State Innovation Model (SIM) Summative Evaluation Report: Activities and Goal Evaluation Award Year 2-4 (AY2-4)

Overview of SIM Implementation Activities from November 2016 - April 2019

December 2019

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Executive Summary

This report covers the process activities and outcomes of the State Innovation Model (SIM) test grant in Iowa during Award Years 2-4 (November 2016-April 2019).

The Summative Iowa SIM report is comprised of three chapters:

1) Process Evaluation of SIM Implementation Activities
2) Results of the 2016 and 2018 Statewide Survey
3) Outcome Evaluation of SIM Goals

Chapter 1 Key findings from the Process Evaluation

Stakeholder Engagement

- Multiple changes in state leadership positions (Governor, DHS Director, Medicaid Director, and the Medicaid Managed Care Organizations (MCOs)) presented variability in momentum in implementation of some aspects of the SIM. For example, convening of the Healthcare Innovation and Visioning Roundtable was delayed due to these transitions in leadership.
- A Social Determinants of Health (SDHs) workgroup was convened and progress was made toward defining and standardizing the measures for data collection surrounding social determinants of health.
- SIM staff and MCO representatives met regularly to discuss contract parameters, quality measures, and value-based reimbursement, which ended in satisfactory agreements, according to stakeholders.
- Both MCOs and three of the four Medicaid Accountable Care Organizations (ACOs) interviewed noted regularly convening healthcare stakeholders through meetings, workgroups, and the Governor's Healthcare Innovation and Visioning Roundtable (Roundtable) as a positive impact of the SIM.
- With the introduction of the Medicaid MCOs, the Medicaid ACOs were one level removed from the SIM organizers, Iowa Medicaid Enterprise (IME) in particular. This was reflected in all four ACOs reporting infrequent and "*sporadic*" involvement with the SIM staff, with two ACOs noting more involvement when they were contracting directly with the state (prior to Medicaid Modernization).
- Disrupted engagement with the Accountable Care Organizations (ACOs) impacted relationships, as ACOs reported diminished roles in decision-making and uncertainty about the SIM goals and the role of ACOs. Representatives from ACOs perceived they were not sufficiently involved in decision making and planning of policies and programs that their organizations were impacted by and or compelled to adopt.

Governor's Healthcare Innovation and Visioning Roundtable

- The Roundtable was convened in December 2017. Seven meetings of the Roundtable were held.
- Two workgroups, one focusing on Healthy Communities and the other focusing on Data Sharing and Use were formed in May 2018.
- In September 2018, the Roundtable shared recommendations with the Iowa Governor's Office, which included workgroup goals, processes, and strategies.
- The Iowa Governor's Office stated explicit support to sustain the assemblage of the Roundtable, goals, processes, and strategies.
- The Medicaid ACOs described their engagement with the SIM through the workgroups and the Roundtable as "*surface level*," "*conceptual*," and "*visionary*," and expressed a need for continuing SIM efforts, such as the Roundtable, to produce concrete contractual commitments toward statewide goals.
- Members of the Governor's Healthcare Innovation and Visioning Roundtable, Social Determinants of Health workgroup, Healthy Communities workgroup, and Data Sharing workgroup will all continue to meet to advance SIM goals beyond the SIM funding period.

- SIM-related workgroups plan to include Iowa Total Care, the Medicaid MCO which began a contract in July 2019, to continue incorporation of SIM goals with this new stakeholder.

Community and Clinical Care Initiatives (C3s)

- Broad community and regional groups of stakeholders were involved, engaged, aware of, and participated in C3 planning, development, and implementation. In most C3 communities and regions, C3 participants expect to continue their commitments to population health improvement and addressing social determinants of health after Iowa SIM funding ends; however, the extent of commitment varies from C3 to C3.
- All C3 lead staff remain committed to advancing the goals of the C3 and will do so after Iowa SIM funding ends.
- Advances have been made toward establishing care coordination processes and systems and integrating them into health and social services organization operation However, sustainable reimbursement to support these systems has not been identified and make them vulnerable over the long term. Some C3 communities have leveraged local partnerships and other funding sources or programs to maintain and develop care coordination services, but these too are susceptible to retraction.
- All but one C3 advanced their care coordination systems to achieve implementation status or have fully operationalized the Iowa Department of Public Health's Care Coordination Statewide Strategy that includes 41 tactics.
- Diabetes initiatives have evolved with C3 communities identifying gaps in services and patient, provider and staff education needs. C3s are working more towards identifying and meeting the needs of patients with diabetes and pre-diabetes, and in some instances diabetes programs are fully operational and integrated with extensive diabetes education programs in place.
- Local and regional relationships and partnerships have expanded, evolved, and formalized. Some have become an integral part of the local healthcare delivery system. This change was reported by many of the C3 stakeholders as the greatest outcome of the C3s.
- Data sharing is underway within most of the C3s but is limited except for one C3 that has a fully integrated system. In all instances, users are still being served.
- Program sustainability plans were created or are developing. All C3s are moving forward with at least some project plans; however, dedicated care coordination staff will be eliminated in most of the C3 regions.
- Each C3 continues to develop or operate at a different pace, adjusting to local, state, and national policy changes, reimbursement, and funding opportunities.
- Healthcare provider involvement in C3s is still variable, however, the few that are reportedly engaged and aware of C3 goals and activities are using access to improved care coordination and diabetes programming to their patients' benefit.
- All C3s' patient case stories detail the benefits and outcomes from the C3s related to patient health, social determinants of health, decreasing costs, increasing access, decreasing emergency room utilization, and improving indicators associated with diabetes and wellness.

Statewide Admission, Discharge, and Transfer (ADT) Alerting

- There were challenges getting all hospitals (especially rural hospitals) connected to the SWAN and getting the larger healthcare systems to buy-in to its potential to improve care processes.
- Both Medicaid MCOs reported using the SWAN to help coordinate care after patient discharges.
- MCOs and ACOs reported that the SWAN would have more value if the alerts were timelier (immediately after an ADT event) and all hospitals in Iowa were connected.
- MCOs expressed frustration that the use of and participation in the SWAN was required contractually before the platform and infrastructure was fully developed.
- The SWAN (Statewide Alert Notification), which was used in AY 2-3 for Statewide

Admission, Discharge, and Transfer (ADT) alerting, ended in April 2019.

- SWAN vendor, IHIN (Iowa Health Information Network), will continue providing Iowa hospitals with ADT alerts through a partnership with PatientPing.
- Some IHIN clients opted to continue their contracts with IHIN to receive PatientPing alerts, and some opted to contract directly with PatientPing (Figure 10). Three of the Medicaid ACOs which were original SWAN users (Mercy, UnityPoint, and Broadlawns) opted to contract directly with Patient Ping.

Data Collection, Sharing, and Reporting

- Several data collection efforts stimulated by the SIM will not be sustained post-SIM, including AssessMyHealth (AMH), Community Scorecards, and the VIS dashboard.
- Stakeholders understood the value of collecting and using Social Determinant of Health (SDH) data (and credit the SIM with initiating and maintaining conversations about SDHs) and some have incorporated SDH information into their internal processes and patient care plans.
- Different clinics and sites used different, incompatible, and/or underdeveloped EMRs, which limit the ability to collect data on the prevalence of SDH needs.
- There is a lack of workforce with experience in HIT and data analytics in health systems and the community.
- Many different types of Health Risk Assessment (HRA) instruments are in use across clinics and systems and this creates a challenge when trying to standardize data across systems.
- ACOs reported difficulty integrating aggregate AssessMyHealth (AMH) data from the state back into their own systems. C3s reported the AMH tool was time-consuming to implement and/or it was duplicative of other tools preferred by partners and predicted it would not be used after the SIM C3 funding ended.
- In AY4 the SDH workgroup identified standardized measures to replace the AMH screening tool (use ended in April 2019).

Value Based Purchasing (VBP) and Quality Metrics

- At the beginning of the SIM, the introduction of Medicaid Managed Care Organizations (MCOs) and basic state contract negotiations affected the MCOs ability to focus on SIM activities and plan for the metrics to meet SIM goals.
- In Award Year 2 (AY2), two of the three Medicaid MCOs completed state-approved VBP contracts in 2017, which included a 2% payment withhold to enforce the requirement of 40% covered lives in VBP.
- State-approved value-based contracts were in place as of September 2017, and both MCOs reported that they were satisfied with the conclusion of negotiations. The Iowa SIM team update in 2018 noted that incentive payments had been received and disseminated to providers in one MCO.
- In AY3, both MCOs were knowledgeable about contract expectations regarding increasing the percentage of members covered in a VBP arrangement to 30% by July 2018 and 40% by December 2018.
- MCOs reported active engagement in SIM VBP activities and explicitly reported collaborative relationships and participation in negotiations as a success.
- All MCOs and ACOs interviewed noted hesitation to adopt the VIS metrics, with five of these stakeholders noting that the VIS was developed to measure privately insured populations, and not suited to the Medicaid population. One ACO suggested increased alignment with Medicare methodologies as a potential solution. Neither MCO was able to identify added value from the requirement to incorporate VIS into performance-based measures.
- Stakeholders had conflicting motivations regarding standardization. MCOs wanted less standardization across ACO contracts (referring to the required use of state-approved contract templates) to promote competition in the MCO contracting process, and ACOs preferred standardization to simplify practice and reporting processes for providers.
- The VBP population threshold goal was met. Both participating MCOs were successful in

meeting the December 2018 goal of 40% lives covered in VBP.

- Exit and addition of Medicaid payers (MCOs) had an impact on the state's ability to standardize contracts across payers. Throughout the SIM, AmeriHealth and UnitedHealthcare withdrew from Iowa's Medicaid management, and Iowa Total Care began management. VBP contracts with terms to reflect updates to quality measures and percent of population covered were being negotiated at the time the SIM ended (April 2019) with active MCO stakeholders.
- Throughout the SIM, expectations for standardized quality measures and the qualifying metrics considered transitioned. The standard VIS measures were removed from VBP contracts and replaced with HEDIS measures of each MCOs choice.

Technical Assistance (TA)

- Additional subcontractors were added to the SIM TA team throughout the SIM, solidifying partnerships to provide SIM stakeholders access to specific expertise and leveraging existing networks of professional association members to enhance the application of SIM activities.
- All stakeholders interviewed (MCOs, ACOs, C3s) described various limitations in workforce skills and capacity as challenges which validated the need for providing targeted TA.
- Representatives from two ACOs described a lack of applicability of SIM provided training within their unique systems and settings.
- Three C3 site representatives reported a lack of follow-through regarding the cyclical quality improvement plan process, and six sites reported a need for customized TA.
- SIM TA in AY4 focused on sustainability and included efforts to measure and communicate the value of the SIM work, maintain a community of support for health transformation, and provide tools for ongoing progress towards SIM goals.
- Nine new C3 sites were onboarded during AY4, and their proposal requirements were in alignment with the original C3 site requirements (e.g. Accountable Communities of Health (ACH) model).

Chapter 2 Key findings from the Statewide Consumer Survey

- From 2016 to 2018, reports of excellent physical health increased by 4.6% while reports of fair/poor physical health remained stable for respondents in C3 counties.
- From 2016 to 2018, reports of excellent mental health decreased in both non-C3 (-2.1%) and C3 counties (-6.1%), while reports of good mental health increased (+1.9% and +4.2%, respectively).
- Every form of clinical diabetes-related stress decreased from 2016 to 2018, with emotional distress (-5.4%), physician-related stress (-4%), and interpersonal distress (-5.8%) showing the most significant reductions.
- From 2016 to 2018, there were reductions in the percentage of all respondents reporting tobacco use (-3.3%) and being overweight (-4%). More respondents in C3 counties were diagnosed as obese (+1.8%), advised to lose weight (+3.4%), to change diet (+7.3%), and to increase physical activity (+3.3%). The percentage of Iowans who were advised to quit smoking by their healthcare professionals increased in non-C3 counties (+2.1%) but decreased in C3 counties (-2.8%).
- From 2016 to 2018, four different measures of food insecurity decreased or remained stable for respondents in C3 and non-C3 counties.

Chapter 3 Key findings from the Medicaid Outcome Analyses

- Medicaid members reduced their use of the ED over the 4 years of the SIM demonstration, while nationally the rate of ED use for Medicaid members remained stable.
- The rate of inpatient readmissions declined during the 4 years of the SIM demonstration for adults 18-64 years of age. These rates are not adjusted for relative risk making them incomparable to national rates.
- The total cost of care for Medicaid members was volatile during the 4 years of the SIM demonstration making it difficult to ascertain any trend, though the costs in C3 counties

were below those in all other Iowa counties for the last 2 years of the demonstration period.

- Outcomes related to diabetes were essentially stable or negative over the 4 years of the demonstration with diabetes prevalence varying for all age groups over time with no discernible trend.
- Diabetes monitoring rates for eye exams, medical attention for nephropathy, and HbA1c testing were all comparable to national rates, however; C3 counties had higher rates than non-C3 counties consistently during the demonstration period.
- Obesity rates have increased over the 4 years of the SIM demonstration, while tobacco use has decreased. However, vaping is not yet included in the tobacco use component of the BRFSS.

Chapter 1: Process Evaluation of SIM Implementation Activities

Introduction

The State Innovation Model (SIM) was a federal grant program administered by the Centers for Medicare and Medicaid Service's (CMSs) Center for Medicare and Medicaid Innovation (CMMI). The purpose of this grant program was to provide funding for states to develop innovative ways to address the "triple aim" of healthcare reform; namely, to improve the patient experience of care and population health while simultaneously reducing health system costs. To do this, states were encouraged to use SIM funding to transform their public and private healthcare payment and delivery systems.

CMMI awarded three types of SIM grants -- Model Design, Model Pre-Test, and Model Test awards.[1] Design grants were awarded to states to design plans and strategies to transform healthcare in their states. Test states received awards to implement their plans for comprehensive statewide healthcare transformation. In 2013, Iowa received a Model Design award and in 2015 received a $43 million Model Test award to implement and test its plan over the course of four years. SIM year 1 (2015) and year 2 (through October 2016) were development and building years for the SIM initiative in Iowa and are not covered in this this report.

Chapter Focus and Organization

This chapter covers the process and implementation activities of the SIM initiative test grant in Iowa during Award Year 2 (AY2), Award Year 3 (AY3) and Award Year 4 (AY4), which spanned November 2016 – April 2019.

The objective of the process and implementation evaluation was to describe the structure of the interventions/actions being utilized in the SIM initiative and the characteristics of the communities and settings which were impacted by the SIM. The key questions addressed in throughout reports included:

1) How were the SIM interventions implemented around the state of Iowa?
2) What non-SIM factors or statewide programs are in place that could also impact the SIM-specific goals?
3) How were strategies to promote sustainability of SIM initiatives implemented?

This report is organized by providing a summative overview about the evolution of each SIM activity or intervention.

A variety of methods were used to gather the information provided in this report. The University of Iowa Public Policy Center (PPC) team reviewed documents and collected information from pertinent websites, participated in bi-weekly phone conferences with the state SIM team and the Center for Medicare and Medicaid Innovation (CMMI), participated in monthly phone conferences with the state SIM team and the national evaluators, and conducted stakeholder interviews to understand how the SIM initiative was being implemented throughout the grant.

Methods

The PPC state-level evaluation of Iowa's SIM included both qualitative and quantitative methods and incorporated multiple data sources and collection methods to capture information from many areas of the healthcare system (local, regional, and state-level; patient, provider, payer, and other stakeholders). The overall evaluation includes two-parts: 1) assessment of the process and implementation of the key SIM interventions and activities (including the statewide survey) and, 2) assessment of the core SIM goals (primary outcomes used to measure the success of the SIM). As noted previously, this chapter focuses on part 1, the description of and progress update on the implementation activities in this reporting period.

1 Centers for Medicare and Medicaid Services. State Innovation Models Initiative: General Information. Accessed November 1, 2016 at https://innovation.cms.gov/initiatives/state-innovations/

A variety of methods were used by the PPC evaluation team to gather the information provided in this report. To provide data to inform key questions 1 and 2, the team regularly conducted a systematic environmental scan of SIM-related initiatives. This included a review of documents and information collected from pertinent websites, review of documents requested from SIM partners, including work group meeting minutes, work plans, and survey and evaluation instruments, and participation in phone conferences with the state SIM team, CMMI, and the national evaluators.

The following specific sources were used to gather information. Sources were reviewed at least quarterly.

Websites

Iowa Department of Public Health

Iowa Department of Human Services

Iowa Healthcare Collaborative

Iowa Medicaid Enterprise

Centers for Medicare & Medicaid Services State Innovation Models Initiative

SIMplify (the Iowa SIM initiative website for the community partners)

Amerigroup Iowa

United Healthcare of Iowa

Iowa Health Information Network (IHIN)

Centers for Disease Control and Prevention (CDC)

Periodic Publications

SIMplify newsletter

Community and Clinical Care (C3) proposals, action plans, and quarterly reports

Iowa SIM quarterly reports to CMMI

Quarterly MCO reports

In addition to secondary data collection, the PPC team conducted a variety of stakeholder surveys and interviews to understand how the C3 initiative was being implemented and perceived by stakeholders during the grant period. The PPC evaluation team included a subcontractor, Rural Health Solutions (RHS), a consulting company with national rural health development, research, and evaluation expertise.[2] RHS focused efforts on evaluation of the Community and Clinical Care (C3) initiatives. Table 1 provides a summary of the stakeholder groups asked to provide input on their experiences with the Iowa SIM grant activities.

2 http://www.rhsnow.com/

Table 1. Sources of Stakeholder Experiences

Stakeholder Group	Method	Timing of Data Collection
Payers – Medicaid MCO representatives	Telephone Interviews	November/December 2017
Providers – Medicaid ACO representatives	Telephone Interviews	February/March 2018
C3 Program Officers	Care Coordination matrix	April 2017 April 2018 April 2019
C3 Steering Committee Members	Web-based survey	March 2017 February/March 2018 April 2019
C3 Community Coalition members	Web-based survey	February/March 2018 March/April 2019
C3 Healthcare Providers	Mailed Survey	March 2017 March 2018 April 2019
C3 Program Officers	Site Visit Interview	Fall 2017 April 2018
C3 Clinic Managers	Telephone Interviews	March 2017 April 2018
C3 Diabetes Educators	Telephone Interview	April 2018 April 2019
C3 Patients/Clients	Mailed Surveys	December 2017 – April 2018
C3 Network Analysis	Web-based survey	July – October 2018
C3 Steering Committee Members	On site group exit interview	March/April 2019
C3 Community Coalition members	Exit interview	March/April 2019

Vision and Goals

The overall vision of the Iowa SIM Test Award during its first two years was to transform healthcare to improve the health of Iowans. For AY3 and AY4 planning and implementation, the SIM vision was revised to "Iowans experience better health and have access to accountable and affordable healthcare in every community." This vision and updated driver diagram continued to be the foundation throughout the duration of the grant. The figure on the following page is the AY3 and AY4 driver diagram.

The SIM focused efforts around two primary drivers:

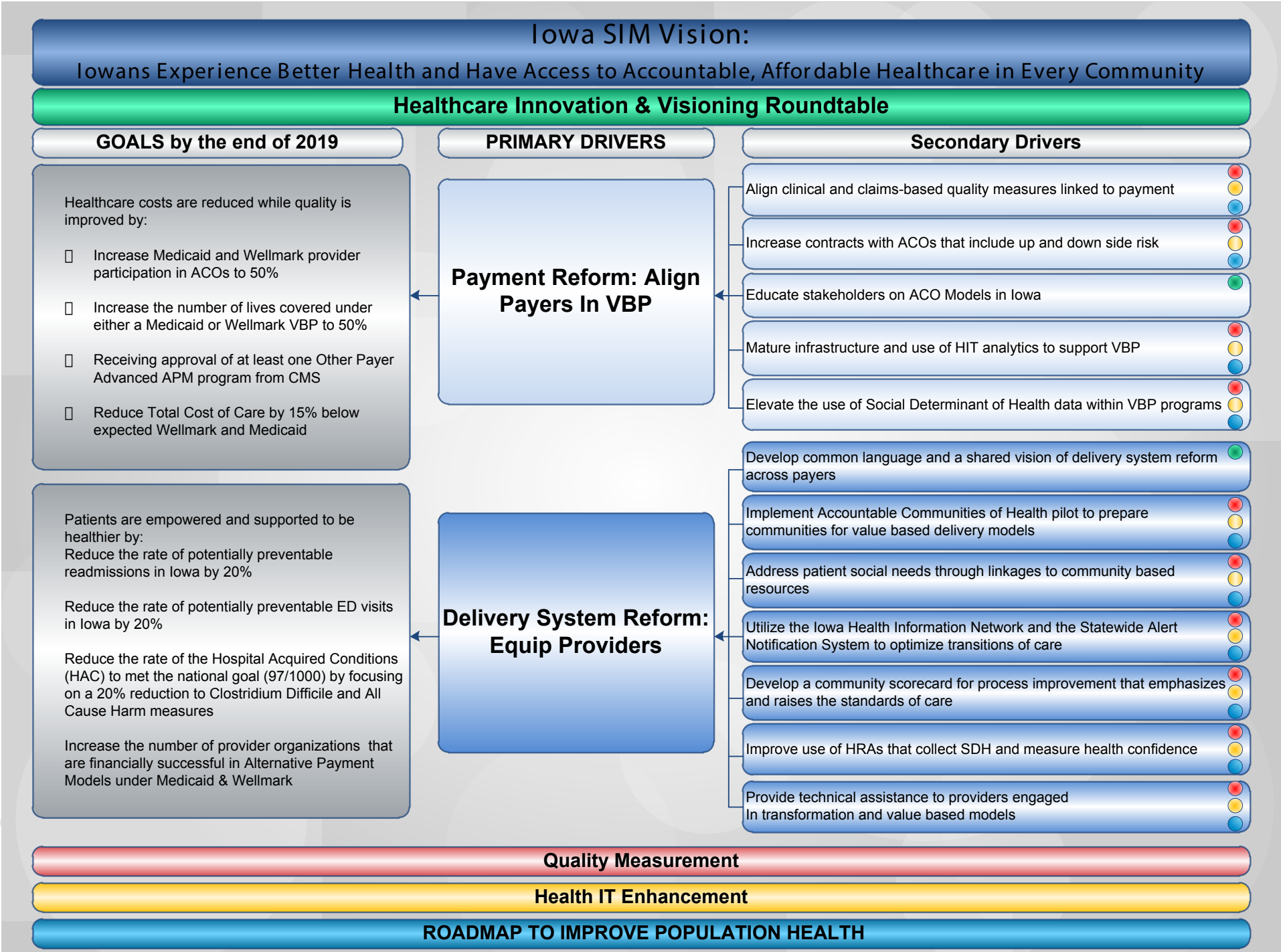
> **Delivery system reform** centered on equipping providers in the community and healthcare systems with tools to engage in population health and to educate them on value outcomes to support their initiation into payment reform.
>
> **Payment refor**m centered on aligning payers and providers in value-based purchasing (VBP) and Advanced Alternative Payment Models (APMs)

The combination of these two reform efforts was intended to achieve statewide healthcare transformation where providers are paid based on quality and value, and communities and health systems work together to produce a healthy population.

The primary implementation strategies used by the SIM to address the aims of the grant cross both primary drivers but focus on a variety of activities. These include:

- Funding community and clinical care coalitions (C3s),
- Deployment of a statewide Admissions, Discharge, and Transfer (ADT) alerting system

- Data collection, sharing, and reporting,
- Instituting value-based purchasing (VBP) as a method of payment reform, and
- Providing technical assistance (TA) at both the community and healthcare system levels


Iowa SIM Vision:
Iowans Experience Better Health and Have Access to Accountable, Affordable Healthcare in Every Community
Healthcare Innovation & Visioning Roundtable
GOALS by the end of 2019
PRIMARY DRIVERS
Secondary Drivers
Healthcare costs are reduced while quality is improved by:
Increase Medicaid and Wellmark provider participation in ACOs to 50%
Increase the number of lives covered under either a Medicaid or Wellmark VBP to 50%
Receiving approval of at least one Other Payer Advanced APM program from CMS
Reduce Total Cost of Care by 15% below expected Wellmark and Medicaid
Payment Reform: Align Payers In VBP
Align clinical and claims-based quality measures linked to payment
Increase contracts with ACOs that include up and down side risk
Educate stakeholders on ACO Models in Iowa
Mature infrastructure and use of HIT analytics to support VBP
Elevate the use of Social Determinant of Health data within VBP programs
Patients are empowered and supported to be healthier by:
Reduce the rate of potentially preventable readmissions in Iowa by 20%
Reduce the rate of potentially preventable ED visits in Iowa by 20%
Reduce the rate of the Hospital Acquired Conditions (HAC) to met the national goal (97/1000) by focusing on a 20% reduction to Clostridium Difficile and All Cause Harm measures
Increase the number of provider organizations that are financially successful in Alternative Payment Models under Medicaid & Wellmark
Delivery System Reform: Equip Providers
Develop common language and a shared vision of delivery system reform across payers
Implement Accountable Communities of Health pilot to prepare communities for value based delivery models
Address patient social needs through linkages to community based resources
Utilize the Iowa Health Information Network and the Statewide Alert Notification System to optimize transitions of care
Develop a community scorecard for process improvement that emphasizes and raises the standards of care
Improve use of HRAs that collect SDH and measure health confidence
Provide technical assistance to providers engaged In transformation and value based models
Quality Measurement
Health IT Enhancement
ROADMAP TO IMPROVE POPULATION HEALTH

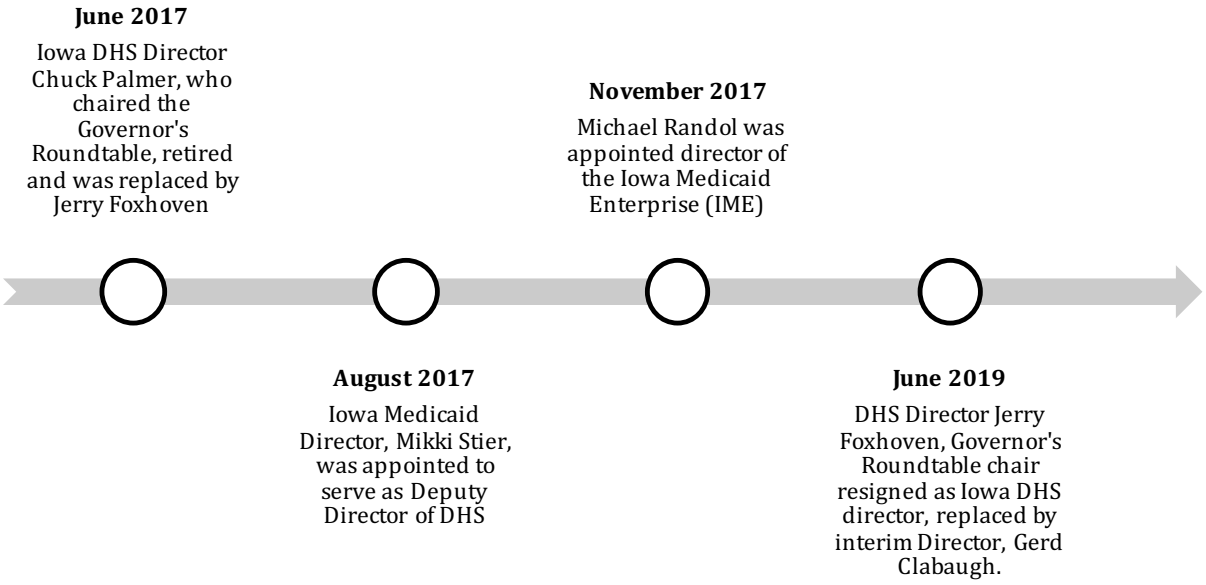
Governance

With oversight from the Governor's office, the governance of the Iowa SIM was primarily led by representatives from the Iowa Department of Human Services (DHS) and the Iowa Department of Public Health (IDPH). Two representatives from the governor's cabinet, specifically the Director of DHS and the Director of IDPH, were responsible for working with the state executive and legislative branches.

The Director of DHS was the recipient of the SIM grant and as such, DHS was accountable for the operation and execution of the SIM activities. IDPH partnered with DHS to implement particular functions of the SIM grant. The Iowa Healthcare Collaborative (IHC) provided technical assistance and quality improvement support services to healthcare providers and other stakeholders. These three entities had the primary responsibilities for carrying out most SIM activities.

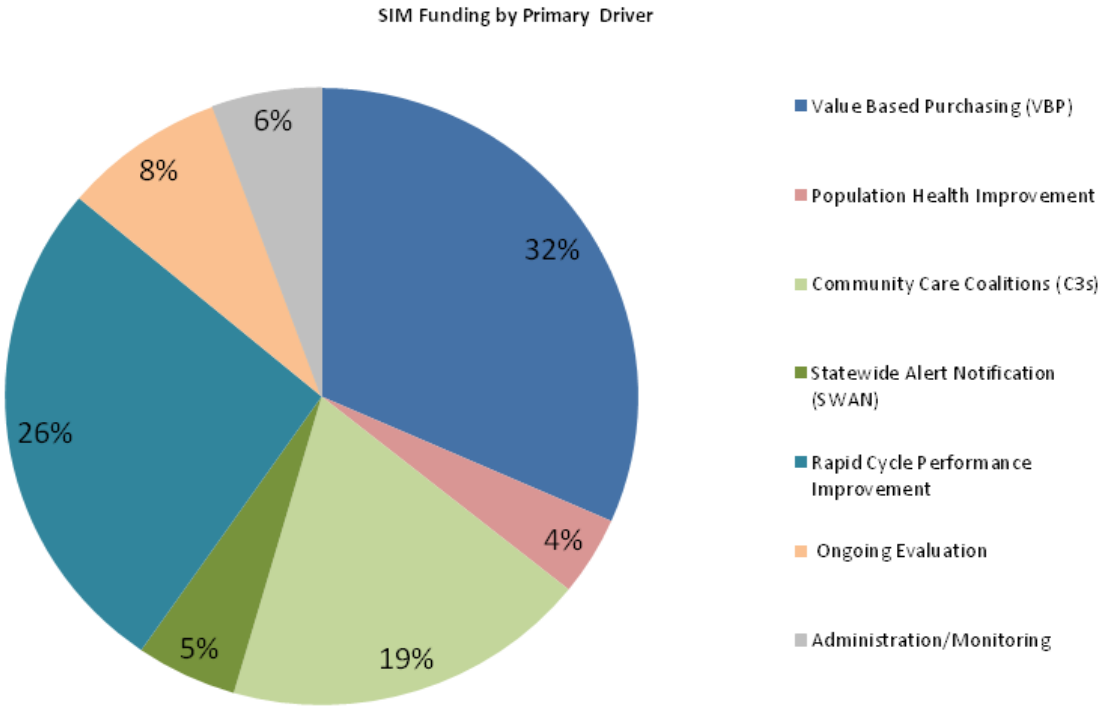
Throughout the SIM grant, notable transitions in leadership entities occurred as outlined in Figure 1.

Figure 1.1. Leadership transitions in SIM governance entities throughout grant



A Summation of the Iowa SIM Process Evaluation

This summative report reviews all SIM investments and activities from AY2 to AY4. The figure below shows the proportion of SIM funding dedicated to each driver included in this report. Of note, naming conventions for each driver shifted over time, so Rapid Cycle Performance Improvement is also referred to as Technical Assistance (TA), and SWAN (Statewide Alert Notification) is also referred to as statewide Admissions, Discharge, and Transfer (ADT) alerting.



Stakeholder Engagement

There were many stakeholders who were integral to the implementation of the SIM in Iowa. Partners in the SIM vision and implementation included payers, providers, communities, state governmental entities, and others. Table 2 provides a list of SIM stakeholders organized by sector.

Table 2. SIM Stakeholders

State Government	Payers	Providers	Communities	Contracted Entities
• Iowa Department of Human Services (DHS) • Iowa Department of Public Health (IDPH) • Iowa Medicaid Enterprise (IME) • Governor's Office • Iowa Department on Aging	• MCO: Amerigroup • MCO: UnitedHealthcare *(June 2019 exit)* • Wellmark • *MCO: Centene (July 2019 start)* • MCO: AmeriHealth *(Nov. 2017 exit)*	• Accountable Care Organizations (ACOs) • Independent primary care providers • Hospitals	• C3 community care teams • Social services agencies • Local government • Local and county public health • Healthcare consumers	• Iowa Healthcare Collaborative (IHC) • 3M Analytics • Public Policy Center (PPC) • Iowa Health Information Network (Hielix, then IHIN)

Over the SIM grant period, several transitions of Managed Care Organizations, which were primary stakeholders in the SIM payment reform efforts, occurred.

During AY3, two primary stakeholders in the SIM, namely a Medicaid MCO (AmeriHealth) and a Medicaid ACO (University of Iowa Health Alliance), no longer participated in SIM activities for different reasons. In October 2017, the state announced the withdrawal of AmeriHealth Caritas Iowa from Iowa's Medicaid management.[3] And, in March 2018, the University of Iowa Health Alliance announced its decision to dissolve its Medicaid ACO.

During AY4, a primary stakeholder in the SIM, namely a Medicaid MCO (UnitedHealthcare), began transitioning out of SIM involvement. In March 2019, the state announced the withdrawal of UnitedHealthcare from Iowa's Medicaid management, effective June 30, 2019.[4,5] In response, (and in conjunction with the November 2017 withdrawal of AmeriHealth Caritas Iowa) Iowa DHS announced the addition of an MCO, namely, Iowa Total Care, a Centene subsidiary, to Iowa's Medicaid management in February 2019. Iowa Total Care began Medicaid management in Iowa starting July 1, 2019.[6]

The following sections describe some of the main stakeholder engagement activities and stakeholder experiences with these activities.

SIM Communication Workgroup

The SIM Communication Workgroup, which began in May 2017, held bimonthly meetings during the SIM grant. The Communication workgroup provided a platform for members of the SIM team to discuss updates, successes, barriers, grant requirements, and progress towards goals. The SIM communication workgroup discontinued regular meetings in April 2019.

Standardized Social Determinants of Health (SDH) Workgroup

The SIM team convened a group of stakeholders with the end goal of standardizing social determinants of health data collection across the state. Since its inception in June 2017, members of the SDH workgroup held monthly meetings. Members of the SDH workgroup included state government entities, public health, payers, health systems, provider groups, health and social service providers. The goal of the SDH workgroup is to "suggest standardized measures and provide

3 https://dhs.iowa.gov/sites/default/files/PressRelease_October2017.pdf
4 https://dhs.iowa.gov/sites/default/files/PressRelease_IAHealthLink_Update_March29_2019.pdf?062520192101
5 https://dhs.iowa.gov/sites/default/files/Member_Provider_Town%20Halls.pdf?062520192114
6 https://dhs.iowa.gov/sites/default/files/1989-MC-FFS_MCO_Credentialing_0.pdf?062520192120

guidance for collecting, analyzing, reporting, and utilizing the data to our stakeholders through education and advocacy." The SDH workgroup progressed towards its goal by completing activities listed below throughout the SIM grant.

Created a crosswalk of items included in four established SDH screening tools

Selected and added standardized SDH items to the Assess My Health (AMH) screening tool

Narrowed SDH focal areas from five to three (housing stability, food security, and income capacity)

Identified existing data sources to establish a baseline of SDH related needs in the state (e.g. Community Health Needs Assessments)

Collected, analyzed, and reported on the SDH data collected on the AssessMyHealth (AMH) tool

Started the process of conducting an environmental scan to identify existing resources and programs which could be leveraged to address SDH

Identified standardized measures to replace AMH SDH screening tool (AMH use ended in April 2019)

Standardized SDH measures were adopted by IME with the intent to be included in the next iteration of MCO contracts

Developed briefs on key topics (income, housing, and food) from an environmental scan to guide the Healthy Communities Roundtable Workgroup

Standardized Social Determinants of Health (SDH) Workgroup activities and meetings will continue beyond the SIM funding period.

Value Based Purchasing (VBP) Workgroup

Throughout the SIM grant, the MCOs managing Medicaid were engaged in VBP workgroups, facilitating the negotiations of quality metrics and contractual expectations for progress. The regularly scheduled VBP workgroups adjourned in late 2017 after finalizing 2018 program requirements and contract language. At that time, Medicaid in Iowa was managed by three MCOs, Amerigroup Iowa Inc. (Amerigroup) and United Healthcare Plan of the River Valley, Inc. (United Healthcare), and AmeriHealth Caritas (AmeriHealth). However, in November 2017, AmeriHealth announced its withdrawal from Iowa's managed care program, effective December 1, 2017.[7] Engagement with MCOs regarding payment reform continued in December 2017 through the assembly of the Governor's Healthcare Innovation and Visioning Roundtable, in which both active MCOs at the time (Amerigroup and United Healthcare) were members.

Governor's Healthcare Innovation and Visioning Roundtable

The AY3 & AY4 Operational Plan for the Iowa SIM included plans to convene a Governor's Healthcare Innovation and Visioning Roundtable (indicated as the Roundtable from this point forward), which was responsible for gathering stakeholders, planning the remaining years of the SIM, and sustaining the SIM initiatives beyond the granting period.

In AY2, the state planned the assemblage of the Governor's Healthcare Innovation and Visioning Roundtable (formerly known as SIM Innovation and Visioning Roundtable) and was seeking a federal facilitator to conduct the first Roundtable meeting.

Beginning in December 2017, six Roundtable meetings were held during AY3, and one has been held (June 2019) since SIM funding ended in April 2019. Roundtable meetings continue to be facilitated by Health Management Associates (HMA).

In response to the September 2018 recommendations the Roundtable shared with the Iowa Governor's Office, Governor Reynolds released a letter in October 2018. The full letter is embedded below, and the content included explicit support to sustain the assemblage of the Roundtable, goals, processes, and strategies. The Governor's letter also described recommendations for public and legislative engagement, along with regular evaluation of progress.

7 https://dhs.iowa.gov/sites/default/files/1848-MC-FFS-D_AmeriHealth_Caritas_Withdraw.pdf

KIM REYNOLDS
GOVERNOR

OFFICE OF THE GOVERNOR

ADAM GREGG
LT GOVERNOR

October 22nd, 2018

Director Jerry Foxhoven
Chair of the Healthcare Innovation and Visioning Roundtable
1305 E Walnut St.
Des Moines, IA 50319

Dir. Foxhoven,

I want to thank the members of the Healthcare Innovation and Visioning Roundtable for participating in this important effort and for your hard work and dedication in developing your recommendations. It is clear this Healthcare Innovation and Visioning Roundtable brings together influential business leaders, payer, providers and public agency leaders most immediately accountable for making change that will build an improved and sustainable healthcare system in Iowa. I also appreciate the national experts who helped facilitate conversations and brought national best practices to Iowa for consideration. I applaud this group for work you've accomplished.

Our mutual goal is to create a sustainable healthcare system in Iowa which can only be achieved through thoughtful collaboration. Key to that effort is creating healthy communities for all Iowans, establishing effective data sharing that supports health communities and ensuring sustainability of these strategies.

Your recommendations make clear that there is strong consensus on the need to continue the important work of this Healthcare Innovation and Visioning Roundtable which has brought together stakeholders to focus on both rural and urban communities. Together we can ensure the implementation of these recommendations and continue to build and maintain a strong public-private partnership and multi-stakeholder process.

I support the continuation of the Healthcare Innovation and Visioning Roundtable in the effort to refine and develop implementation steps for your recommendations and future actions. This includes the development of a formal governance infrastructure. The healthcare Innovation and Visioning Roundtable should produce periodic progress reports on the implementation of your recommendations and any future actions.

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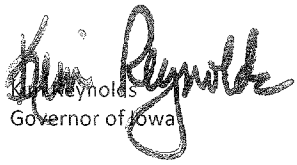
Efforts should include a stakeholder engagement plan, with opportunities for public engagement and interaction of communities, consumers and state legislators. This will allow them to share community successes and encourage replication and adaptation of successful community approaches.

It will also be important to evaluate the impact of the work advanced by the Healthcare Innovation and Visioning Roundtable using measures and milestones of success that are meaningful for stakeholders in communities and reflect what is important to difference constituencies in the community.

Again, I appreciate all of your work and dedication. It is clear you have assembled the right people to truly effectuate the change needed for Iowa's healthcare delivery system.



Kim Reynolds
Governor of Iowa

The workgroups formed and monitored by the Roundtable (Healthy Communities and Data Sharing and Use) continued to meet regularly during the SIM funding period, and beyond.

Stakeholder Engagement Summary

- Multiple changes in state leadership positions (Governor, DHS Director, Medicaid Director, and the Medicaid Managed Care Organizations -MCOs) presented variability in momentum of implementation of some aspects of the SIM. For example, convening of the Healthcare Innovation and Visioning Roundtable was delayed due to these transitions in leadership. An SDH workgroup was convened and progress was made toward defining and standardizing the measures for data collection surrounding social determinants of health (SDHs).
- Regular MCO workgroups: SIM staff and MCO representatives met to discuss contract parameters, quality measures, and value-based reimbursement.
- Both MCOs and three of the four ACOs interviewed noted regularly convening healthcare stakeholders through meetings, workgroups, and the Governor's Healthcare Innovation and Visioning Roundtable (Roundtable) as a **positive impact** of the SIM.
- With the introduction of the Medicaid MCOs, the Medicaid ACOs were one level removed from the SIM organizers, in particular IME, and this was reflected in all four ACOs reporting infrequent and *"sporadic"* involvement with the SIM staff, with two ACOs noting more involvement when they were contracting directly with the state (prior to Medicaid Modernization).
- Disrupted engagement with the ACOs has impacted relationships, as ACOs report diminished roles in decision-making and uncertainty about the SIM goals and the role of ACOs. ACOs perceived they were not sufficiently involved in decision making and planning of policies and programs that their organizations were impacted by and/or compelled to adopt.

Governor's Healthcare Innovation and Visioning Roundtable summary

The Roundtable convened in December 2017. Seven meetings of the Roundtable have been held.

Two workgroups, one focusing on Healthy Communities and the other focusing on Data Sharing and Use were formed in May 2018.

In September 2018, the Roundtable shared recommendations with the Iowa Governor's Office, which included workgroup goals, processes, and strategies.

- The Iowa Governor's Office stated explicit support to sustain the assemblage of the Roundtable, goals, processes, and strategies

ACOs described SIM engagement in workgroups and the Roundtable as "surface level," "conceptual," and "visionary," and expressed a need for continuing SIM efforts, such as the Roundtable, to produce concrete contractual commitments toward statewide goals.

Members invited to the Roundtable could be updated to include key stakeholders recommended by the National Governor's Association (specifically, the state Attorney General's Office, a Health Information Organization, and a State Health IT Coordinator).

- Other healthcare stakeholder groups could also be considered for membership to the Roundtable.
    - First, to provide a **patient-centered** perspective, additional patient or consumer advocacy groups could be appointed to membership (i.e., behavioral health groups, child advocacy groups, or healthcare consumers themselves – perhaps from a C3 region).
    - Second, the inclusion of state legislators, particularly from the Health Policy Oversight Committee, could be beneficial to provide an **additional policymaker stakeholder** perspective.
- Members of the Governor's Healthcare Innovation and Visioning Roundtable, Social Determinants of Health workgroup, Healthy Communities workgroup, and Data Sharing workgroup will all continue to meet to advance SIM goals beyond the SIM funding period
- SIM-related workgroups plan to include Iowa Total Care, the Medicaid MCO that began a contract in July 2019, so alignment with SIM goals will continue with this new stakeholder

Evaluation of Implementation Activities

The implementation activities from the end of AY2 into AY4 were a continuation of previous activities to promote the two primary drivers of the Iowa SIM; namely, delivery system reform (equipping providers with tools and technical assistance on how to use the tools and information) and payment reform (establishment of quality measurement and promotion of value based purchasing contracts). The following outline shows how the activities will be organized and presented in this section.

1) Healthcare Delivery System Reform
    - Community and Clinical Care Initiatives (C3s)
    - Statewide Admission, Discharge, and Transfer (ADT) Alerting
    - Data Sharing, Collection, and Reporting
        - Continuous Quality Improvement – Community Scorecards
        - Social Determinants of Health – Health Risk Assessments (HRAs)
        - Value Index Score (VIS) Dashboard
2) Payment Reform
    - Value-Based Purchasing (VBP)
    - Quality Measures and the Value Index Score (VIS)
3) Technical Assistance (TA)
    - Statewide Learning Events
    - Targeted TA to C3 Communities
    - Targeted TA to Healthcare Systems

The rest of this section provides a description of each activity, a summary of implementation during this reporting period, and some experiences of stakeholders with each SIM implementation activity.

Community and Clinical Care (C3) Initiatives

SIM-funded Community and Clinical Care (C3) Initiatives were designed to transform healthcare delivery by promoting care coordination across the traditional divide between medical, public health, and social service delivery systems. At the conclusion of the SIM, the C3 service regions across the state included 25 counties (including 15 counties from the 2016 cohort). The following map (Figure 3) shows the C3 sites and associated service areas at the end of the SIM.

Specific to the SIM, the C3s have two primary functions:

1) Develop and implement population-based, community-applied interventions for their target population, individuals at risk for, or who currently have ***diabetes***
2) Address social determinants of health through ***care coordination***

Figure 1.2. Timeline of C3 events throughout SIM grant

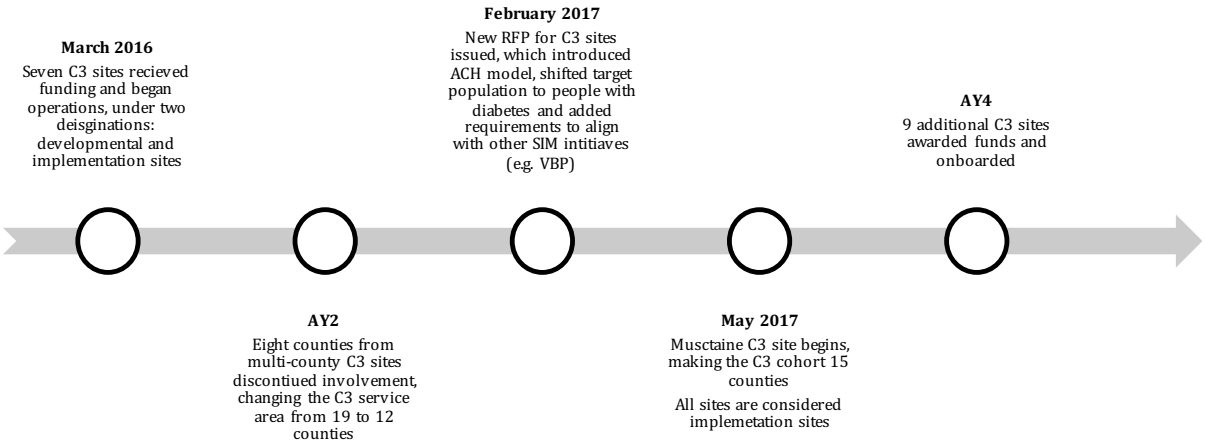
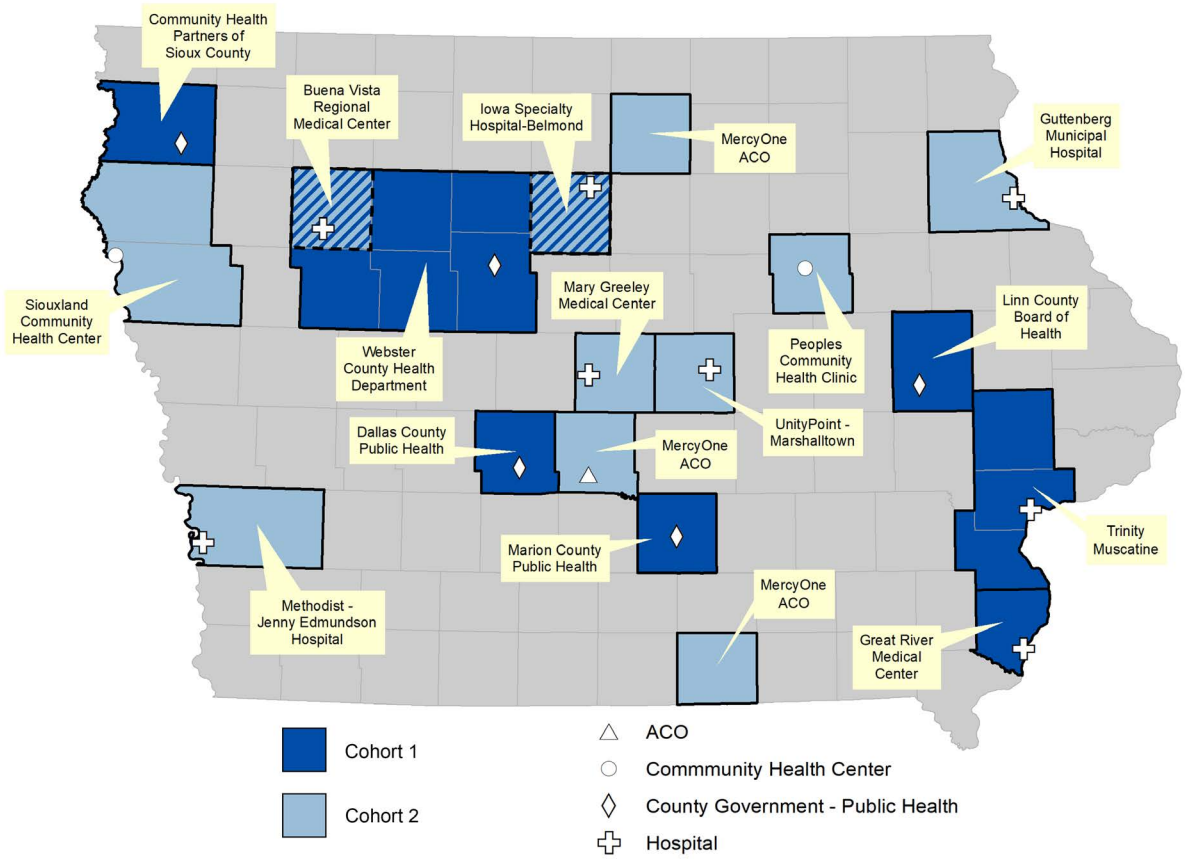


Figure 3 shows the two cohorts of C3 sites, specifically the 7 sites which began C3 activities in 2016 (Muscatine, awarded in 2017, is also included), along with the 9 sites which were awarded in SIM Award Year 4. The C3 sites now cover 25 counties in the state, including independent awards to two counties which were involved in the Webster County C3 (cohort 1 C3). Figure 3 also displays symbols categorizing each integrator organization (i.e. grantee) at each C3 site. Compared to the first C3 cohort, which was primarily comprised of government public health agencies, the second cohort had more representation of healthcare-based C3 site leadership, along with an ACO.

Figure 1.3. C3 sites at the end of the SIM grant by Cohort and Integrator Organization



In the first year (SIM AY2) of the C3 initiatives, the Marion, Des Moines, and Linn county C3 sites were developmental sites and the Sioux, Dallas, and Webster county regional C3 sites were implementation sites. The UnityPoint Health – Trinity Muscatine C3 site began operations in year two (SIM AY3). In year two (SIM AY3) and going forward, all C3 regions were considered implementation sites.

In 2017, the structure and function of the C3s were shifted to align more closely with the Accountable Community of Health (ACH) model of health care delivery.[8] The C3 RFP included criteria to increase and strengthen clinical partnerships within the C3s.

Sustainability

In AY4, C3 sites included specific activities that address sustainability in their C3 action plans. Examples of these planned initiatives are shown below.

Preparation of the delivery system by attending educational opportunities focusing on payment reform.

Removal of policy and regulatory barriers through implementation of local data sharing agreements.

Incorporation of target population data into the local CHNA/HIP process and assuring polices for sharing patient information are in place.

Improvement of the CHNA/HIP process through clinical-community collaboration

Implementation of system-wide change strategies to support the provision of clinical and community care coordination and promote sustainability.

