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Evaluation of Health Care Innovation Awards (HCIA): Primary Care Redesign Programs

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ATLANTIC GENERAL HOSPITAL

SUMMARY OF PROGRAM DESIGN AND IMPLEMENTATION EXPERIENCE

MARCH 2014

Linda Barterian and Megan Donnelly

In this brief, we describe the primary care redesign (PCR) program being implemented by Atlantic General Hospital Corporation (AGH) in Worcester County, Maryland under Health Care Innovation Award (HCIA) funding from the Center for Medicare & Medicaid Innovation (CMMI). The purpose of this brief is to describe the design of the program as it is currently being implemented and to summarize implementation experiences one and a half years after the receipt of award. We based the information presented in this brief on a review of program documents, including application materials and quarterly reports, as well as telephone discussions and follow-up communications with program administrators. This brief describes the status of the program as of December 2013. We will update the brief as additional information becomes available.

I. Overview

AGH received a three-year, $1.1 million dollar HCIA to implement a patient-centered medical home (PCMH) model in all seven of its primary care practices located throughout eastern Maryland and southern Delaware supported by a clinical team at Atlantic General Hospital. This initiative strives to provide patients diagnosed with chronic conditions with timely, coordinated, and less costly outpatient care and to decrease overutilization of high-cost, high-acuity services. Specifically, the project originally aimed to reduce hospital readmissions and emergency department (ED) visits by 20 percent and total cost of care by 15.5 percent among Medicare beneficiaries with a primary or admitting diagnosis of chronic obstructive pulmonary disease (COPD), congestive heart failure (CHF), and/or diabetes mellitus (DM). The Centers for Medicare & Medicaid Services (CMS) approved the program's operational plan in October 2012; AGH began accepting patients into the PCMH program in January 2013.

In the first quarter of 2013, AGH expanded its program to include patients with a secondary or tertiary diagnosis of CHF, COPD, and/or DM—as well as patients with other chronic illnesses such as hypertension and obesity—because referring providers believed these patients would also benefit from participation in the program. Expanded eligibility includes patients with non-Medicare insurance and patients younger than 65. When fully implemented, the AGH initiative will include enhanced electronic health record (EHR) functionality offering an online patient portal to support communication between patients and providers and to give patients access to health information to improve self care.

AGH works with several community partners, including the Worcester County Health Department (WCHD) in Maryland and 15 faith-based community organizations, to provide additional care transitions and educational support to patients. Program staff members at the WCHD assess patients' care transition needs, conduct home health visits, educate patients and caregivers about PCMH services, and connect patients with local community resources. Trained staff at faith-based organization partners engage their congregations by providing information about the PCMH and will offer online access to health care resources through the patient portal when it is completed.

II. Organizational Structure

AGH is a private, not-for-profit, community-based healthcare delivery system located in Worcester County, a largely rural county on Maryland's Eastern Shore and a federally designated medically underserved area. The system is comprised of (1) Atlantic General Hospital, a 62-bed, state-of-the-art, full service, acute care, inpatient and outpatient facility and the only hospital serving residents of Worcester County; (2) the Atlantic General Health System (AGHS), consisting of more than 30 community-based primary and specialty care physicians and providers, including seven primary care practice sites; and (3) Atlantic ImmediCare, a subsidiary that provides walk-in primary care and urgent care. AGH serves Worcester, Wicomico, and Somerset counties in Maryland and lower Sussex County in Delaware. Figure 1 shows the location of this service area, and Figure 2 displays the location of AGH and its seven primary care provider sites. Table 1 provides a list of the participating practice sites and the number of practitioners and their practice locations. Although the hospital is located in a resort area, most of AGH's primary care patients live there year-round. In their proposal, program administrators note that many residents are older than 65 and have low literacy rates.

Figure 1. Map of the Northeast United States Showing the Area Served by Atlantic General Hospital in Berlin, Maryland

Figure 2. Map of Delaware and Eastern Maryland Showing the Location of Atlantic General Hospital (blue marker) and Its Seven Primary Care Practices (red markers)

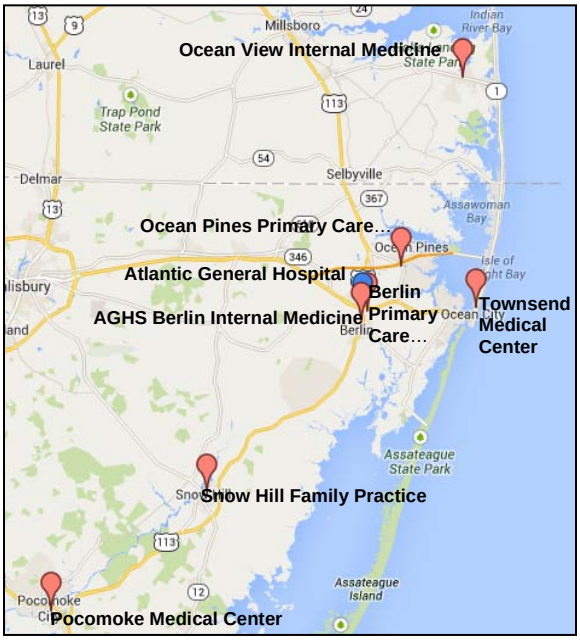


Table 1. AGH Primary Care Practices

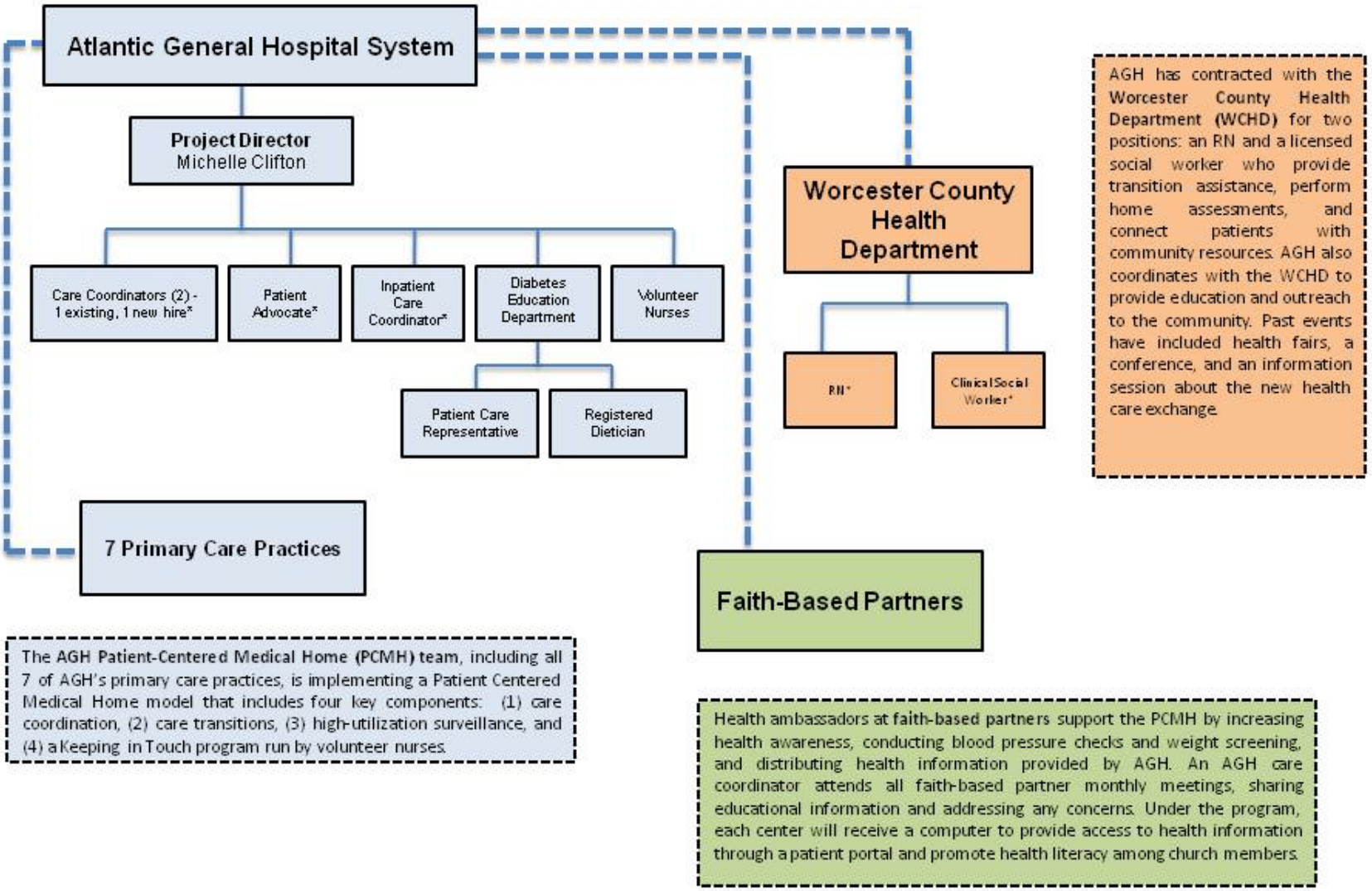
Primary Care Practice	Number of Practitioners	Location
AGHS Berlin Internal Medicine	1	Berlin, Maryland
Berlin Primary Care and Pulmonology	2	Berlin, Maryland
Ocean Pines Primary Care & Women's Health	2	Berlin, Maryland
Ocean View Internal Medicine	1	Ocean View, Delaware
Pocomoke Medical Center	1	Pocomoke, Maryland
Snow Hill Family Practice	1	Snow Hill, Maryland
Townsend Medical Center	3	Ocean City, Maryland

Source: Information provided by program administrators, December 2013.

AGH's chief executive officer, leadership team, and staff have shown their support for the initiative. AGH has provided the services of several staff members for the project, including the project's director and fiscal officer, and members of the care coordination team, without using project funding. AGH has also had previous experience implementing a PCMH. Before receiving the HCIA award, two AGH primary care practices (Berlin Primary Care and Pulmonology and Townsend Medical Center) participated in PCMH demonstration projects with CareFirst Blue Cross/Blue Shield of Maryland and the Maryland Health Care Commission, which focused on the non-Medicare population with multiple chronic illnesses. The current initiative offers the opportunity to build on the foundation established through this earlier work by expanding the PCMH to include all AGH primary care practices. Based on discussions with program administrators, some program staff at the other five practices initially expressed resistance to adopting the PCMH model through participation in the HCIA initiative. However, these staff members embraced the change after learning more about the model and realizing that they already do most of what it entails. Program administrators now report that they often hear how their providers "love the PCMH and what it does for their patients."

Figure 3 shows the organizational structure of AGH's program. In addition to the core clinical PCMH team at AGH, 11 primary care practitioners at seven physical practice sites participate in the program. Community partners include the WCHD and 15 local faith-based organizations. These partners provide education and care transitions support to PCMH patients to supplement the primary care delivered by AGH's providers.

Figure 3. AGH HCIA Primary Care Redesign Program Organizational Chart



Source: Based on information provided in the Atlantic General Hospital Corporation Health Care Innovation Award application, January 2012; AGH awardee narratives, program quarters 1-6; and information provided by program administrators, November 2013.

- Indicates staff member is funded by the project. RN=registered nurse.

III. Program Features and Implementation Progress

To achieve its goals, AGH is implementing three program elements: (1) a PCMH including AGH and its seven primary care practices to expand access to care and provide care coordination and care transition support for patients, (2) patient education and outreach to promote awareness and use of the PCMH, and (3) expanded EHR functionality offering a patient portal to enhance patient-provider information exchange and patients' access to health information. We describe the AGH program elements next, and Figure 4 shows the time line for implementation of the AGH initiative.

A. Patient-Centered Medical Home

The PCMH program adopted by AGH is based on the National Committee for Quality Assurance[1] standards. In addition to expanded access to care through same-day appointments at all seven primary care practices and additional walk-in extended hours care available at newly established urgent care centers, the AGH PCMH includes four components: (1) care coordination, (2) care transitions and readmissions prevention, (3) high-utilization surveillance, and (4) the Keeping in Touch program. Eligibility criteria vary across the components, and patients enrolled in the PCMH program can participate in more than one component. We describe each of these program components next.

Care coordination. The care coordination (CC) program, implemented in January 2013, aims to provide ongoing, coordinated chronic disease care management for the project's target population (described in detail in Section IV). Primary care practitioners at AGH's seven provider practices refer patients to the PCMH and CC program by telephone or fax or through the AGH EHR system. The CC team (consisting primarily of two care coordinators) completes an initial patient assessment and works with the patient's primary care provider and other members of the PCMH team to set goals for the patient. The care coordinators monitor the patient's progress through regular follow-up calls and visits and identify patients due for visits, lab tests, or referrals. About 90 percent of these services occur through telephone calls, with the remaining 10 percent taking place in person. Typically, a patient is discharged from the CC program after meeting his or her goals. Patients are also discharged from the program if they do not engage in their plan of care or if they change providers or leave the practice, opt out of the program, or die.

Care transitions and readmissions prevention. AGH implemented the Transition in Care (TIC) program in March 2013. The TIC team, consisting of a registered nurse and a clinical social worker from the WCHD, works with patients for about 30 days after they have been discharged from the hospital to identify and address their care transition needs (for example, medication reconciliation and transportation) and to connect them with follow-up care resources (for example, rehabilitation, skilled nursing, home health services, and durable medical equipment). The TIC team also conducts home visits when they are deemed necessary. Patients treated by one of the system's primary care providers are automatically referred to TIC upon

[1] National Committee for Quality Assurance. "Patient-Centered Medical Home Recognition." Available at http://www.ncqa.org/Programs/Recognition/PatientCenteredMedicalHomePCMH.aspx. Accessed February 17, 2014.

discharge. A patient can also be referred to the CC program if the team feels the patient would benefit from additional follow-up care beyond the initial 30 days. If a PCMH patient is already enrolled in the CC program, his or her care coordinator would assume responsibility for post-discharge transition care management.

As part of the effort to improve care transitions and prevent unnecessary readmissions, the inpatient care coordinator reviews readmission trends, responds to the ED for urgent consultations, and educates patients about the benefits of the PCMH program. AGH identified an increase in readmissions among TIC patients from the fourth to the fifth reporting quarters and found that many of the readmissions occurred among patients admitted from skilled nursing facilities, rehabilitation facilities, or home health agencies outside of the AGH system. As a result, AGH developed and implemented an action plan in the fourth quarter of 2013 for the inpatient care coordinator to build relationships with these facilities and agencies to identify the root causes of readmissions and work together to prevent them in the future.

High-utilization surveillance. In addition to provider referrals, monitoring inpatient and ED use are also used to identify patients who might be eligible and expected to benefit from PCMH services. The patient advocate conducts a daily review of all inpatient admission and discharge records. When a PCMH patient is admitted or discharged, the patient advocate informs a care coordinator. In addition, the patient advocate reviews ED visit records. If a patient is identified as a high utilizer (defined as more than two visits to the ED in six months), the patient advocate will assess the patient's care needs and will work with the patient to address any barriers to successful care transitions. This can also entail referrals for follow-up care through the CC or TIC programs.

Keeping in Touch. AGH developed the Keeping in Touch program in the fourth quarter of 2013 to meet the needs of patients who do not require the level of intervention services offered through the CC and TIC programs, but who could benefit from less intensive support. The program will provide assistance to patients who have shown progress in managing their chronic illnesses, but given the remaining barriers to self care, might benefit from periodic calls and follow-up visits to help maintain their progress and avoid overuse of inpatient and ED services. AGH plans to build a team of volunteer nurses to staff the program beginning in the first quarter of 2014.

Figure 4. AGH HCIA Primary Care Redesign Program Implementation Time Line

	Q4 2012	Q1 2013	Q2 2013	Q3 2013	Q4 2013
Patient-Centered Medical Home (PCMH)	Establish integrated PCMH components in all 7 AGH practices and Atlantic General Hospital Hire and train new PCMH staff (4.5 FTE) Finalize referral process and PCMH team member roles Contract with WCHD for care transitions support Integrate diabetes education department into PCMH	Develop and implement Care Coordination program protocols Establish Transition in Care/Readmission Prevention program Establish High-Utilization Surveillance program Begin patient enrollment Jan 2013 Expand target population to include non-Medicare patients and patients with hypertension and obesity			Begin developing relationships with local facilities and agencies to improve patient transitions and prevent readmissions Recruit volunteer nurses to staff the Keeping in Touch program
Education and Outreach	Begin developing educational materials for patients/caregivers and health professionals	Provide PCMH training and educational materials to 15 faith-based organization partners			Provide computers to 15 faith-based organization partners to promote use of the patient portal
Patient Portal		Begin development of new EHR functionality to include patient portal	Portal delay due to incompatibility with existing EHR		Begin negotiations for new patient portal product

Source: Based on information provided in AGH awardee reports and narratives for program quarters 1-6.

FTE = full-time equivalent.

B. Education and Outreach

AGH created a set of PCMH informational materials and has educated its providers about the PCMH model to promote the enrollment of eligible patients and the appropriate use of its services. AGH administrators have cited difficulty in explaining the medical home model briefly and accurately to patients as one of their biggest challenges. They have updated their website to include information about the PCMH and made a series of revisions to an educational brochure to address this issue.

AGH's project partners also participate in education and outreach activities to increase providers' knowledge and community awareness of the PCMH initiative. Collaborative events with the WCHD have included health fairs, seminars, conferences, and information sessions. Partners from local faith-based organizations distribute health education materials among their congregations to promote health and wellness and to increase awareness of the PCMH and its services. A PCMH care coordinator attends monthly meetings with the faith-based partners to share information about the initiative and address any concerns they have related to their members' use of program services.

C. Patient Portal

AGH plans to expand the functionality of its current EHR system to include an online patient portal. The portal will enable patients to communicate directly with their providers and to access health information resources online. In the fourth quarter of 2013, AGH purchased and began distributing computers to each of its 15 local faith-based partners which will enable these organizations to provide on-site access to the portal for their congregations. Several congregations have engaged members of their youth groups to help set up the computers and train other members in their use. Planned features of the portal include electronic newsletter subscriptions, customized health reminders for appointments and health screenings, medical record transfer requests, medication tracking, customized health problem lists, patient education resources, and prescription renewal requests. Based on discussions with program administrators, AGH believes its target population will have the required access, skills, and support from health ambassadors at each site to navigate the portal and use the resources it provides.

AGH has experienced a delay in developing the patient portal and has extended the deadline for completion to year 2 of the project. This delay resulted from its discovery that the software provided by the hospital's EHR vendor will not meet the project's needs. However, administrators expressed optimism that development of the portal will receive priority attention with the arrival of a new vice president of information services, and contract negotiations with a potential product vendor began in the fourth quarter of 2013.

IV. Target Population and Assessment

Project focus and original target population. The AGH program targets patients with a high risk for underutilization of primary care and overutilization of inpatient and ED services. After reviewing service utilization patterns among its patient population, AGH originally defined a target population that included 1,314 Medicare beneficiaries who were hospitalized (398 beneficiaries) or visited the ED (916 beneficiaries) with a primary diagnosis of CHF, COPD, and/or DM in fiscal year 2011. AGH had initially planned to enroll all of these patients and contact them to encourage their participation in PCMH programs. However, based on

discussions with program administrators, AGH revised its approach, instead opting to enroll patients with targeted diagnoses through referrals from providers at local primary care practices.

Target population expansion. After implementing the PCMH model in their practices, participating providers identified patients with other diagnoses who could also benefit from participation in the program. Therefore, program administrators expanded the target population to include patients with other chronic conditions, including hypertension and obesity. In addition, patients with one or more of the targeted conditions are eligible to participate in the program whether or not they had a prior hospitalization or ED visit and regardless of payer. According to program administrators, 51 percent of enrolled patients have one of the three chronic illnesses originally targeted (CHF, COPD, and DM).

Enrollment and patient characteristics. Monthly program enrollment has steadily increased from project launch in January 2013 through September 2013 (Figure 5).[2] These enrollment data include unique direct participants; the AGH program does not include indirect participants. Most patients served by the program are white (80 percent) (Figure 6). Nearly half of patients are covered by Medicaid (48 percent) with slightly fewer covered by Medicare (43 percent) (Figure 7).[3] As of December 2013, AGH has enrolled a cumulative total of 537 patients into the PCMH program including 193 patients in the CC program and 344 patients in the TIC program. Current enrollment as of December 2013 includes 129 patients approximately evenly split between the CC program (64 patients) and the TIC program (65 patients).[4]

[2] Atlantic General Hospital's fifth quarter (Jul - Sept 2013) report prepared by The Lewin Group.

[3] Percentages are based on demographic information for 394 unique direct participants provided in AGH's fifth quarter (Jul - Sep 2013) report prepared by The Lewin Group.

[4] Atlantic General Hospital's sixth quarter (Oct – Dec 2013) awardee reports.

