



The State of Connecticut State Innovation Model Final & Annual Report

Award Year 4:

February 1, 2019 – January 31, 2020



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This project was supported by Grant Number 1G1-CMS-331630-01-05 from the Department of Health and Human Services, Centers for Medicare and Medicaid Services. The contents of this publication are solely the responsibility of the authors and do not necessarily represent the official views of the U.S. Department of Health and Human Services, or any of its agencies. The research presented here was conducted by the awardee. Findings might or might not be consistent with or confirmed by the findings of the independent federal evaluation contractor.

A. Introduction

The State Innovation Model (SIM) was a \$45 million grant, awarded to the State of Connecticut from the Centers for Medicare and Medicaid Innovation (CMMI). Originally awarded as a four-year test grant beginning in February 2015, a series of no-cost extensions have resulted in a final test grant period of five years, ending on January 31, 2020. With the grant expiration, the Connecticut Office of Health Strategy (OHS) is submitting this Final and Annual Report to the Centers for Medicare and Medicaid Innovation, so that members of CMMI, the SIM governing bodies, the program management team, recipients of SIM funding, and other stakeholders may consider the achievements, challenges, and efforts that accompanied this grant.

The Connecticut OHS, within which the SIM grant operates for the State, has been dedicated to leveraging the time, funding, and expertise contributed to SIM efforts, and is fully committed to build upon these efforts during the past five years to continue the journey to improve the health of Connecticut residents for years to come.

Report Overview

This report summarizes SIM achievements, challenges encountered during implementation, lessons learned, and recommendations to enable achievement of the SIM goals. Additionally, this report covers the impact of initiatives, as well as highlighting the conclusion and sustainability, SIM Funding Utilization overview, and the Sustainability Strategy. It is broken out by the following:

- a. **Introduction:** This section provides an understanding of how the report is composed, where specific sections are located, and what to expect while reading.
- b. **State of Connecticut SIM Strategies:** This section describes the status of each SIM work stream or initiative as of the end of the grant (January 31, 2020), including relevant accountability metrics. For the purpose of this report, accountability metrics are process measures that have been tracked by program staff since early in the grant. These metrics are used to track progress toward achievement of SIM goals, but do not reflect health or healthcare outcomes, are described in the Statewide Impact section.
- c. **Statewide Impact:** The Statewide Impact section describes progress on key measures of population health, healthcare quality, consumer experience and cost. These measures examine performance with respect to all Connecticut residents with commercial, Medicare, or Medicaid coverage. The statewide evaluation of performance is a fundamental component of the SIM initiative, as measures have been tracked over time by the University of Connecticut Evaluation

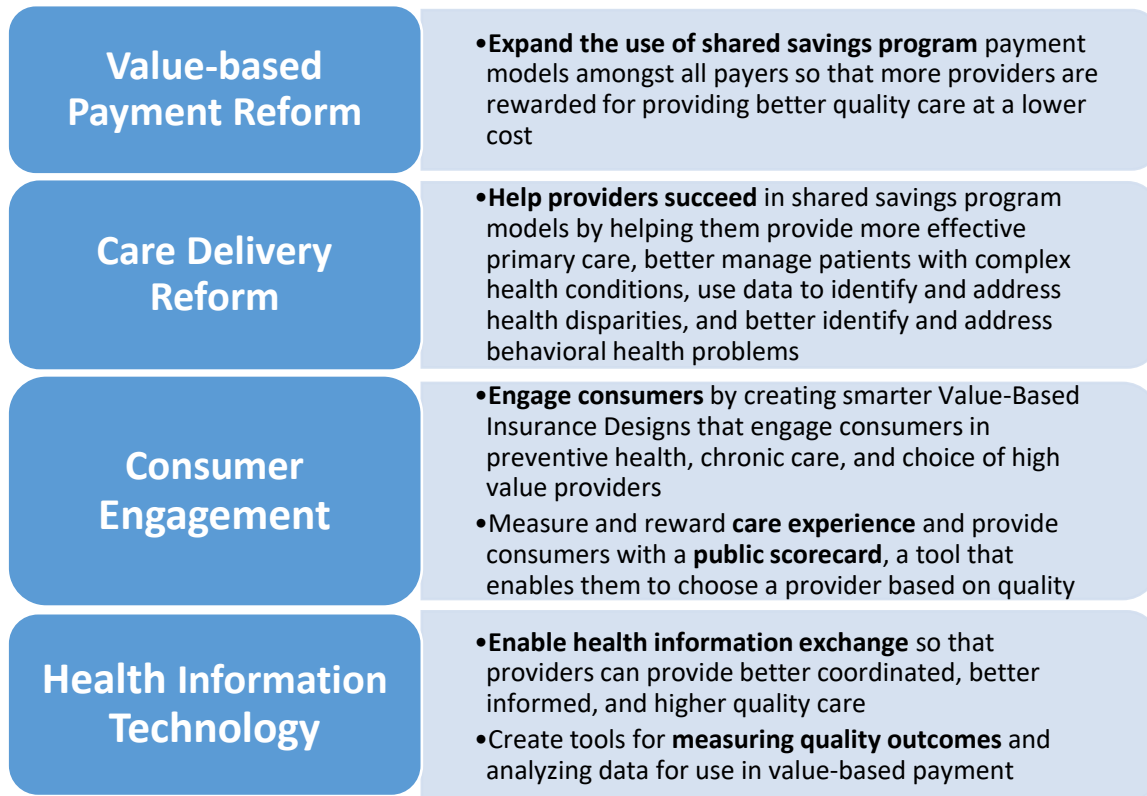
Team. This section introduces the overall statewide impact monitoring strategy and presents selected findings.

- d. **Model Specific Outcomes:** The Model Specific Outcomes section assesses the changes in the way healthcare was delivered and paid for and compare the performance of Connecticut advanced networks and federally qualified health centers.
- e. **Conclusion and Sustainability:** This section gives a conclusion, sustainability moving forward, and the end vision.
- f. **SIM Funding Utilization Overview:** The section gives an overview of how SIM funds were expended in Connecticut.

State Innovation Model: Multiple Aligned Initiatives

One of the goals of SIM was to align a set of initiatives to advance our overall goals of healthier people and communities, better healthcare outcomes, reduced health disparities, and reduce the upward trend of Connecticut’s healthcare spending. The set of initiatives that we proposed in our test grant reforms focused on four streams of work summarized in **Figure 1: Value-Based Payment, Care Delivery, Consumer Engagement, and Health Information Technology.**

Figure 1: State Innovation Model Work Streams



The above work streams and the initiatives that comprise them are interdependent. Together they create an **environment that incentivizes** better care and smarter spending, as well as **help providers succeed** in doing so. The providers that are the focus of the SIM initiatives include Advanced Networks (ANs) and Federally Qualified Health Centers (FQHCs). Advanced Networks are defined as networks of

primary care providers that have organized to participate in shared savings arrangements. Each of the initiatives is reviewed below.

Value-Based Payment

- a. **Person-Centered Medical Home Plus (PCMH+):** SIM funded the design and implementation of the PCMH+ shared savings program in Medicaid. This program adds Medicaid to the list of payers that offer shared savings arrangements to promote better care and smarter spending. PCMH+, like other shared savings programs, rewards providers for achieving better quality and care experience, and reducing avoidable use of hospital and ED services. PCMH+ complements SIM's broader all-payer strategy to promote the use of value-based payment. Providers that are in value-based contracts with multiple payers have a stronger incentive to systematically improve quality and outcomes.
- b. **Quality Measure Alignment:** Each payer that administers a shared savings program uses a quality scorecard to determine whether providers are improving quality. Providers struggle to track and monitor their performance on these measures because there is so much variability among payers as to which measures they include on their scorecards. SIM established a Quality Council to propose and maintain a recommended Core Quality Measure Set for use in shared savings arrangements. OHS encourages payers to align with this measure set.
- c. **Consumer Assessment of Healthcare Providers and Systems (CAHPS):** Since 2017, we have conducted an annual measure of consumer experience using the Consumer Assessment of Healthcare Payers and Systems (CAHPS). The primary purpose of the CAHPS survey is to provide commercial payers and Medicaid with data that they can use in their shared savings arrangements to reward ANs and FQHCs that improve care experience. The annual survey will also provide data for use in the public scorecard.

Care Delivery

- d. **Advanced Medical Home (AMH):** The Advanced Medical Home (AMH) program enables primary care practices to achieve Patient Centered Medical Home (PCMH) recognition, improving patient care, and enabling those practices to receive higher Medicaid reimbursement rates. *AMH directly supports eligibility for PCMH+.* AN practices and FQHCs that are PCMH recognized are eligible to participate in Person Centered Medical Home Plus (PCMH+).
- e. **Community and Clinical Integration Program (CCIP):** The Community and Clinical Integration Program builds on AMH by improving care delivery models across ANs participating in PCMH+. Specifically, CCIP focuses on improving complex care management, behavioral health integration, and healthy equity. The promotion of Community Health Workers (CHWs), another SIM initiative, complements AMH and is a critical component of both PCMH+ and CCIP. CHWs improve care by supporting patients with complex needs and addressing social determinant risks.
- f. **Prevention Service Initiative (PSI):** The Prevention Service Initiative (PSI) helps extend the primary care team outside the walls of the AN or FQHC. PSI establishes formal connections between ANs or FQHCs that are participating in PCMH+ and community-based organizations that provide CHW-led interventions to improve outcomes.

- g. **Health Enhancement Communities (HEC):** The Health Enhancement Community Initiative is a statewide, place-based initiative that is focused on improving the health and well-being of all residents in Connecticut by implementing local and statewide strategies that improve community health, healthy equity, and prevent poor health. Communities will focus on two main health priorities: improving child well-being and improving healthy weight and physical fitness; underpinning both health priorities is an improvement to health equity.

Consumer Engagement

- h. **Value-Based Insurance Design (VBID):** The above initiatives all aim to improve the way patient care is delivered, by providing payment incentives and direct support for advancing care. In contrast, the Value Based Insurance Design (VBID) initiative promotes the employer adoption of health insurance plans that incentivize consumers to get the right care, at the right time, from the right provider. Such plans adjust cost sharing to positively influence consumer behavior in order to drive better health outcomes and lower costs. VBID plans *align the interests* of consumers and the ANs and FQHCs that provide their primary care.
- i. **Public Scorecard:** To improve transparency, OHS has launch **HealthscoreCT**, a Public Scorecard that was developed to allow consumers to view the quality of care provided by ANs and FQHCs. **HealthscoreCT** is among the first public reporting initiatives that makes use of Connecticut's **All Payer Claims Database**.

Health Information Technology

- j. **Information Exchange Services:** To support all care delivery and payment reform efforts, the state's Health Information Exchange (HIE) has been under development, supported by substantial SIM funding. The HIE will offer tools and services to increase secure and authorized information exchange between disparate healthcare systems. Exchange of data across systems continues to be a challenge for ANs and FQHCs who struggle to share updates on patients for whom they are accountable. Through data exchange, the HIE will improve patient-centered care and outcomes and reduce costs.
- k. **Using Data to Drive Improvement:** In order to drive improvement in healthcare outcomes, the Core Data Analytics Solution (CDAS) will enable advanced analytics and quality and utilization measures production. The CDAS will increase the use of electronic Clinical Quality Measures (eCQMs) among ANs and FQHCs. The use of eCQMs improves the quality of the data, reduces the reporting burden, and ultimately improves healthcare outcomes and quality, while also demonstrating success for value-based payment arrangements. The CDAS was launched during Award Year 3 and will continue to increase its data capture and analytic capabilities over time.

Across all the SIM initiatives, we aimed to prioritize consumer experience, transparency, and engagement. Much of this work has been led by the Consumer Advisory Board (CAB). It has included activities such as listening sessions, community forums, a video project, and the inclusion of consumers on all of SIM's many advisory bodies, including the Healthcare Innovation Steering Committee (HISC).

The initiatives that have been launched under SIM represent the building blocks of an improved healthcare delivery and payment system. In the course of the past several years, we have gained

important insights about the power of our SIM reform initiatives to drive improvement. However, we have also come to appreciate the limitations of these initiatives and the need to formulate a new generation of reforms to build on the SIM foundation.

B. State of Connecticut SIM Strategies

In this section, the report examines progress on three of the SIM work streams, Care Delivery Reform, Value Based Payment Reform, and Consumer Engagement (see **Figure 2**). For information about the status of our work on Health Information Technology, please see the [2019 Annual Report: Health Information Exchange](#).

Figure 2. SIM Work Streams



Care Delivery Reform

The goals of the SIM Care Delivery Reform initiatives are to:

- Collectively strengthen the capabilities of ANs and FQHCs to deliver higher quality, better coordinated, community integrated, and more efficient care while reducing health disparities.
- Promote policy, systems, & environmental changes, while addressing socioeconomic factors that impact health.

Care Delivery Reform initiatives include:



- Advanced Medical Home Program (AMH)
- Community & Clinical Integration Program (CCIP)
- Community Health Worker initiative (CHW)
- Prevention Service Initiative (PSI)
- Health Enhancement Communities (HEC)

Advanced Medical Home

Goal: Enable primary care practices to become Patient Centered Medical Homes (PCMH) and Advanced Medical Homes (AMH).

How it works: Guided technical assistance program including webinars and on-site support to achieve NCQA PCMH and AMH status. AMH recognition expands on traditional PCMH by requiring additional elements that focus on health equity improvement and behavioral health integration.

How it helps: Patient Centered Medical Home (PCMH) recognition by the National Committee for Quality Assurance (NCQA), is a pre-requisite for participation in the Person Centered Medical Home Plus program (PCMH+) which offers shared savings incentives to Advanced Networks (ANs) and FQHCs that are able to demonstrate improved quality and reduced costs to Medicaid beneficiaries. Because designation as a PCMH or AMH practice requires an increased focus on health equity and behavioral health, AMH offers primary care practices additional tools to achieve success in PCMH+ and similar accountable payment arrangements. Recognition also enables success in Medicare and commercial shared savings arrangements.

Metrics:

Accountability Metric	Total Target	AY4 Total
Number of new practices that enroll in the AMH program	300	151
Number of practices obtaining NCQA PCMH Recognition	300	125
Number of practices that complete AMH program	300	38

Achievements:

1. **AMH/PCMH Recognition:** Through AY4, 151 practices have participated in the AMH program. Although 125 have successfully achieved NCQA PCMH recognition, only 38 practices met the AMH program requirements.
2. **PCMH+ Participation:** Participation in the AMH program enabled 151 practices (472 PCPs) to obtain PCMH recognition, thereby allowing four large advanced networks to participate in PCMH+ serving nearly 45,000 attributed lives.