8 Spencer A and Freda B. Advancing State Innovation Model Goals through Accountable Communities of Health. Center for Healthcare Strategies, Inc. October 2016. Available at https://www.chcs.org/resource/accountable-communities-health-state-innovation-models/

Target Population – Individuals with Diabetes

In addition to the C3 sites shifting focus to a diabetic population, statewide efforts to improve the diabetes education infrastructure developed during the SIM grant. Diabetes education programs are widespread across the state and it is important to note those with state certification. This accreditation qualifies Medicare program participants for cost reimbursement and, in Iowa, state certified Diabetes Self-Management Education and Training (DSME) programs are reimbursed by Medicaid and some private insurers. Thus, efforts to promote state-certification of DSME programs was a strong policy angle for SIM activities. Efforts to implement this part of the population health initiative of the SIM have involved many policy levers for change, including establishment of cooperative agreements and relationships, helping build infrastructure, and offering financial incentives through reimbursement for education programs. While the number of DSME sites have remained constant, 32 additional DSME sites in the state have received state certification since 2017, with 103 total state certified sites in Iowa in 2019.

One of the SIM activities involves promoting "population based, community applied" interventions designed to encourage providers to use evidence-based care and support patients in self-managing their health conditions. One of the ways C3 initiatives do this is through leveraging existing community evidence-based programming supporting diabetes self-management[9] such as the DSME program[10], the Better Choices, Better Health program (also known as the Stanford Chronic Disease Self-Management Program (CDSMP))[11], and the National Diabetes Prevention Program (NDPP)[12].

In Figure 4, diabetes-related programming in Iowa is highlighted. Diabetes education programs/sites are indicated by the colored circles; those with state certification are indicated with a star inside the circle.

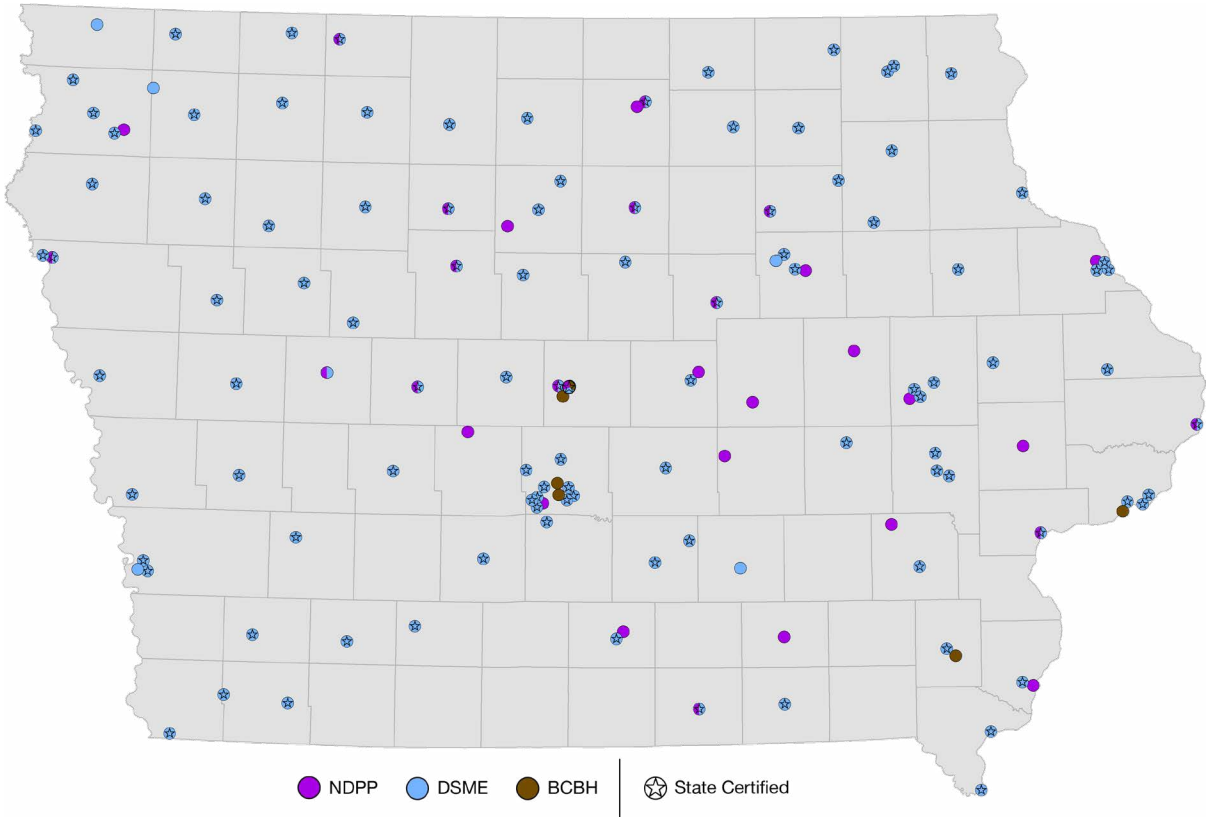
9 Iowa Department of Public Health. Diabetes Prevention and Control. Available at http://idph.iowa.gov/diabetes

10 Centers for Disease Control and Prevention. Managing Diabetes: Diabetes-Specific Self-Management Education Programs. Available at https://www.cdc.gov/learnmorefeelbetter/programs/diabetes.htm

11 Iowa Department of Public Health. Better Choices, Better Health. Available at http://www.idph.iowa.gov/betterchoicesbetterhealth

12 Centers for Disease Control and Prevention. National Diabetes Prevention Program. Available at https://www.cdc.gov/diabetes/prevention/index.html

Figure 1.4. Diabetes Programming Map



Note: all program sites may not be visible on the map, due to overlap in dense locations

DSME: Diabetes Self-Management Education (DSME) is a ten hour program for people diagnosed with diabetes which provides education on medical management and self-care behaviors [Source: ADA Recognized Education Programs and American Association of Diabetes Educators accredited programs]

BCBH: Better Choices, Better Health (BCBH) (also known as Chronic Disease Self-Management Program/Education (CDSMP)) is a six week workshop (15 hours total) for individuals with chronic conditions to improve health outcomes through managing lifestyle behaviors [Source: Iowa Department of Public Health]

NDPP: National Diabetes Prevention Program (NDPP) is a yearlong program (16 sessions + 6 follow-up sessions) that can help prevent or delay type 2 diabetes for people with prediabetes [Source: CDC NDPP Registry]

State Certification: The IDPH certifies diabetes outpatient education programs – certification is necessary to obtain reimbursement from Medicaid and some private insurers in the state of Iowa [Source: Iowa Department of Public Health]

Care Coordination

In June of 2016, the Iowa Department of Public Health published its "Care Coordination Statewide Strategy."[13] The mission was to, "Establish coordinated patient care as the standard in Iowa" while the vision was, "By 2019, improve patient outcomes and experiences through coordinated delivery of healthcare and community services in the right order, at the right time, and in the right setting." The strategy included four goals, each with objectives (13 total) and related tactics (41 total) to reach the objectives. Using this strategy document, a strategy matrix was developed to document and track each of the C3's work on each of the tactics throughout the Iowa SIM grant cycle. The matrix included each of the tactics by objective and goal along with columns to report the status for each of the tactics: 1) no activity, 2) planning underway, 3) developing, 4) implementation initiated/underway, 5) complete and/or fully operational or 6) not applicable and/or not intending to implement. September 2016*, April 2017, April 2018, and April 2019 each C3 completed the matrix (* except for Muscatine C3 who completed their first matrix in April 2017).

Looking at the status of the 41 tactics at project end in April 2019, we see that all the C3s advanced the care coordination tactics and three of the C3s completed or fully operationalized 75% or more of the tactics. Additionally, the C3s were most likely to "complete and/or fully operationalize" the following tactics: 1) increase awareness and capacity to address social determinants of health (SDH), promoting inclusion of SDH as a component of implemented health risk assessments; 2)

13 Care Coordination Statewide Strategy tool http://idph.iowa.gov/Portals/1/userfiles/38/Care%20Coord%20State%20Strategy%2C%20Final_06_01_16.pdf

identify available assistance within the community and establish points of contact to enable resource sharing and referral; 3) incorporate involvement from non-clinical support systems as part of a whole-person-centered care model, including community-based services; 4) Establish referral and reciprocal communication for closed-loop referral processes between and among clinical providers and community-based services, and 5) Build, enhance and maintain collaborative relationships and functional referral mechanisms between health care systems and community-based services (6 C3s). Below is a summary of the advancements made by each of the C3s over the past three years:

Webster County C3 reported all the tactics as either "developing" (15%) or "implementation initiated/underway" (85%) at project start. By project end, 100% of tactics were "implementation initiated/underway" (44%) or "complete and/or fully operational" (56%) - the most of all the C3s. Looking across all three grant years, six tactics moved from "developing" to "implementation initiated/underway" and no tactic moved from developing to "completed/fully operational".

Linn County C3 reported advancement in 26 of the tactics across the grant period. While advances were made throughout each of the goals, advancing patient-centered care practices was the most stagnant or resulted in "no activity/not applicable" or "not intending to implement". This was particularly evident after years-2 and 3. Interesting to note is there was little movement in tactics from baseline to year-end 1 with only three measures reported as advancing. From year-end 1 to year-end 2; however, 26 measures advanced and then from year-end 2 to year-end 3/grant end, nine measures advanced. At the end of the Iowa SIM, 8 tactics were reported as "complete and/or fully operational" with only one of these (identify available assistance within the community and establish points of contact to enable resource sharing and referral) complete and/or fully operational at project start.

Marion County C3 reported the largest number of tactics advancing from baseline to year-end 2019 with all 41 measures advancing. At the end of the Iowa SIM, Marion County C3 has no tactics with "no activity" or "not applicable/not intending to implement" and they had no tactics with "planning underway". At project end, one tactic was reported as "developing" - increase access to needed medical services in locations and at times that meet patients where they are and one tactic was reported as "implementation initiated/underway" - create and maintain policies for patient-centered care practices across team settings, emphasizing inclusive team-based care, shared-decision making, and patient activation strategies.

Sioux County C3 reported 31 tactics advancing and 6 tactics with no activity/not applicable/ not intending to implement from baseline to Iowa SIM end. Also, by project end, they identified no tactics as "planning underway" or "developing". There was no movement in tactics with no activity/not applicable/not intending to implement from year-end 1 to project end. There was similar advancement in tactics from year-end 1 to year-end 2 and from year-end 2 to project end.

Dallas County C3 reported 27 tactics "complete and/or fully operational" or "implementation initiated/underway" by the end of the Iowa SIM. They reported no tactics with "no activity" or "not applicable/not intending to implement" at year-end 2 and project end. It is the only C3 that reported a significant decline in the advancement of its tactics from baseline to year-end 1; however, this was directly in response to the state's shift in C3 priorities.

Great River C3 reported 22 tactics "complete and/or fully operational" or "implementation initiated/underway" by the end of the Iowa SIM. They reported no tactics with "no activity" or "not applicable/not intending to implement" at year-end 2 and project end and reported the least number of tactics (2) as "complete and/or fully operational" at project end. From baseline to year-end 1 and year-end 1 to year-end 2, tactics were advancing at the same rate.

Muscatine C3 reported its baseline data for all tactics in 2018 because this was its first year of Iowa SIM C3 funding. Baseline data indicated two tactics with "no activity", 16 tactics as "planning ", 12 tactics "developing", 3 tactics with "implementation initiated and/or underway", and 7 tactics "complete and/or fully operational". By project end, Muscatine C3 had no tactics with "planning underway" and one tactic with "no activity". From baseline to the end of year-2, the greatest movement was the number of tactics reported as "planning underway" to "implementation initiated/underway".

Detailed charts for all tactics by C3 are included on the following pages. The percent of tactics by activity level, grant year and C3 are included as Table 3. Figure 5 also includes the percent of tactics

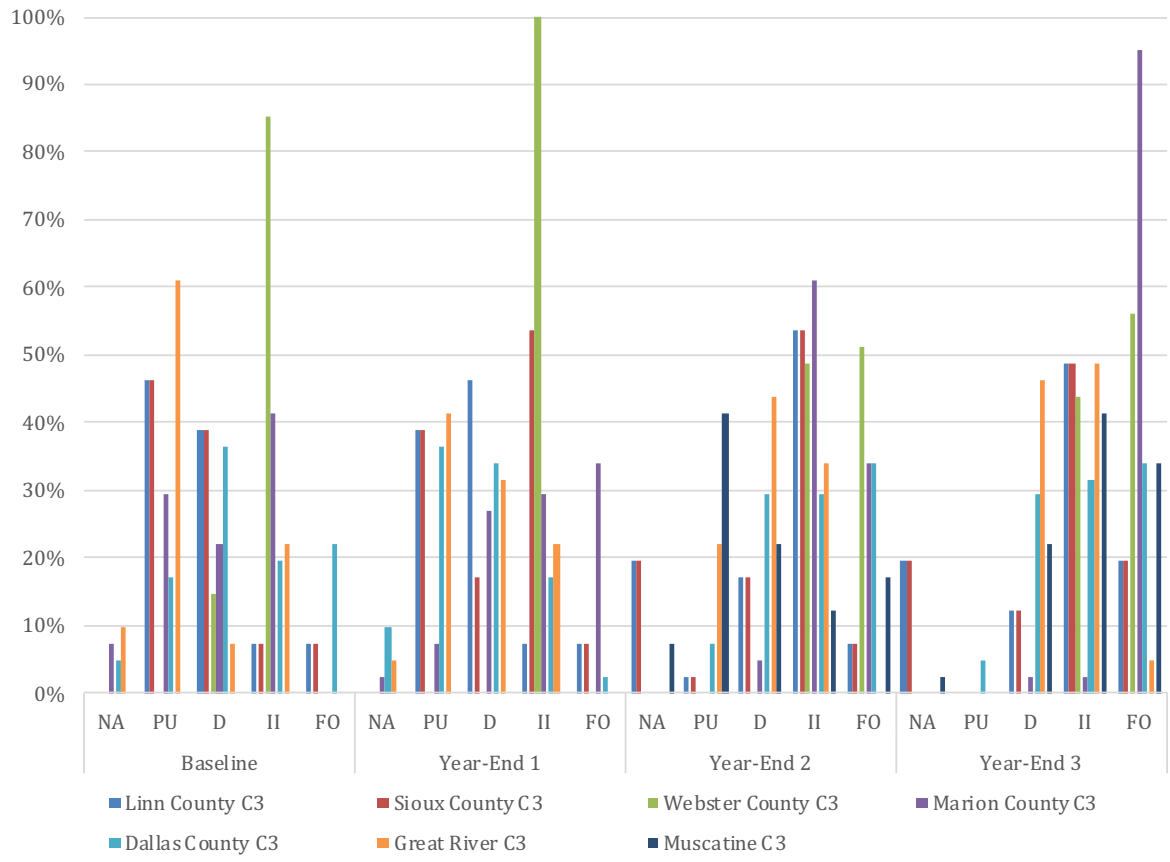
by activity level, grant year and C3 but this gives a visual of the movement of tactics from predominantly planning and development to implementation and operational across all the C3s.

Table 3. Percent of Care Coordination Strategy Tactics at Each Activity Level by Year and C3

	Baseline					Year-End 1					Year-End 2					Year-End 3				
	NA	PU	D	II	FO	NA	PU	D	II	FO	NA	PU	D	II	FO	NA	PU	D	II	FO
Linn	0%	46%	39%	7%	7%	0%	39%	46%	7%	7%	20%	2%	17%	54%	7%	20%	0%	12%	49%	20%
Sioux	0%	46%	39%	7%	7%	0%	39%	17%	54%	7%	20%	2%	17%	54%	7%	20%	0%	12%	49%	20%
Webster	0%	0%	15%	85%	0%	0%	0%	0%	100%	0%	0%	0%	0%	49%	51%	0%	0%	0%	44%	56%
Marion	7%	29%	22%	41%	0%	2%	7%	27%	29%	34%	0%	0%	5%	61%	34%	0%	0%	2%	2%	95%
Dallas	5%	17%	37%	20%	22%	10%	37%	34%	17%	2%	0%	7%	29%	29%	34%	0%	5%	29%	32%	34%
Great River	10%	61%	7%	22%	0%	5%	41%	32%	22%	0%	0%	22%	44%	34%	0%	0%	0%	46%	49%	5%
Muscatine											7%	41%	22%	12%	17%	2%	0%	22%	41%	34%

NA= No Activity; PU = Planning Underway; D =Developing; II=Implementation initiated; FO = Fully Operational

Figure 1.5. Care Coordination Strategy Matrix Status By Year and C3



NA= No Activity; PU = Planning Underway; D =Developing; II=Implementation initiated; FO = Fully Operational

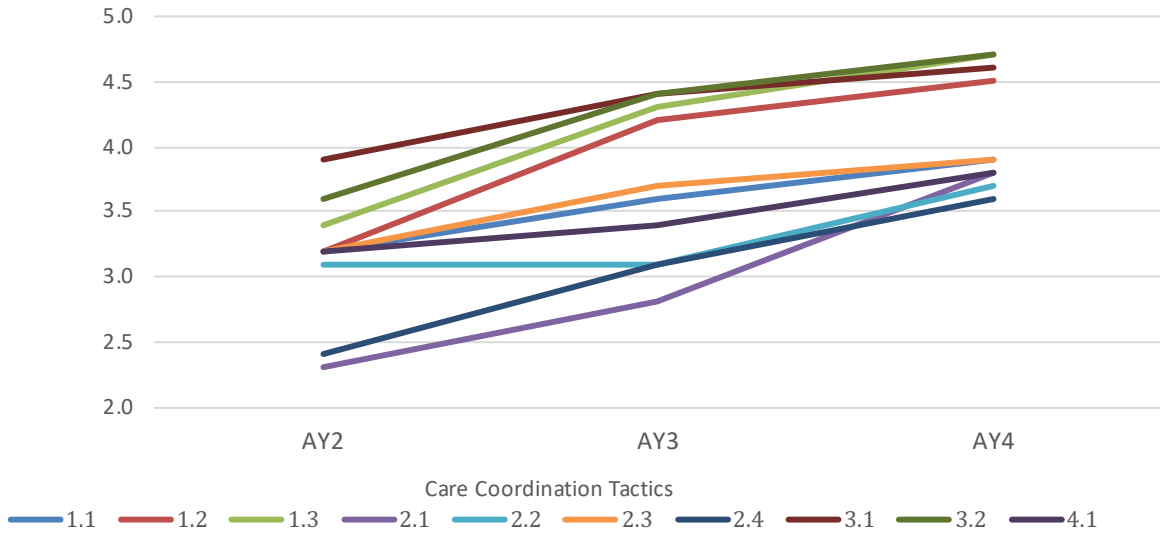
Table 4. Year 1, Year 2, and Year 3 Self-Assessment of Care Coordination Activities

Objective (# Tactics)	End of Award Year 1	End of Award Year 2	End of Award Year 3	Change
1.1 Advance patient centered care practices (7)	3.2	3.6	3.9	+
1.2 Facilitate the impactful delivery of healthcare services (5)	3.2	4.2	4.5	++
1.3 Establish coordinated connections to needed community-based services (3)	3.4	4.3	4.7	++
2.1 Develop multi-discipline patient-centered care teams (6)	2.3	2.8	3.8	+++
2.2 Use of HIT to facilitate cross-communication and documentation (4)	3.1	3.1	3.7	+
2.3 Establish standardized processes and protocols for collaborative care delivery (3)	3.2	3.7	3.9	+
2.4 Enhance collaboration among healthcare providers, community-based services, and the payer community (3)	2.4	3.1	3.6	++
3.1 Align community-based services for each patient/service recipient to ensure greatest impact (3)	3.9	4.4	4.6	+
3.2 Connect clinical services with community-based services (4)	3.6	4.4	4.7	++
4.1 Promote and enhance the use of HIT to identify, track, and monitor population health (3)	3.2	3.4	3.8	+

[+] = Increase in score from Year 1 to Year 3 of 0.5-0.9; [++] = Increase in score from Year 1 to Year 3 of 1.0-1.4; [+++] = Increase in score from Year 1 to Year 3 of 1.5 or more

As seen in Figure 6, all tactics progressed steadily towards implementation over the C3 award years. This figure was created from the aggregate ratings shown in Table 4.

Figure 1.6. Self-Rated Progress of Care Coordination Tactics Over Time (aggregated across sites)



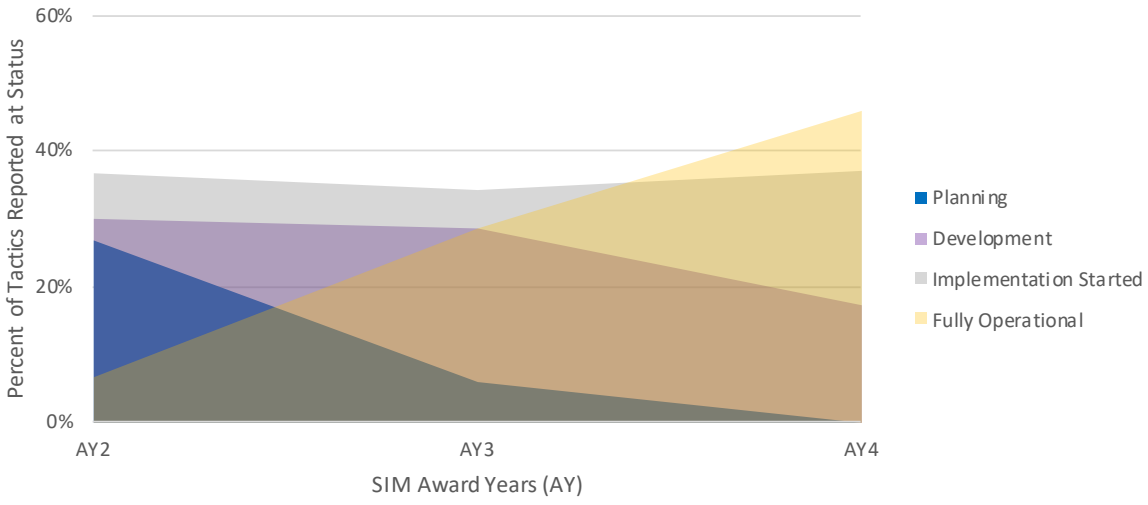
C3 sites were required to develop activities for their initiatives for five specific care coordination tactics. Table 5 presents the developmental progress of the C3s in meeting this requirement after each year of SIM funding based on C3 site self-assessments. The table shows each *required* care coordination tactic, the progress levels for tactic implementation, and how many C3 sites rated themselves at each level.

Table 5. C3 Progress on the Required Care Coordination Tactics

Required Care Coordination Tactic	Stage of Implementation	Year 1 end # Sites	Year 2 end # Sites	Year 3 end # Sites
1.1f. Promote the implementation of comprehensive and high quality health risk assessments (HRAs) that identify patient, clinical, social, and community needs.	No Activity Planning Development Implementation Started Fully Operational	- 2 2 2 -	- - 2 3 2	- - - 4 3
1.2c. Designate defined care coordination roles and/or responsibilities with the clinic, practice, or organization.	No Activity Planning Development Implementation Started Fully Operational	- 2 2 2 -	- 1 1 2 3	- - 2 2 3
1.3a. Increase recognition and capacity to address SDH through education and incorporation within HRAs to identify patient-specific needs.	No Activity Planning Development Implementation Started Fully Operational	- 2 1 3 -	1 - 1 5 -	- - - 3 4
1.3b. Identify available assistance within the community and establish points of contact to enable resource sharing and referral.	No Activity Planning Development Implementation Started Fully Operational	- 1 1 3 1	- 1 1 - 5	- - - 2 5
2.2a. Promote the use of available HIT resources to allow mutual access to patient care information from all appropriate members of the patient care team, i.e., Iowa Health Information Network (IHIN), shared electronic health records (EHR) view, and messaging functionalities.	No Activity Planning Development Implementation Started Fully Operational	- 1 3 1 1	- - 5 2 -	- - 4 2 1

Figure 7 shows the changes in the statuses of required tactics over time. The percentages displayed were calculated by adding together the number of tactics in each stage of implementation across sites, then dividing by all possible tactics (Year 1 denominator excluded C3 site added in Year 2). As the figure shows, the percentage of tactics reported as fully operation grew steadily over the C3 Award Years.

Figure 1.7. Percent of Required Care Coordination Tactics Rated by Status across all C3 sites



Stakeholder Experiences with the C3 Initiatives

To understand progress made by C3 communities toward SIM objectives, the evaluation team surveyed or interviewed a variety of stakeholders in the C3 initiatives. Throughout the SIM evaluation, PPC and RHS evaluators gathered insights about the C3s from:

- C3 Project Staff
- C3 Steering Committee Members
- C3 Community Coalition Members
- C3 Local Healthcare Providers
- C3 Clinic Managers and Diabetes Educator

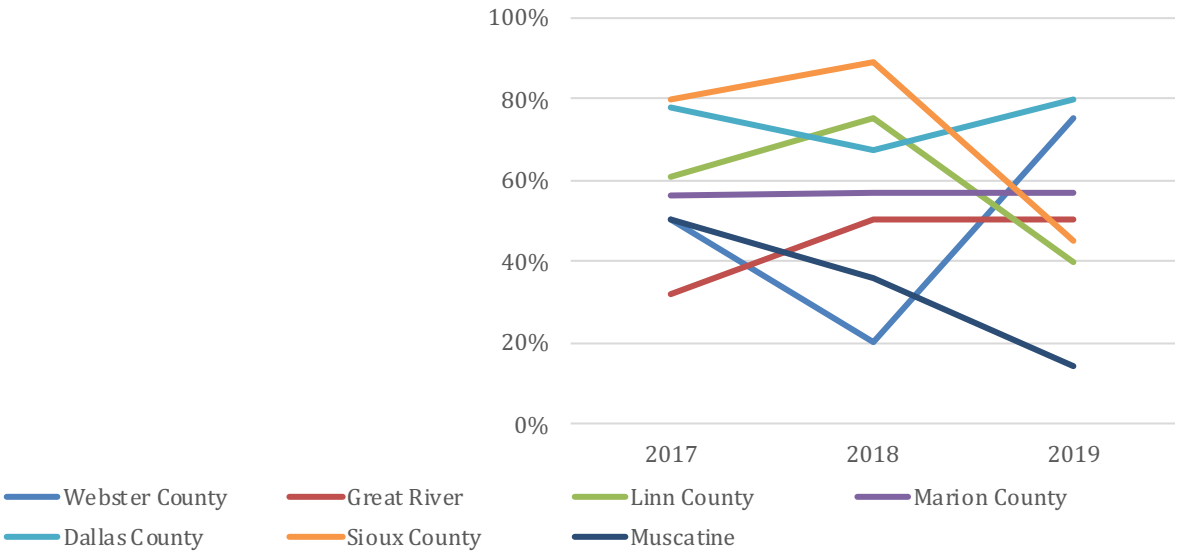
Interviews, site visits, steering committee surveys, community coalition surveys, project-end steering committee focus groups, and care coordination strategy matrixes were completed at/for all C3s. A mailed healthcare provider survey was conducted for the Webster County C3, Great River C3, and Marion County C3; a clinic and hospital management survey was conducted for the Dallas County C3; and diabetes educator and/or care coordinator telephone interviews were conducted for all C3s. Using findings from these sources, the following were determined: 1) all C3s implemented local or regional care coordination; 2) all C3s advanced the care coordination infrastructure in their county or region, 3) all C3s are in some capacity sustaining at least one activity from their C3 initiative; 4) all C3s fostered and developed community partnerships, including increasing the awareness of the health, wellness, and social services available locally and often throughout the region; and 5) all C3s have documented case studies indicating how their initiatives have impacted individuals and their health and social determinants of health.

In the spring of 2019 (the end of the SIM grant), PPC team evaluator RHS made site visits to each of the C3s. The following sections provide the highlights from these site visits, focus groups, web surveys and mailed surveys.

Steering Committee Member Survey

A web-based survey of all seven C3 steering committee members was conducted at or near baseline (September 2017) and at the end of each of the grant years (4 surveys total). Surveys were standardized but introductions were unique to each C3. Each year, the survey asked questions about the survey respondent's role in the C3 and representation on the steering committee, as well as questions about awareness and knowledge of the local C3, participation in C3 activities, and satisfaction with C3 initiatives. Most questions in the survey used a Likert scale; survey respondents were asked to rate their agreement with various statements, using the ratings: "strongly disagree", "disagree", "neither agree nor disagree", "agree", and "strongly agree". Surveys were anonymous. A total of 144 surveys were completed all three years. The number of C3 steering committee members by C3 varied and declined significantly from 2017 to 2019 as shown in Figure 8. The aggregate survey response rate was 55% with varying response rates by C3 (as shown in Figure 8 below). The steering committee survey included a brief overview of why the survey was being conducted and for those that needed additional information about the Iowa SIM and C3s, additional information was made available electronically. No more than four respondents in any given year requested additional information about SIM or C3s. This is a strong indication that respondents were aware of the C3s and the SIM throughout its duration.

Figure 1.8. C3 Steering committee membership count (left) and response rates (right) over time



When asked to report their role on the C3 steering committee, survey respondents indicated they are most likely to be public health providers, hospital leaders, healthcare providers, clinic leaders, others, or community members, in that order. Comparing Year-1 survey respondents to those in Year-2, survey respondents in Year-2 were more likely to be a public health provider, hospital leader, healthcare provider, and clinic leader and significantly less likely to be a community member. In 2019, when steering committee members were asked, "I am aware of the C3's role in my community", 94% of survey respondents reported they "strongly agree" or "agree", an increase when compared to 2018 and 2017. When the survey stated, "I am aware of the C3 initiatives underway in my community", 92% of survey respondents reported they "strongly agree" or "agree" indicating an increase in awareness when compared to Year-1. When the survey stated, "I participate in local C3 initiative planning and development", 97 percent "strongly agree" or "agree". Complementing this, 91% of C3 steering committee members "strongly agree" or "agree" they participate in local C3 decision-making. C3 steering committee members were asked to rate their agreement that the steering committee uses local patient data to drive C3 decision-making. Again, there was significant agreement as 88% either "strongly agree" or "agree". All these data reflect steering committee members who are increasingly aware, involved, and participating in C3 planning, development, and decision-making.

As indicated in Table 6 below, steering committee members were most in agreement with, "I am aware of social determinants of health and their impact on health outcomes". In addition, steering committee members report an increase in agreement from 2018 to 2019 and almost unanimous agreement that they are aware of the gaps in diabetic services in their community/region. In Table 7 that follows, we see that steering committee members reported a significant shift towards care coordination services being implemented for patients (an increase of 30% agreement from 2018 to 2019) and ongoing agreement that community members are working more/better together to meet patient needs.

Table 6. Steering Committee Member Awareness of C3 Activities

	2017			2018			2019		
C3 Activities and Initiatives	Strongly Agree or Agree	Neither Agree nor Disagree	Disagree or Strongly Disagree	Strongly Agree or Agree	Neither Agree nor Disagree	Disagree or Strongly Disagree	Strongly Agree or Agree	Neither Agree nor Disagree	Disagree or Strongly Disagree
Aware of social determinants of health and their impact on health outcomes.	Data not collected for this time period. 97% 3% 91% 9%			97%	4%	0%	100%	0%	0%
Aware of the role of care coordination and its intended impact on health outcomes.				0%	82%	9%	9%		
Aware of the gaps in diabetic services in community/region.				0%	97%	3%	0%		

Table 7. Agreement with Activities and Outcomes of All C3 Initiatives Meeting Community Member Needs

	2017			2018			2019		
C3 Activities and Initiatives	Strongly Agree or Agree	Neither Agree nor Disagree	Disagree or Strongly Disagree	Strongly Agree or Agree	Neither Agree nor Disagree	Disagree or Strongly Disagree	Strongly Agree or Agree	Neither Agree nor Disagree	Disagree or Strongly Disagree
Community members' needs related to social determinants of health will be or are being addressed by the local C3 initiatives.	86%	11%	3%	85%	15%	0%	88%	9%	3%
Community members' diabetic needs will be or are being addressed because of the local C3 initiatives.	82%	16%	3%	88%	12%	0%	67%	33%	0%
Care coordination needs in my community will be or are being addressed through the local C3 initiative.	40%	49%	11%	Data not collected for this time period.			Data not collected for this time period.		
Local C3 is implementing care coordination for patients.	Data not collected for this time period			52%	42%	6%	82%	9%	9%
In the past year, community partners/social services have been working more/better together to meet patient needs.	89%	11%	0%	88%	12%	0%	91%	9%	0%

As shown in Table 8, when C3 steering committee members were asked how strongly the agreed with the statemen, "It's important that I participate in the C3 steering committee", they overwhelmingly indicated that they strongly agree. In 2018 and 2019 C3s were also asked about their satisfaction with the C3 and the initiatives underway in their communities, they again overwhelming reported they were "very satisfied" or "satisfied" with no respondents reporting dissatisfaction.

Table 8. Steering Committee Satisfaction with the C3 Steering Committee and the Importance of their Involvement

	2017			2018			2019		
C3 Satisfaction	Strongly Agree or Agree	Neither Agree nor Disagree	Disagree or Strongly Disagree	Strongly Agree or Agree	Neither Agree nor Disagree	Disagree or Strongly Disagree	Strongly Agree or Agree	Neither Agree nor Disagree	Disagree or Strongly Disagree
It's important that I participate in the C3 Steering Committee	84%	14%	1%	96%	3%	0%	94%	6%	0%
How satisfied are you with the local C3 and its initiatives?	Data not collected for this time period.			94%	6%	0%	91%	9%	0%

Community Coalition Member Survey

A web-based survey was also conducted of all seven C3 community coalition members in 2018 and 2019. Community coalitions were added to C3 operations as part of Iowa SIM Year-2 requirements and continued into Year-3. The role of this group varied from C3 to C3; however, all focused more on programmatic activities, such as those related to diabetes, obesity, food security, and/or safety as compared to broad C3 planning, development and management that was done by the steering committees. The community coalition survey included a brief overview of why the survey was being conducted and for those that needed additional information about the Iowa SIM and C3s, additional information was made available electronically. The survey asked questions about the survey respondent's role in the C3 and representation on the community coalition, as well as questions about awareness and knowledge of the local C3, participation in C3 activities, and satisfaction with C3 initiatives. Similar to the steering committee survey, each C3 had a survey that reflected the names and geographic areas of each C3 and most questions on the survey used a Likert scale; survey respondents were asked to rate their agreement with various statements, using the ratings: "strongly disagree", "disagree", "neither agree nor disagree", "agree", or "strongly agree".

The community coalition survey aggregate response rate was 32 percent. Over 20% of respondents indicated a need for additional information about the SIM and/or C3s, including at least one person from each C3 community coalition except for one of the C3s. In both survey years, there were respondents who indicated they are not members of their C3 Community Coalition.

When asked to report their role on the C3 Community Coalition, survey respondents indicated they are social services providers, community members, healthcare providers, hospital leaders, clinic leaders, public health providers, behavioral health providers, or other. Both years at least 74% of survey respondents reported their member organization "provides services that are part of the C3 implementation activities". When the survey asked respondents to indicate their awareness of C3 activities, they were more likely to be aware in year-3 as compared to Year-2 as shown in Table 9. What changed from Year-2 to Year-3 was awareness of social determinants of health and their impact on health, role of care coordination and gaps in diabetic services. It is unclear why awareness declined; however, it may have been a result of changes in community coalition members.

Other changes noted in survey findings were an increase in agreement amongst community coalition members that community member diabetic needs are getting met, care coordination is being implemented, care coordination has improved, and community partners/ social service agencies are working better/more together (Table 10). There was no change in agreement that community members' social determinants of health are being met by the C3. Interesting to note, is that community coalition members report less agreement from Year-2 to Year-3 that it's important they participate in their local C3 community coalition; however, they report an increase in C3 satisfaction (Table 10).

Table 9. Community Coalition Awareness of C3 Activities

	2018			2019		
C3 Activities and Initiatives	**Strongly Agree or Agree**	**Neither Agree nor Disagree**	**Disagree or Strongly Disagree**	**Strongly Agree or Agree**	**Neither Agree nor Disagree**	**Disagree or Strongly Disagree**
Aware of the C3s role in the community.	85%	9%	6%	96%	4%	0%
Aware of the C3 initiatives underway in the community.	85%	9%	6%	100%	0%	0%
Contribute to C3 planning and development.	60%	22%	18%	63%	19%	18%
C3 community coalition uses local patient data to drive C3 decision-making.	71%	29%	0%	78%	15%	7%
Aware of social determinants of health and their impact on health outcomes.	97%	4%	0%	92%	4%	4%
Aware of the role of care coordination and its intended impact on health outcomes.	97%	3%	0%	92%	4%	4%
Aware of the gaps in diabetic services in community/region.	91%	9%	0%	74%	18%	8%

Table 10. Community Coalition Agreement with Activities and Outcomes of All C3 Initiatives Meeting Community Member Needs

	2018			2019		
C3 Activities and Initiatives	**Strongly Agree or Agree**	**Neither Agree nor Disagree**	**Disagree or Strongly Disagree**	**Strongly Agree or Agree**	**Neither Agree nor Disagree**	**Disagree or Strongly Disagree**
Community members' needs related to social determinants of health will be or are being addressed by the local C3 initiatives.	85%	15%	0%	88%	4%	8%
Community members' diabetic needs are being addressed because of the local C3 initiatives.	52%	44%	4%	75%	17%	8%
The local C3 is implementing care coordination for patients in my community/region.	70%	26%	4%	81%	11%	8%
In the past year, care coordination in my community/region has improved.	61%	31%	8%	70%	15%	15%
In the past year, community partners/social services have been working more/better together to meet patient needs.	73%	27%	0%	82%	4%	14%
It's important that I participate in the community coalition.	89%	11%	0%	81%	15%	4%
C3 Satisfaction	Very Satisfied or Satisfied	Neither Satisfied nor Dissatisfied	Dissatisfied or Very Dissatisfied	Very Satisfied or Satisfied	Neither Satisfied nor Dissatisfied	Dissatisfied or Very Dissatisfied
How satisfied are you with the local C3 and its initiatives?	78%	22%	0%	87%	5%	8%

Healthcare Provider Survey

A mailed healthcare provider survey was conducted in Year-2 of healthcare providers participating in the Webster County and Great River C3s and Year-3 of healthcare providers participating in Webster County, Marion County, and Great River C3s. The survey was mailed to 50 nurse practitioners, physicians, physician assistants, psychiatrists, and two registered nurses (Year-2) and 53 nurse practitioners, physicians, physician assistants, psychiatrists, and one registered nurse (Year-3). The aggregate survey response rate was 19 percent, with ten respondents reporting each year that they are physicians, mid-level practitioner, or not stating their profession. Given the low survey response rate and the small number of surveys completed, the healthcare provider survey data provides limited insight into the impact of the C3s on the healthcare provider community and their patients.

The survey asked questions about C3 awareness, knowledge, and participation in C3 initiatives; C3 satisfaction overall; and background information on the survey respondent. For the awareness, knowledge, and participation questions, the respondents were asked to use a Likert scale ranging from "strongly disagree" to "strongly agree" (the same used in the steering committee and community coalition surveys) to rate the 17 statements provided. In both years, when asked about awareness of the SIM initiative, about half of survey respondents reported being aware and the other half not aware. When asked about awareness of the local C3's role in the community and activities underway in the community, in both years, healthcare providers were more likely to report they are unaware of the role of the C3. When asked about whether they are aware of the local and regional health and social services available to patients, in Year-3 healthcare providers either report they "agree" (50%) or "strongly disagree" (50%) they are aware. The polarity of agreement and disagreement with C3 awareness is notable and suggests varying levels of healthcare provider engagement across C3 sites. This awareness was considerably lower when compared to Year-2 survey findings when 71 percent "strongly agreed" or "agreed" they are aware.

Although in Year-2 and Year-3 survey respondents didn't report a strong awareness of the C3's roles and activities, in both years about half of survey respondents "strongly agree" or "agree" and about half "neither agree nor disagree" that they support their clinic's collaboration with C3 initiatives and activities. Additionally, 33 percent "strongly agree" or "agree" and 66 percent "neither agree nor disagree" that they actively encourage the clinic's collaboration with C3 initiatives and activities. In both years, Healthcare providers who "strongly agree" they are aware of the SIM also "strongly agree" or "agree" they are aware of the local C3, its activities, regional health and social services, and actively support and encourage the clinic's collaboration in C3 activities and initiatives.

In Year-2, two healthcare providers reported they "agree" they use information from the C3's care coordination database to learn more about their patients. No healthcare providers report using this information in Year-3. Over both years, five healthcare providers report they "strongly agree" or "agree" they are better able to support patients' needs related to their social determinants of health because of the local C3 initiatives. These same providers report they "agree" they are able to support patients' diabetic needs because of the local C3 initiative. Of these five healthcare providers, four report they "agree" that through the local C3 initiative, the clinical care coordination needs of their patients are met and the social determinants of health-related needs are being addressed, the C3 initiative has contributed to the improvement of care coordination for their patients, and the C3 has contributed to their ability to work more/better with community partners/social services to meet patient needs. Considering all survey responses, healthcare providers reporting awareness of the SIM and C3 initiatives were the only healthcare providers reporting they "strongly agree" or "agree" they are using the C3 as a means to support patients' social determinants of health and/or diabetic needs; however, all survey respondents indicated an interest in learning more.

Although the survey response rate was low for both surveys, survey respondents continue to report a lack of awareness of the C3s and their work. This may be attributed to C3 activities being imbedded in care coordination activities and operations of clinics and local public health without attributing the work to the C3 and its goals and/or without direct involvement by healthcare providers. Another contributing factor may be the process for referrals to C3s, as these are made by clinic care coordinators or health navigators, limiting the healthcare providers' contact and exposure to the C3 as whole.

Clinic, Diabetes Management, and Care Coordination Interviews

In Year-2, telephone interviews were conducted with two clinic managers and one diabetes educator involved with the Great River, Linn County, and Webster County C3s. One of the clinics is a federally qualified health center (FQHC) that primarily serves Medicaid patients and that offers an array of services (e.g., family practice, oral health, OB/GYN, after-hour walk-ins, student health). The second clinic is a designated rural health clinic with a large Medicare population. Both clinics have been participating in C3 activities since program start. The diabetic educator serves as the Diabetic Program Coordinator in a clinic setting with five employees assigned as two full-time equivalents.

The three staff members agreed their operations have not changed solely because of the C3s. Instead, roles, degree of coordination and integration, patient engagement, and operations are constantly changing due to ACOs, managed care, other insurers, grant funded initiatives (e.g., SIM and National Association of Community Health Centers - NACC), and health policy in general. All are working to improve access and patient outcomes as well as decrease duplication of services. One example of this is FQHCs around the state who are meeting once a week to develop a risk stratification plan to identify patients to target for care management and additional resources. The aim of this work is to decrease hospitalizations and ultimately costs. This work aligns with the FQHC's participation in the C3, also aimed at decreasing costs.

The three staff members agreed their participation in the C3 has improved transparency, knowledge of local and regional health and social services resources, local and regional partnerships, and awareness of the need and process to uncover and address patients' social needs. They agree their organizations are committed to long-term implementation of C3 goals; however, for some organizations, it was still early in the process, so work-flows were not fully determined, care coordination data tracking systems were just getting rolled out, and in some instances, project plans were still being developed. When asked about diabetes needs and next steps, the clinic managers and diabetes educator reported the needs listed below.

Better pre-diabetes resources and insurance to cover costs

Standardized diabetes education

Standardized blood glucose logs that are easily and consistently understood by both patients and healthcare providers

Focus on and resources to address behavioral health

Engagement and involvement by the staff and healthcare providers who are working directly with patients

Knowledge of and access to technology that can support patients and the care process

In Year-3, telephone and on-site interviews were conducted of 12 diabetes educators and 3 care coordinators engaged with their local C3. Additional interviews were possible in Year-3 because all but one C3 had engaged diabetes staff in program operations. One of the diabetes educators included in Year-3 interviews was also interviewed in Year-2. During the Year-3 interviews, care coordinators and diabetes educators again agreed their operations have not changed solely because of the C3s; however, the C3 had a direct impact on service components and more broadly on their organization operations. For example, they report the C3 is one component of integrated and broader changes where roles, degree of care coordination and integration, patient engagement, and operations are constantly changing due to ACOs, managed care, other insurers, grant funded initiatives (e.g., SIM and National Association of Community Health Centers - NACC), local boards of health/county boards, and health policy in general. Some of the care coordinators noted new care coordinator/health navigator positions were added to their organizations, sometimes because of the C3. Care coordinators and diabetes educators reported they are working to improve access, handoffs between providers/services, patient involvement, and patient outcomes as well as decrease duplication of unnecessary services. Additionally, they reported C3s have impacted care coordination and diabetes care by:

Bringing internal stakeholders and community partners together to understand roles, responsibilities, programs and services

Educating patients, providers, and community members on care coordination/health navigation, social determinants of health, and diabetes

Supporting local initiatives such as public safety programs and diabetes education programs

Providing resources that support care coordinator positions who directly improve patient outcomes

Improving transparency

Increasing data sharing

Building awareness of or lack of diabetes services, patient and healthcare provider education

Identifying access issues

Increasing knowledge of local and regional health and social services resources

Improving local and regional partnerships and relationships, including those along the care continuum

Increasing awareness of the need and process to uncover and address patients' social needs

Both diabetes educators and care coordinators also identified patient challenges to addressing chronic conditions. For example, patients are often hesitant to seek and obtain help because most have no idea that services are available, including those that are no-cost or part of an insurance plan. Diabetes educators also identified healthcare provider challenges as some healthcare providers that are not aware of or choose not to refer patients into care coordination pathways. Additionally, some healthcare providers are not familiar with pre-diabetes and diabetes care in general, and some do not take the time to learn about the patient's needs, their care plan, medications, and other factors to support good outcomes. Care coordinators discussed the challenges of staff turnover and how patients struggle with maintaining and building trust when turnover occurs and new relationships need to be established. In all instances, patient engagement in the decision making was reported as essential, along with warm hand-offs and clear communications. One care coordinator noted the clinic's involvement in the C3 and use of the care coordination data sharing system that has resulted in time savings because care coordinators can immediately see if a patient followed through with referrals. The care coordinator added that the tool also aids in their ability to better help patients because they have more information to help guide questions and provide support.

Care coordinators and diabetes educators agree their organizations are committed to long-term implementation of C3 goals; however, for some organizations, without additional funding, staffing for care coordination services, including those directed at diabetes patients, will no longer be made available. Instead, and where feasible, they will integrate care coordination into funded and operating programs and services, such as the First Five Program, congregate dining, home care, and community paramedicine.

Steering Committee Focus Groups

In March/April 2019, at the end of three-year grant period, steering committee focus groups were conducted with all C3s except for Webster County C3. All but one focus group was conducted face-to-face. The focus groups shared their greatest successes/accomplishments and challenges, expectations and plans for the C3 moving forward, and recommendations for communities and regions developing or implementing care coordination.

Greatest Successes

Building community partnerships and relationships

Establishing care coordination

Identifying local resources and sharing that knowledge throughout the community

Meeting the needs of community members who would have gone without care or would have been underserved

Better identifying, serving, and educating pre-diabetes and diabetes patients

Increasing community partners/key stakeholders' understanding of the impact of social determinants of health

Improving referral and organizations' internal processes

Greatest Challenges

Time given the availability of limited staff and the duration of the C3 funding

Community members are not aware of the services available to them, including those offered by local public health

Assess My Health survey instrument which was not discussed by all C3s before implementation

Restrictions on funding use

Data sharing

Lack of incentives to fully support people towards health and wellness

Local politics

Organizations and people that get stuck in their silos

Staff turnover within the C3 and at the state level

Standardizing processes across various systems, clinics, and/or across state lines

C3 Project Staff Exit Interviews

C3 project staff were interviewed to get an update on their activities, project strengths and successes, challenges to implementation, and to obtain an idea of their main needs and concerns.

All C3 lead staff (11) participated in project exit interviews as part of the Iowa SIM evaluation. The interviews were either on-site or by telephone during March/April 2019. Staff were asked questions about sustainability plans, local and regional system changes related to diabetes and care coordination, C3 participation requirements and funding, and their role as lead staff.

Highlights and themes from the exit interviews are as follows:

Most will have some level of staff dedicated to maintaining C3 components, most likely focusing on relationship building and care coordination

Most will maintain a form of their steering committee, but plans related to management and structure are still being developed

Use of care coordination data management systems has increased, but it has been slow to adopt. Partner organizations' staff were more likely to get onboard if they were required to use the tools

Data sharing agreements and having agreements in place to maintain data privacy is and was complicated, and delayed and/or hindered initiatives

Local health provider participation had less to do with provider type and more to do with people/leadership

Internal workflows are unique to each organization and impact data sharing, care coordination, and processes overall

Change takes a lot of time when multiple stakeholders with different drivers are at the table making decisions, creating plans, and dedicating staff time

C3s are seeking or have obtained other funding sources to support program components

Community health needs assessments are being used and adapted based on lessons learned from the C3s

Community-wide care coordination entry points were established throughout some of the C3 so regardless of where a patient enters the system, they have access to care coordination

Opportunities exist to leverage other programs and services, such as First Five within local public health or Medicare programs within clinics and hospitals

Unique programs or services that were developed and/or activities that should be noted, include but were not limited to:

Roadshows to educate clinic staff and providers on diabetes education, the referral process, and/or care coordination

Establishment and branding of a local population health consortium that was the result of the C3

Community paramedicine look-alike

Regional health coach training for schools, clinics, pharmacies, hospitals, gyms, and other partners

Regional care coordination simulation to identify gaps in services and service knowledge

One C3 noted that from the start they had sustainability at the forefront of decision-making as a factor determining whether any initiative would move forward. This included establishing a sustainability committee during Year-1. They reported that this approach continues to be a critical factor in their ability to maintain and develop C3 programs. Another C3 noted that, "until there is pain within the system, and they have no choice but to change, the system will not change." This they believe is a reflection of people who do not embrace change and reimbursement systems that continue to be based on volume.

When C3s discussed the technical assistance and support provided to them through the Iowa SIM, all reported some of the support was beneficial. Areas where support was lacking related to on-boarding and initial C3 training, data sharing between C3s, buy-in from the leaders and managers of the Iowa SIM, and lack of defined/unclear roles and responsibilities of leaders and mangers of the Iowa SIM.

For future projects, C3s leaders and steering committee members reported the following suggestions:

Start small but think broadly.

Always leave a seat at the table for community partners.

Establish a community-wide matrix with patients in the middle.

Maintain the project focus during a 3-year grant cycle as it's critical to sustain success. Most healthcare organizations are operating within a rapidly changing environment so significant shifts in scope can delay and/or decrease participation by local stakeholders.

Plan funding based on need. For example, Year-1 planning sites had access to less funding during implementation than Year-1 implementation sites. This seemed counter to needs.

Include a steering committee as a required component as this was key towards building local partnerships, identifying local services and capabilities, securing buy-in, and educating participants.

Identify and secure an integrator organization that is neutral, has extensive community/regional knowledge, can commit the time and resources, and works best given community relations. This organization may vary from region to region based on role, resources, connections, staff, as well as other factors.

Provide technical assistance that includes on-boarding, is tailored to community or regional need, includes a menu of standards services, and includes regular sharing between initiatives (e.g., C3s).

Share best practices from other state's SIM initiatives, in particular those focusing on social determinants of health, diabetes and care coordination.

Summary of the C3 Initiative

Year-3 data collection for the seven C3s is complete and indicates stakeholders continue to be on board, aware of, and participating in their planning and development.

Advances have been made towards developing and hardwiring care coordination into the continuum of health and social services

Diabetes initiatives are fully operational but will be difficult to sustain without funding for staff training.

Local and regional relationships have evolved and mechanisms are in place to support their future development.

Data sharing is underway but continues to be a challenge.

Program sustainability plans have been set and, in some instances, will be sustained.

Each C3 advanced the Iowa Department of Health's care coordination statewide strategy and all are sustaining some of this work and/or have integrated it into their operations.

Healthcare provider involvement in the initiatives is still unclear and appears to be limited. However, community partners, care coordinators and diabetes educators are aware of and engaged in C3 planning, development, and implementation. They are using and advancing C3 data sharing tools towards improving patient outcomes.

The statewide landscape of diabetes programming is growing in alignment with the C3 focus on diabetes management. In Iowa, state certified DSME (Diabetes Self-Management Education) programs are reimbursed by Medicaid and some private insurers. Thus, efforts to promote state-certification of DSME programs is another strong policy angle for SIM activities. Thirty-two additional DSME sites in the state have received the designation of state certified since 2017, with 103 total state certified sites in Iowa in 2019 (Figure 2).