Figure 5. AGH Direct HCIA Program Participants, Monthly Unique Participants, October 2012 – September 2013

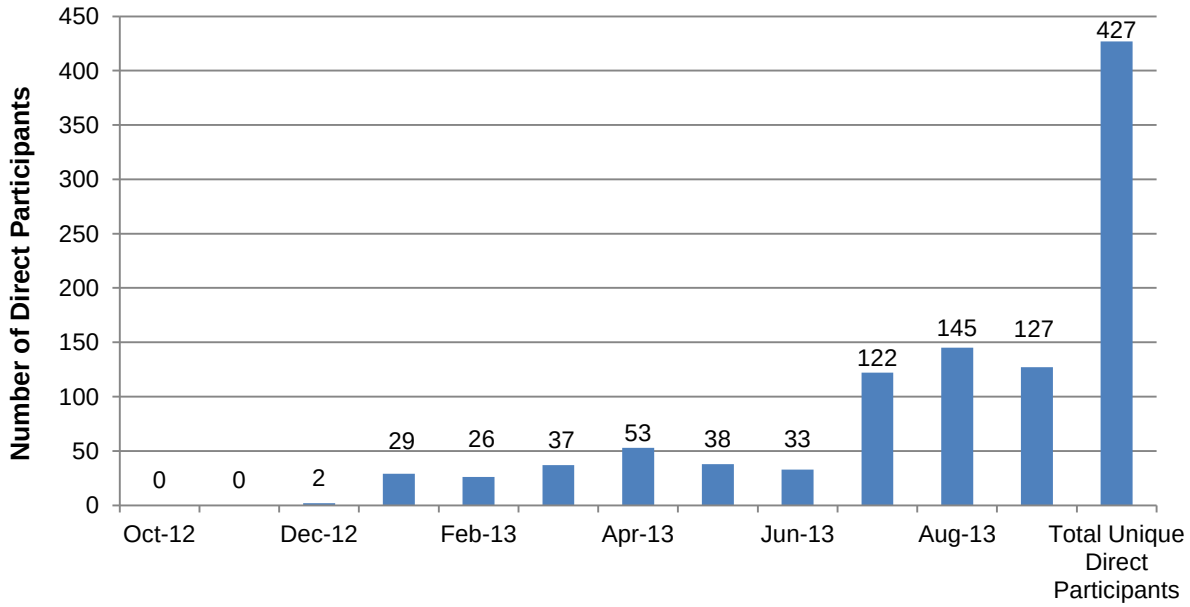


Figure 6. Unique Program Participants by Race (n = 394), September 2013

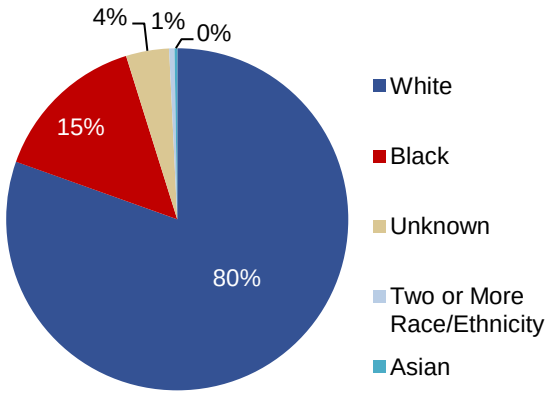
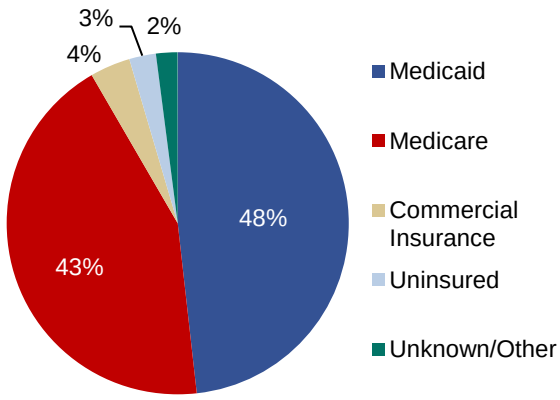


Figure 7. Unique Program Participants by Payer (n = 394), September 2013



V. Workforce and Training

AGH used the HCIA award to hire 4.5 full-time equivalent (FTE) project staff (Table 2). These new staff members provide project support that complements the program services offered by existing AGH staff. Michelle Clifton, B.S.N., R.N., and the AGHS clinical manager, led two previous PCMH demonstration projects and currently serves as the PCMH project director (not funded under the award). AGH hired a new care coordinator to expand its CC team. The CC team also includes an additional care coordinator hired and funded under a previous project grant, and a patient care representative and a dietician from the AGH diabetes education department assigned to the project to provide support for PCMH patients with diabetes. The TIC team includes three new project staff: a registered nurse, a clinical social worker, and an inpatient care coordinator. The high-utilization surveillance team consists of a newly hired patient advocate, and the Keeping in Touch program will rely on volunteer nurses to provide services to participating patients. The original program design also included funding for a

community health outreach worker, but the position proved difficult to fill and the funds were redirected to offset costs of contractual services provided by the WCHD.

Table 2. AGH PCMH Newly Hired Program Staff

PCMH Component	Title of Position	FTEs
Care Coordination (CC)	Care coordinator	1.0 FTE
Care Transitions (TIC)	Registered nurse	1.0 FTE
	Clinical social worker	0.5 FTE
	Inpatient care coordinator	1.0 FTE
High-Utilization Surveillance	Patient advocate	1.0 FTE
Keeping in Touch Program	Nurse volunteer	TBD
Total		4.5 FTE

Source: Based on information provided in AGH awardee reports and narratives, program quarters 1-6.

TBD = to be determined.

AGH has conducted several training sessions for program staff, providers, and community partners to support implementation of the PCMH model. As of December 2013, 312 attendees have received training; Table 3 shows the groups of trainees attending each of the courses offered. The five new PCMH program staff received training designed to increase their awareness of the PCMH model and their knowledge of the National Committee for Quality Assurance standards for a PCMH. The AGH board of directors, primary care providers, and Auxiliary volunteers also participated in a training session that provided information about the PCMH model, staff roles, and program data collection activities. The project director gave a similar presentation to attendees of a Worcester County Aging conference to increase community awareness of the PCMH. The third training course focused on increasing health literacy among faith-based partners in order to enhance their ability to promote better health and wellness among their congregation members. Although AGH has no additional formal training sessions planned, it created a PCMH informational packet as a resource for future staff orientation and training sessions.

Table 3. AGH HCIA Primary Care Redesign Program Training Courses

			Number of Trainees per Course by Type of Trainee					
Course	Duration (hours)	Training Modality	PCMH Team	Board of Directors and AGHS Providers	AGH and Auxiliary	Worcester County Aging Conference Attendees	Diabetes Support Groups	Total Trainees
NCQA PCMH Standards	4	Classroom, handouts	5					5
PCMH Philosophy of Care Presentation	4	Discussion, PowerPoint presentation		80	50	125		255
Wellness Themed Health Literacy for Faith-Based Partners	1	Discussion, text, handouts					52	52

Source: Based on information provided in AGH reports prepared by The Lewin Group, program quarters 1-5, and information provided by program administrators, January 2014.

VI. Future Plans

AGH's program has evolved from the originally proposed design to include expansion of the target population and a broadening of the intervention to address varying patient needs. Program administrators have indicated that they might make additional changes as they continue to identify opportunities to improve their program and increase the overall impact of their intervention. Specifically, they might add specialty providers to their PCMH because they believe that many patients of these providers could benefit from PCMH services. AGH also intends to explore opportunities to develop other community partnerships that would help increase access to care for patients in neighboring Delaware, because support provided through the WCHD is limited to Maryland residents.

As part of its program monitoring efforts, AGH tracks patient utilization and costs data as well as multiple quality measures including immunizations, blood pressure management, tobacco use, and weight screening to monitor patient outcomes. In addition, when the patient portal is in place, the project team intends to track patient use of this new resource and administer a user survey to assess the portal's effectiveness in providing information that patients find useful. In light of these ongoing data collection and reporting activities, program administrators identified a need for a PCMH program manager to oversee day-to-day operations and assume responsibility for program data collection and reporting. AGH included funding for this position in its request for rollover funding from year 1 of the award, and interviews will begin in the first quarter of 2014.

CAREFIRST, INC

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CAREFIRST, INC

SUMMARY OF PROGRAM DESIGN AND IMPLEMENTATION EXPERIENCE

MARCH 2014

Kristin Geonnotti and Lauren Hula

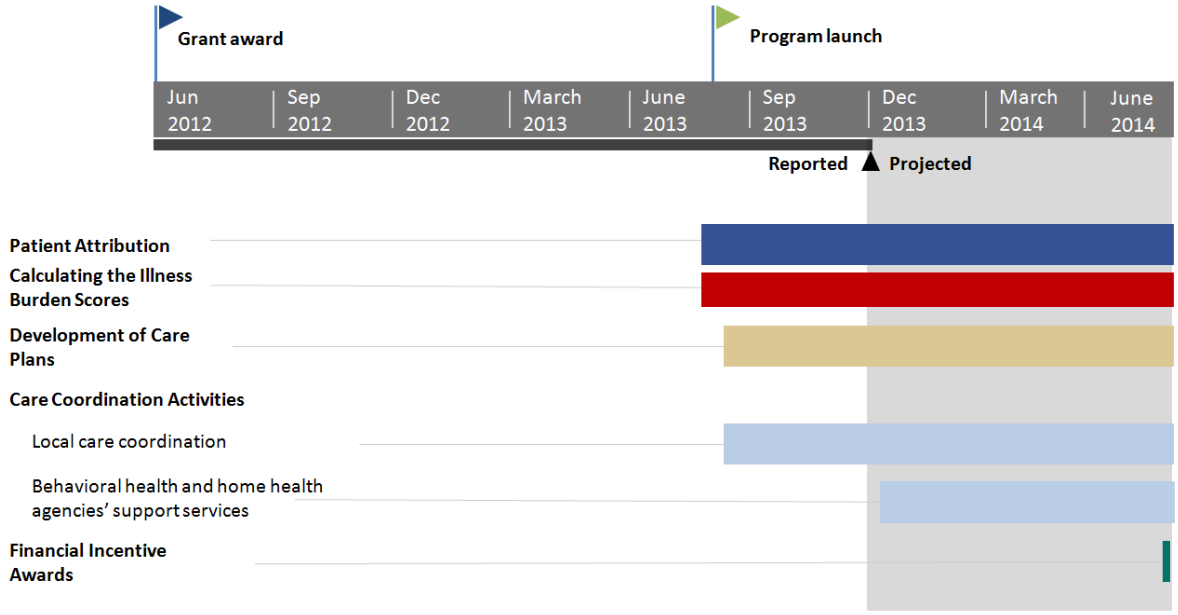
In this brief, we describe the primary care redesign (PCR) program being implemented by CareFirst, Inc., in Maryland under Health Care Innovation Award (HCIA) funding from the Center for Medicare & Medicaid Innovation (CMMI). The purpose of this brief is to describe the design of the program as it is currently being implemented and to highlight the implementation experience one-and-a-half years after receipt of the award. We based the information presented in this brief on a review of program documents, including application materials and quarterly reports, as well as telephone discussions and follow-up communications with program administrators. This brief describes the status of the program as of December 2013. We will update the brief as additional information becomes available.

I. Overview

CareFirst, through its affiliated companies known as CareFirst BlueCross BlueShield (CareFirst), is the Mid-Atlantic region's largest private sector health insurer. CareFirst launched its Total Care and Cost Improvement (TCCI) program three years ago, the core of which is one of the largest patient-centered medical home (PCMH) programs in the country with nearly 4,000 participating primary care providers (about 80 percent of all in the region), who serve 1.1 million commercial payer patients in Maryland, northern Virginia, and the District of Columbia. CareFirst received $24 million in HCIA funding to extend TCCI to Medicare fee-for-service beneficiaries in Maryland.

The HCIA-funded initiative aims to unite the two largest payers in the region (CareFirst and Medicare) into a single health care financing model that seeks to incentivize primary care providers (PCPs) to reduce health care costs while increasing quality. The HCIA-funded initiative aims to reduce hospital admission/readmission costs for Medicare participants by 7.5 percent and to reduce total health care costs for Medicare beneficiaries by 6 percent (3.4 percent after adjusting for the HCIA funding) by the end of the award period. The HCIA-funded initiative includes five key components: (1) ensure that PCPs—both physicians and nurse practitioners—know the patients for whom they are responsible (known as patient attribution); (2) provide PCPs with detailed information about their patients' medical needs based on an illness burden score; (3) develop care plans for the highest-risk patients with multiple chronic conditions; (4) implement care plans with the support of care coordination teams and additional support vendors; and (5) financially reward PCPs who reduce their patients' total health care costs while improving health care quality. Figure 1 shows the implementation status of each of the program's key features.

Figure 1. HCIA-Funded Initiative Implementation Time Line



Source: Adapted from CareFirst's HCIA quarterly reports, December 2012 through December 2013.

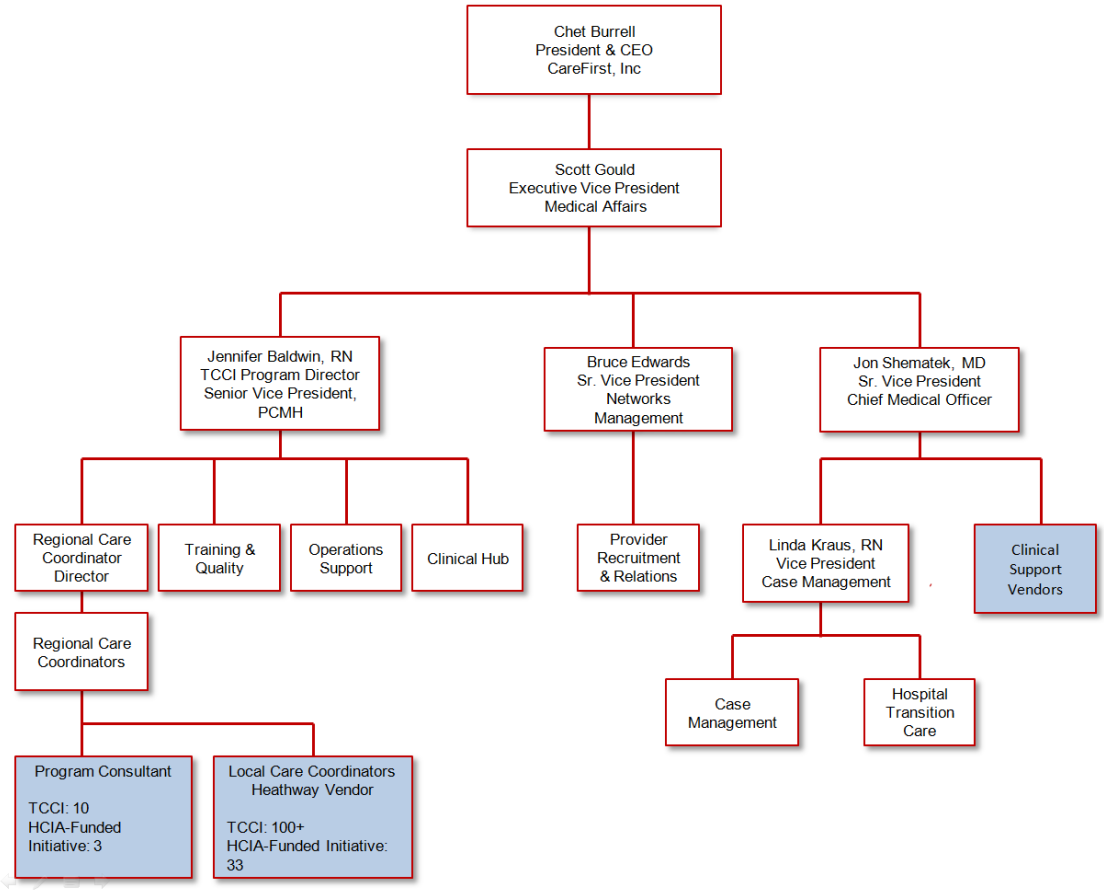
Note: This time line shows the implementation status of the HCIA-funded initiative as of December 2013 (reporting period) and the projected implementation dates for the remaining key programmatic features.

II. Organizational Structure

A. Program Structure and Resources

The HCIA-funded initiative is embedded within the existing TCCI program; figure 2 shows the organizational structure of TCCI leadership. Given this existing infrastructure, CareFirst provides in-kind funding for all management oversight, information technology (IT) support, and other operational costs for the HCIA-funded initiative. CareFirst uses HCIA funding to add local care coordinators (LCCs) and program consultants who work solely with Medicare beneficiaries (shaded in blue in Figure 2). CareFirst has subcontracted with American Healthways, LLC (Healthways) to hire LCCs for the HCIA-funded program. CareFirst has also negotiated with several clinical support service vendors to provide behavioral and home health services to Medicare beneficiaries enrolled in the HCIA-funded initiative.

Figure 2. TCCI Organizational Structure with Embedded HCIA-Funded Operational Staff



Source: Adapted from an organizational chart provided by Chet Burrell, president and chief executive officer, CareFirst BlueCross BlueShield, August 2012 to reflect staffing levels in CareFirst's sixth quarter operational report.

Note: Clinical support vendors represent behavioral and home health services.

B. Medical Care Panels

When CareFirst implemented TCCI, it determined that medical care panels (panels) would be the central building blocks of the program. A panel is a group of 5 to 15 PCPs who voluntarily agree to participate in the TCCI program as a performance unit to try to achieve the financial incentives offered by the program for decreasing care costs and increasing quality. CareFirst developed the panel structure so that the PCP groups would be large enough to ensure stability in performance measurement, but small enough for PCPs to hold one another accountable for their individual performance. Panels can be formed by four different arrangements:

1. A virtual panel forms when solo practices or small, independent group practices agree to work together. Each practice remains independent and administratively separate, but for the purpose of the TCCI program they are evaluated as a unit. About half of the panels are virtual.
2. A multipanel independent group practice panel forms when a portion of a large group practice (5 to 15 PCPs) breaks into several panels, often based on practice location.

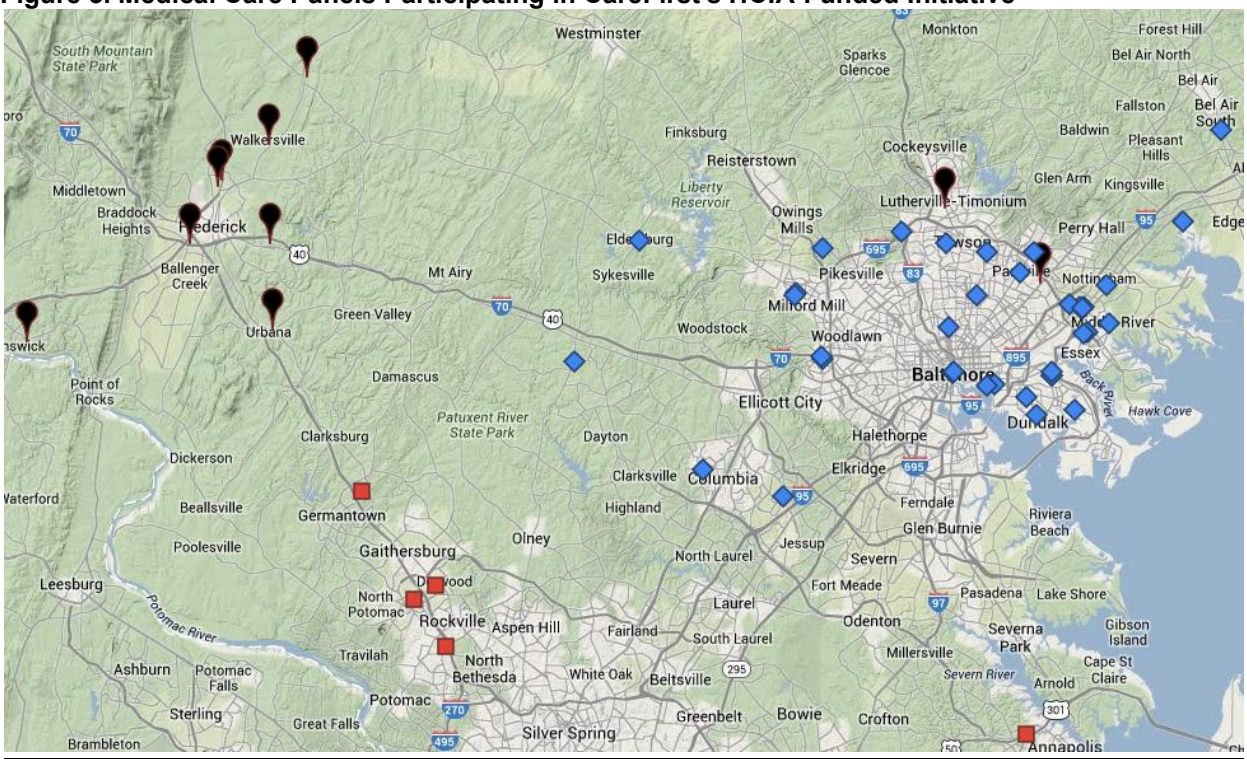
3. An independent group practice panel forms when a group practice is already the appropriate size for a panel.
4. A health system-based panel indicates that the PCPs in these panels are part of a large health system.

Only PCPs in the traditional primary care categories of internal medicine, family practice, general practice, geriatrics, and pediatrics can form panels. PCPs must be full-time employees with active, unrestricted licenses to practice medicine and be in good standing in the CareFirst BlueChoice (health maintenance organization) and the CareFirst Regional Participating Preferred Provider Networks. Currently, about 425 panels participate in TCCI. CareFirst recruited 14 of the panels participating in the TCCI commercial program to participate in the HCIA-funded initiative (the panels had to consent to join the award). CareFirst originally proposed including 50 panels from TCCI in the HCIA-funded initiatives; however, due to funding constraints, CareFirst had to limit the number of panels participating in the award to 14.

