCP** evaluators observed that providers were hesitant to use HIEs or other claims and clinical data repositories because of concerns that data were unreliable or incomplete and that systems were onerous to use. HIEs were also limited because individuals were required to opt-in to have their data included. In **NFI**, nursing facilities found that hospitals' adoption of HIEs was an ongoing challenge, even after the HIEs were fully operational. Many hospitals either did not send discharge summaries for patients discharged to nursing facilities at all, or the summaries were sent late, putting the onus on nursing facility staff to call the hospitals to obtain or clarify information. Even when the discharge summaries came through, information was almost useless in some cases since it was unreadable or unsearchable because of formatting or length.

## **Data Access**

### *Examples of leveraging multiple sources of data*

The ability to mine and analyze multiple sources of data to identify opportunities for improved quality performance, increase efficiency, and monitor strategies was viewed as important by **SIM R1** states. The benefit was enhanced by states that made funding available for quality measure reporting or through grants to fund providers' quality improvement (QI) initiatives — for example, using demonstration funds, one state gave physicians paid under the episode of care model a report that compares providers' results on quality outcome and cost metrics. Similarly, **MAPCP** participants cited the availability of recent practice-level data (i.e., reports that are less than 6 months old)—aggregated across multiple payers—as important in that it allowed practices to compare their performance to other participants. The resulting reports included data on measures used to determine performance-based payments, and practice-reported quality and utilization measures based on data from Medicaid managed care, Medicare Advantage (MA), and commercial plans. Analysis of internal and external data was a trait commonly observed among engaged hospitals in the Maryland **All-Payer Model**. Four of the **HCIA R2** awardees leveraged multiple sources of data for the purposes of generating feedback and monitoring performance targets, e.g., enrollment goals, treatment outcomes, etc. According to the **PCSR**, several states in SIM and MAPCP worked to mitigate the lack of access to timely claims data by implementing local or statewide HIEs that provided discharge notifications; other model participants establishing discharge notification arrangements with local hospitals.

### *Examples of data timeliness and quality concerns*

Implementing an effective, user- and workflow-friendly health IT infrastructure was a common challenge evidenced across models in the **HCIA R1 Meta-Analysis**. For example, **SIM R1** providers in one state, along with **HCIA R1 BHSA** participants, expressed frustration that the data used to generate reports were too old to be useful and, thus, hampered their ability to succeed in timely quality improvement. In another state, PCPs did not trust their attributed patient panels to be correct because they did not recognize many of the names the state identified as their patients. Relatedly, in **SIM R2**, the health IT and data infrastructure systems are only valuable and desired by providers if there is sufficient data and the data is believed to be accurate and complete. For example, when one state launched its statewide common provider directory, stakeholders questioned its usefulness since only one of the four major payers in the state contributed to it and another major provider declined to participate. Also, MMPs in **FAI** had difficulty obtaining timely data from providers for individual patient care plans. Meanwhile, providers struggled to access enrollee records, resulting in additional delays accessing care plans. Likewise, **HCIA R1 BHSA** evaluators reported that variation in providers' use of EHR systems resulted in inconsistent reporting of patient data. Similar challenges were reported in some **MAPCP** states where the state (or payers) were unable to consistently produce the data practices needed to monitor or improve performance and identify gaps in care. The issues were compounded by a lack of data sharing agreements, inconsistent data formats across payers, and substandard quality/integrity of data received, a finding echoed in **MIPCD**.

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### *Examples of misaligned quality measures*

Lack of alignment in quality measures across models and initiatives resulted in high administrative burden for states and providers alike. Specific examples from **SIM R2** and **MAPCP** include different measures, measure definitions, data sources, and report formats across demonstrations and payers. In some instances, measures that were relevant to commercial payers were not well-suited for the Medicaid population. Measure alignment challenges occurred not only at the payer level, but also at the state level: **SIM R1** providers complained about having too many measures to collect across different payers as well as about the lack of requirements for harmonization of measures in some states. Even in one state where there was a requirement for measure alignment, the regulations applied only to a small subset of payers, resulting in inconsistencies.

### *Examples of data access issues*

Although event notification services were considered helpful where available, concerns with access to these services persisted. Issues included the high cost of access through HIEs and state policies that restricted access for certain providers. Similar data access-related issues were noted in **MAPCP** where (lack of) interoperability of EHRs limited data exchange across providers in many states: unable to exchange patient data electronically, providers instead relied on PDFs of patient records. Also, in year 2 of the MAPCP demonstration, one state's Medicaid agency implemented a new claims payment system and changed data warehouse vendors, which affected the state's ability to obtain data. As a result, for most of a calendar year, the initiative was precluded from providing practices with data to help them identify patients needing care management services. For some **HCIA R2** awardees, ongoing difficulties accessing Medicaid and Medicare data had far-reaching impacts. For one awardee, the total number of participating patients and their associated claims were smaller than originally envisioned, which had the potential to limit the awardee's ability to detect statistically significant condition prevalence and cost estimates and to calculate overall medical expense savings from the program. Compounding this, the same awardee continued to face delays in receiving Medicaid data files and was unable to accurately assess changes in utilization patterns and costs (i.e., potential savings achieved) for the Medicaid population served under the award. Another HCIA R2 awardee faced long delays in receipt of Medicare claims data needed to help develop the team's payment model and to help guide the risk stratification of program patients. While the awardee leveraged historical claims data from another source to begin payment modeling in the interim, evaluators in a later report stated that the program continued to be plagued by lack of timely access to Medicare data that should have been used to help develop their payment models.

### ***Cross-Setting/-Entity Data***

#### *Examples of efforts to promote cross-provider data sharing*

Two states in **SIM R2** viewed their health IT and data infrastructure strategies as a driver of provider participation in health care transformation: the systems allowed the states to supply providers with the information needed to adopt value-based payment (VBP) and APMs. In **SIM R1**, initiative funding was used in at least one state to develop tools for providers to pursue

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population health improvement opportunities. In this instance, the state developed a referral system for providers to encourage greater use of preventive care and adoption of healthy behaviors among patients. In **HCIA R2**, program staff began working with a hospital to receive timely EHR notifications of ED visits and inpatient admissions, which allowed program staff to visit patients in the hospital and start coordinating post-hospital care. **MAPCP** evaluators reported that regular data feeds from local hospitals similarly helped facilitate care coordinators' activities. While use of EHRs in **MAPCP** improved the transfer of information between PCPs, hospitals, and specialists, sometimes the flow of information revealed that PCPs were not actively coordinating patients' care as intended.

*Examples of lack of interoperability and ineffective data sharing across platforms and entities*

**FAI** and **SIM R1** informants named the absence of sharing timely and complete data as a significant hindrance to care coordination processes. **SIM R1** providers acknowledged that although the event notification services were helpful, cross-setting data sharing challenges persisted, while lack of effective data sharing across EHR systems and an inability to send information across settings obstructed **FAI** care coordinators' activities. A similar finding for one **HCIA R2** awardee led program staff to develop a template that the initiative's outside vendor was required to use to ensure program staff were provided with up to date clinical information on patients served by the program. Lack of access to information held by relevant payers and providers proved to be a challenge for hospitals in the Maryland **All-Payer Model**. Maryland hospitals cited the importance of receiving additional data from CMS about patients' non-hospital service use for controlling the total cost of care. Specifically, the hospitals sought access to Medicare beneficiary data, including information from skilled nursing facilities, home health providers, and other non-acute care facilities. Despite increased adoption and use of health IT such as EHRs, some **MAPCP** practices encountered an unwillingness of health systems with which they were not affiliated to alert providers when their patients were seen.

*Examples of challenges integrating behavioral and medical health records*

Looking across several multi-payer initiatives, the **PCSR** raised the issue of privacy associated with sharing behavioral health data in the context of feedback reports. Mental health and substance abuse disorders were often excluded from patient-level data provided to practices, yet patients suffering from those conditions were most in need of the services provided through these initiatives. Similarly, key informants for **FAI** described challenges associated with balancing the need for data exchange in order to coordinate care for vulnerable populations and observing patients' privacy concerns around sharing certain mental health diagnoses, hospitalizations, and substance abuse treatment records. **SIM R1** evaluators described how policy and technical barriers to exchanging comprehensive health information impeded progress on behavioral health integration with other aspects of the health care delivery system in almost all Test states. In some states, patients were required to opt-in to data sharing; with similar consequences, a federal statute requiring patient consent to share substance abuse information between providers had unintended consequences on care coordination interventions that aimed to improve patients' holistic health status. Other communication and data sharing challenges associated with the integration of behavioral and physical health stemmed from the lack of infrastructure and

capacity to enable providers and agencies delivering behavioral health services to access and exchange patient information electronically.

### ***Health IT and Data to Support Patient Identification***

#### ***Examples of use of external sources of data to identify and enroll high-risk, high-cost patients***

Approval from federal or state entities to access their data systems yielded benefits for organizations trying to locate and engage patients who would benefit from their initiatives. In **FAI**, CMS's authorization for MMPs to request beneficiary addresses and confirm beneficiary contact information through the Batch Eligibility Query process meant that the payers did not have to submit individual enrollee requests, which is the standard, thereby reducing the time care coordinators spent searching for patient information. In **HCIA R1 BHSA**, one awardee periodically identified groups of patients with more severe health conditions, and staff made a special effort to ensure that EHRs for these patients contained key data about their health status and use of health services. The staff obtained this information by reaching out to patients' PCPs and accessing the state's ED data system. Not only did these more comprehensive data help staff better understand the full range of patients' needs for health services and improve coordination with PCPs, but ED visit data also helped staff coordinate with other providers in the community. At least one of the **HCIA R2** awardees described how program staff finalized an agreement with the state Medicaid agency on the process for exchanging claims data. As a result, the awardee gained access to claims data directly from the state on all Medicaid recipients, negating the need to request information from individual MCOs. Even better, data from the state were more complete and a consistent format, making it easier for program staff to accurately identify individuals eligible for the program. By the third year of the **MAPCP** demonstration, three states augmented data they provided to practices as a way to improve demonstration practices' data analysis and identification of priority patients.

#### ***Examples of use of internal sources of data to identify and enroll high-risk, high-cost patients***

EHR systems were a primary source used by some of the initiatives to identify eligible patients. **MAPCP** evaluators tied the improved ability of practices to manage patients and coordinate and improve care in one state to widespread EHR adoption. The practices in the state attributed the health IT advancement, in part, to the state's requirement that practices attempt to connect to its HIE. Several awardees in **Strong Start** described using their EHR systems to not only identify eligible patients, but also to facilitate a multidisciplinary team approach to enhanced prenatal care. Another Strong Start awardee used its EHR system to facilitate an electronic process to accept provider referrals to the program, while several awardees relied on maternity clinic schedules stored within EHR systems to identify likely candidates for the model. This also allowed them to engage in face-to-face outreach, thereby reducing the need for clinic physicians and nurses to make referrals. Several **HCIA R2** awardees used their EHR systems or care coordination software to run daily reports on specific diagnostic codes of interest, which allowed nurse care managers to extract lists of patients they could assess for program eligibility. Care coordination tools contained initial patient assessments, generated care plans and recommended follow-up actions based on responses to assessment questions, helping program staff focus on patients most in need of program resources. Another HCIA R2 awardee enhanced the analytic

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algorithm it used within the EHR system to find eligible patients by expanding the ZIP codes searched and excluding language preference (after finding the latter to be an unreliable data element).

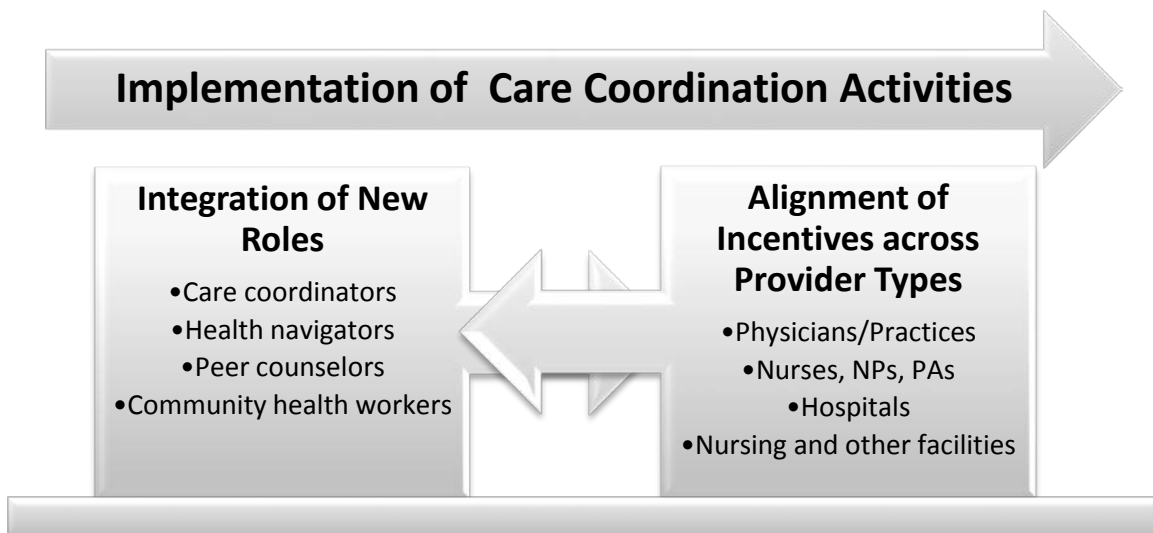
*Examples illustrating how the process of identifying patients for care coordination was challenged by lack of data timeliness and questionable data quality*

**MAPCP** evaluators pointed to the lack of timely data, which made it difficult for practices to implement real-time adjustments to their care management strategies. At least one state said that lack of timely utilization and quality data stratified at the practice- and beneficiary-level presented obstacles to managing patient care and producing meaningful practice feedback reports related to performance of the state's HIE. **PCSR** practices' receipt of quarterly claims-based data with a three- to six-month lag was viewed as too dated to be actionable for care management purposes. Compounding this, the claims lags also made it difficult for practices to reconcile data from CMS and other payers with more current data generated from the practices' own EHR systems. Issues related to the reliability of lists of high-risk and high-cost patients made prioritizing patients for care management a time-consuming process for MAPCP practices; similarly, provision of outdated or incorrect contact information for beneficiaries to the MMPs in **FAI** meant that plans struggled to conduct outreach. As a result, two-thirds of demonstration states were unable to reach significant portions of enrolled patients within the first 90 days, which meant they failed to meet a model requirement to conduct a health risk assessment (HRA) in the prescribed window. Difficulties with real-time verification of Medicaid eligibility for some **MPCD** programs impeded staff's ability to confirm patient enrollment. This was also a challenge when potentially eligible individuals called smoking quit lines, heightening frustrations with establishing consistent enrollment processes. For one **HCIA R2** awardee, inconsistent technical performance of the EHR system tasked with identifying eligible patients caused low enrollment at the beginning of the awardee's program.

**Finding 4: Reliance on ‘new’ non-physician provider roles and collaboration across provider types and sites enhanced care coordination though resistance to change and conflicting incentives and functions created obstacles to effective integration.**

As described in the model overview section, many of the models relied on new or refined staff roles focused on care coordination or direct patient support. The names and types of roles that care coordination staff filled differed depending on the model, the licensure required, and the scope of responsibilities. Roles included: dedicated nurse care managers, social workers, community health workers (CHWs), patient navigators, peer support specialists, peer counselors, and community health teams (CHTs). The initiatives included in this review also affected traditional healthcare providers, including hospitals, nursing facilities, physicians, and nurses.

**Figure 6. Coordinating Across Provider Type and Sites of Care**



- Integration of New Provider Roles in the Care into Care Delivery Workflows:*** Use of non-physician providers focused on care coordination — carefully selected with based on experience with the priority population, roots in the community, and strong communication skills — enhanced coordination of services and quality of care. Resistance to change, care coordinator role ambiguity, and staffing difficulties were obstacles to integration of non-physician providers into workflows, which discouraged practices from adapting to new types of providers.
- Collaboration Across Different Types of Providers and Sites of Care:*** Strategies to promote provider collaboration, such as integration of behavioral health and primary care, accelerated progress toward increased enrollment and improved outcomes, while conflicting incentives within and across provider types inhibited ability to improve quality, constrain costs, and maintain continuity of care.

## **Finding 4 Examples: Care Coordination and Collaboration across Provider Type and Sites of Care**

This section contains model-specific examples of facilitators and challenges related to integrating new provider roles and increasing collaboration across provider types and sites of care.

### ***Integration of New Provider Roles into Care Delivery Workflows***

#### *Examples showing benefits to providers of new roles*

Cross-model analysis revealed that new or refined staff roles focused on care coordination were central features of most initiatives. Irrespective of titles and credentials, across the board, care coordinators were credited with driving much of the improved care coordination that providers and patients experienced. Evaluators for a number of models, including **SIM R1**, **HCIA R2**, **Strong Start**, and **HCIA R1 BHSA**, asserted that the activities of care coordination staff enhanced providers' ability to focus on medical care and promoted communication between providers and participant patients. Reports for the latter model stated that in addition to reducing PCP workloads, care managers were better equipped to handle patients' overlapping psychiatric and medical issues and could dedicate a significant amount of time to individuals with complex conditions. In Strong Start, clinic staff began viewing model care coordinators as valuable resources who not only reduced the burden on providers, but who enhanced the overall quality of care by linking patients to community services and reinforcing treatment instructions prescribed by providers. **MAPCP** evaluators echoed similar sentiments, saying that care managers and care coordinators were seen by states and participating practices alike as the most transformative and valuable part of the model. Specifically, one **MAPCP** state highlighted the benefits of the practice-based nurse care managers while another state praised CHTs as an important element of the program.

#### *Examples related to patient benefits of new roles<sup>12</sup>*

Patient responses to care coordinator roles were also largely positive. **Strong Start** evaluators conveyed that the relationship between the patients and their care coordinators was viewed as particularly valuable to the high-risk Medicaid patients receiving services. According to evaluators, patients benefited from care coordination services that complemented those of clinical teams, especially around filling gaps in traditional care: care coordinators helped patients access community services, conducted rigorous follow-up, and arranged for personal medical transportation or gas reimbursement for medical appointments. In **SIM R1**, some patients reported reduced wait times to see providers once new care teams and staff roles were implemented. Across **HCIA R1 BHSA** awardees, many staff reported that incorporating patient navigators and peer support specialists into the care teams not only increased patients' access to

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<sup>12</sup> Additional information on how beneficiaries were engaged in the models is provided in the Stakeholders section under Beneficiary Participation and Engagement.



health care services by increasing patient engagement and behavior change, but also addressed barriers to care and provided extended support to patients beyond traditional business hours.