Initially, the SIM plan included many activities that were passively encouraged to be utilized by stakeholders to bring about delivery system change and payment reform. There was significant progress in incorporating stronger policy levers into SIM initiatives to bring about change, for example requiring the use of SIM tools such as the statewide strategic plans (SSPs), the SWAN, data reporting, and technical assistance (TA) as part of the funding for the C3 communities.

There was evident progress in the C3s development into Accountable Communities of Health. Each of the C3 sites have the components of the ACH model required by the contract.

The AY4 ACH expansion granted hospital-based integrator organizations, which was inconsistent with the ACH modal of having an integrator organization that was a "neutral player outside the healthcare system"

The C3s were particularly successful at building strong relationships and partnerships across sectors, connecting traditional clinical services to community-based services to address patient needs, and promoting understanding of the impact of social determinants of health on the overall patient and population health.

There was steady progress in the C3 systems toward integrating new processes for care and care coordination into their delivery system protocols.

Resource sharing among partners developed steadily over time; data sharing has developed more slowly.

Difficulties were identified regarding how to address the specific needs of the focal population of individuals with diabetes.

- Some C3 initiatives reported difficulties accessing their patient/client populations who had diabetes.
- Providers and community coalitions were less likely to know about the gaps in diabetic

services in their community/region and how the C3 initiatives could address those gaps. This finding presents an opportunity to engage local community coalitions more in diabetes activities.

- While all seven C3 sites identified using existing diabetes resources such as the NDPP and DSME to address needs, around half of the patients/clients with diabetes surveyed had ever taken a course of class in how to self-manage their diabetes. And, around one-third of those with a chronic condition reported strong confidence in being able to manage and control their health problems. These findings indicate an opportunity to further engage individuals with diabetes in the self-management of their health.

Limitations in the current workforce were noted by different stakeholders. In particular, they noted limited capacity and skills in the area of data analytics and limited understanding of how to manage and integrate non-traditional providers (i.e., nurse practitioners, care coordinators, health navigators/coaches) into the traditional delivery system model.

Data collection and data sharing were identified as challenges by most stakeholders and C3s.

- Use of the AssessMyHealth (AMH) as the tool to collect SDH information was seen as duplicative of other HRAs already in use, time consuming to administer, or was not preferred over other HRA tools. Some stakeholders questioned the sustainability of the AMH tool past the funding period.

- An inadequate HIT infrastructure, inability to access and share needed data and understand it was noted by many stakeholders. Most C3 sites were still in the developmental stage regarding HIT and utilizing data to improve patient care processes or population health. This presents an opportunity to provide additional resources to bolster the data sharing infrastructure and/or more targeted training about HIT and how best to use data within their communities.

MCOs and ACOs had somewhat limited direct interaction with the C3 initiatives. Yet, these stakeholders were aware of C3 initiatives and expressed support. One of the payers noted providing some project-specific resources to at least one of the C3 communities. These findings could indicate an opportunity for all C3s (i.e., seeking resources from the MCOs for particular projects) as they contemplate ways to sustain and/or fund their initiatives going forward.

Advances have been made towards developing and hardwiring care coordination into the continuum of health and social services; diabetes initiatives are fully operational but will be difficult to sustain without funding for staff training; local and regional relationships have evolved and mechanisms are in place to support their future and development; data sharing is underway but continues to be a challenge; and program sustainability plans have been set and in some instances will be sustained.

Healthcare provider involvement in the initiatives is still unclear and appears to be limited, however, community partners, care coordinators and diabetes educators are aware of and engaged in C3 planning, development, and implementation and are using and advancing C3 data sharing tools towards improving patient outcomes.

In AY3, network analysis was used to capture the roles and relational aspects of inter-organizational collaboration at each C3 site.

Overall, the stakeholders in C3 sites have been successful in developing strong working relationships with the integrator organizations and other partnering organizations.

Five of the seven C3 networks included stakeholders from the healthcare, public health, and social services sectors, which aligns with the ACH characteristic of multi-sector partnerships. The remaining two networks can continue to be strengthened by involving diverse sectors in planning and administration of activities.

The C3 grant had a role in stimulating collaboration, with an average of 21% of respondents across sites attributing current collaborative relationships to the C3. In addition, respondents expected 39% of the current relationships (on average) to be sustained past the funding period.

Resource sharing networks across sites were the most developed, and integrator organizations play key roles in their respective sites in the facilitation of resource sharing.

Three of the seven integrator organizations are leading the brokerage of care coordination at their sites. The integrator organizations at these high scoring sites have established and are responsible for the maintenance of HIT data sharing systems utilized by local organizations for care coordination.

While data sharing networks were the least developed on average across sites, integrator organizations had key leadership roles in the developing data sharing networks.

Qualitative feedback from C3 survey respondents were largely positive, and comments represented two general themes: 1) Improved communication and coordination (34 comments) and 2) Strengthened relationships (28 comments). Only four comments were neutral or negative.

Statewide Admission, Discharge, and Transfer (ADT) Alerting

Statewide ADT alerting has been a SIM goal since inception, with the intention to help transform the healthcare delivery system by improving the quality of care coordination activities and, as a result, reduce the rates of preventable readmissions and preventable ED visits. During the grant period, the SWAN (Statewide Alert Notification), which was used in prior years to achieve this goal, ended in Award Year 4 (April 2019).

The SWAN was a part of a HIT infrastructure investment through the SIM to promote better care coordination within the healthcare delivery system. The SWAN was a software technology hub that uses ADT (Admission, Discharge, and Transfer) files from participating hospitals to formulate alerts to providers and care teams when one of their patients has a hospital admission or an emergency department (ED) visit. The SWAN tool was intended to help transform the healthcare delivery system by improving the quality of care coordination activities and, as a result, reduce the rates of preventable readmissions and preventable ED visits.

While the SWAN was discontinued, its vendor, IHIN (Iowa Health Information Network), will continue providing Iowa hospitals with ADT alerts through a partnership with PatientPing.[14] While some Iowa hospitals opted to continue their contracts with IHIN to receive PatientPing alerts, some opted to contract directly with PatientPing (Figure 10). Three of the Medicaid ACOs which were original SWAN users (Mercy, UnityPoint, and Broadlawns) opted to contract directly with Patient Ping. The embedded document below is a Frequently Asked Question document developed by IHIN to inform stakeholders during the transition from SWAN to PatientPing.

14 https://www.ihin.org/article/iowa-health-information-network-and-patientping-partner-power-real-time-care-coordination

PatientPing Frequently Asked Questions

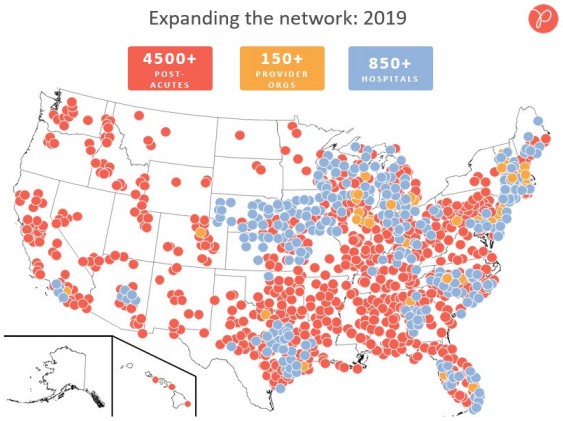
What is PatientPing and why is it replacing the old SWAN?
PatientPing is a national care coordination network that connects healthcare providers with real-time clinical event notifications whenever, and wherever, a patient receives their care. As IHIN's contract with ICA (the legacy health information exchange platform for IHIN) for SWAN services came to an end April 30, 2019, IHIN worked toward advancement of capabilities for an enhanced statewide alerting system. In partnership with PatientPing, which informs providers when their patient is admitted to an unaffiliated facility with real-time notifications (or pings), IHIN transitioned services for advanced alerting.

What services does PatientPing provide?
Patient Ping provides two key services:

- Pings: Receipt of real-time notifications on patient admissions and discharges from hospitals and post-acute facilities
- Stories: Critical patient information regarding a patient's prior visit histories, care team information and instructions, as well as patient demographic information.

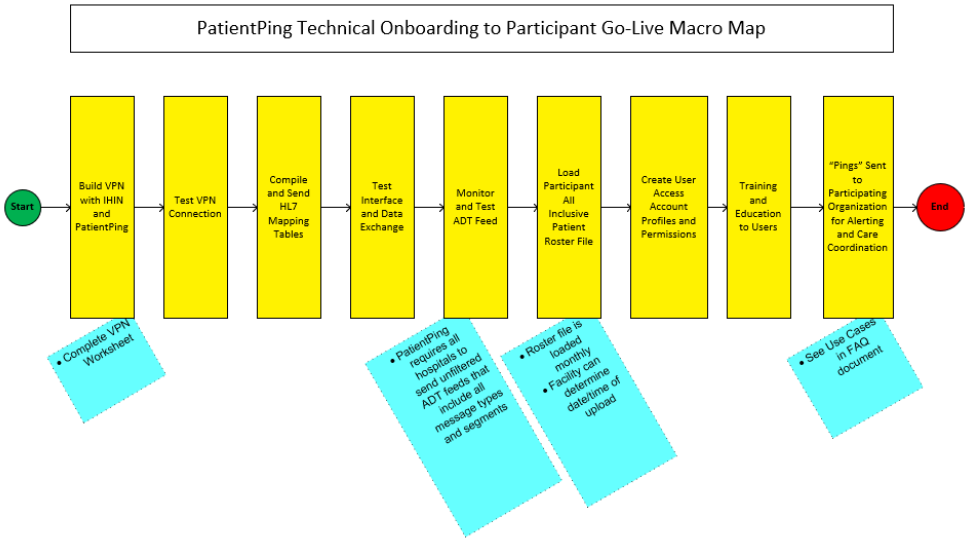
What types of organizations are participating in PatientPing?
Nationwide, PatientPing serves all patients and care teams (Commercial, Medicaid, Medicare, Uninsured) through real-time notifications. PatientPing will also connect post-acute facilities in Iowa.

What does the service area for PatientPing in the United States look like?



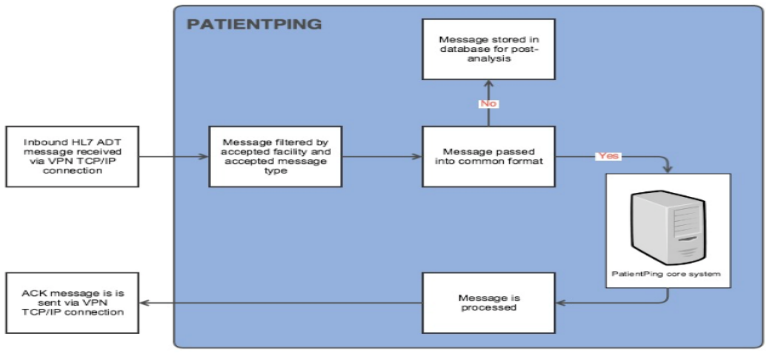
What organizations/health systems are using PatientPing in Iowa?
As of April 2019, 94 hospitals, 87 post-acute facilities, and 3 ACOs are using PatientPing in Iowa. This includes participants such as UnityPoint Health, MercyOne, Broadlawns, Genesis, The University of Iowa Hospitals and Clinics, The Iowa Clinic and IowaHealth+.

What is the process for getting PatientPing for my organization?



What type of information do you want in our admission, discharge and transfer (ADT) messages?
We are asking for real time ADT messages on all of your patient population. Those will be used two ways: to populate the IHIN Electronic Master Patient Index (EMPI) and to forward to PatientPing for advanced alerting and care coordination activities. There is no charge for ADT integration beyond your IHIN participation fee. At PatientPing, these ADT messages become the trigger event to send alert and care coordination information to anyone who has a particular patient in their Roster file. At IHIN, ADTs can also become foundational to query exchange and driving State Registries (services included in your IHIN participation fee should you decide to pursue them).

Do you have a picture of the data process flow illustrating how the data gets from the electronic health record (EHR) to PatientPing?



What is the "All Inclusive Patient Roster" and what does it do?
The all-inclusive patient roster is the file listing an organization's attributed patients. It is an extract of your patient population that you wish to be alerted on via PatientPing. This file is submitted once per month on a date of your choosing.

Should the Patient Roster follow the technical specifications of the previous SWAN monthly file or should it change to the new PatientPing technical specifications?
The PatientPing community is built on a series of data sources, which first and foremost rely on ADT feeds and patient attribution lists to alert users as to their patients' movements throughout various care settings. PatientPing leverages ADT data from acute care hospitals to send real-time notifications to care coordinators and other users, enabling coordination of care at the time of admission, pre-discharge planning, or following a patient's departure from the hospital. In the ADT feed, PatientPing focuses on data elements such as level of care (patient class (PV1.2), hospital service (PV1.10), patient type (PV1.18)) and other encounter-level clinical context to present users with a snapshot of the patient's encounter at an acute care facility. The roster file should follow the PatientPing specifications, not the traditional SWAN specifications. IHIN will need to ensure your ADT file matches the need to enable the most robust data collection to support the care coordination tools afforded to participants in the PatientPing tool. When you share your organization's standard ADT format with IHIN, we will work with your technical team to identify gaps and needs going forward. The ADT triggers the event, while the roster file gives the return of the information to drive enhanced care coordination. All data is secured internally at PatientPing.

How will IHIN know the subset of patients the organization would like Pings on?
Through the roster file that you share monthly.

Can you pull just medical patients, or can we see dental patients as well?
PatientPing can identify medical patients through the attribution file (Patient Roster) and may be able to filter dental patients using fields in the ADT messages.

How much does it cost to send our All Inclusive Patient Roster?
Charges are based upon the total number of records in the All Inclusive Patient Roster file. A quotation for services can be obtained by contacting IHIN.

What if we forget or do not update our All Inclusive Patient Roster for the month?
If you were to not able to update a Roster file in a particular month, IHIN and PatientPing will use the most recent roster file available in the system to provide you alerts (and alerts will flow month to month based on the most recent Roster file). Once a new Roster file is loaded, it becomes the basis for billing.

What day are we required to send to IHIN our All Inclusive Patient Roster?
Rosters are submitted monthly. The Roster can be submitted on any day/time of the month at the discretion of the contributing organization.

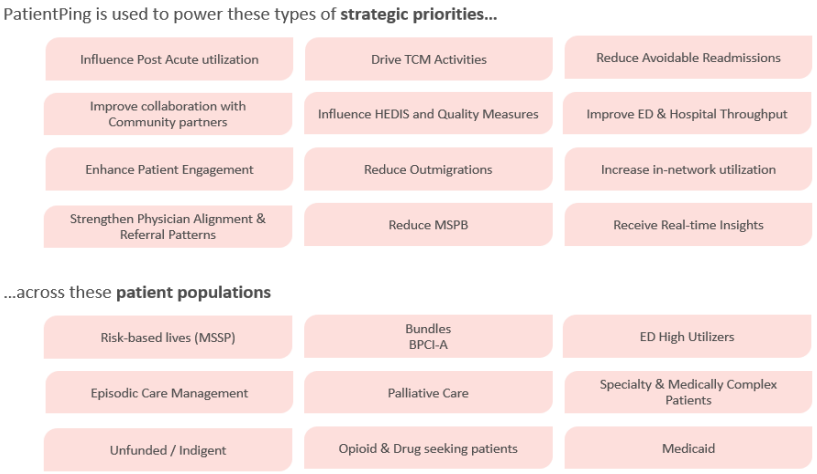
How is a Patient Roster generated?
A Patient Roster is generated in two ways: (1) the PatientPing Customer provides a list of patients for whom the PatientPing Customer provides care coordination services or (2) PatientPing attributes patients to a PatientPing Customer as result of a treatment relationship between the PatientPing Customer and the patient, as evidenced by the fact that the patient has presented and/or was admitted to a PatientPing Customer's healthcare facility. Once a match between the ADT feeds and the Patient Roster has been established, then such PatientPing Customer will have access to protected health information (PHI).

What are the SFTP requirements?
There are no customized SFTP port requirements to include. Unlike HL7 messages, SFTP will all utilize one industry standard port (22) regardless of who the participant is and what they are trying to send/receive through SFTP.

The steps for the SFTP for the participant to creates a Roster File are:
Participant SFTP Push to IHIN → IHIN monitors directory and triggers based on new file appearance/modification → SFTP IHIN Push to Patient Ping
Patient Ping → SFTP Push to IHIN (Trigger Undetermined)→ Participant SFTP Pull to Participant (Trigger Undetermined)

Is PatientPing Health Insurance Portability and Accountability Act (HIPAA) compliant?
In order for a Customer to receive access to Protected Health Information (PHI) via the PatientPing Services, there needs to be match, as determined by PatientPing's proprietary matching algorithm, between the real-time ADT feeds, delivered by PatientPing Customers and securely stored in the PatientPing platform, and a PatientPing Customer's Patient Roster. As set forth in 45 C.F.R 164.502(A)(1)(ii), a Covered Entity (or a Business Associate on the Covered Entity's behalf) can disclose PHI for purposes of (a) Treatment, with treatment being defined as the "provision, coordination, or management of health care and related services by one or more health care providers, including the coordination or management of health care by a health care provider with a third party; consultation between health care providers relating to a patient; or the referral of a patient for health care from one health care provider to another"; and (b) Healthcare Operations, which is broadly defined but includes, conducting quality assessments and improvement activities, patient safety activities, population-based activities related to improving health care and reducing health care costs, case management and care coordination, contacting of healthcare providers and patients with information about treatment alternatives, health plan performance, etc. As described above, a PatientPing Customer will only have access to PHI via the PatientPing Services, in the form of a Story or a Ping, if there is a match between the ADT feed and the PatientPing Customer Patient Roster, which such Patient Roster requires that such PatientPing Customer either have a care coordination relationship or a treatment relationship with such patient. Information being disclosed via the PatientPing Services are done solely in furtherance of those relationships, indicating that all disclosures of information via the PatientPing services, including PHI, are being disclosed for purposes that fall within either the Treatment or Healthcare Operations exceptions above

What are the use cases that PatientPing can assist my organization in accomplishing?



When will my organization have access to PatientPing?
After the master service agreement has been reviewed and signed/executed by your organization IHIN will work with you to create access rights and permissions for users post technical go-live. We will look to your organization to provide a list of staff you wish to have access to PatientPing.

Is there a certain discipline that can access PatientPing? Can intake coordinators that are not licensed RN's access and document in this tool?
PatientPing partners will all types of organizations and allow account access to be provisioned at the discretion of each individual customer. Some organizations have intake coordinators, administrative staff, analysts, and others accessing the data for many different purposes - ACO attributions, utilization history, discharge planning, analytics reporting, etc. PatientPing will work with each organization to train and coach all members of the organization on the appropriate use of the PatientPing application.
Is there a Service Level Agreement with PatientPing?
Yes. PatientPing considers the HL7 interface to be mission critical during standard business hours (8am - 6pm ET). However, PatientPing monitors all ADT production data feeds at the interface and internal processing levels on a ten (10) minute interval. It is acceptable for an interface to be down outside of normal business hours and PatientPing will not initiate a support call to the customer outside of the above-stated business hours. Although PatientPing strives to maintain a >99.99% uptime, it is expected that customer interface connections are set to retry every 120 seconds. Also, customer interfaces should be set to queue for up to 48 hours in the event of an unplanned network or interface outage.

Is there a demonstration of the product available for viewing?
For an overview of PatientPing, you may view a Webex recording of IHIN's initial Patient Ping Demonstration at:

Patient Ping Demonstration - IHIN-20190409 1707-1
Tuesday, April 9, 2019
2:22 pm | Central Daylight Time (Chicago, GMT-05:00)

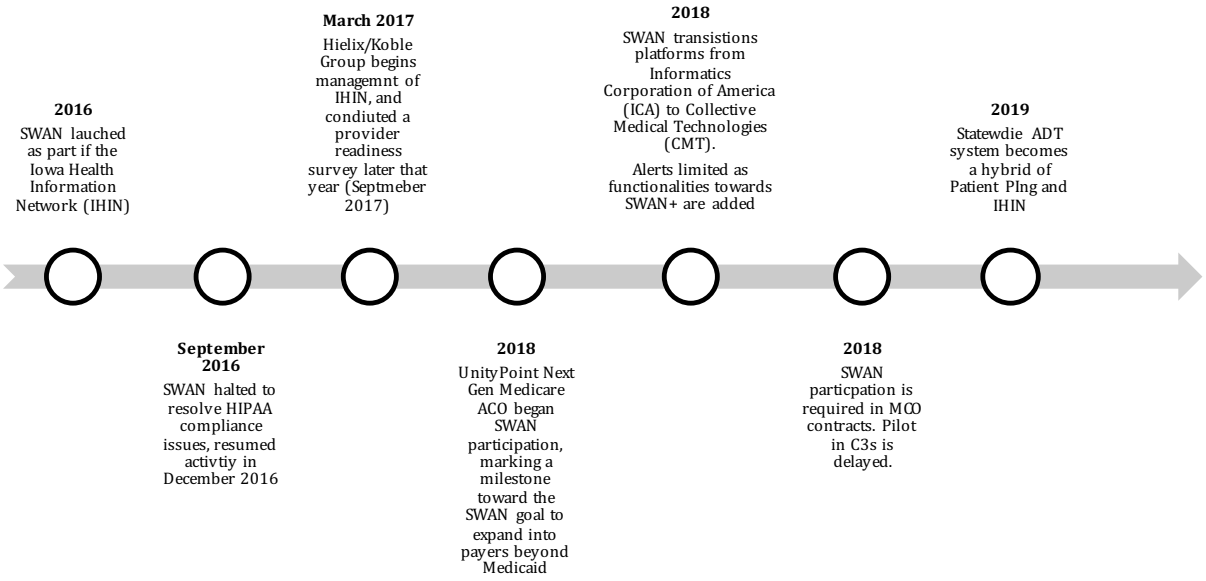
PLAY RECORDING (54 min)
https://ihin.my.webex.com/ihin.my/ldr.php?RCID=193c7f9bec8ceaf97ee93b99795e4fc2
Recording Password:(This recording does not require a password.)

Will there be any training webinars available for PatientPing subscribers?
IHIN has partnered with PatientPing to identify the Service Level Agreement for ongoing training and support for PatientPing contributors and users. PatientPing will work with each organization to train and coach all members of the organization on the appropriate use of the PatientPing application. We understand that support needs vary by customer, and the customer may contact PatientPing at any time for integration support. For any issues that require PatientPing support, please use the contact information below:
Phone: (617) 356–7147
E-mail: integrationsupport@patientping.com

When might PatientPing reach out to my organization's support team for more information?
PatientPing will reach out to customer support contacts for the following reasons:
1. Downtime escalations: the interface is down and needs troubleshooting
2. Mapping updates: we're receiving new codes that are not mapped
3. Customer tickets: missing or unusual events

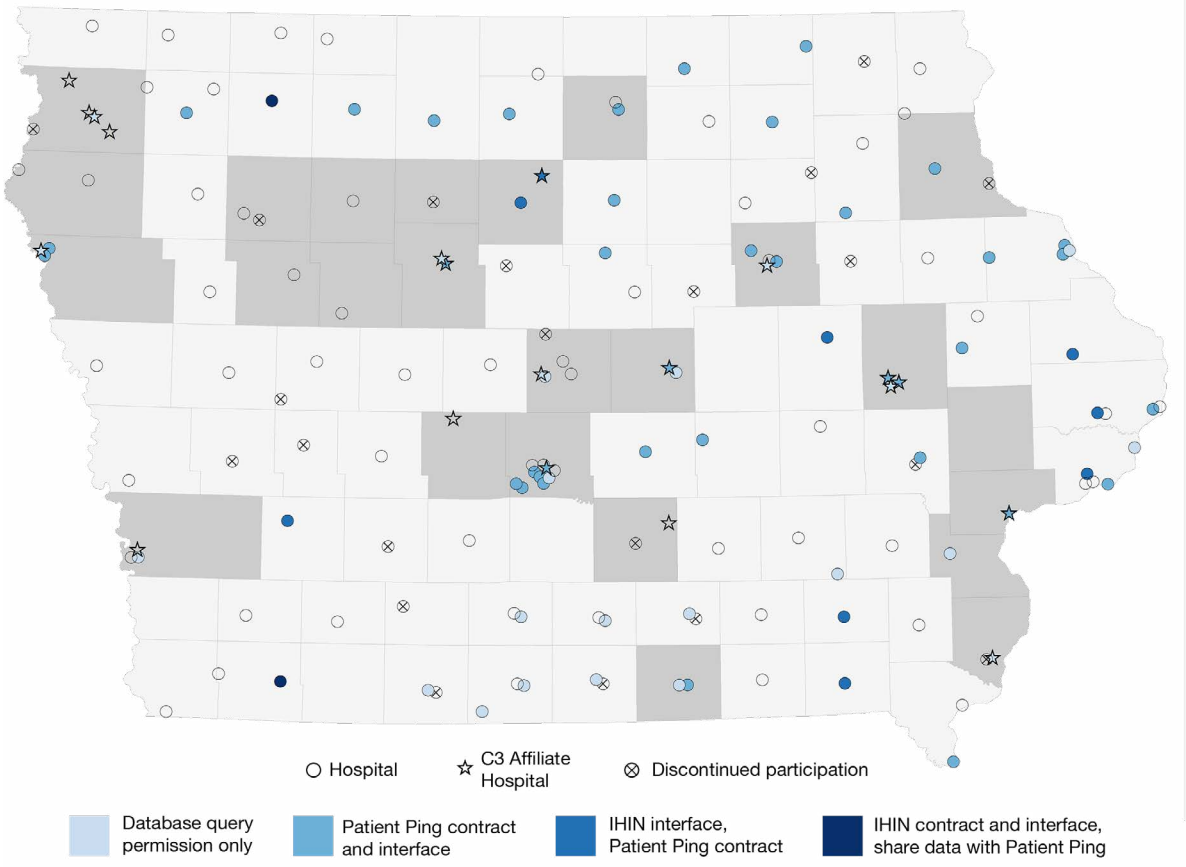
In AY3, a SWAN+ pilot was planned, and while the SWAN+ was never fully launched, PatientPing offers similar functionalities as the SWAN+ pilot, such as real-time notifications.

Figure 1.9. Timeline of Statewide ADT events throughout SIM grant



The following map (Figure 10) provides the geographical distribution of the 118 targeted hospitals in Iowa, which ones are participating in the statewide ADT system (and in what capacity), and an indication of which of those hospitals fall within the C3 regions (shaded counties). Hospitals with representation on C3 steering committees are indicated by a star. If the hospital is sending alerts to the statewide ADT system (any combination of PatientPing and IHIN participation), the circle and/ or star is filled in. Changes to statewide ADT participation are noted, with each color indicating the level of participation and noting discontinued participation since the 2018 SWAN participant list (21 hospitals).

Figure 1.10. Statewide ADT Network Map



Summary of Statewide Admission, Discharge, and Transfer (ADT) Alerting

During this reporting period, the SWAN (Statewide Alert Notification), which was used in prior years for Statewide Admission, Discharge, and Transfer (ADT) alerting, ended in April 2019.

SWAN vendor, IHIN (Iowa Health Information Network), will continue providing Iowa hospitals with ADT alerts through a partnership with PatientPing.

Some IHIN clients opted to continue their contracts with IHIN to receive PatientPing alerts, and some opted to contract directly with PatientPing (**Error! Reference source not found.**). Three of the Medicaid ACOs that were original SWAN users (Mercy, UnityPoint, and Broadlawns) opted to contract directly with Patient Ping.

Since the 2018 Award Year 3 SIM report, 21 SWAN-participating hospitals have discontinued participation in the current PatientPing/ IHIN hybrid statewide ADT system.

There were challenges getting all hospitals (especially rural hospitals) connected to the SWAN and getting the larger healthcare systems to buy-in to its potential to improve care processes.

Both MCOs reported using the SWAN to help coordinate care after patient discharges.

MCOs and ACOs reported that SWAN would have more value if the alerts were timelier (immediately after an ADT event) and all hospitals in Iowa were connected.

MCOs expressed frustration that use of and participation in the SWAN was required contractually before the platform and infrastructure was fully developed.

Formalized processes triggered by SWAN alerts could be developed to include larger patient populations and enhance the effectiveness of the SWAN.

Both MCOs believed the SWAN could be sustained beyond SIM funding, especially if alerts were sent instantaneously after ADT events and if all hospitals in Iowa were connected.

Data Collection, Sharing, and Reporting

There was an emphasis during the SIM on developing and refining data collection, sharing, and reporting mechanisms for payers, providers, health systems, and other stakeholders to improve patient health at the individual level and plan for policy and/or organizational changes and resource investments at the system level. Four of those data initiatives included:

- Community Scorecards
- Health Risk Assessments (HRAs)
- Value Index Scores (VIS)
- Statewide Strategy Plans

An emphasis on social determinants of health (SDHs) was a fundamental component of the SIM population health improvement framework. The SDH focus is embedded within several SIM activities including: 1) the referral and care coordination networks developed by and implemented in the C3 communities, 2) incorporation of measures of SDH into health risk assessments (HRAs), in particular the AssessMyHealth (AMH) tool, and 3) aggregating and analyzing SDH data to help inform policy and patient care decisions.

At the local level, the C3 communities were on the forefront of providing enhanced care coordination activities as part of their role on the SIM. The addition of SDH questions to the AMH was a goal of the SIM for AY3 but use of the AMH was discontinued in AY4.

Two SIM data initiatives were ***community scorecards*** provided to C3s to promote continuous quality improvement and ***health risk assessments (HRAs)*** to aid in understanding and addressing patients' social determinants of health (SDHs).

Community Score Card

Community score cards were feedback tools created from the data reported by the C3 communities through the SIM Portal database. Each C3 site was required to submit data elements to the SIM Portal including SDH referral data, tobacco QuitLine client referrals, a diabetes National Quality Forum (NQF) measure, and two process measures. In addition, the SIM portal database included administrative claims specific to county-level Medicaid potentially preventable ED visits, other NQF quality measures submitted by participating clinics, Hospital Improvement Innovation Network (HIIN) hospital data, and SDH data from IDPH. Thus, the SIM Portal acted as a data repository and engine (managed and administered by the IHC SIM team) to aggregate these data into a community-specific scorecard that can be shared back to each community. The purpose of the scorecards at the community-level was for stakeholders to use them to drive quality improvement.

Health Risk Assessments (HRAs)

Health risk assessments (HRAs) are screening tools (typically questionnaires) completed by patients that are used to provide both the patient and provider with an evaluation of the person's health status, health risks, and quality of life. The intention of HRAs was to identify risks, provide feedback, and introduce interventions that could promote health and/or prevent disease. Based on the use of health risk assessments within the Iowa Wellness Plan (IWP)[15], the Iowa SIM decided to invest effort in using an HRA tool as a way to not only identify SDH issues for individual patient interventions but, in aggregate, to identify SDH issues for community intervention and promote SIM goals.

In SIM AY3, the SIM project embarked on a plan to use HRAs to address SDHs by encouraging the use of a standardized HRA, namely the AssessMyHealth (AMH) tool that is used in the Healthy Behaviors Program of the IHAWP. Use of the AMH was discontinued in AY4..

Value Index Score (VIS) Dashboard

The VIS was a quality metric comprised from claims and encounter data that was generated at the ACO/Provider level based on their attributed population. It was designed to be a tool for measuring health system change and the components that made up that change. Based on six primary care specific domains (derived from sixteen key process and outcome measures), the VIS was a single,

15 Iowa Department of Human Services. Healthy Behaviors Program. Available at http://dhs.iowa.gov/ime/about/iowa-health-and-wellness-plan/healthybehaviorsprogram

composite score that was supposed to drive quality improvement by quantifying how well a provider is caring for their entire patient population. The VIS score was made available to providers/organizations through an online dashboard that is periodically updated and a main purpose of the VIS within the SIM is to support VBP efforts by providing a quantifiable basis for quality-based payments. The use of the VIS and VIS dashboard in SIM initiatives ended in AY4.

Statewide Strategy Plans

A major effort to coordinate and measure statewide population health in AY2 included the development and dissemination of IDPH's Statewide Strategy Plans (SSPs). The SSPs were guidelines to evidence-based practice for a variety of population and hospital-based health issues. For each topic, the SSP included an overarching mission and vision statement, specific goals and objectives, and targeted tactics to address primary prevention, detection, management/treatment, and the use of data to address the particular condition. The SSPs can be found here https://idph.iowa.gov/SIM.

Over the course of the first implementation year, multi-stakeholder committees met several times to develop many of the SSPs. In the first implementation year, the C3 communities were encouraged to use the SSPs, particularly related to obesity, tobacco, diabetes, and care coordination but there were no particular requirements to do so. In this reporting period, as a part of their contractual award, the C3 communities were to focus their population health plans and activities on improving the health of people with diabetes and were required to utilize the diabetes and related SSPs to do so. This change in direction provided a strategic move from passive encouragement of the use of SSPs to a more active requirement of their use within one set of stakeholders.

In addition, SSP outreach was used to educate county stakeholders about diabetes resources, such as DSME and NDPP programming, available in their region. With the turn toward a focus on diabetes for population health measurement, the SIM team intended to leverage existing, evidence-based diabetes programming as tools for communities in efforts to reduce the prevalence of diabetes and help patients better manage their diabetes (see Figure 4 for statewide Diabetes Self-management training sites at the end of the SIM grant).

Summary of Data Collection, Sharing, and Reporting

Several data collection efforts stimulated by the SIM will not be sustained post-SIM by SIM-involved stakeholders, including AssessMyHealth, Community Scorecards, and the VIS dashboard.

Stakeholders understood the value of collecting and using SDH data (and credit the SIM with initiating and maintaining conversations about SDHs) and some have incorporated SDH information into their internal processes and patient care plans.

Different clinics and sites used different, incompatible, and/or underdeveloped EMRs.

Lack of workforce with experience in HIT and data analytics poses a challenge for data collection and use.

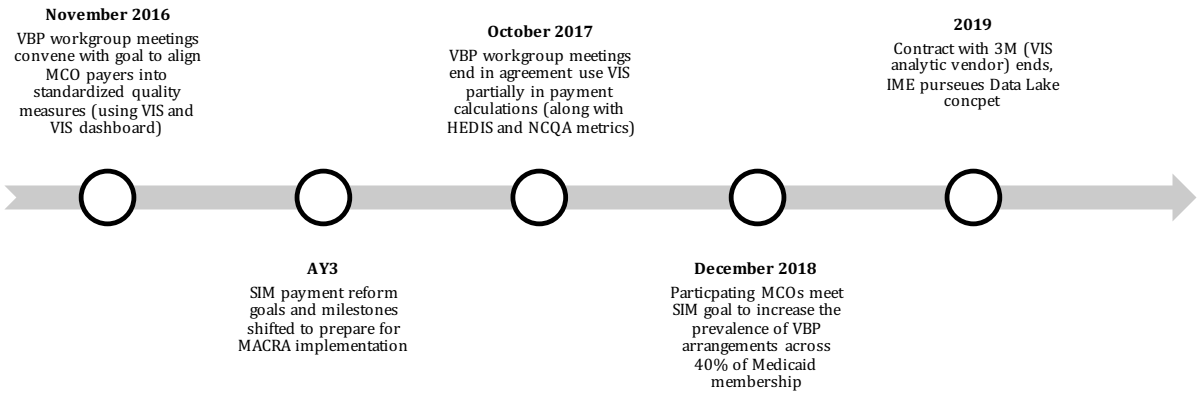
Many different types of HRAs instruments are in use across clinics and systems and this creates a challenge when trying to integrate data across systems.

ACOs reported difficulty integrating AMH data received from the state back into their own systems; C3s reported the AMH tool was time consuming to implement and/or it was duplicative of other tools preferred by partners and predicted it would not be used after the SIM C3 funding ended.

In AY4 the SDH workgroup identified standardized measures to replace AMH SDH screening tool (use ended in April 2019).

Value Based Purchasing (VBP) and Quality Metrics

Figure 1.11. Value Based Purchasing events during the SIM grant



Quality Measures

A central issue in the progression towards the SIM's goal of a statewide VBP payment model was differing needs and current practices in quality and performance measures. Specifically, contract discussions revolved around cost and quality measurement, Total Cost of Care (TCOC) and VIS methodologies, and appropriate level of risk, while maintaining flexibility for each MCO to incorporate internal metrics. Discussions around quality measures and statewide standardization reached a conclusion in late 2017, and requirements were delineated in MCO VBP contracts. While the original SIM goal was to require the MCOs to adopt the Value Index Score (VIS) used in the pre-MCO Medicaid program and Wellmark, negotiations between the state and MCOs ended in agreement to only use VIS partially in payment calculations. Both MCOs used national quality measures (HEDIS and NCQA) along with VIS to calculate reimbursement in shared savings models. In the September 2017 MCO contract amendments, the Medical Loss Ratio (MLR) or the TCOC were both acceptable calculations to determine the success in VBP arrangements.

In Award Years 2 and 3 of the SIM, the goal of payment reform included aligning payers around standardized quality measures to inform value-based payments. The metric selected at the beginning of the SIM was the VIS, the calculation of which was facilitated by 3M Analytics. Due to issues with the ability to stabilize MCO encounter data, 3M was unable to provide baseline information for use in the VBP contracts. During AY4, the state's contract with 3M was terminated and the VIS requirements in MCO contracts were replaced with a subset of HEDIS measures from the Core Set of Adult[16] Health Care Quality Measures for Medicaid and the Core Set of Children's[17] Health Care Quality Measures for Medicaid. The subsets of measures which determine payments were selected by each MCO, so standardization of quality measures across payers was not fully realized.

As documented in prior evaluation reports, the VIS tool and dashboard had encountered issues with functionality and buy-in from stakeholders. Specifically, the AY3 report stated, "*All six stakeholders interviewed (two MCOs and four ACOs) independently noted hesitation to adopt the VIS metrics, with five stakeholders noting that the VIS was developed to measure privately insured populations and was not suited to the Medicaid population*." Some suggested using a nationally standard tool for Medicaid populations, like HEDIS. In addition, the transition should be relatively undisruptive, since both MCOs reported using national measures (HEDIS) along with the VIS previously.[18] So, this transition of quality measures may garner more support and fortify the potential for sustaining value-based contracting beyond the SIM.

16 2019 Core Set of Adult Health Care Quality Measures for Medicaid https://www.medicaid.gov/medicaid/quality-of-care/downloads/performance-measurement/2019-adult-core-set.pdf

17 2019 Core Set of Children's Health Care Quality Measures for Medicaid and CHIP https://www.medicaid.gov/medicaid/quality-of-care/downloads/performance-measurement/2019-child-core-set.pdf

18 Bentler S, Heeren T, Spinarski RSchultz, McInroy B, Momany E, Damiano P. State Innovation Model (SIM) Evaluation Report on Award Year 3 (AY3) Activities. University of Iowa Public Policy Center; 2018. doi:10.17077/rtl9-ewc4.

At the time of this report, IME reports pursuing proof of concept designs for enhanced analytics through a Data Lake concept. This includes the concept design of an analytics dashboard that could be used to monitor performance under VBP contracts as well as MCO oversight.

Value Based Purchasing

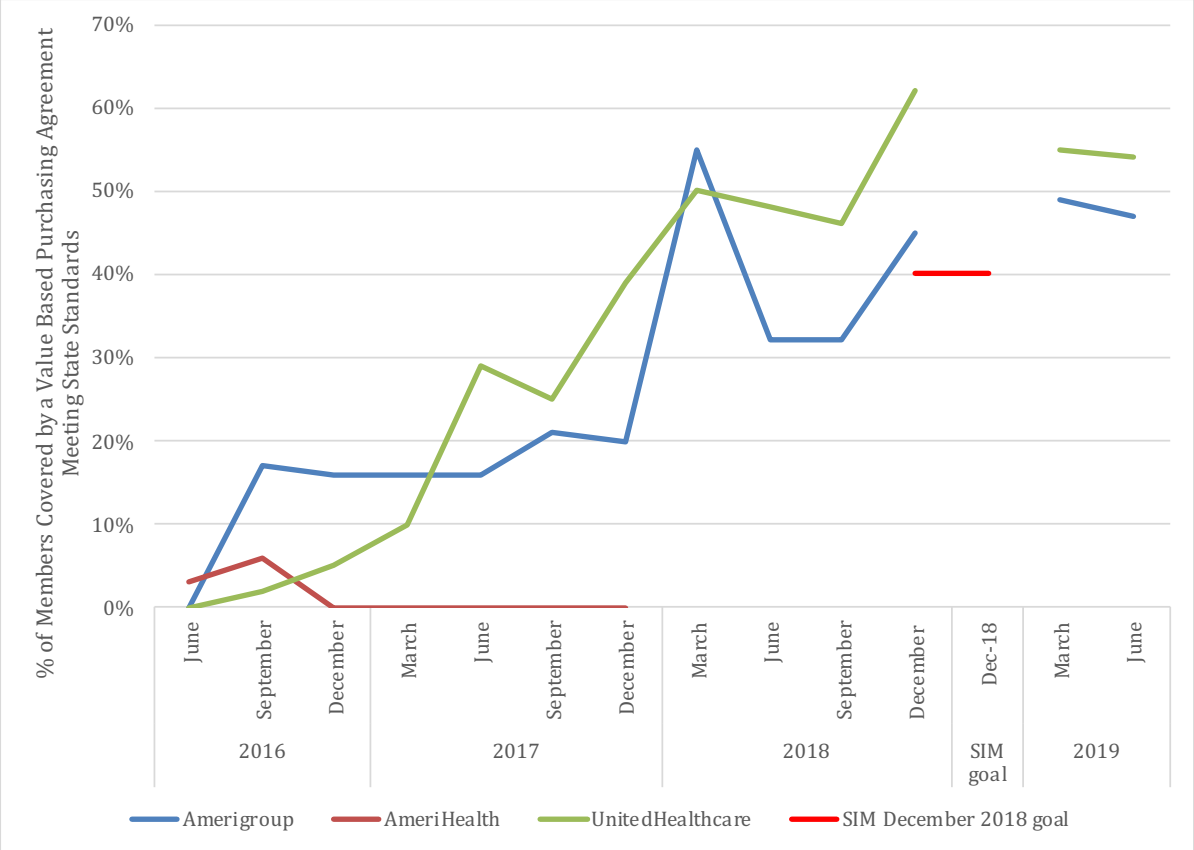
Value Based Purchasing (VBP) is broadly defined as linking healthcare provider payment and incentives to improved quality of care and performance. This payment methodology is intended to hold healthcare providers accountable for both the cost and quality of care they provide. VBP programs can take on many forms but all attempt to encourage reductions in inappropriate care and identify and reward the best-performing providers.

While the ultimate goal was to encourage VBP participation by all payers in Iowa, throughout the SIM award years, the focus of the VBP initiative was Medicaid, specifically, VBP contracting between the MCOs and the five Medicaid ACOs. As a SIM goal, establishment of VBP was measured by an increase in the number of provider contracts in a VBP arrangement and number of lives covered under VBP contracts. Ultimately, the SIM aimed to develop draft contract language that advanced requirements to achieve level 3B Advanced Alternative Payment Models (Alternative Payment Models with Shared Savings and Downside Risk) – this was not fully achieved during the grant period.

The churn of MCO providers in the state may have delayed advancement towards the ultimate SIM VBP goal of developing contract language that advances requirements to achieve level 3B AAPMs by 2019 across all MCOs (two MCOs withdrew, with a new MCO beginning in July 2019). In AY3, Medicaid ACOs reported little involvement in the VBP contract development. At the time the SIM ended, the MCO contracts had the same standards of risks withheld as in prior years.

During the grant period, the Iowa SIM achieved its goal to increase the prevalence of VBP arrangements across 40% of Medicaid membership (see Figure 1.12).

Figure 1.12. Value Based Purchasing Enrollment by MCO



The SIM goal of aligning payers in quality measurement and contractually requiring thresholds for membership enrolled in VBP was realized during the SIM grant. In addition, SIM staff reported

in July 2019 that incentive shared savings payments to providers participating in SIM approved VBP programs were dispersed (2% withhold not enacted) to both successfully participating MCOs (Amerigroup and United Healthcare).

The Iowa SIM team reported that the MCOs were notified that the VIS would no longer be used and that during 2019 and 2020 the SIM team would collaborate with the MCOs to develop a new aligned approach to VBP for the Medicaid population.

Key Takeaways – SIM payment reform efforts

Uncertainty in MCO contracts affected the MCOs' ability to focus on SIM activities and plan ahead for the metrics that they will be expected to reach in the coming years. There were some challenges advancing the SIM strategies for VBP while the state contracts with the Medicaid MCOs were under negotiation.

In AY2, two of the three Medicaid MCOs completed state-approved VBP contracts, which included a 2% payment withhold to enforce the requirement of 40% covered lives in VBP.

State-approved value-based contracts were in place as of September 2017, and both MCOs reported that they were satisfied with the conclusion of negotiations. The Iowa SIM team update in 2018 noted that incentive payments had been received and disseminated to providers in one MCO.

Both MCOs were knowledgeable about contract expectations regarding increasing the percentage of members covered in a VBP arrangement to 30% by July 2018 and 40% by December 2018.

MCOs reported active engagement in SIM VBP activities and explicitly reported collaborative relationships and participation in negotiations as a success.

All MCOs and ACOs interviewed noted hesitation to adopt the VIS metrics, with five of these stakeholders noting that the VIS was developed to measure privately insured populations and was not suited to the Medicaid population. One ACO suggested increased alignment with Medicare methodologies as a potential solution. Neither MCO was able to identify added value from the requirement to incorporate VIS into performance-based measures.

Stakeholders have conflicting motivations regarding standardization. MCOs want less standardization across ACO contracts (referring to the required use of state-approved contract templates) to promote competition in the MCO contracting process, and ACOs prefer standardization to simplify practice and reporting processes for providers.

The VBP population threshold goal was met. Both participating MCOs were successful in meeting the December 2018 goal of 40% lives covered in VBP

Exit and addition of Medicaid payers (MCOs) had an impact on the state's ability to standardize contracts across payers. Throughout the SIM, AmeriHealth and UnitedHealthcare withdrew from Iowa's Medicaid management, and Iowa Total Care began management. VBP contracts with terms to reflect updates to quality measures and percent of population covered were being negotiated at the time the SIM ended (April 2019) with active MCO stakeholders.

Throughout the SIM, expectations for standardized quality measures and the qualifying metrics considered transitioned. The standard VIS measures were removed from VBP contracts and replaced with HEDIS measures of each MCOs choice.

Technical Assistance (TA) Initiatives

Providing technical assistance (TA) to the various stakeholders involved in both primary drivers (payment and delivery system reform) was one of the main activities supported by the SIM. Technical assistance activities were intended to educate stakeholders on the many facets of payment reform and delivery system change, as well as to provide information and data for health systems to use to enact change.

The Iowa Healthcare Collaborative (IHC) and subcontractors (Topos, Iowa Primary Care Association (IPCA), Iowa Pharmacy Association (IPA), Iowa Medical Society (IMS), Iowa Hospital Association (IHA), and Alliance for Integrated Medication Management (AIMM)) TA activities included a wide variety of opportunities, strategies, and venues to provide education and training to, along with information sharing among, C3 communities and other interested stakeholders. Table 11 provides an outline of TA focus areas and the entity providing TA in that area.

Subcontractor Consultation

The IHC, while primarily responsible for providing TA to C3 communities and healthcare systems, has also utilized various subcontractors to leverage existing networks of professional association members and access specific expertise.

Table 11. Technical Assistance Providers

Responsible Entity	TA Focus Area
Iowa Healthcare Collaborative (IHC)	Social Determinants of Health • Develop and deploy referral loop and feedback system for C3s Diabetes Management • Develop and deploy referral loop and feedback system for C3s • Diabetes Statewide strategy Quality Improvement • Provide quarterly community scorecards • Monthly QI/PI Site Visits • Manage IHC-SIM Data Portal • Community Scorecard Workforce Development • Statewide conferences • Webinars • On site meetings Support and Resource Sharing • SIMplify website • SIMplify Newsletter • Conference calls • E-mail • Social Media
Iowa Primary Care Association (IPCA)	Social Determinants of Health • Seven SDH podcasts • Three SDH briefs
Iowa Pharmacists Association (IPA)	Medication Safety • Provide resources to C3 coalitions Readmission Prevention • Provide resources to C3 coalitions
Iowa Medical Society (IMS)	Guidance on payment reform and QPP (Quality Payment Program) • Promote resources on website to assists physicians with MIPS (Merit Based Incentive Payment System) Community level involvement • Dr. Evans and IMS membership promote
Iowa Hospital Association (IHA)	Quality Improvement • Work directly with C3s to Update Quality Improvement Plans • Facilitate RCPI connected to scorecards
Alliance for Integrated Medication Management (AIMM)	Medication Management • Virtual C3 Learning Community Presentation Care Coordination • Facilitated group meeting at one C3

Table 12 provides a summary of the main TA activities implemented over this reporting period, and the organization responsible. The remainder of this section describes each TA activity.

Table 12. Summary of Technical Assistance (TA) Activities during SIM grant*

Activity	Intent/Description	Timeline Implemented	Venue/Stakeholders
SIM Unplugged	Monthly webinar series posted on YouTube and SIMplify website	Began series in November 2017, with monthly editions through April 2019	Online – SIMplify portal
Learning Community Events	Day-long conferences designed to provide SIM-specific education and training to stakeholders	Held 3 times per year throughout grant	In person – C3 and others
Targeted TA to C3 Communities – Site Visits	Site visits to C3 communities were conducted to introduce the SIM, provide education and training, and incorporate feedback from C3s into planning for future events.	Quarterly	In person – C3 specific
Targeted TA to C3 Communities – SIMplify Website	A web-based communication platform which facilitates communication between SIM staff and C3 members	Ongoing	C3 specific
Iowa Pharmacy Association (IPA) TA	Webinars, conference calls and on-site technical assistance education	Throughout AY4	Pharmacists, Pharmacy techs and Physicians
The Primary Care Association (IPCA)	PRAPARE staff training and implementation, webinar series training with resources, development of SDOH Toolkit for primary care providers	Throughout AY4	FQHCs and primary care staff
Alliance for Integrated Medication Management (AIMM) TA	Assessment/consultation conference call, virtual education session, on-site visit, ACH sustainability planning	Throughout AY4	C3 sites
IA Medical Society (IMS) TA	Regional sessions, opioid summit, webinars	Throughout AY4	Health systems
Topos TA	In-person Value-Based messaging workshop and webinars	Throughout AY4	C3 sites
SIMplify Newsletter	A way to update stakeholders on SIM activities, share relevant resources, and promote upcoming events.	Began in March 2016; Monthly dissemination	Online/email distribution – C3 and others

* Public forums and feedback email account were ongoing, but not shown above.

SIM Unplugged series

The SIM Unplugged series was a bi-monthly webinar series organized by the IHC. The series produced videos which covered a variety of topics, outlined in Table 13, and each video is available on the IHC website, posted to the SIMplify forum and YouTube channel, and disseminated through a SIM Unplugged newsletter.

Table 13. SIM Unplugged series details

Date	Topic	Presenting Organization	Views
November 2017	Finding and using SDH data	Iowa Primary Care Association (IPCA)	86*
December 2017	SIM and Healthcare Trans-formation	Iowa Healthcare Collaborative	108*
January 2018	Risk in Healthcare	Iowa Healthcare Collaborative	54*
February 2018	Heart Health	Iowa Healthcare Collaborative	24*
March 2018	Patient Centered Care	Marshalltown Primary Healthcare	70*
April 2018	Advanced Care Planning	HCI Care Services	47*
May 2018	Building a Business Case for Quality Improvement	Iowa Healthcare Collaborative	18*
July 2018	Community Partnerships	Iowa Healthcare Collaborative	10*
August 2018	Opioid Standard of Care	Compass PTN	9**
November 2018	SIM Expansion	IHC	48**
December 2018	Medication Management	Towncrest Pharmacy, UIHC	71**
February 2019	Community Paramedic Medication Management	IPCA	49**
February 2019	Responsible Reporting of Healthcare Information and Data	IPCA	29**
April 2019	Health Risk Assessment	Chris Schacherer, PhD	41**

* View data collected 10/15/18; ** View data collected 6/26/19

Statewide Learning Community Events

SIM Learning Community events were day-long in-person conferences which provided education and training for healthcare providers, payers, care coordination teams, hospitals, ACOs, MCOs, and C3s in their respective roles in the SIM Initiative. The conferences featured speakers, panels, and networking breaks. During the SIM grant, IHC held seven Statewide Learning Communities (Table 14).