CareFirst administrators recruited panels that are located in Maryland and were thoroughly engaged in the commercial medical home program in 2011 or 2012. Although CareFirst formally calculates provider engagement as one of its quality measures for the TCCI commercial program, it did not use these scores when selecting panels for the HCIA program. Rather, CareFirst administrators selected panels based on their knowledge about the panels. Figure 3 provides details about the 14 panels participating in the HCIA-funded initiative and maps the specific practice locations.

The 14 panels participating in the HCIA-funded initiative include a range of types, in roughly the same proportion found in the broader commercial medical home program: 7 are virtual panels, 2 are multi-panel independent group practices, 2 are health systems-based panels (for example, Johns Hopkins University or Medstar), and 3 are independent group practices.

Figure 3. Medical Care Panels Participating in CareFirst's HCIA-Funded Initiative



TCCI Panel Types	Map Legend	Number of Panels	Average Number of Practices Locations	Average Number of PCPs per Panel
Independent Group Practice	■	3	2	9
Multipanel Independent Group Practice	●	2	3	13
Virtual	◆	7	7	9
Health System-Based		2	4.5	13

Source: Personal communication with Ricardo Johnson, associate general counsel, CareFirst BlueCross BlueShield, February 24, 2013.

Note: The types of panels participating in the HCIA-funded initiative are a representative sample of the panels participating in the TCCI commercial program.

n.a. = not applicable.

III. Program Features and Implementation Progress

The HCIA-funded initiative aims to focus on the needs of chronically ill patients while rewarding PCPs for successfully containing health care costs and improving care quality for their attributed patients. The program promotes care coordination by supporting panels with population health reporting, IT infrastructure, and care coordination teams that arrange for and track the care of high-risk patients using care plans. In this section, we further describe the five key components of the program model and the experiences that CareFirst has had in implementing them: patient attribution, illness burden scores, care plans, care coordination, and financial incentive awards.

A. Patient Attribution—Assigning Patients to the 14 HCIA-Funded Panels

The first component of the program is to identify Medicare patients who already receive primary care from a PCP (and hence a panel) funded by the award. Patient attribution is required so that PCPs clearly know the patients in their panels and the patients' process and outcome metrics that will determine whether the panel achieved its financial and quality targets. The attribution methodology for the HCIA-funded initiative uses historical claims data to attribute a patient to the PCP that he or she have visited most frequently during the past 12 months.[1] This attribution is then updated monthly to reflect the patient's current PCP preference, if it changes.[2]

The process requires demographic and claims data for each individual Medicare fee-for-service beneficiary and attribution is rerun monthly for the duration of the award. Data coordination between CareFirst and the Centers for Medicare & Medicaid Services (CMS) initially proved to be challenging, resulting in a major implementation delay. After determining that CMS's data vendor did not have the ability to complete the attribution process for Medicare fee-for-service beneficiaries, a collective decision was made that CareFirst would conduct the attribution process. It took a year from the initial award—until June 2013—for CareFirst to receive the requisite data from CMS to begin processing Medicare beneficiary attribution.

B. Calculating the Illness Burden Scores

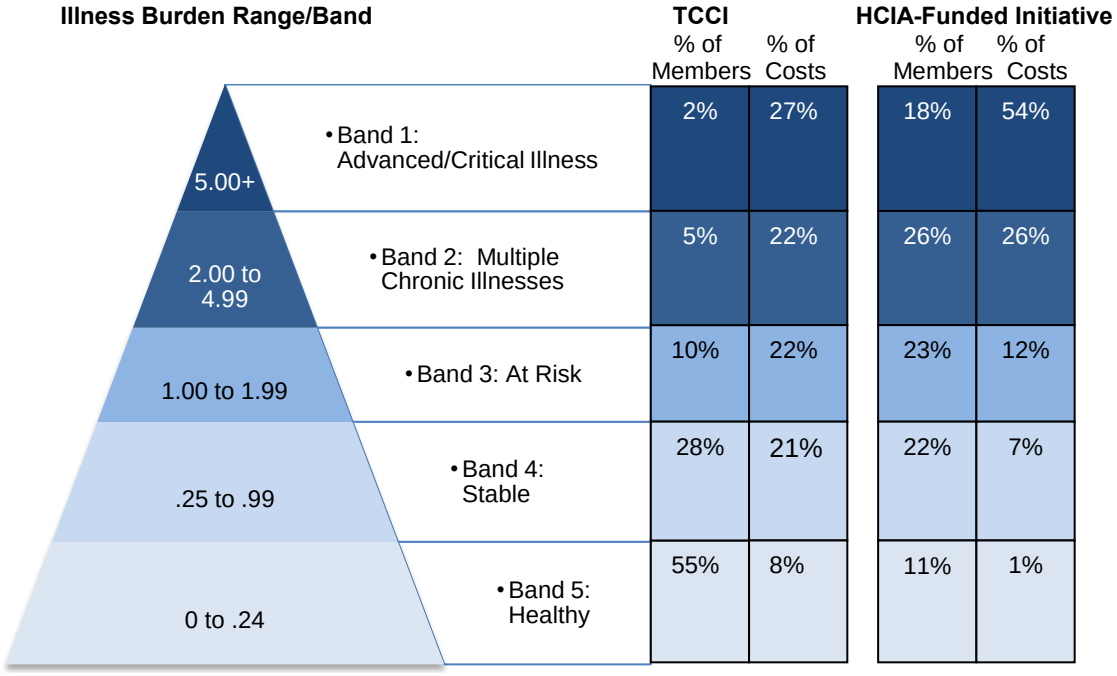
After CareFirst attributed Medicare beneficiaries to a participating PCP, these patients are stratified into five illness bands based on the risk level of their health status. These illness burden bands help PCPs to identify patients who are most in need of additional care coordination services. The illness burden score is based on a diagnostic cost grouper classification model that is similar to hierarchical condition categories (HCCs) scores and uses inpatient and outpatient diagnosis and demographic information. Within a month of receiving the required claims data from CMS, CareFirst provided each participating panel with a roster of its attributed patients, stratified by illness burden ranking. These illness burden scores are updated monthly, based on a 12-month history, using the same methodology for Medicare beneficiaries that the TCCI program uses. With the necessary data in place, CareFirst launched the HCIA-funded initiative in August 2013.

For CareFirst's commercial population younger than 65, the illness burden scores form a pyramid with most patients being healthy and the top 2 percent of patients accounting for a quarter of costs (Figure 5). Relative to this distribution, more Medicare beneficiaries have a higher illness burden ranking (and in turn, nearly 60 percent of costs); according to CareFirst, this demonstrates an even greater need to coordinate the care of Medicare beneficiaries, as it aims to do in the HCIA-funded initiative.

[1] Patients are first attributed to the PCP they visited most often during the past 12 months. If a patient has not visited a PCP in the past 12 months, the attribution time frame is extended to 24 months.

[2] After the initial attribution process, a patient must see a PCP in another panel at least twice before that PCP becomes the newly attributed provider.

Figure 4. Illness Burden Pyramid Ranking, by Percentage of Beneficiaries and Health Care Costs



Source: Communication from CareFirst to CMS. Submission to CMMI in response to questions, August 2012.

C. Development of Care Plans

Although 35,000 Medicare beneficiaries have been attributed to the 14 participating panels, CareFirst is targeting a much smaller set of high-risk beneficiaries for intensive care coordination services. CareFirst hopes to develop care plans for 1,500 to 2,500 Medicare beneficiaries by the end of the three-year award, which accounts for about 5 to 7 percent of all Medicare patients attributed to the program. Panels identify beneficiaries for intensive care coordination services in two steps. First, they use the illness burden scores to identify potential patients who could benefit most from a care plan, with scores of four or higher indicating eligibility. Then, PCPs and LCCs work together to determine which patients would benefit the most from care plans.

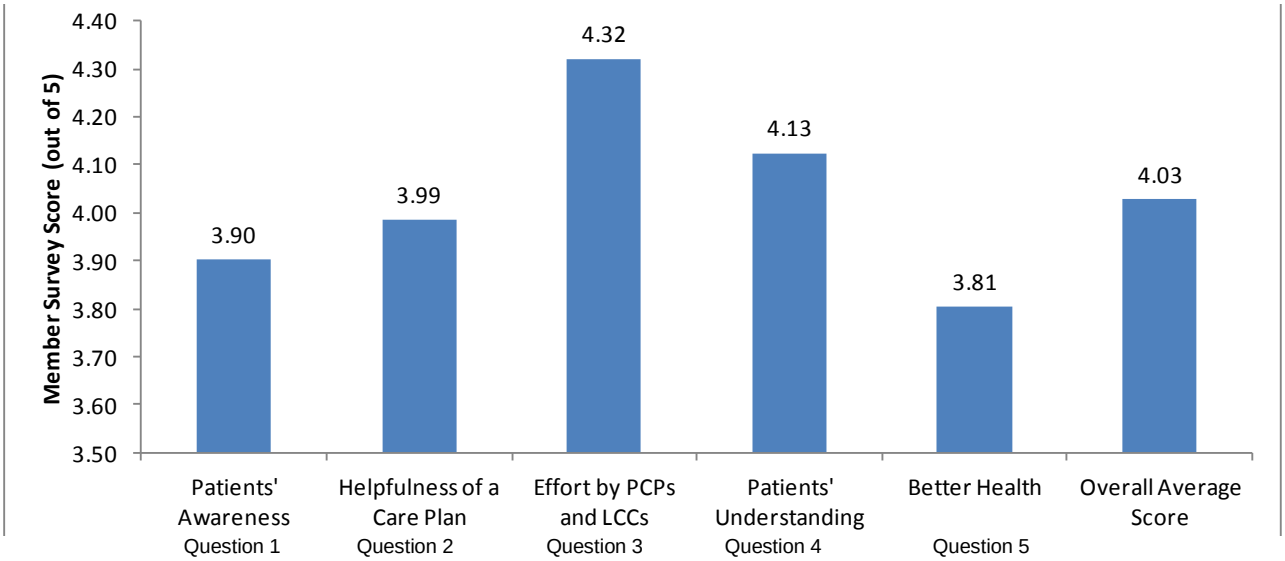
The identified patients are likely to: (1) have a high illness burden score; (2) have had recent hospitalizations or ED visits; and (3) have one more of the following chronic conditions for which care coordination could be particularly effective: diabetes, chronic obstructive pulmonary disease, coronary artery disease, heart failure, neck and back pain, osteoarthritis, and hypertension (generally as a comorbid condition).[3] As of December 2013—five months after the program launched—337 Medicare beneficiaries had received care plans.

[3] Please see page 54 of "Patient-Centered Medical Home: Program Description and Guidelines," May 2011. Available at https://provider.carefirst.com/wcmwps/wcm/connect/52a3c780456e3cdfa7d6afed9a4bbc9e/BOK5423.pdf?MOD=AJPERES&CACHEID=52a3c780456e3cdfa7d6afed9a4bbc9e.

D. Care Coordination Activities

Medicare beneficiaries with active care plans are eligible for additional care coordination and support services. LCCs are responsible for coordinating the care of these patients as detailed in their care plans. To do so, LCCs reach out to these patients on a weekly basis to coordinate among the key participants in the care of the patient, which could include other PCPs on the panel, the patient's family and/or caregiver(s), and other specialists and providers as designated in the care plan. Early results from CareFirst's member survey show that Medicare beneficiaries report that they generally agree that the care coordination team has been helpful in coordinating care and their health is more stable as a result of the care coordination plan (Figure 5).

Figure 5. Reported Member Engagement (August 2013–Sept 2013)



Source: CareFirst's self-monitoring plan, sixth quarter.

Note: Member were asked, "Do you: strongly agree (5); agree (4); neither agree nor disagree (3); disagree (2); or strongly disagree (1) with the following five statements:

(1) You understand your care coordination plan, including the actions you are supposed to take. (2) Your care coordination nurse and care coordination team are helpful in coordinating your care. (3) Your doctor or nurse practitioner spends enough time with you. (4) After starting your care coordination plan, you have had access to information that you need to understand and manage your health better. (5) Your health is more stable and better managed as a result of the care coordination plan."

CareFirst also provides access to an array of additional targeted health services to Medicare patients with care plans, including (1) medication review, (2) behavioral health services, and (3) home-based services. Medication review services began in September 2013 and have been performed 359 times for Medicare beneficiaries by PCPs and LCCs. As of December 2013, CareFirst finalized its contract with Magellan Behavioral Health to provide behavioral health services and with four home health agencies, and will begin offering all of these services to selected Medicare patients participating in the award.

E. Financial Incentive Awards

CareFirst uses the HCIA-funded initiative to test a financing model that uses financial incentives to counteract the volume-inducing aspects of the current fee-for-service system. Under

this new model, CareFirst will pay panels an outcome incentive award if the panel reduces costs and meets quality targets for its attributed Medicare beneficiaries. CareFirst develops a global target budget for each participating panel. This global target budget is based on a trended, risk-adjusted projection of the panel's Medicare patients' expected health care costs. Such costs are calculated using demographic, geographic, and historical claims data patterns. The global target budget for the year is adjusted monthly, based on the current month's attribution of Medicare beneficiaries.

The projected costs for all attributed beneficiaries are credited to the panel. During the year, the cost of care provided to attributed patients in each panel is debited against these credits. At the end of each performance year, if credits exceed debits then the panel is eligible to receive an outcome incentive award.[4] In addition, PCPs receive a $200 reimbursement for developing a new care plan and $100 for updating an existing care plan.

The outcome incentives awards are based on a panel's total reduction in costs plus the panel's quality score. The quality score is based on each panels' performance in five key areas: (1) degree of PCP engagement, (2) appropriate use of services, (3) effectiveness of care, (4) degree of patient access, and; (5) structural capabilities. Table 1 provides a detailed breakdown of each of the measures included in these key quality areas, some of which are assessed based on claims data and some of which are evaluated directly by the RCCs, LCCs, and program consultants. Overall, the degree of cost reduction and quality attainment intersect on a grid, with a higher point of intersection earning the panel a greater outcome incentive award.

[4] CareFirst allows for one quarter (three months) of run-out in the claims data and subsequently calculates the OIA in the second quarter following the end of the performance year.

Table 1. Quality-of-Care Measurements

Measuring Quality of Care	Number of Points
Degree of PCP Engagement RCC/LCC assesses PCPs' engagement with the program monthly. RCC/LCC assesses PCPs' engagement with care plan development and maintenance monthly.	**30**
Appropriate Use of Services Claims data are used to examine the degree to which beneficiaries experience the appropriate settings and coordination for care: potentially preventable ED visits, hospital admissions, and readmissions.	**30**
Effectiveness of Care Claims data are used to measure the degree to which each panel manages its population of members who have chronic conditions and those who need preventive services; the data include the Healthcare Effectiveness Data and Information Set (HEDIS) Physician Measures as determined by the National Committee for Quality Assurance (NCQA), as well as some National Quality Forum (NQF) measures.	**20**
Degree of Patients' Access A quarterly survey measures the extent of office hours, patient wait times, use of e-scheduling, e-visits and similar measures.	**20**
Structural Capabilities A quarterly survey measures the degree to which a practice has attained PCMH certification (NCQA, Utilization Review Accreditation Commission (URAC) and/or the Joint Commission), electronic medical record meaningful use, e-prescribing, and email use.	**10**
Total	**100 Points**

Source: Communication from CareFirst to CMS. Submission to CMMI in response to questions, August 2012.

CareFirst will use the HCIA funding to make outcome incentive award payments to panels in annual lump sum payments. CareFirst anticipates that these payments will amount to $7 million over the three-year award period. Due to the delayed launch the HCIA-funded initiative, the first outcome incentive award payments will not be paid out until July 2014 (the eighth quarter of the award, about a year after the initiative was launched).

IV. Target Population and Assessment

The HCIA-funded initiative is targeted to Medicare fee-for-service aged and disabled beneficiaries, for whom Medicare is their primary payer under Part A and Part B. The program excludes beneficiaries who are also enrolled in Medicaid (dual eligible beneficiaries) or in Medicare Advantage plans. CareFirst has attributed 35,000 Medicare fee-for-service patients to the 14 panels participating in the HCIA-funded initiative. This is 10,000 more Medicare beneficiaries than CareFirst expected to identify in the panels participating in the award.

Of this group, CareFirst is targeting a much smaller set of high-risk beneficiaries for intensive care coordination services. PCPs and LCCs work together to identify these high-risk beneficiaries based on illness burden score and who they think would most benefit from a care plan. Those Medicare beneficiaries who receive a care plan are considered direct HCIA program participants. By the end of the award, CareFirst expects to have approximately 1,500 to 2,500 direct participants (5 to 7 percent of all attributed Medicare beneficiaries). As of December 2013,

337 Medicare beneficiaries had received a care plan. Most of these care plans (297 of 337) were completed from October to December 2013.

V. Workforce and Training

A. Staff

CareFirst used HCIA funding to hire additional LCCs and program consultants, who are solely dedicated to providing care coordination services for Medicare beneficiaries enrolled in the HCIA-funded initiative.

Local care coordinators. As of December 2013, CareFirst had hired 33 LCCs (through Healthways), who are all registered nurses. LCCs are dedicated to specific panels and are required to have direct, frequent, in-person communication with those PCPs. As described earlier, LCCs help PCPs identify and develop care plans. They are then responsible for coordinating the care defined by care plans.

Program consultants. As of September 2013, CareFirst had directly hired three program consultants, whose role is to help PCPs understand and manage the health outcomes, quality, and costs of care for their panel of patients. Program consultants assist panels in identifying care patterns among their Medicare beneficiaries that will lead to increased quality and reduced costs. Program consultants are also responsible for educating panels about SearchLight reports, which are available through CareFirst's online portal, iCentric. SearchLight reports enable PCPs to access detailed patient information and track patients' outcome trends (detailed information that is otherwise unavailable to PCPs).

B. Staff Training

The HCIA-funded initiative provides training to LCCs and PCPs. Of the 33 LCCs that CareFirst has hired for the HCIA-funded initiative, 28 have received the necessary training and are currently deployed in the field as of December 2013. LCCs undergo a structured four-week training/orientation class (160 hours per person). Trainers facilitate engagement modeling and guided dialogues, during which LCCs must use program-focused talking points to demonstrate their readiness to engage PCPs and Medicare beneficiaries appropriately. LCCs must then pass a post-review assessment of 11 fundamental elements of CareFirst's overall PCMH program. LCCs also receive training in writing clear, concise, and comprehensive care plans, both as part of a group and individually during training. At the end of the training, LCCs must successfully complete a formal 50-question assessment.

Program consultants receive comprehensive training during their first three months, which focuses on their ability to understand, analyze, and present the large amounts of claims data compiled in SearchLight reporting. Program consultants learn to recognize trends and patterns in the data to identify areas in which a panel or practice has opportunities for reduced costs and improved patient outcomes. Their training also involves role-playing and mock presentations to data experts, who help the program consultants learn how to respond to prospective inquiries from PCPs. The training includes shadowing existing senior program consultants at panel and practice meetings. To date, all three program consultants have completed the required training.

VI. Future Plans

After the delayed launch of the HCIA-funded initiative due to the data issues described earlier, CareFirst is still in the process of scaling up the program. It hopes to accomplish the following steps over the rest of the award period:

1. **Increase the number of care plans.** The HCIA-funded initiative aims to develop approximately 1,500 to 2,500 care plans for Medicare beneficiaries (as of December 2013, it had developed 337). LCCs continue to work with PCPs to identify and engage high-risk beneficiaries who are most in need of care plans. LCCs and PCPs also began to refer beneficiaries to the program's behavioral health consultation and home-based services beginning in January 2014.
2. **Outcome incentive award payments.** In June 2014, CareFirst will make the first outcome incentive award payments to qualifying panels and will make subsequent annual payments to panels for the duration of the HCIA-funded initiative. CareFirst originally projected a 1 percent cost savings to CMS in year 1; 3 percent savings in year 2; and 6 percent savings in year 3.[5] However, due to the delay in launching the program, CareFirst has not been able to achieve the desired year 1 outcomes. CareFirst has filed a carry-over request with CMS to move unused year 1 funds to subsequent award years, which it hopes will enable it to achieve its original savings projections.
3. **Improve data quality and coordination.** CareFirst and CMS are working together to improve the accuracy and completeness of data. To date, CMS has not been able to distinguish among beneficiaries for whom Medicare is the primary insurer (secondary payer status is an exclusion criterion for the program) and beneficiaries are not consistently appearing in the monthly enrollment files. CareFirst also continues to receive data from CMS through the physical delivery of disks, rather than through a secure FTP. CareFirst and CMS are working to improve and refine both the data and the data delivery process.

[5] CareFirst's correspondence with CMS regarding proposed revisions to award submission, June 6, 2012.