*Examples of the operational and quality benefits of new roles*

In the Maryland **All-Payer Model**, hospitals reported that they had increased precision in nurse staffing levels and enhanced their use of physician assistants. Further, the organizations began cross-training staff on skills relevant to different (hospital) divisions as a way to adapt more nimbly to changes in patient census and care coordination needs. Benefits of cross-training both clinical and non-clinical staff to fill multiple roles and functions was also cited as a facilitator to implementation by **HCIA R1 Meta-Analysis** evaluators. To expedite the learning curve for new care coordination staff, one of the **HCIA R2** awardees hired a nurse trainer. Simultaneously, program leaders slowed enrollment of patients until new staff were fully acclimated to their roles. Leaders described the decision as a strategy to balance the “twin goals” of improving care coordination services and expanding program capacity. The **PCSR** had a similar finding in the context of participant sites becoming advanced primary care practices. Since most practices needed to add staff to achieve this status, allowing personnel sufficient time to adapt to their roles and perform practice transformation activities was deemed essential.

*Examples of the benefits of deliberate selection and placement of care coordination staff and the importance of their scope of services*

**Strong Start** evaluators described the model’s emphasis on the deliberate selection and hiring of care coordination staff who not only possessed the requisite clinical credentials but also exhibited strong interpersonal skills and had ties to the communities they served. Evaluators viewed these criteria as a key part of successful model implementation. Similarly, **HCIA R1 BHSA** evaluators noted the importance of hiring staff with roots in the local community, who possessed experience with the priority patient group(s) and showed a willingness to address social determinants of health. Evaluators for **NFI** concurred with findings about the importance of selecting staff with specific personality and experience-based characteristics, naming strong positive relationships and personality fit between the NFI model-employed nurses and nursing facility staff and leadership as key facilitators to successful implementation. These relationships were critical in encouraging culture change at participating nursing facilities and cultivating supportive environments in which NFI nurses could treat residents and educate facility staff on changes of condition and appropriate care to minimize unnecessary hospitalizations. As with the Strong Start care coordinators, the nurses who were most successful in communicating the goals of the model and gaining buy-in from staff were individuals who had experience building relationships and fostering open lines of communication, and who exhibited resilience when faced with resistance to change. Based on feedback from at least two awardees, **HCIA R2** evaluators confirmed that care coordinators’ prior experience in similar roles was an asset to the initiative since these staff needed less training, were accustomed to collaborating with other key stakeholders, and understood the importance of collecting data to support program evaluation. **HCIA R1 BHSA** evaluators also underscored the importance of identifying the “right people” for care coordination roles: individuals with strong personality traits and relevant experience to deliver care coordination services. Some awardees discussed the importance of care coordinators

being comfortable working in a team environment, as several awardees asserted that their team-based approach was a fundamental element of their care coordination model.

*Examples illustrating how flexibly adapting care coordination roles and services over time advantages integration with practice workflows*

Evaluators for **SIM R1** and **MAPCP** agreed that care coordinator roles must be well-defined to ensure staff are as effective in their roles as possible and capable of working at the top of their licensure. In this vein, enhancements commonly made by MAPCP practices by the third year of the demonstration involved refining care manager roles to better integrate them into practice activities and workflows. As the model progressed, some MAPCP practices hired new, non-physician staff including pharmacists, social workers, and dieticians. These individuals became progressively more integrated in practice activities once existing practice staff recognized the gaps in care they filled. In **Strong Start**, peer counselors' ability to adapt to their role in the birth center setting was highlighted. Peer counselors adeptly crafted services to the needs of patients, which was viewed as a facilitator to assimilating the counselors into the practices. At least one **HCIA R2** awardee restructured the staffing of its care coordination teams during the initiative. The awardee promoted some CHWs to care coordinator positions which in turn allowed care coordination teams to benefit from the individuals' knowledge of, and experience with the program. Hiring care coordinators from the existing pool of CHWs and prioritizing supervisory support and training for the CHWs boosted overall staff morale and effectiveness.

*Examples related to securing buy-in from providers, staff, and leadership through education and training*

**Strong Start** evaluators described promising practices to obtaining provider buy-in, including educational webinars and training sessions for providers about complementary services offered by care coordinators. Also cited were learning collaboratives involving providers and partner organizations and identification of internal "champions" to communicate the value of the program. Greater buy-in from providers and staff offered evidence of improved relationships which in turn yielded widespread benefits. For example, Strong Start evaluators largely attributed gains in program enrollment during the third year to improved integration of Strong Start care coordinator staff into clinical settings and better relationships with clinicians. Increased buy-in from providers not only enhanced coordination of obstetrics-related services, but it positively impacted the flow of referrals to the program and raised opportunities for integration of enhanced care coordination services into the providers' workflows. Similar efforts among at least five **HCIA R1 BHSA** awardees emphasized the value of training providers as a way to engender buy-in for the model. Also important was active leadership support of training and new roles, reinforcing the importance of buy-in at all levels. For example, one awardee spent the first six months training staff throughout the organization in procedures needed to implement the program and then continued widespread training efforts after the program began. The **HCIA R1 Meta-Analysis** stated that program staff considered informal training modalities such as shadowing and mentoring to be more effective and practical than didactic training. Yet, evaluators noted that training staff with varied backgrounds together in a group fostered a shared understanding of the initiative's activities and helped dissolve divisions across different types of

staff (e.g., physicians, nurses, social workers). A hands-on training approach with positive results was exhibited by **NFI** model-employed nurses. In contrast to education-only nurses who conducted intermittent didactic training for facility staff, nurses with a full-time presence in nursing facilities who also provided an “extra set of hands” during residents’ clinical care saw more measurable changes. The latter set of nurses were associated with facilities that showed greater overall buy-in to the initiative among nursing facility staff and providers, as well as stronger intervention effects – specifically, reduced utilization of acute care and expenditures. Nurses with a consistent versus intermittent presence in the facilities saw greater changes in facility culture and increased support for the goal of reducing avoidable hospitalizations.

#### *Examples of provider resistance to change*

Overcoming provider resistance to new models of care and general resistance of practices to adapt to change required patience and creative strategies on the part of model staff and leaders. **MAPCP** evaluators described how practices in one demonstration state dedicated significant resources to effectively integrating care managers, often employed by the physician organization, into participating practices. Despite the efforts, practices experienced mixed success. Under the **Strong Start** model, care coordinators struggled to communicate and partner with physicians and nurses. Some obstetrics providers were initially reluctant to allow an additional person to care for their patients, while lack of support and buy-in from physician and midwife prenatal care providers limited the number of referrals they made to the initiatives. Collectively, this resistance had a negative impact on program enrollment and there was little coordination between medical services and intervention services during the early stages of implementation. Challenges with provider buy-in for the Strong Start model also surfaced at clinics where the rotation of resident physicians necessitated the relationship between providers and care coordinators be continuously re-established. For one **HCIA R1 BHS**A awardee, integrating new roles into an existing team and establishing specific responsibilities for care coordinators proved challenging, while another awardee faced internal resistance to acceptance of a non-hierarchical team-based model.

#### *Examples of practice staff resistance to change*

Some **Strong Start** clinics reported that care coordination was seen by practice staff as an extra layer, rather than an integral part of a patient's experience. Care coordinators at these clinics reported that clinic staff tolerated them but were not welcoming. Lack of dedicated physical space in clinics for use by care coordinators was raised as an issue in Strong Start and **HCIA R2** reports as a challenge to implementing care coordination services. For Strong Start, **HCIA R1 Meta-Analysis**, and two **MAPCP** states, care coordinators and CCTs were perceived as adding complexity to, or interfering with, established practice workflows, which presented barriers to implementation and compromised staff satisfaction.

#### *Examples of patient resistance to change*

Evaluators for **SIM R1** and **Strong Start** touched on the topic of patient resistance to integration of care coordinators. For example, some patients served by SIM initiatives were disinclined to see different members of a care team when they came in for appointments. Many Strong Start mothers were reluctant to make a separate trip to a site to meet with their designated peer

counselor. This left clinic sites to grapple with how to best incorporate the peer counselors' services into their workflows.

### *Examples of challenges related to defining care coordinator roles*

As discussed above, organizations faced a variety of difficulties integrating care coordinators into their workflows and team structures. A significant portion of the challenges can be attributed to organization staff's uncertainty about the purpose and boundaries of the care coordinators' new roles. For example, some **HCIA R1 BHSA** awardees reported that organizational culture and unfamiliarity with certain aspects of care coordination services (e.g., telehealth) posed challenges to program implementation. Each **MAPCP** state initiative was required to make provisions for the integration of community-based resources to support PCMHs and six of the eight states funded new provider roles for this function. However, there were few guidelines provided as to how to implement the change and it took more time than anticipated to clearly define the role of the CCTs with practices, staff the CCTs up to capacity, and develop relationships. Likewise, in **HCIA R2**, the nascence of the initiative meant that transitional care managers and health coaches had to develop their own roles without anyone to learn from. Care coordination staff struggled to define their roles and prioritize their workloads without consistent guidance about how much time to devote to newly enrolled patients versus existing patients. **FAI** used care coordinators employed by the MMPs to deliver comprehensive care coordination to enrolled patients. However, the overlap of MMP care coordinators' activities with other care managers created confusion among staff and patients alike, particularly when patients had multiple complex conditions (e.g., medical issues, behavioral health needs, recent hospital discharges). Some patients had up to three care coordinators simultaneously across various organizations, including the MMPs, Medicaid, and behavioral health agencies, which created unnecessary overlap. In **HCIA R1 Meta-Analysis** and the **PCSR**, evaluators reported that determining the most appropriate roles and functions for non-clinical or less experienced staff interacting with complex patients proved challenging. While financially advantageous to use non-clinical personnel for care coordination and disease management, many organizations learned that staff did not have the requisite expertise or clinical skills to address the medical needs of clinically complex patients. As a result, some practices ended up having to hire individuals with clinical backgrounds.

### *Examples of struggles to recruit, hire, and train care coordinators*

Numerous models encountered difficulties recruiting and hiring qualified care coordination staff (**FAI**, **MAPCP**, **HCIA R1 BHSA**, **HCIA R1 Meta-Analysis**, and **Strong Start**). Staffing challenges slowed implementation of care coordination services and extended timelines for hiring, training, and defining workloads for care coordinators. **FAI** evaluators reported that MMPs had difficulties finding care coordinators with experience coordinating care across acute, LTSS, and behavioral health settings; in several states, the need to source candidates with diverse backgrounds and bilingual created an added layer of complexity. In **MAPCP**, primary care practices in four states reported significant challenges with staffing CHTs. Likewise, multiple awardees in **HCIA R1 BHSA** faced obstacles in their efforts to recruit and retain qualified staff, including problems hiring behavioral specialists in rural areas, finding care coordinators able to

work with homeless populations, and attracting staff despite the availability of more lucrative opportunities. Complicating the hiring and retention concerns was an issue raised by HCIA R1 Meta-Analysis evaluators: initiatives that rely on hiring all or almost all new staff may be more difficult to sustain in the long run—particularly once the award funding concludes—compared to initiatives that draw on existing staff by redefining or adding activities to staff roles.

#### *Examples of challenges faced due to care coordinator turnover*

While initiative leaders struggled to staff their care coordination roles and teams to full operational capacity, they also had to contend with staff turnover. For **Strong Start** care coordinators, resource constraints limited the number of contacts the care coordinators could make per enrollee which hindered relationship-building. Large caseloads and the inability of care coordinators to fully meet the needs of high-risk enrollees (e.g., given limited options for community resources such as affordable housing, mental health services, etc.) fueled some of the turnover. One Strong Start awardee noted that high turnover is a common peril in grant-funded programs because the jobs are viewed as temporary. Burnout due to the dedication required and intensity of work involved in delivering community-based primary care to individuals with complex conditions was cited by **HCIA R1 BHSA** evaluators. In addition, stress, low wages, misalignment between care coordinators' skills and the clinical needs of complex patients, and the need for more hands-on practical training were identified as common drivers of care coordinator turnover across models (Strong Start, HCIA R1 BHSA, **FAI**, **NFI**, **HCIA R1 Meta-Analysis**). Turnover meant that initiatives were left not only with open positions to fill, but once new staff were hired, models had to conduct orientation and training of new staff. **HCIA R2** and **PCSR** evaluation reports described how models were training staff on care coordination workflows and clinical decision support tools on an ongoing basis. Allowing adequate time for new staff to learn the program, shadow their colleagues, and ramp up to full patient caseloads had negative implications for program capacity development and enrollment.

#### **Coordination Across Different Types of Providers and Sites of Care**

##### *Examples of structures to integrate behavioral health with traditional medical care*

All states in **SIM R1** facilitated behavioral health integration through practice transformation efforts including TA, training, learning collaboratives, peer-to-peer learning opportunities, and access to consultants and experts. One state launched a “behavioral health and physical health integration library” that contained a collection of resources for providers and organizations that included “virtual clinic visit” videos and expert interviews. Other test states encouraged communication between PCPs and behavioral health providers through telehealth initiatives that brought behavioral health into primary care clinics, or mandated establishment of contractual or compact-based relationships between PCPs and behavioral health providers (**SIM R1**, **MAPCP**). Even if not mandated, at least one **HCIA R2** awardee stressed the importance of having employed or contracted behavioral health staff available to support the initiative, believing that sites with these arrangements in place are ideal locations for focused integration efforts to take root. Using a different tack, **SIM R2** states developed systems to support behavioral health providers who needed skills training (e.g., how to share patient health information with PCPs) to promote their new responsibilities in care coordination, while some **SIM R1** states promoted use

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of HIEs to share this information between parties. An awardee in **HCIA R1 BHSa** reported that team meetings for systematic case reviews that involved the care manager, PCP, and several consultants facilitated knowledge transfer and growth among the care team. Another awardee said that program success was maximized at sites that offered a full continuum of acute and outpatient behavioral health services. Affiliation with large hospitals or health systems allowed greater access to resources as well as an easier time identifying and enrolling patients. In contrast, sites without such affiliations had to conduct more extensive outreach to generate referrals and recruit participants from local hospitals and community providers. An HCIA R2 awardee took a similar approach to integrated care and provided behavioral health services to patients through web-based, small group, and individual interventions.

#### *Examples related to new payment models*

Several **HCIA R2** awardees have focused efforts on developing new payment models to cover services delivered across care sites and to better align their payment approach with new alternative payment models (APMs). One awardee has made some progress in developing a bundled payment with shared savings under which the payer reimburses the hospital a set amount per patient for one episode that includes all services provided by a remote patient monitoring team—including, PCPs, nurses, medical assistants, dietitians, ophthalmologists, and other staff. Another awardee is developing multiple payment models for both the Medicare FFS and managed care plans, that would include acute and post-acute care (PAC) (including the observation and palliative care units) as well as a discounted DRG that includes physician payments and a bundled rate.

#### *Examples of provider and community partnerships to increase referrals and enrollment*

**MEPD** evaluators cited the importance of having strong collaborations and partnerships with key stakeholders such as mental health providers, care coordinators, advocates, and others, as a fundamental aspect of their success in providing services to program patients. These partnerships also served as important referral sources. One state reported that strong communications with providers in the community helped create their most fruitful recruitment source for new patients. Key informants for **Strong Start** described improved systems of referrals to community-based services that benefited program patients and did not exist pre-demonstration. The networks the programs developed with community organizations included linkages to behavioral health services, housing support, and food-related services or programs (e.g., WIC, food banks). **HCIA R1 BHSa** awardees described a variety of collaborations with local agencies and community partners designed to provide wrap-around services for their respective program patient populations. One awardee partnered with local agencies serving the poor such as FQHCs, provided transportation to visits, and established telehealth and telepsychiatry systems in rural areas. Two awardees reported that care coordination staff connected participants to community-based resources for housing, clothing, and jobs. Patients sometimes viewed securing assistance in these areas as more important than health services. Other awardees conducted outreach to local and county administrators, hospital systems, and correctional facilities and other criminal justice agencies to create collaborations that surpassed the boundaries of traditional medical care and attended to patients' holistic needs. Not all key stakeholder collaborations to increase

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enrollment and integrate services involved community partners, however. One **HCIA R2** awardee built on its past collaborations with the three institutions involved in the program. The group met regularly and discussed implementation progress, convened workgroups to address barriers to implementation, and shared implementation strategies between the organizations.

*Examples of promising strategies for fostering cross-provider communication and engagement*

**Strong Start** participant sites held multiple meetings and lunches at provider sites, and communicated by phone, email, and EHR messaging to improve engagement. Evaluators for both **Strong Start** and **HCIA R1 Meta-Analysis** touched on the importance of achieving the right balance between team members communicating electronically versus in-person, and the subsequent effects on team functioning and care coordination. In that vein, states in **SIM R1** and **HCIA R1 Meta-Analysis** were encouraged to physically co-locate different types of providers, especially behavioral health specialists and PCPs. As a result, several **HCIA R1 Meta-Analysis** awardees reported stronger working relationships and better coordination of care, which had the potential to translate into improved patient health outcomes. Sharing a physical location for as little as one day a week was seen as an advantageous strategy for cultivating positive relationships among team members. Other models, such as **HCIA R2**, provided insight about how care coordinator staffing models were restructured to enhance staff communication and engagement. Some awardees increased the number of care teams and reduced the number of CHWs per team. The restructured team, led by a care coordinator, allowed for greater collaboration within teams and enhanced each team's adaptability to the priority area to which it was assigned. Other awardees used weekly meetings with clinical care teams—one awardee even relied on twice-daily huddles with all care providers—to discuss patient needs, program implementation, and progress. Another awardee used a medical co-management model staffed by a team of physicians and nurse practitioners that was available 24/7 for consultations in inpatient and ambulatory settings. The team supported cross-provider communication, facilitated patient transitions in and out of the hospital, and optimized the potential for home care. As a result of integrating primary and behavioral health as part of their value-based purchasing (VBP) model, two **SIM R1** states reported improved care coordination between primary and behavioral health providers, better follow-up rates, and enhanced ability to engage hard-to-reach populations. Providers agreed that having behavioral health-focused quality measures as part of their VBP model enriched behavioral health and primary care integration.

In other state experience, **MEPD** reports indicated that one-third of demonstration states described improvements in the communication process over the course of the program, an achievement shown in enhanced discharge planning processes and stronger linkages to aftercare services.

*Examples of barriers to integrating behavioral health with primary care*

Despite increased focus on integrating behavioral health into PCMHs, MAPCP practices still struggled to integrate services. PCP practices lacked integration with behavioral health providers,

which was a significant barrier to making referrals and addressing patients' behavioral health needs. Practices often encountered shortages of behavioral health providers and were unable to identify any behavioral health providers or any accepting new patients. Relatedly, an **HCIA R1 BHSA** awardee encountered challenges coordinating behavioral health and primary care, as the lack of a shared medical record (sharing was uni-directional) meant that behavioral health specialists did not have access to program patients' medical records and had to specifically request information. One **SIM R1** state struggled because they lacked a payment model to support behavioral health integration with primary care, which limiting their ability to integrate behavior health. While integrating primary care and behavioral health services was part of nearly all the **SIM R2** Model Test states' initiatives and was the cornerstone of the initiatives in two states, there were several challenges related to the integration of these services. In addition to workforce shortages and reimbursement issues (for telehealth and e-visits that could have mitigated provider shortages), challenges included privacy laws that prevented sharing of behavioral health data, cultural differences in practice patterns between behavioral health and primary care, and low rates of follow-through by patients referred to behavioral health specialists from primary care.