Table 14. Topics covered in SIM Statewide Learning Events

AY2	
November 9, 2016	**July 12, 2017**
Status update and preview of next steps MACRA and reimbursement Care Coordination Model: Rural C3 Care Coordination and Managed Care Medication Management Social Determinants of Health	Care Coordination and Community Service Integration Accountable Care Organizations Social Determinants of Health Physician Engagement Community and Clinical Care Coordination- C3 example

AY3		
November 9, 2017	**March 7, 2018**	**July 17, 2018**
Data Use and Integration SWAN Capabilities and application Data Management and Application ACO Shared Savings models	Health Information Exchange Community Health Transformation Patients Perspectives in Care Partnerships Patient and Family Centered Care	Community Engagement and Complex Patients Rural Health Model Understanding and Serving Communities Community Partner Collaboration Strategic Communication

AY4	
November 6, 2018	**March 28, 2019**
Community Partnership for Healthcare Transformation Rural Health Value Based Care Trends in Payment Design	Value Based Care C3 Successes Reflections on Governor's Roundtable Motivation for Sustainment

There was a drop-off in Learning Community registrants following the first year of the SIM. However, the number of registrants remained stable over award years 3 and 4. There were no notable decreases in registration within any particular subgroup.

Targeted TA to C3 Communities

The IHC was primarily responsible for providing TA and building capacity within C3 sites to ensure that C3 communities were equipped to accomplish SIM goals. Each C3 site had an assigned TA/Quality Improvement (QI) advisor from IHC who conducted site visits and provided small group and individual level TA at each site.

Two half-day learning events were held online for additional TA specific to C3s. In response to feedback requesting more cross-site networking, IHC held a dedicated Virtual Learning community in March 2017 that was primarily developed and led by C3s, and allowed C3s to share resources, common problems, and promising solutions. Linn County and Dallas County C3 sites detailed their approaches to tracking and closing SDH referral loops using TAVhealth and Salesforce, respectively. The four-hour virtual workshop held in June 2017 included responding to TA requests involving data and clarified the expectations for data collection and metric reporting. Content of the learning events can be found in Table 15.

Table 15. Topics covered in C3 Specific Learning Events

SIM C3 Virtual Learning Community March 9, 2017	C3 Virtual Workshop June 22, 2017
Using and Sharing Data Year in Review Resource Sharing Success Stories/ Promising Practices Q&A	Overview of SIM AY3 plans Updates from HIIN and TCPI C3 sites share success stories, plans and local partnership management AIMM presentation Community Scorecard Statewide Strategies Responding to TA requests

IHC-SIM Data portal

A central project to C3 TA was the culmination and use of the IHC-SIM data portal, a secure, web-accessible reporting database to collect C3 project-specific metrics from each of the communities. In AY1, AY2, and into AY3, data collection design and methods for the IHC-SIM data portal were being developed, built, and refined. IHC was responsible for compiling the data and producing a community scorecard and providing that scorecard to the C3 site. Additional measures specific to diabetes management and prevention were added to the portal in AY3, reflecting data-driven support for the IDPH population health roadmap.

Quality Improvement (QI) Work Plans

To support and develop routine process improvement practices, IHC developed a tool to assess needs, track progress, and identify resources for the C3s through the submission of quarterly Quality Improvement (QI) Work Plans. The QI Work Plans asked the C3 sites to self-assess six areas of their operations, including: care coordination (infrastructure, referral process, operational effectiveness, and programmatic focus), general updates, SDH data collection and reporting, diabetes, obesity, and tobacco.

Data Portal Train Along Series

IHC developed a webinar to build capacity and efficacy amongst C3 sites around using and sharing data. The Data Portal training series also served as a feedback loop, so IHC could better identify and understand areas of need and obstacles at each C3 site. The live SIM Data Portal Train Along Series addressed CMS project requirements and program outcomes, as well as focusing on the needs of the initiative.

ACH Expansion

During AY4, IHC onboarded nine new C3 sites (ACH expansion) and continued regular visits with the seven established sites. The IHC had a role in identifying potential sites which had ACH elements in place, then worked with sites to complete a project proposal, logic model, and budget. In addition, IHC collected monthly progress reports, conducted site visits, and will collect a final report from the new ACH sites at the end of their funding.

Total Cost of Care pilot

During the SIM grant, IHC began a pilot which tracked individuals participating in C3 care coordination. The goal of the pilot is to track the SDOH- related costs of high-utilizing patient referrals, along with examining Medicaid claims data costs. The results of this project were delivered by IHC subcontractor, AIMM (Alliance for Integrated Medication Management). An example of the product delivered to C3 sites can be found in Appendix B.

Webinars

SIM-specific webinars were produced as part of the TA plan for C3s. After the real-time webinar content concluded, the webinars were converted to videos and posted on the SIMplify website for reference.

Table 16. Technical Assistance webinars

Topic	Date	Presenting organization
IHIN and pharmacy / HIE	August 8, 2017	IPA
Person and Family engagement	September 7, 2017	IHC
Person and Family engagement	October 5, 2017	IHC

Social Media

In addition to resource sharing on the SIMplify website, SIM education and training events are posted on IHC's Facebook and YouTube.

Podcasts

The Iowa Primary Care Association (IPCA) developed a podcast series (seven installments), titled "Iowa Communities Working to Address Social Determinants of Health." The series was designed around the social determinants of health framework developed by Healthy People 2020. The podcast episodes were published on March 17, 2017 and posted to the IHC YouTube account and the SIMplify website. Table 17 provides a listing of the podcast series topics, featured organizations, and count of podcast views.

Table 17. "Iowa Communities Working to Address Social Determinants of Health" Podcast Series

Topic	Featured Organization(s)	Views*
Introduction and Overview of Social Determinants of Health	Kaiser Permanente Iowa Primary Care Association Child and Family Policy Center	54
Statewide Programs/Resources for Addressing Social Determinants of Health	1st Five SafeNetRX USDA Rural Development Food Bank of Iowa Iowa Area Agencies on Aging	85
Neighborhood and Built Environment	Decatur County Public Health	39
Health and Health Care	Crawford County Memorial Hospital	93
Social and Community Context	Ethnic Minorities of Burma Advocacy and Resource Center	57
Education	Clinton After School Program	34
Economic Stability	Proteus, Inc.	122

*View data retrieved October 27, 2017

SIMplify Newsletter

The SIMplify newsletter was launched in March 2016 and continued to keep C3 stakeholders informed about the SIM on a regular basis. Stakeholders accessed the newsletter as a recipient on a mailing list or by visiting the SIM website. The newsletter informed readers of upcoming events and webinars organized by the Iowa SIM team and the national SIM team. Along with promoting SIM sponsored events, the SIMplify newsletter shared learning opportunities related to SIM goals, presented by SIM leaders and other organizations not directly affiliated with the SIM, but share common goals or interests. Archived issues of the SIMplify newsletter can be found here.

SIMplify Website

The SIMplify website was a web-based communication platform which facilitated communication between SIM staff and C3 members. The SIMplify website was launched during the first

implementation year and was re-vamped in April 2016. The main features of the SIMplify website were the resource library and discussion board. In late July 2017, the SIMplify website was upgraded to a new format, which added features that included a "C3 specific" discussion group, and a reorganization of the resource library by topic.

The SIMplify website was developed to "share information, resources, and tools and promote interaction and networking." To evaluate the usage of the discussion forum on the SIMplify website, an interaction rating scale was developed. The rating scale was designed to measure how C3 representatives were interacting with TA partners and other C3 sites (Table 18).

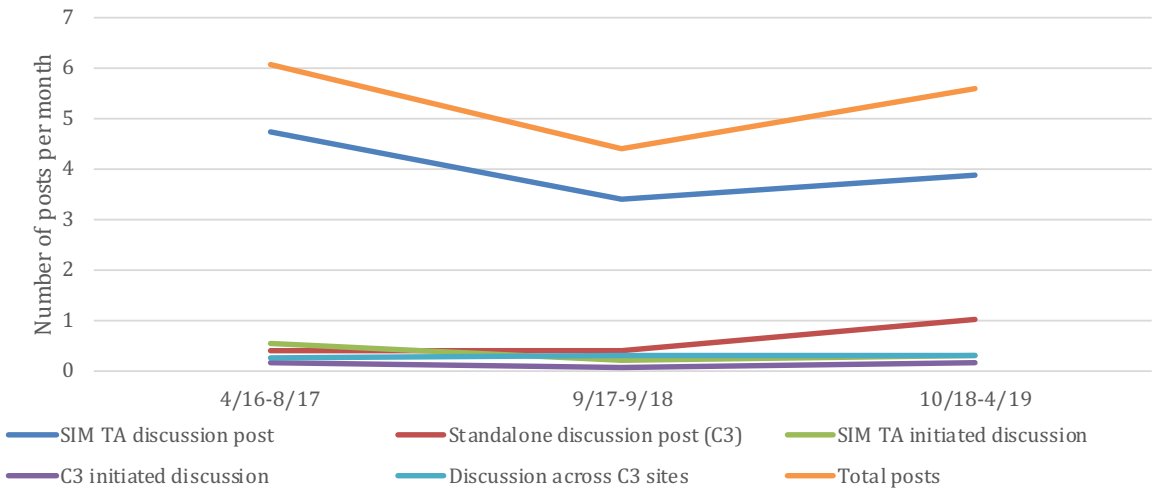
Along with ongoing communication about SIM activities, the discussion board hosted topical discussions. Starting in August 2016, two-week topic cycles were introduced to inform participants and encourage discussion among the C3 partners.

Table 18. SIMplify Website Activity by Types of Posts

	April 2016 through August 2017 (17 months)	September 2017 through September 2018 (13 months)	Octo-ber 2018 through April 2019 (7 months)	Total Posts by type
Classification of Discussion Posts	**Count**	**Count**	**Count**	
SIM TA discussion post Discussion entry posted by SIM TA personnel or subcontractor (IDPH, IHC, IPCA, IHIN, IPA), with no replies from a C3 representative	80	44	27	151
Standalone discussion post (C3) Discussion entry posted by a C3 representative with no replies	7	5	7	19
SIM TA initiated discussion Discussion entry posted by SIM TA personnel with at least 1 reply from a C3 representative	9	3	2	14
C3 initiated discussion Discussion entry posted by a C3 representative with a response from SIM TA personnel	3	1	1	5
Discussion across C3 sites Discussion entry posted by a C3 representative with a response from another C3 site	4	4	2	10
Total posts	**103**	**57**	**39**	**199**

Figure 1.13 shows the changes in SIMplify website activity in three time periods. SIM TA discussion posts (defined in Table 18) were the most frequent type of post and the post defined as the least interactive. There was little change in the frequency of the four other types of posts. It should be noted that all three time periods differ precluding any conclusions regarding the trend in website activity over time.

Figure 1.13. SIMplify Website Usage Over Time by Type of Discussion Post Entry



Sustainability Plan

The SIMplify communication portal managed by the HealthDoers Network was converted to the internal web-based IHC iCompass communication platform. Current C3s, expansion communities, key stakeholders and partners were notified and transferred. In AY4, the SIMplify communication

portal allowed two-way information flow and maintains a library for electronic documents.

TA to Healthcare Systems

An addition to the AY3 SIM activities was the provision of TA to providers in C3 adjacent hospitals, clinics and Medicaid ACOs to build system capacity that aligned with the C3s quality and process improvement activities.

A primary component of IHC's plan to deliver TA to healthcare systems was engaging providers. Leadership at IHC met to define strategies to identify provider champions, prepare providers for VBP, and align existing programs (e.g. Transforming Clinical Practice Initiative (TCPI) and Hospital Improvement Innovation Networks (HIIN)).

Engaging Health Systems through Work Group Participation

Two workgroups specific to physicians and pharmacists were planned by IHC to engage health system practitioners in community care coordination activities. The groups met quarterly with membership composed of five physicians and four pharmacists.

SIM Support within ACOs

IHC provided TA to partnering Medicaid ACOs, Mercy Health Network, UnityPoint Health, and the University of Iowa Health Alliance. Of note, two of the five Medicaid ACOs in the state (Broadlawns and IowaHealth+) were not included in IHC's healthcare system TA partnerships. The assistance provided was wide-ranging and included the development of resource guides for practitioners on the topics of Advanced Alternative Payment Models, Accountable Communities of Health, and risk sharing. Other TA included establishing population management incentives, standardizing administrative processes, exploring global budgets for rural providers, and resolving data management and sharing issues.

During AY2, IHC shifted from the original strategy to embed liaisons in the three major healthcare systems (Unity Point Partners, Mercy ACO, and University of Iowa Health Alliance), and instead utilized existing ACO staff to support SIM initiatives; specifically, assist with IHC TA activities, promote communication and transparency, and provide input.

Key Takeaways- Technical Assistance

The Iowa SIM sponsored technical assistance directly to the C3 sites and health systems, along with strategies to reach statewide audiences, such as Learning Community Events and online platforms.

Additional subcontractors were added to the SIM TA team, solidifying partnerships to provide SIM stakeholders access to specific expertise and leverage existing networks of professional association members to enhance the application of SIM activities.

- For example, Topos was added to the TA team in AY4 to develop value-based messaging with C3 sites to support advocacy and the sustainability of ACH work.

All stakeholders interviewed (MCOs, ACOs, C3s) described various limitations in workforce skills and capacity as challenges which validated the need for providing targeted TA.

Representatives from two ACOs described a lack of applicability of SIM provided training within their unique systems and settings.

Three C3 site representatives reported a lack of follow-through in regards to the cyclical quality improvement plan process, and six sites reported a need for customized TA.

Focus on sustainability: SIM TA in AY4 included efforts to measure and communicate the value of the SIM work, maintain a community of support for health transformation, and provide tools for ongoing progress towards SIM goals.

ACH expansion: Nine new C3 sites were onboarded during this reporting period, and their proposal requirements were in alignment with the original C3 site requirements (ACH characteristics)

Chapter 2: Statewide Survey

Methods

2016

The 2016 statewide surveys were conducted between September 29, 2016 and April 23, 2017 using a telephone interview methodology. Interviews were administered by Computer Assisted Telephone Interviewing (CATI). A dual-frame random digit dial (DF-RDD) sample design, including landline and cell phones, was used to collect the data, with additional oversamples in C3 and control counties. Samples were provided by Marketing Systems Group (MSG); 10,000 landline and 25,000 cellular telephone numbers were sampled from their respective universe of 3,459,6000 and 4,821,000 numbers throughout the entire state of Iowa.

From the phone numbers sampled, 2,132 interviews were completed. Respondents were eligible if they lived in Iowa and were 18 years of age or older at the time of the interview. For the landline samples, interviewers randomly selected an adult member of the household using a modified Kish procedure.[19]

Interviews were conducted by trained interviewers at the Center for Social & Behavioral Research at the University of Northern Iowa (UNI). Out of the total 2,132 interviews, 1,887 were completed by cell phone while 245 were completed on landline phones. No incentives or compensation were offered for participation. Interviews averaged 20 minutes in length.

2018

The 2018 statewide surveys were conducted between September 1, 2018 and April 30, 2019 using a telephone interview methodology. Similar to 2016, interviews were administered by CATI using a DF-RDD sample design of landline and cell phones to collect the data, with additional oversamples in C3 and control counties. Samples were provided by Marketing Systems Group (MSG); 30,000 landline and 3,972 cellular telephone numbers were sampled from their respective universe of 1,230,149 and 5,447,000 numbers throughout the entire state of Iowa.

From the phone numbers sampled, 2,472 interviews were completed. Respondents were eligible if they lived in Iowa and were 18 years of age or older at the time of the interview. For the landline samples, interviewers randomly selected an adult member of the household using a modified Kish procedure.[20]

Interviews were conducted by trained interviewers at the Center for Social & Behavioral Research at the University of Northern Iowa (UNI). Out of the total 2,474 interviews, 1,865 were completed by cell phone while 607 were completed on landline phones. No incentives or compensation were offered for participation. Interviews averaged 20 minutes in length.

Survey Instrument

The survey instrument was designed to obtain information about the health and wellness of Iowans and included items specific to the public health goals of the SIM. The following topic areas were included on the survey:

- Need, utilization, and unmet needs for healthcare services (original items on need and unmet need, derived from NHIS)
- Physical and mental health status, and functional limitations
- Obesity (original items)
- Diabetes (original items, Behavioral Risk Factor Surveillance System (BRFSS)[21], Diabetes Distress Scale[22], California Health Interview Survey (CHIS)[23])

19 Kish, L. (1965). Survey sampling. New York, NY: John Wiley & Sons, Inc.
20 Kish, L. (1965). Survey sampling. New York, NY: John Wiley & Sons, Inc.
21 CDC. (2019). BRFSS. Available at http://www.cdc.gov/brfss/questionnaires.htm
22 Polonsky, W. H., Fisher, L., Earles, J., Dudl, R. J., Lees, J., Mullan, J., & Jackson, R. A. (2005). Assessing psychosocial distress in diabetes: Development of the diabetes distress scale. Diabetes Care, 28(3), 626-631.
23 California Health Interview Survey. CHIS 2013-2014 Adult Questionnaire, Version 5.4. Los Angeles, CA: UCLA Center for Health Policy Research.

- Tobacco use and cessation (original items, BRFSS5, CDC National Adult Tobacco Survey Questionnaire[24])
- Nutrition and food security (CHIS4)
- Physical Activity (BRFSS, CHIS4)
- Determinants of health – Transportation issues (original items)
- Demographics (original items)

24 National Adult Tobacco Survey Questionnaire, 2009-2010. Office on Smoking and Health, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention.

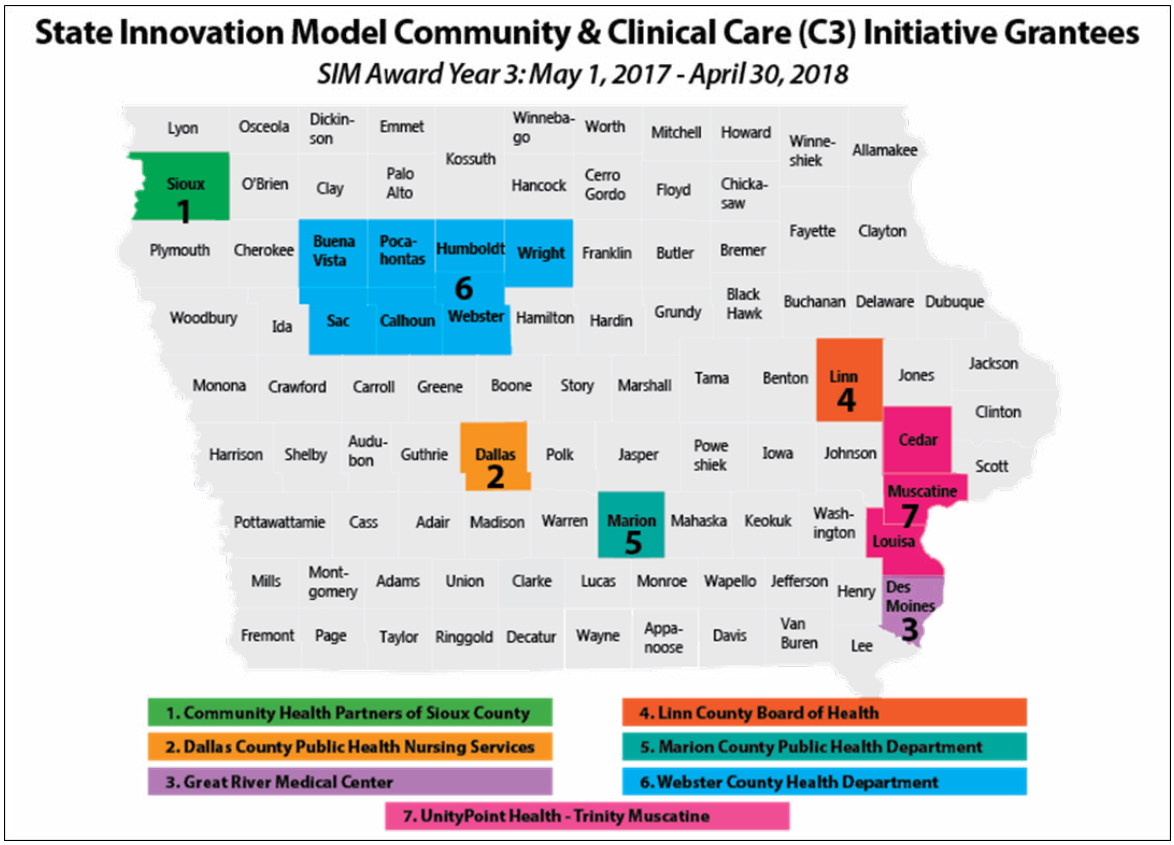
Analyses

Data were tabulated and simple descriptive statistics (means and percentages) were calculated for the 2016 and 2018 surveys using SPSS. In this report, we present estimates for non-C3 counties as well as the estimates for C3 counties (in aggregate) to provide an indication of how well individuals in non-C3 and C3 counties are doing in Iowa. We report valid percentages for each variable, which excludes missing values from the overall percentage calculation, given the small amount of missing data present for most variables (i.e., <5%).

The data was weighted to produce reliable estimates of the population parameters for years 2016 and 2018. Weighting may compensate for the practical limitations of a sample survey such as nonresponse and under-coverage.

The oversampling of C3 counties originally included 19 counties in six regions during C3 Award Year 1/SIM Award Year 2. However, In C3 Award Year 2/SIM Award Year 3, the service areas for the six C3 regions dropped to 15 counties. For the purposes of consistent reporting, we compare 2016 and 2018 aggregated data only for the 15 C3 counties that remained the same between C3 Award Year 1/SIM Award Year 2 and C3 Award Year 3/SIM Award Year 4. Figure 2.1 shows the C3 counties aggregated in this report.

Figure 2.1. SIM AY2-AY4 C3 Counties



Limitations

There are some limitations with survey research that can affect the interpretation of the results. First, respondents may have difficulty accurately remembering events, which may introduce recall bias. Second, those who choose to respond to the survey may be different from those who choose not to respond, which means they may not represent 'average' respondents. This can create biased results, although weighting strategies were used in analyses to account for nonresponse bias. Third, the weighting strategies are specific to each survey rather than both surveys. In other words, the weighted 2016 survey findings apply to all adult Iowans in 2016 and the weighted 2018 survey findings apply to all adult Iowans in 2018. Fourth, researchers sampled different groups of adult Iowans in 2016 and 2018. Due to the survey methods and different samples, we can report overall trends in population health from 2016 to 2018, but cannot attribute these trends to healthcare innovations that occurred during the SIM implementation.

Results

Characteristics of the Population in C3 Counties and Non-C3 Counties

Table 1. C3 County Demographic Characteristics

	2016 N=421 (respondents) N=380,393 (weighted)	2018 N=759 (respondents) N=481,093 (weighted)
Age in Years		
18-40	44.7%	42.2%
41-64	35.7%	34.4%
65+	19.6%	22.4%
Gender		
Female	49.2%	58.0%
Race/Ethnicity*		
White	92.9%	90.6%
Black or African American	1.8%	4.6%
Hispanic/Latino	4.8%	4.7%
Asian	1.6%	3.4%
American Indian, Pacific Islander, Other	3.7%	1.4%
Education		
=< High School Degree	39.5%	37.3%
Some College or Technical School	32.9%	33.1%
College Graduate or Higher	27.6%	29.6%
Employment Status		
Employed Full or Part-Time	65.0%	68.8%
Retired	17.1%	19.4%
Homemaker or Student	11.2%	6.8%
Unable to Work	3.0%	2.9%
Unemployed	3.6%	2.1%
Has Health Insurance Coverage**	93.6%	93.4%
Household Income < $50,000	32.5%	27.4%
Number of Adults in Household		
1	19.7%	15.1%
2	58.5%	56.9%
3 or more	21.8%	28.0%
Any Children in Household	35.6%	37.0%
Size of Community of Residence		
Farm/Rural not farm/Rural subdivision	14.7%	21.0%
Small Town < 25,000	37.5%	41.2%
City 25,000 or more	47.8%	37.8%

* Race/Ethnicity categories are not mutually exclusive

** Such as health insurance, prepaid plans like HMOs, or government plans like Medicaid or Medicare.

Table 2. Non-C3 County Demographic Characteristics

	2016 N=1,711 (respondents) N=1,991,346 (weighted)	2018 N=1,690 (respondents) N=1,809,887 (weighted)
Age in Years		
18-40	45.7%	46.5%
41-64	33.6%	33.1%
65+	20.7%	20.4%
Gender		
Female	51.0%	50.1%
Race/Ethnicity*		
White	89.9%	92.9%
Black or African American	2.6%	2.7%
Hispanic/Latino	6.4%	5.8%
Asian	2.5%	2.6%
American Indian, Pacific Islander, Other	4.9%	1.8%
Education		
=< High School Degree	39.2%	36.1%
Some College or Technical School	31.9%	34.5%
College Graduate or Higher	28.8%	29.4%
Employment Status		
Employed Full or Part-Time	67.1%	69.2%
Retired	18.2%	16.2%
Homemaker or Student	7.4%	8.2%
Unable to Work	5.1%	3.5%
Unemployed	2.2%	2.9%
Has Health Insurance Coverage**	93.1%	91.6%
Household Income < $50,000	35.6%	30.3%
Number of Adults in Household		
1	18.3%	16.1%
2	57.9%	60.3%
3 or more	23.8%	23.6%
Any Children in Household	37.8%	36.3%
Size of Community of Residence		
Farm/Rural not farm/Rural subdivision	21.0%	19.5%
Small Town < 25,000	40.9%	40.2%
City 25,000 or more	38.1%	40.3%

* Race/Ethnicity categories are not mutually exclusive

** Such as health insurance, prepaid plans like HMOs, or government plans like Medicaid or Medicare

Health Status

Participants' health status was assessed in several ways throughout the survey, including self-reported overall physical and mental health, diagnosis of chronic physical or mental health conditions, and functional limitations due to health conditions. Participants were also asked to report about their weight, tobacco use, and whether they had diabetes.

Figure 2.2 shows the percentage of respondents who reported excellent, very good, good, and fair or poor physical health in non-C3 and C3 counties in 2016 and 2018. In C3 counties, reports of excellent physical health increased by 4.6% while reports of fair/poor physical health remained stable.

Self-Reported Physical and Mental Health Status

Figure 2.2. Overall Physical Health Status

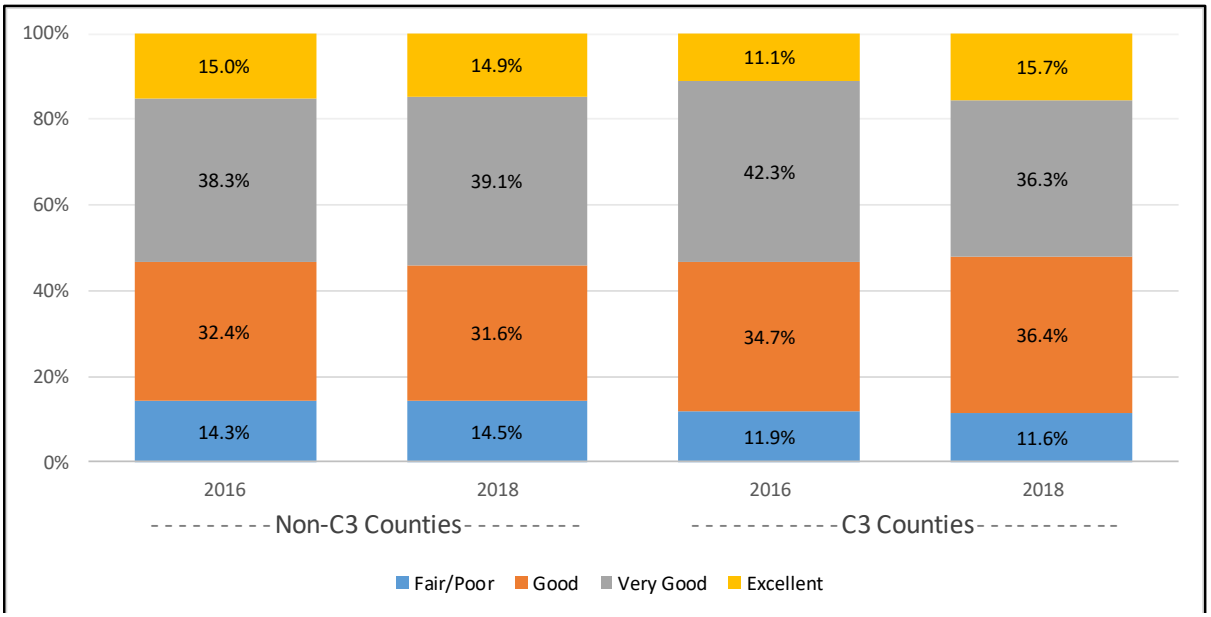
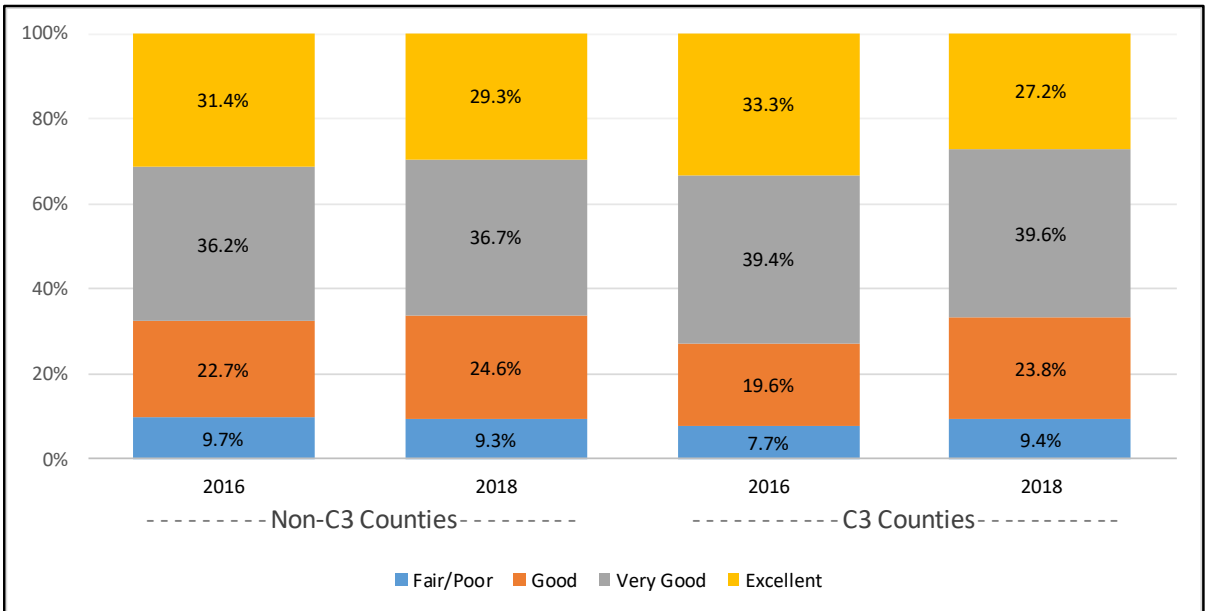


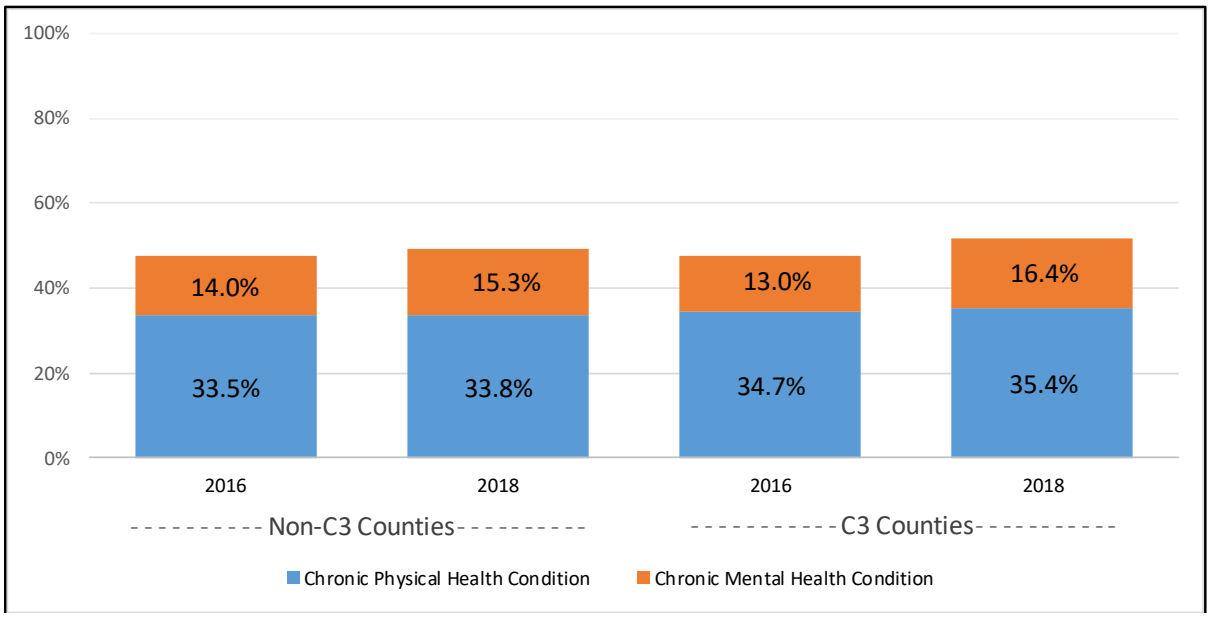
Figure 2.3 shows the percentage of respondents who reported excellent, very good, good, and fair or poor mental health in non-C3 and C3 counties in 2016 and 2018. Reports of excellent mental health decreased in both non-C3 (-2.1%) and C3 (-6.1% counties, while reports of good mental health increased (+1.9% and +4.2%, respectively). Reports of fair/poor mental health in C3 counties also increased by 1.7%.

Figure 2.3. Overall Mental Health Status



Participants were asked if they had ever been diagnosed with a chronic physical or mental health condition that lasted or was expected to last for at least 12 months. Figure 2.4 shows the percentage of respondents who reported experiencing chronic physical or mental health conditions in non-C3 and C3 counties in 2016 and 2018. Chronic mental health conditions increased in both non-C3 (+1.3%) and C3 (+3.4%) counties.

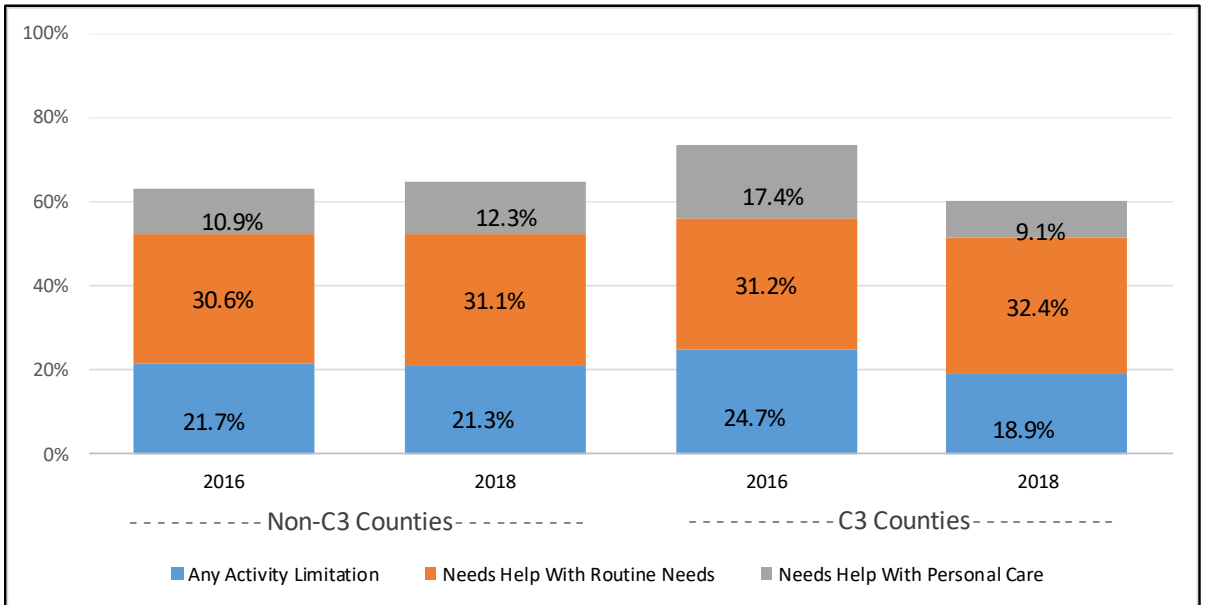
Figure 2.4. Chronic Physical & Mental Health Conditions



Health-Related Functional Limitations

Self-reported functional health was assessed by a series of questions about how participants' physical health affected daily activities including **personal care** (i.e. eating, bathing, or dressing) and **routine needs** (i.e. household chores, shopping, and running errands). Figure 2.5 shows the percentage of Iowan's who reported any activity limitations in non-C3 and C3 counties in 2016 and 2018. Reports of any activity limitation and needing help with personal care both decreased in C3 counties (-5.8% and -8.3%, respectively), while non-C3 reports of needing help with personal care increased by 1.4%.

Figure 2.5. Functional Limitations from Any Impairment Or Health Problem



Weight, Diabetes, and Smoking

We asked participants if they weighed too much, too little, or the right amount compared to others their age and height. Participants who reported weighing *too much* were defined as *overweight*. Participants were considered *obese* if they had ever been told by a health care professional that they are obese. Between 2016 to 2018, reports of *overweight* decreased by 5.5% in non-C3 counties (Figure 2.6) and increased by 1.8% in C3 counties (Figure 2.7). Reports of *obese* increased in C3 counties by 1.8% (Figure 2.7).

We asked, "Since you have been an adult, has a doctor, nurse, or other healthcare professional EVER told you that you have diabetes?" Those who responded *yes* were considered to have *diabetes*, excluding those who only had gestational diabetes. Between 2016 to 2018, reports of *diabetes* decreased by 1.3% in non-C3 counties (Figure 2.6) and by 1% in C3 counties (Figure 2.7).

We asked participants whether they currently smoked cigarettes or used tobacco every day, some days, or not at all. Between 2016 to 2018, the percentage of those who reported smoking *at least some days* decreased by 4.1% in non-C3 counties (Figure 2.6), while remaining virtually unchanged in C3 counties.

Figure 2.6. Diabetes, Obesity, & Smoking in Non-C3 Counties

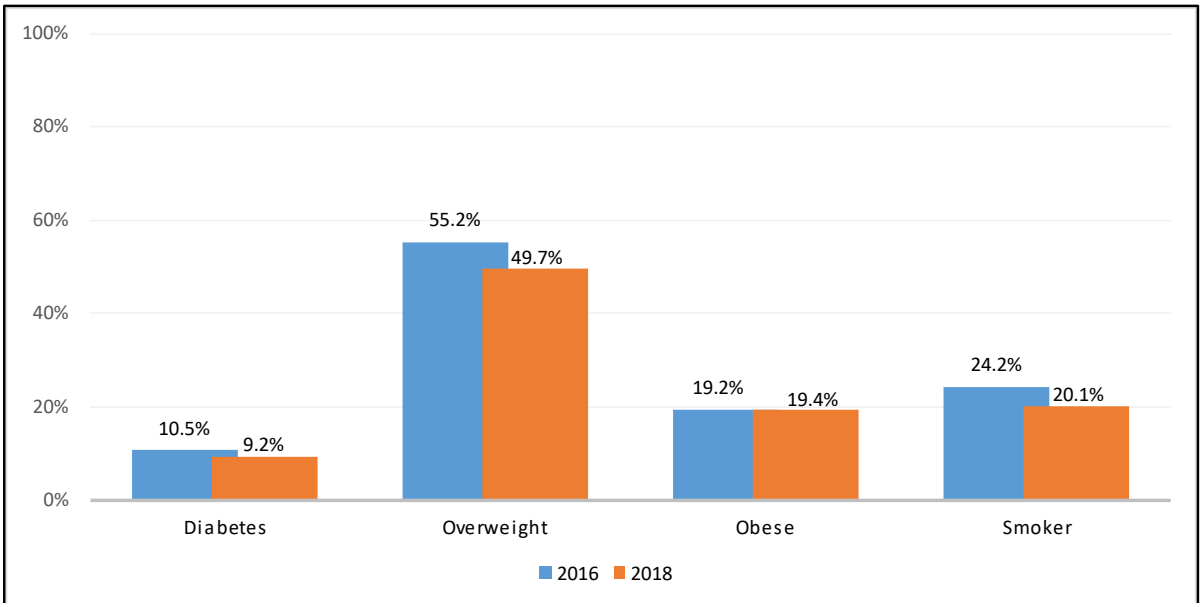
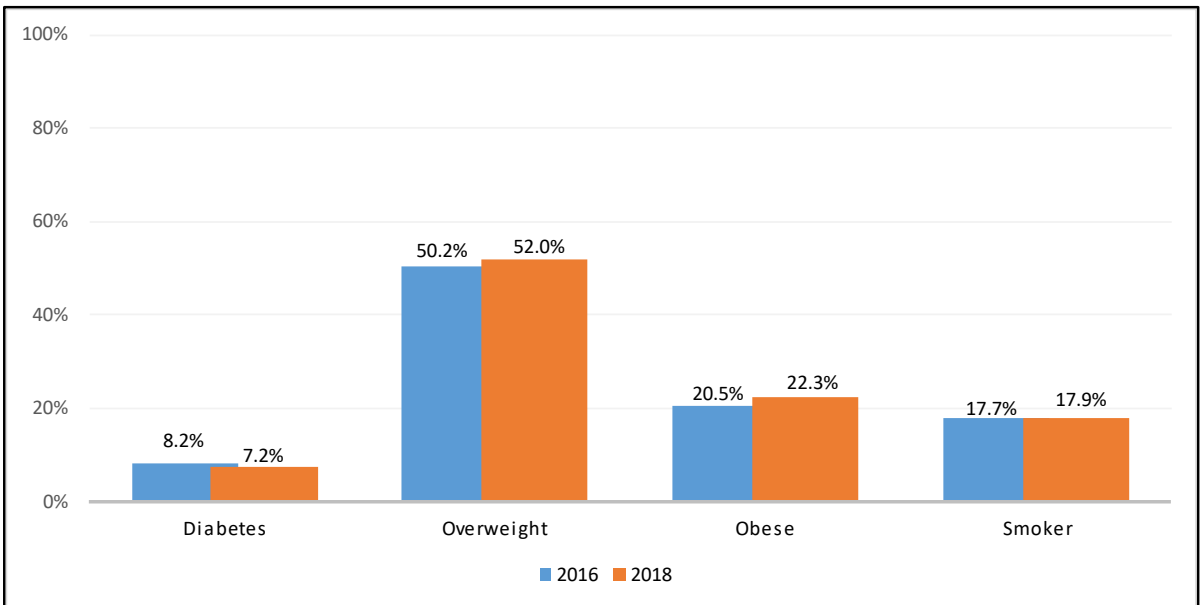


Figure 2.7. Diabetes, Obesity, & Smoking in C3 Counties



Diabetes

In 2016, 10% of participants (n = 239,818) reported having diabetes, compared to 9% in 2018 (n = 205,597). These participants were asked several additional questions to assess their diabetes management. Because of the small overall percentage of Iowan's with diabetes, the following figures report on overall diabetes in Iowa.

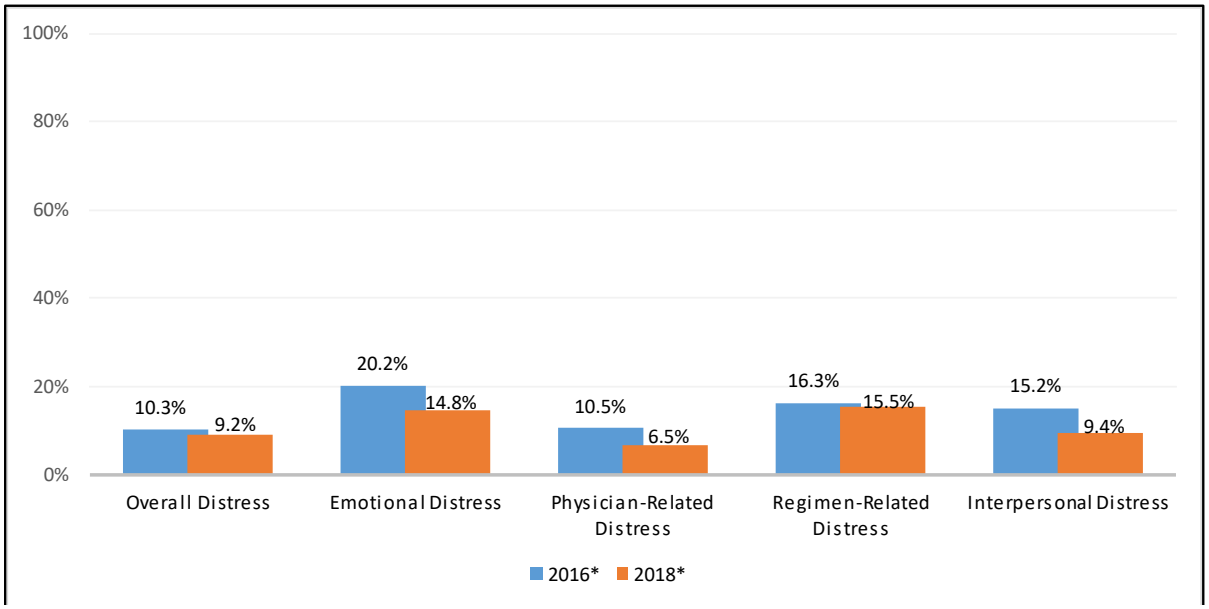
Distress and Burden Due to Diabetes

The Diabetes Distress Scale [25] was used to assess the impact of diabetes management on several areas of life. The scale included 17 items (Addendum 1) for which participants were asked to rate the severity of a problem on a scale from one to six, where one was *not a problem at all* and six was *a very serious problem*. The measure included an overall distress scale as well as four subscales:

1) Emotional Burden – Evaluates the level of emotional distress caused by diabetes [Questions 9, 11, 16, 19, 22]
2) Physician-Related Distress – Evaluates distress due to interactions with one's physician about diabetes [Questions 10, 12, 17, 23]
3) Regimen-Related Distress – Evaluates distress due to keeping up with diabetes management routines [Questions 13, 14, 18, 20, 24]
4) Interpersonal Distress – Evaluates the burden of diabetes on interpersonal relationships [Questions 15, 21, 25]

For each scale, a mean score of three or higher is considered a clinical level of distress in need of attention. Figure 2.8 shows the percentage of Iowans with a clinical level of distress for each scale in 2016 and 2018. Every form of clinical diabetes related stress decreased from 2016 to 2018, with emotional distress (-5.4%), physician-related stress (-4%), and interpersonal distress (-5.8%) showing the most significant reductions.

Figure 2.8. Percentage of Iowans with Clinical Levels of Diabetes Related Stress



*The percentages shown are of the total population with diabetes in Iowa, based on weighted data (n = 239,818 in 2016; n = 205,597 in 2018).

Impact of Diabetes on the Healthcare System

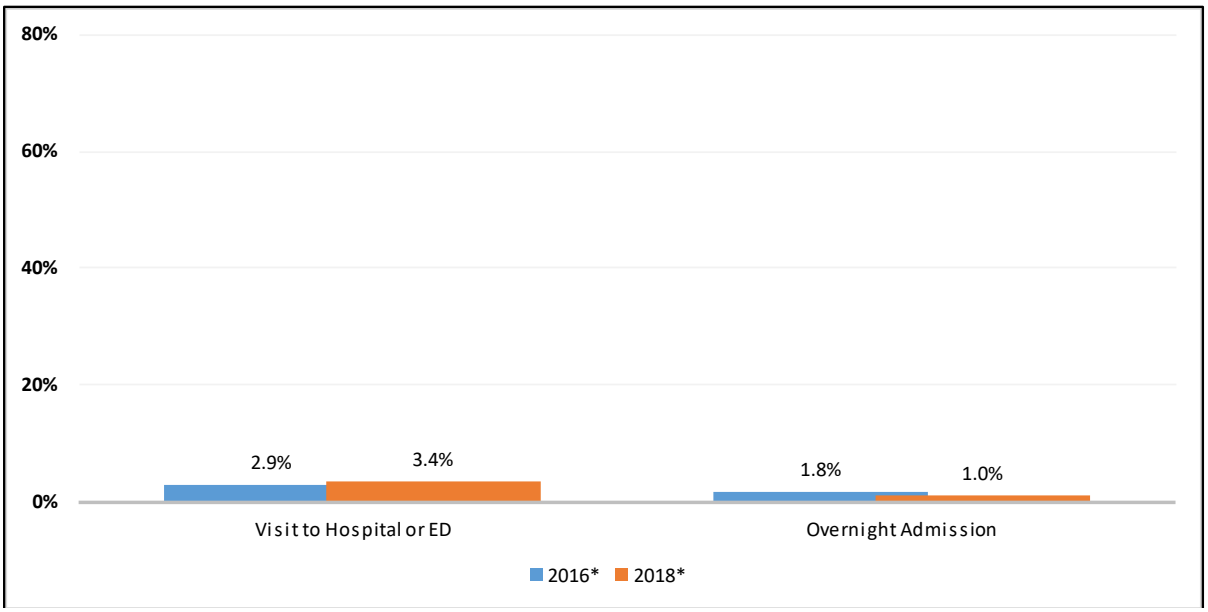
The survey included two questions designed to evaluate the impact of diabetes on the use of hospital-based healthcare services. Respondents with diabetes were asked to answer two questions about hospital utilization:

1) During the last 12 months, have you had a visit to the hospital emergency room because of your diabetes?
2) During the last 12 months, were you admitted to the hospital overnight or longer because of your diabetes?

Figure 2.9 shows the percentages of Iowans with diabetes who responded *yes* to these two questions. Visits to the emergency department increased by 0.5% from 2016 to 2018, while overnight hospital admissions decreased by 0.8%.

25 Polonsky, W. H., Fisher, L., Earles, J., Dudl, R. J., Lees, J., Mullan, J., & Jackson, R. A. (2005). Assessing psychosocial distress in diabetes: Development of the diabetes distress scale. Diabetes Care, 28(3), 626-631.

Figure 2.9. ED Use and Hospital Admissions Among Iowans With Diabetes



*The percentages shown are of the total population with diabetes in Iowa, based on weighted data (n = 239,818 in 2016; n = 205,597 in 2018).

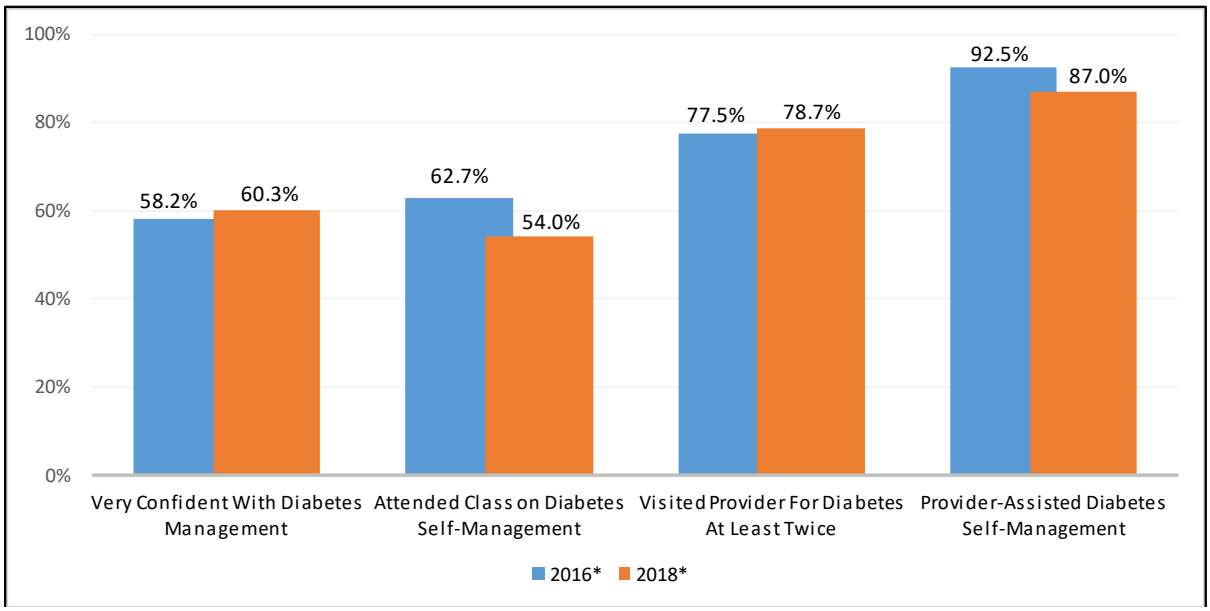
Diabetes Management and Support

The American Diabetes Association recommends that self-management be included as a key goal of routine diabetes care in order to improve clinical outcomes, health status, and quality of life for those with diabetes [26]. To assess experiences of diabetes self-management and support, the survey asked four questions to participants with diabetes:

1) How confident are you that you can control and manage your diabetes?
2) Have you ever taken a course or class in how to manage your diabetes yourself?
3) About how many times in the last 12 months have you seen a doctor, nurse, or other healthcare professional for your diabetes?
4) Have your doctors or other healthcare professionals worked with you to develop a plan so that you know how to take care of your diabetes?
5) The number of respondents who were very confident in their ability to manage their diabetes increased by 2.1% between 2016 and 2018 (Figure 2.10). The number of respondents who visited their healthcare provider at least twice for diabetes in the past year also increased (+1.2%). The number of respondents who attended a class on diabetes management and worked with a healthcare provider to develop a diabetes management plan both decreased (-8.7% and -5.5%, respectively).