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COOPER UNIVERSITY HOSPITAL AND CAMDEN COALITION OF HEALTHCARE PROVIDERS

SUMMARY OF PROGRAM DESIGN AND IMPLEMENTATION EXPERIENCE

MARCH 2014

Kristin Geonnotti and Cara Stepanczuk

In this brief, we describe the primary care redesign (PCR) program administered by Cooper University Hospital and its partner, Camden Coalition of Healthcare Providers (CCHP), in Camden, New Jersey, under Health Care Innovation Award (HCIA) funding from the Center for Medicare & Medicaid Innovation (CMMI). The purpose of this brief is to describe the design of the program as it is currently being implemented and to summarize implementation experiences one-and-a-half years after receipt of the award. We based the information presented in this brief on a review of program documents, including application materials and quarterly progress reports, as well as telephone discussions and follow-up communications with program administrators. This brief describes the status of the program as of January 2014. We will update the brief as additional information becomes available.

I. Overview

Cooper and CCHP received a three-year, $2.8 million award to expand the care coordination program they operate in the city of Camden, New Jersey. Camden has about 77,000 residents and is marked by high rates of poverty[1] and violent crime.[2] In addition, Camden city residents have high rates of chronic disease risk factors, such as obesity, smoking, and dangerous living situations, in addition to difficulty affording prescription medication. As a result, the city has an unusually high use rate per capita of emergency department (ED) services, even though many of the conditions would be better treated in a primary care setting.[3] Similar to the national trend, most of these unnecessary ED and hospital visits can be attributed to a small number of patients, referred to by CCHP as *high utilizers.*

Cooper and CCHP target this small group of high utilizers in their HCIA-funded intervention, called Link2Care. The Link2Care program aims to help Camden's high utilizers overcome health and socioeconomic obstacles, including the fragmented health care and social service systems; manage their diseases more effectively; minimize unnecessary hospital and ED use; and reduce overall health care costs.[4] In its HCIA application, CCHP estimated that it could reduce inpatient and ED costs by 35 percent. Combined with an expected increase in primary

[1] U.S. Census Bureau, 2010 American Community Survey

[2] "2012 City Crime Rate Rankings." CQ Press using reported data from the F.B.I. "Crime in the United States 2011" (http://os.cqpress.com/citycrime/2012/CityCrime2013_CityCrimeRateRankings.pdf)." Available at http://os.cqpress.com/citycrime/2012/CityCrime2013_CityCrimeRateRankings.pdf. Accessed February 4, 2014.

[3] Camden Facts 2008, Public Health Report. CamConnect (http://www.camconnect.org/datalogue/Camden_Facts_08_3-20-08_health.pdf)[3] CamConnect, Camden Coalition of Healthcare Providers. "Camden Facts 2008, Public Health Report." Available at http://www.camconnect.org/datalogue/Camden_Facts_08_3-20-08_health.pdf. Accessed February 4, 2014.

[4] Awardee interview.

care, specialist visits, and pharmaceutical expenditures resulting from improved care coordination, CCHP estimates that it can reduce the total health care costs of its participants by 30 percent. Because more than 95 percent of CCHP's patients have Medicaid, Medicare, or dual coverage, these cost savings will accrue to the Centers for Medicare & Medicaid Services (CMS). Table 1 shows the implementation status of each of the program's key features, which the following sections of the brief describe further.

Table 1. Time Line of Program Implementation

Topic	October – December 2012	January – March 2013	April – June 2013	July – September 2013	October – December 2013	January 2014 – Future Plans
Eligibility and Enrollment	• Start participant enrollment at first site: Cooper University Hospital	• Start participant enrollment at second site: Our Lady of Lourdes Hospital	• Reduce 3-year enrollment target from 870 to 609 due to care team capacity constraints • Limit enrollment to participants younger than 80 • Limit enrollment to participants with PCPs in Camden because RNs spent too much time traveling to appointments	• Reopen enrollment for participants with PCPs outside of Camden and begins to allow any member of care team to accompany participants to appointments		• Newly hired enrollment specialists will help ramp up enrollment to prepare for a randomized controlled trial with local evaluator for program year 3 • May extend program eligibility to pregnant women
Program Staff and Training	• Hire and train 6.4 FTE staff	• Staffing grows to 17 FTE		• Staff trained on new EMR system • Hire and train four new health coaches to replace four outgoing AmeriCorps members		• Hired a program manager (HCIA-funded) • Will hire two enrollment specialists (RCT-funded)
Monitoring and Evaluation	• Use CCHP web-based system for real-time data entry and data storage for monitoring case management activities and reporting purposes				• Implement dashboard to monitor program benchmarks, such as timeliness of home visits and follow-up PCP visits	
Health Information Exchange[a]	• Secure access to EHRs at Cooper, Our Lady of Lourdes, and Virtua					• Will add two hospitals to the HIE, which will help confirm participants' eligibility
Community Outreach	• Staff runs case-conferencing meetings open to community providers and service agencies[a] (ongoing)	• Develop fact sheets, attends community meetings, and hold public board meeting to educate community stakeholders and providers (ongoing)	• Host kickoff event to educate Our Lady of Lourdes staff on the program	• Start biweekly meetings with care coordinators at CAMcare, a primary care practice that accepts Link2Care graduates	• Reintroduce program to case management and social work staff at Cooper Hospital	• Will deploy health coaches to educate PCPs on importance of timely follow-ups after discharge

Source: Awardee interviews, monitoring reports, and quarterly reports.

[a] Existed before HCIA-PCR.

EHR = electronic health record; EMR = electronic medical record; FTE = full-time equivalent; HCIA = Health Care Innovation Award; HIE = health information exchange; PCP = Primary care provider; PCR = Primary Care Redesign; RCT = randomized controlled trial; RN = registered nurse.

II. Organizational Structure

A. History of CCHP

Dr. Jeffrey Brenner, a family physician in Camden and the founder and executive director of CCHP, is a nationally recognized expert in the identification and treatment of medical and social comorbidities of high utilizers. As a family physician in Camden, Dr. Brenner believes that the highest-risk patients would have better long-term health outcomes if they had help finding stable and safe shelter, obtaining access to mental health care, applying for public benefits, and overcoming other socioeconomic barriers. To address these concerns, Dr. Brenner started an informal physician roundtable group more than 10 years ago to discuss the obstacles to providing care for Camden's most complex patients. This gathering changed over time into what is now a monthly case-conferencing meeting that Link2Care staff use to discuss patient issues with community partners (see Section C, Community Partners).

Two solutions for patient issues brought up at the breakfast meetings became cornerstones of the Link2Care program: (1) a nurse practitioner to make home visits and (2) a social worker to help handle the nonmedical determinants of a patient's health.[5] In addition, Dr. Brenner began working with hospitals in Camden to use their electronic health records (EHRs) to identify patients who would benefit from his services and to persuade others in the health system to work together to help them. He completed the bylaws and recruited the first board of directors in 2005, establishing CCHP as an independent nonprofit to manage his initiatives. The philosophy of treating the whole patient (both medical and social needs) and activating the community toward a common purpose of improving the health of high-cost, high-need people permeates CCHP's culture and the design of the Link2Care program.

B. Governance Structure

Although Cooper is the official HCIA grant recipient, CCHP administers the Link2Care program. As its fiscal sponsor, Cooper offers 501(c)3 legal status and administrative efficiencies to CCHP, a nonprofit organization. Cooper is responsible for financial and contractual management and grant reporting. CCHP is responsible for the day-to-day management of the Link2Care program, the oversight of its team members, and the collection and analysis of program data. CCHP staff members are employed by Cooper.

CCHP is incorporated as a membership organization, which gives members influence over internal governance, such as electing directors and amending bylaws. CCHP's board of directors is a representative group, with members that currently include the city's two hospitals (Cooper and Our Lady of Lourdes Medical Center) and one outpatient medical facility with an ED (Virtua Camden), two federally qualified health centers, independent provider offices, community advocacy organizations, and social service and behavioral health organizations. CCHP also devotes significant staff time and resources to ensure that the board and its

[5] Gawande, Atul. "The Hot Spotters." *The New Yorker*, January 24, 2011. (http://www.newyorker.com/reporting/2011/01/24/110124fa_fact_gawande?currentPage=2)Available at http://www.newyorker.com/reporting/2011/01/24/110124fa_fact_gawande?currentPage=2. Accessed February 4, 2014.

subcommittees make decisions by consensus, as the organization emphasizes broad collaboration.

C. Community Partners

CCHP continues to use community outreach strategies in Camden that support the Link2Care intervention and the organization's long-term goals. For example, for the past six years Link2Care staff run a monthly meeting to enable frontline social workers, physicians, case managers, housing agencies, behavioral health organizations, and other service organizations to discuss solutions for challenging issues in patients' care management. The group discusses anonymous patient cases and common barriers to care with the hope that collaboration among these diverse participants can improve inefficient health and social services systems.[6] Link2Care also uses this case conferencing to resolve participants' difficult issues. CCHP staff report that agencies in attendance often volunteer to do something "out of the ordinary" when participants' problems are discussed.

In an effort to build a larger constituency for the Link2Care intervention model, CCHP also holds quarterly community meetings that are open to the public to report on Link2Care's progress. CCHP reports that roughly 125 Camden residents attended a recent meeting. CCHP believes its success in collaborating with the city's residents, social service organizations, and medical community lies in the skill of its staff and its no-fault communications strategy: "Rather than blaming individual institutions, we blame the system. I think we've been effective in our messaging that it's not about bad doctors, patients, hospitals, or insurers, but it's (about) a failing system." Another of CCHP's successful messaging strategies is that the system can be fixed "one patient at a time," starting with Camden's outliers in health care use and costs. CCHP administrators believe that this philosophy makes the fragmentation of the health system seem like a more fixable problem for its staff and community partners alike.

D. Camden Health Information Exchange

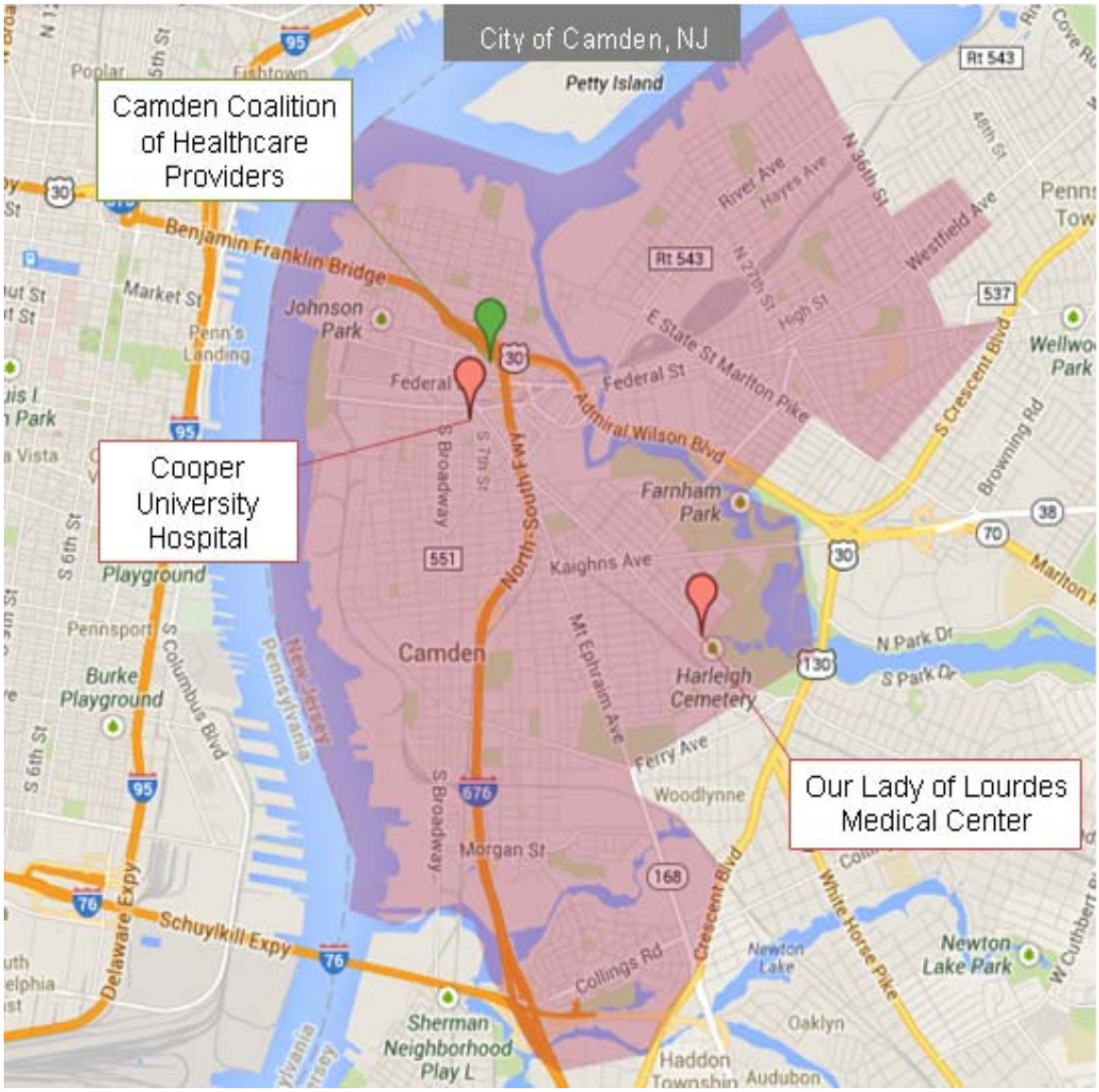
CCHP's ability to bring competitive or disassociated parties together for a common purpose is illustrated by the creation of the Camden Health Information Exchange (HIE). CCHP arranged the data-sharing agreement among a number of local medical facilities[7] and maintains the database of hospital records, including admissions, discharge, and transfer transactions; lab and radiology results; medication reconciliation; and discharge summaries. Link2Care staff, as well as other health care providers in Camden, use the HIE to download clinical information about their patients. CCHP also uses the system to identify patients for enrollment in Link2Care at either Cooper or Our Lady of Lourdes Medical Center. CCHP staff credit the success of the HIE to convincing the area hospitals that this database can help to identify shared problems that CCHP, hospitals, and community partners can solve together.

[6] PBS Frontline. "Doctor Hotspot." Available at http://www.pbs.org/wgbh/pages/frontline/doctor-hotspot/.

[7] Medical facilities that submit data to the Camden HIE currently include Cooper University Hospital, the Lourdes Health System, and Virtua (a nonprofit health system in southern New Jersey). Kennedy Health System will begin to submit data to the exchange in the first quarter of 2014. CCHP is currently in discussions with Inspira Health Network to have themit join the HIE.

In Figure 1, we show the geographic location of CCHP's office and enrollment partners, Cooper and Our Lady of Lourdes Medical Center.

Figure 1. CCHP and its Enrollment Partners



III. Program Features and Implementation Progress

CCHP has been developing a care coordination model for high utilizers in Camden for more than 10 years. The model relies on multidisciplinary, community-based care management teams to help program participants manage their medical and social conditions, thereby reducing the need for costly acute care services and improving health outcomes. HCIA funding enabled CCHP to scale this model by reconfiguring its staffing structure and increasing enrollment into the Link2Care program. The program aims to achieve the following:

1. Reduce unnecessary inpatient and ED costs
2. Stabilize and transition patients to local primary care homes

3. Improve the health of Camden's most complex patients

A study of 36 participants in CCHP's precursor care management initiative—through which staff identified potential participants through referrals from physicians, hospitalists, and social workers—showed a reduction of hospital and ED visits by 40 percent per patient per month.[8] CCHP has since refined its workflow, target population, and enrollment strategy, which are discussed in the following sections, for its Link2Care program.

A. Focus on Social Comorbidities

Link2Care's emphasis on addressing the social determinants of physical and mental well-being distinguishes it from many of the other PCR models. The Link2Care care coordination teams often find that day-to-day social issues facing their program participants—such as food insecurity, inadequate shelter, and domestic violence—present significant barriers to addressing participants' medical comorbidities. According to Link2Care staff, substandard housing or lack of stable housing are participants' most prevalent nonmedical issues. Because of the demand for housing support, Link2Care dedicated its intervention specialist to addressing this issue and found success in this allocation of staff effort: "If someone is worried about where they're staying, it impacts their ability to think about anything else. We have (heard) people say … 'I'm freezing and I have no heat.… Why would I not go to the emergency room [where it's warm]?'"

B. Community-Based Intervention Setting

Link2Care also differs from other PCR interventions because it is a community-based intervention—delivered in the community where participants are located, rather than in a primary care office setting (although, as discussed in Section IV.C, staff enroll participants only in an inpatient setting). Link2Care staff accompany participants to medical appointments at 20 different primary care practices in Camden, but Link2Care encounters often take place in participants' homes or in public spaces, such as public shelters or libraries. Home visits are an essential piece of Link2Care's mission. Staff note that this mobility enables them to evaluate a participant's home environment, especially if safety or family dynamics affect a participant's risk of readmission or other health outcomes. CCHP has also received positive feedback from Link2Care participants for its community-based structure. CCHP reports that this "helps change the power dynamic" when seeking care at a provider's office, hospital, or social service agency.

C. Care Management Team

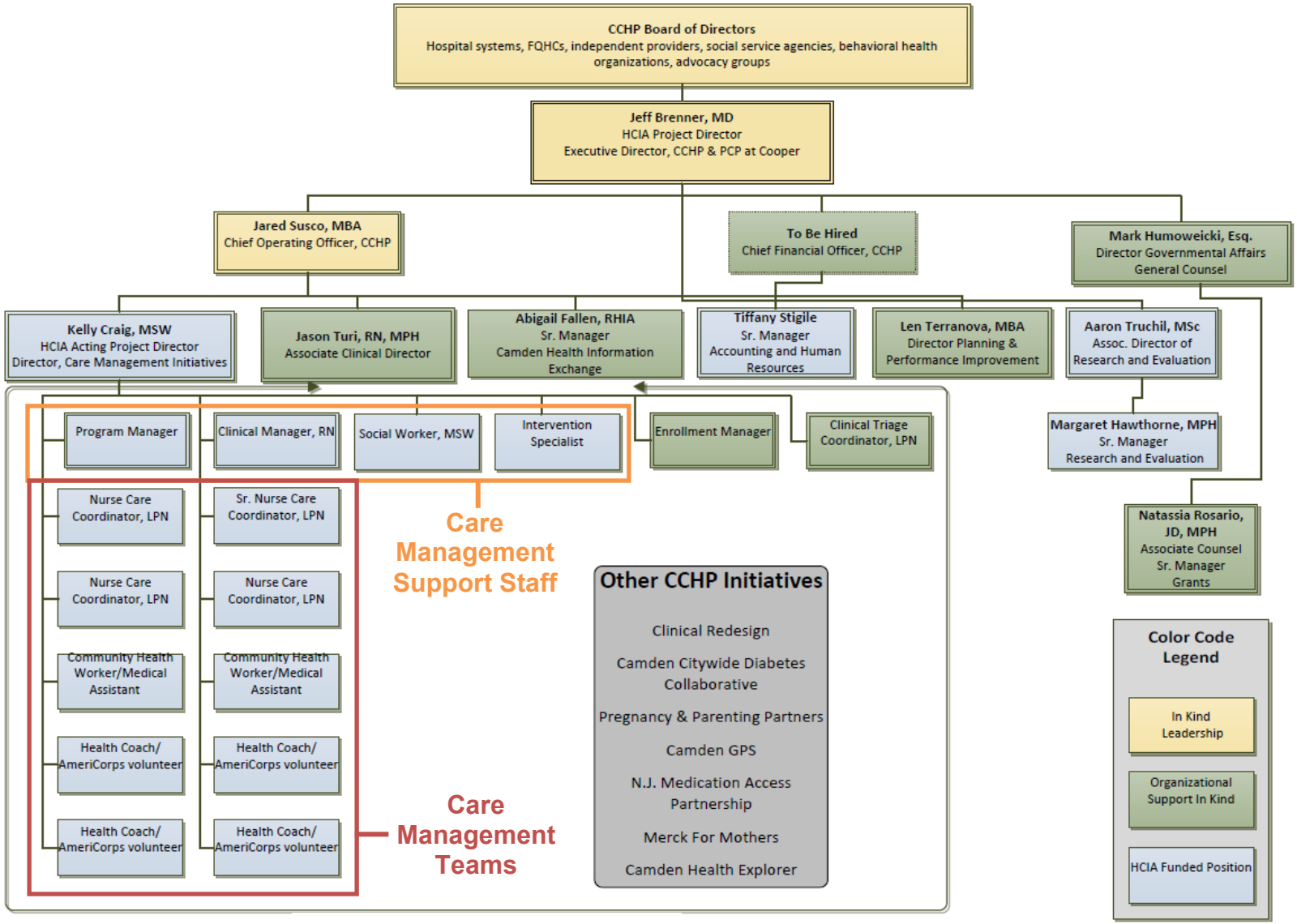
The structure of its care management teams reflects CCHP's multidisciplinary team approach. The Link2Care program consists of two identically structured teams of five people (see red box in Figure 2), each supported by three staff members who work across the teams (see orange box in Figure 2). Each care team is composed of two licensed practical nurses (LPNs) who coordinate patient care, two health coaches (drawn from the AmeriCorps volunteer

[8] Green, S.R., V. Singh, O'Byrneand W. O'Byrne. "Hope for New Jersey's city hospitalsJersey's City Hospitals: The Camden initiative.Initiative." *Perspectives in Health Information Management,* 7(Springvol. 7, spring 2010.

program[9]), and one community health worker (typically a Camden resident who has personal experience with managing his or her own chronic diseases). A registered nurse (RN) supervises the two teams. A social worker assists the care teams with participants' behavioral and social issues, and an intervention specialist assists the care teams with participants' housing issues. The recently hired program manager will work with the RN care manager to implement data and quality improvement initiatives. The program manager will assist with prioritizing and scheduling daily care management activities, such as home visits, enrollment into social services, and coordination of clinical services. With this staffing structure, the Link2Care program can enroll and serve 50 to 54 participants at a time, with participants served by the program for an average of 60 to 90 days.