*Examples of lack of integration across providers and negative consequences for continuity of care*

Evaluation reports for several models revealed challenges with maintaining continuity of care across sites absent incentives for collaboration. Some **Strong Start** program patients expressed dissatisfaction with awardee sites that transferred pregnant women to different locations through pregnancy, delivery, and post-partum care. Also, in Strong Start, some awardees elected to use resident physicians for delivery instead of the prenatal care providers patients were used to. Contrary to the requirements of the maternity care home model, some patients were transferred from maternity care homes to hospital-based care at 36 weeks and then started seeing a third provider for postpartum care, with the latter two providers having no incentive to observe the model approaches. Other models encountered challenges maintaining continuity across settings where there were not shared incentives to constrain costs and improve handoffs: hospitals in the Maryland **All-Payer Model** made limited progress in improving care continuity and offered few examples of partnerships they developed with community physicians other than purchasing physician practices. However, by the second year of the initiative, some hospitals began discussing the need to strengthen and redefine relationships with outpatient and PAC providers while others described new collaborations with other hospitals and PAC providers. In **MAPCP**, a lack of shared incentives often made it difficult for practices to persuade hospitals that were not part of the same health care system to provide regular alerts when their patients were seen in the ED or admitted. Fragmented information flow limited MAPCP practices' potential for care coordination. In **NFI**, nurses that supported the model were employed by the awardee organizations rather than the participating nursing facilities. Ensuring continuity of care required knowledge and skills to be transferred from the model nurses to nursing facility staff. This was an ongoing challenge that required a substantial investment of time from both the model and the facilities. One **HCIA R2** awardee described its struggles to implement acute care in the home setting, an effort that required extensive coordination with different providers. The awardee relied on third-party agencies to provide much of the care and faced lack of alignment regarding



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expectations of timeline and level of care between the model and the home health companies that provided nursing services. The awardee also struggled with a third-party vendor that did not provide services outside of traditional business hours. This presented a barrier to continuity of care for new patients whose program enrollment was effective later in the day. With limited ability to monitor the timeliness and quality of care provided by its external vendors, this continued to be a long-term challenge for the awardee.

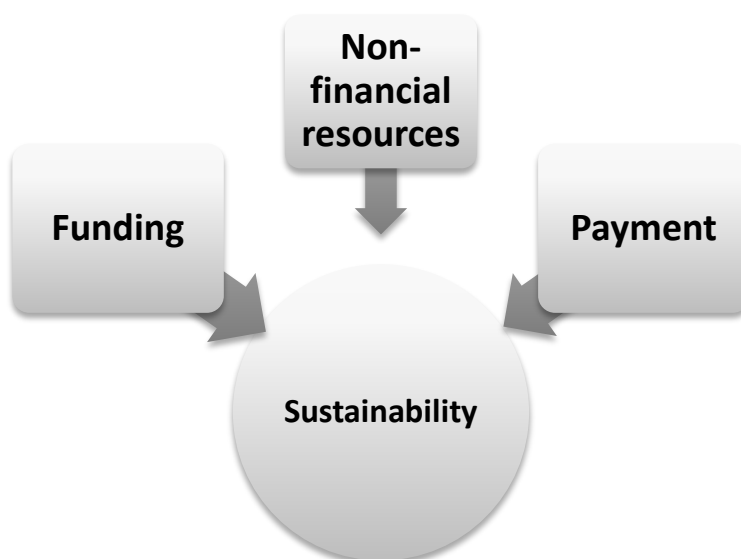
*Examples of asymmetric incentives across providers*

Divergent incentives between community physicians and hospitals in the Maryland **All-Payer Model** led some hospitals to purchase physician practices. Acquisition activity raised concerns among some stakeholders that the global budget model would push Maryland toward a hospital-employed physician model. Related concerns were raised by **MAPCP** evaluators who noted that acquisition of primary care practices by hospitals sometimes affected the practices' ability to continue participation in the model or to achieve PCMH recognition when the new owners did not support the practice's activities. Perhaps of greater consequence, practices also contended with resistance from hospitals and nursing homes on the core principle of the MAPCP model, since better primary care coordination resulted in fewer hospital and nursing facility admissions. Relatedly, the **PCSR** found that some PCPs perceived the behavior of specialists and hospitals to be beyond their sphere of influence. As a result, some PCPs were not inclined (and had limited time) to review external feedback reports from CMS or private payers; they believed the data would not be actionable given the results could reflect other providers' behaviors, which they could not control.

**Finding 5: For almost all models, initial funding for start-up costs as well as ongoing reimbursement for specific services were major challenges to implementation.**

The financial resources for implementation of new payment and delivery models was one of the most common topics throughout the evaluation reports reviewed. In many cases, CMMI provided funds to applicants for planning and implementation while, in other cases, financing came through payment for the services provided, either on a per-service or capitated basis.<sup>13</sup> Depending on the innovation and the extent of prior experience, implementation requires startup funding for infrastructure, often augmented by leveraging state resources, or other initiatives or sources, as well as ongoing financing of service delivery extending beyond the program period. In this section, we describe approaches to obtaining financial resources and the associated facilitators and challenges related to funding, payment and sustainability, as shown in Figure 4, and described below.

**Figure 7. Financial Resources Affect Sustainability**



- **Funding:** Model funding supported startup and development costs in some models. Funding levels were often inadequate for the programs and the changes sought. Although some programs leveraged supplemental funding from other initiatives, stakeholders still raised concerns about sustainability. Funding lags affected implementation timelines.
- **Payment/reimbursement:** Reimbursement for services was generally considered to be too low and inadequate to support ongoing transformations and planned innovations.

<sup>13</sup> Throughout the report, we distinguish between “funding” and “payment/reimbursement.” Funding refers to lump-sum or grant amounts that are not linked to specific beneficiaries and were often provided to awardees at model start-up. Payment or reimbursement is per service or per capita at the beneficiary level.

- ***Financial Sustainability:*** Many awardees planned for sustainability by identifying the most essential program elements to maintain. Where possible, they tried to identify other sources of funding such as community partners or reimbursement from insurers, combining multiple sources when needed and feasible. Many programs faced uncertainty in identifying ongoing program funding for sustainability.

## Finding 5 Examples: Financial Resources

This section contains model-specific examples of facilitators and challenges related to obtaining and using financial resources to implement and sustain programs.

### **Funding**

#### *Examples related to leveraging state funding and infrastructure support*

Through **FAI**, one state was able to access federal financing for the first two years of the managed FFS model, which they used to support the development of intensive care coordination services. Additionally, using demonstration funds, many of the FAI state models developed programs to help eligible beneficiaries make decisions about whether to enroll in a plan and/or to help them select a plan using demonstration funds (e.g., ‘funding for options counseling’ through State Health Insurance Assistance Programs (SHIPs) and Aging and Disability Resource Centers). As part of **MAPCP**, all states leveraged funding from sources other than participating payers to fund portions of the PCMH initiative, or complementary initiatives. One state made substantial investments in HIT that enabled practices to implement EHRs, while another state used Beacon grant funds for learning collaboratives, TA for practice transformation, and to implement Consumer Assessment of Healthcare Providers Systems. Many of the states participating in **SIM R1** offered financial support, often in the form of grants, to support EHR adoption. For example, three states provided funds to behavioral health and other specific provider types to establish or improve their EHRs. Two states also offered financial support for practice transformation; one of these provided grants for integrating emerging professions (CHWs, community paramedics, and dental therapists) into provider organizations, and another state used grants to foster partnerships between coordinated care organizations and local public health departments in order to promote a focus on population health. As described in the **PCSR**, existing infrastructure such as a state or regional HIE, sometimes accompanied by a legislative mandate, increased the pace of practice transformation.

#### *Examples related to leveraging other (non-state) sources of funding*

In the case of **Strong Start**, a few awardees relied on external grants or philanthropic funding—sometimes in combination with self-funding—to sustain the programs. A couple of the awardees designed their programs to address specialized needs of their participants, which was a feature they felt attracted attention and helped them obtain additional funding. Awardees also discussed adapting their model to better attract funding within or outside their organization. Moreover, supplemental funding from CMMI allowed Strong Start awardees to hire more administrative staff, which allowed providers to focus primarily on service delivery rather than time-consuming data collection and reporting. From the **PCSR** report, FQHCs used funds from the Health Resources and Services Administration to cover the cost of applying for and obtaining NCQA recognition, one of the goals of the initiative; Medicare's participation in **MAPCP** (and the beneficiaries it brought to the demonstration) were deemed critical from a funding and sustainability perspective.

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### *Examples related to lags in funding*

Several awardees in **HCIA R1 BHSa** cited as a major challenge a lag in receiving CMS funds, resulting in early implementation delays such as deferred initiation of patient recruitment and staff hiring. In one **MAPCP** state, a budget shortfall during the demonstration period kept practices from being paid for Medicaid patients, causing financial difficulties for the practices. Also, in **MAPCP**, five states reported specific ongoing payment challenges that stemmed from incomplete or inaccurate data, one state delayed Medicaid payments during a transition to a new information management system, and another state's delays in implementing a related initiative resulted in community workers not being paid. Delayed payments distracted practices from quality improvement activities and adversely affected overall practice operations.

### **Payment/reimbursement for services**

#### *Model-based examples related to inadequate reimbursement*

The MMPs under **FAI** noted that they were concerned that the capitation rates did not align with the care models and were therefore inadequate to meet some beneficiaries' care needs. Additionally, **FAI** awardees reported a lack of reimbursement for the additional workload expected under the initiatives. In **MAPCP**, the per-beneficiary monthly care management fee was inadequate to sustain practice enhancements while trying to improve quality and continued patient care. The capitated **PCMH** payments were viewed as too low, which was particularly challenging for rural providers with limited resources. The primary challenges to sustainability for **HCIA R1** awardees pertained to payment models that did not support value-based care, and a lack of reimbursement for telemedicine and for care coordination services and new staff types—non-traditional medical staff, such as health coaches, patient navigators, and **CHWs**. In the **PCSR** report, three of the six initiatives experienced challenges related to insufficient **PBPM** payments, ranging from not having enough funding to cover implementation costs, not being able to pay for a full-time care manager (this was experienced by particularly small practices), and not being able to cover the costs of all practice enhancements.

### **Financial Sustainability**

#### *Examples of sustainability through funding from multiple sources*

Some **Strong Start** awardees began to make plans to transition to other funding sources (e.g., managed care plans or state Medicaid/**CHIP** programs); the ability to provide potential cost savings was a key consideration in “selling” the program to other funders. For example, a Medicaid managed care partner recognized savings associated with **Strong Start** from reductions in neonatal intensive care unit admissions, per the awardee's own analysis. To sustain their program, one **HCIA R1 BHSa** awardee partnered with a county, using funds available through the Mental Health Services Act (a state law supporting mental health services) and Medicaid reimbursement. Sustainability was aided by a strong relationship with county leaders, a unique organizational structure in the county mental health department, expanded program eligibility criteria, and the availability of a long-term funding mechanism. Under **MIPCD**, programs were originally initiated as demonstrations and as the demonstration funding was set to expire, many

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of the states sought alternative funding to keep the programs going. States approached sustaining their programs through: applying for Section 1115 waivers (2 states), Medicaid pilot (1 state), other funding through clinics/health centers or other state agencies (4 states), and embedding programs in the MCOs (3 states).

*Examples related to difficulty obtaining funding and implications for sustainability*

In **MAPCP**, practitioners were concerned about how to sustain their programs once the demonstration funding ended; some practices sought VBP arrangements, others were planning to implement chronic care management fees, while still others were uncertain how to move forward. Solo practitioners seemed especially concerned about how to manage after the demonstration funding expired. Additionally, some of the **Strong Start** awardees scaled back services, or otherwise looked for ways to try to subsidize their services due to sustainability concerns. Despite the widespread interest by Strong Start sites in sustaining elements of the demonstration after the award period ended, few sites had identified/secured future funding during year 3. Typical avenues that participants explored included foundation, federal, and state-based grants; enhanced reimbursement from Medicaid MCOs; and, internal organizational funding. Among awardees who did not expect to sustain the program, lack of funding was the most common challenge along with factors such as lack of support from the OB department, lack of Medicaid reimbursement, or ongoing opposition from the Medicaid program because of the program's association with the Affordable Care Act (ACA). The only state Medicaid agency operating a **Strong Start** award was facing a budget shortfall; another state's Medicaid program postponed implementation of the expected source of one awardee's model; and another awardee was acquired by an **FQHC** network that was not interested in continuing the sites' program despite patient and staff support. **HCIA R1 BHSa** awardees also faced significant challenges to sustainability related to funding. One awardee did not have a permanent and dedicated source of funds to support either its workforce of peers or its primary care clinic. For another, separate regulations and funding streams for services (physical health, behavioral health, vs substance abuse) posed barriers to sustainability. In the **FQHC** Demonstration, as reported in **PCSR**, it is unclear if the enhanced payments during the demonstration were enough to sustain the changes after the demonstration ended because the evaluation time period was insufficient to assess long-term impacts.

*Examples of participants sustaining program elements without other funding*

During the second year, most **Strong Start** awardees began thinking about how to sustain their programs after funding ended, indicating that they would continue Strong Start enhancements in some form if funding were available. Some awardees began identifying community partners that support prenatal care even if no funding was available and made plans to retain elements of the demonstration data collection (e.g., the risk assessment section of the evaluation's intake form) or materials from the demonstration (e.g., screening tools, educational materials). Interview data from ECCPs participating in the **NFI** suggest there has been a generally positive reception to the model, with facility staff and leadership expressing interest in sustaining many initiative components as permanent facility functions.

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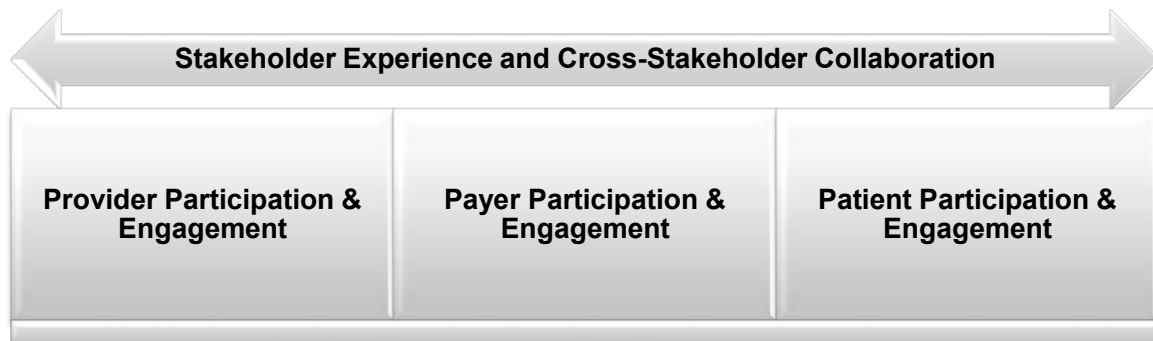
*Examples of model evolution to promote sustainability*

Subsequent to **SIM**, states continued to implement existing delivery and payment reforms, with new or modified ACO models launched in two of the states. After limited uptake by providers, one of the states decided to discontinue that model as of December 2016 and instead use its SIM funds to support the design and implementation of an accountable care strategy. The other state began the first phase of its new all-payer ACO model with the launch of its Medicaid strand in four communities, representing what state officials there described as the next step in the evolution of its existing shared savings program. As part of its broader sustainability plan, a **HCIA R2** awardee planned to submit a state plan amendment (SPA) to CMS to maintain the SNP as a Section 2703 health home. The SPA would enable the awardee to extend the program for at least two more years so that the awardee could accrue enough continuous enrollment data to assess the full impact of the program on patient outcomes and costs and help inform future decision making about the program.

**Finding 6: While the level of engagement varied across stakeholders and many models benefited from tailoring outreach and incentives within stakeholder groups, building relationships was fundamental to successful implementation.**

Model implementation requires the active participation of multiple stakeholders. Depending on the model, specific roles of each stakeholder type varied, but stakeholders included CMS/CMMI, state and local agencies, a range of healthcare provider facilities and healthcare professionals, public and commercial payers, community-based organizations, and beneficiaries.<sup>14</sup>

**Figure 8. Stakeholders Affect Model Implementation**



In this section, we describe the role of stakeholders shown in Figure 5 with a focus on provider and payer participation and engagement, in terms of their potential contributions to supporting and easing model implementation and the perceived negative consequences when they did not fully engage. In most of the models, patients have little active role and, oftentimes, they are unaware that they are part of an innovation. However, in a subset of models, patient participation and active engagement is essential to the success of the intervention; these models are discussed at the end of this section. In summary, we found:

- **Stakeholder Prior Experience:**<sup>15</sup> Stakeholders' experiences with similar or proto-versions of the model helped speed implementation because organizational capacity and stakeholder relationships had already been established. Lack of prior experience among stakeholders, where discussed explicitly as a challenge, negatively affected implementation and required additional efforts to establish relationships with partners.
- **Cross-Stakeholder Collaboration:** Building relationships and enabling dialogue within and across stakeholders improved communication and decision-making about model implementation. While states were often integral to facilitating this dialogue, models without a strong state role also benefited from strong partnerships and active communication among participants. Evidence of a model's benefit and alignment of quality measures for payment contributed to multi-stakeholder engagement. We also

<sup>14</sup> The role of the state as a lead stakeholder and how that affects model implementation has been discussed in earlier section under State Role.

<sup>15</sup> The role of states' prior experience is discussed in earlier section under State Role.



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found examples where difficulties communicating hampered collaboration and decision-making across stakeholders and acted as barriers to model implementation. A dearth of access to, or sufficient data supporting a model's value hampered both near- and long-term stakeholder engagement.

- ***Provider Participation and Engagement:*** Provider participation and engagement facilitated model implementation and were achieved and improved through administrative and clinical leadership, reducing burden, and provider education about the benefits of the model. However, providers also resisted new ways of organizing and delivering care and were stymied by lack of organizational buy-in, unclear and misunderstood model goals, and perceptions of burden. Staff turnover and recruitment of particular types of staff, including behavioral health professionals, were also common barriers to full participation.
- ***Payer Participation and Engagement:*** Payers were more likely to participate when other payers, particularly Medicare or Medicaid, were already involved or where working relationships across stakeholders already existed. Payers were less likely to participate, or to continue as participants, where they did not see a business case for the model.
- ***Beneficiary Participation and Engagement:*** Awardees and providers identified opportunities to engage patients and increase their participation and adapted communication strategies and care delivery to meet the needs of participants. Barriers to reaching patients that affected their engagement with the model were often related to providers' difficulty communicating effectively and also arose because of beneficiaries' lack of access to adequate housing, transportation, and childcare.

## Finding 6 Examples: Stakeholder Roles and Engagement

This section contains model-specific examples of facilitators and challenges related to providers', payers', and patients' participation and engagement with the models.