26 American Diabetes Association. (2019). 5. Lifestyle management: standards of medical care in diabetes—2019. Diabetes care, 42(Supplement 1), S46-S60.

Figure 2.10. Diabetes Self-Management and Support



*The percentages shown are of the total population with diabetes in Iowa, based on weighted data (n = 239,818 in 2016; n = 205,597 in 2018).

Obesity

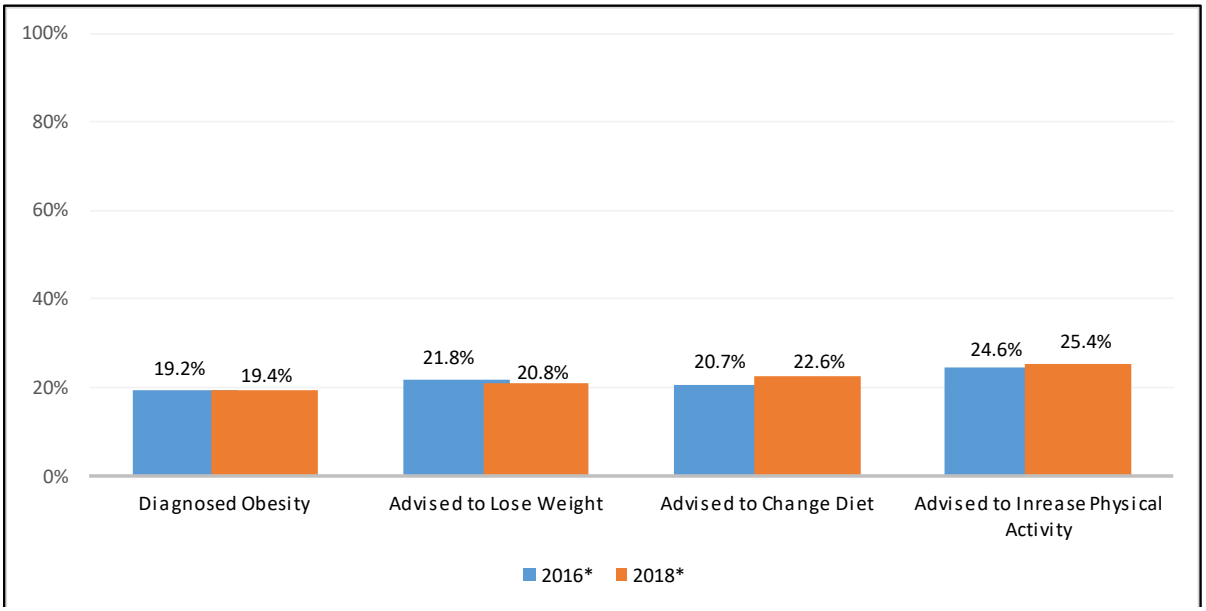
The survey included several items to assess issues related to being overweight and/or obese. As reported earlier, we measured self-reported obesity if participants indicated that they thought they weighed *too much* compared to others of similar age and height. In 2016, about 54% of overall respondents felt that they were overweight (n = 1,279,881), while about 41% felt that they were normal weight (n = 964,075) and 5% felt that they were underweight (n = 108,154). In 2018, about 50% of overall respondents felt that they were overweight (n = 1,153,854), while about 45% felt that they were normal weight (n = 1,053,951) and 4% felt that they were underweight (n = 90,349). For those who self-reported as either overweight or normal weight, we asked the following questions:

1) Have you ever been told by a healthcare professional that you are obese?
2) In the last 12 months, did a doctor or healthcare professional ever:
    a) Advise that you lose weight?
    b) Recommend that you change your diet, meaning what you eat, to help you lose weight?
    c) Recommend that you increase your physical activity to help you lose weight?

Figure 2.11 shows the percentage of respondents in non-C3 counties in 2016 and 2018 who were diagnosed with obesity and advised by a healthcare professional to lose weight, change diet, or increase physical activity. Figure 2.12 shows the percentage of respondents in C3 counties in 2016 and 2018 who fell into the same categories.

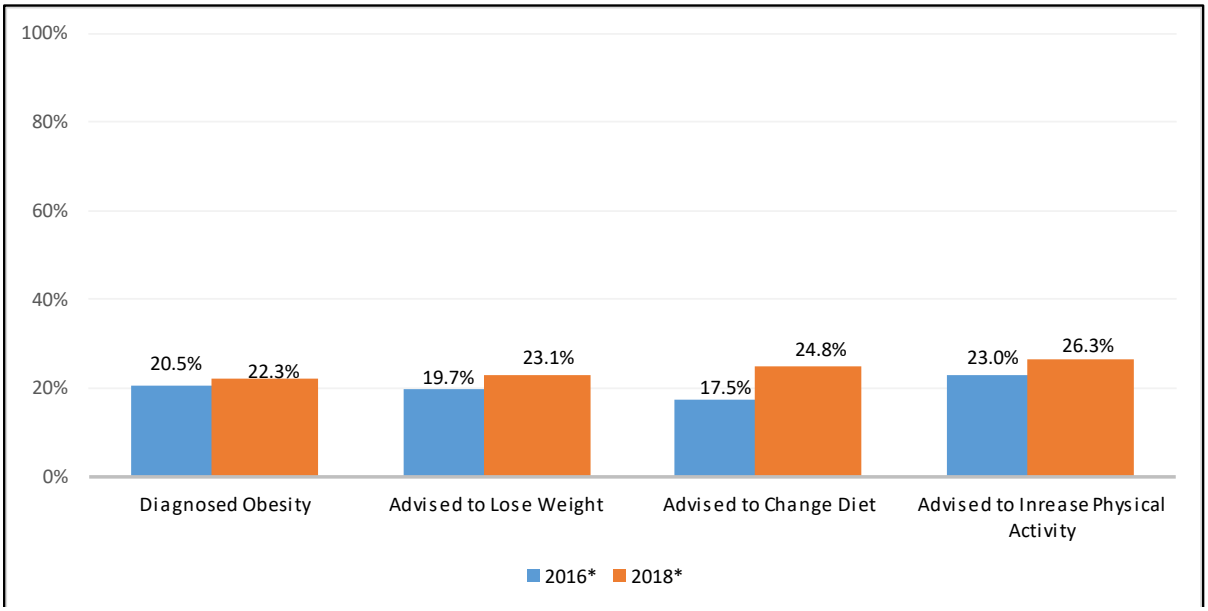
In non-C3 counties, the percentage of people who were advised to lose weight decreased (-1%) while the percentage of people who were advised to change their diet and increased physical activity both increased (+1.9% and +0.8%, respectively). In C3 counties, the percentage of people in each category increased. Obesity diagnoses increased by 1.8%, advised to lose weight by 3.4%, advised to change diet by 7.3%, and advised to increase physical activity by 3.3%.

Figure 2.11. Healthcare Provider Weight Management Recommendations in Non-C3 Counties



*The percentages shown are of those who are of normal weight or overweight in non-C3 counties, based on weighted data (*n* = 1,879,704 in 2016; *n* = 1,725,215 in 2018).

Figure 2.12. Healthcare Provider Weight Management Recommendations in C3 Counties



*The percentages shown are of those who are of normal weight or overweight in C3 counties, based on weighted data (*n* = 364,252 in 2016; *n* = 458,922 in 2018).

Nutrition and Food Security

Access to good nutrition and developing/maintaining a healthy diet are key components to overall health, especially for those who are overweight and/or have diabetes. To assess nutrition, respondents were asked whether they currently eat a healthy diet *regularly* (*n* =1,090,968 in 2016; *n* =1,052,849 in 2018), *once in a while* (*n* =1,107,015 in 2016; *n* =1,113,524 in 2018), *or not at all* (*n* =158,244 in 2016; *n* =133,729 in 2018). To assess barriers to food access, the survey included several questions about food insecurity during the past 12 months:

1) How often would you say that the food you bought just didn't last and you didn't have money to get more? [*Never*, *Sometimes*, or *Often*]

2) How often would you say that you couldn't afford to eat balanced meals? [*Never*, *Sometimes*, or *Often*]

3) How often would you say that you or other adults in your home cut the size of meals or skipped meals because there wasn't enough money for food? [*Never*, *Sometimes*, or *Often*]

4) Did you ever eat less than you felt you should because there wasn't enough money to buy more food? [*Yes* or *No*]

Figure 2.13 shows the percentage of Iowans in non-C3 counties who experienced food insecurity in 2016 and 2018. In non-C3 counties, the amount of people who reported that food didn't last and they didn't have money for more decreased by 1.5%. The amount of people who couldn't afford to eat balanced meals decreased by 2.5%. Respondents who were hungry because they couldn't afford food decreased by 1.4%.

Figure 2.13. Economic Food Insecurity in Non-C3 Counties

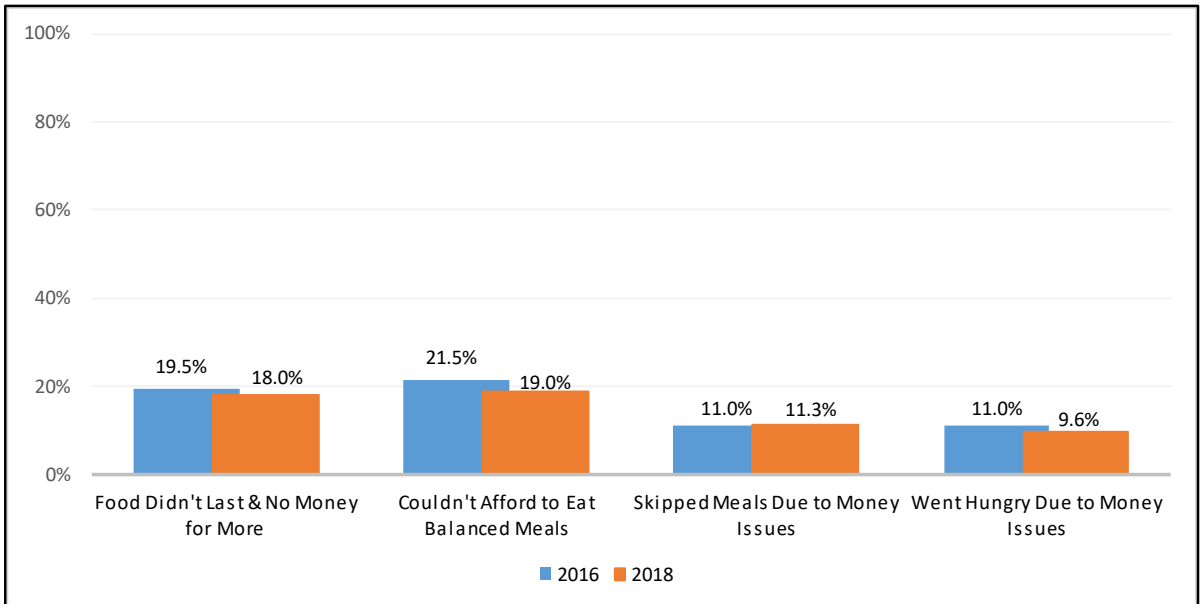
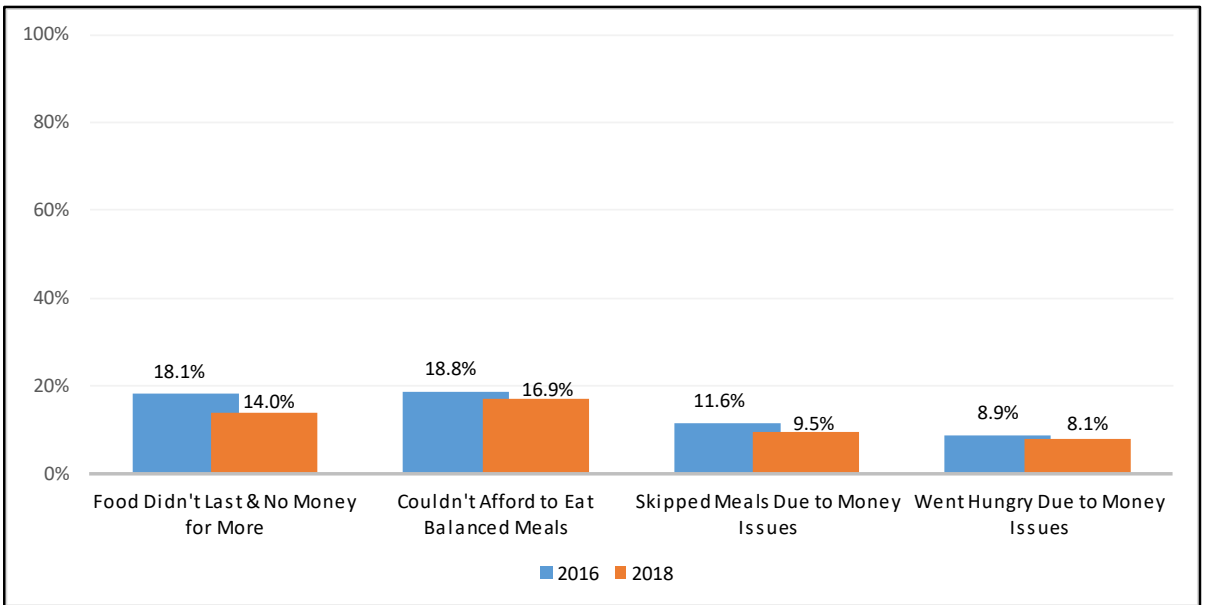


Figure 2.14 shows the percentage of Iowans in C3 counties who experienced food insecurity in 2016 and 2018. In C3 counties, all indicators of food insecurity decreased. The amount of people who reported that food didn't last decreased by 4.1%. People who couldn't afford to eat balanced meals decreased by 1.9%. The percentage of respondents who skipped meals due to money issues decreased by 2.1%. Respondents who were hungry because they couldn't afford food decreased by 0.8%.

Figure 2.14. Economic Food Insecurity in C3 Counties



Physical Activity

Along with eating a healthy diet, regular physical activity is important for health and wellness. Increased physical activity is often recommended for those diagnosed with diabetes and/or weight issues. Several survey questions addressed physical activity levels along with barriers to physical activities like walking and biking. The survey included five questions to understand how much Iowans are exercising:

1) How many days per week do you do **moderate** activities for at least 10 minutes at a time, such as brisk walking, vacuuming, gardening, or anything that causes some increased breathing or heart rate?
2) How many days per week do you do **vigorous** activities for at least 10 minutes at a time, such as running, aerobics, heavy yard work, or anything that causes a large increase in your breathing or heart rate?
3) During the last month, other than during a regular job, did you participate in any physical activities or exercises such as running, calisthenics, golf, gardening, or walking for exercise? [*Yes* or *No*]
4) In the last 12 months, have you walked for exercise or recreational purposes? [*Yes* or *No*]
5) In the last 12 months, have you biked for exercise or recreational purposes? [*Yes* or *No*]

Two survey questions focused on walking and biking for transportation to daily activities, which may be a way to increase physical activity levels. Two questions also assessed whether respondents' communities had barriers to walking or biking for transportation. The following questions assessed walking and biking for daily transportation along with barriers:

1) In the last 12 months, have you walked to stores, businesses, or other public locations? [*Yes* or *No*]
2) Does your community have adequate sidewalks and protected crosswalks or trails that could be used to walk to the grocery store, bank, or other public locations? [*Yes* or *No*]
3) In the last 12 months, have you biked to stores, businesses, or other public locations? [*Yes* or *No*]
4) Does your community have on-street bikeways or trails that could be used to bike to the grocery store, bank, or other public locations? [*Yes* or *No*]

Figure 2.15 shows the percentages of Iowans who reported engaging in physical activities in 2016 and 2018, including walking for exercise and transportation (Figure 2.16) and biking for exercise and transportation (Figure 2.17). Iowans in both non-C3 and C3 counties experienced reductions across all categories of physical activity (Figures 2.15,2. 16, 2.17), except for walking or biking exercise in

the past month. Regarding any physical activity in the past month (Figure 2.15), the largest declines occurred for Iowans in C3 counties (8.7%) as compared to 2.9% of Iowans in non-C3 counties. The only improvements in physical activity occurred for walking or biking exercise in the past month, with an additional .5% of non-C3 Iowans and 2.2% of C3 Iowans reporting more walking exercise in the past month (Figure 2.16) and an additional 1.5% of non-C3 Iowans reporting more biking exercise in the past month (Figure 2.17).

Figure 2.15. Self-Reported Physical Activity (PA)

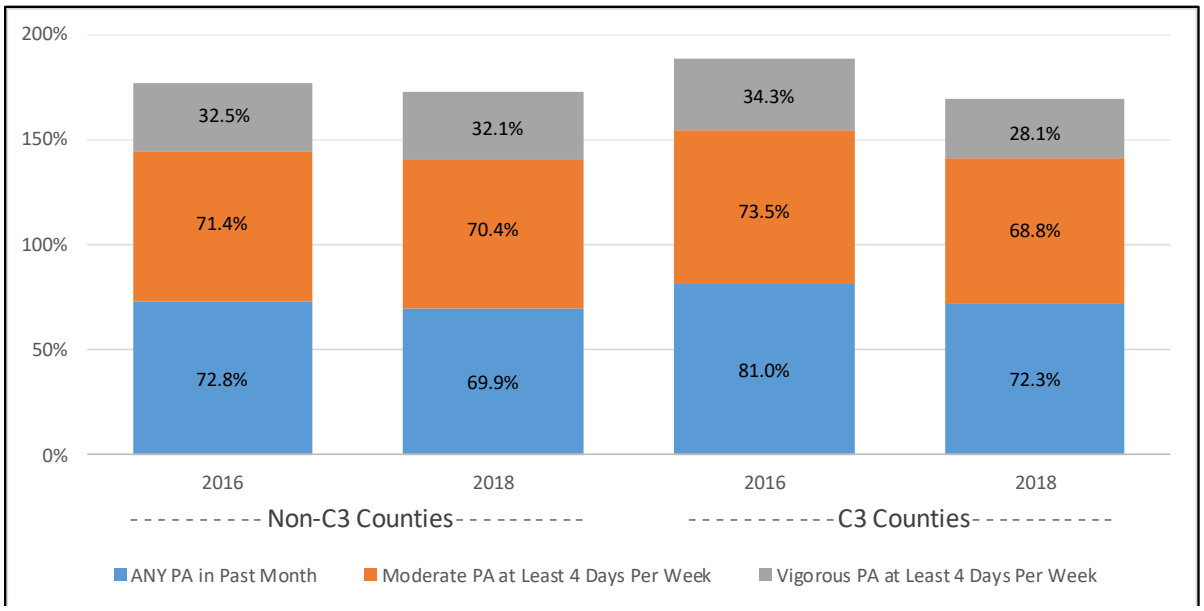


Figure 2.16. Walking for Exercise and Transportation

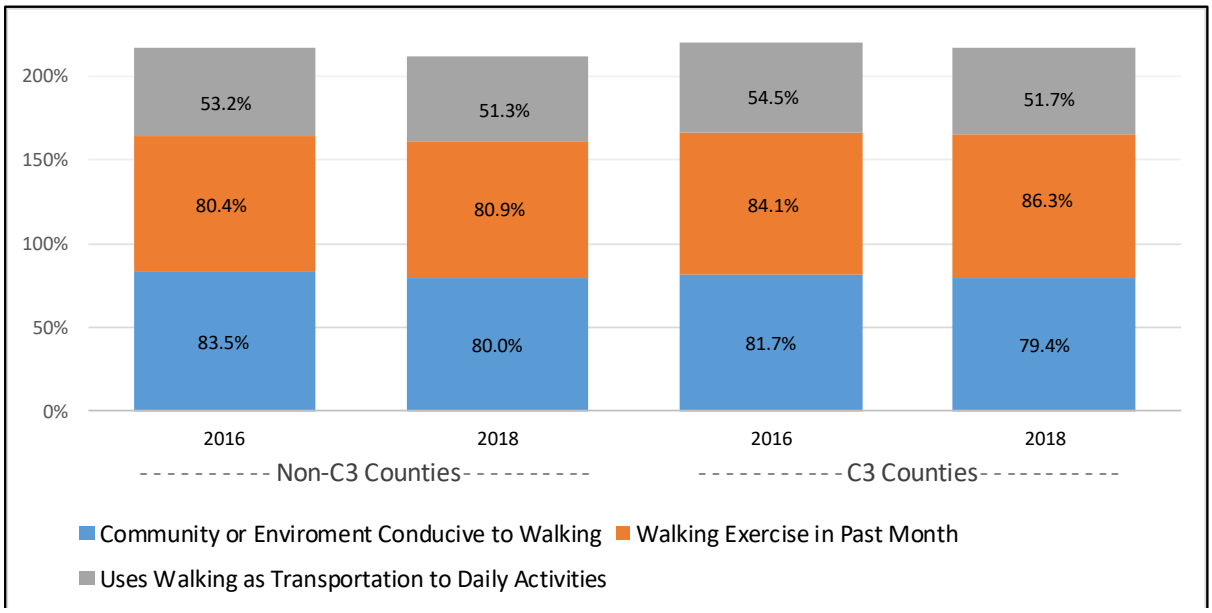
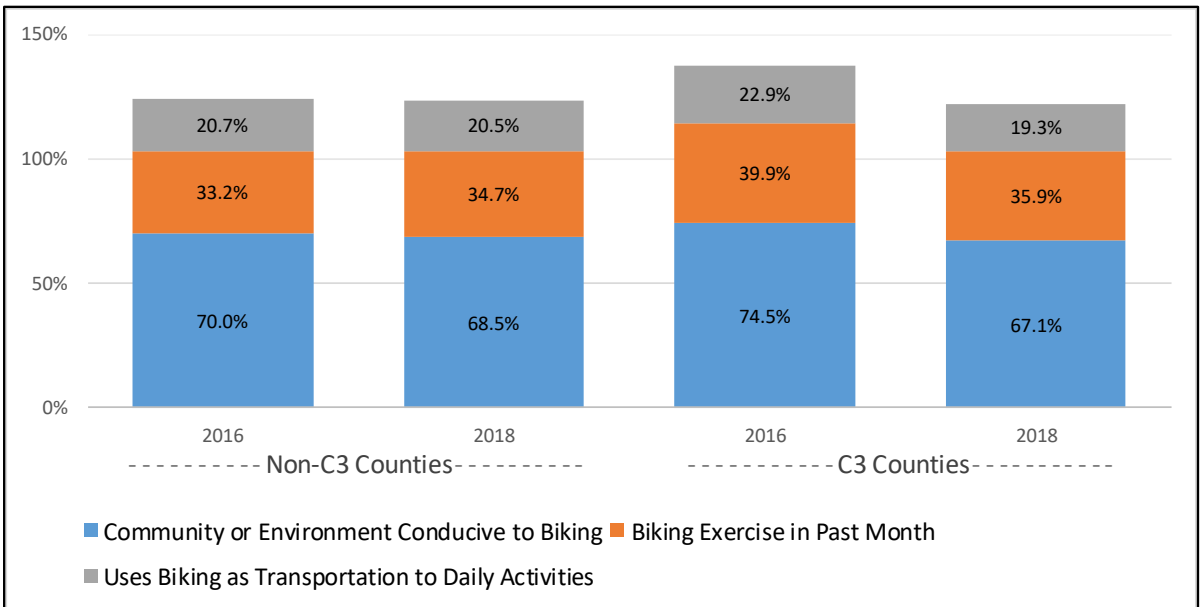


Figure 2.17. Biking for Exercise and Transportation



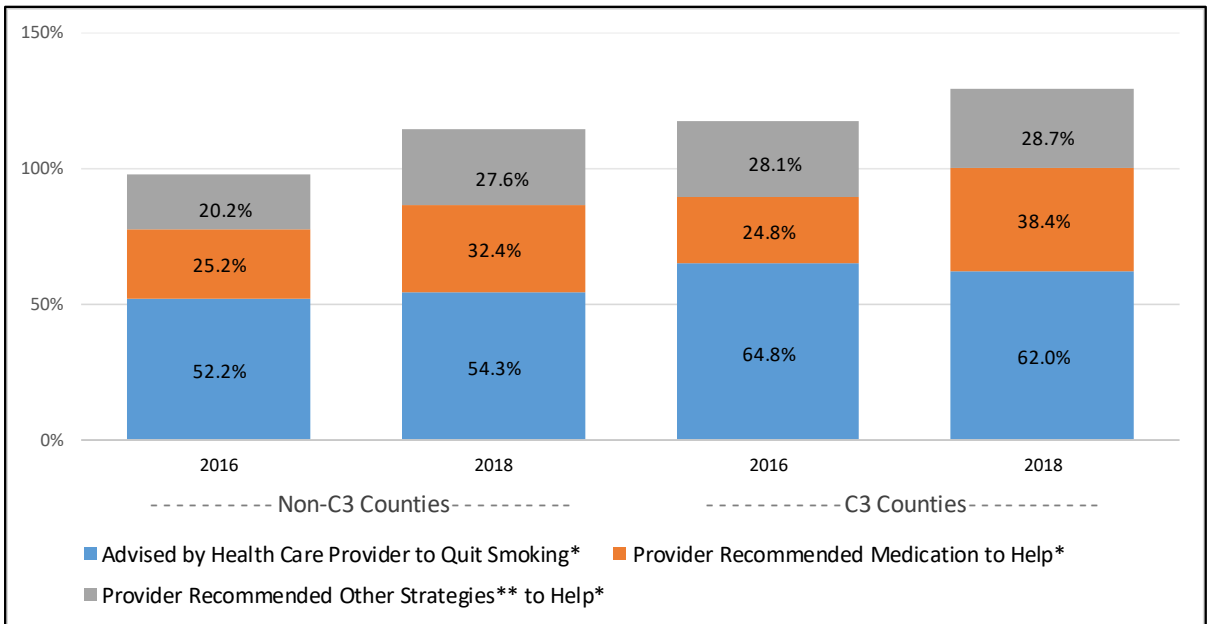
Tobacco Cessation

In 2016, around 23% of Iowans reported smoking cigarettes or using tobacco at least some days compared to 19.7% of the total 2018 sample. For those who reported any smoking, the survey also asked three questions to asses healthcare provider recommendations over the past 12 months to quit smoking or tobacco use:

1) How often were you advised to quit smoking by a doctor or other healthcare provider? [*Never*, *Sometimes*, *Usually*, or *Always*]
2) How often was medication, such as nicotine gum, patch, nasal spray, inhaler, or prescription medicine recommended or discussed by a doctor or healthcare provider to help you quit smoking? [*Never*, *Sometimes*, *Usually*, or *Always*]
3) How often did your doctor or healthcare provider discuss methods and strategies, such as telephone hotlines, individual or group counseling, or a cessation program to help you quit smoking? [*Never*, *Sometimes*, *Usually*, or *Always*]

Figure 2.18 shows the percentage of smokers who were advised to quit, prescribed medication to quit, or recommended strategies to quit in non-C3 and C3 counties. Provider prescribed medication to help quit smoking increased in both non-C3 (+7.2%) and C3 (+13.6%). Provider recommended strategies to help quit smoking increased in non-C3 counties (+7.4%) but remained stable in C3 counties. The percentage of Iowans who were advised to quit smoking by their healthcare professionals increased in non-C3 counties (+2.1%) but decreased in C3 counties (-2.8%).

Figure 2.18. Healthcare Provider Advice for Tobacco Cessation



* The percentage shown is of those who indicated that they are a smoker (*n* =481,027 in 2016 and *n* =363,920 in 2018 in non-C3 counties; and *n*=67,300 in 2016 and *n* =86,169 in 2018 in C3 counties).

**Other non-medication strategies suggested in the question included telephone hotlines, individual or group counseling, or a cessation program.

Utilization and Access to Healthcare Services

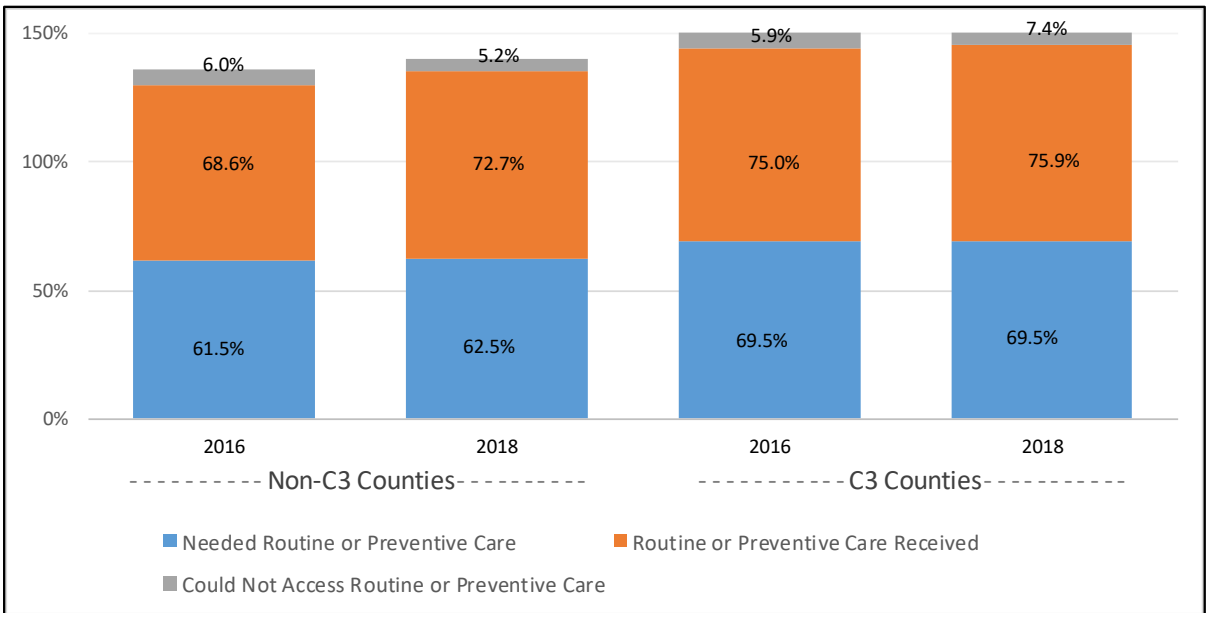
The survey included questions about respondents' use of and access to a variety of healthcare services in the past 12 months including primary care, specialty care, and hospital-based services.

Use of Primary Care Services

Primary care related services included care at a doctor's office or clinic for either routine care (i.e. wellness check or preventative care like yearly examinations or immunizations) or urgent care for an illness, injury, or other condition that needed immediate attention.

Figure 2.19 shows the percentage of Iowan's in non-C3 and C3 counties who reported that they needed routine care, received routine care, or could not access routine care in 2016 and 2018. The number of people who needed routine care increased slightly in non-C3 counties (+1%), but did not change in C3 counties. The number of people who reported use of routine care services increased by 4.1% in non-C3 counties and increased only slightly in C3 counties (+0.9%). The amount of Iowan's who could not access routine services decreased slightly in non-C3 counties (-0.8%) but increased in C3 counties (+1.5%).

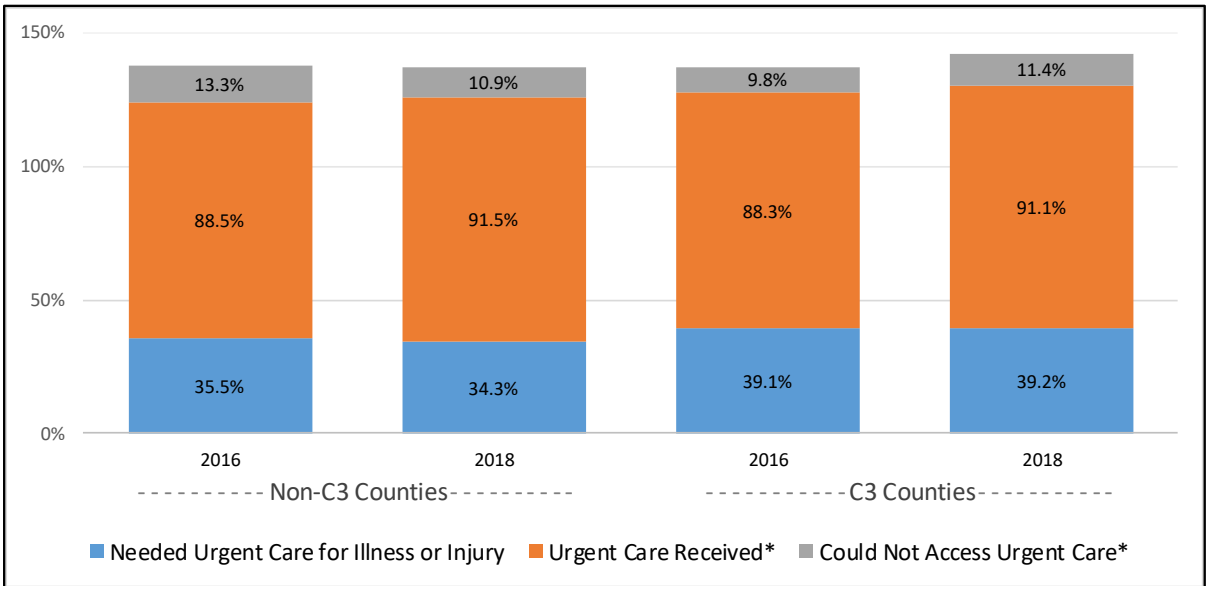
Figure 2.19. Routine Primary Care Service Use, Need, And Unmet Need



Use of Urgent Care Services

Figure 2.20 shows the percentage of Iowan's in non-C3 and C3 counties who reported that they needed urgent care for an illness or injury in 2016 and 2018. It also shows the percentage of those who needed urgent care who received care or could not access care. The need for urgent care decreased slightly in non-C3 counties (-1.2%) but remained stable in C3 counties. The amount of Iowan's who received urgent care services improved in both non-C3 (+3%) and C3 (+2.8%) counties. Iowan's who could not access urgent care services decreased in non-C3 counties (-2.4%) showing improvement, but increased in C3 counties (+1.6%).

Figure 2.20. Urgent Care Service Use, Need, And Unmet Need



* The percentage shown is of those who needed urgent care for an illness or injury at least once in the past 12 months, based on weighted data (*n* =703,802 in 2016 and *n* =616,726 in 2018 from non-C3 counties; *n*=148,719 in 2016 and *n* =188,000 in 2018 from C3 counties).

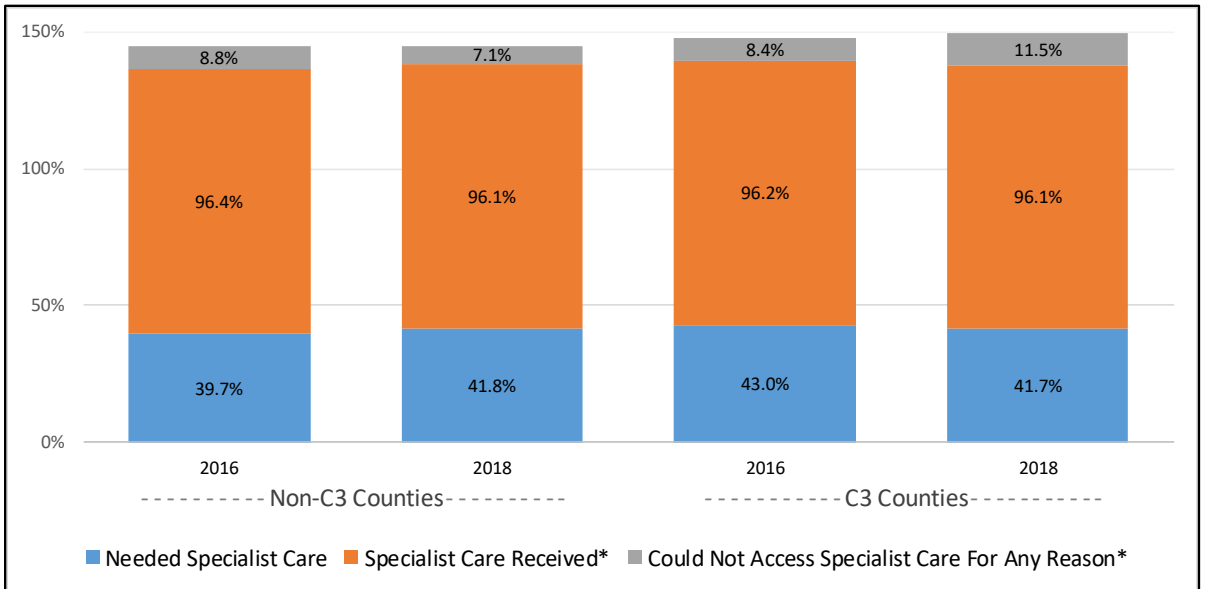
Specialty Care

Specialty care in the 12 months prior to the survey interview included any appointments with a specialist, such as a surgeon, cardiologist, allergist, dermatologist, or oncologist (i.e. a doctor who specializes in one area of healthcare). To assess specialty care use, we asked respondents whether in the past 12 months:

1) There was a time when you or a doctor thought you needed care from a specialist?
2) Did you see a specialist?
3) There was any time when you needed care from a specialist but could not get it for any reason?

Figure 2.21 shows the percentage of Iowan's in non-C3 and C3 counties who reported that they needed specialty care in 2016 and 2018. It also shows the percentage of those who needed specialty care who received care or could not access care. The need for specialty care increased in non-C3 counties (+2.1%) and decreased in C3 counties (-1.3%). The percentage of Iowan's who received specialty care remained stable overall, and the percentage of those who could not access needed specialty services increased in C3 counties (+3.1%).

Figure 2.21. Specialty Care Use, Need, And Unmet Need

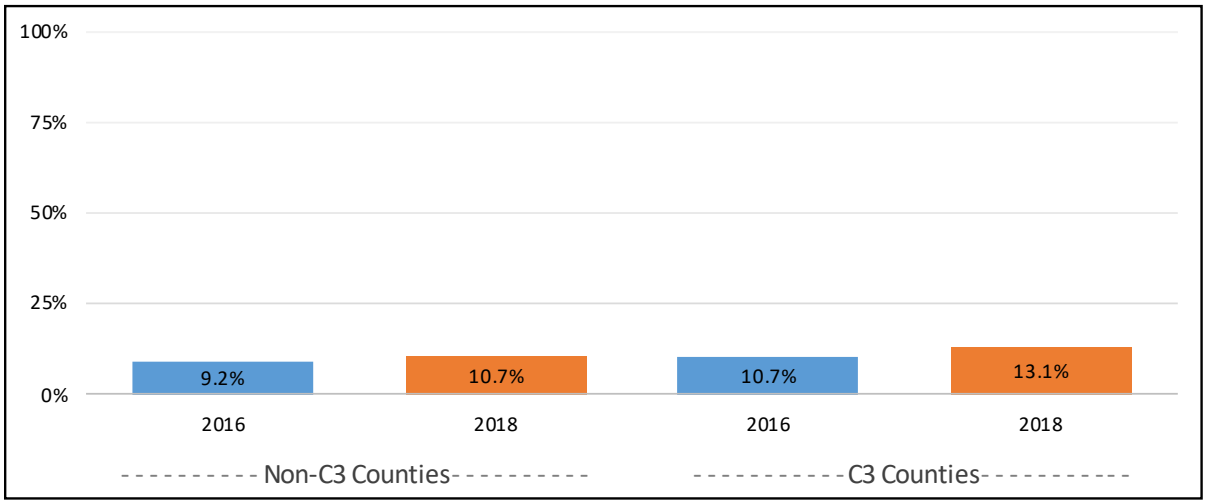


*The percentage shown is of those who needed specialty care at least once in the past 12 months, based on weighted data (*n* =787,218 in 2016 and *n* =754,062 in 2018 from non-C3 counties; *n* =163,347 in 2016 and *n* =200,120 in 2018 from C3 counties).

Mental Health Care

Mental health service use was assessed by asking respondents whether in the past 12 months they needed mental health treatment or counseling services (Figure 2.22). Respondents who reported needing mental health services increased for respondents in non-C3 (+1.5%) and C3 counties (+2.4%).

Figure 2.22. Needed Mental Health Services

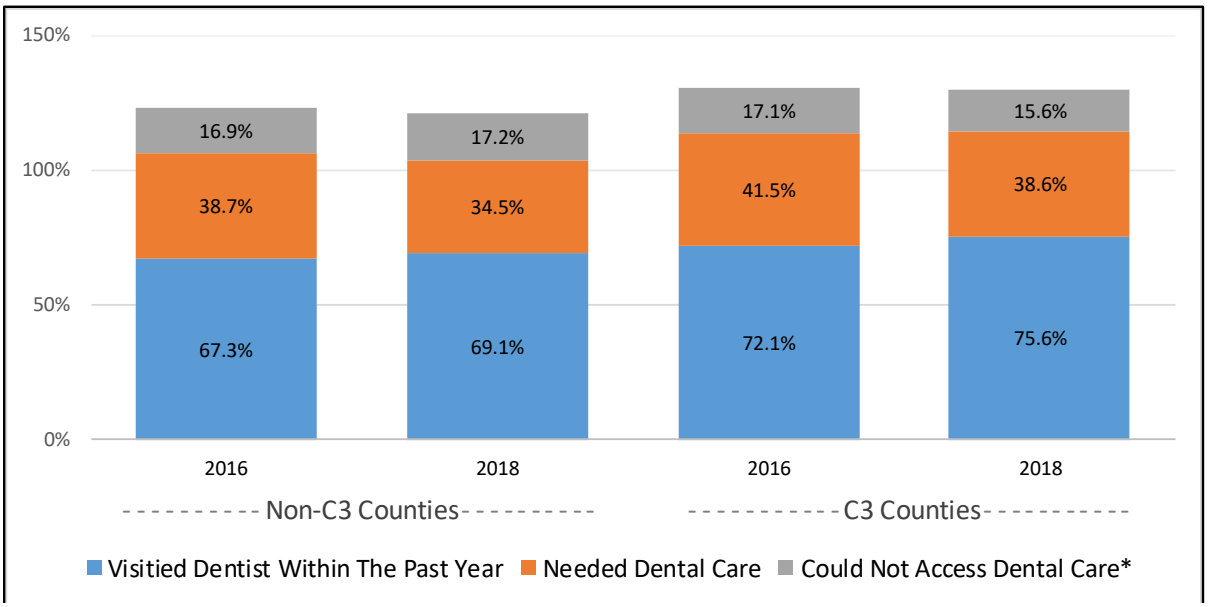


Dental Care

Dental service use was assessed by asking respondents whether their last dental check-up was: a) within the last year; b) one to two years ago; c) more than two years ago; or d) they had never been to a dentist. They survey also asked whether they needed dental care or whether they were not able to access dental care for any reason in the past 12 months.

Figure 2.23 shows the percentage of Iowan's in non-C3 and C3 counties who reported that they needed dental care, received dental care, or could not access dental care in 2016 and 2018. The amount of Iowan's who reported that they needed dental care decreased in both non-C3 (-4.2%) and C3 (-2.9%) counties. Iowan's who reported that they had visited the dentist at least once within the past year increased in both non-C3 and C3 counties (+1.8% and +3.5%) showing improvement. The percentage of Iowan's who needed dental care but could not access it decreased in C3 counties (-1.5%) but remained stable in non-C3 counties.

Figure 2.23. Dental Care Use, Need, And Unmet Need



*The percentage shown is of those who needed dental care at least once in the past 12 months, based on weighted data (*n* =1,302,499 in 2016 and *n* =1,212,180 in 2018 from non-C3 counties; *n* =272,718 in 2016 and *n*=28,426 in 2018 from C3 counties).

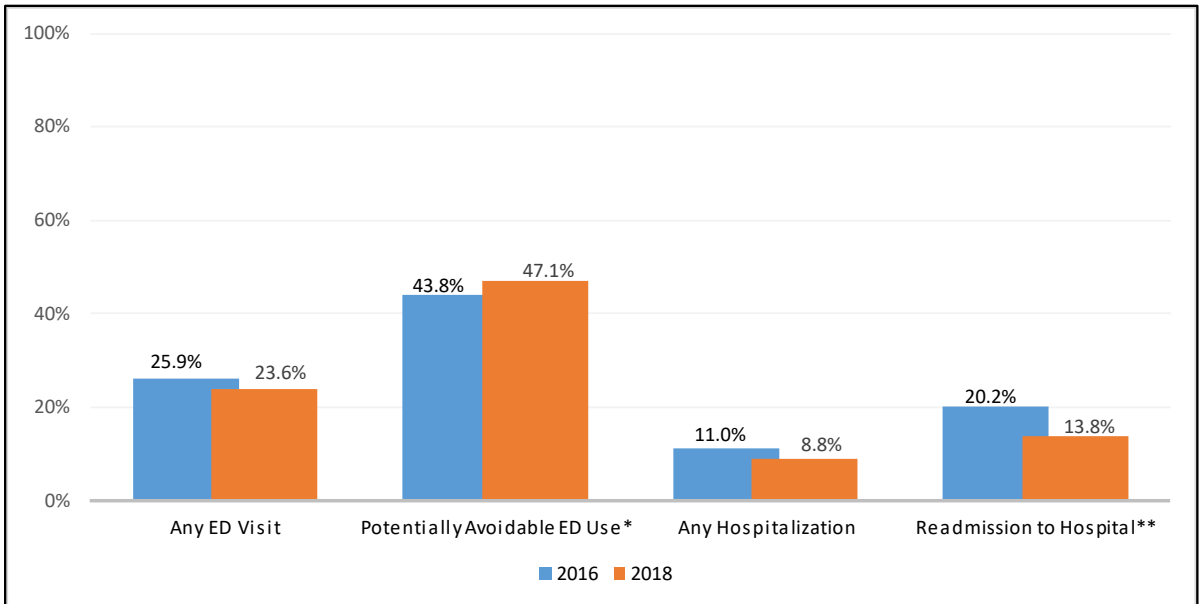
Hospital-Based Services: Emergency Department and Hospitalizations

Several questions were used to assess the use of hospital emergency departments (EDs) for care within the past 12 months and whether those ED visits were "potentially avoidable". For those with at least one ED visit, a "potentially avoidable" ED visit was defined when they reported that the care at their most recent ED visit could have been provided in a doctor's office of clinic.

Two questions asked about hospital stays. The first asked how many nights in the past 12 months, if any, the respondent spent in the hospital because of a health problem. The second asked respondents who had reported hospitalization for at least one night whether they had to be re-hospitalized within 30 days of hospital discharge because they were still sick or had the same health issue.

Figure 2.24 shows the percentage of Iowans who visited the ED at least once and those who were admitted to the hospital in non-C3 counties in 2016 and 2018. It also shows the percentage of those who visited the ED although care could have been provided elsewhere, and those who were hospitalized and readmitted to the hospital within 30 days of discharge. The percentage of people who visited the ED decreased by 2.3% in non-C3 counties, while the rate of potentially avoidable ED use increased by 3.3%. The rate of hospital admissions decreased by 2.2%, as did readmissions by 6.4%, showing improvement.

Figure 2.24. Emergency Department Use and Hospitalizations in Non-C3 Counties

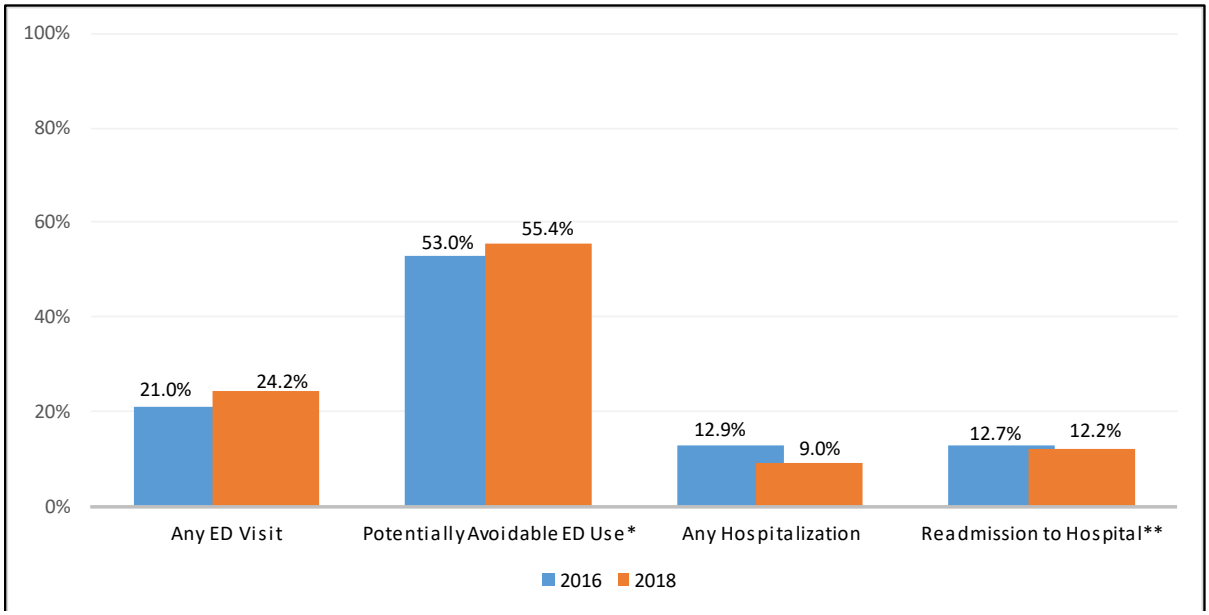


*The percentage shown is the number of people with a potentially avoidable ED visit out of those who had at least one ED visit in the past 12 months (weighted *n* =212,714 in 2016 and *n*=193,797 in 2018 from non-C3 counties).

**The percentage shown is the number of people with a hospital readmission out of all people with at least one hospitalization (weighted *n*=44,220 in 2016 and *n* =21,681 in 2018 from non-C3 counties).

Figure 2.25 shows the percentage of Iowans who visited the ED at least once and those who were admitted to the hospital in C3 counties in 2016 and 2018. It also shows the percentage of those who visited the ED although care could have been provided elsewhere, and those who were hospitalized and readmitted to the hospital within 30 days of discharge. Both the number of ED visits and potentially avoidable ED visits increased in C3 counties (+3.2% and +2.4%, respectively). Hospital admissions decreased by nearly 4%, and readmissions decreased only slightly (-0.5%).

Figure 2.25. Emergency Department Use and Hospitalizations in C3 Counties



*The percentage shown is the number of people with a potentially avoidable ED visit out of those who had at least one ED visit in the past 12 months (weighted *n* =41,199 in 2016 and *n* =63,492 in 2018 from C3 counties).

**The percentage shown is the number of people with a hospital readmission out of all people with at least one hospitalization (weighted *n* =6,194 in 2016 and *n* =5,291 in 2018 from C3 counties).

Access to Healthcare: Transportation Issues

In 2016, access to transportation ranked 7th as a priority area in the CHNAs, with 49 counties identifying access to transportation as a community health need. Perhaps because of this fact, in the SIM Operational Plan, one of the social determinants of health interest areas is transportation, particularly transportation to healthcare visits. Both the 2016 and 2018 surveys included questions about difficulties with transportation to health care visits.