Challenges:

1. **Recruitment:** The initial interest in the AMH program was high. Enrollment diminished over time, despite extensive efforts to recruit additional practices including a large enrollment event in December 2017. Recruitment was discontinued in AY3.
2. **AMH components:** PCMH recognition was achieved by the majority of participating practices; however, completion of the AMH components was more challenging. Practices struggled the most with two components: standardized depression screening and performance stratified for vulnerable populations to identify disparities. Race and

Lessons Learned

Connecticut physicians no longer view NCQA PCMH recognition as an essential means to achieving primary care transformation. Commercial payers seem to agree, as most have migrated away from paying incentives for the credential and instead rely on value-based payment incentives.

ethnic performance stratification would have required dedicated network resources, and this was not viewed as a priority by practices. In addition, it was not possible to impose financial penalties for failing to meet the special AMH standards because participating practices did not receive SIM funding and AMH recognition was not a requirement for participation in PCMH+. We anticipate that the Primary Care Modernization initiative (see Section E) will include the same or similar requirements, which will be a condition for receiving supplemental payments.

Lessons Learned continued.

Free TA was not enough of an incentive to drive achievement of the most challenging AMH capabilities. Practices might have been willing to overcome these challenges if we had provided more persuasive evidence for why these capabilities are essential. Financial incentives or penalties tied to achievement would also have likely improved our results.

Sustainability: At the conclusion of AY4, all 151 practices achieved PCMH recognition, while a subset achieved AMH recognition. OHS suspended additional enrollment in the AMH initiative in early 2018 and reallocated funding and staff resources to support other initiatives.

Community & Clinical Integration Program

Goal: Enable the achievement of best-practice standards in comprehensive care management, health equity, and behavioral health integration for Advanced Networks and FQHCs participating in PCMH+.

How it works: Technical assistance and transformation awards ranging from \$750,000-\$900,000 for Advanced Networks and FQHCs participating in PCMH+. Builds on the PCMH and AMH initiatives by supporting network-level improvements in primary care delivery.

How it helps: The AMH and PCMH initiatives help primary care practices develop core capabilities enabling the provision of high-quality, patient-centered care. CCIP builds on these capabilities by providing support to large networks of providers (i.e., Advanced Networks and FQHCs) to establish enterprise wide infrastructure necessary to be successful in shared savings arrangements. Achieving success in comprehensive care management, behavioral health integration, and health equity improvement allows networks to achieve success in Medicare, commercial, and Medicaid shared savings arrangements.

Metrics:

Accountability Metric	Total Target	AY4 Measure
Number of Advanced Networks participating in CCIP	12	5
Number of FQHCs participating in CCIP	1	1 (8)
Number of participating providers in CCIP	1,364	818
Number of Transformation Awards awarded	13	6
Number of ANs/FQHCs that have met core standards	13	6 (8)

*Parenthetical numbers include FQHCs that are participating in the CMMI funded Transforming Clinical Practices Initiative; they are only required to meet the CCIP Health Equity Improvement Standard

Achievements:

1. **CHW Utilization:** Across all six CCIP participating entities, 19 CHWs have been hired utilizing SIM funding. Networks are utilizing CHWs in different capacities, but all have engaged CHWs as part of the care team to address social determinants of health needs.
2. **Expanded Utilization of PatientPing:** Five CCIP networks are now utilizing PatientPing, a platform that notifies providers of individual patient hospital admissions, discharges and ED visits. PatientPing provides admission, discharge and transfer (ADT) alerts to the care team which enables them to reach out to patients who need additional support, preventing avoidable admissions and additional costs. This is especially critical for patients with complex health needs, the population for whom this technology has been the primary target.
3. **Expanded Behavioral Health Integration:** Four CCIP networks utilized SIM funding to hire behavioral health specialists that support the comprehensive care team. All participants have reported increased screening rates for depression and substance abuse.
4. **Granular Race and Ethnicity Data Collection:** In order to identify gaps in outcomes for subpopulations, CCIP requires the collection of granular race and ethnicity data. Three ANs/FQHCs have begun collecting this data and eleven ANs/FQHCs are actively preparing for collection through EHR adjustments, staff training, and piloting collection in a subset of practices. All of the ANs/FQHCs are implementing a consensus set of granular race/ethnic categories that were developed with the consultative support of Health Equity Solutions.
5. **Sexual Orientation and Gender Identity (SOGI) Data Collection:** All Participating Entities (PEs) have implemented infrastructure and workflows in order to collect SOGI. Four out of the 6PEs have begun to document SOGI in their EHRs.

Challenges:

1. **Identifying Appropriate Technical Assistance:** In addition to funding, CCIP was designed to provide technical assistance and subject matter expertise to participating networks. Identifying appropriate expertise proved challenging. The participating organizations are already experienced in managing care delivery transformation and they are large organizations with distinct delivery models, systems and change processes. This made the relatively standardized state-funded TA less efficient and less useful. In addition, it was difficult to find providers of TA with a high level of expertise in social determinants assessment, CHW deployment, race/ethnic data collection and health equity analytics. OHS changed its strategy during the program, providing an increased level of funding to the CCIP networks to make investments that would better enable them to purchase needed TA support and undertake self-directed changes.
2. **Barriers to EHR configuration:** A wide variety of problems emerged with respect to capabilities that require changes to the EHR. Such barriers were often unique to each organization, varying based on the number and type of EHR(s) and associated software, and the nature and scale of the EHR deployment.
3. **CCIP Participation:** CCIP was limited to organizations participating in PCMH+. As a result, CCIP participation was impacted by lower than projected participation in PCMH+ among ANs and the fact that several FQHCs failed to qualify. In addition, due to the CMMI-funded Transforming Clinical Practices (TCPI) initiative, the number of FQHCs eligible to participate in the full CCIP was lower than originally projected. This prevented eight additional entities from receiving SIM-funded TA awards.

4. Long-term sustainability for CCIP investments:

Without advance funding from payers, most CCIP networks have identified their ongoing ability to sustain investments in new care team members as a significant challenge. Current shared savings arrangements require that providers achieve at least a 2:1 return on investment with respect to supporting the ongoing cost of any new capabilities.

Sustainability: At the conclusion of AY4, all of the CCIP networks achieved the three Core CCIP Standards, two networks achieved the elective eConsult standard, one network will have achieved the elective comprehensive medication management standard, and one network achieved the elective oral health integration standard. Additionally, all FQHCs will have achieved the CCIP Health Equity Improvement standard. In many cases, the achievement may not be network wide. Every single one of the CCIP participants will continue to fund the CHW's and care coordinators that were enabled by SIM. Another major outcome of CCIP was that four of the ANs and all of the FQHC were able to at least pilot the collection of granular race/ethnicity and SOGI data to be able to identify disparities and conduct targeted interventions. Many of those pilots emphasized the fact that this capability is critical and have committed to scaling this collection.

Community Health Worker Initiative

Goal: Promote the use of CHWs through technical assistance, resource development, and policy recommendations.

How it works: CHW Advisory Committee establishes recommendations for policy solutions to promote CHWs; SIM CHW team develops resources to promote CHWs; CCIP, PCMH+, and PSI provide funding and technical assistance to utilize CHWs as part of the primary care team.

How it helps: Qualitative evidence suggests that integrating CHWs directly into primary care teams or utilizing CHW programs as extensions of the care team enable improved patient outcomes by addressing social determinant of health needs, providing patient navigation to clinical and community resources, and providing chronic-illness self-management and education. Promoting this workforce further enables provider networks to succeed in accountable payment arrangements while providing better care that addresses health inequities.

Lessons Learned

Underlying payment structures continue to slow primary care innovation. **New payment models need to provide increased flexibility and more up-front funding** for primary care in order for networks to be successful in accountable payment arrangements.

Information exchange and inter-operability barriers reduce the ability of networks to track and close the loop on social service and out-of-network behavioral health referrals.

The **collection of granular race and ethnicity data** may enable the identification of gaps in care for subpopulations. However, this type of data collection may also lead to concerns from subpopulations about the intended data use, potentially discouraging access for already vulnerable populations. **Additional research needs to be done to assess the impact of this type of collection**, and whether disparities are better addressed by focusing on high-functioning CHW programs.

Metrics:

Accountability Metric	Total Target	AY4 Measure
Number of CHW website visits	300	1295
Number of ANs and FQHCs that have CHWs integrated into care teams (CCIP/PCMH+ funded)	16	14
Number of CHWs hired through CCIP/PCMH+	-	34

Achievements:

1. **2019 CHW Legislation:** CHW Certification was passed in the 2019 Legislative Session (Public Act 19-117 Section 160) that went into effect January 1, 2020. The legislation created the Community Health Worker Advisory Body (CHWAB) whose purpose is to approve the requirements for CHW certification, CHW training vendors, and evaluate the program on a regular basis.
2. **CHW Website Established:** The Connecticut CHW website was established to support CHWs in identifying training and employment opportunities, to highlight CHW achievements, and to centralize CHW resources, including certification resources once established.
3. **Utilization of CHWs in primary care:** Through CCIP and PCMH+, 34 CHWs have been hired and integrated into primary care teams. This represents 14 Advanced Networks and FQHCs.

Challenges:

1. **Sustainable Funding for CHWs:** Despite the increased awareness and acknowledgement for the effectiveness of CHW initiatives, few options exist for sustainably funding this critical workforce. Time-limited grants like the CCIP transformation awards continue to dominate as the primary funding source.
2. **Measuring Return on Investment:** Though CHWs have been successfully integrated into primary care teams, measuring their impact on cost has been challenging due to competing primary care innovations, lack of accessible data, and a lack of financial models to measure this type of investment.

Lessons Learned

Evidence-based models for CHW programs that include onboarding, training, and strategies for identifying metrics to calculate ROI expedite CHW integration, help ensure program success, and support the financial analyses needed to sustain the programs.

Funding for CHWs ultimately needs to be **incorporated into the underlying payment model.**

A **strong CHW Association** has been the driving force in most states for establishing CHW certification, standardizing training, and driving CHW utilization.

Sustainability: CHW certification was established in the 2019 legislative session, leading to more opportunities to pursue sustainable funding options in the future. Although we anticipate that some ANs and FQHCs will retain a small number of CHWs after SIM funding ends, we believe that additional

payment reforms, such as those envisioned in Primary Care Modernization, will be necessary to enable widespread adoption of CHWs as part of the primary care workforce.

Prevention Service Initiative

Goal: Establish formal partnerships between Health Care Organizations (HCOs)/Advanced Networks (ANs) and Community Based Organizations (CBOs) for the provision of chronic-disease self-management services.

How it works: Technical assistance and funding is provided to ANs/FQHCs and CBOs to establish formal partnerships for diabetes self-management and asthma services, enabling the flow of funds from HCOs to CBOs.

How it helps: Programs for chronic-disease self-management and education are already established and successful within many Community Based Organizations (CBOs). As more Health Care Organizations (HCOs) are being held accountable for patient outcomes, they have the opportunity to partner with CBOs that have existing programs and relationships with patients. This relationship is mutually beneficial as it increases the likely success of HCOs in improving quality and reducing cost, and it provides a source of sustainable funding to CBOs to support increased service capacity in the service of their mission. The Prevention Service Initiative (PSI) helps by educating both HCOs/ANs and CBOs on the most effective strategies for establishing these relationships.

Metrics:

Accountability Metric	Total Target	AY4 Measure
Number of CBOs receiving technical assistance	10	6
Number of HCOs receiving technical assistance	10	5
Number of Formal Linkages established between CBOs and HCOs	10	6*

*One HCO has contracts with two CBOs.

Achievements:

- Evidence Based Practices:** Health Care Organizations (HCO) became aware of the value of evidence-based practices being offered by CBOs.
- HCO Capacity Building:** HCOs built capacity to identify stratified patient populations in need of chronic disease management for targeted referral. Additionally, HCOs built capacity for ongoing data sharing with CBOs, and external coordination between the two organizations in order to meet the needs of the targeted patients.
- CBO Capacity Building:** CBO capacity was built around targeting its community extenders, refining interventions to address targeted needs of the chronically ill populations they were serving, setting service rates for their services, and to plan and deliver interventions within a performance based contract.

Lesson Learned

Although PSI did not have the time to fully analyze the desired efficacy of the program, some partnerships were able to show drastic decreases in A1C levels for participating individuals. With strong clinical outcomes, the ROI financial calculation is the next feat beyond the SIM grant.

Challenges:

1. **Transformational relationships:** During the participant identification and orientation phase, PSI participants learned that the dynamics of clinic and community collaboration required a radical departure from “business as usual and demanded more time, patience, and persistence than expected.
2. **Performance Based Contracting:** Participants learned that agreements needed to include enough specificity to hold each entity responsible for critical activities, such as referrals, data sharing, service delivery, and outcomes, but also were not a barrier to ongoing refinements necessary to achieve desired outcomes. Identifying an appropriate payment methodology was especially challenging as it required decisions about service delivery despite many “unknowns” related to the application of the interventions for the targeted populations. A lesson learned was that introducing performance-based contracts – to which many were unfamiliar – pulled attention away from further developing the initiative, and instead transferred resources to focus on contracting.

Sustainability: PSI participants successfully establish seven – one HCO had two partnerships with two different CBOs - formal partnerships for the provision of diabetes self-management and asthma services in AY4. Beyond SIM, two of the partnerships reported that they would continue efforts. The others cited issues with contracting, which as mentioned earlier, was a challenge due to the transformation away from grants to performance based, that the office was looking to achieve with SIM.

Health Enhancement Communities

Goal: To establish sustainable, multi-sector collaboratives in every geographic area in Connecticut that implement community health, health equity, and prevention strategies in their communities, and reduce costs and cost trends for critical health priorities.

How it would work: Implementation of the HEC strategy was not intended to occur during the SIM test period, as this initiative represents a next phase of primary care improvement. SIM supported the reference communities (four grantees), and phase I (nine grantees).