### **Stakeholder Prior Experience**

#### *Examples of the benefits of provider or payer experience*

As noted in the **PCSR**, selecting practices experienced in implementing transformation activities likely facilitated initiative implementation. Similarly, in some of the **MAPCP** initiatives where payers had already collaborated in previous efforts, they were able to build on existing relationships among stakeholders; by partnering to harmonize requirements they were able to ease the burden of transformation for practices. **Strong Start** awardees that had a history of collaboration and institutional support pre-dating the demonstration were viewed by awardees as contributing factors to successful Strong Start implementation. In **SIM R2**, leveraging existing infrastructures, along with having a vision and identifying key leadership roles and staff, were non-technical factors related to successful implementation. **HCIA R1 BHSA** awardees' prior experience with similar initiatives also facilitated implementation. Knowledge and prior work in the community, as well as viewing the program as an extension of prior work, helped awardees move their organizations toward a larger goal. Prior experience of the implementing sites—experience with partners in similar projects or experience with other mental health integration efforts, primary care redesign, and care coordination programs—also made implementation easier. Sites also benefited from having necessary staff and infrastructure in place, including pre-existing network of partners that aided understanding of partners' perspectives. The **HCIA R1 Meta-Analysis** found that awardees with organizational capacity before launch of the innovation could overcome unforeseen challenges and, in the end, may have more sustainable and scalable programs. For example, for one HCIA R1 awardee, staff drew on their knowledge and existing relationships from an earlier home-based primary care program, so the staff was already comfortable providing home-based care (although they noted the important differences between primary and acute care). Similarly, another awardee leveraged existing institutional resources and expertise within their university to develop supporting components, including implementing its care coordination program and nurturing relationships with managed care plans as a promising facilitator of the payment model. Most important to these efforts were the well-known and trusted organizational leaders, who through their existing trust were able to facilitate the implementation of innovations.

#### *Examples of lack of prior experience*

In the **HCIA R1 Meta-Analysis**, evaluators noted that new programs were somewhat less effective in implementing their awards, faced greater challenges in implementing HIT, and were somewhat more likely to hire technical, research, or administrative staff to support their innovation, although these features did not significantly impact implementation effectiveness. Moreover, they found that time necessary to forge strong relations with new partners was an unanticipated challenge for many awardees. The **SIM R1** evaluation found that the lack of clarity in provider/payer roles, the difficulty incorporating initiatives into existing workflow and

the overall lack of experience was a challenge for providers and payers in implementing the models. In the **PCSR** final report, key informants from four of the six initiatives (**CPC**, **FQHC**, **HCIA-PCR**, and **IAH**) noted that practices with a lack of experience with primary care transformation faced unanticipated challenges in that they did not fully understand what primary care redesign entailed, needed additional TA, set overly ambitious goals, and took longer to become operational. In addition, these practices were often unprepared for the requirements, terms, and conditions of a CMS initiative.

### **Cross-Stakeholder Collaboration**

*Examples of beneficial collaboration among stakeholders that were not state-organized and often involved community organizations*

Sites participating in **Strong Start** reported that developing relationships with community-based organizations helped increase awareness of Strong Start and provided specialized expertise that their patients needed. In **FAI**, to establish care coordination organization networks, health homes in the MFFS model contracted with a wide range of community organizations that collectively had experience working with multiple populations with chronic conditions. Similarly, strong coordination and collaboration in **HCIA R1 BHSAs** supported implementation of programs, including getting buy-in and facilitating learning across the program's collaborators. Successful programs in the HCIA R1 BHSAs engaged with community stakeholders such as social service providers, county health staff, and local hospitals, investing in outreach strategies to establish an effective referral system that included local school districts and county social service providers, and leveraging existing partnerships—including relationships with local YMCAs, community colleges, and fire departments. To overcome challenges with coordination and engagement across partner entities, HCIA R1 BHSAs awardees developed opportunities for partner organizations to provide input on program implementation and one awardee promoted feedback through an inclusive governance structure. Another HCIA R1 BHSAs awardee established a referral system through partnerships with staff at school districts and mental health providers and other community entities; they reported that community outreach and education was essential to long-term success, particularly in rural communities. In the **PCSR** final report evaluators noted that successful collaboration among multiple stakeholders required model conveners to clearly communicate the roles and responsibilities of the various payers and providers as well as the goals and strategies of CMS.

*Examples of importance of data to demonstrate initiative impacts to stakeholders*

In **MAPCP**, payers expressed frustration with the lack of data showing return on investment (ROI), improved patient outcomes, and reduced costs or utilization. Ultimately, this frustration contributed to some payers withdrawing or discontinuing participation in the demonstration. In particular, payers lacked insight and specific data on CHTs that would have helped them understand who the CHTs served and what services the payers were subsidizing. Confirming the assertions of many awardees that additional data on outcomes and cost savings attributable to the initiative would have been extremely useful, particularly in discussions with payers, two **Strong Start** awardees stressed that cost data were indispensable when exploring collaborations with Medicaid MCOs to sustain elements of Strong Start after the demonstration period concluded.

For one **HCIA R2** awardee, early in the implementation process, care coordinators regarded data collection procedures as excessively complicated and time-consuming. However, care coordinators became more accepting of the project's reporting burden after training sessions that helped clarify the rationale for data collection and its role in demonstrating model outcomes. Another **HCIA R2** awardee's efforts to integrate data from the telehealth systems and the EHR allowed it to evaluate health outcomes and conduct economic analyses needed to develop a payment model for these types of services.

*Examples related to difficulty coordinating across partners, unrelated to state activity*

As noted in the **PCSR** report, in a single-payer initiative, the convener is able to design the goals of an initiative to meet its objectives, while multi-stakeholder teams require clarity on goals, roles, and responsibilities to maintain a productive and harmonious collaboration. Communication challenges can emerge when there are multiple conveners or leaders of initiatives. Stakeholders can sometimes lack clarity on the parameters of the initiatives. For example, in **CPC**, some payers expected more collaboration with CMS and did not anticipate all of the requirements for payer meetings, performance measurement, data aggregation, and learning activities. The need to coordinate across diverse partner organizations posed a barrier for four **HCIA R1 BHSAs** awardees. For example, one awardee reported that they lacked control over staffing at the provider sites, and the sites' varying organizational structures and management styles sometimes made it difficult to standardize services for research purposes.

**Provider Participation and Engagement**

*Examples of the importance of provider buy-in*

One of the key facilitators to successful implementation in **NFI** was physician buy-in: **ECCP** interviewees suggested that it would have been ideal to work with physicians in the planning phase. Nursing facilities and **ECCPs** that established positive relationships between the **ECCP** nurse, facility staff, and leadership (including physicians) seemed to show more progress toward achieving model goals than facilities that struggled to build relationships. In the **All-Payer Model**, hospitals that evaluators considered to be fully engaged in model implementation had CEOs who were generally enthusiastic about and fully supportive of the global budget model. At a minimum, they accepted that some form of fixed resources is an inevitable future direction of health care. Strong leadership was identified as a facilitator for sustainability of the **Strong Start** model and key to gaining buy-in from the full range of staff and providers. Front-office staff and providers who fully embrace a program can more effectively advocate for sustaining it and executives who believe the program is valuable may be more willing to allocate internal resources or leverage connections with health plans and other external funders. Some awardees that are sustaining **Strong Start** programs in all or some sites are fully self-funding the ongoing operation of their programs and in each case, key informants cited leadership support as critical in keeping the programs operational. Six **HCIA R1 BHSAs** awardees said strong leadership was a key facilitator of program implementation, both at the administrative level and for clinical leaders, such as physician champions. Valued characteristics of leadership included expertise in intervention, experience with target population, and accessibility. Leadership was also important in gaining buy-in from staff and promoting communication among team members.

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*Examples of clinical leadership (“champions”) facilitating engagement and participation*

**Strong Start** awardees relied on many of the same approaches to building support for the program among prenatal care providers, health care administrators, and other key stakeholders. Several noted the importance of identifying and engaging model “champions,” ideally in leadership positions. Awardees in **HCIA R1 BHSA** took steps to improve provider engagement and combat cultural resistance. One awardee said that having the support of leaders was critical and emphasized the importance of having a champion at the clinic/hospital to guide the project, talk to providers, and help address challenges. Another awardee used a collaborative approach with partners and, through use of effective communication strategies, increased buy-in, accountability, and sharing of best practices and challenges. To promote the model among providers, one **HCIA R2** awardee contracted with a local physician champion in each of the participating communities. The physician champion communicated regularly with other physicians and providers in the community to promote the model and solicit feedback on the program. Another awardee scheduled multiple in-person meetings to develop trust in the program. The **PCSR** report noted that practice “champions” improve staff buy-in and facilitate transformation. Many key informants reported a practice champion was key to successful practice transformation. Physician champions are needed to lead their practices’ transformation efforts and to foster a more collaborative and communicative work environment that builds staff buy-in and drives the initiative forward.

*Examples of lack of buy-in at the organization level*

Evaluators of the **All-Payer Model** found that hospitals varied considerably in the extent to which they had adapted to the new model. About half of those interviewed were categorized as “fully engaged,” while “minimally engaged” hospitals appeared to have made few changes in the way they operate. These minimally engaged hospitals expected the model to fail and, under this assumption, made little investment. The absence of organizational buy-in and leadership support was often observed by key informants as the most critical internal contributor to their inability to continue **Strong Start** operations. Key informants at one of the sites felt that lack of support for their program at the larger organizational level undercut efforts to raise funds to sustain enhanced services. Similarly, two awardees in another Strong Start model reported lukewarm interest from leadership as the main factor preventing continuation of the model. Successful **NFI** implementation was often hindered when facility staff or leadership resisted aspects of the initiative or seemed to have low engagement with certain initiative components and goals.

*Examples of provider engagement and participation increasing with experience in the model*

Practice staff interviewed for the **MAPCP** evaluation praised the PCMH model of primary care and could not imagine reverting to their old way of delivering care. Practices viewed the benefits of the PCMH model as improving staff engagement, motivation, and satisfaction (though sometimes increasing workloads); improving patient satisfaction; improving quality of care; improving access to care; moving practices in the “right” direction; and preparing practices to participate in ACO contracts. Providers in two states participating in **SIM R1** discussed the benefits from increased quality reporting, including increased accountability, identifying “super

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users" of the health care system and identifying previously undiagnosed cases of chronic disease. **The HCIA R1 Meta-Analysis** found that clinical staff satisfaction with and support for the innovations increased markedly in the second year as the value of innovations in improving workflow and patient care became increasingly apparent. Several innovations will likely be sustained in whole or in part on the basis of staff support and satisfaction. Some **Strong Start** awardees also reported improvements in provider buy-in as the model became more established and familiar to clinic staff, and positive outcomes became noticeable.

*Examples of the benefits of participation in similar prior initiatives*

In at least one state, some of the practices in the **MAPCP** model benefited from already mature PCMH programs, so these practices did not have to incur extra costs to become PCMH. Also, in the MAPCP model, some primary care practices had already adopted some of the care coordination components of the health care homes model before certification began, so they were ahead of the curve in their implementation efforts. Some awardees had refined and matured their models locally through prior work and used **HCIA RI** funding to expand the model. For example, one awardee had already started developing their information technology prior to participating in HCIA R1 and used the funds to expand and improve their technology.

*Examples of education and training on the model promoting engagement*

In **SIM R1**, provider education and training in the model helped with provider engagement. While SIM funds were prohibited from being used to provide direct services to patients, they could be used for incentives such as TA and practice transformation. Such incentives offered by two states helped to achieve or exceed recruitment goals during the analysis period for payment and delivery reforms. In **Strong Start**, one awardee took steps to boost provider buy-in by holding an educational webinar for providers and encouraging participants to share the information at an upcoming staff meeting. They felt the webinar increased support for Strong Start and gave midwives a better understanding of its purpose. One Strong Start awardee's most common approaches to building support for group care is to invite providers to observe and participate in sessions. Most have also made staff presentations on the model, with one awardee suggesting that conducting these information sessions early (prior to implementation) was valuable. Awardees in **HCIA R1 BHA** provided increased training to program staff and created more opportunities for communication and feedback to overcome pushback from frontline staff in adjusting delivery of patient care. For one **HCIA R2** awardee, the hospital team invested considerable energy engaging PCPs, specialists, and other external stakeholders such as community services and advocacy organizations. Awardee staff noted that, as the reception in the community became more positive and as referring providers became familiar with the SNP, the volume of patient referrals increased.

*Examples of providers' resistance to change*

In **SIM R1**, there was some resistance from traditional providers who were unfamiliar with the involvement of CHWs in care coordination activities. A lack of provider support for **Strong Start** was found among some awardees across models. Some awardees said that providers and administrators perceived that the group care model is not compatible with their organization's

teaching mission or residency program. Providers, in particular, may not support this model because they are resistant to system-level change and do not want to disrupt the traditional clinic workflow or learn new skills such as facilitating group care. Providers in other Strong Start models were also resistant to changing specific clinical practices. In **HCIA R1 BHS**, two awardees reported that organizational culture posed a challenge to program implementation. For one, several organizations faced difficulty in integrating peer specialists into their outreach teams because of staff uncertainty about the purpose and boundaries of the specialists' new role. For another, several rural sites initially resisted the program because they were unfamiliar with telepsychiatry. Four **HCIA R1 BHS** awardees reported that organizational culture slowed implementation progress, particularly when programs required frontline staff to adjust how they approached patient care. At times, organizational culture slowed some awardees' implementation progress, particularly when programs required frontline staff to adjust how they approached patient care. For example, some clinical staff with two awardees initially resisted these program models because they conflicted with staff's training in more traditional models of care. Awardees overcame these barriers by providing increased training to program staff and creating more opportunities for communication and feedback. In **HCIA** the most significant challenge faced by one awardee was the individualism that characterizes rural providers, competition for patients between rural communities, and what the awardee perceives as skepticism towards "big city" solutions to "small town" problems. The **PCSR** report found that physicians in these initiatives face many competing priorities for their time beyond direct patient care, leaving little time or inclination to review an external data report from CMS or other payers—especially if the physician does not view the data as actionable. Transformation was harder for small practices with fewer resources.

#### *Examples of providers' perception of burden*

In **SIM R1**, providers in MCOs in Massachusetts said the model was too prescriptive and did not allow enough choice for how the model was applied or adopted. Providers in multiple states thought the documentation required by the initiatives took time away from patient care. For example, providers said they tracked quality measures in different reporting systems and spent extra time inputting data into their EHRs to ensure correct calculation of quality measures, all activities considered to be burdensome. In **SIM R2**, in states and models where participation was not required, the outcomes of recruiting practices to participate in SIM models depended on the level of difficulty of the participation requirements and incentives. In **MEPD**, ED staff expressed frustration with the time needed to process psychiatric patients and complained that it drew resources away from the care of other patients. The **HCIA R1 Meta-Analysis** found that innovations that use new IT systems received negative feedback from clinicians who are too busy to learn new systems or that the time interfered with their workflow.

#### *Examples of alignment strategies to reduce provider burden*

Most states in **SIM R2** worked to use common measure sets and reporting processes, dropping problematic measures and replacing state-specific measures or definitions with nationally recognized versions in order to achieve alignment with national payers. In the evaluation reports, stakeholders suggested this approach was effective because the implementation period with

Medicaid demonstrated the value proposition of aligning measures with other payers and across providers, thus promoting stakeholder engagement. Also, in SIM R2, evaluators highlighted the states that allowed participants to use the same quality measures in SIM as those selected for use in the CPC+, a move that not only yielded better measure alignment, but also reduced reporting burden on practices.

#### *Examples of multiple initiatives affecting participation and creating participant fatigue*

For **SIM R1** providers and payers, concurrent and/or competing health reform initiatives not only impacted the implementation of activities, but also caused participation fatigue. In **MAPCP**, other priorities limited staff's capacity to work on all the initiatives and caused "change fatigue"; one test awardee found that all the competing initiatives were distractions to their SIM activities. In the **PCSR** model, practices found it difficult to meet all the initiative requirements due to competing priorities. They also noted that they experienced lower practice participation in some of the competing initiatives, for example, when ACOs were present, participation in other more traditional primary care initiatives declined due both to practice preferences and some of the ACO initiatives prohibiting concurrent primary care initiatives. Providers from one of the **HCIA R2** initiatives noted that other larger practice initiatives—such as quality measurement of other conditions, pressures to meet meaningful use requirements, and PCMH priorities—made it difficult to address the HCIA initiative. Another HCIA R2 awardee noted that a major organizational restructuring delayed their ability to post and fund a new position for their initiative. Other initiatives seeking to divert psychiatric boarding of patients in EDs—such as crisis walk-in clinics, behavioral health home models, mobile crisis units, crisis intervention, stabilization, and housing services—may have impacted **MEPD** participants' ability to serve intended patients and led the program to focus on the hardest to reach and most severe patients.

#### *Examples of staff turnover or staffing difficulty affecting implementation*

For two of the **Strong Start** models, staff turnover caused enrollment "dips" and delays. One key informant pointed out that high turnover is common in grant-funded programs because the jobs are viewed as temporary. Many Strong Start sites experienced high turnover over the course of the award period at the leadership level, as well as among midwives and peer counselors. For example, at one awardee site, all four of the center's midwives left between rounds of case study collection, representing a complete turnover of the site's prenatal care providers. In all Strong Start models, awardees experienced staff turnover which disrupted enrollment, continuity of care, and provision of enhanced services while new staff were identified, introduced to, and trained on the program. Losing key personnel or a program champion and high staff turnover/low buy-in were contributing factors in the discontinuation of two sites. The **NFI** evaluation found that ECCPs faced some challenges endemic to long-term care, such as high rates of facility staff and leadership turnover, as well as turnover among ECCP nurses. Some components of the Initiative (e.g., consistent use of INTERACT tools) were challenging when facility staff changed frequently. The **HCIA R1 Meta-Analysis** found that participants faced challenges in attracting qualified staff, especially because continued funding of the position was uncertain, and due to staff burnout relates to heavy caseloads and challenges associated with



managing complex patient populations. In addition, turnover was found to be more likely when staff lacked the requisite experience with challenging populations. For one **HCIA R2** awardee, the program experienced staffing shortages for all roles or difficulties identifying staff with the right skills mix, including physician, nurse practitioner, nurse, and care coordinators. The staffing issue caused delays in implementation in the first year and, in year two, the site experienced staff turnover, as well as a lack of familiarity with the specific positions being recruited.

#### *Examples focused on behavioral health shortages*

**SIM R2** awardees struggled with too few primary care and behavioral health providers, particularly in rural areas. The behavioral health care professional shortage was also echoed by an awardee in a rural area of one **MAPCP** state. **Strong Start** awardees found that the supply of mental health providers willing to accept and treat Medicaid patients was inadequate for the need of their participants. Additionally, in **MEPD**, both beneficiaries and staff described a lack of behavioral health providers and services available after the patients were discharged from the hospital; some patients could not be seen for two or three weeks after discharge and others received no follow-up care. Generally, the chronic lack of psychiatrists who could provide follow-up care and prescribe medications to patients after discharge contributed to re-hospitalizations. Four of the **HCIA R1 BHS** awardees struggled to retain behavioral health specialists due in part to a limited pool of candidates in rural areas as well as losing their staff to more lucrative opportunities. One of these awardees required regular availability of psychiatrists and had problems accessing them. The lack of access negatively impacted the likelihood of the program's sustainability, e.g., one partner in the program had to suspend its program for a few months while they tried to fill the psychiatrist's role.