To evaluate healthcare related transportation issues, the survey covered the following topics:

- Respondent mode of traveling to healthcare appointments
- Number of vehicles available to the respondent's household for transportation purposes
- Frequency of needed assistance getting to and from healthcare visits in the past 12 months
- Unmet need for transportation to or from healthcare visits in the past 12 months
- Concern or worry about costs associated with transportation to healthcare visits

Mode of Transportation to Healthcare Visits

The majority of Iowan's surveyed are licensed drivers (92.9% of the total sample in 2016; 94.4% of the total sample in 2018). Participants were asked: "When you need to get healthcare, what is the type of transportation you use most often to get to your visit? [*Drives self, family/friend drives, taxi or public transportation*, or *walk/bike*]

Figure2. 26 shows the modes of transportation to healthcare visits in non-C3 counties in 2016 and 2018. A majority of Iowans in non-C3 counties drive themselves to their healthcare appointments. The amount increased by 6.8% from 2016 to 2018, while alternative modes of transportation remained stable.

Figure 2.27 shows the modes of transportation to healthcare visits in C3 counties in 2016 and 2018. Like non-C3 county residents, Iowans in C3 counties typically drive themselves to their healthcare appointments. The amount increased by 2% from 2016 to 2018, while the amount of people who received rides from friends and family slightly decreased (-1.1%). Alternative modes of transportation to healthcare remained stable.

Figure 2.26. Types Of Transportation To Healthcare Visits in Non-C3 Counties

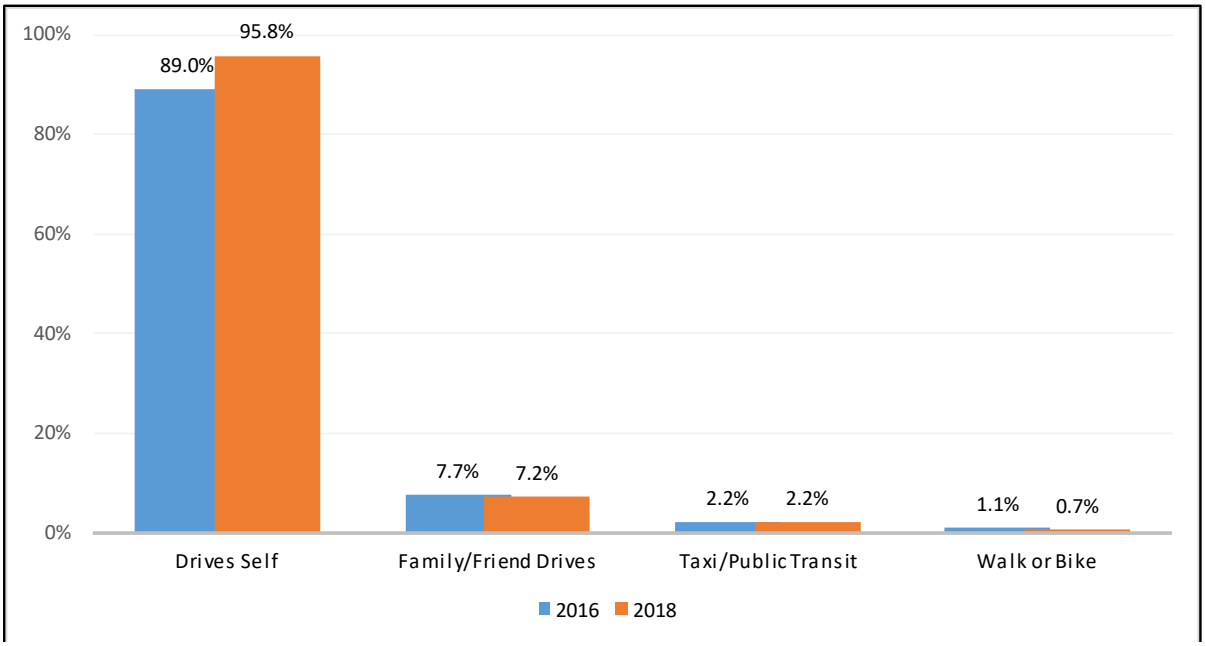
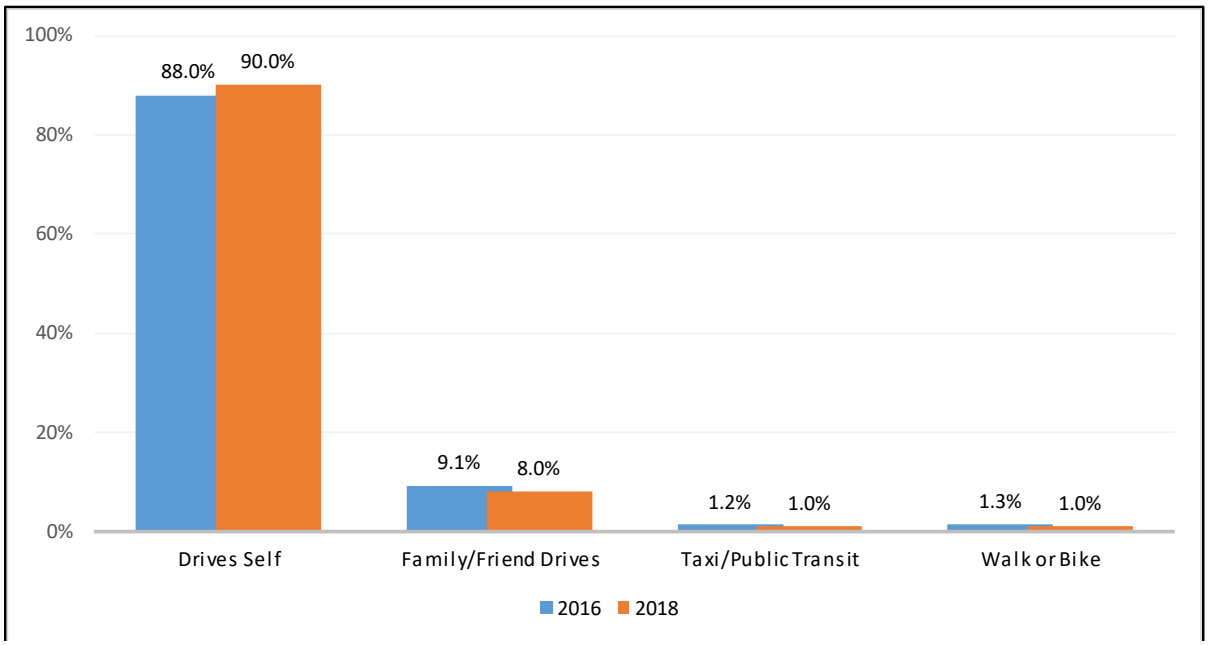


Figure 2.27. Types Of Transportation To Healthcare Visits in C3 Counties



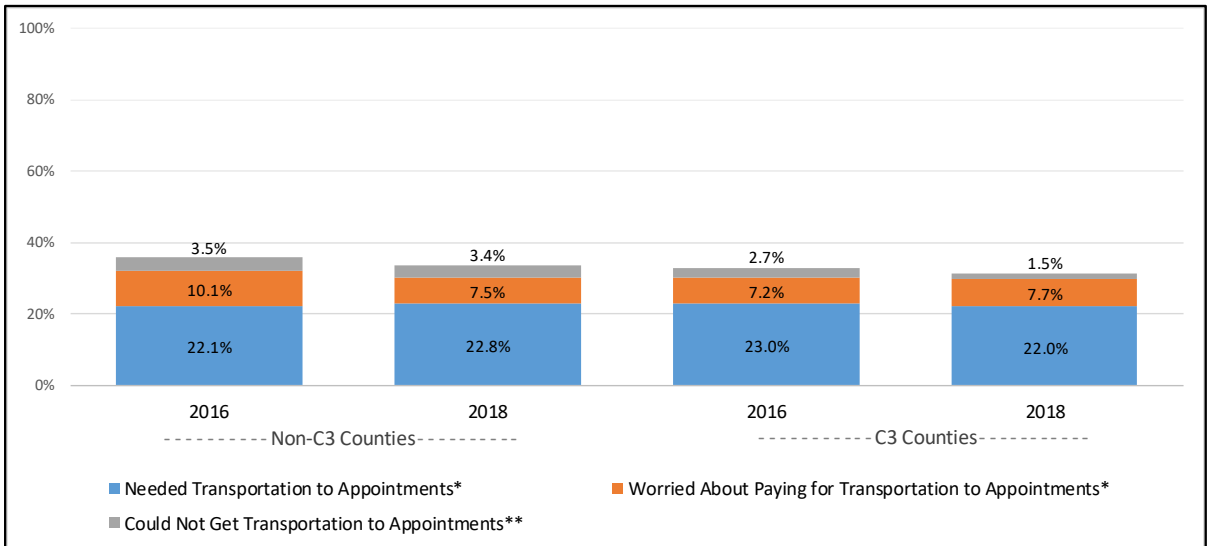
Barriers to Transportation for Healthcare

To assess potential barriers to transportation for healthcare, the survey asked in the past 12 months:

1) How often did you need assistance from other sources (such as friends, family, public transportation, etc.) to get to your healthcare visits?
2) Was there any time when you needed transportation to or from a healthcare visit but could not get it for any reason?
3) How much, if at all, have you worried about your ability to pay for the cost of transportation to or from a healthcare visit?

Figure 2.28 shows the percentage of Iowans in non-C3 and C3 counties who needed transportation to healthcare appointments, could not get transportation, or worried at least sometimes about paying for transportation to appointments in 2016 and 2018. The amount of people who were worried about paying for transportation to appointments decreased in non-C3 counties (-2.6%), while those who needed transportation and who could not get transportation remained stable. In C3 counties, the amount of people who could not get transportation to appointments decreased (-1.2%), along with those who needed transportation (-1%).

Figure 2.28. Barriers to Transportation for Healthcare Visits



*Includes respondents who reported “sometimes,” “usually,” or “always”. Respondents reported “need” or “worry” at least sometime in the past 12 months. **The percentage shown is the number of people who could not access transportation to health care appointments sometime in the past 12 months (weighted *n* =68,714 in 2016 and *n* =62,198 in 2018 from non-C3 counties; *n* =10,286 in 2016 and *n* =7,352 in 2018 from C3 counties).

Chapter 3: Outcome Evaluation

Measures removed from outcome evaluation

The SIM is a dynamic process as stakeholders explore mechanisms that will work to drive population health improvement through the enhancement of technology and implementation of quality measures designed to inform health care system change. As the project evolved CMS requested that Iowa focus efforts on a specific group to better measure the effects of SIM-related activities. At that time, the hypotheses listed below were removed from the operational plan necessitating the removal of measures from the evaluation.

- The rate of elective C-sections and early elective deliveries will be reduced.
- Rates of low birth weight newborns will decrease over the 3 years of the SIM.
- Providers will integrate the statewide strategies for the care of diabetes.

Table 19. Hypotheses and measures

Hypothesis	Measure	Data Source	Outcome Target date
The statewide diabetes rate will be reduced by 0.2% over the three years of the SIM.	Statewide diabetes rate	BRFSS	12/31/2018
The hospitalizations related to the long-term and short-term complications of diabetes will be reduced.	Admissions due to long-term and short term complication from diabetes	Iowa Hospital Association (IHA) inpatient file	10/31/2019
ER visits for diabetes related issues will be reduced.	ED visits due to long-term and short term com-plication from diabetes	IHA outpatient file	10/31/2019
Providers will integrate the statewide strategies for the care of diabetes.	Number of providers who integrate statewide strategies	Provider survey	12/1/2017
People with diabetes will experience improved quality of life (QoL).	Moved to process evaluation		
People with obesity will have decreased BMI over the 3 years of the SIM.	Weight and height measure	BRFSS/YRBS	6/30/2017 and 6/30/2018
There will be an increase in the proportion of people interested in reducing tobacco use.	number of people requesting information from the Quitline	Iowa Quitline data and claims data	6/30/2017 and 6/30/2018
The rate of tobacco use will decrease by 1% over the 3 years of the SIM.	Rate of reported tobacco use	BRFSS/YRBS	6/30/2017 and 6/30/2018
The rate of elective C-sections and early elective deliveries will be reduced.	Rate of C-sections and early elective deliveries	IHA inpatient file	6/30/2017 and 6/30/2018
Rates of low birth weight newborns will decrease over the 3 years of the SIM.	Low birth weight rates	Birth certificate data	6/30/2017 and 6/30/2018
The rate of surgical site infections will be reduced.	Rate of surgical site infection	IHA inpatient file perhaps use National Healthcare Safety Network (NHSN)	6/30/2017 and 6/30/2018
The rate of Narcane use outside the hospital will be reduced.	Narcan use rates	Medicaid and/or Wellmark claims data	6/30/2017 and 6/30/2018
Glucose monitoring will increase.	Hemoglobin A1c rates	Medicaid and/or Wellmark claims data	6/30/2017 and 6/30/2018
Monitoring of anti-coagulation medications will increase.	Protime rates	Medicaid and/or Wellmark claims data	6/30/2017 and 6/30/2018

Hypothesis	Measure	Data Source	Outcome Target date
The SIM will reduce the annual rate of preventable readmissions by the third year.	Avoidable readmissions at 7days and 30 days (HEDIS)	IHA inpatient data	6/30/2017 and 6/30/2018
The SIM will reduce the annual rate of preventable emergency department visits by the third year.	Rate of preventable ED visits as defined by NYC Billings algorithm	IHA outpatient file	6/30/2017 and 6/30/2018
The total cost of care per member in Iowa will be reduced below the national average by the third year.	Cost of care per person in Iowa	Either provided by third party vendor or calculated from Medicaid/Wellmark/Medicare claims data	12/31/2017 and 12/31/2018
The proportion of Medicaid primary care providers in value-based purchasing contracts will increase to 70% by the third year.	Proportion of Medicaid Primary care providers in VBP contracts	Medicaid provider dataset	12/31/2018

Note: Hypotheses that have been removed are highlighted in graph

Utilization and cost

We have calculated three outcome measures relating to access and cost for the general population: ED Visits, Plan All-Cause Readmissions, and Total Cost of Care. The measures were calculated using only Medicaid administrative data for this report. All Medicaid members who were not additionally covered by Medicare were included in the measures. The evaluation plan calls for Medicare and Wellmark data to be utilized for the final report in March 2019, however, there have been difficulties performing the TCOC with the heightened security protections on Medicare and Wellmark data. Additionally, we have been unable to obtain the data for CY 2016 and CY 2017 for both populations, making it difficult to understand changes over the SIM implementation. All Medicaid members who were not additionally covered by Medicare were included in the measures. However, we have provided the national benchmarks from the National Committee for Quality Assurance as a comparison for those measures in for which benchmarks are provided.

ED visits in Medicaid

ED visit rates for the Iowa Medicaid population are calculated according to HEDIS 2016 specifications for Emergency Department. Simple ED visit rates are reported as unadjusted visits per 1,000 months of eligibility (Table 20, Figure 14). These rates include Medicaid members who were eligible for at least 1 month during the measurement year. The ED visit rates include all ED visits that did not result in an inpatient admission and were not related to behavioral health care.

Table 20. ED visits per 1,000 months of eligibility, CY 2015 - CY 2018

Age group	CY 2015	CY 2016	CY 2017	CY2018
<1 year	79.21	76.39	76.73	79.38
1-9 years	53.16	50.76	45.59	50.31
10-19 years	37.76	37.42	33.83	35.92
20-44 years	85.78	84.60	74.55	77.53
45-64 years	66.70	70.96	64.79	69.59
Total	61.96	61.96	55.50	59.24
National Benchmark	62.4	64.6	65.21	62.2

Figure 14. ED visits per 1,000 months eligibility by age, CY 2015 – CY 2018

ED visits rates fell for almost every age group in CY 2017, with the only exception being a slight rise for those under 1 year of age; but rates rose again to pre-2017 levels during CY 2018. Rate changes over time can occur for many reasons that may, or may not, be related to SIM state-wide activities. Over time, Figure 14 seems to indicate that, though rates may change from year to year, they remain relatively stable over a longer time period.

By calculating ED visits according to HEDIS 2018 specifications for Emergency Department Utilization, the rates do not reflect all ED visits, not only those that are potentially preventable. Determining whether the rates of potentially preventable ED visits has decreased can be particularly difficult for this study period of CY 2015 – CY 2018 for two reasons: 1) the Iowa Medicaid program switched all enrollees to one of three Managed Care Organizations (MCOs) during this time period, and 2) diagnosis coding used to determine whether a visit was avoidable had the first major update since the 1960's, going from ICD9 to ICD10 during this time period.

Plan all-cause readmissions

Plan all-cause readmissions reflect hospital admissions that occur within the first 30 days following an index hospital discharge (NQF measure #1768). Index hospital discharges include discharges that occurred during the measurement year between January 1 and December 2 for Medicaid members eligible for at least 1 month after the index discharge. Readmissions are discharges that occur within 30 days after the index discharge and during the period January 2 to December 31. These discharges

do not include pregnancy- or perinatal condition-related discharges or discharges with planned readmissions such as chemotherapy or transfusions.

The HEDIS specifications for plan all-cause readmission rates call for risk adjusting the rates in an effort to make populations more comparable by controlling for existing disease severity-related admission risk. We are unable to risk adjust this measure for the Medicaid population, as HEDIS only provides standardized risk adjustments for Medicare or commercially insured populations. Table 21 shows the unadjusted plan all-cause readmissions in CY 2015 through CY 2018 for the Iowa Medicaid population. The rate of observed readmissions remained about the same for the 18-44 and 45-54 age groups, while the rate increased for those 55-64 years of age from CY 2015 though CY 2017, however all rates dropped in CY 2018, with the largest drop occurring in the 45-54 year old category.

Table 21. Unadjusted Plan All-Cause Readmissions, CY 2015 - 2018

	Count of index stays (Denominator)				Count of 30-day readmissions (Numerator)				Observed Readmissions			
Age group	CY 2015	CY 2016	CY 2017	CY 2018	CY 2015	CY 2016	CY 2017	CY 2018	CY 2015	CY 2016	CY 2017	CY 2018
18-44 years	7,810	10,288	11,305	11,874	763	858	907	543	9.8%	8.3%	8.0%	7.6%
45-54 years	4,418	3,290	4,088	4,461	545	376	495	343	12.3%	11.4%	12.1%	7.7%
55-64 years	3,575	2,697	3,919	4,674	403	257	473	412	11.3%	9.5%	12.1%	8.8%
Total	15,803	16,275	19,312	21,009	1,711	1,491	1,875	1,298	10.8%	9.2%	9.7%	6.2%

Total cost of care

Total cost of care is calculated using the Health Partners analytic package with the Johns Hopkins ACG system (Adjusted Clinical Groups) to risk adjust cost results for Medicaid members who were eligible for at least 9 months during the measurement year (see https://www.healthpartners.com/ucm/groups/public/@hp/@public/documents/documents/dev_057642.pdf).

Table 22. Risk adjusted per member per month (PMPM) cost of care, CY 2015 – CY 2018

Year	Months of enrollment	Inpatient PMPM	Outpatient PMPM	Professional PMPM	Medical PMPM	Prescription PMPM	Total PMPM	% change Total PMPM
2018	4,050,149	$64.01	$116.97	$168.31	$349.30	$57.67	$406.96	+10.5%
2017	5,483,132	$60.66	$90.46	$148.87	$299.99	$68.17	$368.16	-10.7%
2016	5,493,831	$80.04	$88.97	$146.16	$315.16	$96.93	$412.09	+13.7%
2015	5,140,441	$49.18	$82.86	$143.01	$275.05	$87.41	$362.46	

The average risk-adjusted per member/per month cost for Medicaid members in CY 2018 was $406.96, this represents a 10.5% increase in costs over CY 2017 and a shift to nearly 10% higher than the total PMPM in CY 2015. The largest portion of this cost ($349.30) was attributable to

medical care (e.g., outpatient, professional and ancillary services).

As part of the SIM activities, the IDPH awarded funds to counties and county groups to organize area stakeholders and providers to enhance the referral and care coordination systems in an effort to provide not just health care service, but additional service related to social determinants of health such as housing and employment. These counties are referred to as C3 counties. The C3 counties for CY 2015 and CY 2016 include those awarded funds during C3 award year 1: Appanoose, Buena Vista, Calhoun, Dallas, Decatur, Des Moines, Hamilton, Humboldt, Linn, Lucas, Marion, Monroe, Pocahontas, Ringgold, Sac, Sioux, Wayne, Webster, and Wright, while those for CY 2017 and CY 2018 include those operating as C3s during CY 2017: Buena Vista, Calhoun, Cedar, Dallas, Des Moines, Humboldt, Linn, Louisa, Marion, Muscatine, Pocahontas, Sac, Sioux, Webster, and Wright. Though the list of counties is different across time, we opted to compare them with the idea that this shows how successful the C3 program is, not the counties themselves. The addition and deletion of counties in a program such as this is not unusual and our results should show the results embedded with the changes.

C3 counties showed a decrease in costs from $420.75 to $360.59 and 14.2% reduction in 2017, however, costs increased 10% in CY 2018 to $396.80. The Total PMPM cost for C3 counties was lower than the total for all counties in Iowa (Table 22) for CY 2017, while non-C3 counties had higher Total PMPM costs than all counties in Iowa in CY 2017. C3 county costs have shifted significantly from CY 2016 to CY 2017 and again to CY 2018. When compared to the change in Medicaid costs nationally, C3 counties have had an 8.4% increase in costs from CY 2015-CY 2018, while nationally the increase has been 9.6%. Applying this percentage difference to CY 2018 costs, approximately $4.36 per member year in CY 2018, providing an estimated $264,544 in reduced expenditures in C3 counties as compared to national figures. If this reduction were achieved for all Medicaid members, the reductions could be over $1.2 million. When compared to the state as a whole, there is a $15.08 reduction in costs for CY 2018, resulting in estimated total reductions in cost of $913,879, with the potential to save over 4 million across the state.

Costs reductions are estimates based on comparisons, it is important to remember that certain assumptions apply in the figures provided above. First, we assume that national trends would be reflected in Iowa Medicaid expenditures. Second, we assume that the members we have included in the cost calculations (eligible for Medicaid for at least 9 months of the year) have similar expenditure patterns as those who are not included (eligible for Medicaid less than 9 months of the year). Third, we assume that non-C3 counties would be as successful at implementing C3 strategies. Finally, we attribute cost reductions to the C3 counties and C3 activities when they may not be the driving force.

Table 23. Risk adjusted per member per month (PMPM) cost of care for C3 counties, comparison counties, and non-C3 counties CY 2015 – CY 2018

Year	Months of enrollment	Inpatient PMPM	Outpatient PMPM	Professional PMPM	Medical PMPM	Prescription PMPM	Total PMPM	% change Total PMPM	
C3 Counties									
2018	727,302	$62.00	$108.64	$168.05	$338.69	$58.11	$396.80	+10.0%	+2.2%*
2017	988,568	$59.38	$84.75	$148.66	$292.80	$67.80	$360.59	-14.2%	+2.9%
2016	967,325	$76.38	$92.91	$153.52	$322.82	$97.93	$420.75	+14.9%	+4.2%
2015	906,494	$50.26	$84.12	$145.60	$279.99	$86.15	$366.14		
Non-C3 Counties									
2018	3,322,847	$64.48	$118.88	$168.37	$351.73	$57.56	$409.30	+10.7%	
2017	4,494,564	$46.95	$91.77	$148.92	$301.64	$68.26	$369.90		
Comparison Counties									
2016	972,481	$81.75	$88.46	$136.16	$306.38	$96.91	$403.28	+13.9%	
2015	912,348	$48.00	$85.73	$132.93	$266.66	$87.46	$354.12		

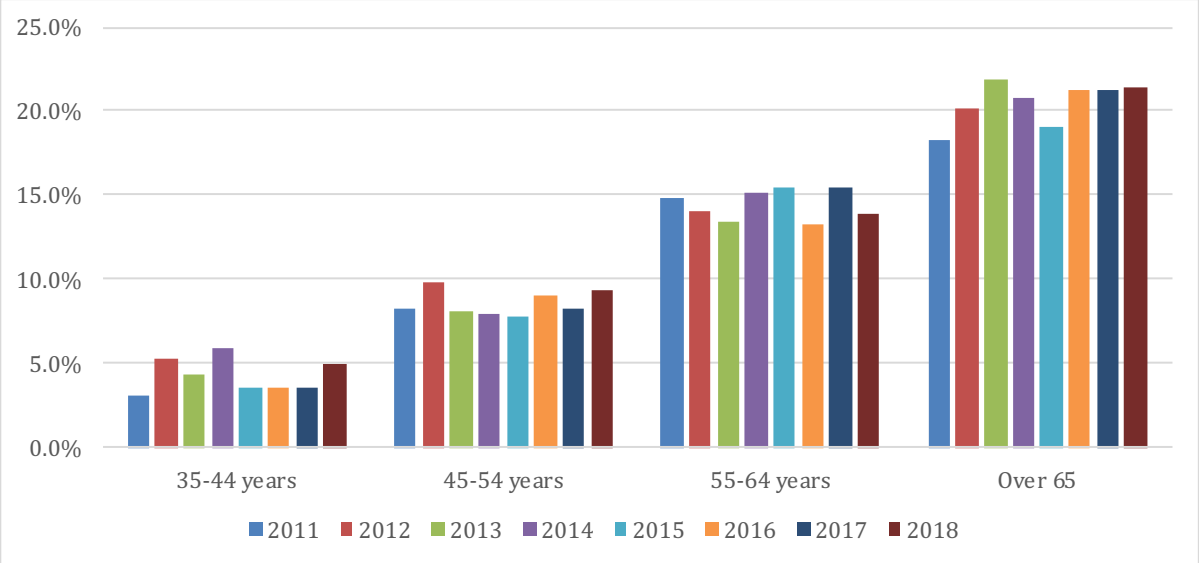
Diabetes

Statewide diabetes rates

The most recent SIM operational plan focuses on improving the quality of care and outcomes for people with diabetes. One of the outcomes related to the goals of the SIM efforts states that "The statewide diabetes rate will be reduced by 0.2% over the three years of the SIM." Statewide data related to rates of diabetes comes from the Centers for Disease Control (CDC) which administers the Behavioral Risk Factor Surveillance System (BRFSS) questionnaire annually in all 50 states. The crude prevalence diabetes rates are available online through the CDC site and through annual reports compiled by the Iowa Department of Public Health and posted to the IDPH website at http://idph.iowa.gov/brfss . **Error! Not a valid bookmark self-reference.** provides the crude diabetes prevalence rates by year and age group from CY 2011 through CY 2017 (CY 2018 rates are not currently available). These rates reflect the percent of respondents that indicated their doctor had told them they have diabetes at some time. The rates vary over time somewhat, but hover around 3-5% for those 35-44 years of age, 8-10% for those 45-54 years of age, 13-15% for those 55-64 years of age and 18-21% for those 65 and over. Though most groups have remained relatively stable over time, the 65+ group has continued to experience rising rates of Diabetes due to either increased disease or improved detection. In CY 2017, there was a marked increase in the number of people who reported having been told they had Diabetes in the 55-64 age group over last year. However, when compared to CY 2015, it is nearly the same.

It will be difficult to detect a 0.2% change in the diabetes rates over time as the year to year fluctuations range from reductions of 2.4% to increases of 2.2%. Evidence to date, does not suggest that SIM activities have caused a reduction in the Diabetes rates. Perhaps, it is more prudent to anticipate that rates may increase for a short time as Diabetes-related awareness increases the use of pre-screening and detection tools and the early detection of diabetes. Though this early detection should lead to long term reductions in complications, hospitalizations and ED visits, the time lag for these effects are not well established in the literature.

Figure 3.1. BRFSS crude diabetes rates by age group and year



Diabetes monitoring

Effectiveness of diabetes care is monitored through the measure 'Comprehensive Diabetes Monitoring consisting of 1) Hemoglobin A1c (HbA1c) testing, 2) HbA1c poor control, 3) HbA1c control under 8%, 4) HbA1c control under 7% (special populations), 5) eye exam performed, 6) Medical attention for nephropathy, and 7) blood pressure under control. Claims data can be used to calculated three of these diabetes monitoring outcomes to determine the effectiveness of Diabetes management: 1) receiving a Hemoglobin A1c, 2) receiving an eye exam, and 3) receiving medical attention for nephropathy. These outcomes utilize claims for Medicaid members from 19 through 64 years of age with diabetes. The Medicaid statewide results are shown in Figure 3.1 and Figure 3.2. Rates for Diabetes monitoring have remained similar in all monitoring categories. However, this

could change as additional data is added for the final report. Within CY 2018, C3 counties do have significantly higher rates of eye exam and completion of all three types of monitoring than non-C3 counties.

Over time, rates for all three monitoring activities have fallen from CY 2015-CY 2017; however, in CY 2018 rates begin to move upward again. When looking at the average over time it appears that for the diabetes monitoring activities, rates have not improved at the state level, while nationally they have improved slightly or remained stable.

Table 24. Diabetes monitoring by county type and year, CY 2015 – CY 2018*

	2015			2016			2017			2018		
Monitoring outcome	**C3**	**Non-C3**	**U.S.**	**C3**	**Non-C3**	**U.S.**	**C3**	**Non-C3**	**U.S.**	**C3**	**Non-C3**	**U.S.**
Hemoglobin A1c 90.3%	2,775	13,489		3,072	14,468		2,722	13,066		3,050	14,301	
	89.7%	86.3%	89.5%	88.8%	86.0%	78.7%	79.7%	86.7%	80.8%	81.7%	87.6%	
Eye exam 61.5%	1,890	8,811		2,151	9,183		2,009	8,674		2,153	9,311	
	58.6%	54.4%	62.7%	56.5%	53.7%	58.1%	52.9%	54.9%	57.0%	53,2%	57.2%	
Medical attention for Nephropathy 92.6%	2,845	13,878		3,175	15,056		2,813	13,304		2,966	13, 713	
	92.3%	81.0%	92.5%	92.5%	90.0%	81.3%	81.1%	89.9%	78.5%	78.3%	90.1%	
Had all three types of monitoring 55.0%	1,690	7,765		1,896	8,054		1,478	6,396		1,604	6,952	
	51.7%		55.2%	49.5%		42.7%	39.0%		42.5%	39.7%		

Rates for Eye exam and having all three types of monitoring are significantly higher for C3 counties than non-C3 counties.

Figure 3.2. Rates of Hemoglobin A1c monitoring, CY 2015 – CY 2018

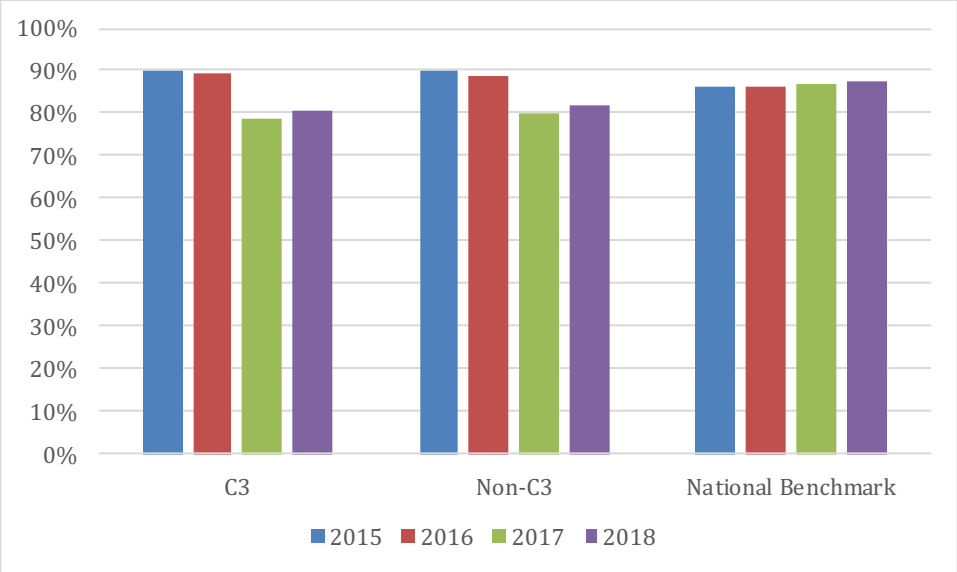


Figure 3.3. Rates of eye exams, CY 2015 – CY 2018

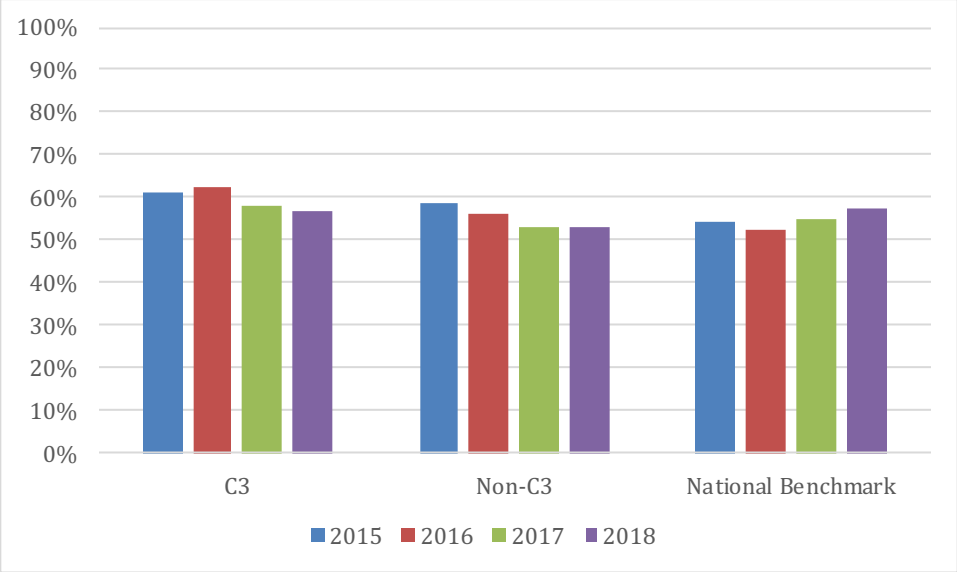


Figure 3.4. Rates of medical attention for Nephropathy, CY 2015 – CY 2018

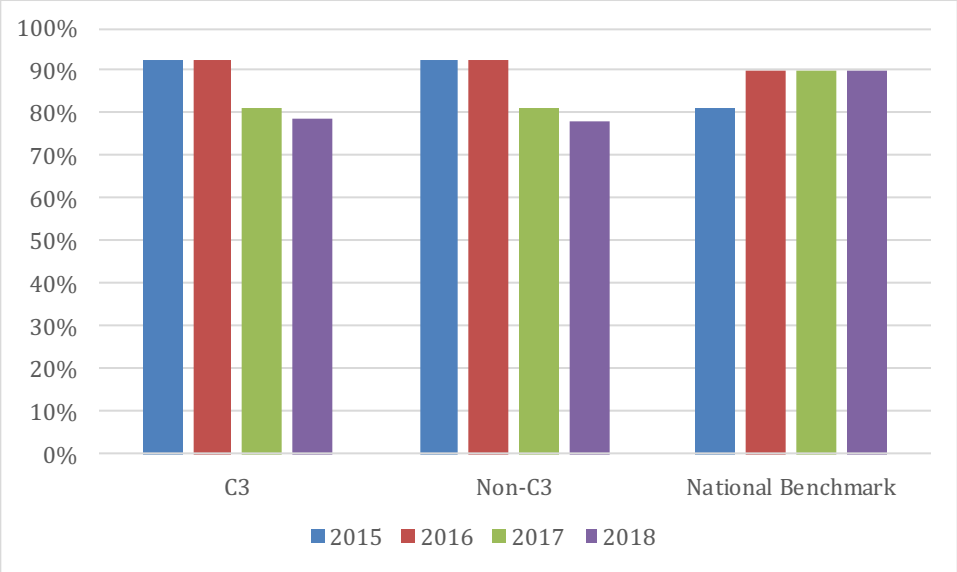
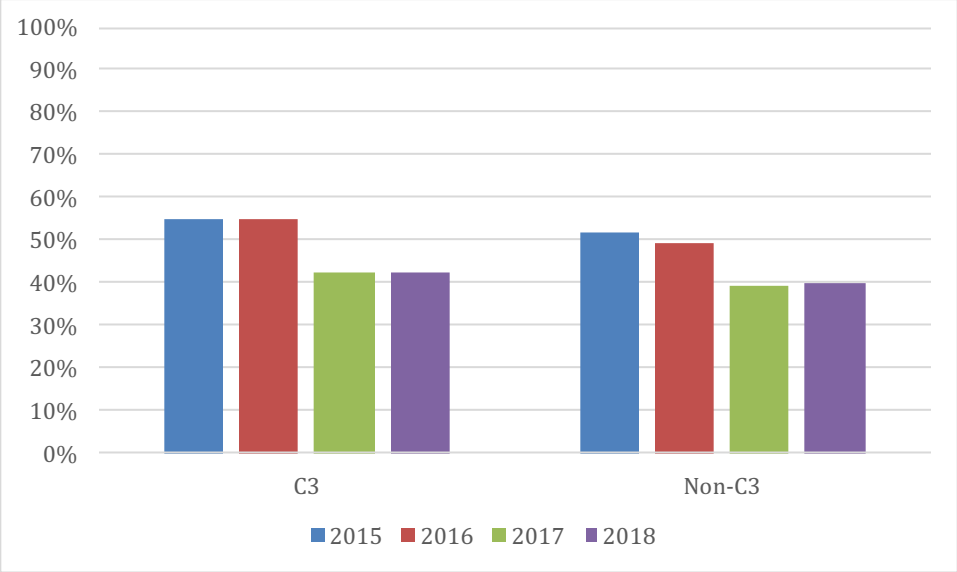


Figure 3.5. Rates of all three Diabetes monitoring activities, CY 2015-CY 2018



Admissions related to Diabetes

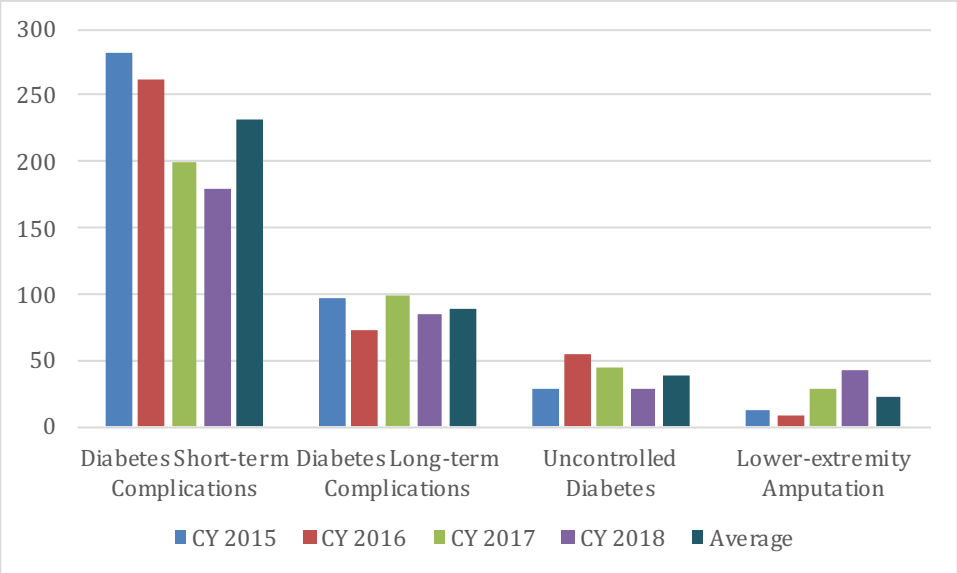
The rate of hospital admissions for diabetes-related problems is expected to decrease over the SIM as monitoring for early detection of problems would lead to fewer admissible events. We used the rates of admission for short-term and long-term complications of diabetes, uncontrolled diabetes and lower-extremity amputation among patients with diabetes to evaluate this hypothesis. These rates were calculated using the Agency for Health Research and Quality (AHRQ) outcome calculator utilizing the Prevention Quality Indicators (PQI) related to diabetes for Medicaid members eligible for at least 9 months in the calendar year. Table 25 and

Figure 20, show that the rates for two of the four admission types (short-term complications and uncontrolled diabetes) fell from CY 2016 to CY 2018, while rates for uncontrolled diabetes remained stable, and the rate of lower extremity (LE) amputations increased. There were 62 admissions for LE amputations in CY 2017 and 106 in CY 2018. This change in number resulted in a large increase in the rate. It is unclear why the number of LE amputations related to diabetes increased so dramatically in CY 2018, nearly doubling. Yet, the numbers are still small and may explain the large changes in rates over time. Thus, while the admission rate for short-term complications of diabetes have fallen over time, indicating that there may be improved monitoring of diabetes, the rate of lower extremity amputations has increased and the rates of admission for long-term complications and uncontrolled diabetes have varied.

Table 25. Number of admissions related to diabetes per 100,000 members, CY 2015 – CY 2017

Type of admission	CY 2015	CY 2016	CY 2017	2018
Diabetes Short-term Complications	282.83	262.02	200.02	178.88
Diabetes Long-term Complications	97.53	72.76	98.44	85.66
Uncontrolled Diabetes	28.28	54.01	45.19	29.08
Lower-extremity Amputation	13.17	9.37	27.7	42.23

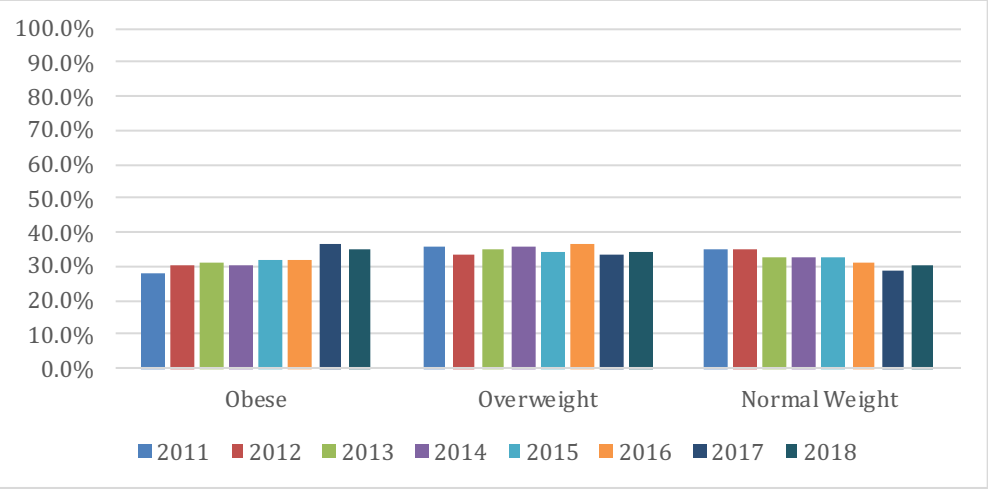
Figure 3.6. Number of admissions for diabetes-related conditions per 100,000 members by year



Obesity

SIM activities are designed to support providers and patients as they lower individual BMI. These efforts are expected to have the following result: People with obesity will have decreased BMI over the 3 years of the SIM. Though we need to have the state-specific BRFSS data to report this measure, the statewide obesity rates are available through the CDC and IDPH annual reports (**Error! Not a valid bookmark self-reference.**). Between CY 2011 and CY 2018, the rate of obesity has risen from 29% to 35%, a 21% increase. Unlike the crude prevalence rates for diabetes, this rate does not vary from year to year – increasing one year and then decreasing the next. This rate rises steadily over time to over 36% in CY 2017 with a mirrored decrease in the rate of people with normal weight, and nearly stable rates of people who are overweight. These rates seem to stabilize in CY 2018.

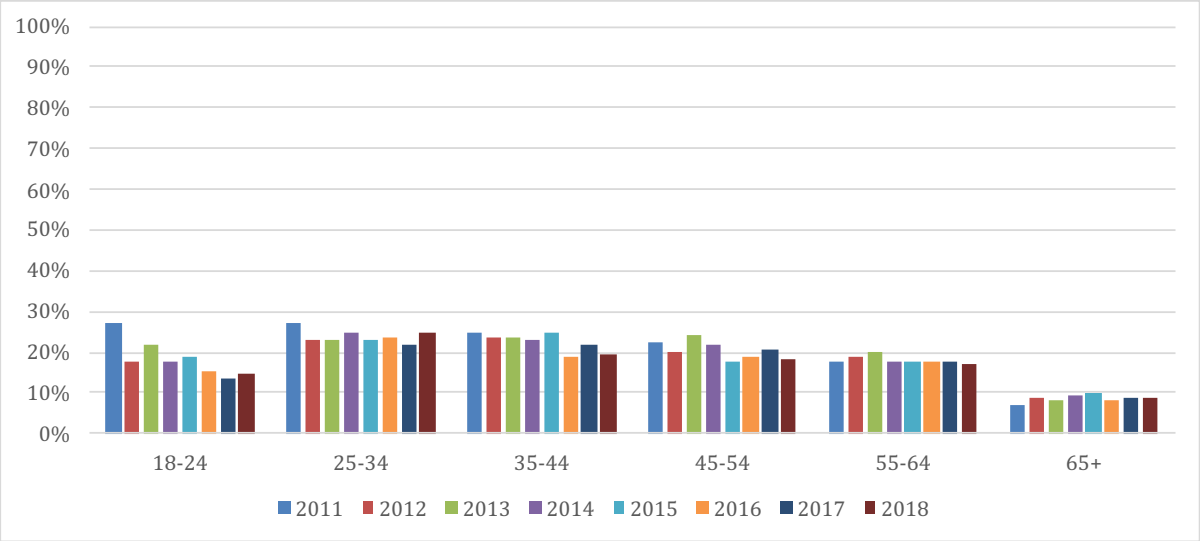
Figure 3.7. Obesity rates by BMI category and year, CY 2011-CY 2018



Tobacco use

Reducing tobacco use is an expected outcome for the SIM activities. Figure 22 provides the tobacco use rate by age group and year as provided by the BRFSS. Tobacco use has consistently been decreasing for all age groups except those 55-64 years of age and those 65 years of age and over. The SIM goal is to reduce tobacco use by 1% over the 3 years of the SIM; this may be difficult to measures since the rates were already going down an average of 1% per year from CY 2011 to CY 2016 for the four lower age groups.

Figure 3.8. Tobacco use by age and year, CY 2011-2018



Conclusion

The State Innovation Model (SIM) provided the impetus for health system change designed to provide better health care for Iowans at a more affordable price. Within the 4 years of the SIM Iowa worked to incentivize drivers that would improve care while increasing the proportion of the population in value-based payment models. Below are some of the successes that Iowa experienced under the SIM.

- Increased investments in Health Information Technology (HIT) and infrastructure (e.g. SWAN, SDOH screening) which can continue to be leveraged post-SIM
- Improved workforce readiness to deliver coordinated care (locally with ACH models and statewide) through application and training-based experience
- Built cooperative relationships for strategic planning between medical, healthcare and other sectors
- Improved accountability for providers through payment reform towards value-based care
- Achieved the goal for Medicaid enrollees' participation in value-based care through negotiating Medicaid MCO payment reforms
- Hospital readmission rates and emergency department use started to trend downward

While state investments and accomplishments are shaping the culture of health in the state, many initiatives are not sustainable without additional investment or federal funding. Iowa's statewide healthcare leaders need to remain engaged in the process of health care system change to maintain the momentum to sustain and expand gains from the SIM project. The lessons learned through SIM can be applied to continue advancing and expanding Iowa's health system transformation within and beyond the scope of Medicaid populations.

Appendix A: Full SIM Statewide Survey Results

The first set of questions will be about your need for and use of health care in the past year. (n=2472)

AN1. In the last 12 months, was there any time when you or a doctor thought you needed routine wellness or preventive care, such as a yearly physical or immunizations, at a doctor's office or clinic? (n= 2453)

1. Yes (69%)
2. No (31%)

AN2. In the last 12 months, did you get any routine wellness or preventive care from a doctor's office or clinic? (n= 2457)

1. Yes (75%)
2. No (25%)

AN3. In the last 12 months, was there any time when you needed routine wellness or preventive care but could not get it for any reason? (n= 2465)

1. Yes (6%)
2. No (94%)

AN4. In the last 12 months, did you have an illness, injury, or condition that needed care right away in a doctor's office or clinic? (n= 2456)

1. Yes (36%)
2. No (64%) **If no, skip to AN7.**

AN5. Did you get that care at a doctor's office or clinic? (n= 885)

1. Yes (90%)
2. No (10%)

AN6. In the last 12 months, was there any time when you needed care for an illness, injury, or other condition right away but could not get it for any reason? (n= 880)

1. Yes (11%)
2. No (89%)

AN7. During the last 12 months, how many times did you go to a hospital emergency room to get care for yourself? (n= 2466)

1. 1 time (14%)
2. 2 to 4 times (8.5%
3. 5 to 9 times (1%)
4. 10 or more times (0.5%)
5. None (76%) **If none, skip to AN11.**

AN8. Thinking about your most recent ER visit, did a doctor, nurse, or other health care provider tell you to go to the ER for this care? (n= 582)

1. Yes (35%)
2. No (65%)

AN9. Do you think the care you received at your most recent visit to the ER could have been provided by a doctor's office or clinic? (n= 572)

1. Yes (45%)
2. No (55%) **If no, skip to AN11.**

AN10. What was the main reason you did not go to a doctor's office or clinic for this care? (Select one) (n=244)

11. Could not afford the care or have no insurance (3%)

12. Insurance/HMO coverage was inadequate (1%)
13. I did not have a doctor or clinic to go to (2.5%)
14. Distance or transportation problems (3%)
15. My doctor's office/clinic was open, but could not get an appointment (11%)
16. My doctor's office/clinic was not open when I needed care (50%)
17. Could not get off work (0.5%)
18. Doctor/Nurse sent me to the ER (9%)
19. My health problem was too serious for the doctor's office or clinic (16%)
20. OTHER (3%)

AN11. During the last 12 months, how many nights did you spend in the hospital because of a health problem? (n= 2466)

1. 1 night (3%)
2. 2 nights (2%)
3. 3 nights (2%)
4. 4 or more (4%)
5. None (89%) **If none, skip to AN13.**

AN12. In the last 12 months, did you ever have to go back into the hospital within 30 days after being allowed to go home because you were still sick or still had a problem? (n= 268)

1. Yes (15%)
2. No (85%)

AN13. Specialists are doctors like surgeons, heart doctors, allergy doctors, skin doctors, and others who specialize in one area of health care. When you answer the next few questions about specialist care, do not include dental visits or care you got when you stayed overnight in a hospital. In the last 12 months, was there any time when you or a doctor thought you needed care from a specialist? (n= 2459)

1. Yes (45%)
2. No (55%) **If no, skip to AN16.**

AN14. How many specialists have you seen in the last 12 months? (n= 1103)

1. 1 (46%)
2. 2 (29%)
3. 3 (14%)
4. 4 or more (8%)
5. None (3%)

AN15. In the last 12 months, was there any time when you needed care from a specialist but could not get it for any reason? (n= 1103)

1. Yes (7%)
2. No (93%)

AN16. In the last 12 months, did you or a health care provider believe you needed any treatment or counseling for a mental or emotional health problem? (n= 2467)

1. Yes (9.5%)
2. No (90.5%)

AN17. In the last 12 months, did you get any treatment or counseling for a mental or emotional health problem? (n= 2468)

1. Yes (12%)
2. No (88%)

AN18. In the last 12 months, was there any time when you needed treatment or counseling for a mental or emotional health problem but could not get it for any reason? (n= 2470)

1. Yes (2.5%)
2. No (97.5%)

The next few questions are about your dental care. (n= 2472)

AN19. When was your last dental check-up? (n= 2418)

1. Within the last year (72%)
2. 1 to 2 years ago (11%)
3. More than 2 years ago (16.5%)
4. Never been to a dentist (0.5%)

AN20. In the last 12 months, was there any time when you or a dentist thought you needed dental care for any reason? (n= 2453)

1. Yes (38%)
2. No (62%) **If no, skip to AN22.**

AN21. In the last 12 months, was there any time when you needed dental care but could not get it for any reason? (n= 919)

1. Yes (16%)
2. No (84%)

AN 22. In the last 12 months, about how many times did you or someone in your household go without medical or dental care because of cost? (n= 2443)

1. 1-2 times (9%)
2. 3-5 times (4%)
3. 6 or more (2%)
4. None (85%)

The next set of questions ask about your health. (n= 2472)

HS1. In general, how would you rate your overall physical health now? Would you say … (n= 2468)

1. Excellent (14%)
2. Very good (37%)
3. Good (34%)
4. Fair (12%)
5. Poor (3%)

HS2. Have you been diagnosed with a chronic physical health condition or disease that has lasted or is expected to last for at least 12 months? (n= 2455)

1. Yes (39%)
2. No (61%)

HS3. In general, how would you rate your overall mental or emotional health now? Would you say … (n= 2469)

1. Excellent (29%)
2. Very good (37%)
3. Good (25%)
4. Fair (7%)
5. Poor (1%)

HS4. Have you been diagnosed with a chronic mental or emotional health condition that has lasted or is expected to last for at least 12 months? (n= 2457)

1. Yes (14%)
2. No (75%)

The next questions are about physical, mental, or emotional problems or limitations you may have in your daily life. (n= 2472)

HS5. Are you LIMITED in any way in any activities because of any impairment or health problem?