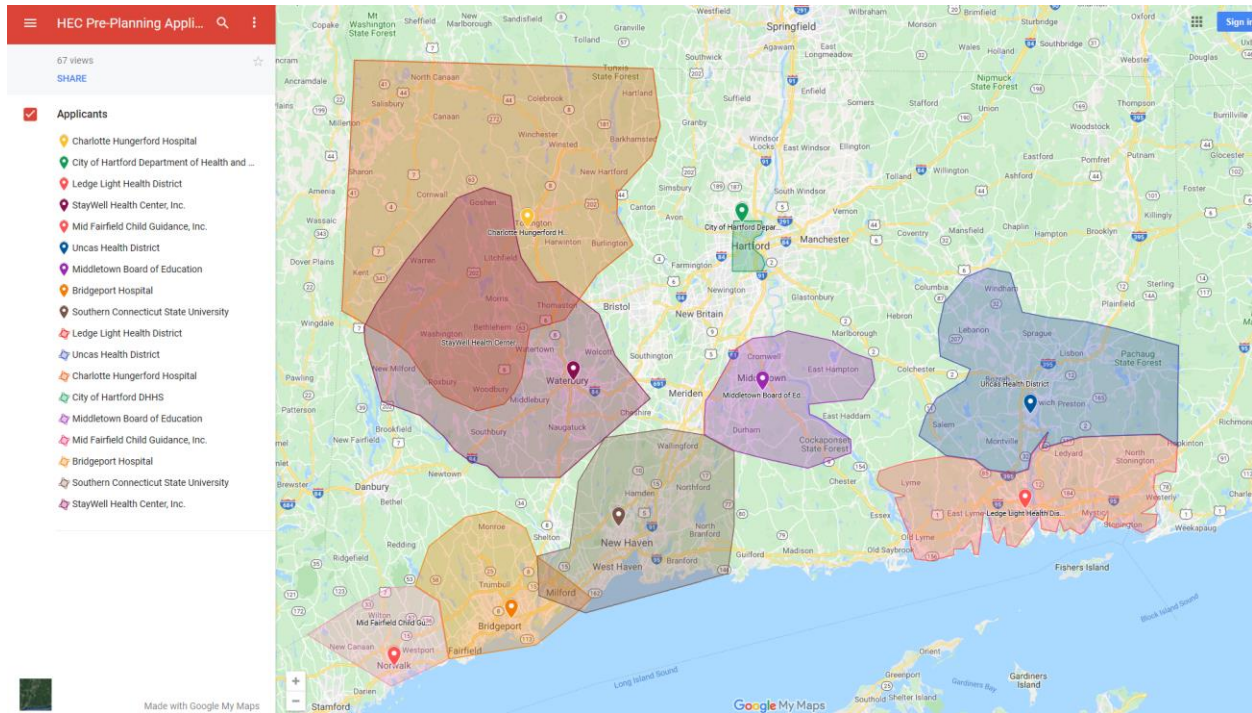
How it helps: This initiative proposes to support upstream prevention activities that address social determinants of health at the root cause, and that are not financially supported through the current healthcare delivery or financing models. Although other SIM care delivery initiatives have increased the use of CHWs, promoted partnerships with community based organizations, and focused on the identification of social determinants of health, the majority of that work has been focused on individuals who have already been diagnosed with a chronic condition or who have been identified as high risk. HECs enable the cross-sector collaborations necessary to prevent disease and improve community health, moving from accountable care to accountable communities. There is a heavy emphasis on the importance of community

residents in this initiative. Ultimately, those who are affected should also be at the table speaking with those multi-sector organizations on what is needed, and what has not worked in the past.

Metrics:

Accountability Metric	Total Target	AY4 Measure
Number of accountable community models assessed	10	12

Map of Pre-Planning HECs in Phase I of the initiative



Achievements:

- 1. Recruiting four reference communities:** To inform the development of the HEC Framework, the SIM team recruited and worked closely with four reference communities. These communities represented areas of the state that had already established collaboratives and were able to provide invaluable feedback throughout the planning phase.
- 2. Identifying health priorities:** An intensive process of engagement with stakeholders led to a defined scope for HEC activities which includes a focus on two health priorities: improving child well-being for Connecticut children from 0 to 8 years old (0 age is indicative of also helping the mother have a healthy pregnancy), and improving healthy weight and physical fitness for all Connecticut residents. Underpinning both these initiatives is a strong focus on health inequities. Without addressing health inequities, collaboratives will be unable to achieve or sustain the health outcome and prevention goals.
- 3. Completing the HEC Framework and Technical Report:** The HEC Framework and the accompanying Technical Report were completed under the guidance of the SIM Population Health Council. The Framework succinctly describes the recommended goals, key elements, health priorities, and financing strategies representing not only the input of the Population Health Council, but numerous other stakeholder groups. The Technical Report is a detailed

expansion of the Framework that can serve as a blueprint for implementation. Both reports were approved by the Population Health Council in April 2019, and were approved by the Healthcare Innovation Steering Committee.

4. **Request for Proposals for Phase I Pre-Planning HECs:** Nine applications were awarded for the first phase of pre-planning for HECs. These applicants worked on a variety of items ranging from setting their geographic zones – and working with others on overlap, bringing together or strengthening collaboratives, and recruiting community residents to work on the pre-planning deliverables. Three of the nine awardees were also given an additional award which was optional for the application, around rapid-cycle community measurement. These three groups worked with the Center for Outcomes Research and Evaluation (CORE) based in New Haven, CT. With technical assistance from CORE, these groups worked on how to develop rapid-cycle metrics which would allow HECs to monitor close to real-time progress on goals and outcomes
5. **Multifaceted Stakeholder Engagement.** The HEC initiative intentionally sought out input from a multitude of stakeholders to inform all aspects of its development. In total, 45 key stakeholder engagement meetings were held between March 2018 – October 2018. As mentioned previously, the reference communities were used as on-the-ground sounding boards to test and vet HEC concepts. In addition, significant work was done with the Population Health Council and HISC to frequently gain their input and feedback on the model as it was developed. Multiple regional and statewide community forms were held where the HEC model design elements were presented to community members and residents and their feedback was incorporated into the model design. Finally, OHS published the HEC Framework and Technical Report for public comment, receiving and reviewing feedback with the Population Health Council and making changes to the model design. Pre-planning HECs were required to have community residents as part of their planning groups and with the support of CMMI and OAGM HECs were able to pay residents for their meaningful contributions to the design of HECs in their community. Finally, as part of the HEC funding strategy, multiple state agencies were engaged to gain input in the HEC model and explore potential braided and blended funding models to support HECs. Agencies included the Office of Health Strategy, Department of Public Health, Department of Social Services, Office of Early Childhood, Department of Children and Families, Department of Housing, the Department of Mental Health and Addiction, and the Office of Policy and Management.
6. **Phase II Pre-Planning HECs Development:** While not supported by the SIM grant, Phase II was possible because of the work achieved in Phase I under the grant. All nine awardees opted to stay in Phase II, and continued their work around items like governance structures, Memorandum's of Agreement, collaboration building, and preliminary interventions and measures.
7. **HEC Financing and Sustainability Strategy.** Under SIM, two financial impact models were created to show the effect of HECs on Medicare and Medicaid. Based on reduction goals around reducing adverse childhood experiences, and bending the trend on obesity, the models showed over \$1 billion in savings over ten years. Beyond SIM, OHS is supporting the creation of a public-private partnership in the form of a health equity trust, which would bring together funders that typically would not combine funds to work on such items as health inequities in Connecticut.

Challenges:

1. **Sustainability:** The HEC Framework and continued ongoing work identified several options for financing, including outcomes-based financing models, pooling funds together such as a wellness trust, reorienting existing funds through blended or braided models*, tax incentives, and public health insurance programs. A challenge has been gaining agreement among agencies and other stakeholders to pursue the various options. This became more challenging immediately after the shift to a new administration and new agency commissioners. Conversations were initiated with the new commissioners, and they engaged in the HEC financial modeling process. However, once the pandemic began, attention was diverted to addressing that crisis. As the pandemic revealed in starker detail the vast inequities in CT, there has been a renewed interest and activity to pursue a wellness trust focused on health equity and braided and blended funding among agencies.
2. **Community Uncertainty:** With the closure of Phase I, the Office of Health Strategy and the Department of Public Health invited the nine HEC initiative leadership and community members to an in-person meeting to discuss progress, barriers, and next steps. One of the items of feedback was that too often Federal or State governments bring forward a project, get the community involved, have success, and then discontinue the program because funding was not sustainable. This initiative intentionally cultivated trust and buy-in from the community by being transparent, inviting members to partake in the work, and open with funding. However, the warning was still prominent that the state must be aware of the consequences to starting programs that are successful without a sustainability plan when considering future consequences of engagement.
3. **COVID-19:** As stated, once the pandemic began, the attention of the administration, state agencies, and funders were reasonably diverted to addressing the crisis. That paused or halted many cross-entity conversations, especially related to sustainability. The economic crisis that followed the pandemic has also made conversations about funding, even pooling or aligning funding, challenging. However, the pandemic has also increased the focus on health equity and created more interest in joint action than existed previously, which has created an opportunity to direct that focus and interest toward the HEC initiative.

Lesson Learned

Communities that are accountable for the health outcomes of their residents rely on a strong accountable healthcare system that can invest in the community. Current shared savings models will not generate the revenue needed to support these investments. HECs, as proposed, would be sustainable and successful with a combination of financing strategies that includes a **more advanced shared savings model** that captures the economic value of prevention.

*Braided funding refers to the utilization of multiple funding sources to achieve a shared goal. For example, NYC braided funding from childcare, Head Start, and state universal Pre-K to improve access and continuity of childcare for low-income children and their families. In braided funding arrangements, funding streams are still accounted for separately, while in blended models, the funding streams are not necessarily accounted for separately.

Value-Based Payment Reform

The goal of the SIM Value Based Payment Reform Initiatives is to promote payment models that reward improved quality and health outcomes, care experience, health equity, and lower cost. As care delivery reforms are designed and implemented, payment models must be designed that support new or different infrastructure and costs.



Value Based Payment Reform Initiatives include:

- Person Centered Medical Home Plus (PCMH+)
- Quality Measure Alignment
- All Payer Participation

Person Centered Medical Home Plus (PCMH+)

Goal: Increase provider and beneficiary participation in shared savings arrangements that use financial incentives to reward improved quality of care and reduced health care expenditures.

How it works: Advanced Networks and FQHCs that are PCMH recognized and have experience and trust basis with Medicaid members, are selected via a thorough procurement process to serve attributed members through enhanced care coordination activities focused on behavioral health integration, under an upside-only shared savings program.

How it helps: Through use of advance care coordination and upside-only shared savings payments, PCMH+ has incented Medicaid-participating Person Centered Medical Home practices to layer on additional features of care coordination that are instrumental to addressing leading challenges for members of Connecticut Medicaid. Taken in context of complementary Medicare and commercial payer use of value-based payment models, PCMH+ increases the number of providers and members that participate in and benefit from these arrangements.

Metrics:

Accountability Metric	Total Target	Anticipated AY4
Percent of beneficiaries in PCMH+	63%	13%*
Number of Advanced Networks in PCMH+	12	2
Number of FQHCs in PCMH+	14	8
Number of PCPs in PCMH+	1,624	434*
Number of beneficiaries in any SSP	88%	34%
% Beneficiary Participation in a shared savings plan	3.17m	1.22m
Number of PCP participation in any SSP	5,450	3100

**Note that the percent of beneficiaries in PCMH+ and the number of PCPs in PCMH+ are likely understated. Until the composition of the Advanced ANs for AY4 is finalized through contracting, estimates that are more realistic are currently unavailable.*

PCMH+ Overview:

DSS, Connecticut's single state Medicaid agency, has used SIM funding and state resources to establish PCMH+. DSS' goal with PCMH+ is to build upon its existing, successful Person-Centered Medical Home (PCMH) and Intensive Care Management (ICM) initiatives to further improve health and satisfaction outcomes for individuals currently being served by FQHCs and Advanced Networks (e.g., large primary care provider practices with existing risk-based contracts), both of which have historically provided a significant amount of primary care to Medicaid members.

PCMH+ amplifies the important work of the Connecticut Medicaid PCMH initiative. PCMH practices have adopted practices and procedures designed to enable access to care; developed limited, embedded care coordination capacity; become attuned to use of data to inform responses to their panel members; and also have become attentive to working within a quality incentive framework. Further, they have demonstrated year-over-year improvement on most of the identified quality measures and have received high scores on such elements as overall member satisfaction, access to care, and courtesy and respect. Notwithstanding, there remain a number of areas in the quality results that illustrate ongoing opportunities for improvement. These have informed both the care coordination approach and quality measure framework for PCMH+.

PCMH+ has enabled DSS to migrate its federated, Administrative Services Organization (ASO) based ICM interventions to more locally based care coordination. While the ASO ICM continues to wrap around PCMH+ efforts in support of individuals with highly specialized needs (e.g., transplant, sickle cell disease, high risk pregnancies, transgender supports), PCMH+ underscores DSS' commitment to provide practice coaching and funding supports to local entities that have the experience and trust basis to effectively serve their communities.

DSS aligned model design and implementation of PCMH+ with the SIM CCIP initiative and the CMMI TCPI grant received by the Community Health Center Association of Connecticut. This enabled the state to informally braid resources toward a common result.

Finally, PCMH+ represents the first ever Connecticut Medicaid use of an upside-only shared savings approach. This has brought DSS along the curve of value-based payment approaches, which had historically focused exclusively on pay-for-performance.

DSS developed PCMH+ with the advice and comment of a committee of stakeholders that is affiliated with the statutory body that provides oversight of Medicaid and CHIP in Connecticut. Model design centered around selection of appropriate features of care coordination, means of protecting members from adverse consequences (steering, stinting) that were identified as potential risks of the shared savings model, and development of a financial model predicated on quality improvement.

PCMH+ is a sustainable model that has been rolled out in successive waves, described below:

- Wave 1 (effective January 1, 2017 – March 31, 2018) included seven FQHCs and two Advanced and supported 137,037 attributed Medicaid members.
- Wave 2 (effective April 1, 2018 – December 31, 2019) included renewed participation of all of the Wave 1 PEs (including seven FQHCs and two advanced networks), and selection of an additional two FQHCs and three advanced networks with a new member assignment for all PEs. Total member attribution for Wave 2 was 181,902 (132,155 individuals attributed to FQHCs and 49,747 individuals attributed to advanced networks).
- Wave 3 (effective January 1, 2020 – December 31, 2021) includes ten FQHCs and two advanced networks who entered into a contract with the Department through a Request for Proposal (RFP) process. Total member attribution for Wave 3 is 150,834 (122,390 individuals attributed to FQHCs and 28,444 individuals attributed to advanced networks.)

The Department employs many means to evaluate PCMH+, including an array of reports and data points outlined below, as well as on-site compliance reviews with the PEs in conjunction with the Department's contractor, Mercer Consulting. Performance indicators for Waves 1 & 2 demonstrate that PCMH+ has been implemented successfully, with many positive elements and also some challenges, as further described below, that are fairly typical of experiences in other new care coordination initiatives.

Key indicators include a **low member opt-out rate** (the overwhelming majority of which occurred concurrent with the release of the initial member letter), **low rate of member complaints**, and **successful PE implementation of care coordination activities and establishment of community partnerships**. Further, we are excited about PEs' **use of the data** that is being provided to them via the CHN portal; **hiring of community health workers**; various, locally informed applications of **behavioral health integration**; **great collaboration among PEs** via the ongoing provider collaborative, related to clinical practice; and **members' positive reports**. **Some quality measures improved, but others did not show substantial change**. This is consistent with experiences in other care coordination programs.