#### *Examples focused on general staffing shortages*

In **MIPCD**, one state reportedly experienced a shortage of providers trained in smoking cessation counseling and designed a training for providers on how best to counsel patients trying to quit smoking. Awardees in **HCIA R1** reported that they struggled to recruit nursing, data analyst, and IT staff, and sometimes social workers, to work in their programs. Also, in **HCIA R1**, some awardees noted that rotating physician residency and temporary nursing posts impacted their retention of trained workforces. One **HCIA R2** awardee also found hiring nurses difficult for two primary reasons: (1) nurses perceived the position as temporary due to the 3-year funding available and (2) the role had lower pay scales since it was for work conducted over the phone and not hands-on with the patients. Another **HCIA R2** awardee found that there was a limited pool of qualified staff for both IT and clinical roles (care managers and health coaches) in their rural community. This awardee also noted that the hospitals were reluctant to post the health coach position for fear of losing an applicant who could fill a nursing role—also difficult to recruit and retain—to the health coach position. Another **HCIA R2** awardee struggled to retain medical assistants qualified to set up and work with their telemedicine equipment due to high turnover; they also had issues staffing an adequate number of nurses to maintain the model's services. At another awardee site, they struggled to recruit staff at all clinical levels—physicians, NPs, nurses, and care coordination assistants—due primarily to a lack of qualified applicants,

although turnover also contributed to their challenges. In the **All-Payer Model**, hospitals struggled to recruit and retain PCPs in particular due to the low pay they were able to offer them and a lack of funding for other investments that the PCPs found necessary.

### ***Payer Participation and Engagement***

#### *Examples of Medicare or Medicaid participation encouraging other payers' participation*

Across states participating in **MAPCP**, the entry of Medicare as a payer was generally viewed as positive because of additional funds and because it added legitimacy, encouraging other payers to participate. In one state, strong leadership from the insurance commissioner and a small insurance market facilitated payer participation. In **SIM R2**, the states that focused first on implementing a common measure set for Medicaid payers and models progressed further on measure implementation than other states that first sought agreement among payers before proceeding to implement a measurement plan. Leading with Medicaid was possible in states where Medicaid initiatives were predominantly involved in the SIM award, and the initiative leveraged Medicaid managed care contracts or public employee contracts to require adoption of common measure sets. Where SIM initiatives have not centered on Medicaid models, many states have achieved partial alignment-between some payers and along a set of core measures using a mix of approaches that signal flexibility in how payers and providers can choose to align.

#### *Examples of collaboration between payers*

As noted in the **PCSR** final report, in some of the **MAPCP** initiatives where payers had already collaborated in previous efforts, they were able to build upon existing relationships among stakeholders. For example, in one of the states, a consensus on data sharing among payers reached through numerous workgroups, although time-consuming, was essential in gaining participation. One of the **HCIA R2** awardees found that soliciting feedback from payers during development of a new payment model allowed payers to recommend changes that helped to simplify the model and gain participation.

#### *Examples where payers did not see the benefit of participation*

Gaining multi-payer engagement was a challenge in some of the **SIM R1** states because payers were not convinced that models were worth the risk or investment. Lack of evidence and data was also problematic for payers in **MAPCP**. In one state, the lack of evidence for improved care utilization and reduced costs led key private payers to discontinue their participation in the initiative (or not extend it). In another state, payers thought that CHTs did not systematically track the services they provided which led to a lack of accountability and made it difficult to determine which of the teams' services created a ROI. One **HCIA R1 BHS** awardee had issues with payers not being sufficiently familiar with telepsychiatry. Care navigators reported that they sometimes had to educate insurers on the initiative and why it was important to cover telepsychiatry, and some companies did not reimburse the program for services. In **HCIA R2**, one awardee had similar difficulty engaging payers, which delayed their ability to develop a payment model for this telehealth program.

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*Examples where initiatives were not aligned with payer goals or there was little incentive for participation*

In **SIM R1**, payers were more likely to be engaged with models that included risk-based contracting and less interested if there is no downside risk for providers. The SIM evaluation found a lack of payment alignment across payer type, largely due to differing business goals of Medicaid and commercial payers, commercial payers' reluctance to share data (e.g., details on quality and utilization measures and performance reports for providers) and concerns that ROI for payer-specific innovations in payment reform will accrue to other parties. For example, one state convened payers in a work group to help design a model template for insurance products but payers felt the goal of establishing a template for use across all payers did not reflect the reality of their business models, which require them to have flexibility over product design rather than adhere to a template. In several **MAPCP** states, maintaining voluntary participation by private payers was an ongoing challenge. Payer attrition was associated, in part, with reduced pressure for payer participation by the state (change in administration), as well as renewal contracts for Medicaid managed care plans that no longer required Medicaid to participate.

***Beneficiary Participation and Engagement***

*Examples of providing transportation or accommodating children to facilitate participation*

In one of the **HCIA R2** sites, initial findings suggested that the initiative enrolled more Medicaid participants than originally expected—the high enrollment came from a site that served a high Medicaid population in rural locations. This encouraged the leaders to begin offering services in a wider variety of locations, and also to consider how to address the transportation issues of their low-income rural populations. Several **Strong Start** awardees in two of the models focused on organizing transportation for model enrollees and at least one awardee offered transportation vouchers, bus tokens, etc., for participants. Some sites offered transportation solutions aside from the Medicaid-provided services. One particularly hard-to-reach site reported that peer counselors have provided rides for women with transportation issues. In one of the models, most sites either allow women to bring children to their appointments or provide a play area for children in the waiting room. Allowing children in appointments seems to enhance the care experience for many patients, according to focus group participants. Two awardees in **HCIA R1 BHSA** provided transportation to increase beneficiary engagement, thereby increasing access to and use of needed behavioral care.

*Examples of relationship-building strategies, such as provider continuity and peer-to-peer support*

Stakeholders from a **MIPCD** program highlighted that patients have built relationships with their health coaches, which promoted engagement in their care. The few **MAPCP** focus group participants with care managers were generally very positive about the support and quality of care that they received and felt that communication with their providers was good. Some **Strong Start** awardees thought that Strong Start helped participants feel more connected to the health system, which led to better attendance. Several contributing factors were identified by key informants including the social bonds developed during group sessions, the longer time spent by

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group facilitators with participants, and the importance of peer-to-peer psychosocial support. Awardees felt that the educational and psychosocial benefits of group prenatal care were even more pronounced for specialized groups targeting specific populations of pregnant women, including groups for women who share a medical risk factor and groups for women who share demographic features.

#### *Examples of outreach and marketing that engaged participants*

In the **MIPCD** model, states reported the importance of increasing access to all possible participants by making sure they offered culturally appropriate suggestions, treatment options, and services and provided material in languages other than English. Focusing outreach efforts to address health disparities and recruit underrepresented groups (such as ethnic minorities or Lesbian, Gay, Bisexual, Transgender, Queer/Questioning populations) was specifically noted in one state as being important for targeting people who needed the program the most. Another state stressed the importance of simple/clear marketing materials incorporating cultural sensitivities that honored the participants' culture. One **HCIA R2** site found that their health promotion materials were initially difficult to understand and have since worked with a health literacy expert to tailor the materials to make them more user friendly for their participants. **Strong Start** sites used social media and texting to engage participants. For example, one site used carryover funds to increase its internet and social media presence to build support for and enrollment in Strong Start and some other sites described using some form of social media, although not part of the Strong Start intervention or for recruitment or enrollment. Sites often reported having their own Facebook pages that are typically used to highlight birth announcements, helpful resources, and community events. A few sites also use other social media outlets, such as Pinterest, twitter and Instagram, to share resources on breastfeeding, car seat safety, and parenting resources and connect with patients.

#### *Examples of using patient reminders to engage patients and promote attendance and adherence*

Text messaging was an especially promising strategy for addressing communication problems, according to **Strong Start** awardees. Awardees explained that once they introduced text messaging that issues with sustaining contact went away. Awardees' strategies to boost attendance included providing a full schedule of session dates upon program enrollment and reminding participants of the next meeting date at the end of each session, with some sites asking group members to take out their smart phones or calendars on the spot and record the meeting information. Other Strong Start awardees adjusted their reminder strategy to call patients early in the month when participants are more likely to have minutes left on their phones, texting patients, allowing enrollees to email their providers through patient portals, providing print-outs of all future appointments at every visit, and searching claims for visits with other providers or the ED to locate updated contact information. Additional strategies for keeping in touch included providing personal phone contact information for group facilitators and nurses, having group facilitators and Strong Start coordinators call participants directly to remind them about sessions, and encouraging group members to share contact information and keep in touch with one another. An **HCIA R1 BHSA** awardee that experienced beneficiary hesitation to use a

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telemonitoring device increased access and use of the system with the launch of a web and mobile phone version. An **HCIA R2** program rolled out more detailed care coordination protocols and a new communications technology (SMS texting), which allowed for another way for the coordinators and participants to connect between visits. The program offers disease-specific online portals in which participants and their families can access self-education resources at any time. Staff are also implementing a care coordination texting program to provide participants with support about disease-specific goals, remind participants about appointments, and send participants information about social services.

#### *Examples of financial incentives to engage beneficiaries*

Nine of ten **MIPCD** programs provided monetary incentives in the form of check, debit card, gift card, or flexible wellness account funds, to beneficiaries for use of preventive services. Beneficiary satisfaction surveys and focus group results supported the idea that providing incentives close to the completion of the incentivized activities is strongly related to keeping participants motivated and focused on their goals. Having few steps to receive incentives was important: the more steps required for participants to receive incentives and the greater the delay in participants' receiving them, the smaller the impact of the incentives. In one state, participants earned points that could be redeemed for health-related items from an online catalog, but the process from completion of the incentivized activity to having points available online was not clear to participants.

#### *Examples of challenges to beneficiary participation related to transportation and childcare*

Awardees in two of the **Strong Start** models discussed the challenges presented by lack of childcare and transportation. Contributing factors were lack of options for affordable childcare, limitations on whether children can be included in Medicaid transportation and at appointments, difficulty of using public transportation with small children, and lack of reliable of public transit. Additionally, some awardees discussed that non-emergency transportation to health care services is a covered benefit under Medicaid, but participants do not understand how to use the benefit (e.g., the benefit requires advance scheduling). Participants in **MIPCD** identified lack of transportation to program activities as a barrier to participation.

#### *Examples of challenges to adequate care delivery due to housing insecurity*

In **HCIA R1**, awardees identified a lack of affordable housing for their patient population as a key challenge for their program; for example, awardees in one city shared that the lack of affordable housing was a major barrier to effectively implementing their programs, as many of their patients were homeless or lacked stable housing. One awardee reported that it was difficult to coordinate and improve the health of clients—both mental and physical—when they lacked stable housing. Also, in **HCIA R1**, participants (some of who reside in facilities such as halfway houses that have policies preventing participants from accepting incentives) were not always able to accept the incentives that were offered to try to increase uptake. In the **MEPD** model, physicians in five of the participating states reported that their discharge planners sometimes discharged patients to homeless shelters because other housing options were not available.

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*Examples of challenges related to multiple socio-economic or cultural barriers*

For **MAPCP** practices, patients who lived in rural areas had social, financial and geographic barriers to seeking care and the low-income and low literacy population was challenging to reach. Additionally, some beneficiaries identified by CHTs/CCTs in MAPCP refused services, particularly those with high-costs, high-needs or those with multiple comorbidities, significant socioeconomic constraints, and behavioral health diagnoses. **Strong Start** participants struggled with food insecurity, low incomes, low educational attainment, chronic unemployment, unstable housing, unreliable transportation, and unmet dental and behavioral health needs, all of which made it difficult to engage participants. Also, one of the **HCIA R2** sites found that some of their participants' characteristics, particularly Medicaid enrollees who were vulnerable and had high levels of need, presented challenges to delivering services. The **HCIA R1 Meta-Analysis** found that cultural barriers (e.g., language barriers, lack of trust) were challenges for delivering care and placing self-monitoring technologies in patients' homes.

*Examples of communication and participation barriers between patients and providers*

Although the majority of challenges stemmed from socioeconomic factors, key informants from **Strong Start** noted that meeting times sometimes conflicted with enrollees' school or work schedules, and that interventions did not achieve desired outcomes because some women miss their appointments, are not adherent to care instructions, or are unwilling to learn about recommended changes in health behaviors. In other cases, lack of evening and weekend hours posed a barrier for women who work. In **HCIA R2**, interviewees found that some patients withheld information about their conditions, e.g., alcohol and drug use, or provided inaccurate information to the medical team, making medical management more difficult. Initiatives to expand access in **MAPCP**, including open access scheduling, expanded hours, better after-hours coverage, improved telephone access, and Web-based patient portals, were not always successful. Not only was it difficult to staff expanded hours but patients needed ongoing education about expanded hours, same-day appointments, 24/7 access, and contacting the practice before going to the ED. In **MIPCD**, engaging the target population was more difficult than anticipated. Four programs that targeted people with behavioral health and substance use disorders found that ensuring staff were appropriately trained for the challenges faced by caring for mentally ill patients was a challenge.

*Examples of challenges related to communicating by telephone*

Awardees in one of the **Strong Start** models had trouble reaching participants due to changing phone numbers or patients running out of minutes on their phones. In addition, speaking on the telephone was not a preferred mode of communication for some patients, who did not answer their phone or set up and use their voicemail. Areas for improvement include: better integrating the participant's partner and family in prenatal care, promoting attendance at classes (including providing or arranging childcare or transportation), and maintaining contact with women who have inconsistent phone access or "disappear." Key informants reported challenges with patients who do not return missed phone calls, change their number without notifying the site, or do not have voicemail set up where center staff can leave messages. Four of the **HCIA R2** awardees

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had difficulties reaching and engaging their participant populations; the challenges ranged from not being able to follow up with participants whose phone numbers and/or primary addresses changed often, the phone number that participants provided at enrollment no longer worked, health promotions materials were too complex for the patient population, and their patient population (in this case, dementia patients) being isolated and hard to reach. Participants in **MIPCD** identified a few barriers to access, including limited cell phone minutes to access telephonic program components.

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**Finding 7: The context in which models were implemented—particularly with respect to the receptiveness of the regulatory and policy environment—varied widely, alternately facilitating and confounding implementation.**

This section summarizes findings about market features that facilitated or presented challenges to the implementation of the models. These environmental factors, including other reform initiatives, as well as state policies and regulations, provide important context that should be considered in model design because they may facilitate or confound implementation. In summary, we found:

- ***Other reform initiatives:*** Synergies in funding, information exchange, quality and performance reporting, and delivery and payment reforms from previous or concurrent initiatives facilitated start-up and implementation of models. However, we also found examples where participants reported that health care reform efforts competed for their limited resources.<sup>16</sup>
- ***State policies and regulations:*** States sometimes adopted regulations and policies to facilitate and sustain change. The changes the states focused on in their regulations and policies varied from improving HIT adoption rates, supporting partnership requirements, promoting payment policy and coverage changes, and facilitating payer participation and adoption of consistent metrics. Existing state policies, particularly related to Medicaid, were also seen as barriers to implementation.

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<sup>16</sup> Examples of effects of other reform initiatives on provider engagement are also discussed in the *Stakeholders* section of this report.

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## Finding 7 Examples: Environment

This section contains model-specific examples of facilitators and challenges related to other reform initiatives and state policies and regulations that affected implementation of the models.

### *Other reform initiatives*

#### *Examples related to infrastructure and model alignment*

For the **MAPCP** initiative, there were benefits of broad participation in other models beyond funding, including the ability to build upon infrastructure. All eight states applied to CMS to participate in its **SIM** initiative and five states obtained or were pursuing Section 2703 Health Homes under the ACA, used to build upon each state's PCMH infrastructure and complement the **MAPCP** Demonstration. Stakeholders across the states generally felt that other ongoing initiatives were complementary and dovetailed with the multi-payer PCMH initiatives, strengthening the primary care base on which the larger reforms were built. As an example, one group began producing practice feedback reports with medical and pharmacy claims data for primary care practices across the state as part of the state's **SIM** initiative, which benefited both **MAPCP** demonstration and non-demonstration practices. Population health plans developed as part of state **SIM** Initiative Operational Plans generally referenced existing State Health Improvement Plans (SHIPs) and other public health activities outside the direct scope and funding for the **SIM** Initiative. State officials aligned **SIM** activities to coordinate with existing public health activities and drew synergies between programs whenever possible. This alignment between **SIM**-funded and existing public health activities was most evident in the use of quality and performance metrics that focus on improvements in conditions that address population health priorities. Also, as reported in **PCSR**, initiatives running concurrently can be mutually supported when requirements align or one initiative builds on another — the states that designed the **SIM** initiatives were able to build off existing practice transformation initiatives in all six states. As an example of a common feature, PCPs participating in **SIM**, **MAPCP**, and other initiatives used feedback reports to inform practice transformation efforts. One of the **HCIA R2** awardees reported that their efforts to develop a value-based payment model were assisted by alignment with broader state efforts to realign payment. Other initiatives seeking to divert psychiatric boarding of patients in EDs—such as crisis walk-in clinics, behavioral health home models, mobile crisis units, crisis intervention, stabilization, and housing services—may have impacted ten of the **MEPD** states' ability to serve all the intended patients and led the program to focus on the hardest to reach and most severe patients.

#### *Examples of competing priorities*

As reported in the **PCSR**, establishing health insurance exchanges under the ACA created competing priorities in some **SIM** states. For example, because state-level **SIM** data analysts had to first address challenges from the launch of one state's marketplace exchange, their participation in implementing the **SIM** initiative was delayed. In one **SIM** state, in the Design and Pre-Test phase, the timing of other state activities (including the legislative session and a Medicaid reform effort) stretched resources and limited the time available for planning activities. Because of multiple funding sources, **FQHCs** had to meet multiple reporting requirements. Even

when other health care reform initiatives aligned with the FQHCs' transformation efforts, the required documentation and other work strained resources. Other reform opportunities, like ACOs, tended to create conflicts for practices; not only were ACOs sometimes viewed as an alternative to participating in traditional primary care initiatives, but some ACO initiatives prohibited concurrent participation in other initiatives, so some **CPC** and **MAPCP** practices left the initiatives to participate in ACOs. Some practices participating in **HCIA** projects also noted issues, particularly the **HCIA** awardees also involved with the FQHC Demonstration or other regional activities. Concurrent primary care initiatives also caused problems among participating practices. While the three **MAPCP** states that were also **SIM** states largely benefited from the common activities, there was some pressure on practice capacity as well as some "change fatigue" reported, as state officials and providers were faced with limited time and resources. While some of the interviewees in one state felt that the state's **SIM** planning was a distraction for their **MAPCP** initiative, stakeholders in another state did not identify negative impacts of these simultaneous programs. However, many interviewees cautioned that they might have to contend with "provider fatigue" over time, as discussed earlier under the stakeholder finding.