[9] AmeriCorps volunteers have a 10-month rotation and replacements must be recruited by Link2Care each August. Because AmeriCorps pays its staff a living stipend, CCHP does not face the full cost of hiring these staff.

Figure 2. CCHP Organizational Chart



Source: CCHP, February 9, 2014.

FQHC = federally qualified health center; GPS = global positioning system; LPN = licensed practical nurse.

Rather than providing direct social or medical services, the Link2Care program focuses on connecting participants to existing medical professionals and social service organizations. This philosophy has influenced the composition of the care management team and support staff. For example, CCHP focuses recruitment for Link2Care staff on LPNs, social workers, and other nonclinical staff who can provide basic services and help participants navigate the health system, while enabling physicians to address participants' medical needs outside of the Link2Care program. CCHP has chosen to employ a larger staff with lower-level certifications as a cost-effective way of serving more participants.

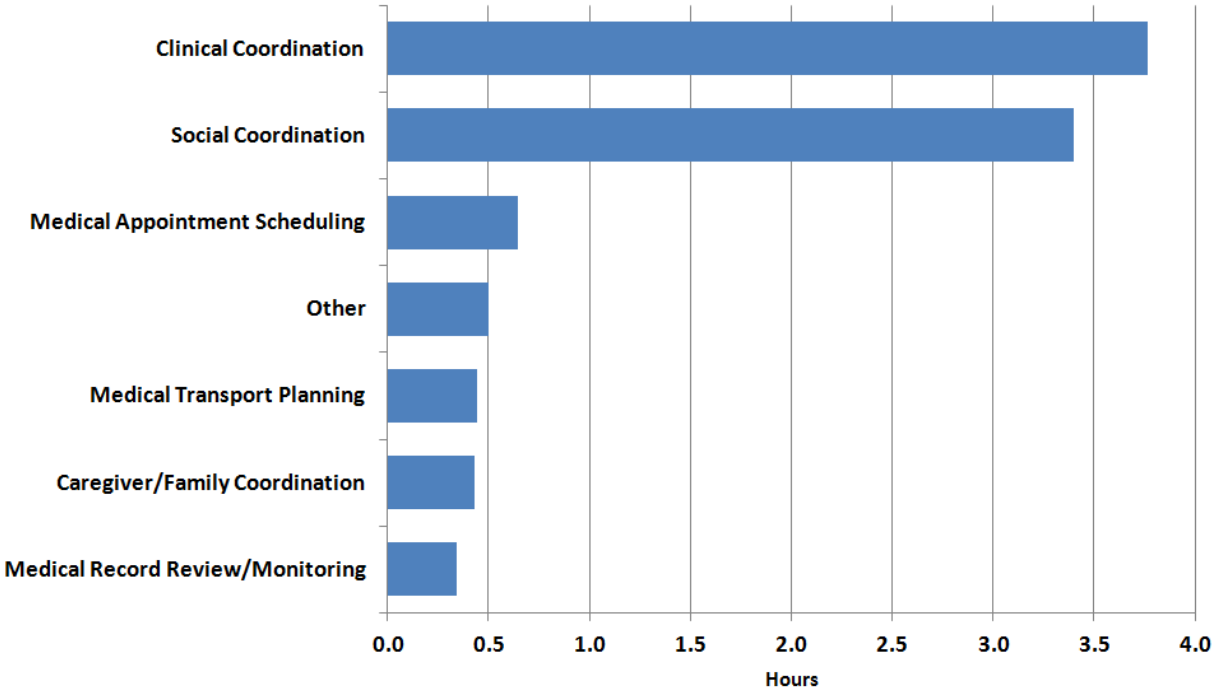
D. Care Management Activities

After assessing a participant's clinical and social service needs, the care management team provides Link2Care participants with frequent, in-person outreach. Participants receive an average of 43 hours of care management before graduating from the intervention, and each participant is assigned a lead health coach for the duration of the intervention. Care teams try to understand all medical, behavioral health, and social challenges before developing a participant's care plan. Although care plans are tailored to the needs of each participant, common care coordination activities include the following:

- Scheduling appointments with primary care providers and specialists
- Assisting with enrollment in social services, such as housing support, Social Security, and the Supplemental Nutrition Assistance Program
- Performing medication reconciliation
- Conducting home visits to support disease management
- Empowering participants to manage their health issues through support group activities

Link2Care staff spend most of their time on clinical and social coordination tasks, as shown in Figure 3. They also spend about 30 minutes per patient on smaller tasks, such as scheduling medical appointments and arranging for medical transportation.

Figure 3. Average Number of Hours per Participant Spent on Care Coordination Tasks



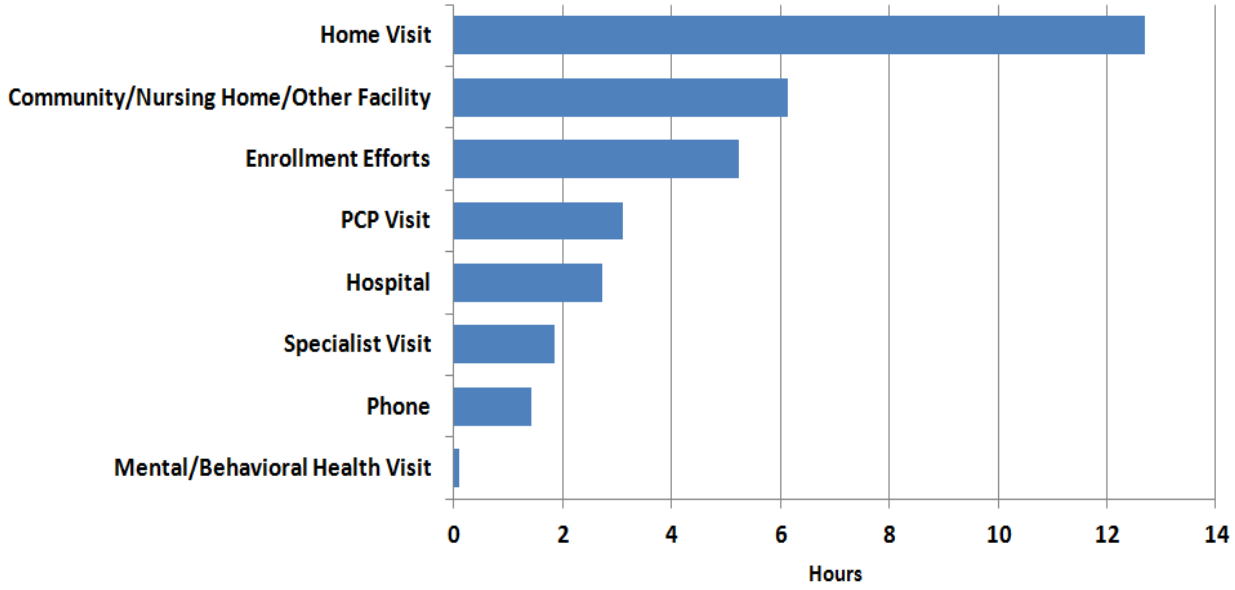
Source: Cooper University Hospital monitoring data. Reporting period: October 2012 through December 2013.

Note: Average is calculated by dividing the total number of hours spent on the task by the number of total participants through December 2013 (187).

Each morning, the care management teams meet to discuss the needs of current participants and assign staff members to address those needs. For example, community health workers might be dispatched to a hospital if a patient has been identified as eligible for Link2Care services (details of this process are described in Section IV). If a new patient joins the program, an LPN and RN will conduct a home visit and complete an extensive intake process that includes quality measures, medication reconciliation, planning future medical appointments, and other issues contained in the hospital's discharge instructions. CCHP found that a key factor to reducing the risk of hospital readmission is to conduct home visits within 72 hours of discharge and to ensure the patient has a follow-up visit with a primary care provider within seven days of discharge.

Link2Care staff members accompany participants to primary care, specialist, and mental health provider office visits to help facilitate communication between the patient and doctor. Staff found that providers do not often "meet the patients where they need to … from a health literacy standpoint." Acting as equal parts translator and coach, Link2Care staff help participants explain to the doctor the reason for their hospital admission and help them implement the doctor's instructions after the visit. Link2Care staff also conduct home visits and telephone calls to support disease management. As shown in Figure 4, Link2Care staff spend most of their time (more than 12 hours per participant over the length of the intervention) visiting participants at their homes or community facilities and accompanying participants to primary care, specialist, or mental health visits (a total of more than 5 hours per participant for all three types of interactions).

Figure 4. Average Number of Hours Spent per Participant Over the Length of the Intervention on Different Encounter Types



Source: Cooper University Hospital monitoring data. Reporting period: October 2012 through December 2013.

Note: Average is calculated by dividing the total number of hours spent on the encounter by the number of total participants through December 2013 (187).

PCP = primary care provider.

E. Length of Intervention

Link2Care staff work with participants for a minimum of 30 days and reevaluate their readiness for program graduation in 30-day increments. Although the typical length of stay in the program is 60 to 90 days, CCHP will continue to work with individuals for up to eight months on a case-by-case basis. The goal of the program is a so-called warm hand-off of a participant to a primary care provider who will assume the care management role for that patient. The Link2Care program does not have a specific measure to determine whether a participant's medical and social needs have been stabilized enough to graduate from the program. However, CCHP staff have learned which participants' goals they can affect directly and which are better handled by referring them to other providers in the community.

Link2Care staff prepare to hand off some patients by meeting with care coordinators at the two largest primary care practices in Camden. Staff members use these meetings, which take place monthly at Cooper's Division of General Internal Medicine and every two weeks at CAMCare Health Corporation, to discuss handoff strategies and exchange patient data, such as utilization history and contact information. Link2Care staff have found that these ongoing relationships are useful in preventing patients' relapse and in helping to prepare primary care practices to work with patients on longer-term goals that they were unable to achieve during the intervention.

F. Health Information Technology

CCHP successfully developed the health information exchange (HIE) infrastructure to access data from local hospitals, but struggled with using health information technology in the field. Each staff member is equipped with a smartphone and/or tablet computer that allows for constant staff communication and real-time entry of patients' data and staff time. The lack of wireless and broadband Internet access in Camden hampers the effectiveness of these mobile devices, however. Care teams often must carry papers and pens as a back-up for data entry during home visits and other activities in the community, which often delays data entry. The data uploaded from these mobile devices (when working properly) or manually entered into the system from paper records are stored with the Camden HIE so that primary care providers can see Link2Care staff notes when caring for a patient. Care team data also feed into CCHP's dashboard, a new tool used for rapid-cycle improvements and goal tracking for the Link2Care program (please refer to Section VI for more details).

IV. Target Population and Assessment

A. Target Population

Link2Care serves a specific segment of high utilizers in Camden. Table 2 describes the eligibility criteria that CCHP uses to identify and enroll eligible participants into Link2Care.

Table 2. Eligibility Criteria

Participants Must:	Participants Must Meet at Least 3 of the Following 6 Criteria:	Excludes People with Admissions Related to:
• Be from 19 to 80 years old* • Have 2 or more admissions in 6 months to one of Camden's hospitals* • Have health insurance	• 2 or more chronic conditions • 5 or more outpatient medications • Difficulty accessing services • Insufficient social support at home or in the community • Mental health comorbidity • Active user of drugs or is homeless	• Oncology • Pregnancy • Acute disease or injury-specific condition • Surgeries for acute or injury-specific conditions • Chronic conditions for which there is limited treatment • Mental health issues with no comorbid conditions

* Data elements readily available in Camden HIE. All other eligibility and exclusion criteria require manual chart review of each potentially eligible patient and verification of data at patient's bedside.

HIE = health information exchange.

Over time, the Link2Care program has adjusted these eligibility criteria in an effort to balance enrollment targets with staff capacity to enroll new participants. For example, Link2Care staff have debated whether and how to serve participants who have primary care providers outside of Camden's city limits (the program currently includes them) or individuals older than 80 (the program currently excludes them). According to our discussions with CCHP administrators, the Link2Care program will soon start accepting pregnant women because it is a population for whom CCHP staff have experience through other CCHP initiatives and for whom they believe they can positively influence health outcomes.

B. Patient Identification Process

Patient identification for the Link2Care program begins with a data feed from the Camden HIE that lists the following two basic eligibility criteria:

1. Whether a patient is 19 or older
2. Whether the patient has had two or more inpatient admissions to Camden-area hospitals that participate in the HIE[10] within a six-month period (at least one of which must occur at Cooper or Our Lady of Lourdes in Camden, where recruitment occurs)

The number of patients eligible for Link2Care based on the two or more admissions criterion varies daily, but usually ranges from 4 to 10 potential participants per day. After these patients appear in the daily HIE data feed, CCHP applies the program's additional eligibility criteria (see Table 2) to this group of potential participants in a process that CCHP refers to as triage. Triage requires that Link2Care staff members manually review charts, including both standard and free-text EHR data elements. The EHR contains the additional information that Link2Care staff need to determine whether a patient meets the eligibility criteria of chronic conditions, multiple medications, and social comorbidities.

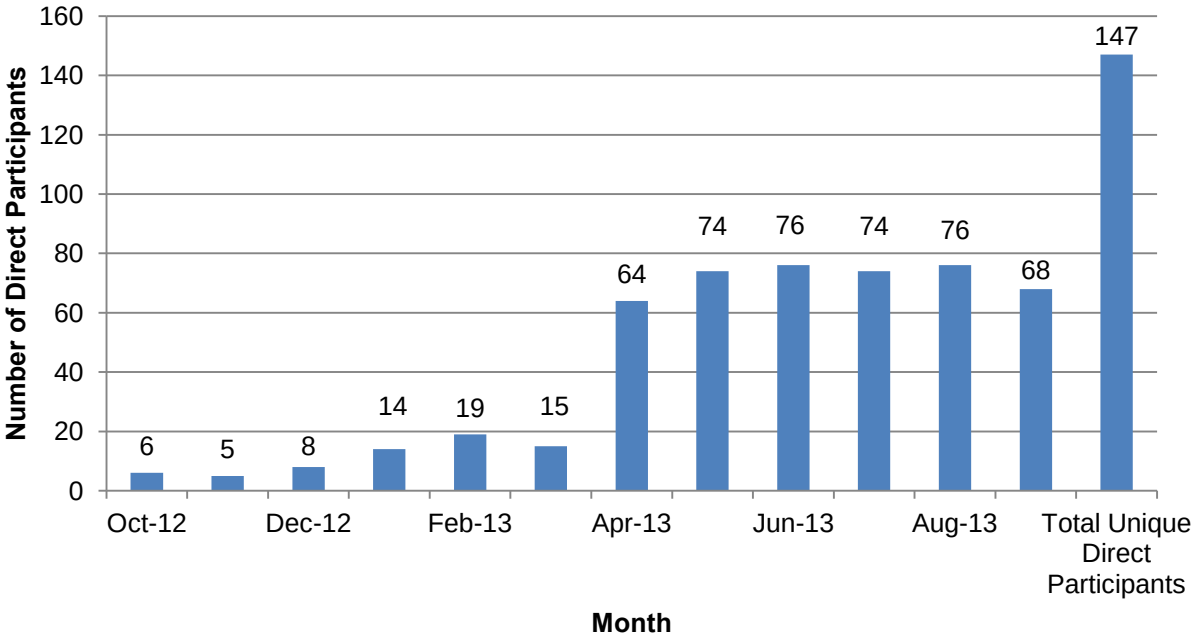
Over the past year, CCHP found that more than 19 percent of potential participants met all eligibility criteria except that they lacked health insurance, which excluded them from Link2Care. CCHP will continue to use this exclusion criterion because people with insurance are better able to use the full array of services offered through care management, such as securing appointments with primary care providers and specialists and affording prescription medications. However, CCHP expects the proportion of patients who are ineligible due to insurance reasons to decline in 2014, as the Patient Protection and Affordable Care Act's Medicaid expansion provision offers coverage to individuals who would otherwise be eligible for the Link2Care program.

C. Patient Enrollment Process

Enrollment in the Link2Care program began slowly after its October 2012 launch, but has increased in recent months. CCHP served a total of 187 participants through December 2013. Over the first few months of operation, CCHP learned that its Link2Care staff could not handle as many patients as originally anticipated; as a result, CCHP revised downward its enrollment target from 870 to 609. Figure 5 shows CCHP's participant count by month of enrollment.

[10] Any hospital visit at Cooper, Virtua (Camden and non-Camden locations) and Lourdes (Camden and non-Camden locations) counts toward a patient's admission count for eligibility purposes (two or more admissions in six months). However, Link2Care attempts to enroll patients only when they are admitted to Cooper and Lourdes-Camden. In the first quarter of 2014, one additional hospital system in southern New Jersey (Kennedy Health System) will begin to submit data to the HIE. CCHP also hopinghopes to bring an additional hospital network—Inspira Health Network—into the HIE in the next six months. When that process is complete, Link2Care will continue to enroll participants at the original two locations and will begin to include patient admissions at the additional hospitals toward program eligibility.

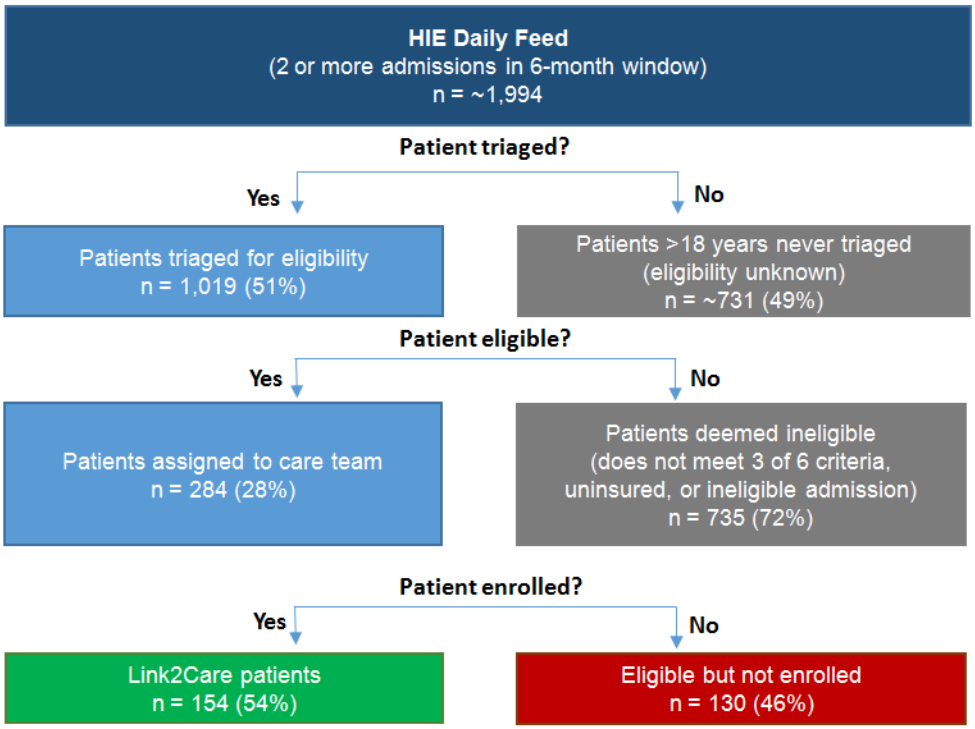
Figure 5. Direct Participants, Link2Care, October 2012 to September 2013



Source: Lewin fifth quarterly reporting period (July, August, and September 2013). "Quarterly Awardee Performance Report: Cooper University Hospital." Prepared for CMS and submitted on December 6, 2013.

The patient identification and enrollment process is illustrated in Figure 6. After a Link2Care staff member completes the triage process and determines that a potential participant meets the eligibility and inclusion criteria, the staff member assigns the patient to a care team. A member of the care team (usually a community health worker) travels to the inpatient facility that admitted the patient and conducts a pre-enrollment bedside visit. Community health workers use a technique called motivational interviewing to encourage participation in Link2Care. This technique engages patients in a collaborative and person-centered discussion focused on goal-setting and motivating behavior change. Program staff might not be able to conduct a pre-enrollment visit for two reasons. First, the patient is at the hospital but unavailable to meet the Link2Care representative at the time of the visit (for example, the patient has been taken for imaging). Second, the patient was discharged before the visit. Though they provide services to enrolled participants in the community, care team members do not conduct pre-enrollment visits after discharge. As a result, Link2Care enrollees must opt into the program while they are in the hospital. For those who to choose to participate in the program, enrollment begins on the date that the patient returns home or to the community and meets with the Link2Care care coordination team.

Figure 6. Link2Care Patient Flow (sample of participants drawn from December 2012 to November 2013)



Source: CCHP, December 11, 2013.