Results of Wave 2

Wave 2 PCMH+ participating entities (PEs) had a lower cost trend than the statewide trend. The statewide trend was developed from members who were not associated with a PCMH+ practice but met similar eligibility requirements as the PCMH+ members. PCMH+ saw an increase in costs of 2.66% and the increase in costs for the statewide group was 2.99%. The program saved \$8.2 million in total. 12 out of 14 PEs are eligible to receive a payment from either the Individual Savings Pool or the Challenge Pool.

PCMH+ PEs were also tracked on nine scoring quality measures and four challenge measures for a total of 13 measures. One of these measures (Medication Management for People with Asthma) was removed due to pharmacy claim issues and was not included in the scoring. The program saw significant improvement in three of the quality measures, a decline in two measures, and small improvements in the other quality measures.

Significant improvement was observed for the following quality measures for PCMH+:

- Behavioral Health Screening 1-17 (58.4% improvement)
- Developmental Screening in the First Three Years of Life (28.6% improvement)
- Avoidance of Antibiotic Treatment in Adults with Acute Bronchitis (7.4% improvement)

Quality measures that did not improve:

- The PCMH+ PEs did not improve on the Diabetes HbA1c Screening measure (decreased by 0.8%)
- The PCMH+ PEs did not improve on the Postpartum Care Measure (decreased by 1.4%)
- Only 4 out of 14 PEs improved on the Well-Child Visits in the First 15 Months of Life)

The quality measures that did not improve are the subject of renewed emphasis in Wave 3.

\$5.53 million was available to the PEs that saved as part of the Individual Savings Pool. \$1.86 million was distributed to the PEs that saved in the Individual Savings Pool. The unclaimed savings were made available to all PEs in the Challenge Pool. 3 out of 14 PEs were not eligible to participate in the Challenge Pool because of their lack of improvement in the scoring quality measures. The remaining \$3.67 million was distributed to the PEs in the Challenge Pool based on performance on the Challenge Pool quality measures and membership.

Challenges:

Over the course of Waves 1 and 2 of PCMH+, both DSS and the PE's have gained learning, and this has influenced both adaptations to the initial model design as well as opportunities to change practice. Challenges, and means of mitigating them, included:

- **Need for vigilance around protections for members:** The Department has since inception of PCMH+ been using a range of tools and strategies to monitor for any incidence of under-service, including, but not limited to, opt-out data and telephone interviews, review of detailed monthly programmatic reports from the PEs, grievance and appeal data, CAHPS data, quality data, and population studies. Our overwhelming conclusion, after reviewing all of these, is that there has been only positive impact from PCMH+.
- **Loss of attributed members due to eligibility churn:** After experiencing significant loss of attributed members in Wave 1 due to migration on and off Medicaid, in Wave 2, DSS reexamined its procedures, and amended both the SPA and the PE contracts to permit restoration of individuals who regain eligibility within 120 days to PCMH+ participation (and associated payments to the involved FQHC, as well as participation for purposes of shared savings). This greatly mitigated loss of members for PCMH+ practices.
- **Usability of data:** DSS also received inquiries from the PE that are ANs to release Medicaid claims data in raw form, to enable them to more easily import data into their own analytics platforms. The Department worked with its medical ASO, CHNCT, to enable this effective in April 2019. Claims data assisted the PEs in filling gaps in care such as annual wellness visits, supports for chronic conditions, and pediatric wellness visits. Claims data that was not released included sensitive data such as substance use, HIV status, and behavioral health claims.
- **Electronic Health Record Interoperability:** The PEs that were best able to support member care coordination were practices that utilized a single electronic health record platform in which the medical record was accessible to each member of the care coordination team. PEs that had the most difficulty in care delivery were those that limited medical record access to only a few members of the care team, or used multiple health record platforms across various locations, making continuity of care difficult. In Wave 3, DSS is requiring PEs either to utilize either an

interoperable system across multiple platforms or a single medical record platform. Wave 3 also requires that all members of the multidisciplinary care team have access to the member’s medical record for continuity of care.

Sustainability: As noted above, PCMH+ has been sustained for a two-year Wave 3, which commenced January 1, 2020.

Quality Measure Alignment

Goal: Recommend a statewide multi-payer core quality measure set for use in value-based payment models to promote quality measure alignment.

How it works: The SIM Quality Council established an initial recommended Core Quality Measure Set and annually reviews the measures. Healthcare payers have been encouraged to adopt the measure set, which includes a consumer satisfaction measure.

How it helps: As SIM promotes the expansion of value-based payment to support improved care delivery, providers and provider networks can rely on a common set of measures of quality care and meet the standards required by the payment models. Without a common set of measures, providers struggle to track and monitor performance due to the variety of measures included in value-based contracts. The high number and variability of measures takes attention away from patient care and makes it difficult to compare outcomes across patient panels. The recommended Core Quality Measure Set provides a common reference that payers can use in their value-based contracts so that providers can focus on providing the best care to all patients.

Metrics:

Accountability Metric	Total Target	AY4 Measure
% alignment across health plans on core quality measure set (commercial/Medicaid)	75%	73%
% alignment across health plans on core quality measure set (commercial)	75%	98%

Note: Above statistics are for claims-based measures only. Only Medicaid and Medicare have implemented CAHPS for shared savings payment purposes.

Achievements:

- 1. Development of the Core Measure set:** The Quality Council developed a core measure set, as well as Reporting and Development sets that can be used for reporting purposes only or reassessed at a later date.
- 2. Progress toward Alignment:** Healthcare payers have made significant progress toward alignment. In Award Year 3, alignment among commercial and Medicaid reached 70% from a previous rate of 55%. Among commercial payers, alignment reached 76%, exceeding the overall SIM target of 75%.

Challenges:

1. **Alignment:** Although the State has made good progress on alignment, commercial payers with a national footprint tend to avoid state-level customization because of the associated costs and inefficiencies.
2. **e-CQM measure production:** The delays in SIM funded health information technology to enable the production of trusted e-CQM measures has delayed adoption of the recommended core quality measures that require EHR data.

Sustainability: Alignment goals were reached for commercial payers and was within 2% for Medicaid. OHS will continue to strive for

alignment across all payers. OHS hosted a legislative forum in the winter of 2020 where payers made a commitment to achieving alignment. Historically, the measures used for value-based payment have been considered proprietary by commercial payers. In recognizing the burden that this places on providers, as well as the greater good that can be achieved from transparency regarding quality improvement, there was consensus to align measures under an impartial convener, such as OHS.

Another major contributor to the sustainability of the quality measure alignment efforts comes from the Governor's [Executive Order Number 5](#) that tasks the Quality Council to establish quality benchmarks by 2022. The order states that quality benchmarks "may include clinical quality measures, under and over utilization measures, and patient safety measures". This order also expands the scope of the Quality Council as they have been focused on primary care measures.

Lessons Learned

Alignment may be more successful if the state can establish trusted measures on behalf of providers, thus defraying a portion of the expense of alignment.

Some differences among payers, especially Medicaid, may be appropriate for scorecard measures to ensure that such measures reflect the health challenges of the covered beneficiaries.

Consumer Assessment of Healthcare Providers and Systems (CAHPS)

Goal: Increase the utilization of CAHPS to measure and reward improvements in patient experience in shared savings arrangements.

How it works: SIM funds support an annual CAHPS survey for Medicaid beneficiaries and the commercially insured population. CAHPS is being provided to participating payers with a recommendation to include this data in their shared savings arrangements.

How it helps: CAHPS measures patient experience and satisfaction with primary care. Survey results can be used by provider networks to make improvements across their networks or within particular practices. Additionally, CAHPS data can be used by payers in their shared savings arrangements so that providers are rewarded for improving consumer experience in primary care. CAHPS is being used as a scorecard measure to evaluate and reward consumer experience performance in PCMH+.

Metrics:

Accountability Metric	Total Target	AY4 Measure
% health plans that use Consumer Assessment of Healthcare Providers and Systems (CAHPS) in their scorecards tied to payment (commercial/Medicaid)	50%	17%

Achievements:

- 1. Completion of commercial CAHPS surveys:** Working with two commercial health plans, the SIM team completed 3,000 CAHPS surveys representing 19 Advanced Networks. The second iteration of the survey will allow for the comparison of patient experience across the same advanced networks over time, as well as between advanced networks.
- 2. Completion of Medicaid CAHPS surveys:** The number of Medicaid CAHPS surveys conducted was expanded using SIM funding, for a total of 5,883 surveys completed in 2018. Like the commercial data, the collected data will allow for the comparison of patient experience across networks over time. The CAHPS data is especially relevant to assess how PCMH+ has impacted Medicaid patient experience.
- 3. Use of Medicaid CAHPS surveys in PCMH+:** Medicaid is utilizing CAHPS data to measure and reward AN/FQHC care experience performance.

Challenges:

- 1. Response rate:** While the number of completed surveys represents one of the largest repositories of CAHPS data across the country, the response rate was still lower than anticipated. AY4 saw an increased response rate due to proactive communications and more detailed outreach to patients who would receive the survey.

- 2. CAHPS Adoption:** The adoption of the consumer experience measure for the purpose of value-based payment has been slower than overall alignment on other measures. Health plans continue to avoid introducing state-only scorecard measures and express concern about who will bear the cost of CAHPS data collection.

Sustainability: OHS plans to solicit payers to fund the CAHPS post-SIM. There has been value found in this robust collection of patient experience, and with OHS conducting it is more cost effective than payers conducting the survey individually. It is critical that this effort continue as patient experience is included in the public scorecard.

Lessons Learned

CAHPS can be used as a measure to assess the impact of care delivery and payment reform initiatives. To enable these comparisons, the SIM team ensured CAHPS surveys were conducted across both networks participating in SIM initiatives and those that are not.

To increase the response rate on patient experience, **future data collection should consider innovative data collection methods** that utilize shorter surveys and more cost efficient collection modalities.

Primary Care Modernization

Goal: Transform primary care delivery in Connecticut to improve access, quality, and patient experience while reducing total cost of care and revitalizing primary care.

How it would work: The current model, in development with stakeholders, anticipates increased, more flexible primary care investment that supports traditional primary care providers and new, diverse care team members in connecting and engaging with patients in the office, home, community and virtually. A robust accountability framework ensures new dollars are spent on primary care and in ways that reduce total cost of care over time.

How it helps: Primary Care Modernization (PCM) proposes to support primary care practices in achieving their full potential to identify and address medical, behavioral, and social contributors to population health, serve as an important connection in community-based prevention efforts, and undergird accountable care organizations seeking to improve health outcomes and lower total cost of care over time. Other SIM initiatives and conversations with stakeholders have identified several barriers to these goals, all of which PCM addresses. These barriers include 1) an evidence-based framework to implement new capabilities, 2) funding to hire diverse care team members, improve health information technology infrastructure, engage patients and address patient-specific social determinant of health barriers, and 3) Focused technical assistance and peer support through a learning collaborative.

Achievements:

Primary Care Modernization Framework Co-Developed with Stakeholders: To inform the development of the PCM Framework, the SIM team collaborated with more than 600 stakeholders including primary care physicians, other care team members, clinical and administrative leaders from ANs and FQHCs, hospital leaders, employers, payers, and medical schools and residency programs. With this engagement to inform their work, multi-stakeholder design groups focused on developing a cohesive set of evidence-based capabilities through review of national and Connecticut program experience and related academic

research. Recommendations were presented to the Practice Transformation Task Force (PTTF), a multi-stakeholder committee overseeing PCM design, for review, refinement and approval.

Required capabilities recommended by the PTTF as of March 2019 included:

- **Diverse Care Teams** which bring together professionals with different skills and expertise to provide patients with needed support throughout their care experience.
- **Behavioral Health Integration** adds a behavioral health clinician to the primary care team for assessment and screening, brief interventions and connections to and coordination with community-based providers and resources.
- **Phone, Text, Email and Video Visits** offers patients more convenient ways to connect and engage.
- **e-Consults and Co-management** allow primary care providers to electronically consult with a specialist for a non-urgent condition before or instead of referring a patient to a specialist for a face-to-face visit. Co-management offers patients the opportunity to receive more coordinated, collaborative ongoing management by the PCP, specialist and patient.
- **Remote Patient Monitoring** uses connected digital services and technology to move patient health information from one location, such as at a person's home, to a healthcare provider in another location for assessment and recommendations.
- Specialized practices to offer specific expertise to **Older Adults with Complex Needs**, patients in need of **Pain Management and Medication-Assisted Treatment** and **Individuals with Disabilities**.

On a parallel track, OHS convened a multi-stakeholder Payment Reform Council a focused on developing payment model options to support the capabilities. They developed strawman payment model options, which are being refined based on input from dozens of one-on-one stakeholder meetings.

Challenges: Aligning with Other Models: Providers and payers are balancing many opportunities to improve healthcare value. PCM offers a pathway to improve the primary care foundation necessary to achieve success across many of these programs. Stakeholders have shared a strong understanding of how PCM could serve as an important component of their overall healthcare value strategy. However, they also recognize it would involve a significant shift in how care is delivered and compensated. Preparing for this shift in the midst of other change has been challenging.

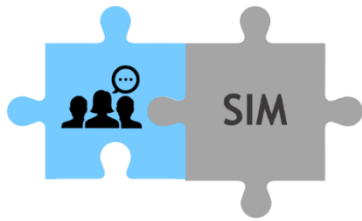
Sustainability: PCM as it was envisioned will not be acted upon in Connecticut. There were many factors at play that were not conducive to an environment that would allow this to move forward. However, there are elements that will carry forward under the work that OHS was tasked to do under the Governor's Executive Order Number 5 that was mentioned previously. The order mandated that primary care spend be increased to 10% from what it is today for all payers. In order for that to be achieved the way primary care is delivered must transform, and the capabilities that were designed under PCM are the mechanisms that will enable this effort. OHS will consider the work that was done by the Practice Transformation Task Force as it creates its strategy for this effort.

Lessons Learned

- **Flexible, advance payments are needed** to sustain sufficient investments in care transformation.
- **A strong accountability framework is necessary** to ensure more flexible investments are dedicated to primary care and achieve desired improvements while reducing total cost of care.
- **Patients and employers value services that improve convenience and coordination** and prefer these conducted by the patient's primary care team.

Consumer Engagement

The goal of the SIM Consumer Engagement initiatives is to engage consumers in healthy lifestyles, preventive care, chronic illness self- management, and healthcare decisions.