(n= 2458)

1. Yes (25%)
2. No (75%) **If no, skip to OB1.**

HS6. Because of any impairment or health problem, do you need the help of other persons with your PERSONAL CARE needs, such as eating, bathing, dressing, or getting around the house? (n= 605)

1. Yes (11%)
2. No (89%)

HS7. Because of any impairment or health problem, do you need the help of other persons in handling your ROUTINE needs, such as everyday household chores, doing necessary business, shopping, or getting around for other purposes? (n= 608)

1. Yes (30%)
2. No (70%)

The next questions are about some other specific health problems. (n=2472)

OB1. Compared to other people of your age and height, do you think you weigh… (n= 2451)

1. The right amount (43%)
2. Too much (53%)
3. Too little (4%) **If too little, skip to DB1.**

OB2. In the last 12 months, were you ever advised by a doctor or other health professional to lose weight? (n= 2359)

1. Yes (24%)
2. No (76%)

OB3. Have you ever been told by a health professional that you are obese? (n= 2349)

1. Yes (20%)
2. No (80%)

OB4. In the last 12 months, did a doctor or health professional ever recommend that you change your diet, meaning what you eat, to help you to lose weight? (n= 2360)

1. Yes (24%)
2. No (76%)

OB5. In the last 12 months, did a doctor or health professional ever recommend that you increase your level of physical activity to help you to lose weight? (n= 2354)

1. Yes (27%)
2. No (73%)

DB1. Since you have been an adult, has a doctor, nurse, or other health care professional EVER told you that you have diabetes? [IF "YES" AND RESPONDENT IS FEMALE, ASK "WAS THIS ONLY WHEN YOU WERE PREGNANT?"] (n= 2466)

1. Yes (12%) **If yes, go to DB2. All other responses, skip to TB1.**
2. Yes, only during pregnancy (1%)
3. No (85%)
4. No, but pre-diabetes or borderline diabetes (2%)
8. Yes, but no longer have diabetes (< 1%)

DB2. Type 1 diabetes results from the body's failure to produce insulin and is usually diagnosed in children and young adults. Type 2 diabetes results from insulin resistance and is the most common form of diabetes. Were you told that you had Type 1 or Type 2 diabetes? (n= 283)

1. Type 1 (10%)
2. Type 2 (88%)
3. Another type (2%)

DB3. About how many times in the last 12 months have you seen a doctor, nurse, or other health professional for your diabetes? (open ended) (n= 292)

DB4. During the last 12 months, have you had to visit a hospital emergency room because of your diabetes? (n= 296)

1. Yes (5%)
2. No (95%)

DB5. During the last 12 months, were you admitted to the hospital overnight or longer for your diabetes? (n= 296)

1. Yes (2%)
2. No (98%)

DB6. Have your doctors or other health care professionals worked with you to develop a plan so that you know how to take care of your diabetes? (n= 293)

1. Yes (89%)
2. No (11%)

DB7. Have you ever taken a course or class in how to manage your diabetes yourself? (n= 294)

1. Yes (61%)
2. No (39%)

DB8. How confident are you that you can control and manage your diabetes? Would you say you are… (n= 295)

1. Very confident (59%)
2. Somewhat confident (36%)
3. Not too confident (3.5%)
4. Not at all confident (1.5%)

Living with diabetes can sometimes be tough. You may experience problems and hassles concerning your diabetes. The next series of questions are about potential problem areas that people with diabetes may experience. For the following statements, consider the degree to which each statement may have been a problem for you DURING THE LAST MONTH. On a scale from 1 to 6, where 1 is "Not a problem at all" and 6 is "A very serious problem," how much of a problem is… (n= 297)

DDS1. Feeling that diabetes is taking up too much of your mental and physical energy every day. (n= 295)
1. Not a problem (52%)
2. Slight problem (24%)
3. Moderate problem (11%)
4. Somewhat serious problem (5%)
5. Serious problem (4%)
6. Very serious problem (3%)

DDS2. Feeling that your doctor doesn't know enough about diabetes and diabetes care. (n= 290)
1. Not a problem (82%)
2. Slight problem (9.5%)
3. Moderate problem (3%)
4. Somewhat serious problem (2%)
5. Serious problem (1%)
6. Very serious problem (2.5%)

DDS3. Feeling angry, scared, and/or depressed when you think about living with diabetes. (n= 294)
1. Not a problem (68%)
2. Slight problem (17%)
3. Moderate problem (7%)
4. Somewhat serious problem (3%)
5. Serious problem (2%)
6. Very serious problem (3%)

DDS4. Feeling that your doctor doesn't give you clear enough directions on how to manage your diabetes. (n= 292)
1. Not a problem (81%)
2. Slight problem (11%)
3. Moderate problem (3%)
4. Somewhat serious problem (2%)

5. Serious problem (1%)
6. Very serious problem (2%)

DDS5. Feeling that you are not testing your blood sugars frequently enough. (n= 283)
1. Not a problem (54%)
2. Slight problem (18%)
3. Moderate problem (13%)
4. Somewhat serious problem (5%)
5. Serious problem (4%)
6. Very serious problem (6%)

DDS6. Feeling that you are often failing with your diabetes routine. (n= 294)
1. Not a problem (54%)
2. Slight problem (21%)
3. Moderate problem (13%)
4. Somewhat serious problem (5%)
5. Serious problem (2.5%)
6. Very serious problem (4.5%)

DDS7. Feeling that your friends or family are not supportive enough of your self-care efforts (such as planning activities that conflict with your schedule, encouraging you to eat the "wrong" foods, etc.). (n= 292)
1. Not a problem (74%)
2. Slight problem (13%)
3. Moderate problem (4.5%)
4. Somewhat serious problem (4%)
5. Serious problem (1%)
6. Very serious problem (3.5%)

DDS8. Feeling that diabetes controls your life. (n= 294)
1. Not a problem (63%)
2. Slight problem (14%)
3. Moderate problem (9%)
4. Somewhat serious problem (6%)
5. Serious problem (3%)
6. Very serious problem (5%)

DDS9. Feeling that your doctor doesn't take your concerns seriously enough. (n= 292)
1. Not a problem (84%)
2. Slight problem (7%)
3. Moderate problem (4.5%)
4. Somewhat serious problem (1%)
5. Serious problem (1%)
6. Very serious problem (2.5%)

DDS10. Not feeling confident in your day-to-day ability to manage your diabetes. (n= 293)
1. Not a problem (66%)
2. Slight problem (19%)
3. Moderate problem (8%)
4. Somewhat serious problem (3%)
5. Serious problem (2%)
6. Very serious problem (2%)

DDS11. Feeling that you will end up with serious long-term complications from your diabetes, no matter what you do. (n= 290)
1. Not a problem (45%)
2. Slight problem (23.5%)
3. Moderate problem (14.5%)
4. Somewhat serious problem (6%)
5. Serious problem (6%)
6. Very serious problem (5%)

DDS12. Feeling that you are not sticking closely enough to a good meal plan. (n= 292)

1. Not a problem (38%)
2. Slight problem (28%)
3. Moderate problem (16.5%)
4. Somewhat serious problem (5%)
5. Serious problem (4.5%)
6. Very serious problem (8%)

DDS13. Feeling that friends or family don't appreciate how difficult living with diabetes can be. (n= 290)
1. Not a problem (65%)
2. Slight problem (18%)
3. Moderate problem (7%)
4. Somewhat serious problem (3%)
5. Serious problem (2%)
6. Very serious problem (5%)

DDS14. Feeling overwhelmed by the demands of living with diabetes. (n= 296)
1. Not a problem (60.5%)
2. Slight problem (19%)
3. Moderate problem (10.5%)
4. Somewhat serious problem (4%)
5. Serious problem (4%)
6. Very serious problem (2%)

DDS15. Feeling that you don't have a doctor who you can see regularly enough about your diabetes. (n= 295)
1. Not a problem (85%)
2. Slight problem (8%)
3. Moderate problem (3.5%)
4. Somewhat serious problem (< 1%)
5. Serious problem (1.5%)
6. Very serious problem (2%)

DDS16. Not feeling motivated to keep up your diabetes self-management. (n= 294)
1. Not a problem (53%)
2. Slight problem (24%)
3. Moderate problem (11%)
4. Somewhat serious problem (5%)
5. Serious problem (3%)
6. Very serious problem (4%)

DDS17. Feeling that friends or family don't give you the emotional support that you would like. (n= 291)
1. Not a problem (79%)
2. Slight problem (11%)
3. Moderate problem (4%)
4. Somewhat serious problem (2.5%)
5. Serious problem (1%)
6. Very serious problem (2.5%)

The next questions are about your use of tobacco. Please consider smoking cigarettes, cigars, pipes, or using smokeless tobacco as using tobacco. [DOES NOT COUNT VAPING / E-CIGARETTES] (n=2472)

TB1. Do you CURRENTLY smoke cigarettes or use tobacco every day, some days, or not at all? (n= 2470)

1. Every day (13%)
2. Some days (4%)
3. Not at all (83%) **If not at all, skip to NP1.**

TB2. In the last 12 months, how often were you advised to quit smoking or using tobacco by a doctor or other health provider? Would you say… (n= 420)

1. Never (39%)
2. Sometimes (24%)
3. Usually (10%)
4. Always (27%)

TB3. In the last 12 months, how often was medication, such as nicotine gum, patch, nasal spray, inhaler, or prescription medicine, recommended or discussed by a doctor or health provider to assist you with quitting smoking or using tobacco? Would you say… (n= 420)

1. Never (66%)
2. Sometimes (16%)
3. Usually (7%)
4. Always (11%)

TB4. In the last 12 months, how often did your doctor or health provider discuss or provide methods and strategies other than medication such as a telephone hotline, individual or group counseling, or a cessation program to assist you with quitting smoking or using tobacco? Would you say… (n= 423)

1. Never (71%)
2. Sometimes (18%)
3. Usually (3%)
4. Always (8%)

The next set of questions are about the food that you eat. A healthy diet is one that is low in fat, low to moderate in salt, contains whole grains, and five or more servings of fruit and vegetables per day. (n= 2472)

NP1. Do you CURRENTLY eat a healthy diet… (n= 2453)

1. Regularly (50%)
2. Once in a while, not regularly (45%)
3. Not at all (5%)

The next few questions are about the food eaten in your household in the last 12 months and whether you were able to afford the food you needed.

NP2. In the last 12 months, how often would you say that the food you bought just didn't last and you didn't have money to get more? Would you say… (n= 2458)

1. Never (84%)
2. Sometimes (11.5%)
3. Often (4.5%)

NP3. In the last 12 months, how often would you say that you couldn't afford to eat balanced meals? Would you say… (n= 2459)

1. Never (82%)
2. Sometimes (13%)
3. Often (5%)

NP4. In the last 12 months, how often would you say that you or other adults in your household cut the size of your meals or skipped meals because there wasn't enough money for food? Would you say… (n= 2469)

1. Never (90%)
2. Sometimes (7%)
3. Often (3%)

NP5. In the last 12 months, did you ever eat less than you felt you should because there wasn't enough money to buy food? (n= 2467)

1. Yes (8%)
2. No (92%)

NP6. In the last 12 months, were you ever hungry, but didn't eat because there wasn't enough money for food? (n= 2466)

1. Yes (6%)
2. No (94%)

The next set of questions are about your physical activity. Physical activity can include exercises such as running, brisk walking, or swimming, and other activities such as golf, gardening, or housekeeping. (n= 2472)

PA1. Do you CURRENTLY engage in any physical activity? (n= 2459)

1. Yes, regularly (62%)
2. Once in a while, but not regularly (25%)
3. No (13%)

PA2. How many days per week do you do MODERATE activities for at least 10 minutes at a time, such as brisk walking, vacuuming, gardening, or anything else that causes some increase in your breathing or heart rate? (n= 2442)

1. 1 day (3.5%)
2. 2 days (8%)
3. 3 days (14%)
4. 4 days (11%)
5. 5 days (18.5%)
6. 6 days (8%)
7. 7 days (30%)
8. None (7%)

PA3. How many days per week do you do VIGOROUS activities for at least 10 minutes at a time, such as running, aerobics, heavy yard work, or anything else that causes large increases in your breathing or heart rate? (n= 2425)

1. 1 day (13%)
2. 2 days (13%)
3. 3 days (13.5%)
4. 4 days (7%)
5. 5 days (10%)
6. 6 days (3%)
7. 7 days (8%)
8. None (30.5%)

PA4. During the last month, other than during a regular job, did you participate in ANY physical activities or exercises such as running, calisthenics, golf, gardening, or walking for exercise? (n= 2464)

1. Yes (69%)
2. No (31%)

PA5. Does your community have adequate sidewalks and protected crosswalks or trails that could be used to walk to the grocery store, bank, or other public locations? (n= 2433)

1. Yes (77%)
2. No (23%)

PA6. In the last 12 months, have you walked to stores, businesses, or other public locations? (n= 2464)

1. Yes (48%)
2. No (52%)

PA7. In the last 12 months, have you walked for exercise or recreational purposes? (n= 2466)

1. Yes (80%)
2. No (20%)

PA8. Does your community have on-street bikeways or trails that could be used to bike to the grocery store, bank, or other public locations? (n= 2406)

1. Yes (66%)
2. No (34%)

PA9. In the last 12 months, have you biked to stores, businesses, or other public locations? (n= 2465)

1. Yes (17%)
2. No (79%)
8. Don't own a bike/Ride a bike (4%)

PA10. In the last 12 months, have you biked for exercise or recreational purposes? (n= 2466)

1. Yes (30%)
2. No (65%)
8. Don't own a bike/Ride a bike (5%)

The next set of questions ask you about issues related to your use of transportation. (n= 2472)

TP1. Are you a licensed driver? (n= 2471)
1. Yes (95%)
2. No (5%)

TP2. How many licensed vehicles were owned or available for regular use by members of your household during the last 12 months? (n= 2458)

0 (3%)
1 (20%)
2 (38%)
3 (21%)
4 (10%)
5 (4%)
6 (2%)
7 (1%)
8 or more (1%)

TP3. When you need to get health care, what is the type of transportation you use MOST OFTEN to get to your visit? [Select one] (n= 2463)

11. Drive myself, using my own vehicle (89%)
12. Drive myself, using someone else's vehicle (1%)
13. Someone else drives me, using my own vehicle (3%)
14. Someone else drives me, using their vehicle (4%)
15. Takes a taxi or cab (0.5%)
16. Takes public transportation (1%)
17. Bikes or walks (1%)
18. Other 0.5%)
88. Does not have reliable transportation to health care visits (0%)

TP4. In the last 12 months, how often did you need assistance from other sources, such as friends, family, public transportation, and so forth, to get to your health care visit? Would you say… (n= 2464)

1. Never (76%)
2. Sometimes (19.5%)
3. Usually (1.5%)
4. Always (3%)

TP5. In the last 12 months, was there any time when you needed transportation to or from a health care visit but could not get it for any reason? (n= 2469)

1. Yes (3%)
2. No (97%) **If no, skip to TP7.**

TP6. How often was cost the main reason you could not get the transportation you needed?

1. Never (32%)
2. Sometimes (51%)
3. Usually (8.5%)
4. Always (8.5%)

TP7. In the last 12 months, how often have you worried about your ability to pay for the cost of transportation to or from a health care visit? Would you say…

1. Never (92%)
2. Sometimes (6%)
3. Usually (1%)
4. Always (1%)

The next set of questions ask you about issues related to your financial situation. (n= 2472)

EF1. Which of the following best describes your financial situation? Do you see yourself as … (n= 2412)

1. Very financially secure (31%)
2. Somewhat financially secure (53%)
3. Not very financially secure (11%)
4. Not at all financially secure (5%)

EF2. How difficult is it for you to live on your household income right now? Would you say… (n= 2440)

1. Not all difficult (62%)
2. Somewhat difficult (31%)
3. Very difficult (5%)
4. Extremely difficult (2%)

EF3. How confident are you that you could come up with $2,000 if an unexpected expense arose within the next month? Would you say… (n= 2430)

1. Very confident (61%)
2. Somewhat confident (19%)
3. Not too confident (8%)
4. Not at all confident (12%)

EF4. In the last 12 months, did you not pay the full amount of a utility bill, including water, gas, oil, or electricity? (n= 2448)

1. Yes (7%)
2. No (93%) **If no, skip to EF6.**

EF5. In the last 12 months, about how many times did you not pay the full amount of a utility bill? (n= 169)

1. 1-2 times (44%)
2. 3-5 times (32%)
3. 6 or more times (24%)

EF6. In the last 12 months, was your cellphone or telephone service ever disconnected or did you ever run out of minutes because there wasn't enough money? (n= 2462)

1. Yes (5%)
2. No (95%) **If no, skip to EF8.**

EF7. In the last 12 months, about how many times were you without cellphone or phone service? (n=

111)

1. 1-2 times (51.5%)
2. 3-5 times (32.5%)
3. 6 or more times (16%)

EF8. In the last 12 months, did you not pay the full amount of rent or mortgage payments? (n= 2442)

1. Yes (3%)
2. No (97%) **If no, skip to HO1.**

EF9. In the last 12 months, about how many times did you not pay the full amount of rent or mortgage payments? (n= 65)

1. 1-2 times (46%)
2. 3-5 times (40%)
3. 6 or more times (14%)

EF10. In the last 12 months, were you evicted from your home or apartment for not paying the rent or mortgage? (n= 67)

1. Yes (3%)
2. No (97%)

The next set of questions ask you about issues related to your housing situation. (n= 2472)

HO1. In the last 12 months, did you move in with other people even for a little while because of financial problems? (n= 2466)

1. Yes (2%)

2. No (98%)

HO2. In the last 12 months, did you stay at a shelter, in an abandoned building, an automobile or any other place not meant for regular housing, even for one night? (n= 2470)

1. Yes (1%)

2. No (99%)

HO3. In the last 12 months, about how many times have you moved? (n= 2468)

0 (89%)

1 (8%)

2 (2%)

3 (<1%)

4 or more (<1%)

I'm going to read you a series of statements about the current condition of your home. In the last 12 months, does your home have any… (n= 2472)

HO4. Do you have any pests such as rats, mice, roaches, or other insects? (n= 2466)

1. Yes (17%)
2. No (83%)

HO5. Did your roof or ceiling leak? (n= 2465)

1. Yes (7%)
2. No (93%)

HO6. Did you have exposed electric wires in the finished areas of your home? (n= 2467)

1. Yes (1%)
2. No (99%)

HO7. Did you have a toilet, hot water heater or other plumbing that did not work? (n= 2470)

1. Yes (12.5%)
2. No (87.5%)

HO8. Did you have holes in the walls or ceiling or cracks wider than the edge of a dime? (n= 2466)

1. Yes (5%)
2. No (95%)

HO9. Did you have holes in the floor big enough for someone to catch their foot on? (n= 2470)

1. Yes (1%)
2. No (99%)

HO10. Did you have an unreliable furnace, boiler, air conditioning, or heating system? (n= 2465)

1. Yes (8%)
2. No (92%)

HO11. Were the conditions in your home undesirable enough to move? (n= 2465)

1. Yes (3%)
2. No (97%)

The final set of questions are about your background. (n= 2472)

DM1. Think of a ladder with 10 steps as representing where people stand in society. At the top of the ladder (represented by the number 10) are the people who are the best off—those who have the most money, the most education, and the most-respected jobs. At the bottom (represented by the number 1) are the people who are the worst off—those who have the least money, the least education, and the least- respected jobs or no job. Select a number from 1 to 10 to indicate where you would place yourself on this ladder compared to other people. (n= 2383)

1 (2%)
2 (1%)
3 (3%)
4 (6%)
5 (15.5%)
6 (16%)
7 (25%)
8 (19%)
9 (6.5%)
10 (6%)

DM2. How do you identify your gender? Is it… (n= 2469)

1. Male (48%)
2. Female (52%)
3. In another way (<0.5%)

DM3. What is your current age? (open ended)

18-24 (6%)
25-34 (10%)
35-44 (12%)
45-54 (14%)
55-64 (22%)
65 or older (36%)

DM4. What is the highest grade or level of school that you have completed? (n= 2462)

1. 8th grade or less (2%)
2. Some high school (Grades 9 – 11), but did not graduate (3%)
3. High school graduate (Grade 12) or GED (26%)
4. Some college (1 – 3 years) or technical school (31%)
5. 4-year college graduate (22%)
6. More than 4-year college degree (15%)

DM5. Do you have any kind of health care coverage, including health insurance, prepaid plans such as HMOs, or government plans such as Medicaid or Medicare? (n= 2463)

1. Yes (94%)
2. No (6%)

DM6. Which of the following best describes where you live? Do you live… (n= 2368)

11. On a farm (11%)
12. In a rural setting, not on a farm (11%)
13. In a rural subdivision outside of city limits (6%)
14. In a small town of less than 5,000 people (22%)
15. In a large town of 5,000 to less than 25,000 people (16.5%)
16. In a city of 25,000 to less than 50,000 people (11%)
17. In a city of 50,000 to less than 150,000 people (14.5%)
18. In a city of 150,000 or more people (8%)

DM7. Are you currently… (n- 2466)

11. Employed for wages full-time (35+ hours per week) (46%) **If employed full-time, skip to DM9.**
12. Employed for wages part-time (less than 35 hours per week) (13%) **If employed part-time, skip to DM9.**
13. Not employed (41%)

DM8. You stated you are not currently employed. Are you currently… (n= 983)

11. A Homemaker (12%)
12. A Student (3%)
13. Retired (71%)
14. Disabled (10%)
15. Temporarily laid off, looking for work (4%)

DM9. What is your annual gross household income from all sources before taxes? Is it… (n=2201)

11. Less than $15,000 (8.5%)
12. $15,000 to less than $25,000 (8.5%)
13. $25,000 to less than $35,000 (9%)
14. $35,000 to less than $50,000 (16%)
15. $50,000 to less than $75,000 (20%)
16. $75,000 to less than $100,000 (14%)
17. $100,000 to less than $150,000 (14%)
18. $150,000 or more (10%)
77. Don't know **If don't know, ask DM10. Otherwise, skip to DM11.**

DM10. Can you tell me if your annual gross household income is less than, equal to, or greater than $50,000? (n= 140)

1. Less than $50,000 (46%)
2. Equal to $50,000 (9%)
3. More than $50,000 (45%)

DM11. Which one or more of the following would you say is your race? Would you say... [SELECT ALL THAT APPLY] (n= 24)

1. White (92%)
2. Black or African American (2%)
3. Hispanic or Latino (4%)
4. Asian or Asian American (1%)
5. Native Hawaiian or Other Pacific Islander (<0.5%)
6. American Indian or Alaska Native (0.5%)
7. SOMETHING ELSE? (<0.5%)

(IF MORE THAN ONE RESPONSE TO DM11; CONTINUE TO DM12. OTHERWISE, SKIP TO DM13.)

DM12. Which one of these groups would you say BEST represents your race? (n= 32)

1. White (41%)
2. Black or African American (19%)
3. Hispanic or Latino (16%)
4. Asian or Asian American (16%)
5. Native Hawaiian or Other Pacific Islander (0%)
6. American Indian or Alaska Native (6%)
7. SOMETHING ELSE (3%)

DM13. How many children, that is people under the age of 18, live in your household? (n= 2469)

0 (74%) **If none, skip to DM17.**
1 (10%)
2 (9%)
3 (4%)
4 (2%)
5 (0.5%)
6 or more (<0.5%)

DM14. What is the primary type of care you use for your children while at work or school? (n= 612)

1. Center-based (17%)
2. Family (20%)
3. Friend (1%)
4. Neighbor (<0.5%)
5. Children are old enough to stay home alone (31%)
6. Other (5%)

88. Respondent is a stay-at-home parent (26%)

DM15. In the last 12 months, about how many times did cost influence your choice of childcare arrangements? (n= 609)

1. 1-2 times (6%)
2. 3-5 times (2%)
3. 6 or more times (6%)
4. None (85%)

DM16. In the last 12 months, about how many times did availability of childcare influence your

choice of childcare arrangements? (n= 609)

1. 1-2 times (7%)
2. 3-5 times (4%)
3. 6 or more times (5%)
4. None (84%)

DM17. What county do you live in? (open ended) (n= 2449)

DM18. What is your ZIP Code? (open ended) (n= 2417)

DM19. Do you have access to internet? (n= 2462)

1. Yes (90%)

2. No (10%)

DM20. [If talking to respondent on cell phone, skip to DM21] Do you have a cell phone or can you also be reached via cell phone? (n= 546)

1. Yes (86%)

2. No (14%)

DM21. [If talking to respondent on landline, skip to DM22] Does the house you live in also have a residential landline telephone? (n= 1926)

1. Yes (37%)

2. No (62%)

DM22. How many RESIDENTIAL LANDLINE telephone NUMBERS do you have in your home? Do not include cell phone numbers or fax numbers. (n= 1246)

1 (95.5%)
2 (3.5%)
3-5 (1%)

DM23. Thinking about all the phone calls that you RECEIVE on your landline and cell phone, what percent, between 0 and 100, are received on your CELL PHONE? (open ended) (n=1116)

That's my last question. Everyone's answers will be combined to see what Iowan's perceptions of healthcare are. I want to thank you for your time and cooperation today.

IOWA SIM
State Innovation Model of Iowa

Community Investments Ensuring Sustainment

Webster County

April 2019

Iowa Healthcare Collaborative

Webster County Coalition
Accountable Community of Health

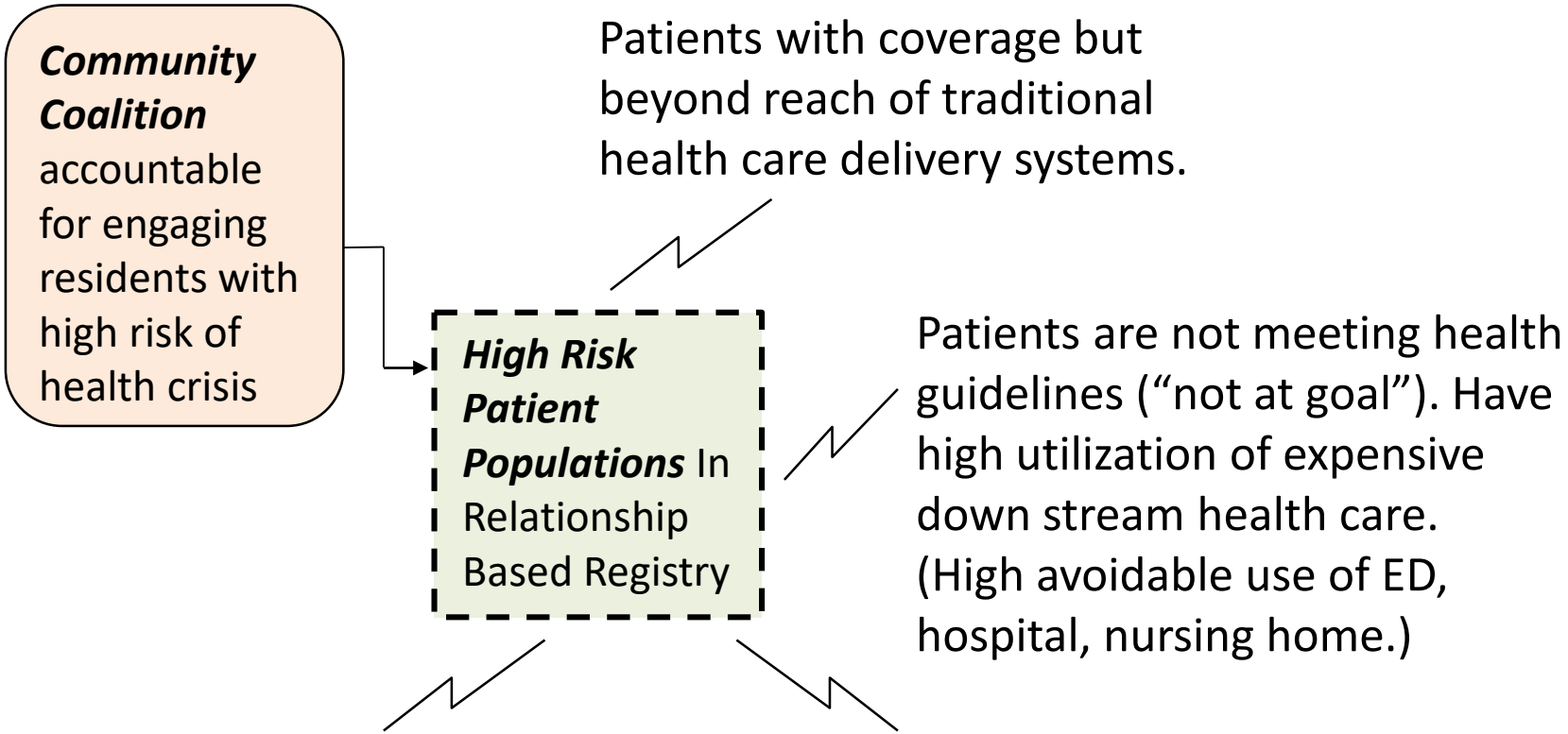
A. Accountable Community For Health

Definition:
Accountable Community for Health (ACH) is a structured, cross-sectoral alliance of **healthcare**, public **health**, **social** services and other organizations that plans and implements strategies to improve population **health** and **health** equity for all residents in a geographic area.

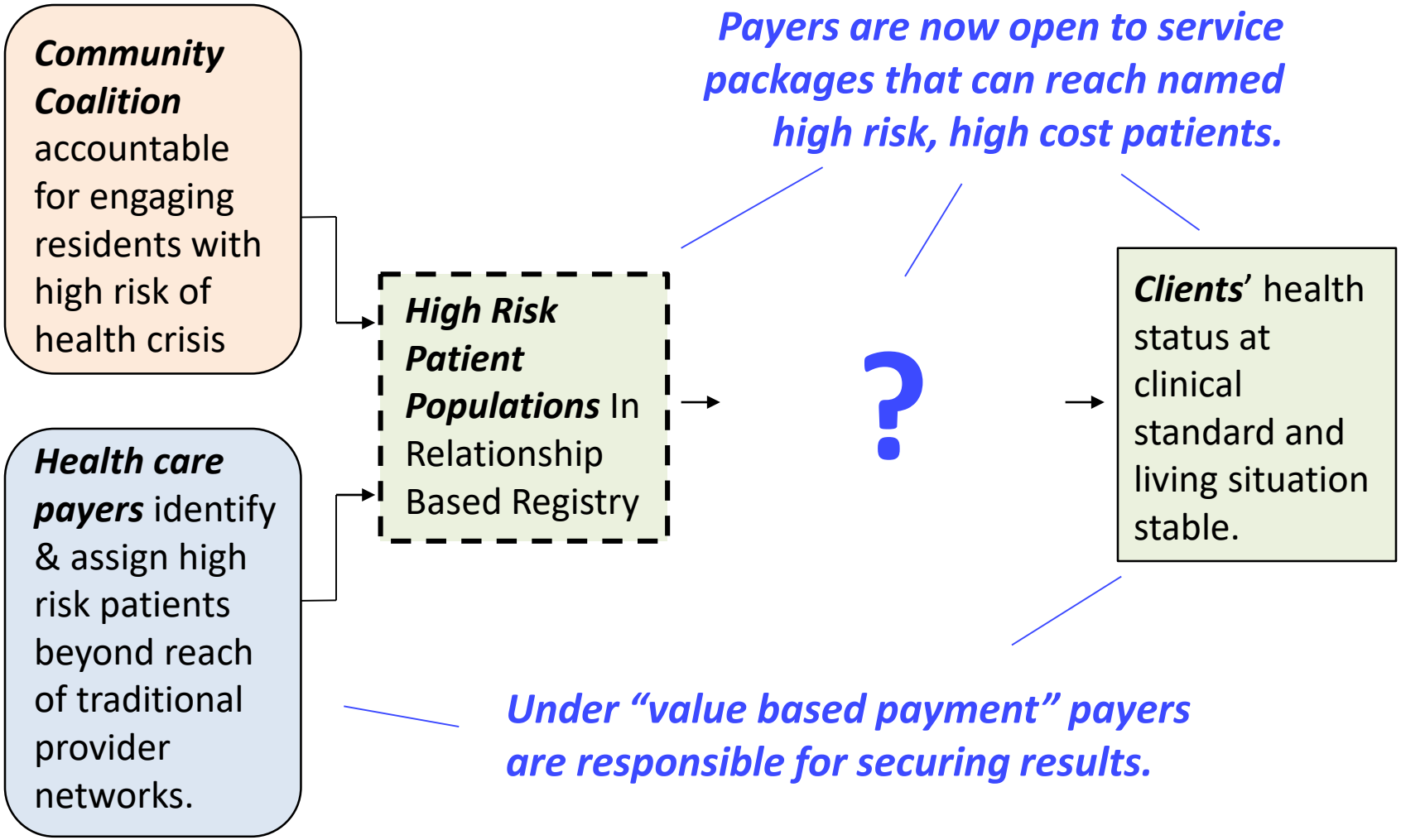
ACH Performance Aims And Logic Model

Bring together medical and social services in an integrated delivery system that can be managed for value with a business model that is sustainable.

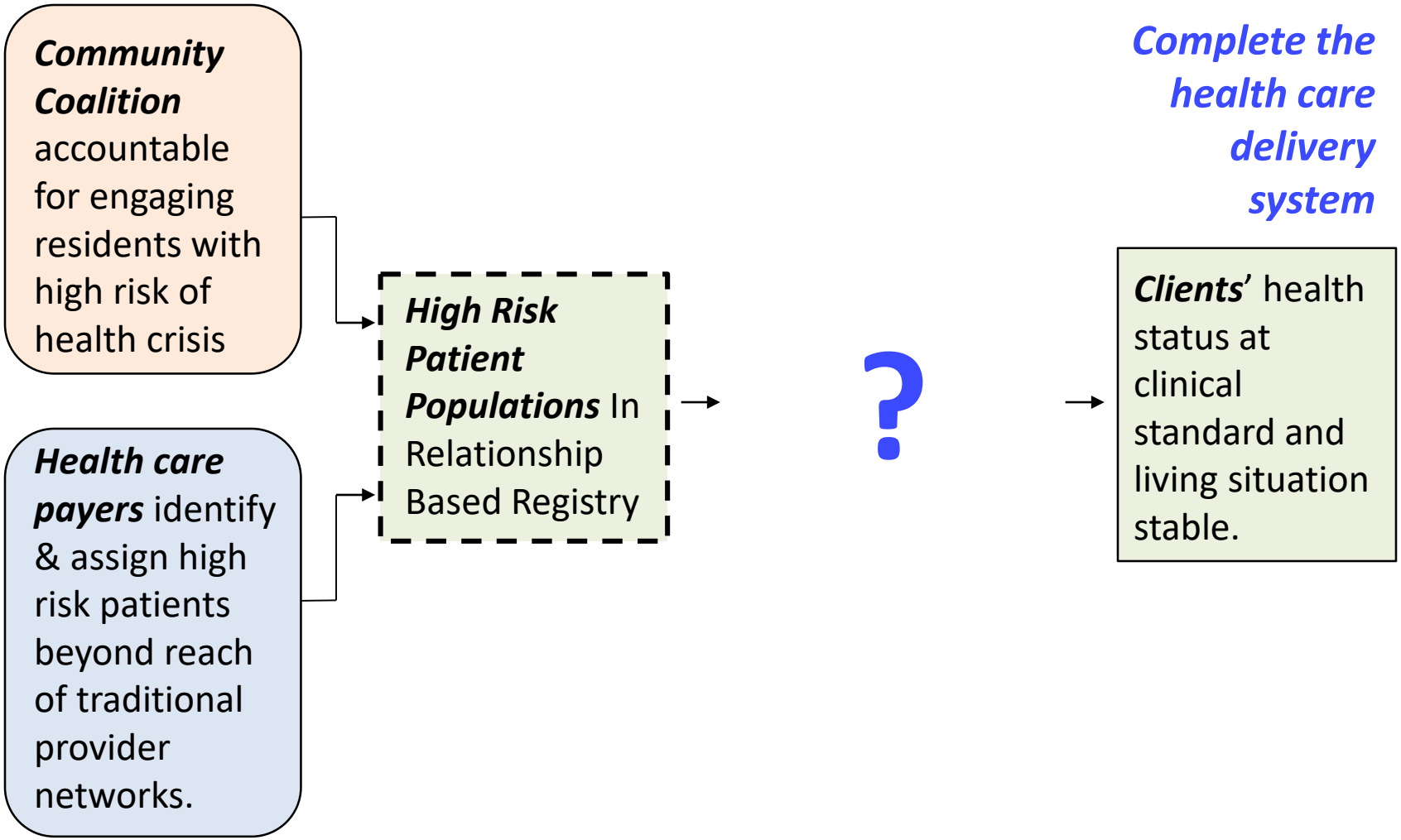
Accountable Community For Health – Logic Model



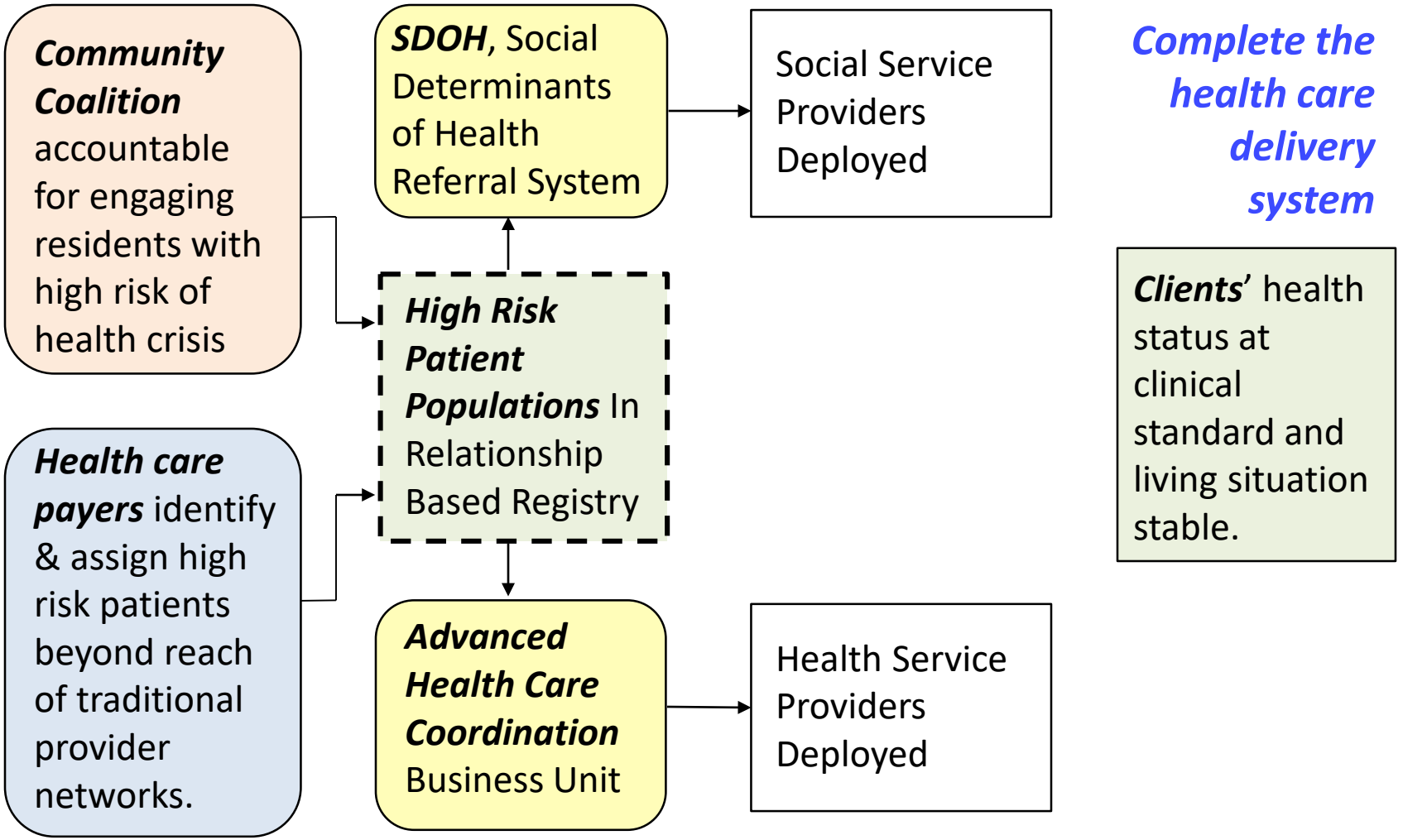
Accountable Community For Health – Logic Model



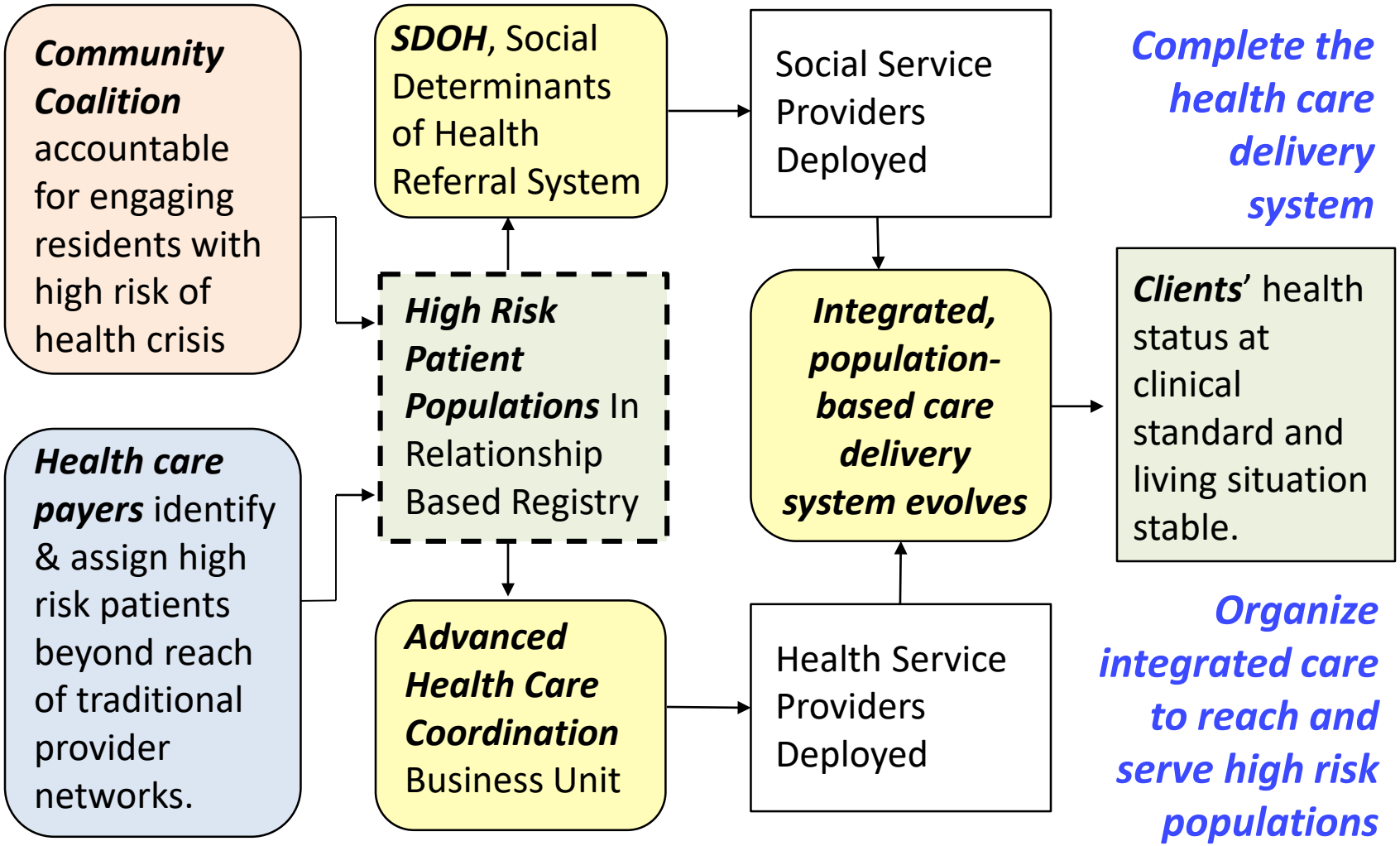
Accountable Community For Health – Logic Model



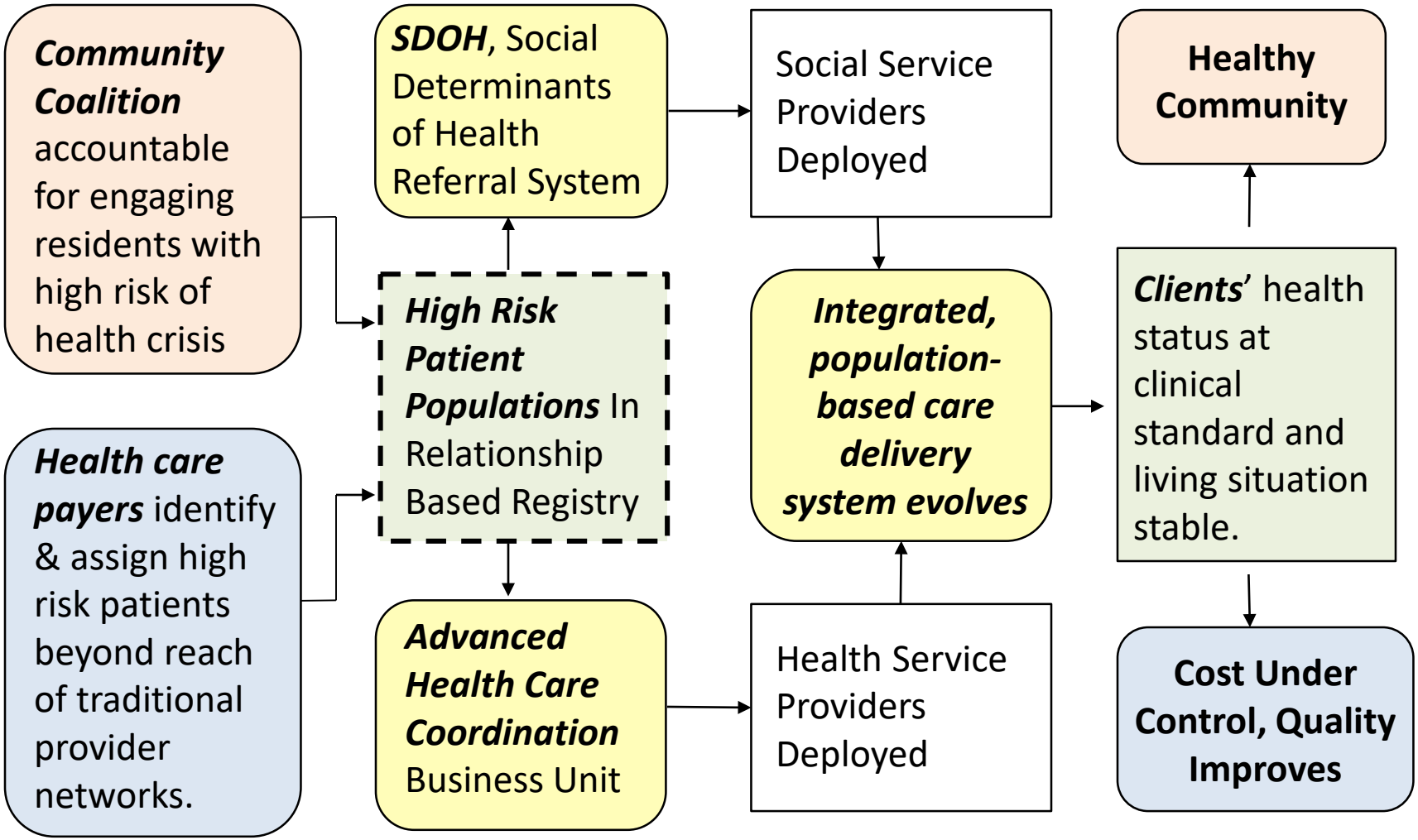
Accountable Community For Health – Logic Model



Accountable Community For Health – Logic Model



Accountable Community For Health – Logic Model



Accountable Community For Health – Iowa 2019 SIM Performance Commitments

Reduce the **Total Cost of Care** for Wellmark and Medicaid population by 15% below projected targets

Reduce rate of **"Hospital Acquired Conditions"** by 20%

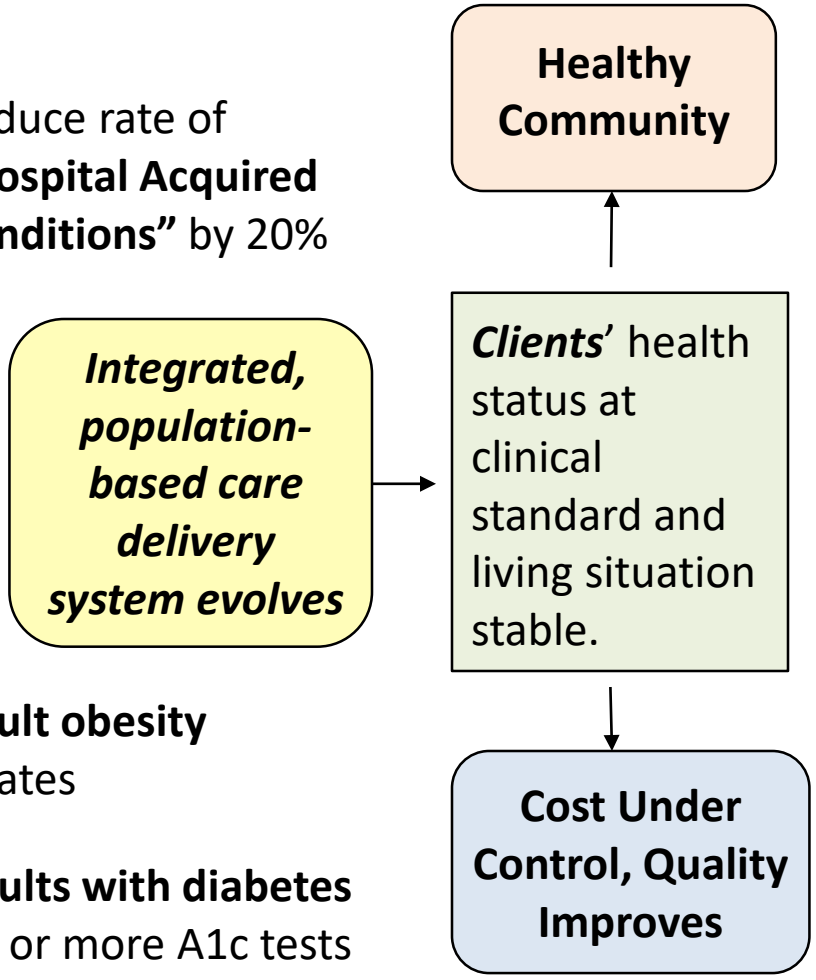
Provider participation … in **value based purchasing** reaches 50%

Reduce rate of preventable **readmissions** by 12%

Increase % of **adult smokers** who have made a quit attempt

Decrease **adult obesity** prevalence rates

Increase % of **adults with diabetes** having two or more A1c tests



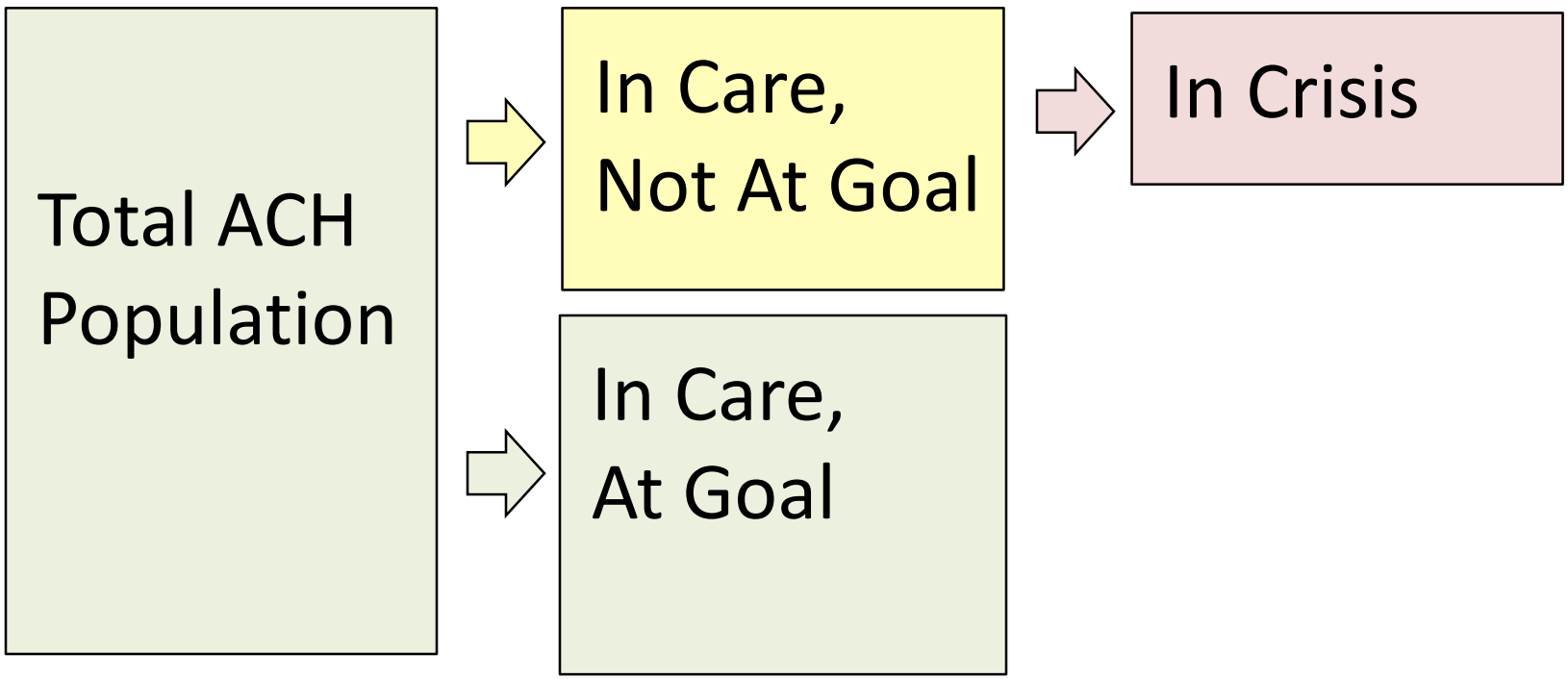
B. ACH Sustainment

Three On-Going Roles

1. Population Management
2. Care Coordination & Service Integration
3. Financing With Value Based Payment

B. ACH Sustainment

1. Population Management



Scale of Care Coordination Needed (Estimates)

Webster Population = 121,100

Hospital Utilization

ED visits	52,800
Avoidable ED visits	8,450
Cost of avoidable	$11,881,000
Hospital Admits	12,200
30 Day Readmissions	1,700
Avoidable 30 Day	460
Cost of avoidable	$6,624,000

Social Services

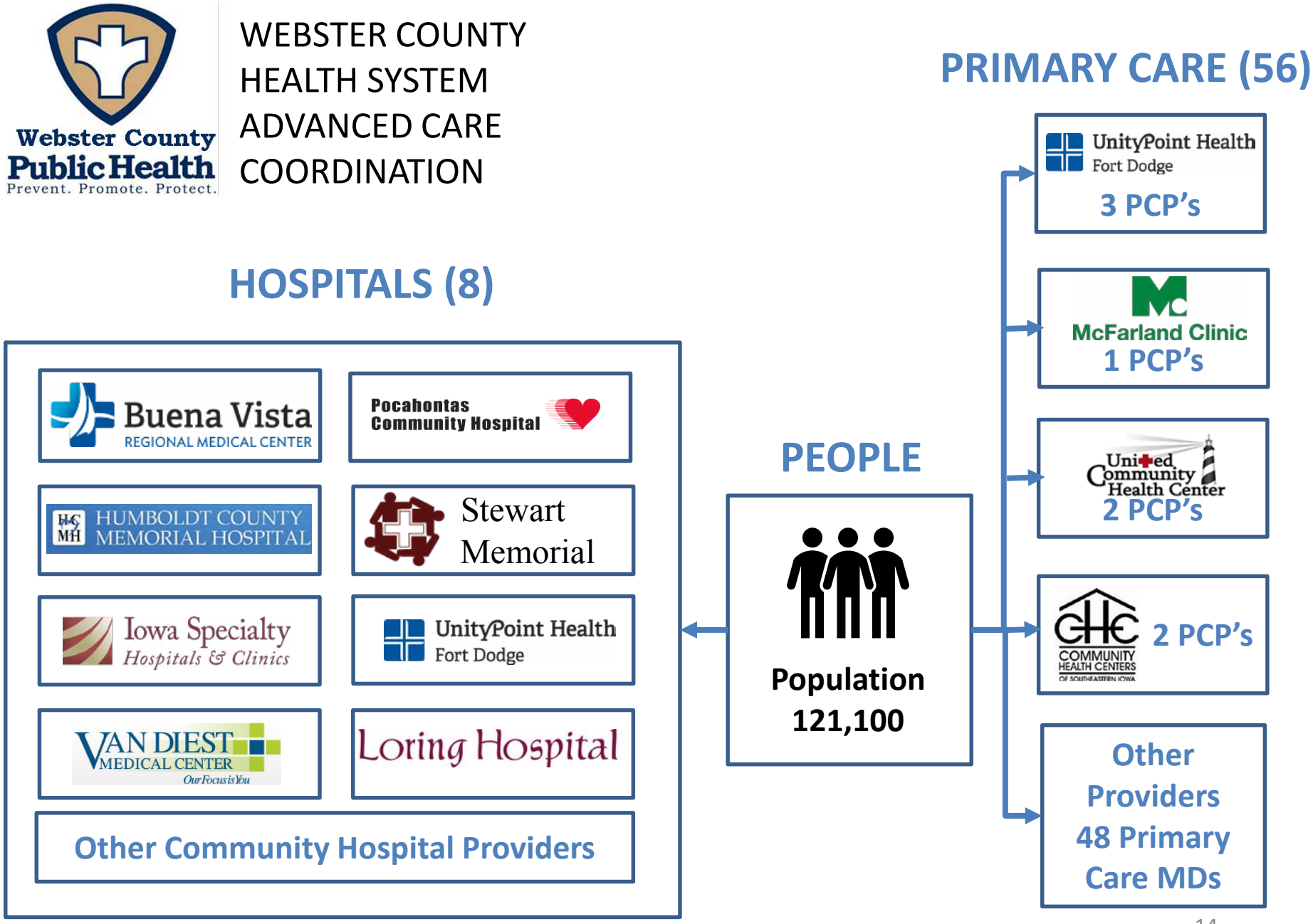
Poverty	16,380
Need Social Services	5,410
Number in Crisis	1,790

Health Status

Diabetes	12,290
DM NAG	3,690
DM Crisis	360
Obesity	28,680
Obesity Crisis	2,210
Tobacco User	14,510
Tobacco Crisis	1,450
High Risk, Chronic Conditions (≥ 3)	26,147
Number in Crisis	2,610

Webster County Public Health
Prevent. Promote. Protect.