### **State Policy and Regulations**

#### *Examples of state legislation and policy to promote system change*

Under **SIM R1**, several states implemented legislation to initiate and formalize changes in health care delivery systems. For example, one state implemented a **PCMH** requirement to document acquisition of an **EHR**, while three other states mandated **EHR** adoption or established a **HIT** program. Another state gained strong provider participation through a legislative mandate which required **Health Insurance Marketplace** qualified health plans (**QHPs**) to participate in **PCMHs**. One state used **SIM** funds to prepare practices for participation in newly legislated behavioral health homes. States also used legislative mandates to promote **MAPCP** initiatives (in five states) or **EHR** mandates (one state). Another state passed enabling legislation that created a stakeholder engagement process giving payers and providers an equal voice, while another state passed legislation codifying the **PCMH** initiative and requiring the future participation of state-regulated health insurers, and one state's health reform legislation codified the initiative in statute and laid the basis for future legislative expansions. To increase **HIT** adoption, states have implemented provider participation requirements, direct financial support, and facilitation of privacy and confidentiality requirements. In order to encourage increased focus on population health as part of **SIM R1** initiatives, states used a variety of policy levers including requirements for partnerships with public health departments, the conduct of population health needs assessments, and the development of population health improvement plans. Due to the crosscutting nature of population health issues, a population health focus within the context of the **SIM** Initiative promoted additional or renewed engagement across agencies and stakeholders. One of the **HCIA R1 BSA** awardees offered that several state policies supporting the use of telemedicine helped to increase demand for the program's tele-psychiatry services.

#### *Examples of Medicaid policy changes to promote system change*

Under **SIM R1**, several states introduced Medicaid policy changes through **SPAs** and waivers to support new directions in health care systems. For example, in one state, a new Medicaid **SPA**

adds flexibility to the IHP model, such as adjustments to the attribution methodology that increase its accuracy. State legislation in one state authorizes Medicaid reimbursement for the three emerging professions (CHWs, community paramedics, and dental therapists) being supported under its SIM Initiative. In **SIM R2**, states used their power as a purchaser (Medicaid and state employee plans) to help them reach a broad population. Changes in state Medicaid policy positively contributed to one of the **Strong Start** models, with some awardees reporting that changes to Medicaid and WIC positively impacted the demonstration, including coverage for equipment and prescriptions important for participants.<sup>17</sup> Also, in July 2014, one state's Medicaid transitioned to managed care for most Medicaid populations, including pregnant women, and some awardees noted that access to transportation services improved as the MCOs organized transportation services for their members. Two states Medicaid programs require MCOs to include at least one birth center in their network which increased Medicaid volume at some sites. A shift to Medicaid managed care also helped one **HCIA R2** awardee through MCO emphasis on care coordination, which made potential partners more receptive to the new program.

#### *Examples of states use of contracting to promote system change*

Under **SIM R1**, several states initiated contracts with insurance providers, managed care entities, or ACOs to support healthcare system change. State regulatory and legislative powers have been central to helping one state transform its health care system. The state passed a number of laws pertaining to health care transformation, including bills to better align performance metrics across payers and to further develop HIT infrastructure by allowing public-private partnerships. In **SIM R2**, six states required that contracts with Medicaid MCOs include adoption of APMs or value-based purchasing models. Through their contracts and negotiations with health plans, four states incorporated SIM models into state employee health plans or intend do so in the future.

#### *Examples of using policy to support model sustainability*

As demonstration funding for **MIPCD** programs was set to expire, many of the states sought alternative funding streams to keep their programs going. States approached sustaining their programs through: applying for Section 1115 waivers (2 states), Medicaid pilot (1 state), other funding - either through clinics/health centers or other state agencies (4 states) and embedding programs in the MCOs (3 states). Several **HCIA R1 BHS**A awardees provided instances of state policies that were helping to sustain their models, including legislation that provides funds for provision of mental health services to counties, changes to one state's Medicaid program that allowed for reimbursement of services, and legislation supporting telemedicine in three states. The reimbursement of services through Medicaid reform offered a unique opportunity to build a sustainable payment model into state legislation.

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<sup>17</sup> For example, MI Medicaid began covering more powerful breast pumps and dropped the prior authorization requirement for long-acting reversible contraceptives.

### *Examples of obstacles to using policy to promote change*

Although policy levers were effective for some **SIM R1** states, other states struggled to implement policies that would transform payment policy. Stakeholders from both private and public sectors working on one state's **SIM** initiative noted that the pace of public sector reform can be slow and another state's plan relied on market forces, noting that "a single, state favored approach would slow down progress."<sup>18</sup> This approach of relying on voluntary forces rather than government action was chosen by several states where stakeholders anticipated difficulties in passing legislation. There were instances in **SIM R2** where the initiative and state timelines clashed. One example is that state bids for managed care contracts were due while the state was planning for the **SIM** initiatives; the states halted communications with the managed care contractors in order to avoid influencing responses, causing delays in receiving stakeholder input on the **SIM** initiative. For both the **SIM** and **MAPCP** initiatives, evaluators noted that changes in state landscapes can also affect progress (e.g., administrative turnover). Lack of state leadership and/or regulatory support sometimes served as a barrier to change. For example, following a change in state leadership, participant's in one **MAPCP** state lamented lacking the regulatory support and state-level leadership to compel payers to remain in the initiative or to engage new Medicaid managed care plans to join.

### *Examples of barriers related to existing Medicaid policies*

Certain existing Medicaid policies acted as barriers to model implementation for models targeting the Medicaid population. Commonly cited barriers for **Strong Start** included eligibility determination and continuity of coverage; and coverage of related services including transportation, contraceptives, and breast pumps. For example, lengthy Medicaid eligibility determination hampered the ability of birth centers to accept new patients. Despite **CMMI** and awardee encouragement to accept patients with "pending" Medicaid applications, only about half of the birth center sites chose to do so, noting that the delays created uncertainty about enrollment relative to capacity. Several awardees also identified the lack of continuous Medicaid and **CHIP** health coverage in the postpartum period (once pregnancy-related coverage expires). While, as noted above, one state participating in **Strong Start** increased access to birth control, inadequate reimbursement and problems obtaining a steady supply of long-acting reversible contraceptives were particular challenges in other states, especially at smaller hospitals in rural areas. **MIPCD** programs with limited experience working with Medicaid found navigating Medicaid reimbursement difficult. For example, one state built its program on an existing diabetes prevention program for non-Medicaid individuals and had trouble working with and handling Medicaid reimbursement. One **HCIA R2** awardee faced challenges from a transition to Medicaid managed care, noting that the ability of participants to switch plans on a monthly basis made engaging and coordinating care, including managing referrals due to differences in networks across plans, difficult. States' decisions around Medicaid expansion affected the target populations and created capacity challenges for **HCIA R1** awardees across four types of portfolios (behavioral health, complex care, community, and hospital). For example, one **BHSA** awardee indicated that one state's decision not to expand Medicaid hindered their patients'

<sup>18</sup> [https://downloads.cms.gov/files/cmmti/SIM-Round1-ModelDesign-PreTest-EvaluationRpt\\_5\\_6\\_15.pdf](https://downloads.cms.gov/files/cmmti/SIM-Round1-ModelDesign-PreTest-EvaluationRpt_5_6_15.pdf), pg. 23-8.

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ability to receive care for physical health services from specialists, and significant staff time was then spent arranging referrals. Another state's decision to expand Medicaid posed a different sort of challenge for a **BHSA** awardee: the expansion increased demand for mental health services making it difficult for the awardee to recruit enough staff and hampered broader program implementation.

#### *Examples related to Medicaid reimbursement*

For **Strong Start**, existing reimbursement policies, including low and delayed Medicaid reimbursement, created barriers and limited birth centers' ability to participate in the Medicaid program. Key informants reported that Medicaid reimbursement is inadequate to cover the cost of birth center care. Like "traditional" care, birth centers typically receive a global payment from Medicaid for all prenatal services, but birth center providers often provide individual patients with more care visits and spend more time with them. For example, one birth center noted that its state Medicaid agency limits the number of reimbursable visits to 10, but the birth center conducts 14 visits as its standard approach of care. Another birth center noted that Medicaid reimbursement for its facility fee (for labor and delivery services) in its state was \$400, which would not even be sufficient to cover the costs associated with a birth assistant. While Medicaid reimbursement is very low for deliveries, for women who receive prenatal care at the center but deliver elsewhere, reimbursement is even lower. Low reimbursement undermines birth centers' willingness to care for a greater proportion of Medicaid enrollees, and thus limits their ability to increase Strong Start enrollment. Several awardees also noted problems with implementing the model within the global fee that Medicaid MCOs use to reimburse for prenatal care and the restrictions on non-emergency Medicaid transportation.

#### *Examples related to barriers created by non-Medicaid policies*

Several programs faced issues with state licensing of healthcare professionals. As provider organizations participating in **SIM R1** initiatives try to incorporate CHWs and other emerging professions into the provision of care, credentials for these professions are not yet uniformly agreed upon within or between states. In **Strong Start**, there were also operational challenges for some sites in states with more restrictive rules for scope of licensure for advance practice nurses and certified nurse midwives. One **HCIA R1 BHSA** awardee found that, even though state policies supported reimbursement for telemedicine, there were gray areas that some commercial insurers relied on to deny payment. From the **PCSR**, stakeholders in one of the **SIM** states lobbied for HIPAA exemption from regulations making sharing of personal health information across collaborating partnerships difficult and were not approved, resulting in difficulty coordinating care. Also, two of the **HCIA R2** awardees struggled to launch their programs due to burdensome university regulations. One of the awardees in **HCIA R2** struggled to determine how to bill Medicare for mobile acute care team services as this was a new service and the services are not purely inpatient or outpatient, making it difficult to determine if they should be billed under Medicare Part A or Part B. Finally, another **HCIA R2** awardee struggled to connect Medicare-only participants to resources available to their dual-eligible counterparts—the Medicare-only participants are not eligible for adult day and long terms services and support that dual eligible beneficiaries can access through their Medicaid coverage. One **HCIA R2** awardee

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faced challenges in implementing its care coordination model due to a lack of alignment within the delivery system; with a shift to Medicaid managed care, MCOs in the state were developing their own internal care coordination systems and would not share data on patients, CHWs had difficulty making referrals because not all providers accept all MCOs, and patients were able to change plans each month making it difficult to determine eligibility for the program. Awardees under **HCIA R1 BHSA** noted the difficulty of developing an innovative service delivery model without having supportive financing and policy arrangements in place at both the state and federal level. One state moving toward adopting an integrated purchasing model for behavioral health services faced uncertainty about the effect of this policy change on the funding streams that would support the program's components in the future.

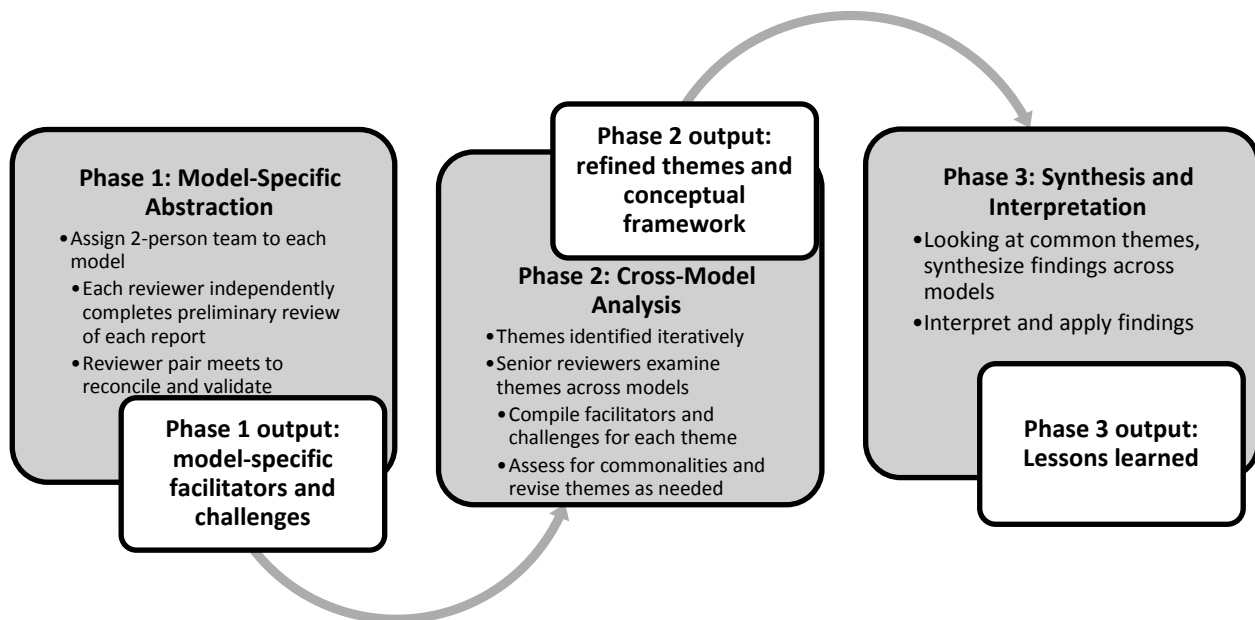
*Examples related to sustainability*

A few **Strong Start** awardees noted that uncertainty about future Medicaid financing and the possibility of ACA repeal made planning for long-term sustainability of programs like Strong Start difficult. The **HCIA R1 BHSA** awardee mentioned above with respect to one state's decision not to expand Medicaid noted that their inability to arrange specialist care for their clients was not only a short-term issue but threatened the long-term sustainability of the program.

## APPENDIX A: METHODS

This appendix describes our approach to reviewing and synthesizing qualitative findings from the evaluation reports identified for review. Our goal was to implement a consistent process for summarizing commonalities and underlying variations resulting in differences in model implementation and influencing lessons learned. Figure 6 depicts the three-phase approach used to abstract and synthesize information from the evaluation reports.

**Figure 9. Three-Phase Approach to Data Abstraction and Synthesis**



### Phase 1: Model-Specific Abstraction

Phase 1, Model-Specific Abstraction, laid the groundwork for synthesis of the qualitative evaluation findings. We intended this activity to: 1) establish common definitions and vocabulary for describing the initiatives, 2) build a framework for organizing and synthesizing information that will help CMS in discussing future initiatives, and 3) populate that framework with relevant data for further cross-model analysis and interpretation.

To ensure a basic understanding of each of the models being reviewed, the team gathered and documented information on the model and evaluation features, as shown under “Taxonomy,” and “Methodology,” in Table 3. Then, with the study’s research questions as a guide, we identified “Facilitators and Challenges” within each report and made an initial attempt to sort them by theme to facilitate within-theme cross-model analysis in Phases 2 and 3. The themes evolved over the course of the study but were driven by CMS’s research questions.

**Table 3. Information Extracted from Model Reports**

Topic	Types of information
<b>Taxonomy</b>	<ul style="list-style-type: none"> <li>• Purpose/goals</li> <li>• Intervention/mechanism for change</li> <li>• Funding</li> <li>• Key actors and roles</li> <li>• Duration &amp; scale</li> </ul>
<b>Methodology</b>	<ul style="list-style-type: none"> <li>• Types of data collection</li> <li>• Sample sizes</li> </ul>
<b>Facilitators &amp; Challenges, by theme</b>	<ul style="list-style-type: none"> <li>• State role</li> <li>• Model design</li> <li>• HIT/data</li> <li>• Care coordination and provider collaboration</li> <li>• Financial resources</li> <li>• Stakeholders</li> <li>• Environment</li> </ul>

For Phase 1, teams of two reviewers (one senior, one junior) were assigned to each model. Both team members reviewed each of the reports for a given model and extracted relevant information. After each of the reviewers completed a preliminary review, the two-person team compared their individual reviews, resolving any inconsistencies through additional reference to the reports. The final product of the reconciled preliminary reviews for each report became a validated review. To facilitate group collaboration, the team utilized Airtable, a cloud-based spreadsheet application with an underlying relational database. The team created an Airtable workbook for storing and analyzing extracted information. Each topic – or in the case of Facilitators and Challenges, theme within a topic – had its own evidence table with Airtable.

At the conclusion of Phase 1, the team had developed a reference source of background information for each model and established common definitions for describing the initiatives and populated the underlying evaluation context (Taxonomy, Methodology), and developed a thematically-organized framework for organizing and synthesizing information (Facilitators and Challenges, by theme). The themes identified through the reviews served as the basis of the conceptual framework discussed later in Figure 7, which in turn served as the structure for our cross-model analysis and synthesis.

### **Phase 2: Cross-Model Analysis**

In Phase 2, Cross-Model Analysis, senior team members synthesized validated reviews from Phase 1 to refine the initial set of themes within Facilitators and Challenges and ensure that teams were characterizing findings consistently. Each senior reviewer was assigned one to two



themes for review. Reviewers classified the identified challenges and facilitators for each model under subthemes using abstracted information as specific examples. We began this process with Tier 1 model evaluation reports to identify themes from the most relevant group of models. The initial set of themes were tested on Tier 2 models and revised as needed. The themes were applied to Tier 3 models with no revisions made.

After senior team members completed the cross-model analysis, the Project Director and Project Manager reviewed cross-model themes, subthemes, and examples for consistency and completeness.

### Phase 3: Synthesis and Interpretation

The final model abstraction step was to identify commonalities and differences within the cross-model examples of facilitators and challenges collected for each theme. To do so, senior reviewers participated in consensus-building discussions and worked together to draw inferences for future CMMI initiatives. During these discussions, the team relied on the contextual and methodological information that had been compiled for each model in the Taxonomy and Methods tables to ensure that findings were analyzed with full awareness of model features, evaluation methods, and other relevant aspects of the implementation environment.

### Defining Outputs from Data Abstraction and Synthesis

The following terms are used to provide a structure for the report.

- **Themes** are used to extract and organize relevant report data into broad categories of factors affecting model implementation. The themes were developed based on review of model-specific evaluation reports and guided by the priority research areas.
- **Findings** are the facilitators and challenges that were identified as common across models. They are organized by themes and based on the reviews of the evaluation reports.
- **Lessons Learned** are derived based on a synthesis of the findings. These are higher-level implications for design of future models.

### Data Sources

The CMS COR and other CMS staff selected the 12 models for review and identified the relevant reports (see Table 4) comprising the data sources for this project.<sup>19</sup> The model reports were placed into tiers based on an initial priority placement by the COR. Higher-priority (Tier 1) models were those with a more significant state role, models in Tier 2 involved Medicaid as a payer, and models in Tier 3 had more limited state roles and were lower-priority for the research team's review. Based on this prioritization, the team relied primarily on review of Tier 1 models to identify the major themes and develop the conceptual framework. Review of Tier 2 models

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<sup>19</sup> The 12 models count SIM Rounds 1 and 2 as one model, all HCIA reports as one model, and the PCSR as 3 models (CPC, IAH, FQHC) since MAPCP is included separately.

helped to refine themes, while the Tier 3 models were used primarily to provide examples supporting the selected themes. Once the themes were finalized and examples extracted, the ‘tier’ designation was disregarded. Per the study design, the team’s review of the reports focused on qualitative findings. In total, we reviewed 47 evaluation reports, largely annual or final reports, of models that are state-based or those that have a significant state role.<sup>20</sup> The 47 reports amounted to over 9,000 pages of content without appendices. A complete listing of the reports is provided in Table 9.