Consumer Engagement Initiatives include:

- Value-Based Insurance Design (VBID)
- Consumer Engagement Surveys (CAHPS)
- Public Scorecard

Value-Based Insurance Design (VBID)

Goal: Promote the use of Value-Based Insurance Designs (VBID) that incentivize consumer engagement and appropriate health care choices.

How it works: The VBID Consortium designed insurance benefit templates that are open for adoption by employers. Targeted technical assistance is offered to employers interested in adopting VBID plans.

How it helps: Value-Based Insurance design (VBID) plans encourage patients to access the right care, at the right time, from the right provider. Consumers with VBID plans have lower cost sharing for preventive services, chronic illness self-management services and prescriptions, and visits to high value providers. VBID plans are tailored to the enrolled population and have been shown to improve patient outcomes and reduce costs for consumers, employers, and health care payers.

Metrics:

Accountability Metric	Total Target	AY4 Measure
Number of Employers participating in VBID Technical Assistance opportunity	25	9
Number of Employers participating in VBID TA that adopt VBID plans	15	5
% of Commercially Insured Population in a VBID plan that aligns with CT SIM's VBID threshold	84%	28.7%

Achievements:

1. **VBID Insurance Templates:** The multi-stakeholder VBID Consortium advised on the development of VBID templates that can be used and adjusted by employers to meet the needs of their employees. The templates draw from the best available evidence on VBID plans, utilizing the Connecticut State Health Enhancement Program, the University of Michigan VBID Center, and employers like Pitney Bowes as examples. The Consortium has also completed two annual updated versions of the templates, as well as implementation guidance.

2. **Targeted Technical Assistance:** Through the SIM VBID consultant, Freedman Healthcare, 11 employers have participated in a targeted technical assistance program to encourage VBID adoption. The program consisted of a review of all available employer data, the development of a VBID plan including a communications and evaluation strategy, and peer-learning opportunities between employers. To date, five employers have committed to implementing VBID plans.

Challenges:

1. **Promoting Adoption:** Learning collaboratives do not provide an efficient or sufficiently tailored vehicle for helping employers adopt VBID. Employers need individual technical assistance that uses their own employee healthcare data to design a VBID strategy that will enable them to achieve their unique healthcare improvement objectives.
2. **Measuring VBID uptake:** The goal of the VBID initiative is to increase the percentage of commercially enrolled individuals in a VBID plan to 84%. Among the foremost challenges for the VBID initiative has been measuring VBID uptake. The challenge is largely due to the self-insured market, where most VBID plans currently reside. The SIM team has provided guidance to payers to report on fully insured plans that contain VBID elements, but health plans do not have a standard mechanism to identify whether self-insured employers include VBID components within their plans. Additionally, employers often offer incentives outside of the plan itself, making it even more difficult to track the array of incentives that might be in use.
3. **Employers:** Across the two cohorts, four selected employers did not complete the program due to competing organizational priorities and resource constraints. In recognition of these common hurdles, the FHC team developed a digital TA toolkit to offer employers a more flexible timeline and self-service approach to adopting VBID plans. The toolkit enables employers to move forward with VBID strategies whenever they are ready to.
4. **Interest:** After a successful first TA cohort, interest in the program waned. Discussions with employers, brokers, consultants, and employer coalition leaders suggested new concerns were top-of-mind for employers, e.g. hospital price inflation, pharmacy costs, and surprise billing. In response, FHC modified the program to help address these new priorities. Changes included incorporating creative strategies to reduce employee cost sharing under HSA plans, increasing focus on ways to address rising inpatient costs, and offering additional support for identifying Centers of Excellence. In addition, a joint decision was made by the project partners to extend the recruitment timeline for Cohort 2, and to forgo a third cohort of the program.

Lessons Learned

Strong engagement of the broker and consultant community is crucial to the success of the TA program. These individuals serve as a key gatekeeper to employers and many employers default to them as trusted partners in the benefits design and plan selection process.

There is not an optimal time of year for employer recruitment due to ongoing benefits planning, enrollment, and implementation cycles, which do not necessarily align across all organizations. Focused, ongoing efforts to raise general awareness about the TA opportunity is crucial in developing a strong participant pipeline.

Sustainability: Given the current policy environment, OHS has decided to shelve the VBID initiatives for a year following the end of the SIM grant on January 31, 2020. If at the end of that year, there is new evidence suggesting a more robust ROI or other forms of stronger alignment (for example, with the state’s Health Enhancement Communities work), OHS may revisit the initiative.

Public Scorecard

Goal: Provide transparency on cost and quality by creating a Public Scorecard to report provider quality and care experience performance.

How it works: The Quality Council provided guidance to the UConn Evaluation team in the selection of metrics, risk adjustment, capabilities, and visual components of the Public Scorecard. The [HealthscoreCT](#) scorecard was launched in August of 2019.

How it helps: Health care payers track performance measures to determine whether providers meet quality goals for the purpose of value-based payment arrangements, including PCMH+. The public scorecard will share provider network scores on certain measures, including care experience. This will allow consumers to compare provider quality and make informed healthcare decisions.

Metrics:

Accountability Metric	Total Target	AY4 Measure
Number of valid measures recommended for public reporting	45	24
Number of measures publicly reported	40	25
Number of views to public scorecard	3,000	13,575
Number of organizations/entities that have self-attested to using data from scorecard	60	0

Achievements:

1. **Measure Selection:** Based on the Quality Council’s Core Measure set, and the current availability of only claims based data, a set of 25 measures were selected for inclusion on the public scorecard.
2. **Public Scorecard Design:** The public scorecard has been designed with input from the Quality Council’s scorecard design group. The design process included input on functionality, attribution, risk adjustment, and visual appearance.

Challenges:

1. **Data Acquisition:** The major challenge continues to be access and availability of data. UConn Health will continue to work with the APCD to ensure timely reporting as work on the scorecard progresses.

Sustainability: The Public Scorecard was published in the Summer of 2019 to a very positive reception. The rated entities found it to be a meaningful tool and will use it in their own quality improvement efforts. OHS will continue to fund the scorecard and as the CDAS becomes fully operational it will include ECQMs.

Health Information Technology

The State of Connecticut is taking important steps to accelerate the use of health information technology (HIT) to enable healthcare transformation so that the state’s residents receive timely, coordinated, and person-centered care. The HIT and health information exchange (HIE) approach described here will be undertaken with transparency and broad stakeholder input. The strategy is guided by a comprehensive 2017 environmental scan and subsequent [report](#), which engaged almost 300 individuals and over 130 organizations. It is also guided by extensive input from the Health Information Technology Advisory Council, created under [Public Act 16-77](#), and comprised of providers, consumers, payers, and representatives of the legislature, the state’s executive branch, and several state agencies.

Core Data Analytics Solution

Goal: CDAS serves as a statewide data analytic hub for OHS, Health Information Alliance and potentially other state agencies. CDAS provides information-based insights to improve the quality and effectiveness of decisions being made from consumers to policymakers.

How it Works

The University of Connecticut Analytics & Information Management Solutions (AIMS) has implemented components of the Core Data Analytics Solution (CDAS). The CDAS architecture is based on leading-edge technologies that have been implemented across many other industries and leverages open source and commercial-off-the-shelf

(COTS) software components. This architectural approach, along with the technology components, provides a modular configurable solution, not a custom coded solution. This means that CDAS can be updated and adapted over time to meet the changing needs of Connecticut stakeholders.

Metrics

Due to delays, these measures were unable to be addressed.

Accountability Metric	Total Target	AY4 Measure
Percent of health systems on boarded to eHealth Exchange (eHEX), Care Quality (CeQ) and/or CommonWell (CW)	43.8	-
Percent of providers with access to longitude health record (LHR)	17.5	-
Percent of health systems providing "Admit, Discharge, & Transfer" (ADT) to the Health Information Exchange (HIE)	87.5	-
Percent of ACOs receiving clinical encounter alerts	87.5	-
Percent of Primary Care Physicians receiving clinical encounter alerts	17.5	-
Number of picture archiving and communications systems (PACS) on board for image sharing	3.5	-
Percent of Core Services implemented	100	-

How it Helps

The CDAS provides meaningful insight and analysis on transactional and clinical healthcare data and related activities in a way that supports the quadruple aim of enhancing patient experience, improving clinical outcomes, reducing costs, and enhancing clinical experience.

Achievements

1. **Master Data Management (MDM):** Installation of a core service, the MDM multi-domain provides the ability to create, manage and share an authoritative, multi-hierarchical, trust framework to provide the single best version of truth, such as master person index (MPI) and master provider registry (MPR) in addition to the care relationships between the persons and providers as well as consent. This is a foundational solutions component for the state’s HIA Services.
2. **Data Governance:** CDAS has begun developing a data governance framework strategy to define a set of data rules, organizational role delegations, and processes aimed to support OHS and the state as a whole.
3. **Deployment of Secure Infrastructure Environments:** CDAS has deployed bifurcated environments to support both Protected Health Information (PHI) and non-PHI data.
4. **Clinical Groupers:** To provide clinical stratification to claims data, CDAS is utilizing the advanced capabilities of 3M Health Information Systems (HIS) and their advanced categorical grouping and risk adjustment software, including the 3M™ Clinical Risk Groups (CRGs), 3M™ Potentially Preventable Events (PPEs), and 3M™ All Patient Refined – Diagnostic Risk Category (APR-DRGs) classification systems. Clinical groupers provide an overall understanding of an individual’s health status by using longitudinal data like collected claims, pharmacy and other data processed through clinical categorical models.

5. **Clinical and Claims Data Processing:** UConn AIMS has implemented both clinical and claims data processing tools and has the ability to intake clinical data through Consolidated Clinical Document Architecture (C-CDA) and well as claims data. The clinical data stream is a vital use case to support the HIA services to participating provider organizations.

Challenges

Implementation challenges include:

1. Legal Agreements – Participating organizations could not come to terms with the state requirements, and as a result, eQMs were delayed by approximately a year.
2. Outreach to draw upon analytics champions with the state, community and industry did not happen as a direct consequence to the inability to establish terms for sharing data.
3. Collaboration between various teams that had shared projects required considerable efforts to avoid silos and ensure teams were working efficiently.

Lessons Learned

When it comes to Protected Health Information (PHI) & Personally Identifiable Information (PII), it is better to work through a neutral third party, who is able to establish a traditional HIPAA business associate agreement in order to get the data shared.

Consideration to ensure efficient team structures is a necessary ingredient to ensure coordinated and collaborative team efforts.

Sustainability

Funding is currently secured through the HITECH Act, with funding to move into the Medicaid Management Information System (MMIS) at the end of the HITECH Act.

Health Information Alliance

Goal: The goal of the HIA is to serve the population of Connecticut by providing streamlined health information for patients and their providers throughout the state.

How it Works

The Health Information Alliance was established in July 2019 to serve as a trusted, neutral, nonprofit, and nongovernmental entity to enable the development and operation of the health

information exchange (HIE) services for the state of Connecticut.

How it Helps

The HIE will enable the exchange of clinical information across all health care settings; support care coordination; reduce preventable costs associated with readmissions, duplicative testing and errors; support public health reporting, research and population health analytics; adhere and promote standards and interoperability; provide patient access to health information; and include broad local governance.

Metrics

Due to delays, these measures were unable to be addressed.

Accountability Metric	Total Target	AY4 Measure
Percent of health systems providing "Admit, Discharge, & Transfer" (ADT) to the Health Information Exchange (HIE)	87.5	-
Percent of ACOs receiving clinical encounter alerts	87.5	-
Percent of Primary Care Physicians receiving clinical encounter alerts	17.5	-
Number of picture archiving and communications systems (PACS) on board for image sharing	3.5	-
Percent of Core Services implemented	100	-

Achievements

1. The HIA is incorporated, has a functioning board, and is approving policies to set business functions.
2. The entity has a physical location and is standing up business and operating practices and procedures.
3. The HIA is working off a master plan to deliver initial use cases, establish the trusted data sharing arrangements between participating organizations, establish basic business operations, and scale from pilot to full production during Federal Fiscal Year 2020 (FFY20).

Challenges

- Impact of working through the political and structural environment to fund the nonprofit entity so that it is able to perform its functions. The issue at hand is the late start that Connecticut had with the respect to the end of the Health Information Technology for Economic and Clinical Health Act (HITECH Act). Consequently, Connecticut has been challenged to devise launch plans that maximize the short remaining time available for using HITECH funding to launch this HIE.

Lessons Learned

The Office of Health Strategy embarked on an incubation process starting with the SIM Program and continuing after the end of SIM on HITECH funding to establish the basic technical infrastructure, preliminary operational procedures, draft trust frameworks, and other artifacts that would be useful in accelerating the HIE's launch. While this was effective in the main to advancing the mission, we learned that there were limitations that arose with respect to transferring functions into the nonprofit entity. For example: with respect to the trust framework, it is only when the entity had seed money that legal counsel representing the Board of Directors was able to take the trust framework to final stages. As another example, we were unable to transfer desirable contracts into the nonprofit that had originated as a state contract and as a result, those contracts had to be rebid or renegotiated.

In retrospect, incubation was the right decision from the beginning, however had we had to do this over again, we would have taken steps to inject seed money earlier and to a greater extent into the entity so that it can deal with the challenges that arose from the evolution of incubatory to production activities.

Sustainability

The HIA is going to work collaboratively with Medicaid to ensure that the architecture and business processes brought forward in the HIE conform to Connecticut's Medicaid Enterprise System (CT METS) architecture and business processes, enabling it to participate in future Medicaid Management Information System (MMIS) funding. Additionally, HIA is seeking alternate sources of funding from other Federal, State, and private sector areas. This includes an approved grant under the Substance Use-Disorder Prevention that Promotes Opioid Recovery and Treatment for Patients and Communities Act (SUPPORT Act). HIA has also participated in business negotiations with third part providers who are offering relevant services that the HIA can sponsor and or support that will generate private sector revenue. In this last regard, two of these opportunities have arisen directly as a result of the pandemic and the health ecosystems interest in telehealth and care coordination.

C. Statewide Impact

Assessing Patient Experience, Health Outcomes, Affordability, and Work Stream Feedback

The SIM Evaluation Team was led by Dr. Robert Aseltine of UConn Health (UCH), and Dr. Paul Cleary of Yale University. The Evaluation Team has worked with OHS and DPH to collect or compile data that illustrates statewide impact on population health, healthcare quality, consumer experience, and cost with respect to all Connecticut residents.

Whenever possible, the Evaluation Team reported on statewide performance that is based on the entire CT population. However, depending on the data sources (e.g., APCD), the team was at times limited to data that only includes individuals who have commercial, Medicare, or Medicaid coverage. When data permits, we present measures that allow us to compare performance across these payer categories and across race/ethnic groups.