WEBSTER COUNTY HEALTH SYSTEM ADVANCED CARE COORDINATION



Webster County Public Health
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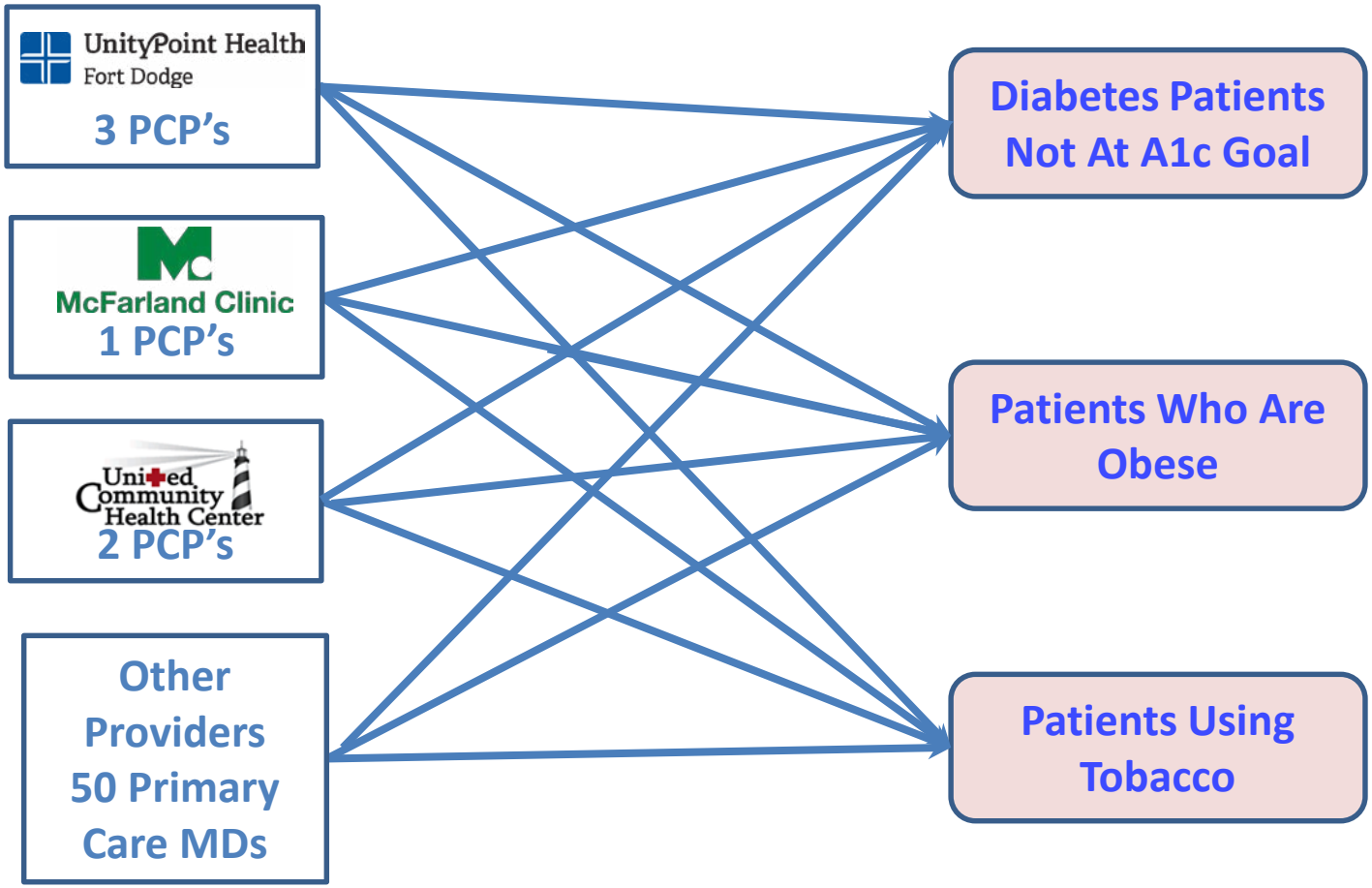
WEBSTER COUNTY HEALTH SYSTEM ADVANCED CARE COORDINATION

C3 WORKING WITH HOSPITALS AND DOCTORS TO MANAGE UTILIZATION

Webster County Public Health
Prevent. Promote. Protect.

WEBSTER COUNTY HEALTH SYSTEM ADVANCED CARE COORDINATION

C3 WORKING WITH PRIMARY CARE AND OTHERS TO MANAGE CHRONIC CONDITIONS



WEBSTER COUNTY
HEALTH SYSTEM
ADVANCED CARE
COORDINATION

C3 COMMUNITY WORKING TOGETHER TO INSTALL AND ADVANCED CARE COORDINATION SYSTEM THAT:

- IMPROVES HEALTH
- REDUCE COST OF CARE
- REDUCES UNNECESSARY HOSPITAL UTILIZATION

Webster County Public Health
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WEBSTER COUNTY HEALTH SYSTEM ADVANCED CARE COORDINATION

Potential Savings in Avoidable ED Visits = $11.8 Million

Buena Vista Regional Medical Center
Pocahontas Community Hospital
Humboldt County Memorial Hospital
Stewart Memorial
Iowa Specialty Hospitals & Clinics
UnityPoint Health Fort Dodge
Van Diest Medical Center
Loring Hospital

ED Visits	% Avoidable	# Avoidable
48,361	16.0%	7,740

92% of Total

Other Community Providers

ED Visits	% Avoidable	# Avoidable
4,439	16.0%	710

8% of Total

Average Cost of ED Visit = $1,406

Population-Based Estimate

ED Visits	% Avoidable	# Avoidable
52,800	16%	8,450

100% of Total

Avoidable Calculation: 8,450 avoidable ED Visit x $1,406 cost per visit = $11.8 Million

Webster County Public Health
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WEBSTER COUNTY HEALTH SYSTEM ADVANCED CARE COORDINATION

Potential Savings in Avoidable Readmissions = $6.6 Million

Buena Vista Regional Medical Center
Pocahontas Community Hospital
Humboldt County Memorial Hospital
Stewart Memorial
Iowa Specialty Hospitals & Clinics
UnityPoint Health Fort Dodge
Van Diest Medical Center
Loring Hospital

Admissions	% 30 Day Readmits	# Readmits	
8,146	13.9%	1,137	*67% of Total*

Other Community Providers

Admissions	% 30 Day Readmits	# Readmits	
4,054	13.9%	563	*33% of Total*

- *Average Cost of Hospital Readmission = $14,400;*
- *Estimated % of Readmissions that are avoidable = 26.9%*

Population-Based Estimate

Admissions	% 30 Day Readmits	# Readmits	
12,200	13.9%	1,700	*100% of Total*

Avoidable Calculation: 1,700 x 26.9% avoidable x $14,400 = $6.6 Million

WEBSTER COUNTY
HEALTH SYSTEM
ADVANCED CARE
COORDINATION

Reducing unnecessary ED visits ($11.8 Million) and Avoidable Readmissions ($6.6 Million) can generate up to $18.4 Million in potential savings to the Webster County Community.

Webster County Public Health
Prevent. Promote. Protect.

WEBSTER COUNTY HEALTH SYSTEM ADVANCED CARE COORDINATION

4,830 People are at risk to incur either an avoidable ED visit or an avoidable readmission.

Item	8 Hospitals	Others	Total
Avoidable ED Visits	7,740	710	8,450
Average Visits/Person *	1.50	1.40	1.49
Total People	***5,160***	***507***	***5,667***
Avoidable Readmits	305	155	460
Average Readmits/Person *	1.15	1.20	1.17
Total People	***265***	***129***	***394***
Duplication Factor (On Both List) *	20%	23%	
Total People at Risk	***4,340***	***490***	***4,830***

*** For illustration only**

Webster County Public Health
Prevent. Promote. Protect.

WEBSTER COUNTY HEALTH SYSTEM ADVANCED CARE COORDINATION

3,350 People are estimated to be in crisis as a result of their chronic condition.

Item	Diabetes NAG	Obesity	Tobacco
# of Patients with Condition	3,690	28,680	14,510
Estimated Percent in Crisis *	9.7%	7.7%	10.0%
Total People	***347***	***2,208***	***1,451***
Duplication Factor (on all 3 Lists) *	10%	15%	20%
Total People at Risk for Condition	***312***	***1,877***	***1,161***
Total People in Crisis			***3,350***

*** For illustration only**

It is a good bet that most of these people are using the emergency department and being admitted unnecessarily to the hospital.

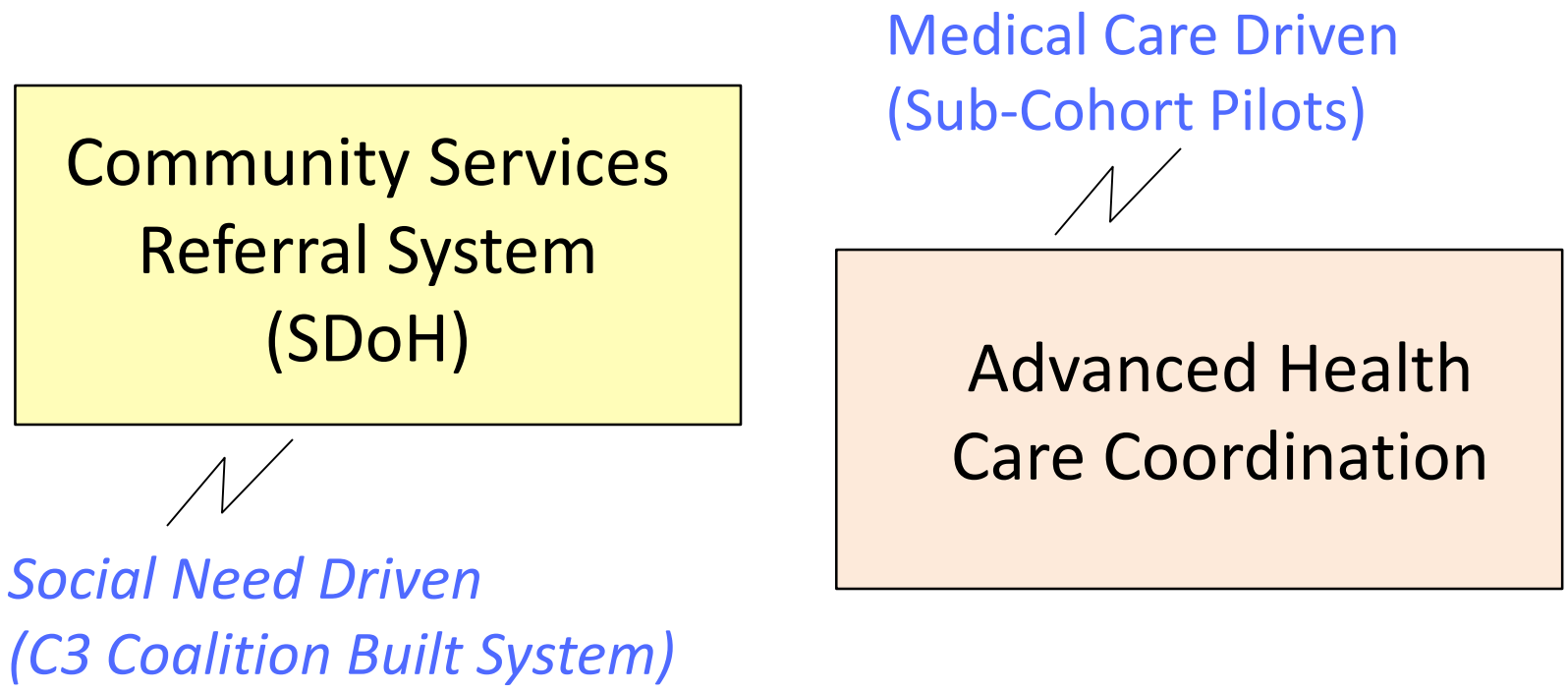
WEBSTER COUNTY
HEALTH SYSTEM
ADVANCED CARE
COORDINATION

Creating an Advanced Care Coordination System enables Webster County to assemble its collective resources to eliminate unnecessary utilization of high-cost services for over 4,830 of its citizens at risk and help improve the health status of 3,350 in immediate crisis.

Care Coordination can reduce their unnecessary use of high-cost health services and reduce the overall cost of care in the County on the order of $18.4 million.

B. ACH Sustainment

2. Care Coordination and Service Integration



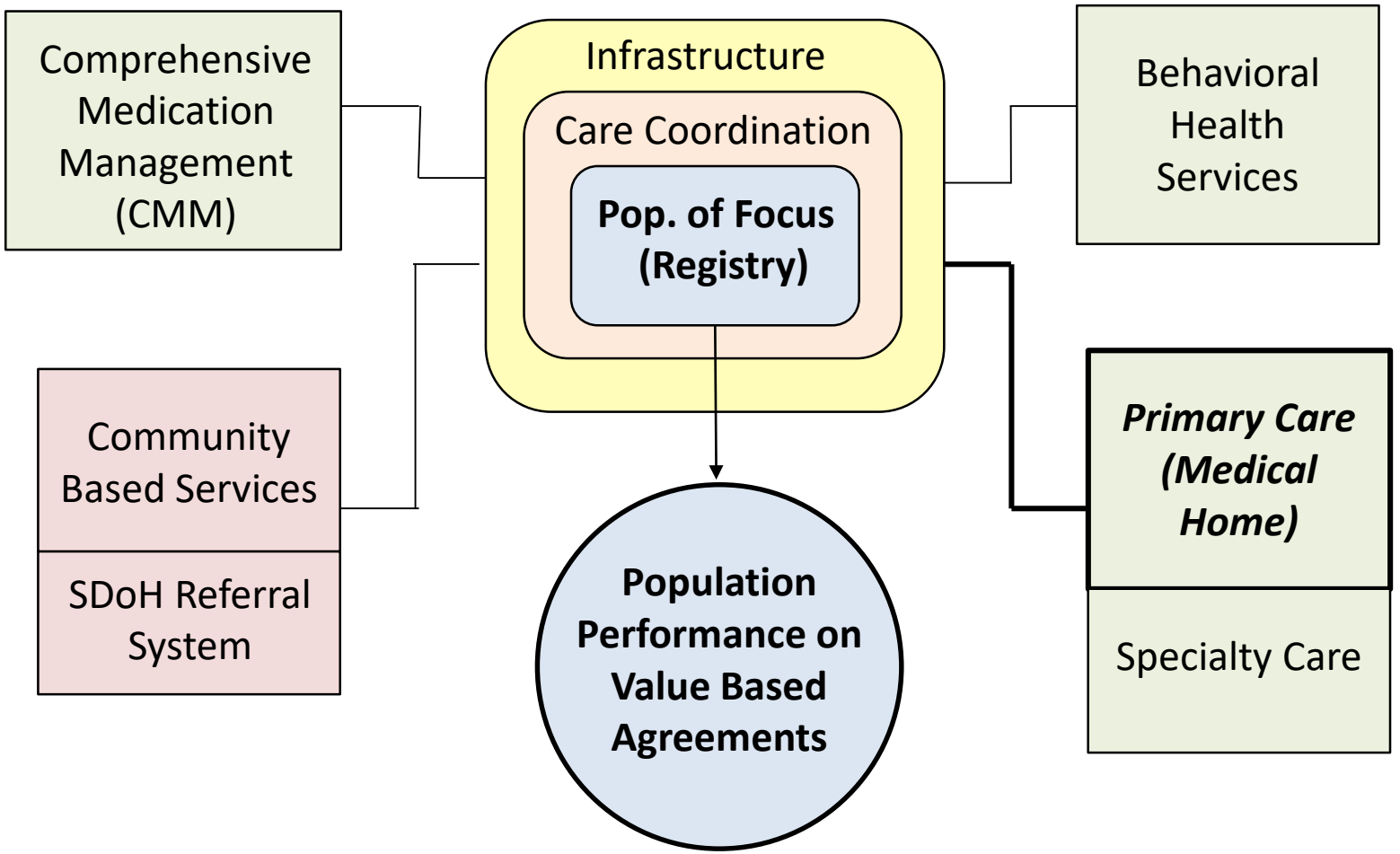
Comparing The Two Coordination Systems			
System	**Accountability**	**Activities**	**Duration**
Health Care Coordination	High risk patients meet health outcome and service utilization targets	• Assessment • Health Action Plan • Home Based • Med Management • SC Referral • Patient Activation • Counseling	From several sessions to regular monthly engagement long term
Social Service Referral System	Connect client to community services needed.	• Assessment, client goals • Referral to needed service • Follow through	One to five days

Overview of C3 Communities (11/18 -2/19)

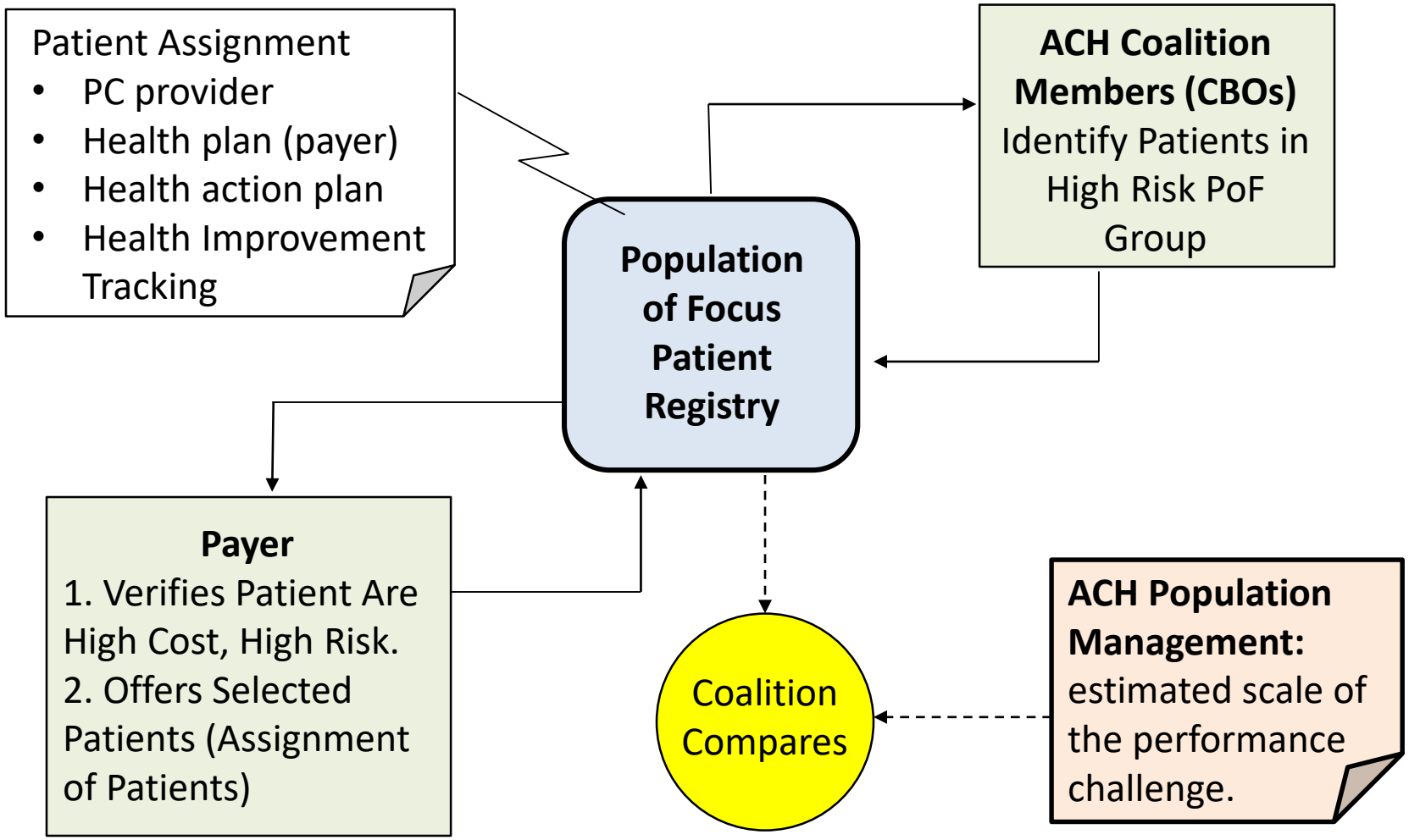
SDoH = Social Determinants
PHD = Public Health Dept.
ED = Emergency Dept
CC = Care Coordinator

Seven Ways To Build Care Coordination With A Community-Based SDoH Referral System						
C3	**Community Service Referral System (Social Services)**				**Advance Clinical Care Coordination**	
	Organization of Referral Process	**Location**	**User**	**Manager**	**Health Care Coordination**	**Medical Home**
Marion	Central Community Referral System	PHD	All	PHD	Central CC, Home visits, 60 patient	2 Health Systems
Webster	Central, Integrated Into PHD Ops.	PHD	All	PHD	Partners collaborating on ED use, readmission, diabetes.	
Linn	Networked Referral System	Participating CBOs (TAV)	All	CBO User Group	Contracted CC, 10 patients	I FQHC
Sioux	Hospital Based, Across Several	4 Hospitals Clinics, PHD	Hospital Clinics	Hospitals	PHD, High Touch. Readmits & ED	Hospital, PC Providers
Great River	Central Hospital Based	GRMC Clinics (FQHC soon)	Hospital Clinics	GRMC (Hospital)	Central GRMC, High ED users	Hospital, FQHC
Dallas	Central Referral System (navigation)	PHD	All (95%) MD (5%)	PHD	Pharmacy Pilot; 10 Navig. patient	Requested PCP info
Trinity Musct.	Hospital Based	Hospital outpatient	Hospital System	Hospital	6 patients A1c> 9, SDOH	Unity Health

Advanced Care Coordination Program Model (Integrated Services Tailored To the Population of Focus)

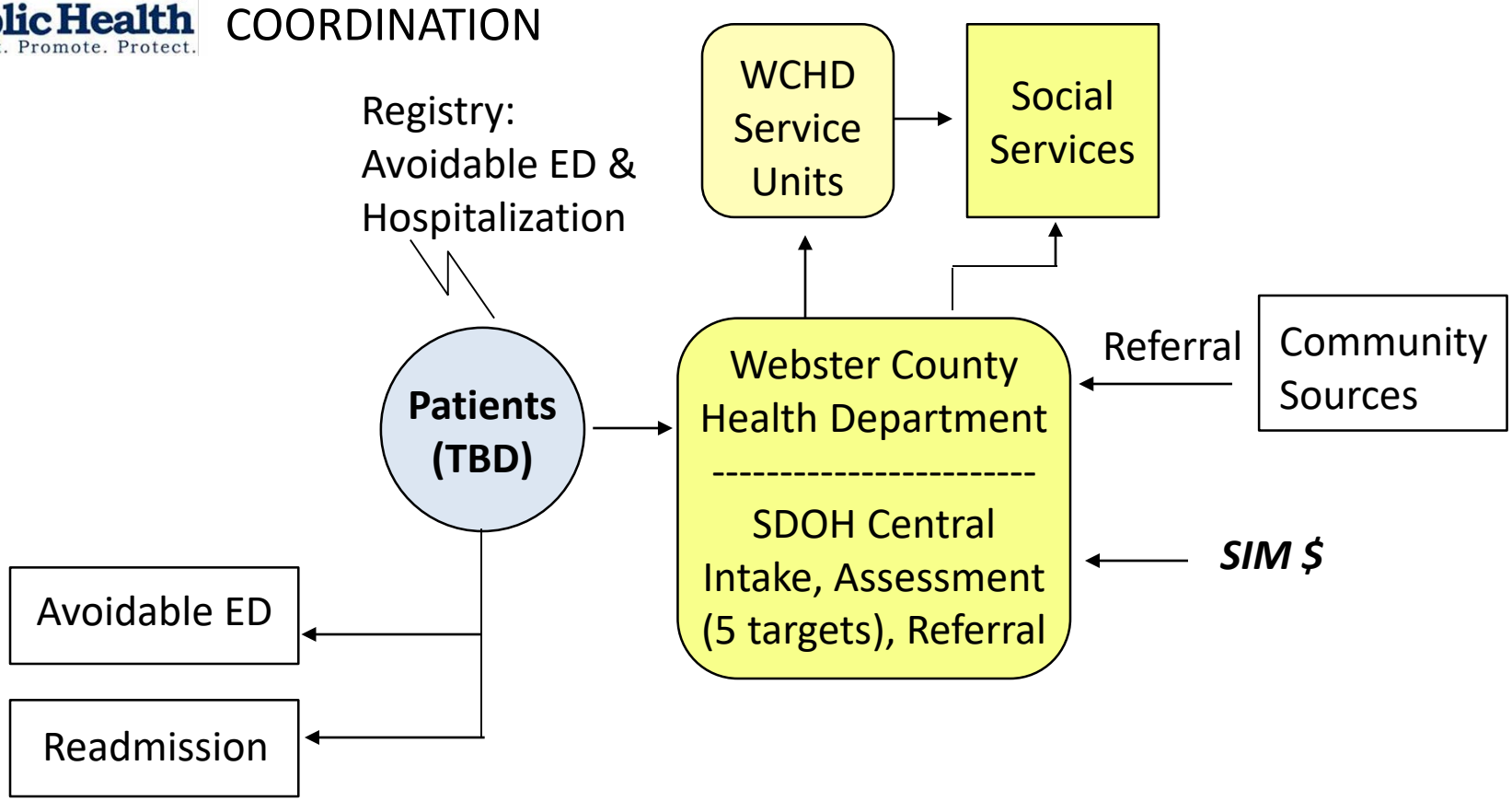


PoF Registry: ACH Coalition's Major, High Value Asset



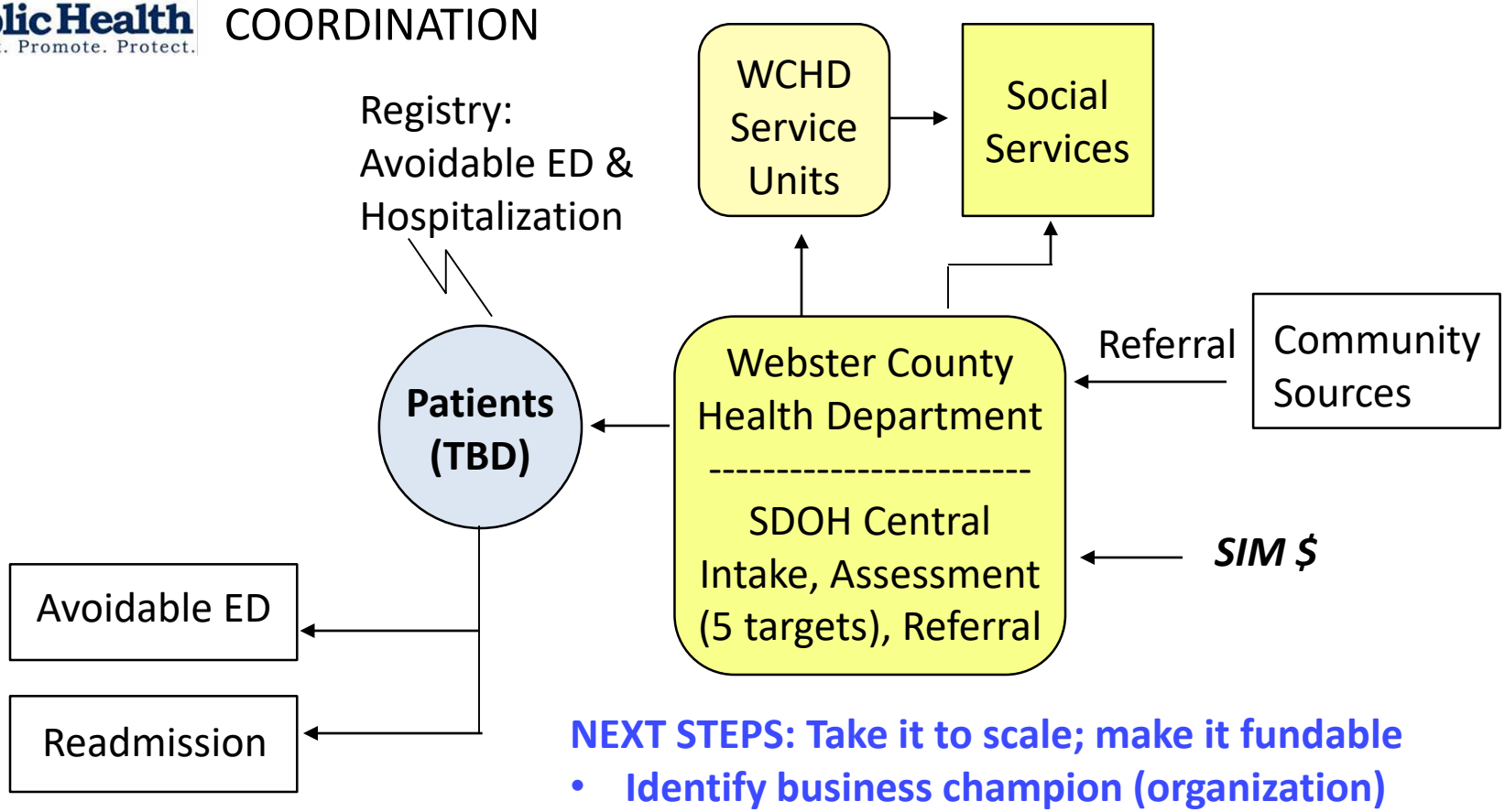
WEBSTER COUNTY HEALTH SYSTEM ADVANCED CARE COORDINATION

PILOT (Sub Cohort)



WEBSTER COUNTY HEALTH SYSTEM ADVANCED CARE COORDINATION

PILOT (Sub Cohort)

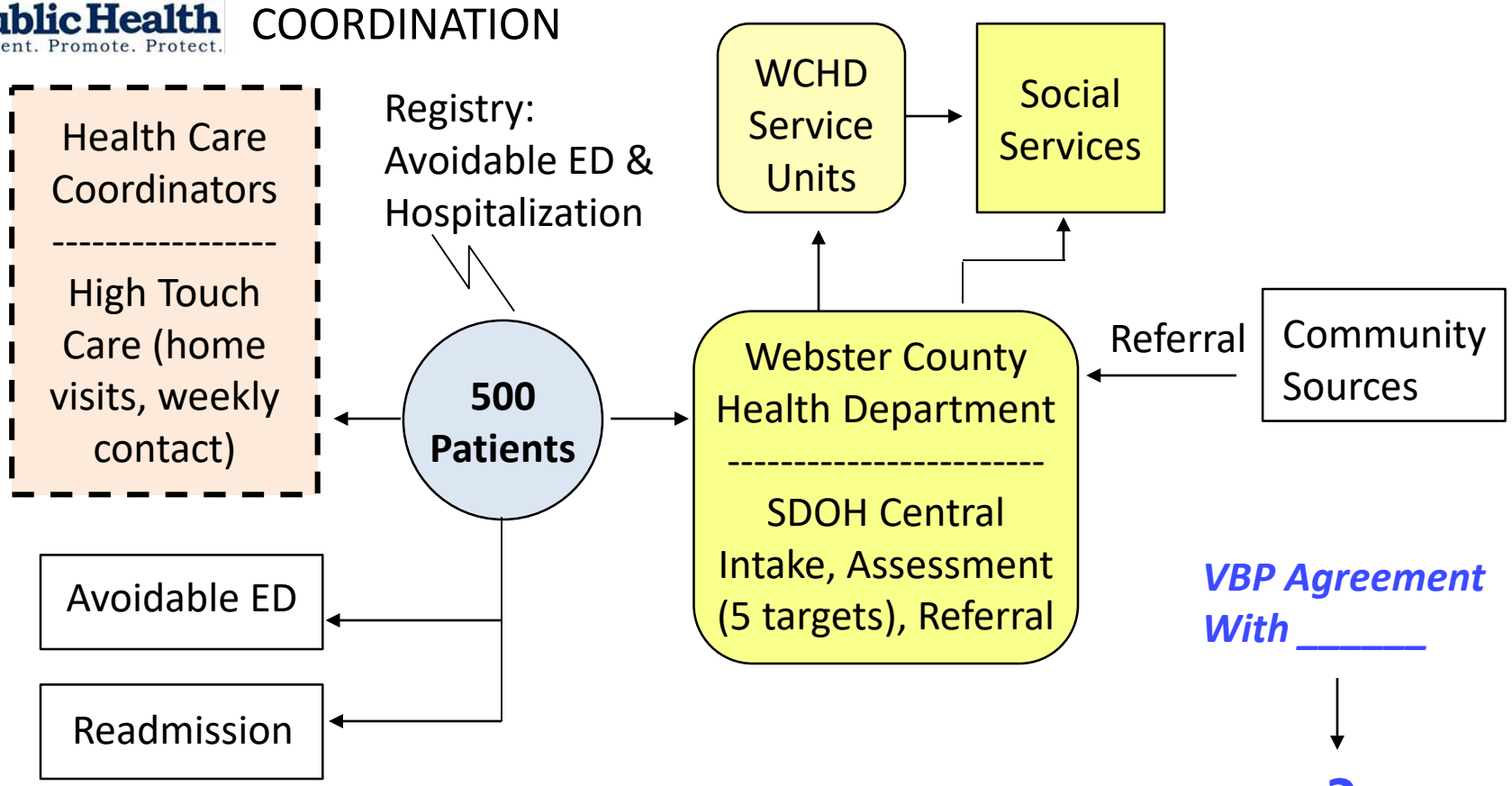


NEXT STEPS: Take it to scale; make it fundable

- **Identify business champion (organization)**
- **Design delivery system and business model**
- **Grow PoF to scale (registry)**
- **Accountable payers engaged**

WEBSTER COUNTY HEALTH SYSTEM ADVANCED CARE COORDINATION

Scale Up To Fundable



Address a serious challenge that a named payer is facing.

Use “best practice” cases to guide program design and financing

Advanced Care Coordination
"Best Practice" Model Example: *Health Home*

On going care coordination to improve health outcomes and eliminate avoidable costs for high cost, high risk patients

- Assign high cost, high clinical risk patients to lead community based organization.
- Organization recruits and enrolls patient into program.
- Initiates care with full assessment home visit to develop Health Action Plan
- Monthly follow up encounters in the home or by phone to assure plan's goals are met.
- Incentives for success in enrollment and for reductions in total cost of care.

Advanced Care Coordination
"Best Practice" Model: *Health Home*

The Health Home program provides services beyond the clinical services offered by a primary care provider.

- Clinical and Social Assessments
- Comprehensive care management
- Patient activation
- Care coordination with providers
- Health promotion
- Transitional planning and follow-up
- Individual & family support
- Referral to relevant community and social support services

Activity and Costs

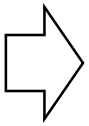
Monthly Engagements With Client	Per person per month charge
Tier One Encounter One time. Outreach and assessment. In home. Produce Health Action Plan.	$253
Tier Two Encounter. Intensive care coordination. Follow through on HAP. In home or office.	$172
Tier Three Encounter Low level care coordination. By phone or office.	$67

Advanced Care Coordination
"Best Practice" Model: *Health Home*

From Assessment to Action

Coordinated Care Assessment Options to Develop *Health Action Plan*:

a. Medication Management Readiness
b. Patient Activation (PAM Score)
c. Health Care Service Utilization
d. Quality of Life
e. Depression
f. Health Literacy



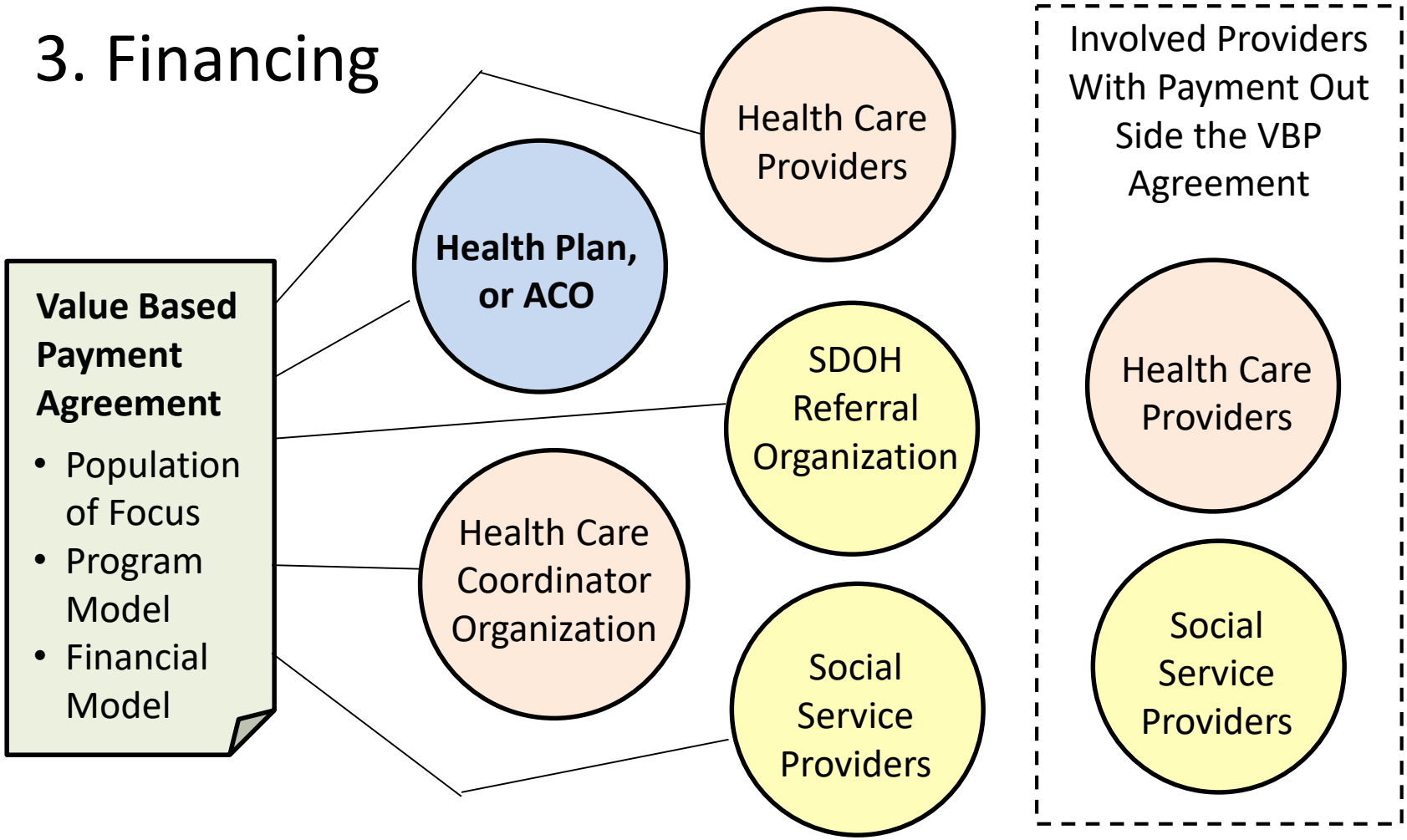
Plan of Action: High risk patients are likely to need services from multiple delivery systems.

Health Action Plan (HAP) Care
- Primary care and specialty care
- Comprehensive medication management

Supported by
- Depression treatment
- Alcohol/drug treatment services
- Developmental disability services
- Long term care
- Social services
- Home care

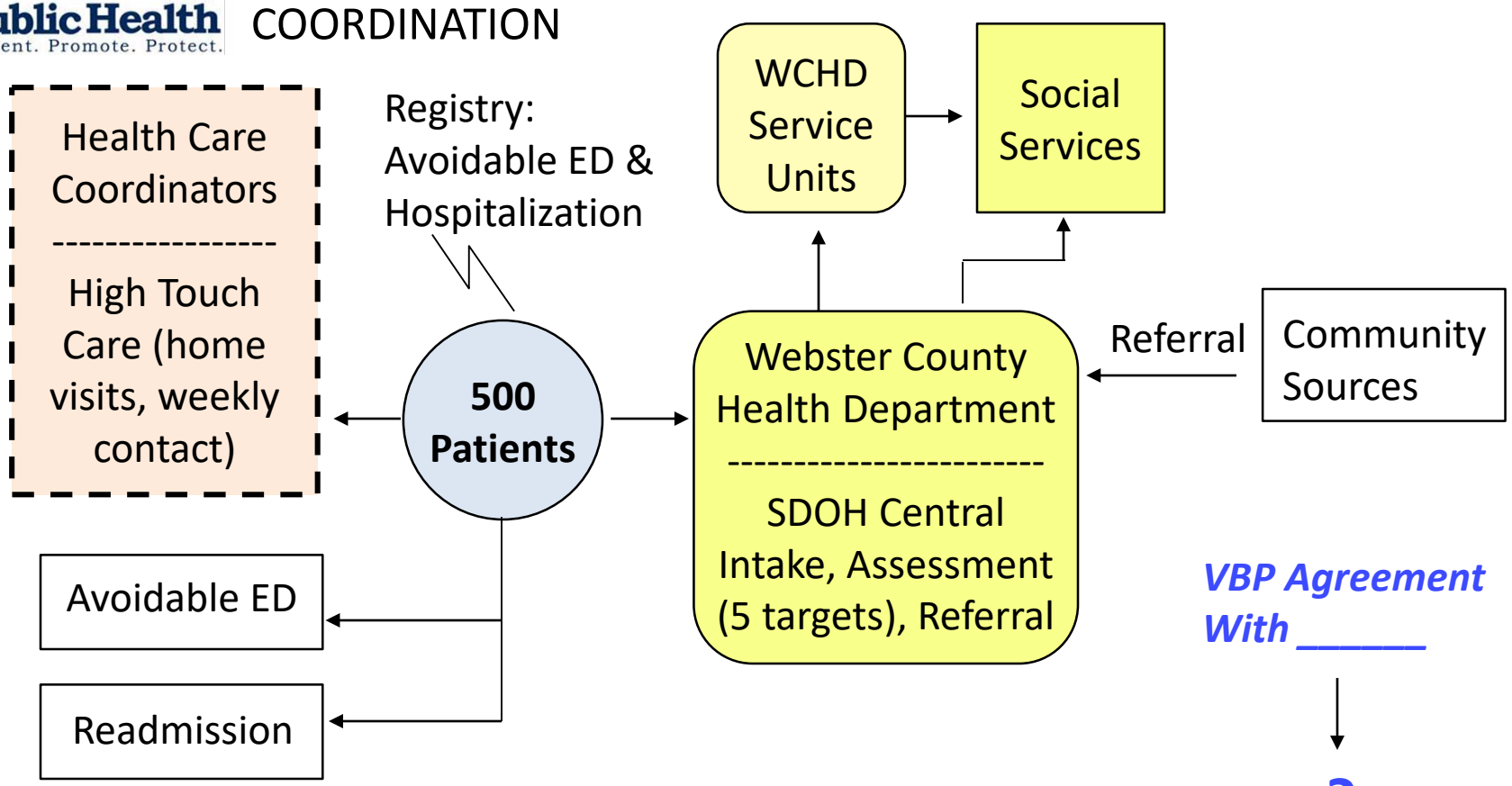
B. ACH Sustainment

3. Financing



WEBSTER COUNTY HEALTH SYSTEM ADVANCED CARE COORDINATION

Scale Up To Fundable



Address a serious challenge that a named payer is facing.

Webster County Public Health
Prevent. Promote. Protect.

WEBSTER COUNTY HEALTH SYSTEM ADVANCED CARE COORDINATION

1. PROGRAM VOLUME	
Total Number of Annual Patients Screened	500
Total Number of Annual Patients Enrolled	252
Total Number of Annual Patient Encounters	2,699

2. PROGRAM COSTS	
Clinical Pharmacists	$74,462
Advanced Care Coordination	$16,157
Social Services	$11,985
Other Overhead Costs	$25,651
Total Costs	***$128,255***

3. PROGRAM REVENUES	
Amount Billed	$143,723
Less: Allowance for Uncollectible	($5,031)
Total Revenue	***$138,692***

4. Net Revenue over Expense $10,437

Expected Cost of ED & IP Services for Population = $1,690,000

Payer Break Even in Costs Reductions = 8.2%

5. VALUE PROPOSITION			
Rate of Cost Reduction	**Expected Costs Cut**	**Equivalent # of Admits**	**Equivalent # of ED Visits**
5.0%	$84,534	4	60
8.2%	$138,692	6	99
10.0%	$253,603	8	120

C. Four Collaborative Steps to Sustainment

1. Identify and charter the community organization accountable for health care coordination

2. Create patient population of focus: community registry with named patient list, responsible payer, primary care assignment

3. Set the service delivery package, supported by a “best practice” site

4. Arrange the community coalition financing package (community investment, offer to ”responsible payer”)