Staff conduct Link2Care patient identification and enrollment on a rolling basis, depending on the capacity of the program to conduct pre-enrollment visits and provide care management services. Because the program does not have full-time staff dedicated to patient identification and enrollment, these processes only occur when intake staff have time and when care management staff have an opening. However, CCHP plans to hire dedicated staff (through non-HCIA resources) to handle clinical triage and patient enrollment on a full-time basis. This additional staffing capacity will enable the Link2Care program to recruit more patients on weekends and during periods of high admissions and to reduce the number of eligible participants lost to discharge.

V. Workforce and Training

Although Link2Care launched in October 2012, it was understaffed for three months following program launch. CCHP now employs 19 HCIA-funded and eight in-kind staff for the Link2Care program, as described in Figure 2 (above) and Table 3.

Table 3. Staffing Levels as of January 2014

Position	Full-Time Staff	Roles
Community Health Worker	2	Care management activities
Health Educator/Health Coach	4	Care management activities
Management or Administrative Staff	5	Program operations
Registered Nurse	2	Offers clinical guidance, supervises care management teams, and conducts home visits
Licensed Practical Nurse	4	Coordinates participants' care, conducts home visits and other care management activities

Table 3 *(Continued)*

Position	Full-Time Staff	Roles
Social Worker	1	Assists participants with behavioral and social issues
Intervention Specialist/Outreach Worker	1	Assists participants with housing issues
Total HCIA-Funded Staff	**19**	
In-Kind Organizational Staff	8	Management, health information exchange, program monitoring, and legal staff
Total Link2Care Staff	**27**	

Source: Lewin fifth quarterly reporting period (July, August, and September 2013). "Quarterly Awardee Performance Report: Cooper University Hospital." Prepared for CMS and submitted on December 6, 2013.

Note: The program manager, the 19th Link2Care employee, was hired after the September 2013 report.

Given the small number of Link2Care staff members, CCHP takes a relatively informal approach to training, providing modules on an as-needed basis. Link2Care's nursing staff, social workers, and community health workers participate in training modules together. Health coaches, who are AmeriCorps volunteers on 10-month rotations, receive an intensive version of the training modules. These selected modules reflect the priorities of the program and the needs of the Link2Care participants. For example, because more than 80 percent of Link2Care participants have been diagnosed with diabetes, CCHP has made training on diabetes self-management a priority. Similarly, CCHP regularly provides training on motivational interviewing techniques, because it uses these techniques to fully engage participants in enrollment and care management. Other training topics include navigation of the HIE, harm-reduction approaches to treatment, chronic disease management, and Health Insurance Portability and Accountability Act of 1996 compliance. CCHP also adapts the content of training modules in response to formative feedback from internal staff and program stakeholders. For example, after enrolling a participant with suicidal behavior, CCHP added a training module for suicidal behavior and crisis response.

CCHP administrators report that competing demands on staff time limit the amount of training they can reasonably expect staff to complete. In the future, CCHP might further formalize its approach to training. For instance, it hopes to partner with a local community college to help LPNs earn the certifications needed to become RNs, which CCHP believes would help to increase the number of RNs in Camden who are trained and certified to do the community-based work that Link2Care provides.

VI. Future Plans

A. Program Monitoring to Improve Operations

Link2Care has recently implemented a more data-driven approach to improving its operations. CCHP administrators have identified several key areas for program monitoring that directly relate to internal program goals. For instance, CCHP administrators report that primary care offices have not been able to accommodate Link2Care patients within seven days of discharge, which is a key component of the Link2Care intervention model. CCHP has incorporated this metric as one of four key measures that it will track on a weekly basis:

1. Number of patients receiving home visits within 72 hours of discharge

2. Number of patients visiting a primary care provider within seven days of discharge
3. Total number of hours the care teams devote to patients
4. Total number of patients enrolled per week

After CCHP collects data on these metrics, it believes it will be better equipped to identify and address implementation challenges. For instance, CCHP will now know more precisely the number of patients visiting a primary care provider within seven days of discharge and can devote an appropriate level of staff effort to address the issue. CCHP has already developed one strategy to improve participants' access to providers: Link2Care health coaches will meet with office staff at local primary care practices to discuss the importance of primary care visits for recently hospitalized patients. CCHP also reports that, to date, this enhanced monitoring effort has resulted in more participants with home visits and care teams devoting more time to patients.

B. Plans for Randomized Controlled Trial

Partnering with researchers at the Massachusetts Institute of Technology and The Abdul Latif Jameel Poverty Action Lab (MIT/J-PAL), CCHP plans to launch a randomized controlled trial (RCT) to evaluate the Link2Care program in March 2014. Participants will be randomized into treatment and control groups, with assignment occurring after Link2Care staff members obtain patients' consent. To accommodate the RCT, CCHP will increase its enrollment target for the final year of the HCIA initiative to 800 participants; of these, 400 will be assigned to the treatment group (receive the Link2Care intervention) and 400 will be assigned to the control group.

The 400 study participants randomized into the treatment group will account for a large proportion of Link2Care's overall enrollment goal of 609 participants. During the first five program quarters (October 2012 through December 2013), Link2Care has enrolled 187 participants. With the additional 400 study participants that it anticipates enrolling in the program beginning in March 2014, the total expected number of study participants will be 587.[11]

CCHP staff do not expect to make any changes to the Link2Care program itself. However, they plan to increase enrollment by expanding eligibility to pregnant women and using supplemental MIT/J-PAL funding to expand staffing capacity. One new staff member will be responsible for consistently conducting the patient chart review that Link2Care uses to determine eligibility. Another new staff member—an engagement specialist—will conduct all pre-enrollment visits. As a result, care team members who had previously handled these tasks will be able to devote more time to care coordination activities. CCHP administrators believe that the new staff members will increase the number of eligible patients identified on a daily basis and reduce the number of potential participants they are unable to reach before enrolling into Link2Care.

[11] We calculate 587 anticipated enrollees when summing enrollment to date plus 400 participants who are projected to be randomized into the treatment group and enrolled during the RCT that begins in March 2014. Given the lag in reporting, we have not yet received the enrollment figures from the first quarter of 2014. It is possible that the Link2Care program will have exceeded the anticipated enrollment target of 609 participants when accounting for these months of enrollment.

DENVER HEALTH AND HOSPITAL AUTHORITY

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DENVER HEALTH AND HOSPITAL AUTHORITY

SUMMARY OF PROGRAM DESIGN AND IMPLEMENTATION EXPERIENCE

MARCH 2014

Tricia Higgins and Lauren Hula

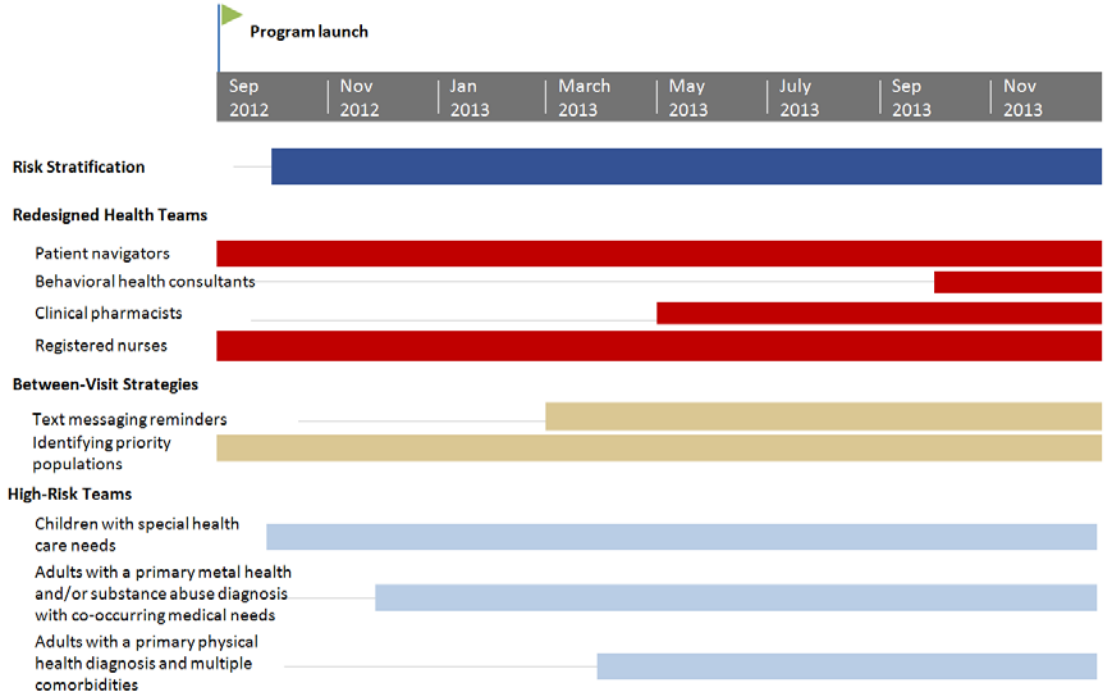
In this brief, we describe the primary care redesign program that Denver Health and Hospital Authority in Denver, Colorado, is implementing with Health Care Innovation Award (HCIA) funding from the Center for Medicare & Medicaid Innovation (CMMI). The purpose of this brief is to describe the design of the program and to highlight implementation experiences one-and-a-half years after the receipt of the award. Sources of information for this brief include program documents, such as application materials and quarterly reports, and telephone discussions and follow-up communications with program administrators. This brief describes the status of the program as of December 2013. We will update the brief as additional information becomes available.

I. Overview

Denver Health, the largest provider of health care to Medicaid beneficiaries and uninsured patients in Colorado, is a nationally recognized, integrated safety net system with a history of pursuing quality improvement and health systems innovation based on Lean principles.[1] Denver Health received a $19.8 million HCIA award to implement its 21st Century Care Plan. The goal of the 21st Century Care Plan is to transform Denver Health's primary care delivery system to more effectively meet its patients' medical, behavioral, and social needs. The transformation plan includes four key components: (1) stratify patients based on risk so that additional support services can be most efficiently allocated, (2) redesign Denver Health's current health care delivery teams, (3) leverage health information technology (IT) to provide between-visit support, and (4) create new high-risk clinics to provide individualized care to patients with the most complex conditions. The 21st Century Care Plan aims to improve patient health outcomes by 5.0 percent, increase patient satisfaction with between-visit care by 5.0 percent (without decreasing visit-based care satisfaction), and decrease the cost of care by 2.5 percent. Figure 1 shows the implementation status of each of the program's key features.

[1] Meyer, H. "Life in the 'Lean' Lane: Performance Improvement at Denver Health." *Health Affairs,* Vol. 29, no. 11, 2010, pp. 2054–2060.

Figure 1. 21st Century Care Plan Implementation Time Line



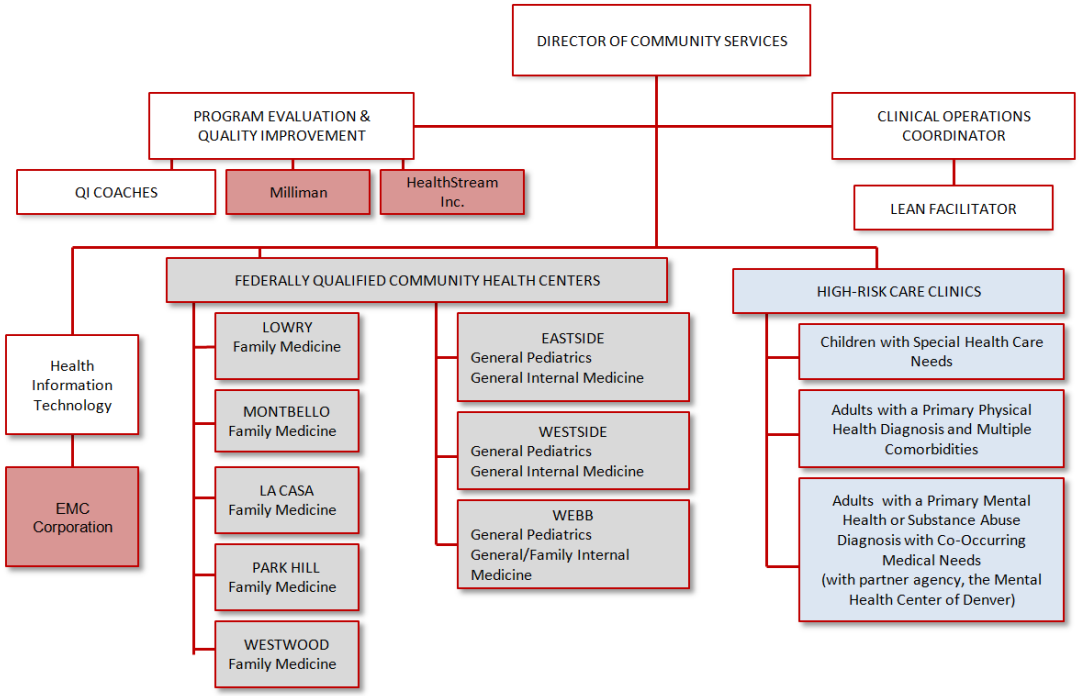
Source: Adapted from Denver Health's HCIA quarterly reports, December 2012 to December 2013.

II. Organizational Structure

Denver Health is an integrated delivery system that includes eight federally qualified health centers (hereafter referred to as community health centers), 15 school-based health centers, an ambulatory specialty care center, a 500-bed acute care hospital with a Level 1 trauma center, an urgent care facility, and a 100-bed nonmedical detoxification facility. The community health centers operate multiple clinics; however, the 21st Century Care program has been implemented primarily in the community health centers' family medicine, general internal medicine, and general pediatrics clinics (Figure 2). Denver Health's school-based clinics and urgent care center are involved in the program, although to a lesser extent than the community health centers. Since June 2013, HCIA-funded staff have worked in all eight community health centers (shaded in grey).[2] By April 2013, the 21st Century Care program had also established three new specialty high-risk clinics (shaded in blue). A program evaluation team and a health IT group support the 21st Century Care program. These staff members include a combination of HCIA-funded and in-kind funded positions.

[2] Denver Health and Hospital Authority. HCIA Narrative Progress Report, April-June 2013, page 3.

Figure 2. Denver Health 21st Century Care Organizational Chart



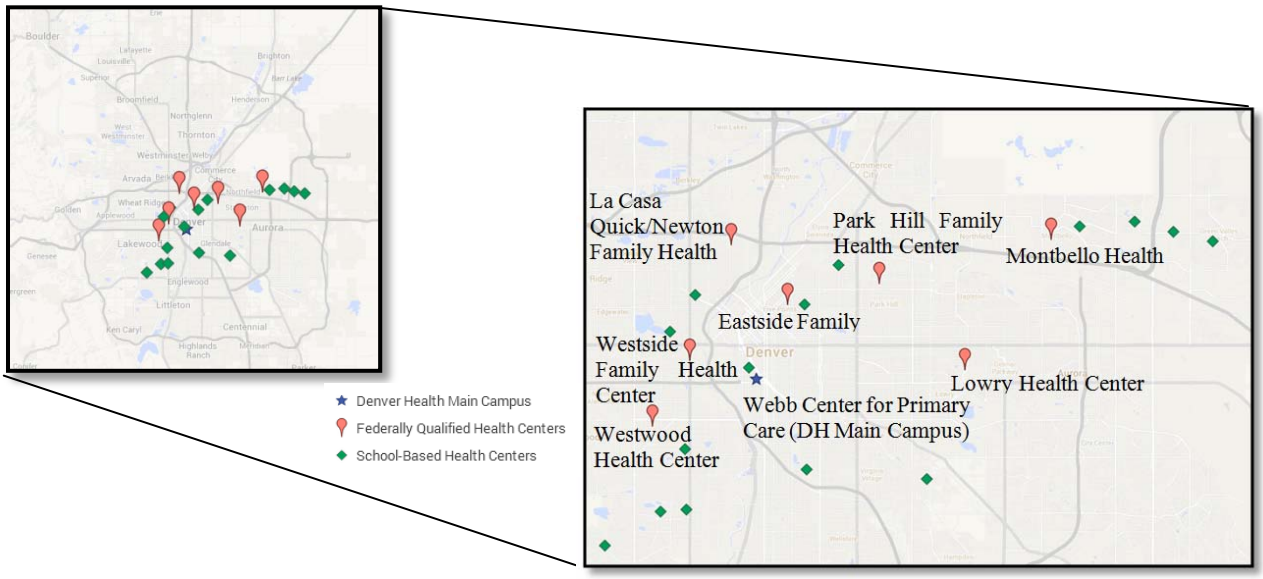
Source: Adapted from an organizational chart provided by Jessica Johnson-Simmons, clinical operations coordinator, Denver Health and Hospital Authority, January 17, 2014.

Note: QI = quality improvement.

Denver Health is partnering with the Mental Health Center of Denver (MHCD) to integrate behavioral health services into primary care sites and to operate a specialty high-risk clinic for adults with serious mental health and substance use problems. MHCD is Denver Health's community mental health provider and serves primarily a chronically mentally ill population. Denver Health and MHCD have a long history of collaboration, and there is overlap between patients Denver Health serves in its inpatient psychology unit and substance use treatment program and patients seeking outpatient mental health services at MHCD. Denver Health and MHCD previously shared staff at MHCD and in its school-based clinics.

Denver Health also works with three subcontractors on its HCIA-funded project (shaded in red). The first, EMC, assists in the development and implementation of health IT initiatives. The second, Milliman, created an initial risk-stratification algorithm (described in greater detail later in this report) and continues to provide actuarial support to Denver Health. In January 2013, HealthStream, the third subcontractor, began conducting an expanded Consumer Assessment of Healthcare Providers and Systems (CAHPS) survey of the primary care clinics as part of Denver Health's self-monitoring quality evaluation.

Figure 3. Denver Health Primary Care Clinic Locations



III. Program Features and Implementation Progress

The 21st Century Care Plan adheres to the concept that care should be based on a patient's individual needs. Although the target population for this intervention is almost entirely low-income people (more than 90 percent of Denver Health patients have incomes below 150 percent of the federal poverty level), patients' health status and health care needs are not uniform.[3] Denver Health serves a large number of comparatively low-cost, healthy patients; it also serves a substantial number of children with special health care needs, high-risk adults, and adults and children with chronic conditions who, without careful monitoring and support, are at risk of becoming high utilizers.

The 21st Century Care program has four main components to address the needs of its target population: (1) using health IT to stratify patients into risk groups and to customize patient care, (2) redesigning health teams to support the system's full range of patients, (3) implementing between-visit care services, and (4) launching high-risk clinics to serve patients with the most complex conditions. Denver Health had piloted several elements of the 21st Century Care Plan on a small scale (in one or two clinics or with specific subpopulations) before receiving the HCIA award. Leaders viewed the HCIA award as an opportunity to take these pilot programs to scale throughout Denver Health's delivery system. We describe each of these initiatives, and the challenges that Denver Health has faced implementing them, next.

A. Risk Stratification

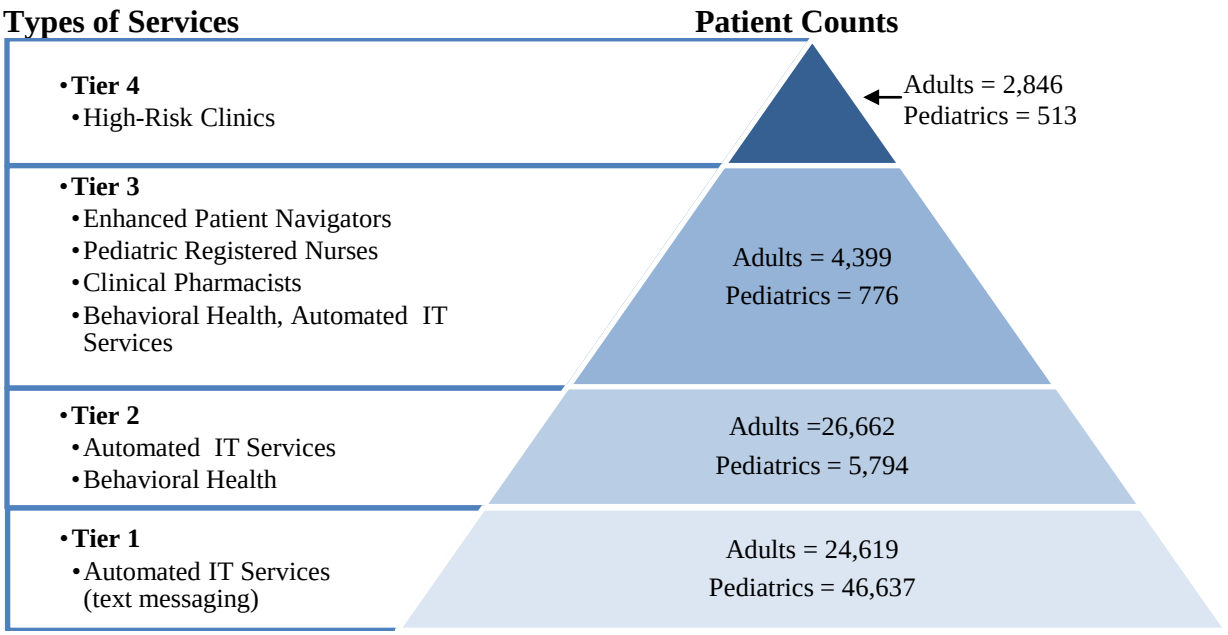
The 21st Century Care program stratifies patients into four tiers based on their risk of physical and behavioral health issues and the services they use, and assigns each tier to an

[3] Denver Health and Hospital Authority, Health Care Innovation Challenge grant submission, January 2012, page 7.

appropriate level of intervention support. Figure 4 lists the number of patients in each tier and the corresponding types of services provided to each tier as of November 2013. Although the intervention focuses on enhanced services to high-risk patients (Tiers 3 and 4), all patients benefit from health IT investments, such as automated text messaging.