Due to delays and lack of responses that did not allow for statistically significant results, the Provider Experience is not included in this report.

The full [SIM evaluation report](#) with all measures has been posted on UConn Health's website. Section C. Statewide Impact, Section D. Model Specific Impact, and Section E. Sustainability and Conclusion are based on the full SIM evaluation report. The reader should exercise caution in the interpretation of the statewide findings. While they do reflect the state's absolute performance, they do not tell us whether the SIM reforms are working.

Patient Experience

The SIM evaluation team conducted surveys of probability samples of commercially insured and Medicaid patients in Connecticut to assess their care experiences. The team used a modified version of the Clinician and Group Consumer Assessment of Healthcare Providers and Systems (CG-CAHPS) survey. At the recommendation of the Quality Council, the CG-CAHPS 3.0 instrument was modified to include several questions that the Evaluation Team developed to assess access to behavioral health services.

CG-CAHPS is a standardized, validated instrument widely used throughout the country. It is being administered by experienced CAHPS vendors who have more than 20 years of experience conducting patient experience surveys. Three waves of CG-CAHPS surveys were completed in 2017, 2018, and 2019 for both Medicaid recipients and commercially insured individuals.

To develop the sample of individuals to be surveyed, the evaluation team first identified all the Advanced Networks and FQHCs in CT that were participating in shared savings programs and providing care to Medicaid recipients or to individuals insured by the participating commercial health plans. Two of the major commercial payers in CT participated in 2017, and three in 2018 and 2019. Medicaid participated all three waves.

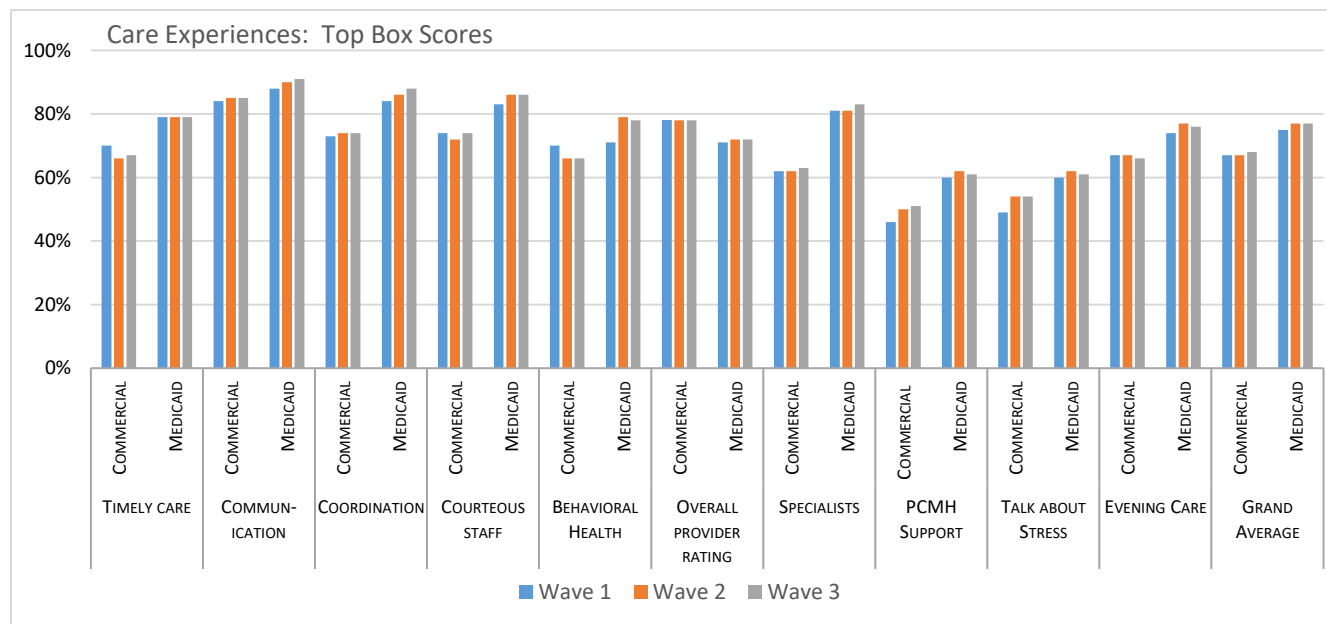
Medicaid and the participating insurance plans provided a list to the survey vendor of all adult (18 or older) patients in CT who had made a visit to a primary care provider in the six months prior to when the data were accessed. The survey vendors then selected a probability sample of patients who had used

each Advanced Network or FQHC in the state. To provide a comparison, the evaluation also selected a sample of patients who did not receive care in one of the identified advanced networks. Medicaid also included a comparison group of PCMH program participants that are not in the Medicaid shared savings program (PCMH+).

The data were used to help evaluate the impact of care delivery and payment reforms (e.g. whether an advanced network is participating in a shared savings program) on patient experience. We also examined patient experiences across racial/ethnic groups, comparing changes across time periods, and comparing patient experience based on type of health coverage (commercial or Medicaid). To simplify the presentation of data, herein we report ‘Top box scores’ or the percent of respondents who had the highest rating of care (9 or 10) for the provider rating).

One notable finding is that Medicaid recipients tended to report better care experiences than did commercially insured patients (See Figure 3). However, in all three years, 78% of commercially insured individuals rated their provider a “9” or “10” on a 0 to 10. Among Medicaid recipients, 71% gave a rating of 9 or 10 in the first wave, and 72% gave such a rating in the second and third wave. Analyses, not reported here, indicate that differences in patient characteristics account for differences in CAHPS scores by source of coverage and year. Medicaid and commercial surveys were conducted by different vendors, however. We do not think the differences in protocols are large enough to account for the observed differences, but that is a possible explanation for at least some of the Medicaid-commercial differences.

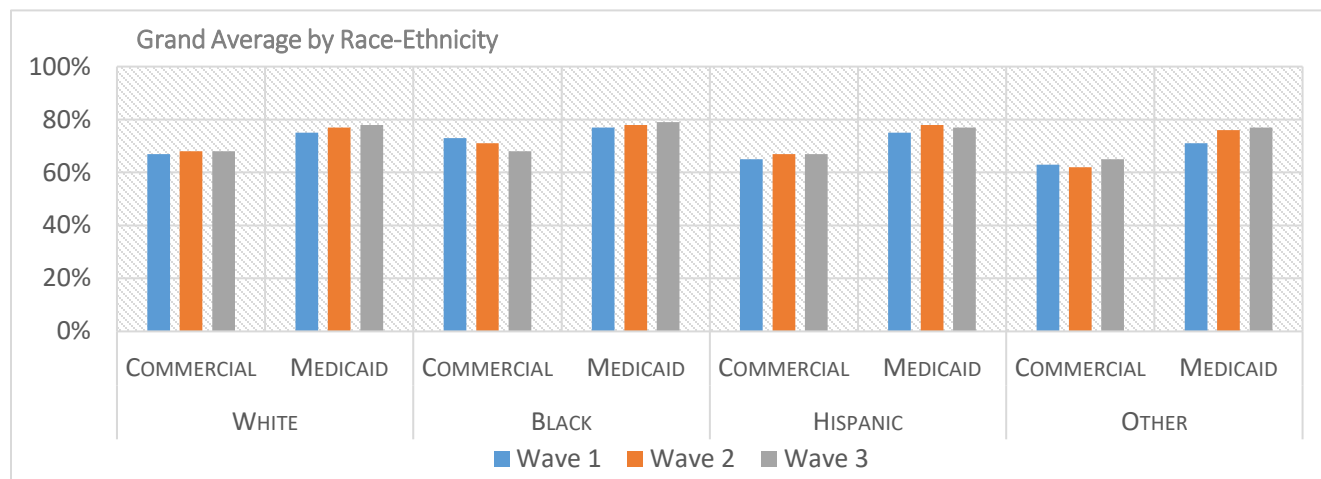
Figure 3. Care experiences among CT commercially insured and Medicaid patients



To assess differences by race and ethnicity, we compared the CAHPS Grand Average of self-identified white respondents to the responses of non-Hispanic Blacks, Hispanics, and those classified in other categories for Medicaid and commercially insured respondents in the two survey years (See Figure 4).

The differences were small and inconsistent. Of the 36 statistical comparisons (e.g., Black vs. White, Medicaid, Black vs White commercial, each year), only four were significant ($p < 0.01$).

Figure 4. Race/ethnic differences in care experiences among CT commercially insured and Medicaid patients



Data from CMS that are not publicly available (personal communication; Paul Cleary) indicate that when ambulatory, hospital, and home health care CAHPS scores from 2014 were considered, Connecticut was 42nd among states and the District of Columbia. In 2017, the only other year analyzed, Connecticut had dropped slightly to 43rd.

Health Outcomes

Population Health

The SIM evaluation tracked six measures of population health: adult diabetes, adult obesity, child obesity, adult smoking, youth cigarette smoking, and premature death due to cardiovascular disease. Premature death due to cardiovascular disease, derived from mortality statistics maintained by the Connecticut Department of Public Health, provides an illustration of a population health measure that might be favorably impacted as a result of value-based payment, particularly the incentives in the Medicare Shared Savings Program for improving hypertension control. Cardiovascular disease is defined as any health problem that includes the heart or blood vessels. It is the leading cause of death in the US. This measure estimates the number of years of

SIM Targets

Most SIM measures have target values that quantify the improvements expected during the SIM award period. For most measures a 5% improvement over the duration of the SIM was expected. These targets were calculated after taking into account prior historical trends for a particular measure. For example, deaths due to cardiovascular disease have been falling, while rates of adult and childhood obesity have been rising. The targets established for the SIM take these historical trends into account.

potential life lost (YPLL) for persons dying before age 75 due to cardiovascular disease (ICD-10 codes 100 to 178). Values were age adjusted to allow for comparisons over time.

In 2013-2015, the CT rate of YPLL per 100,000 was on a downward trend, resulting in target values that declined by approximately 2% per year through 2020. In 2016, the first year of SIM implementation, the observed rate of 734 YPLL was comparable to the 2015 rate but significantly higher than the target of 685. In 2017, the observed rate increased, for the first time since 2013, to 754; this observed rate was significantly higher than both the 2017 and 2016 targets. However, there were race differences in this trend change. The rate for blacks significantly decreased from 2016 to 2017 whereas rates for other races (whites, Asians, and Hispanics) all increased (although not significantly).

Attributing Patients to Primary Care Providers

Patients were attributed to the primary care provider from whom they have received the most primary care services within the past year. **Primary care providers** were defined as physicians, advanced practice registered nurses and physician assistants who specialize in Family Medicine, Internal Medicine, Pediatrics, General Practice, or, in some cases, Obstetrics-Gynecology. **Primary care services** included claims coded with the Current Procedural Terminology (CPT) codes for office or other outpatient visits, preventive medicine services, and consultation services.

Figure 5 presents population level results for premature death from cardiovascular disease from years 2013 through 2017 relative to targets. In 2013-2015, the CT rate of years of potential lives lost (YPLL) per 100,000 was on a downward trend, resulting in target values that declined by approximately 2% per year through 2020. In 2016, the first year of SIM implementation, the observed rate of 734 YPLL was comparable to the 2015 rate but significantly higher than the target of 685. In 2017, the observed rate increased, for the first time since 2013, to 754; his rate was significantly higher than both the 2017 and 2016 targets. The targets continued to decrease to 581 YPLL by the end of the CT SIM award period in 2019. Because of the lag time in obtaining mortality data, observed rates beyond 2017 were not available for the final report.

Figure 5. Premature Death from Cardiovascular Disease in Connecticut

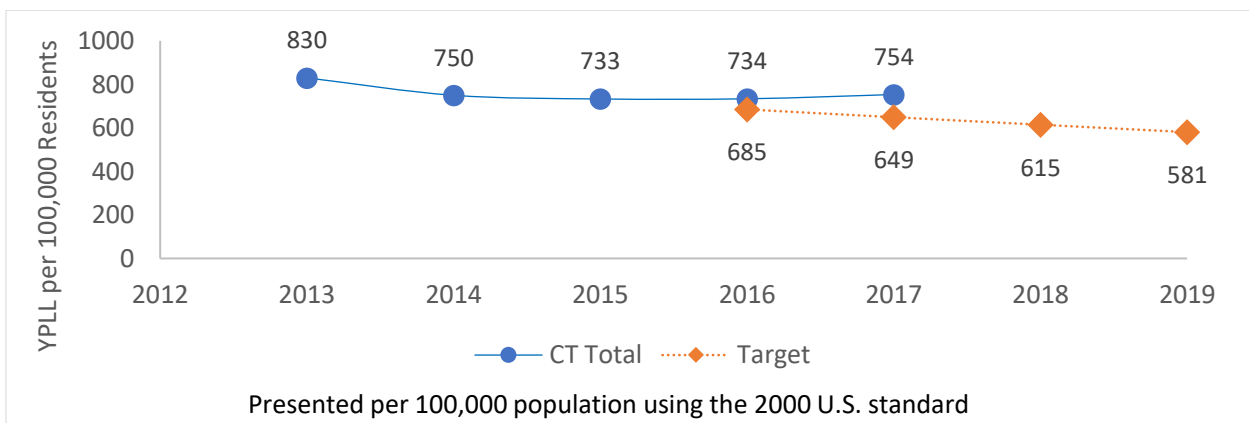
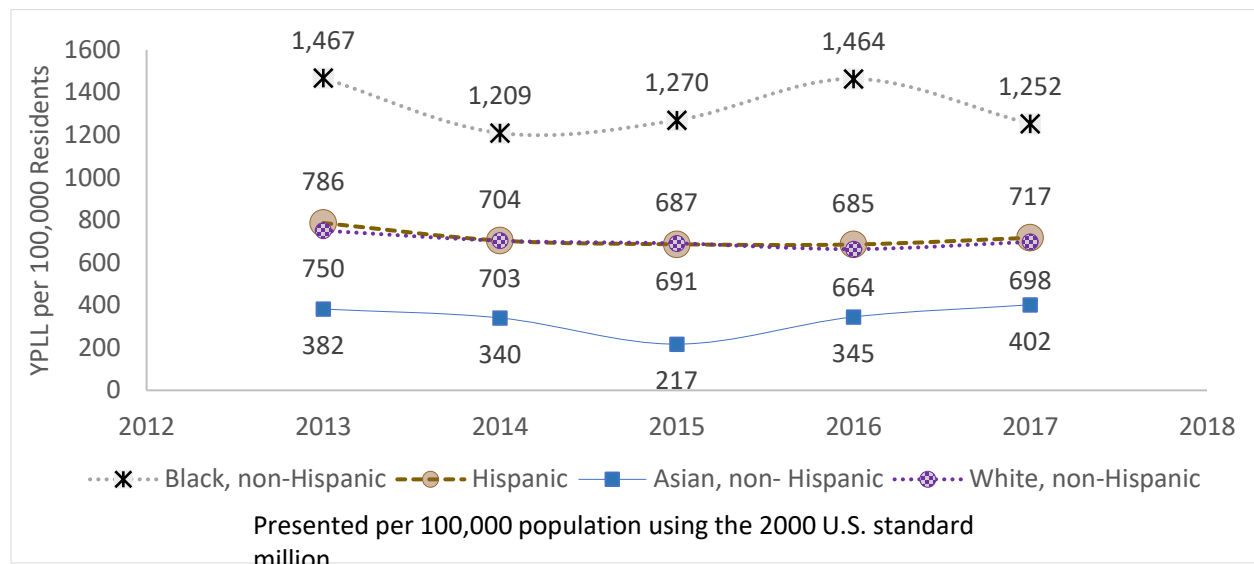


Figure 6 presents trends in CVD mortality by race and ethnicity. Race and ethnic disparities in CVD mortality were pronounced: YPLL rates due to CVD were roughly twice as high among Blacks compared

to Whites and Hispanics, and Asians had approximately half the YPLL rate of Whites and Hispanics. In addition, CVD mortality rates for Whites and Hispanics demonstrated a slight downward trend from 2013 to 2016, with a slight uptick in 2017. Rates for Asians and Blacks were less stable. Because of these year-to-year fluctuations in rates among Blacks and Asians, it will take additional years of data to ascertain robust trends in CVD mortality in these groups. In addition, because reduced CVD mortality associated with improved management of cardiovascular disease may take 5-10 years to observe, this measure will be important to monitor in future years to gauge the impact of SIM initiatives in improving health equity.