**Table 4. List of Models and Related Reports**

<b>Model Name (Acronym used in report)</b>	<b>No. of Reports</b>
<b>Tier 1: Strong State Role</b>	
<b>Multi-Payer Advanced Primary Care Practice Demonstration (MAPCP)</b>	4
<b>Maryland All-Payer Model (All-Payer Model)</b>	2
<b>State Innovation Models Round 1 (SIM R1)</b>	5
<b>State Innovation Models Round 2 (SIM R2)</b>	2
<b>Financial Alignment Initiative (FAI)</b>	10
<b>Tier 2: Medicaid Focused</b>	
<b>Strong Start for Mothers and Newborns: Enhanced Prenatal Care Models (Strong Start)</b>	7
<b>Medicaid Incentives for the Prevention of Chronic Disease Model (MIPCD)</b>	4
<b>Medicaid Emergency Psychiatric Demonstration (MEPD)</b>	2
<b>Tier 3: Other Initiatives with State Role</b>	
<b>Health Care Innovation Awards Round 1, Behavioral Health and Substance Abuse (HCIA R1 BHSA)</b>	3
<b>Health Care Innovation Awards Round 1, Meta-Analysis (HCIA R1 Meta-Analysis)</b>	2
<b>Health Care Innovation Awards Round 2 (HCIA R2)</b>	4
<b>Initiative to Reduce Avoidable Hospitalizations among Nursing Facility Residents (NFI)</b>	1

<sup>20</sup> A complete listing of the reports with references is provided in Appendix Table 7.

Model Name (Acronym used in report)	No. of Reports
<b>Primary Care Systematic Review (PCSR), Final Report Only</b> <b>[includes MAPCP; Comprehensive Primary Care (CPC) initiative; Independence at Home (IAH); Federally Qualified Health Center Advanced Primary Care Practice demonstration (FQHC)]</b>	1

*\*See Appendix for complete listing of all reports with references*

## Study Limitations

There are several sources of limitations to this study. First, the conclusions drawn are based on findings from reports that focused on different models and utilized different methods. Although the team took care to contextualize cross-model findings, the models differ widely in terms of intervention, funding, and scale and coverage, as described further in the next section. Similarly, while the team reviewed the methods for each report, the findings are based on differing activities (e.g., key informant interviews versus site visits versus focus groups), involving differing numbers of interviews with differing audiences, and the team was unable to assess the relative strength of the evidence for each finding. While the team made an effort to consider relevant context when discussing cross-model findings, our completion of this project was dependent upon drawing conclusions across models that differed from one another in multiple ways and from reports that varied in the strength of evidence involved.

Second, for all of its information about model implementation, the team did not conduct any primary data collection but relied solely on existing qualitative research reports. Working with qualitative data is inherently subjective; our conclusions were drawn only from the approaches that other evaluators chose to use for the evaluations and the findings that they chose to include in their reports. From these reports, we made further decisions during our reviews on which of those findings to abstract for analysis. While the team took steps in Phase 1 to mitigate this subjectivity by having two researchers review each report independently and reconcile their individual reviews into one validated review for inclusion in Phases 2 and 3 of the data abstraction process, the amount of information involved in this project required researchers to make decisions regarding what findings warranted inclusion. Relatedly, the evaluation findings themselves were based on different sets of activities and intensity of effort — for example, focus groups versus key informant interviews of varying numbers and frequency — making it difficult to assess the strength of evidence across models.

Finally, the models examined disproportionately reflect early adopters and voluntary innovators, those with prior experience and a desire for change. This is true of states as well as other awardee entities who have generally elected to participate and may be well-positioned for the next stage of innovation by a past infusion of resources from CMS. In several of the models, evaluation findings document that organizations with fewer resources, and those with limited or no experience, faced greater obstacles in the many activities required for model implementation. The reports reviewed for this effort provide little information regarding those states that have not yet engaged in innovation. Table 5 below shows the number of states participating in Tier 1 and

Tier 2 initiatives - those initiatives that have the most prominent state roles. Overall 34 states (including the District of Columbia) are represented in our findings.

**Table 5: Number of States Participating in Tier 1 and Tier 2 Models**

<b>17 states</b>	<b>Participate in 0 models</b>
<b>18 states</b>	Participate in 1 model
<b>7 states</b>	Participate in 2 models
<b>9 states</b>	Participate in 3-4 models

Despite these limitations, the variety of models and evaluation methods involved in this study presents an opportunity to observe patterns from a diverse universe of scenarios. Through the team's qualitative meta-synthesis, we were able to draw valuable conclusions to better understand barriers, facilitators and opportunities associated with success in these models and inform future state-based CMMI initiatives.

## APPENDIX B: CONTEXT FOR ASSESSING MODELS

This appendix provides an overview of the models that were reviewed, delineating their features to provide a context within which to extract and synthesize the evaluation findings. Familiarity with the interventions, scale, key actors, and payments or incentives involved in each of the models provided an essential foundation for understanding and assessing the evaluation findings. We also present a conceptual framework for organizing the information reviewed.

### Model Interventions

All of the models sought to improve health and quality and lower the cost of care. Each model differed, however, in the specific intervention selected to achieve the goals. Most of the models focused on a care delivery intervention, such as care coordination or care management (e.g., FAI, MAPCP, CPC, IAH), while others relied on a change in payment as a driver, with the specific mechanism left to the implementing entities (e.g., Maryland All-Payer Model, MEPD). Several models had a patient-centered medical home (PCMH) component included in their interventions (e.g., MAPCP, FQHC, and many of the SIM initiatives). Models also differed in the degree to which CMMI specified awardees' interventions. For example, individual Health Care Innovation Award (HCIA) and State Innovations Model (SIM) awardees designed their own interventions to be supported by model funds, all focused on testing alternative care delivery models; other models, like Comprehensive Primary Care Initiative (CPC) and two of the three Strong Start models, had more defined intervention components that all awardees implemented. Table 6 briefly summarizes the intervention implemented for each model.

**Table 6. Summary of Model Interventions**

Model	Brief Description of Intervention
<b>Tier 1: Strong State Role</b>	
<b>Multi-Payer Advanced Primary Care Practice Demonstration (MAPCP)</b>	Provided care management services to beneficiaries receiving care from advanced primary care practices, including care coordination, improved access to care, and patient education.
<b>Maryland All-Payer Model</b>	Implemented global budgets for all general acute-care hospitals beginning in 2014. All third-party purchasers pay the same price for services at a given hospital with the exception of Medicaid and Medicare payers, who pay 6% less than commercial payers. Growth of per capita hospital costs is limited to 3.58%.
<b>State Innovation Models Rounds 1 and 2 (SIM Round 1, SIM Round 2)</b>	Funded interventions focused on design and testing of health care payment and service delivery models.
<b>Tier 2: Medicaid Focused</b>	
<b>Financial Alignment Initiative (FAI)</b>	Provided care coordination as a single point of contact for all services being managed (e.g., medical, behavioral health, LTSS) and provided multi-disciplinary care teams.

Model	Brief Description of Intervention
<b>Strong Start for Mothers and Newborns: Enhanced Prenatal Care Models (Strong Start)</b>	Provided funds for enhanced services within three prenatal care models: maternity care homes, group prenatal care (“Centering Pregnancy”), and freestanding birth centers.
<b>Medicaid Incentives for the Prevention of Chronic Disease Model (MIPCD)</b>	Funded programs with at least one or more of the following prevention goals: tobacco cessation, weight control, lowering cholesterol or blood pressure, and/or diabetes management, and provided beneficiaries with monetary incentives for participation.
<b>Medicaid Emergency Psychiatric Demonstration (MEPD)</b>	Reimbursed private psychiatric hospitals for certain psychiatric emergency services for which Medicaid reimbursement has historically been unavailable.
<b>Tier 3: Other Initiatives with State Role</b>	
<b>Health Care Innovation Awards Rounds 1 and 2, selected reports (HCIA Round 1, HCIA Round 2, HCIA Round 1 Meta-Analysis)</b>	Funded interventions focused on identifying and testing new care delivery and payment models.
<b>Initiative to Reduce Avoidable Hospitalizations among Nursing Facility Residents (NFI)</b>	Provided on-site staff for training, delivery of preventive services, and improved assessment and management of medical conditions to reduce avoidable hospitalizations.
<b>Primary Care Systematic Review, Final Report (PCSR)</b>	
<i>Comprehensive Primary Care Initiative (CPC)</i>	Providers implemented 5 key CPC functions: (1) risk-stratified care management, (2) access and continuity, (3) planned chronic and preventive care, (4) patient and caregiver engagement, and (5) coordination across the medical neighborhood.
<i>Federally Qualified Health Center Advanced Primary Care Practice Demonstration (FQHC)</i>	FQHCs were expected to obtain Level-3 PCMH recognition (2011 standards) from the National Committee for Quality Assurance (NCQA) by the end of the demonstration.
<i>Independence at Home (IAH)</i>	Used a home-based primary care delivery and incentive model led by physicians or nurse practitioners to design and implement coordinated care plans that were tailored to individual beneficiaries’ chronic conditions and responsive to their preferences.

### Model Scale

The scale or coverage of the models is important in at least two ways. First, scale and coverage can be used to describe and understand the variation in scope and the environment of each of the models. Second, it provides a lens through which to consider the level of evidence or support provided in the synthesized findings, i.e., how much weight should be given to the learnings from any given model. The models reviewed are quite heterogeneous in terms of scale and coverage—models were convened in differing numbers of states, with varied geographic reach within each state, and involved different types and numbers of payers, providers, and

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beneficiaries, as summarized below in Table 7. In terms of geographic coverage, models ranged significantly in the number of states involved, from one state for the Maryland All-Payer Model to the HCIA R1 models which, combined, had presence in all 50 states. Within each participating state, the geographic reach also varied by initiative; some models were implemented statewide, while others operated only regionally or even locally at one specific site. Furthermore, some models' geographic reach varied by individual awardee. For example, five states participating in the Multi-Payer Advanced Primary Care Practice (MAPCP) implemented the model statewide, while three states only implemented the model in certain regions. Each model also involved differing types and numbers of payers, ranging from Medicaid only (e.g., MEPD), to Medicaid and Medicare (e.g., FAI), to Medicaid, Medicare, and commercial payers (e.g., MAPCP). For some initiatives, the number and type of payers involved also varied by state or awardee. The number of providers or sites involved and beneficiaries served also varied significantly for each model; for example, 28 institutions for mental disease implemented The Medicaid Emergency Psychiatric Demonstration (MEPD), delivering care to 11,850 beneficiaries, while MAPCP included over 800 participating practices and involved roughly three million beneficiaries.

**Table 7. Overview of Differences in Geographic Scale and Participation Across Models**

Model	Number of Participating States	Geographic Reach	Payer Scale & Type	Providers & Practices or Sites	Beneficiaries
<b>Tier 1: Strong State Role</b>					
<b>Multi-Payer Advanced Primary Care Initiative</b>	8 States	Regional (3 Awardees), Statewide (5 awardees)	Medicare, Medicaid, Commercial Payers	6,387 providers; 849 participating practices	3 million*
<b>Maryland All-Payer Model</b>	1 State (MD only)	Statewide	All payers	46 Acute Care Hospitals	N/A
<b>State Innovation Model (Round 1)</b>	19 States (Model Design Awards); 6 States (Model Test awards)	Statewide	Medicare, Medicaid, Commercial Payers	Unavailable	N/A
<b>State Innovation Model (Round 2)</b>	11 States	Statewide	Medicare, Medicaid, Commercial Payers	Unavailable	N/A
<b>Financial Alignment Initiative</b>	7 States	Regional (6 Awardees), Statewide (1 Awardee)	29 Medicare-Medicaid Plans	N/A	140,000 (2k-47k per state)
<b>Tier 2: Medicaid Focused</b>					
<b>Strong Start Initiative</b>	30 States; Washington, DC, and Puerto Rico	Site-based	Medicaid and CHIP	27 awardees, 176 provider sites	42,000



Model	Number of Participating States	Geographic Reach	Payer Scale & Type	Providers & Practices or Sites	Beneficiaries
<b>Medicaid Incentives for the Prevention of Chronic Disease</b>	10 States	Regional (6 Awardees), Statewide (4 Awardees)	Medicaid Only; Medicaid MCOs involved in 5 states	N/A	24,403
<b>Medicaid Emergency Psychiatric Demonstration</b>	11 States and Washington, DC	Statewide	Medicaid Only	28 IMDs	11,850
<b>Tier 3: Other Initiatives with State Role</b>					
<b>Health Care Innovation Award Round 1 (Behavioral Health and Substance Abuse)</b>	17 States	Multi-State (3 Awardees), Single State/Metro Area (7 Awardees)	N/A	10 awardees	8,306
<b>HCIA Round One (Meta-Analysis)</b>	50 states, DC, Puerto Rico	Varied by Initiative	N/A	108 awardees	Unavailable
<b>HCIA Round Two (Selected Awardees)</b>	7 states	Regional (All Awardees)	N/A	8 awardees (39 awardees total)	21,047
<b>NFI</b>	7 States	Regional (All Awardees)	N/A	143 nursing facilities working with 7 ECCPs	67,315

Model	Number of Participating States	Geographic Reach	Payer Scale & Type	Providers & Practices or Sites	Beneficiaries
<b>Primary Care Systematic Review</b>					
<i>Comprehensive Primary Initiative (CPI)</i>	7 states	Regional (3 Awardees), Statewide (4 Awardees)	Medicare, Medicaid, CHIP, Commercial Payers	500 primary care practices	410,177
<i>Federally Qualified Health Center Advanced Primary Care Practice Demonstration (FQHC)</i>	46 states and DC	Site-based	Medicare Only	500 FQHCs	Minimum 100,000
<i>Independence at Home (IAH)</i>	15 states	Site-based	Medicare Only	15 primary care practices	Minimum 3,000

*Note: Numbers are current as of the final or most recent published report.*

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## Model Actors

Models also differed in the degree to which states, payers, and/or providers played key roles in model implementation. We define two “key actors”:

1. Awardee/Conveners—the entities that received the financial award and/or convened others to participate in the model, and
2. Participant/Actors—the entities that implemented the models’ interventions.

Table 8 below provides a high-level view of the key actors involved in each model. The state served as the Awardee/Convener for six models; as discussed later in the report, different entities within the state may have played that role. For three of the models, CMS was the convener, with primary responsibility for model design. In two of the models, plus the HCIA awardees, a variety of entities were the awardees and oversaw model implementation at multiple provider sites. The Participants/Actors for the models were largely providers, including hospitals, primary care providers/practices, nursing homes, psychiatric hospitals, Federally Qualified Health Centers (FQHCs), and other clinical sites. Depending on the model, payers played a more or less active role and the number and type of payers varied. For example, in MAPCP, multi-payer participation was required and payers were actively involved in designing and implementing patient attribution algorithms and in designing payment schemes. While beneficiaries were involved in all of the models, in most cases, they played a somewhat reactive or passive role and were not involved in model design or as the actor behind implementation. In the models (e.g., Strong Start, MIPCD) where beneficiary initiative was required to enroll or participate effectively, this became an added dimension of implementation.

**Table 8. Overview of Key Actors and Funding Sources for Models**

Model	Awardee	Participants/Actors	Funding/Payments
<b>Tier 1: Strong State Role</b>			
<b>Multi-Payer Advanced Primary Care Practice Demonstration (MAPCP)</b>	States	Primary care practices, Payers	Practices received payments for serving as PCMH. PMPM payment with performance-based component in some states
<b>Maryland All-Payer Model</b>	State regulatory/rate-setting agency (HSCRC)	Hospitals	Global budget with all third-party purchasers paying the same price for services at a given hospital with growth rate capped
<b>State Innovation Models Rounds 1 and 2 (SIM Round 1, SIM Round 2)</b>	States	Payers, Providers	States received funding to test innovative healthcare payment and service delivery models aimed at lowering costs and improving quality  States allocated funds to providers in different ways, sometimes through PMPM payments
<b>Financial Alignment Initiative (FAI)</b>	State Medicaid agency	Medicare/Medicaid plans (MMPs)	Based on capitated, managed, or alternative model. In the capitated model, MMPs received a blended payment from CMS and the state Medicaid plan. In the Managed FFS model, CMS and state Medicaid programs separately finance distinct services through FFS payments.
<b>Tier 2: Medicaid Focused</b>			

Model	Awardee	Participants/Actors	Funding/Payments
<b>Strong Start for Mothers and Newborns: Enhanced Prenatal Care Models (Strong Start)</b>	Array of entities, including hospitals and health systems, health plans, CBOs, clinics, birth centers, local DOHs, and physician groups	Provider sites	Provider sites received funding to implement enhanced prenatal care services  Per service reimbursement was through Medicaid but was unchanged for model
<b>Medicaid Incentives for the Prevention of Chronic Disease Model (MIPCD)</b>	State Medicaid agency	Primary care providers, Beneficiaries	States received grant funding for administrative and program expenditures; there was no state cost-sharing requirement for services  Monetary incentives were available to beneficiaries
<b>Medicaid Emergency Psychiatric Demonstration (MEPD)</b>	State Medicaid agency	Institutions for Mental Disease (IMDs)	Reimbursed IMDs for certain psychiatric emergencies for which Medicaid reimbursement has historically been unavailable
<b>Tier 3: Other Initiatives with State Role</b>			

Model	Awardee	Participants/Actors	Funding/Payments
<b>Health Care Innovation Awards Rounds 1 and 2 (HCIA Round 1, HCIA Round 2), selected reports</b>	Wide array of entities including, but not limited to, provider practices, payers, local municipalities, and public-private partnerships	Provider sites	Awardees received funding to test innovative healthcare payment and service delivery models aimed at lowering costs and improving quality  Payments to providers varied across awardees
<b>Initiative to Reduce Avoidable Hospitalizations among Nursing Facility Residents (NFI)</b>	Enhanced care and coordination providers (ECCPs)	Nursing facilities	ECCPs received funding through cooperative agreements to implement programs  Nursing facilities (and their practitioners) received no extra funding or payments in the initial phase*
<b>Primary Care Systematic Review, Final Report (PCSR)</b>			
<i>Comprehensive Primary Care Initiative (CPC)</i>	CMS	Primary care practices	Practices received PBPM payments from Medicare and other payers

Model	Awardee	Participants/Actors	Funding/Payments
<i>Federally Qualified Health Center Advanced Primary Care Practice Demonstration (FQHC)</i>	CMS	FQHCs	Practices received PBPM payments from Medicare  Many FQHCs also received grants from HRSA to help cover costs of meeting NCQA PCMH recognition
<i>Independence at Home (IAH)</i>	CMS	Primary care practices	Practices received no upfront financial assistance for transformation but were eligible to receive incentive payments after meeting a minimum savings requirement and meeting quality measures

*\*A second phase of NFI includes payments to practitioners (i.e., physicians, nurse practitioners and physician assistants) at levels similar to the payments they would receive for treating beneficiaries in a hospital.*

## Model Funding, Payment and Incentives

Funding for model interventions, payment for services rendered, and financial incentives for performance also differed by model; for specific models, these aspects also differed by individual awardee. Some models provided start-up funds to support Awardees/Conveners in infrastructure development and model implementation, while other models provided funding through per beneficiary per month (PBPM) payments in addition to the traditional fee-for-service (FFS) arrangement of reimbursement for services provided. Some, but not all, models included a performance- or risk-based payment component, while other models' payments were either FFS or lump-sum funding. While PBPM payments incorporated an element of risk because the practices bear risk for the extra services provided, some of these models/awardees incorporated additional risk in the form of performance payments or shared savings. For two models, HCIA and SIM, awardees received funds upfront, but some Awardees/Conveners then included a performance- or risk-based component when distributing those funds to Participants/Actors. Models with performance- or risk-based payments may offer stronger incentives for model engagement (i.e., better performance in the model leads to a higher financial payoff for key actors), while models without such payments had no financial incentives for achieving success.