The risk-stratification method has been a dynamic process, with Denver Health continuing to increase the complexity of its tiering logic over time. Denver Health originally collaborated with Milliman actuaries to create four risk-stratified tiers for children (younger than 19) and adults (19 or older) based on a financial model of future service costs. However, clinicians found these rankings difficult to use because they were based purely on financial models, rather than use of health care services or clinical diagnoses. In response, Denver Health recalibrated the tiering methodology to overlay patients' use of health services, such as emergency department or inpatient visits. Denver Health also experimented with using patient registries, such as those developed for patients with diabetes and children with special health care needs (CSHCN), to inform the tiering strategy. However, the data in these registries varied too much to develop a consistent tiering methodology, particularly for diabetic patients, whose lab results can vary widely from one visit to the next. Denver Health was able to incorporate information from the registry for CSHCN into its tiering methodology, because these diagnoses were relatively more stable than other diagnoses.

Figure 4. Number of Patients and Types of Services Provided, by Risk Stratification Tiers



Source: Personal communication with Tracy Johnson, Ph.D., director, Health Care Reform Initiatives, Denver Health and Hospital Authority, November 27, 2013.

The latest iteration of risk-stratification ties the tiering algorithm to clinical diagnostics, informed by 3M clinical risk groups (CRGs). Using this process, Denver Health continues to group patients into four tiers, but also categorizes patients into one of nine statuses based on diagnosis (for instance, patients with cancer have a certain status indicator). The new method makes it easier for clinicians to understand and identify patients who are eligible for enhanced services.

B. Redesigning Health Teams

The second key component of Denver Health's program focuses on the addition of new clinicians and social workers in the community health centers to address the needs of patients with moderately complex conditions. The new staff positions include (1) patient navigators, (2) behavioral health consultants, (3) clinical pharmacists, (4) registered nurses, and (5) licensed clinical social workers.

Patient navigators. A major component of the redesigned health teams has been the placement of 24 patient navigators in all eight community health centers. Patient navigators focus on between-visit monitoring and assist high-risk patients with scheduling appointments, accessing care, understanding clinical and self-management information, and connecting with appropriate community services. Patient navigators have been primarily responsible for providing the between-visit support that we describe in the next section. However, the introduction of patient navigators in primary care clinics has created challenges. Existing staff often had little or no previous experience with patient navigators and there was a lack of understanding about the patient navigator's role. In addition, some sites did not have the necessary computers, telephones, and work spaces for patient navigators to operate effectively. Denver Health is working to improve the integration of patient navigators as part of its primary care teams and to more clearly focus patient navigators' efforts on developing relationships with specific, high-risk patients. Denver Health also hopes to equip patient navigators with health IT tools so that they will be automatically alerted when patients miss certain events, such as failing to refill a prescription.

Behavioral health consultants. Another important aspect of the 21st Century Care program's efforts to redesign health teams has been the expansion of a previous primary care–behavioral health pilot program that embeds behavioral health consultants in Denver Health's community health centers. Since October 2013, 3.4 full-time equivalent behavioral health consultants have collaborated with primary care providers in all three general internal medicine clinics (Eastside, Westside, and Webb) to conduct patient evaluations and safety assessments, and to refer patients for additional, outside treatment. Denver Health administrators report that the addition of behavioral health consultants has been well received by the clinics, in part because their role and activities are well defined and easily understood by other team members.

Clinical pharmacists. Denver Health also added two clinical pharmacists to health teams to assess lab results, vital signs, and medication adherence; prepare and monitor medications; encourage lifestyle modifications; and order lab tests as appropriate for ongoing monitoring of patients with specified comorbidities. The clinical pharmacists joined the general internal medicine clinics teams in the Eastside and Webb community health center teams starting in May 2013.

Registered nurses. Registered nurses have joined all three of Denver Health's general pediatric clinics (Eastside, Westside, and Webb). These nurses, 2.8 full-time equivalent positions, assist pediatric patients with transition management support. For example, registered nurses triage Tier 4 patients to identify those who are eligible to receive services at the special needs clinics (described in more detail later) or to help transition patients from the hospital to other needed services. Most of the new registered nurses were in place by the end of 2012.

C. Between-Visit Strategies

According to program administrators, the state's Medicaid expansion program that went into effect in January 2014 will increase demand for health services beyond Denver Health's current capacity. By creating more avenues for between-visit care, such as text messaging and telephone communication, Denver Health hopes to shift its focus away from traditional office visits and increase its primary care capacity to enable the system to care for 15,000 additional patients. To date, Denver Health has focused on implementing text messaging as a low-cost way to contact both low- and high-risk patients and using patient navigators, social workers, and case managers to communicate with high-risk priority patients between appointments.

Text messaging reminders. Denver Health implemented an enhanced version of its patient relationship management (PRM) tool, which tracks patient care and provides text messaging capabilities. Denver Health starting using PRM, a Microsoft application, as part of a previous research project. Denver Health launched its expanded automated text message services in March 2013. By December 2013, the system had sent a total of 206,811 text messages and received 57,044 responses. Although Denver Health initially used text messages to provide appointment reminders, it is expanding the program to include health reminders (see Table 1 for a description of the types of text messages provided).

Table 1. Health IT Text Message Interventions

Health IT Intervention Program	Patient Population	Brief Description	Implementation Date	Number of Clinics Involved	Number of Texts Sent	Number of Text Responses
Appointment Reminders	Adult	Appointment reminder texts sent 3 days and 1 day before appointment	March - July 2013	8	121,234	45,302
Diet Support	Adult	Three messages weekly tied to a theme (for example, goal setting, self-management, meal or snack ideas)	Piloted at Webb Family Internal Medicine Clinic beginning July 2013, then rolled out to six more clinics in March 2014	7	3,545	247
Flu Vaccine	Adult	Reminder to schedule a flu vaccine visit	November 2013	11	80,413	11,269
Well-Child Visit	Pediatrics	Reminders of upcoming scheduled appointments	December 2013	3	1,619	226
Tobacco Support	Adult	Tobacco cessation support	March 2014	8		

Source: Data provided by Kathy Thompson, research projects coordinator, January 24, 2014.

Identifying priority populations. Using the PRM system to improve data management capabilities, Denver Health also strengthened its ability to identify and reach out to priority populations that would benefit from enhanced services. The system lets Denver Health generate a daily list (with a 24-hour lag) of specific groups of patients, such as those with poorly controlled chronic illnesses or those who have experienced potentially preventable events. Based on these lists, HCIA-funded patient navigators, social workers, and case managers contact patients who would benefit from follow-up care, previsit preparation, or transition care. Staff members also reach out to patients with chronic conditions who have not had a recent visit.

The process of identifying priority populations has evolved over time, with Denver Health improving its ability to identify the highest-risk patients by expanding the types of populations included in the identification process. For example, Denver Health first directed patient navigators to focus on contacting adults with uncontrolled hypertension who had not seen a primary care provider for at least three months. Four months after the program launched, Denver Health refocused its efforts to help patient navigators identify and reach out to all high-risk patients in Tiers 3 and 4. In addition, Denver Health expanded outreach to include adults with diabetes or who would benefit from cancer screening, and children with asthma or who are overdue for preventive care.

Interactive web portal. As part of the 21st Century Care program, Denver Health planned to develop an interactive health web portal for providers and patients to communicate. However, because of the challenges it encountered updating its electronic health record (EHR) system, Denver Health decided that it currently does not have sufficient capacity to develop the web portal. Denver Health no longer plans to implement a portal as part of its HCIA-funded initiative.

D. High-Risk Teams

Through the 21st Century Care program, Denver Health established three specialty clinics to serve the highest-risk patients. These clinics focus on the CSHCN population, adults with a primary physical health diagnosis and multiple comorbidities, and adults with a primary mental health and/or substance abuse diagnosis with co-occurring medical needs. Denver Health made the development and implementation of these clinics a major focus of its HCIA-funded activities. We describe each specialty care clinic next.

CSHCN clinic. The CSHCN high-risk clinic, located within Denver Health's main campus pediatrics clinic, began accepting Tier 4 pediatric patients in October 2012. The clinic is built around an existing multidisciplinary team that Denver Health created to work with children with multiple chronic needs. Although the clinic still provides most of its services to children with multiple needs—especially follow-up care for premature babies—the HCIA award enabled Denver Health to expand the clinic's capacity to serve children with other disabilities and developmental delays. The multidisciplinary clinical team includes a physical therapist, nutritionist, clinical psychologist, and staff that provide enhanced care coordination support. (Figure 2 contains a list of CSHCN clinic staff positions.) Denver Health administrators report that this clinic, which became fully operational in January 2013, is functioning well. A number of children would benefit from the high-risk clinic, but their parents prefer to maintain their current primary care providers. In response to this concern, Denver Health developed a rotating consultation model. Once a month, clinic staff travel to the pediatric community health centers (Eastside and Westside) to help primary care providers there address the special needs of their Tier 4 pediatric patients.

Adult mental health clinic. In December 2012, the adult mental health high-risk clinic at MHCD began to accept Tier 4 adult patients with severe mental health conditions and two or more hospitalizations in the previous year. This clinic aims to reduce potentially avoidable use of medical services due to untreated mental health conditions, unstable housing, and other social factors. Before the HCIA award, MHCD had a high-intensity team for patients with persistent mental illness. The HCIA award enabled MHCD and Denver Health to add capacity for another 100 patients and to create a clinic specifically to accept patients transferring from Denver Health.

Denver Health administrators report that the biggest challenge facing the adult mental health clinic has been identifying patients who should be referred there for care. Because Denver Health's patient records are not integrated with MHCD, Denver Health cannot identify patients who are already connected to the mental health system. This makes it difficult to coordinate patient care between the two facilities, adding to the inherent complexities of working with patients suffering from serious mental illness. Denver Health has worked to redesign the referral process to the MHCD high-risk clinic. Clinical and health IT staff collaborate to generate a daily list of eligible Tier 4 patients enrolled at Denver Health. Staff members visit eligible patients while they are in the hospital to discuss the possibility of seeking follow-up care at the clinic.

Adults with a primary physical diagnosis and multiple comorbidities. The third high-risk clinic, for adults with a primary physical diagnosis and multiple comorbidities, opened at Denver Health in April 2013. Denver Health generates a daily list of patients eligible for care at this clinic, which includes patients with three hospital admissions within the past 12 months or two hospital admissions and a mental health diagnosis. An intensive outpatient clinic team reviews the list and identifies adult patients with chronic illnesses who would benefit from the clinic's efforts to provide enhanced clinical and self-management support. Denver Health administrators report that it has been easy to identify patients who are eligible for this clinic. However, it has been a challenge to identify patients who could benefit from the enhanced specialty services it offers, rather than patients who will likely remain high utilizers regardless of the care they receive (such as cancer patients).

IV. Target Population and Assessment

A. Target Population

Denver Health used the following criteria to define which patient groups would be part of its intervention population:

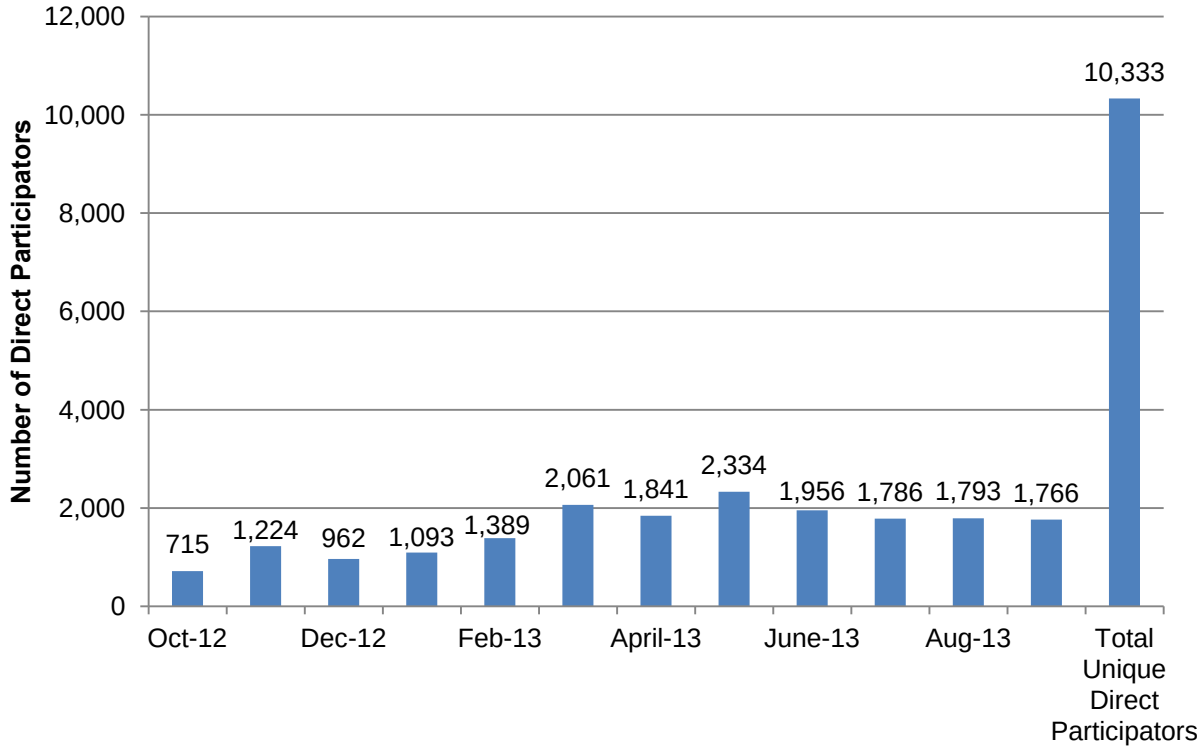
- All primary care patients at Denver Health—defined by the awardee as any person who has made a primary care visit to Denver Health in the previous 18 months
- All enrolled members of Denver Health's managed care plan
- Other high utilizers of Denver Health services who do not fall into one of the previous two categories; these high utilizers are identified as (1) people with three or more of any of the following in the past 12 months: an urgent-care visit, an ED visit, or a hospitalization (including inpatient and observational stays); and (2) people with two or more of those same visits and a serious mental health diagnosis

B. Assessment

As a result of the broad criteria used to define the target population, 21st Century Care affects most regular users of Denver Health. Patients do not have to opt in to the 21st Century Care intervention. Rather, Denver Health attributes patients to the intervention population, in many cases without patients' knowledge of this attribution. At any given time, the total intervention population is expected to be from about 120,000 to 135,000 people, with a larger population expected in later years of the program.

As of September 2013, the 21st Century Care program provided services to 10,333 unique participants. Actual participation is 6 percent below Denver Health's targeted level. Figure 5 displays the unique monthly participant count since the program began.

Figure 5. Number of HCIA Direct Program Participants

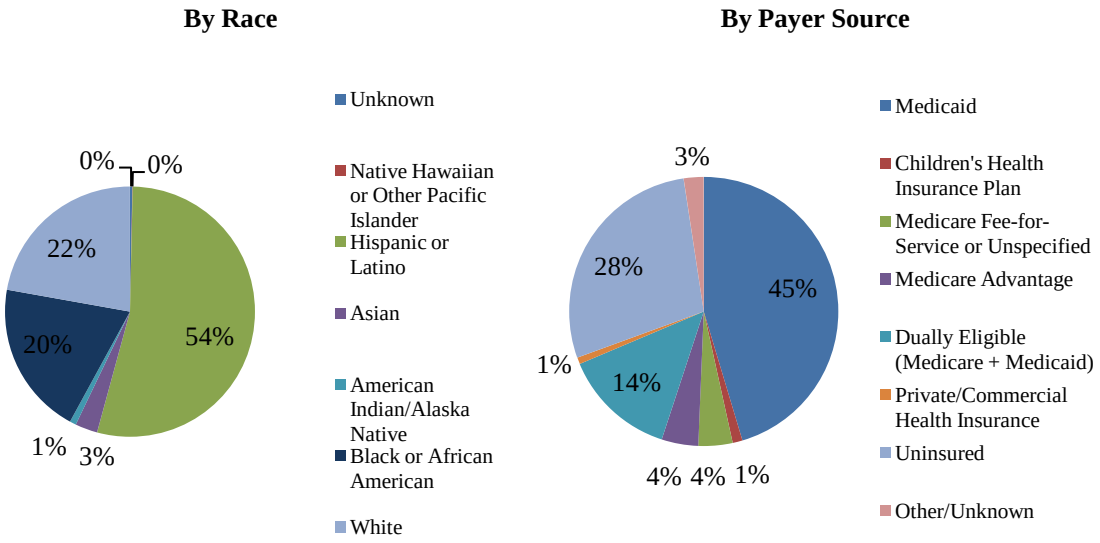


Source: Lewin Health Care Innovation Awards, fifth quarterly reporting period, July– September 2013.

Notes: Each bar represents the number of unique participants in that month. Summing two (or more) months would double count those who participate in two (or more) months.

Most of the patients served by the 21st Century Care program through September 2013 were Hispanic/Latino (54 percent), followed by white and black/African American (22 and 20 percent, respectively). About 45 percent of the patients were enrolled in Medicaid, 28 percent were uninsured at the time they received services, and 14 percent were dually eligible for Medicare and Medicaid (see Figure 6).

Figure 6. 21st Century Care Patient Distribution, by Payer Source and Race/Ethnicity



Source: Lewin Health Care Innovation Awards, fifth quarterly reporting period, July–September 2013.

V. Workforce and Training

A. Staff

The addition of new staff to support Denver Health's community health centers, as well as the newly created high-risk care clinics, have been two of the most critical components of the 21st Century Care program. Denver Health allocated approximately $8.9 million in HCIA funding to the financing of new clinical resources and staff. In total, Denver Health has used HCIA-funding to add 61.5 full time-equivalent (FTE) staff members.[4] As of January 2014, Denver Health had added 33.8 FTE staff positions in its eight community health centers (Table 2). Most of these new positions are for patient navigators, followed by behavioral health consultants, registered nurses, pharmacists, and social workers. Denver Health allocated additional staff to each clinic based on an assessment of the size of the clinics' Tier 3 and Tier 4 patient populations. In addition to these new community health center staff members, Denver Health added approximately 16 FTEs to its high-risk clinics. Denver Health also allocated more than $8 million in HCIA funding to its health IT division. As of September 2013, Denver Health hired 11.6 new health IT staff to help implement various aspects of the 21st Century Care program.

[4] Lewin Group (December 2013). Health Care Innovation Awards, fifth quarterly reporting period, July–September 2013, page 24.

Table 2. HCIA-Funded Community Health Center Clinical Staff, in Full-Time Equivalents

Community Health Center	Type of Clinic	Patient Navigators	Behavioral Health Consultants	Registered Nurses	Clinical Pharmacists	Licensed Clinical Social Workers
Eastside	General internal medicine	2.0	1		1	
Eastside	General pediatrics	1.0		0.6		
La Casa	Family internal medicine	2.0				
Lowry	Family internal medicine	2.0	0.17			
Montbello	Family internal medicine	1.5				
Park Hill	Family internal medicine	2.0				
Webb	General pediatrics	1.5		1.1		0.5
Webb	General/family internal medicine	5.0	1.4			
Westside	General pediatrics	2.0		1.0		1.0
Westside	General internal medicine	4.0	0.95		1	
Westwood	Family internal medicine	1.0				
Total		**24.0**	**3.5**	**2.8**	**2**	**1.5**

Source: Data provided by Kathy Thompson, research projects coordinator, January 24, 2014.

B. Staff Training

Denver Health offers nine training courses for its staff. Most of these are general training courses, such as new employee orientation and computer system training. At the end of the first year of the HCIA award, Denver Health trained 448 people over 7,447 training hours (Table 3). The most time-consuming training program designed specifically in support of the 21st Century Care program is the patient navigation certification course. Denver Health developed the patient navigation certification course in collaboration with the University of Colorado Health Sciences Center. The program, which requires 32 hours of training, is administered by the School of Public Health at the University of Colorado. As of September 2013, four Denver Health patient navigators had completed this training.[5]

[5] Lewin Group (December 2013). Health Care Innovation Awards, fifth quarterly reporting period, July–September 2013, page 28.

Table 3. 21st Century Care Training Courses and Number of Trainees

Training Courses	Duration of Training Course (hours)	Number of Trainees
Patient Navigation Certification at University	32	4
Denver Health New Employee Orientation	8	10
Other Orientations	20	6
Computer System Training	8	10
Clinic Orientation	30	6
Basic Life Support Training	6	6
Cardiovascular Disease, Diabetes, Physical Activity and Nutrition	8	4
CMMI New Employee Orientation	4	5
Patient Relationship Management (PRM)	6.5	10
Total Cumulative Number of Trainees (July 2012 – September 2013)		**448**
Total Number of Cumulative Training Hours (July 2012 – September 2013)		**7,447**

Source: Lewin Health Care Innovation Awards, fifth quarterly reporting period, July–September 2013.