Figure 6. Premature Death from Cardiovascular Disease by Race and Ethnicity



Preventable admissions and readmissions, optimal diabetes care

The SIM evaluation tracked a diverse set of health outcomes, ranging from screening measures (e.g., mammograms for women 50-74 years of age), measures of chronic disease management (e.g., antidepressant medication management), and healthcare utilization (e.g., well child visits for at-risk populations) (see Appendix for full list of measures). Three measures that illustrate the potential impact of SIM on health outcomes among CT residents are preventable hospital admissions for chronic conditions, 30-day readmissions following a preventable admission, and optimal diabetes care.

Preventable hospital admissions were measured using the Agency for Healthcare Research’s (AHRQ’s) Prevention Quality Indicator 92, a composite measure that combines the rate of hospital admissions across 10 separate chronic disease conditions (e.g., admission for heart failure). 30-day readmissions consisted of re-hospitalizations for all causes among those whose index admission was included in PQI 92. Data to calculate these measures were derived from the CT Hospital Inpatient Discharge Database, maintained by the CT Department of Public Health. Optimal diabetes care, defined as annual hemoglobin A1C testing among diabetics, is a measure endorsed by the National Quality Forum. Data to calculate this measure were derived from the CT All Payer Claims Database (APCD) maintained by the Office of Health Strategy.

Figure 7 presents rates of preventable admissions for chronic health conditions per 100,000 population from 2012 through 2018 relative to targets, overall and by insurance type. Total population rates fluctuated within a narrow range but increased slightly from 2012-2018. Medicare beneficiaries had the highest rates of preventable admissions. From 2012-2018, Medicaid beneficiaries, while declining from the 2013-2014 period, remained approximately 8 to 9 times more likely to have a preventable hospital admission as the commercially insured. Rates of those without insurance were comparable to those of patients with commercial insurance through 2015, but increased sharply in 2016-2018.

Figure 7. Hospital Admissions for Chronic Ambulatory Care Sensitive Conditions by Insurance Type

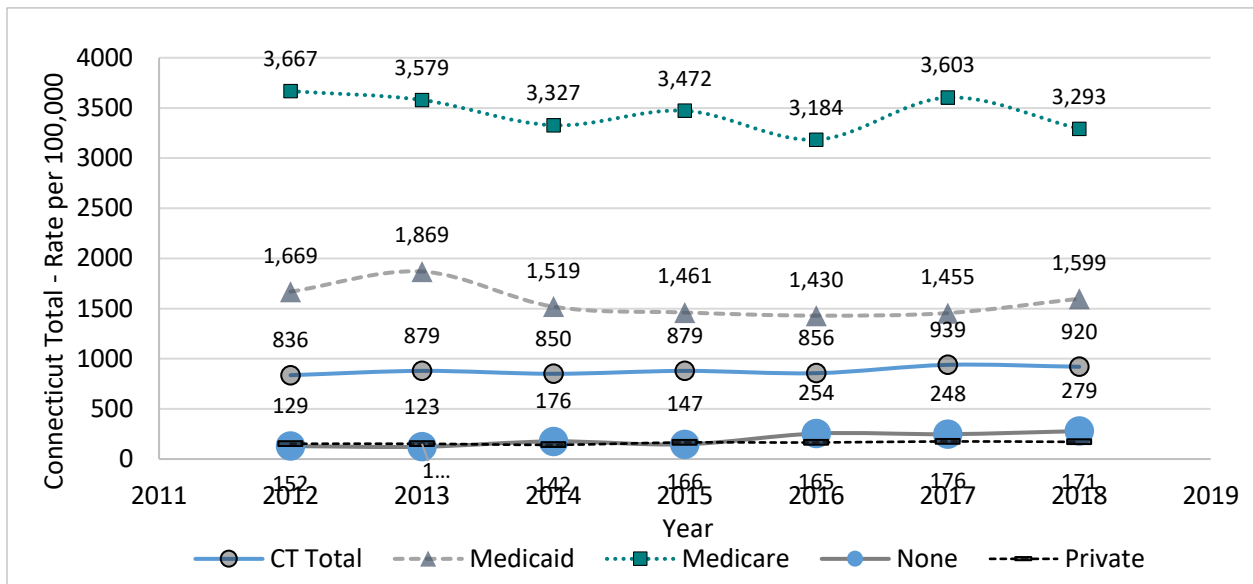


Figure 8 presents trends in rates of preventable hospital admissions for chronic conditions by race and ethnicity. Race and ethnic disparities were pronounced and consistent from 2012-2018, with rates for people who were Black almost twice as high as rates for people who were White and/or Hispanic. The slight increases in preventable admissions over time were observed across race and ethnic groups, although the “Other” races category demonstrated a sharp drop in 2018.

Figure 8. Hospital Admissions for Chronic Ambulatory Care Sensitive Conditions by Race/Ethnicity

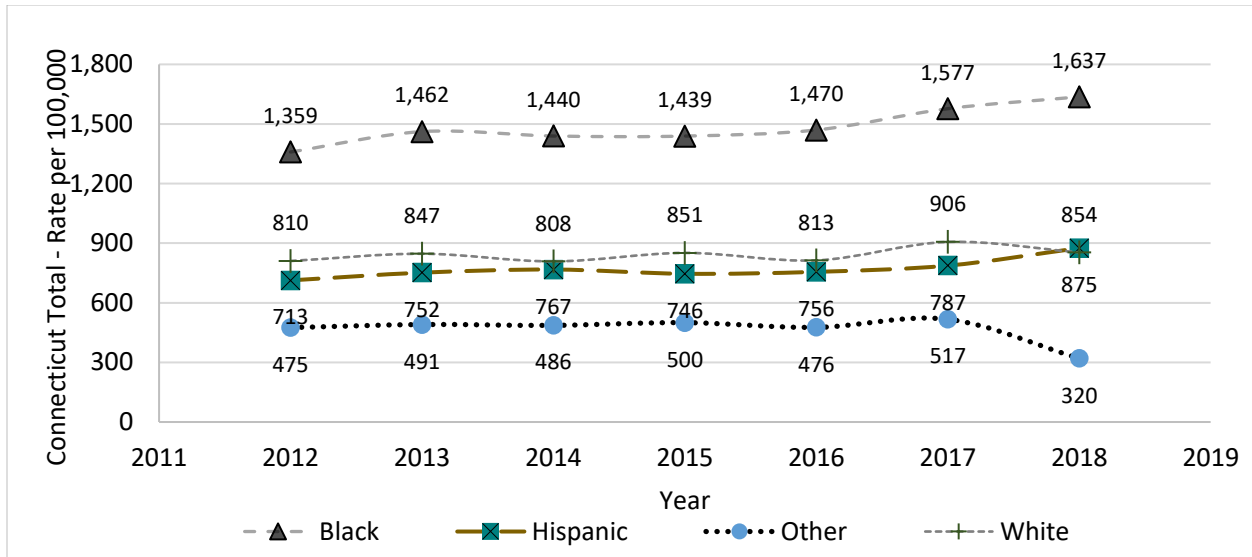


Figure 9 presents the percent of patients re-hospitalized within 30 days after discharge for one or more chronic ambulatory care sensitive conditions (PQI 92). Re-hospitalization rates have fluctuated within a narrow range between 16.9-18.6% since 2012 and the most recent observed rate (2017) was under the 2017 SIM target established using 2012 to 2015 data.

Figure 9. 30-Day Readmission after Discharge for Chronic Ambulatory Care Sensitive Conditions (PQI 92)

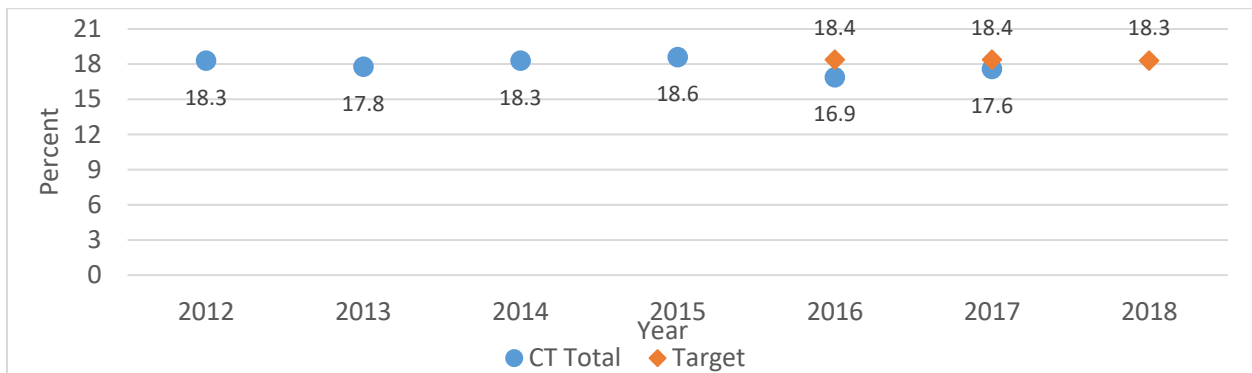
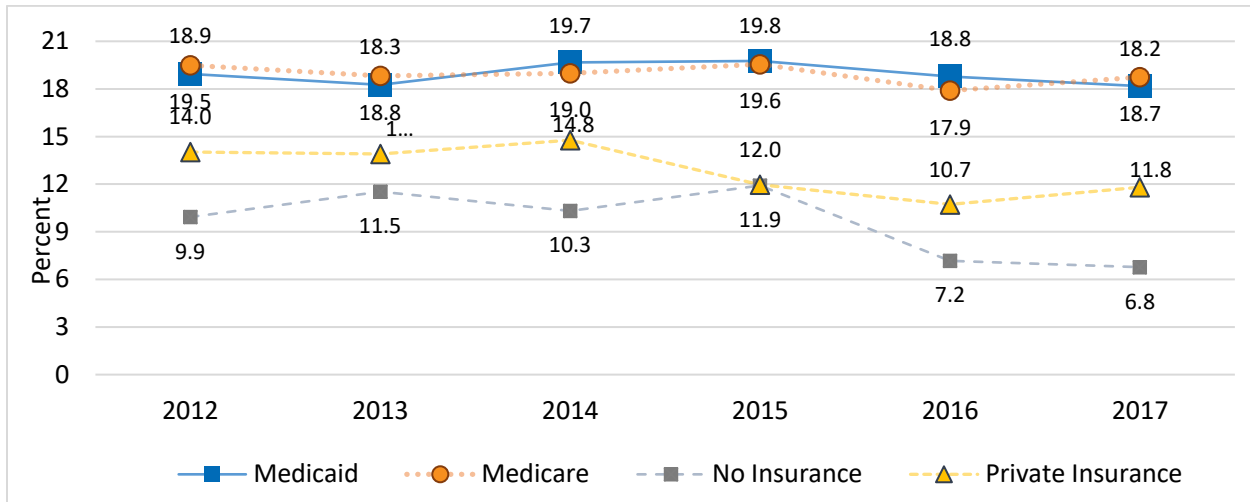


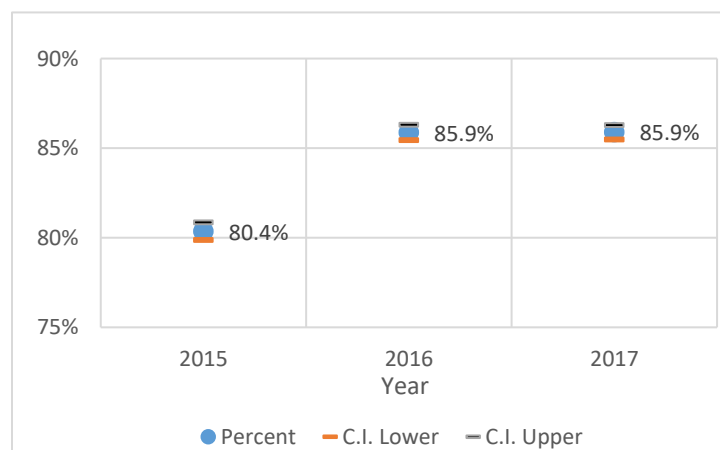
Figure 10 presents re-hospitalization rates by insurance type. Similar to the data presented above on preventable hospitalizations, rates were highest among Medicare and Medicaid beneficiaries from 2012-2017. Additional years of data are needed to determine whether the declining rates observed among both the commercially insured and uninsured since 2014 constitute a significant trend.