## Conceptual Framework

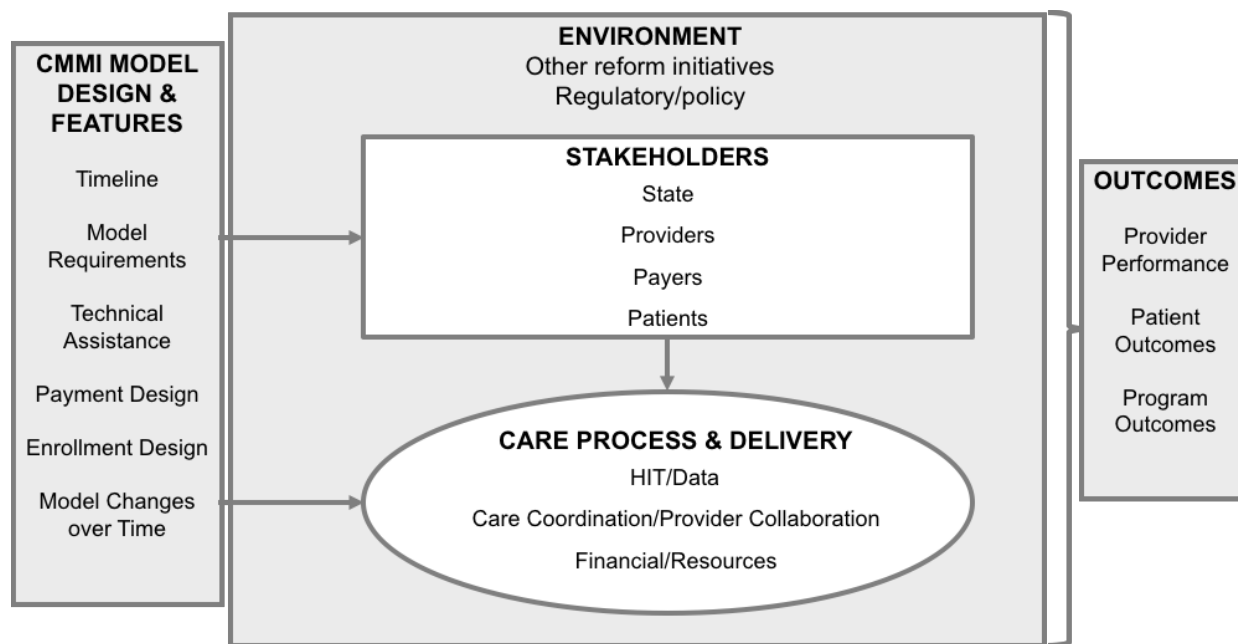
To organize this wide variation in model design and establish a structure for reporting our findings, we developed a conceptual framework to reflect the commonalities across factors impacting the models. The elements of the conceptual framework reflect the common themes identified in our review of the model reports and are used to organize the study findings. The themes are as follows:

- Theme 1: State Role as Awardees and Conveners
- Theme 2: Model Design and Features
- Theme 3: Health IT and Data
- Theme 4: Care Coordination and Provider Collaboration
- Theme 5: Financial/Resources
- Theme 6: Stakeholders
- Theme 7: Environment

The framework, as shown in Figure 7, depicts the relationships between the themes, including the subcomponents of CMMI model design and features that impact the models' care process and delivery and the stakeholders involved. Changes in care process and delivery and stakeholder participation and engagement occur within the broader health care environment, which includes features such as other reform initiatives and existing regulations and policy. Changes in care process and delivery rest on changes in HIT systems and integration, care coordination and collaboration across provider types and sites of care, and financials. Stakeholder participation and engagement and care process and delivery, within the broader health care environment, together determine the outcomes of each model, including provider performance, patient outcomes, and program outcomes.



**Figure 10. Conceptual Framework: Factors Influencing Model Implementation**



While this conceptual framework illustrates the relationships between the factors influencing model outcomes, there are other interactions between factors that are not captured. For example, while model timeline drives implementation, in turn, implementation often depends on the development of infrastructure, including HIT: when HIT implementation is delayed, the model timeline is often affected. In a similar vein, there are many aspects of Model Design that may be supported by the regulatory environment or may require or benefit from changes in regulations. Relatedly, all of the subtopics within Care Process & Delivery, impact one another; for example, changes in HIT/Data are dependent upon having the funding to make investments in HIT, and care coordination efforts are often hindered by limitations in HIT/Data. While we have organized our findings into specific subsections reflecting the framework above, the findings in each subsection are inherently related to the findings in others and we discuss these interconnections accordingly.

**APPENDIX C: EVALUATION REPORTS REVIEWED**

**Table 9. Report References by Model**

Model Name	Reference
<b>Tier 1: Strong State Role</b>	
<b>Multi-Payer Advanced Primary Care Practice Demonstration</b>	RTI International, The Urban Institute, and the National Academy for State Health Policy. (2015). Evaluation of the Multi-Payer Advanced Primary Care Practice (MAPCP) Demonstration First Annual Report. The Center for Medicare & Medicaid Innovation (the Innovation Center). Baltimore, MD.
	RTI International, The Urban Institute, and the National Academy for State Health Policy. (2016). Evaluation of the Multi-Payer Advanced Primary Care Practice (MAPCP) Demonstration Second Annual Report. The Center for Medicare & Medicaid Innovation (the Innovation Center). Baltimore, MD.
	RTI International, The Urban Institute, and the National Academy for State Health Policy. (2016). Evaluation of the Multi-Payer Advanced Primary Care Practice (MAPCP) Demonstration Third Annual Report. The Center for Medicare & Medicaid Innovation (the Innovation Center). Baltimore, MD.
	RTI International, The Urban Institute, and the National Academy for State Health Policy. (2017). Evaluation of the Multi-Payer Advanced Primary Care Practice (MAPCP) Demonstration Final Report. The Center for Medicare & Medicaid Innovation (the Innovation Center). Baltimore, MD.

Model Name	Reference
<p><b>Maryland All-Payer Model</b></p>	<p>RTI International. (2016). Evaluation of the Maryland All-Payer Model First Annual Report. The Center for Medicare &amp; Medicaid Innovation (the Innovation Center). Baltimore, MD.</p>
	<p>RTI International. (2017). Evaluation of the Maryland All-Payer Model Second Annual Report. The Center for Medicare &amp; Medicaid Innovation (the Innovation Center). Baltimore, MD.</p>
<p><b>State Innovation Models Rounds 1</b></p>	<p>RTI International, The Urban Institute, and the National Academy for State Health Policy. (2014). State Innovation Models (SIM) Initiative Evaluation: Model Design and Model Pre-Test Evaluation Report. The Center for Medicare &amp; Medicaid Innovation (the Innovation Center). Baltimore, MD.</p>
	<p>RTI International, The Urban Institute, and the National Academy for State Health Policy. (2014). State Innovation Models (SIM) Initiative Evaluation: Model Test Base Year Annual Report. The Center for Medicare &amp; Medicaid Innovation (the Innovation Center). Baltimore, MD.</p>
	<p>RTI International, The Urban Institute, and the National Academy for State Health Policy. (2016). State Innovation Models (SIM) Initiative Evaluation: Model Test Year Two Annual Report. The Center for Medicare &amp; Medicaid Innovation (the Innovation Center). Baltimore, MD.</p>
	<p>RTI International, The Urban Institute, and the National Academy for State Health Policy. (2017). State Innovation Models (SIM) Initiative Evaluation: Model Test Year Three Annual Report. The Center for Medicare &amp; Medicaid Innovation (the Innovation Center). Baltimore, MD.</p>

Model Name	Reference
	<p>RTI International, The Urban Institute, and the National Academy for State Health Policy. (2017). State Innovation Models: Model Test Year Four Annual Report. The Center for Medicare &amp; Medicaid Innovation (the Innovation Center). Baltimore, MD.</p>
<p><b>State Innovation Models Rounds 2</b></p>	<p>RTI International, The Urban Institute, and the National Academy for State Health Policy. (2017). State Innovation Models (SIM) Round 2: Model Test Annual Report One. The Center for Medicare &amp; Medicaid Innovation (the Innovation Center). Baltimore, MD.</p>
	<p>RTI International, The Urban Institute, and the National Academy for State Health Policy. (2018). State Innovation Models (SIM) Round 2 Initiative Evaluation: Model Test Annual Report Two (Draft). The Center for Medicare &amp; Medicaid Innovation (the Innovation Center). Baltimore, MD.</p>
<p><b>Financial Alignment Initiative</b></p>	<p>RTI International. (2017). Early Findings on Care Coordination in Capitated Medicare-Medicaid Plans under the Financial Alignment Initiative. The Center for Medicare &amp; Medicaid Innovation (the Innovation Center). Baltimore, MD.</p>

Model Name	Reference
	<p>RTI International. (2016). Measurement, Monitoring, and Evaluation of the Financial Alignment Initiative for Medicare-Medicaid Enrollees: Preliminary Findings from the Washington MFFS Demonstration. The Center for Medicare &amp; Medicaid Innovation (the Innovation Center). Baltimore, MD.</p>
	<p>RTI International. (2016). Financial Alignment Initiative Annual Report: Washington Health Homes MFFS Demonstration First Annual Report. The Center for Medicare &amp; Medicaid Innovation (the Innovation Center). Baltimore, MD.</p>
	<p>RTI International. (2017). Report for Washington Managed Fee-for-Service (MFFS) Final Demonstration Year 1 and Preliminary Demonstration Year 2 Medicare Savings Estimates: Medicare-Medicaid Financial Alignment Initiative. The Center for Medicare &amp; Medicaid Innovation (the Innovation Center). Baltimore, MD.</p>
	<p>RTI International. (2017). Issue Brief: Special Populations Enrolled in Demonstrations under the Financial Alignment Initiative. The Center for Medicare &amp; Medicaid Innovation (the Innovation Center). Baltimore, MD.</p>
	<p>RTI International. (2015). Report on Early Implementation of the Demonstrations under the Medicare-Medicaid Financial Alignment Initiative. The Center for Medicare &amp; Medicaid Innovation (the Innovation Center). Baltimore, MD.</p>
	<p>RTI International. (2017). Beneficiary Experience: Early Findings from Focus Groups with Enrollees Participating in the Financial Alignment Initiative. The Center for Medicare &amp; Medicaid Innovation (the Innovation Center). Baltimore, MD.</p>

Model Name	Reference
	<p>RTI International. (2016). Financial Alignment Initiative Annual Report: One Care: MassHealth plus Medicare First Annual Report. The Center for Medicare &amp; Medicaid Innovation (the Innovation Center). Baltimore, MD.</p>
	<p>RTI International. (2016). Minnesota Demonstration to Align Administrative Functions for Improvements in Beneficiary Experience: Annual Report First Annual Report. The Center for Medicare &amp; Medicaid Innovation (the Innovation Center). Baltimore, MD.</p>
	<p>RTI International. (217). Preliminary Savings Report for Colorado Managed Fee-for-Service (MFFS) Demonstration Period 1: Medicare- Medicaid Financial Alignment Initiative. The Center for Medicare &amp; Medicaid Innovation (the Innovation Center). Baltimore, MD.</p>
<b>Tier 2: Medicaid Focused</b>	
<b>Strong Start</b>	<p>The Urban Institute, Health Management Associates, AIR, and Briljent. (2014). Strong Start for Mothers and Newborns Evaluation: Year 1 Annual Report. The Center for Medicare &amp; Medicaid Innovation (the Innovation Center). Baltimore, MD.</p>
	<p>The Urban Institute, Health Management Associates, AIR, and Briljent. (2016). Strong Start for Mothers and Newborns Evaluation: Year 2 Annual Report Volume 1 – Cross-Cutting Synthesis of Findings. The Center for Medicare &amp; Medicaid Innovation (the Innovation Center). Baltimore, MD.</p>

Model Name	Reference
	<p>The Urban Institute, Health Management Associates, AIR, and Briljent. (2016). Strong Start for Mothers and Newborns Evaluation: Year 2 Annual Report Volume 2 – Awardee Specific Reports. The Center for Medicare &amp; Medicaid Innovation (the Innovation Center). Baltimore, MD.</p>
	<p>The Urban Institute, Health Management Associates, AIR, and Briljent. (2017). Strong Start for Mothers and Newborns Evaluation: Year 3 Annual Report Volume 1 – Cross-cutting Findings. The Center for Medicare &amp; Medicaid Innovation (the Innovation Center). Baltimore, MD.</p>
	<p>The Urban Institute, Health Management Associates, AIR, and Briljent. (2017). Strong Start for Mothers and Newborns Evaluation: Year 3 Annual Report Volume 2 – Awardee Specific Reports. The Center for Medicare &amp; Medicaid Innovation (the Innovation Center). Baltimore, MD.</p>
	<p>The Urban Institute, Health Management Associates, AIR, and Briljent. (2018). Strong Start for Mothers and Newborns Evaluation: Year 4 Annual Report Volume 1: Cross-Cutting Findings. The Center for Medicare &amp; Medicaid Innovation (the Innovation Center). Baltimore, MD.</p>
	<p>The Urban Institute, Health Management Associates, AIR, and Briljent. (2018). Strong Start for Mothers and Newborns Evaluation: Year 4 Annual Report Volume 2: Awardee Specific Reports. The Center for Medicare &amp; Medicaid Innovation (the Innovation Center). Baltimore, MD.</p>

Model Name	Reference
<p><b>Medicaid Incentives for the Prevention of Chronic Disease Model</b></p>	<p>U.S. Department of Health and Human Services. (2016). Second Report to Congress Medicaid Incentives for Prevention of Chronic Diseases Evaluation. The Center for Medicare &amp; Medicaid Innovation (the Innovation Center). Baltimore, MD.</p>
	<p>U.S. Department of Health and Human Services. (2013). First Report to Congress Medicaid Incentives for the Prevention of Chronic Disease Model. The Center for Medicare &amp; Medicaid Innovation (the Innovation Center). Baltimore, MD.</p>
	<p>RTI International. (2016). Independent Assessment Report Medicaid Incentives for Prevention of Chronic Diseases Evaluation. The Center for Medicare &amp; Medicaid Innovation (the Innovation Center). Baltimore, MD.</p>
	<p>RTI International and the National Academy for State Health Policy. (2017). Medicaid Incentives for the Prevention of Chronic Disease Model Final Evaluation Report. The Center for Medicare &amp; Medicaid Innovation (the Innovation Center). Baltimore, MD.</p>
<p><b>Medicaid Emergency Psychiatric Demonstration</b></p>	<p>U.S. Department of Health and Human Services. (2013). Medicaid Emergency Psychiatric Demonstration Report to Congress. The Center for Medicare &amp; Medicaid Innovation (the Innovation Center). Baltimore, MD.</p>
	<p>Mathematica Policy Research. (2016). Medicaid Emergency Psychiatric Services Demonstration Evaluation: Final Report Volume 1. The Center for Medicare &amp; Medicaid Innovation (the Innovation Center). Baltimore, MD.</p>



Model Name	Reference
<b>Tier 3: Other initiatives with State Role</b>	
<b>Health Care Innovation Awards Round 1, Behavioral Health/Substance Abuse Awards</b>	Mathematica Policy Research. (2016). Evaluating the HCIA - Behavioral Health/Substance Abuse Awards: Second Annual Report. The Center for Medicare & Medicaid Innovation (the Innovation Center). Baltimore, MD.
	Mathematica Policy Research. (2017). Evaluating the HCIA - Behavioral Health/Substance Abuse Awards: Third Annual Report. The Center for Medicare & Medicaid Innovation (the Innovation Center). Baltimore, MD.
	Mathematica Policy Research. (2014). Evaluating the HCIA - Behavioral Health/Substance Abuse Awards: First Annual Report. The Center for Medicare & Medicaid Innovation (the Innovation Center). Baltimore, MD.
<b>Health Care Innovation Awards Round 1, Meta-Analysis</b>	RTI International. (2015). Health Care Innovation Awards (HCIA) Meta-Analysis and Evaluators Collaborative: Annual Report. The Center for Medicare & Medicaid Innovation (the Innovation Center). Baltimore, MD.
	RTI International. (2017). Health Care Innovation Awards (HCIA) Meta-Analysis and Evaluators Collaborative: Annual Report Year 2. The Center for Medicare & Medicaid Innovation (the Innovation Center). Baltimore, MD.

Model Name	Reference
<b>Health Care Innovation Awards Round 2</b>	Mathematica Policy Research. (2016). Evaluation of the Round Two Health Care Innovation Awards (HCIA R2): First Annual Report. The Center for Medicare & Medicaid Innovation (the Innovation Center). Baltimore, MD.
	Mathematica Policy Research. (2017). Evaluation of the Round Two Health Care Innovation Awards (HCIA R2): Second Annual Report. The Center for Medicare & Medicaid Innovation (the Innovation Center). Baltimore, MD.
	RTI International. (2015). Health Care Innovation Awards (HCIA) Meta-Analysis and Evaluators Collaborative Annual Report Year 1. The Center for Medicare & Medicaid Innovation (the Innovation Center). Baltimore, MD.
	RTI International. (2017). Health Care Innovation Awards (HCIA) Meta-Analysis and Evaluators Collaborative Annual Report Year 2. The Center for Medicare & Medicaid Innovation (the Innovation Center). Baltimore, MD.
<b>Initiative to Reduce Avoidable Hospitalizations among Nursing Facilities Residents</b>	RTI International. (2017). Evaluation of the Initiative to Reduce Avoidable Hospitalizations among Nursing Facilities Residents - Final Report. The Center for Medicare & Medicaid Innovation (the Innovation Center). Baltimore, MD.

Model Name	Reference
<p><b>Primary Care Systematic Review, including Comprehensive Primary Care initiative, Federally Qualified Health Center Primary Care Advanced Practice initiative, and Independence at Home</b></p>	<p>Kennell and Associates, Inc. (2018). Systematic Review of CMMI Primary Care Initiatives – Final Report (unpublished).</p>