Figure 10. 30-Day Readmissions after Discharge for Chronic Ambulatory Care Sensitive Conditions (PQI 92) by Insurance Type



Optimal diabetes care was defined as the percent of diabetic patients who receive annual HbA1c tests, was calculated using APCD data. **Figure 11** presents results among commercially insured patients from 2012–2017 (blue dots). Approximately 85% of diabetic patients annually receive HbA1c tests, with the number higher by over 5 percentage points in 2017 relative to 2015. However, patients who had a qualifying outpatient visit with a primary care provider in 2017 had a much higher rate of annual HbA1c testing (87.96) than did patients who did not see a primary care provider (12.85). These results highlight the importance of connection to primary care among commercially insured patients for optimal diabetes care. Rates for Medicare and Medicaid patients could not be calculated because the complete data necessary to calculate the measure for any measurement year was not obtained

Figure 11. Percent of Patients with Diabetes Receiving Annual HbA1c Testing



D. Model Specific Impact

Major features of Connecticut's SIM award include engaging physicians, hospitals, other healthcare organizations, and health insurers in innovations related to how healthcare is delivered and paid for. SIM initiatives encourage alternative payment models, where physicians and hospitals have the opportunity to share in savings if they provide care that is both high quality and cost effective. SIM has also launched the Person-Centered Medical Home Plus (PCMH+) program, which works to improve HUSKY member's overall health and assists with access to services like access to healthy food, transportation to appointments and assistance in finding community agencies that support housing or employment. Changes in the way healthcare is delivered and paid for are related not only to measures of patient's access to, outcomes of, and costs associated with healthcare, but also to physicians' experiences and career satisfaction.

To assess some of these factors, the evaluation team collected annual data from Connecticut's commercial payers, the state's Medicaid authority, and the All Payer Claims Database to track changes in the way healthcare was delivered and paid for and to assess and compare the performance of Connecticut's ANs and FQHCs, focusing in particular, on how the degree of exposure to value-based payments influenced network or health center performance.

Entity Experience:

The SIM team developed the *2019 Survey of Primary Care Networks* to evaluate and describe the characteristics of primary care networks in Connecticut at the conclusion of the SIM grant in 2019. The survey was sponsored by the Connecticut Office of Health Strategy and administered by the Yale School of Public Health.

The data are being used to evaluate the impact of payment and delivery reform on organizational characteristics, healthcare information technology (HIT) infrastructure, quality improvement programs, and clinical care delivery decisions. It was also intended to enable primary care organizations to compare their organizations to others in the state.

Successes include:

- Upside SSP participation is common
- EHR utilization is high; nearly all PCPs are supported by an EHR
- Organizations provide their PCPs with large amounts of quality data
- Health risk stratification and predictive modeling based on data are common
- Organizations are committed to addressing health disparities (e.g., race/ethnic, social determinants of health)

Opportunities for the future include:

- Downside SSP participation is uncommon
- Ties to community organizations remain weak
- The types of performance-based financial incentives offered to PCPs vary by organization; slightly more than half of organizations report offering incentives

- Organizations are not routinely collecting information on social determinants of health needs despite commitment to addressing those needs

Commercial Entity-Level Results:

Plan All-Cause Readmissions

Among Connecticut commercial insurance carriers in 2017, the O/E ratio (observed readmissions/expected readmissions) for members 18-64 was calculated for unplanned acute readmissions for any diagnosis within 30 days that followed an acute inpatient stay during 2017. This rate was risk adjusted for health covariates (surgeries, discharge condition, comorbidities) in addition to age and gender. Lower O/E ratios indicate greater prevention of unplanned readmissions. The overall O/E ratio for CT was 0.61 which differed between attributed (.62) and unattributed (.45) providers. Among patients of attributed providers, those with providers in an advanced network were less likely to have a readmission (.58) than those with providers not in an advanced network (.67). Although the O/E ratios ranged from 0.25 to 0.91, all entities achieved O/E ratios less than 1. This indicates that, given the profiles of their patient populations, fewer patients than expected were readmitted for unplanned diagnoses within 30 days following an inpatient stay.

Immunizations for Adolescents

Among Connecticut commercial insurance carriers in 2017, 16.9 percent of adolescents had one dose of meningococcal conjugate vaccine, one tetanus, diphtheria toxoids and acellular pertussis (Tdap) vaccine, and had completed the human papillomavirus (HPV) vaccine series by December 31 in the year of their 13th birthday. This rate was lower than the NCQA HMO and PPO benchmarks of 24.0% and 19.9%, respectively. The overall CT rate of 16.9% differed between attributed (18.7%) and unattributed (4.6%) providers. Among patients of attributed providers, those with providers in an advanced network were vaccinated at similar rates (19.3%) to those with providers not in an advanced network (17.2%). The rates ranged from 5.1% to 29.6%. Seven entities had rates below the benchmark, three entities had rates above the benchmark, and three entities had rates in the range of the benchmarks.

Diabetes Care: HbA1c Testing

Among Connecticut commercial insurance carriers in 2017, 85.8 percent of diabetic patients aged 18-64 received annual Hemoglobin A1C (HbA1c) tests. This rate was somewhat below the NCQA HMO and PPO benchmarks of 91.2 and 89.8, respectively. The overall CT rate of 85.8% differed between attributed (89.1%) and unattributed (41.2%) providers. Among attributed providers, advanced network providers performed HbA1c tests somewhat more often (90.6%) than providers not in an advanced network (86.4%). The rates ranged from 86.0% to 94.7%. Although all entities achieved rates near the benchmark, nine entities had rates below the benchmarks and five entities had rates above the benchmarks; five entities achieved rates within the range of the benchmarks.

Follow-up after Hospitalization for Mental Illness (30 days)

Among Connecticut commercial insurance carriers in 2017, 70.4 percent of members 6 years of age and older, who were hospitalized for treatment of selected mental illness diagnoses, had a follow-up visit with a mental health practitioner within 30 days after discharge. The overall rate of 70.4% met the

NCQA HMO and PPO benchmarks of 69.7% and 67.3%, respectively. The overall CT rate differed between attributed (71.2%) and unattributed (62.8%) providers. Among attributed providers, 74.1% of qualifying members with providers in an advanced network had a follow-up visit within 30 days after discharge compared to 67.2% of qualifying members with providers who were not in an advanced network. The rates ranged from 58.7% to 89.7%. Two entities had rates below the NCQA benchmarks, and seven entities had rates above the NCQA benchmarks.

Medicare Entity-Level Results:

Plan All-Cause Readmissions

Among Connecticut Medicare insurance carriers in 2016, the O/E ratio (observed readmissions/expected readmissions) was calculated for unplanned acute readmissions for any diagnosis within 30 days that followed an acute inpatient stay during 2016. This rate was risk adjusted for health covariates (surgeries, discharge condition, comorbidities) in addition to age and gender. Lower O/E ratios indicate greater prevention of unplanned readmissions. The overall O/E ratio for CT Medicare patients was 0.97 which differed between attributed (0.96) and unattributed (1.11) providers. Among patients of attributed providers, those with a provider in an advanced network or Federally Qualified Health Center were more likely to have a readmission (0.90) than those with providers not in an advanced network or Federally Qualified Health Center (0.71). The O/E ratios ranged from 0.69 to 1.40. Thirteen entities achieved O/E ratios less than 1, three entities achieved O/E ratios of 1.00 and two entities had O/E ratio greater than 1. This indicates that, given the profile of their patient population, all but two entities had fewer patients than expected who were readmitted for unplanned diagnoses within 30 days following an inpatient stay.

Follow-up after Hospitalization for Mental Illness (30 days)

Among Connecticut Medicare insurance carriers in 2016, 77.3 percent of members 6 years of age and older, who were hospitalized for treatment of selected mental illness diagnoses, had a follow-up visit with a mental health practitioner within 30 days after discharge. The overall rate of 77.3% exceeded the NCQA benchmark of 56.4%. The overall CT rate differed between attributed (82.0%) and unattributed (62.3%) providers. Among attributed providers, 82.9% of qualifying members with a provider in an advanced network or Federally Qualified Health Center had a follow-up visit within 30 days after discharge compared to 81.2% of qualifying members with a provider who were not in an advanced network or Federally Qualified Health Center. The rates ranged from 66.7 to 95.6%. All entities had rates above the NCQA benchmark.

E. Sustainability and Conclusion

Sustainability Overview

While each workstream in Section B of this report has a sustainability section, this gives a summarized overview of those items being sustained post SIM.

Entities involved in CCIP have continued to fund the community health workers and care coordinators that were enabled by SIM. Additionally, they have all piloted collection of granular race, ethnicity, and SOGI data to better identify disparities and conduct targeted interventions. Community Health Workers now have a certification process through the Department of Public Health, which we believe will lead to more opportunities in the future for sustainable funding, especially in light of the pandemic and the need for CHWs.

The Prevention Service Initiative found in certain cases strong clinical outcomes in reducing A1C levels, but more conversations are being had between health care organizations and community-based organizations to negotiate the best sustainable financial model. Health Enhancement Communities continued post SIM with state funding, and several collaboratives had been formed and will continue after funding from OHS ceases. The State is supporting the creation of a health equity trust, that could be a funding mechanism for HECs to redress health inequities and apply interventions at root causes to social determinants of health.

PCMH+ has been sustained for a two-year wave 3, which started January 1, 2020. While Primary Care Modernization is not moving forward in the state envisioned within SIM, the State is already in the process of applying lessons learned and redoubling efforts to reform primary care. Post-SIM, quality measure alignment will play a big part in Governor Lamont's [Executive Order Number 5](#). This order tasks the Quality Council with establishing quality benchmarks by 2022, and expands the scope of the Quality Council beyond primary care.

The Public Scorecard was published in the Summer of 2019 with a positive reception. As rated entities have found it to be a meaningful, OHS continues to fund the scorecard with the desire that when CDAS becomes fully operational (CDAS still has funding secured through the HITECH Act), it will include ECQMs. The Health Information Alliance continues to support the Health Information Exchange, and more interest is being cultivated in light of the COVID-19 pandemic.

Conclusion

The SIM test grant aimed to improve patient's access to care, improve patient and provider experience, encourage the use of appropriate and high value care, foster better health outcomes while eliminating health disparities, and improve population health.

As of this report, SIM has enabled significant steps toward a better healthcare system in Connecticut. SIM efforts have led to short-term achievements including a significant increase in the number of

Connecticut residents in value-based payment arrangements, more primary care practices utilizing a patient-centered approach to care, more widespread integration of behavioral health and Community Health Workers into primary care, an increase in the number of employers adopting Value-Based Insurance Design plans, and an increasing commitment by ANs and FQHCs to foster community relationships for the provision of care and connection to social services to address the social determinants of health.

Results at this stage indicate that:

- Two thirds of work stream activities were implemented, while a third, primarily in the Health Information Technology work stream, were not.
- One third of accountability metrics were met or exceeded across work stream activities, primarily for Pace measures.
- In terms of quality benchmarks, patients who had regular sources of primary care, and particularly those affiliated with Advanced Networks, were generally more likely to receive care in line with national benchmarks.
- Patients with regular sources of primary care generally had higher rates of preventive care and screening, and lower rates of hospitalization or hospital readmissions.
- Overall, Medicaid members tended to report better care experiences than those with commercial insurance, but individual patient differences often accounted for differences in patient experience.
- The majority of primary care providers support electronic health record systems, and are associated with physician-led organizations, with Anthem most frequently reported as the shared savings program.
- Health care organizations reported significant investments in quality improvement, population health management, and behavioral health integration.
- Pronounced racial and ethnic health disparities were evident in several measures of health outcomes and quality, including cardio-vascular deaths.
- Medicaid members were most likely to have hospital readmissions, with patients who are Black or Hispanic at most risk for readmission.
- Rates of diabetes among Connecticut's adults, as well as child obesity rates, leveled off in the last five years, although obesity rates for adults have continued to increase.
- Smoking among adults and adolescents decreased, but rates of vaping were not assessed.
- Commercial insurance healthcare overall expenditures for medical inpatient and outpatient services and pharmacy care continued to increase, although primary care costs remained fairly constant.
- Medicare overall costs for medical claims was level during the project period, with inpatient costs decreasing, and outpatient, pharmacy and primary care costs increasing.

- PCMH+ and CCIP, and SSP models engaged a significant number of CT's providers and their patients, although target rates were not met. These programs offered promising strategies to provide patients and providers with higher quality care and reimbursement.
- Value based insurance design offered promising incentives for patients, but did not meet SIM targets due to barriers within the self-insured market.
- Leaders and members in SIM work streams reported that they valued opportunities to work together with colleagues to address challenges within CT's healthcare system, and appreciated the OHS' leadership and support. They also reported frustration with the complexity of their activities and administrative challenges, including the challenges of sharing data across State agencies, which prevented them from succeeding at all their work stream activities.

Over the last five years, the SIM project has begun to build a strong infrastructure for healthcare reform in the state, and has clearly uncovered the essential components of the next phase of work. In order to fully achieve the goals identified in the test grant and to expand on them in the future, it is critical that we continue along the continuum of value-based payment models. Such models will sustainably support the type of care delivery reform we know will support diverse patient needs and healthcare outcomes. We also know that to truly move the needle on our statewide goals, including health equity improvement, we need to focus on genuine primary prevention. This will require the shifting of funds, which are currently clustered in reactive healthcare, to prevention efforts that meet consumers where they are. Together, Health Enhancement Communities and Primary Care Modernization build on the SIM achievements, address many of the challenges identified in this Report, and offer the opportunity to fundamentally shift Connecticut's healthcare system to a more equitable, value-based, proactive model that improves outcomes for all Connecticut residents.

F. SIM Funding Utilization Overview

SIM Initiative	Expense	% SIM Budget	Purpose
Community & Clinical Integration Program	\$ 5,223,356.94	17%	Technical Assistance for Participating entities
			Transformation Awards
Population Health	\$ 7,107,142.44	23%	Oversight of the Prevention Service Initiative and Health Enhancement Communities Pre-Planning grants
			Technical Assistance and actuarial support
Person Centered Medical Home Plus	\$ 3,523,259.13	12%	Technical Assistance
			Actuarial Support
			Underservice Monitoring
			Enrollment Support
			Member mailings
Health Information Technology	\$ 4,320,664.32	14%	HIT & HIE Planning and Oversight
			Technology Services for HIE and CDAS
University of Connecticut: Evaluation, Public Scorecard, AHEC, Pain Center, Race/Ethnicity	\$ 3,707,683.84	12%	University of Connecticut scorecard development, evaluation, and work around AHEC, Pain Center, and race/ethnicity project
Value Based Insurance Design	\$ 230,002.53	1%	Technical Assistance
			Employer engagement
Consumer Engagement Activities	\$ 139,421.13	0%	Support workstreams with consumer engagement and the Consumer Advisory Council
Primary Care Modernization	\$ 1,856,549.04	6%	Facilitation & Stakeholding
			Technical Expertise
			Planning & Research
SIM Staff & Administrative Support	\$ 1,432,349.28	5%	Grant Management and Administration
			Programmatic Oversight
			Financial Management
			Communication
			Travel
Unspent Funds	\$ 2,878,748.81	9%	
TOTAL	\$ 30,419,177.46	100%	