VI. Future Plans

Denver Health hopes to accomplish several goals through its 21st Century Care program over the rest of the award period:

- Ensure that the high-risk clinics function at full capacity.
- Identify and engage primary care patients who do not qualify for the high-risk clinics, but who would benefit from enhanced care management.
- Integrate the new team members into the primary care sites, including more clearly defining the role of patient navigators, working with health teams to understand the role of patient navigators, and ensuring that patient navigators work with the highest-risk patients.
- Identify the components of the program that have generated the most savings and develop a plan for sustaining these components.

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FINGER LAKES HEALTH SYSTEMS AGENCY

SUMMARY OF PROGRAM DESIGN AND IMPLEMENTATION EXPERIENCE

MARCH 2014

Rachel Shapiro and Jennifer Lyons

In this brief, we describe the primary care redesign (PCR) program being implemented by the Finger Lakes Health Services Agency (FLHSA) in the six counties surrounding Rochester, New York, under Health Care Innovation Award (HCIA) funding from the Center for Medicare & Medicaid Innovation (CMMI). The purpose of this brief is to describe the design of the program as it is currently being implemented and to highlight implementation experience one-and-a-half years after the receipt of award. We based the information presented in this brief on a review of program documents, including application materials and quarterly reports, as well as telephone discussions and follow-up communication with program administrators. This brief describes the status of the program as of December 2013. We will update the brief as additional information becomes available.

I. Overview

FLHSA received a three-year HCIA award of $26,584,892, and used the funding to launch its program, Transforming Primary Care Delivery: A Community Partnership (hereafter referred to as the FLHSA program or the program) in January 2013. FLHSA decided to apply for the HCIA funding because it was a logical extension of the work conducted under its care management/coordination initiative. After the Patient Protection and Affordable Care Act was signed into law in March 2010, FLHSA, a community health planning organization and convening agency in Rochester, brought together community stakeholders to identify issues related to health care reform on which they could collaborate. The stakeholders—from businesses, community and health care organizations, and local government—decided to focus on care management and, in particular, on improving area hospital readmissions policies. The stakeholders appointed FLHSA to lead a care management and coordination initiative to improve discharge planning, provide coaching to patients during care transitions, and embed care managers in primary care practices. A State of New York Health Care Efficiency and Affordability Law grant funded the embedding of care managers at nine practices. By the time of the 2012 HCIA funding opportunity announcement, the care management and coordination initiative was in its first year of operation.

During the award period, FLHSA plans to transform primary care in the six counties surrounding Rochester in three ways:

1. **Redesign primary care processes, culture, and workforce,** guided by the *Joint Principles of the Patient-Centered Medical Home* (developed by the American

Academy of Family Physicians, the American Academy of Pediatrics, the American College of Physicians, and the American Osteopathic Association)[1]

2. **Integrate primary care with community services** by training and deploying new practice staff (care managers and community health workers) to link patients with resources, and working with the Rochester Regional Health Information Organization to expand community- and home-based providers' use of a secure electronic health information exchange
3. **Develop a communitywide outcomes-based payment model** to ensure sustainability of program activities and personnel beyond the HCIA funding period

Through this program, FLHSA aims to improve intermediate health outcomes and quality of care for its target population. The program also aims to lower health care costs for its target population by reducing preventable hospital admissions and readmissions by 25 percent and avoidable emergency department visits by 15 percent by the end of the award period. Table 1 provides an overview of the program's completed and planned activities.

[1] See http://www.aafp.org/dam/AAFP/documents/practice_management/pcmh/initiatives/PCMHJoint.pdf for more detail.

Table 1. Completed and Planned Activities for the FLHSA Program

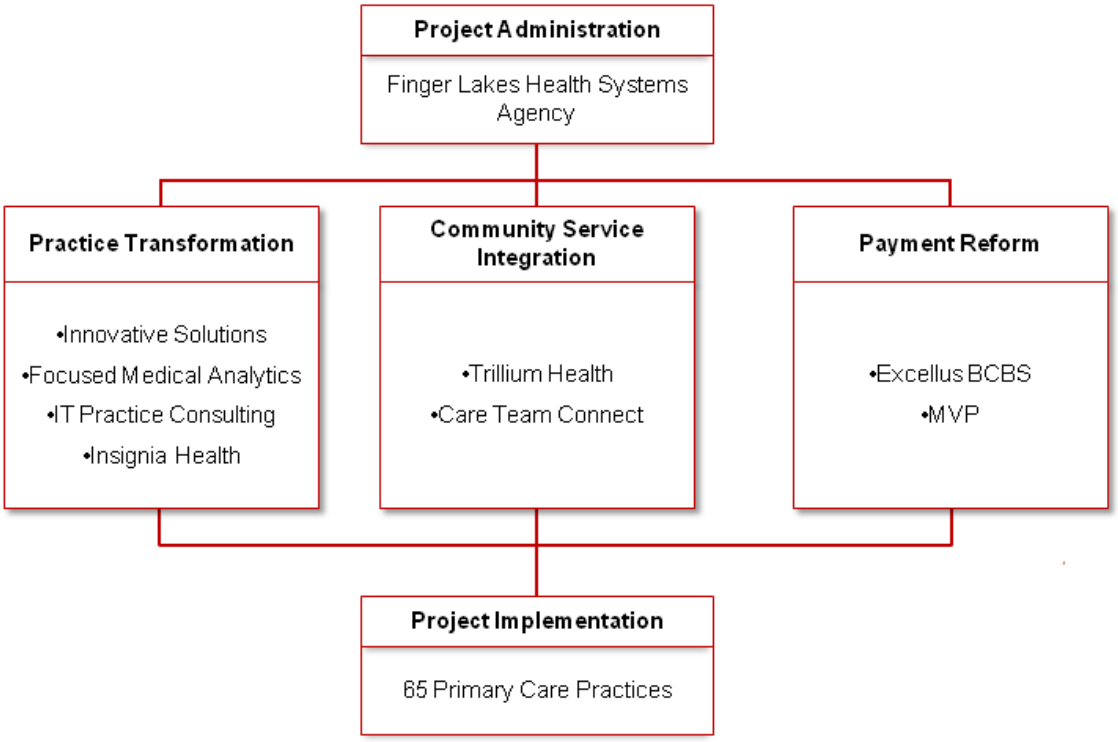
Program Quarter	Date	Activity
		Completed Activities
Q1	July 2012	• FLHSA received HCIA funding
Q1	July–August 2012	• FLHSA solicited practice applications for Cohort 1
Q1–Q2	September–December 2012	• FLHSA interviewed 37 applicants and invited 15 practices to participate in Cohort 1 • FLHSA held kickoff meetings with practice champions from each Cohort 1 practice
Q3	January–February 2013	• Program launched in Cohort 1 practices • FLHSA assisted Cohort 1 practices with care manager recruitment • FLHSA held week-long care manager training for Cohort 1 care managers • Practice improvement advisors began working with Cohort 1 practices
Q3-Q4	February–May 2013	• FLHSA solicited applications for Cohort 2 and held three orientation sessions for interested practices • FLHSA completed interviews with 27 practice applicants and invited 27 practices to participate in Cohort 2
Q4	April–June 2013	• FLHSA assisted Cohort 2 practices with care manager recruitment
Q5	July–August 2013	• Trillium Health hired and trained six community health workers and placed them at high-need practices • FLHSA held two 2-day care manager training sessions for Cohort 2 care managers • Practice improvement advisors began working with Cohort 2 practices
		Planned Activities
Q7	January–March 2014	• FLHSA to release call for Cohort 3 applications and hold orientation sessions for interested practices • FLHSA to interview applicants and invite practices to participate in Cohort 3
Q7–Q8	March–June 2014	• FLHSA to assist Cohort 3 practices with care manager recruitment
Q8	July 2014	• FLHSA to train Cohort 3 care managers • FLHSA and insurers to finalize plans for new payment model
Q10	January 2015	• Insurers to implement new payment model

Source: Quarterly awardee narrative reports to CMMI (first through sixth quarters).

II. Organizational Structure

FLHSA works with external partners, subcontractors, and members of its governing body to implement the program. Figure 1 presents the organizational chart for the program. In this section, we describe the organizational structure of, and administrative staff involved in, the FLHSA program. We provide detail on the program's workforce roles in Section V.

Figure 1. FLHSA Program Organizational Chart



Source: Quarterly awardee narrative reports to CMMI (first through sixth quarters).

BCBS = Blue Cross/Blue Shield; IT = information technology.

A. Implementing Organization

FLHSA, the awardee organization, houses program staff who administer day-to-day program implementation activities, contribute to the development of program strategy, and support program self-monitoring. To oversee program implementation, FLHSA hired an HCIA-funded program director, a clinical coordinator, a data analyst, and a program assistant (all of whom are in full-time positions). These staff members work with existing staff at FLHSA to administer specific program activities. For example, FLHSA's associate executive director leads the program's efforts to develop a new payment model, and FLHSA's associate director for research and planning provides support for data collection and self-monitoring activities to inform practice improvement. FLHSA leads (1) recruitment, assessment, and selection of primary care practices for participation in the program; (2) work with selected practices to hire and train care managers to support practice care teams; (3) provision of tailored technical assistance and support at each practice; (4) meetings of community partners to improve coordination of primary care and community-based services; and (5) collaboration with local insurers to develop a payment model that will sustain these activities after HCIA funding ends. We describe these activities in more detail in Section III.

B. External Partners and Subcontractors

FLHSA works with external organizations to plan and implement program activities. Table 2 describes the organizations with which FLHSA is partnering to move the program forward, as well as organizations with which FLHSA is subcontracting to carry out specific program activities. We describe these activities in greater detail in Section III.

Table 2. External Partners and Subcontractors

Organization	Description
Partners	
Rochester Health Innovation Collaborative (providers, payers, business, government health systems, community agencies, advocacy groups, faith-based organizations, minority coalitions, and patients/families)	Provides input on the program's efforts to better connect primary care with other community-based services
Excellus Blue Cross/Blue Shield and MVP (local insurers)	Collaborate with FLHSA to develop a new payment model to share savings among participating practices and sustain program activities after HCIA funding ends
Subcontractors	
Innovative Solutions	Provides technical assistance for the construction and maintenance of practices' care management databases
IT Practice Solutions	Helps practices extract and use patient data from EHRs
Focused Medical Analytics	Analyzes claims data from regional payers
Insignia Health	Trains care managers at participating practices on, and provides support for, use of its Patient Activation Measure
Trillium Health	Recruits, hires, and trains community health workers, who are integrated into six high-need practices
Care Team Connect	Provides a web-based care coordination platform that enables medical and nonmedical providers (for example, outpatient behavioral health and substance use treatment providers) to share and view patients' care plans across organizations

Source: Quarterly awardee narrative reports to CMMI (first through sixth quarters). Personal communication with awardee, January 3, 2014.

EHR = electronic health record; IT = information technology.

C. Primary Care Practices

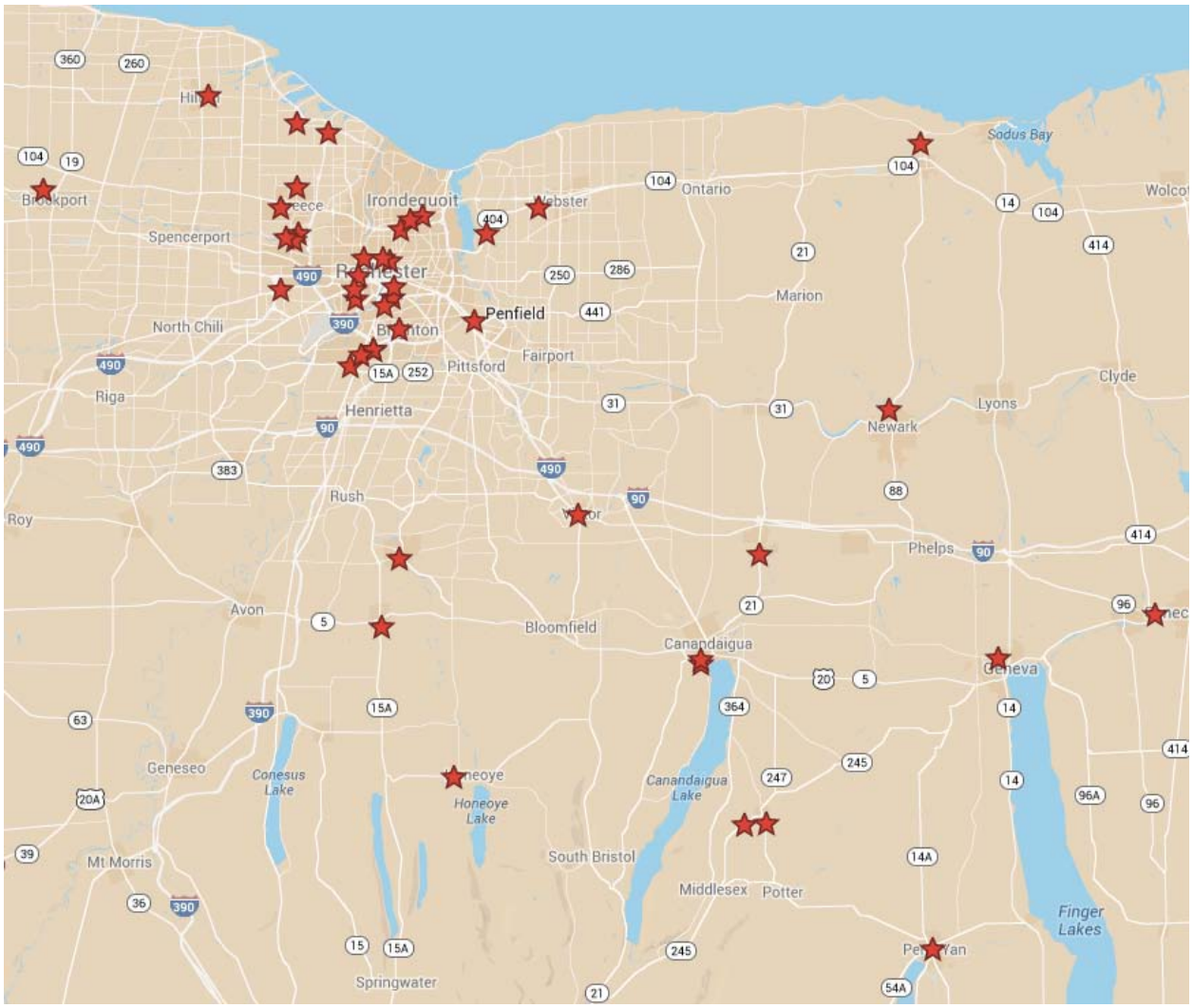
FLHSA plans to implement the program in 65 practices in the six counties around Rochester. FLHSA focuses on recruiting practices that have a large number of patients at risk for having any of three adverse events: (1) avoidable hospitalizations, (2) hospital readmissions, and (3) avoidable emergency department (ED) use. FLHSA's goal is to engage 15 practices during the first year and 25 practices in each of the second and third years.

To recruit practices, FLHSA conducts outreach to practices in the target area, circulates calls for applications, and assesses practices on the following four criteria:

1. **Number of Medicare and adult Medicaid patients** who received care at the practice in the past two years and are at risk for potentially avoidable hospitalizations, hospital readmissions, and preventable emergency department use (the approach used to assess risk status is discussed in Section IV)
2. **Use of electronic health record (EHR)** for at least six months
3. **Number of primary care providers**:
    - Four to seven full-time equivalent (FTE) physicians (Cohort 1), because FLHSA determined that this practice size would best support one full-time care manager
    - Two to seven FTE physicians, nurse practitioners, or physician assistants (Cohorts 2 and 3), because FLHSA transitioned to a new model of care manager resource allocation (described in Section III) and recognized that many practices in the six-county region relied on nurse practitioners or physician assistants to carry out primary care activities
4. **Grant readiness,** as indicated by:
    - Practice readiness score rating the practice on topics such as leadership, access, team work, data/clinical information systems, based on staff interviews (Cohort 1)
    - Practice's stated willingness to participate in award activities (Cohorts 2 and 3). (FLHSA staff discontinued the use of the assessment tool used for the first cohort because they felt that this method of scoring did not accurately predict practices' level of preparation for program implementation)

The program is currently above its target for the first two years, with 19 practices recruited in Cohort 1 and 27 practices recruited in Cohort 2. Figure 2 presents the geographic locations of these practices and Table 3 provides a list of the practices. FLHSA announced a call for Cohort 3 applications in January 2014 and held several orientation meetings for interested practices during the same month. The participating practices vary in structure and affiliation—they are private practices, federally qualified health centers (FQHCs), or part of a larger health system. Practices also vary in terms of the characteristics of their patient populations, such as race and ethnicity, age, comorbid conditions, and coverage source.

Figure 2. Map of FLHSA Program Practice Sites in Cohorts 1 and 2



Source: The Lewin Group. Quarterly awardee performance report: Finger Lakes Health Systems Agency (fifth quarter), December 6, 2013. Email communication with awardee, January 10, 2014.

Table 3. List of FLHSA Program Practices, by Cohort

Practice Site	Practice Type	Location
Cohort 1		
Anthony Jordan Health Center – Brown Square	FQHC	Rochester
Anthony Jordan Health Center – Holland Street[a]	FQHC	Rochester
Anthony Jordan Health Center – Woodward Health Center[a]	FQHC	Rochester
Bay Creek Medical Group	System	Webster
Canandaigua Medical Group	Private	Canandaigua
Clinton Family Health Center	System	Rochester
Finger Lakes Medical Associates	Private	Geneva
Highland Family Medicine	System	Rochester
Hilton Health Care	Private	Hilton
Lifetime Health Medical Group – Irondequiot practice[b]	System	Rochester
Lifetime Health Medical Group – Wilson Health Center[b]	System	Rochester
Long Pond Internal Medicine	System	Rochester
Newark Internal Medicine[c]	System	Newark
Partners In Internal Medicine	Private	Rochester
Sodus Internal Medicine[c]	System	Sodus
Unity Family Medicine at Orchard Street[d]	System	Rochester
Unity Family Medicine at St. Mary's[d]	System	Rochester
Unity Geriatric Associates	System	Rochester
Unity Internal Medicine at Ridgeway	System	Rochester
Cohort 2		
Lifetime Health Medical Group – Artemis Health	System	Rochester
Lifetime Health Medical Group – Folsom Health Center	System	Rochester
Lifetime Health Medical Group – Greece Health Center	System	Rochester
Unity Family Medicine at Country Village	System	Rochester
Unity Family Medicine at Parkway	System	Rochester
Unity Internal Medicine at Cornerstone	System	Rochester
Alexander Medical Group	Private	Rochester
Individual provider 1[e]	Private	Rochester
Individual provider 2[e]	Private	Rochester
Individual provider 3[e]	Private	Rochester
Individual provider 4[e]	Private	Rochester
Geriatrics and Medicine Associates	System	Rochester
Honeoye Valley Family Practice	Private	Honeoye Falls
Lifecare Medical Associates	Private	Seneca Falls
Medicine In Psychiatry Service	System	Rochester
Northridge Medical Group	System	Rochester
Oak Orchard Community Health Center – Brockport	FQHC	Brockport
Penn Yan Community Health	FQHC	Penn Yan
Ridgewood Med-Peds	Private	Rochester
Rushville Community Health Center	FQHC	Rushville
Thompson Health – Canandaigua	System	Canandaigua
Thompson Health – Honeoye	System	Honeoye
Thompson Health – Lima	System	Lima
Thompson Health – Shortsville	System	Shortsville
Thompson Health – Victor	System	Victor

Table 3 *(Continued)*

Practice Site	Practice Type	Location
Tri-County Family Medicine	FQHC	Dansville, Geneseo, and Nunda
Valley View Family Practice	FQHC	Rushville
Webster Medical Group	Private	Webster

Source: The Lewin Group. Quarterly awardee performance report: Finger Lakes Health Systems Agency (fifth quarter), December 6, 2013. Email communication with awardee, January 10, 2014.

Note: In its quarterly reports, FLHSA combined a number of practice sites, as follows:

[a] Anthony Jordan Health Center's Holland Street and Woodward Health Center locations.
[b] Lifetime Health Medical Group's Irondequoiot practice and Wilson Health Center locations.
[c] Newark Internal Medicine and Sodus Internal Medicine.
[d] Unity Family Medicine's Orchard Street and St. Mary's locations.
[e] The practices of individual providers1–4.

III. Program Features and Implementation Progress

By the end of the award period, the FLHSA program aims to improve intermediate health outcomes, improve quality of care, and reduce health care costs in the six-county area around Rochester. FLHSA hopes to achieve these goals by (1) providing technical assistance and incentives to participating practices to transform care delivery, (2) improving coordination of medical and community services available to patients, and (3) reforming how practices are paid by insurers. Next, we describe the components of the program and implementation progress and challenges as of December 2013.

A. Support for Practice Transformation

FLHSA works with participating practices to transform them to function effectively as patient-centered medical homes.[2] This transformation occurs at two levels. First, at the practice level, FLHSA helps practices to change their processes and cultures as they transition to team-based, patient-centered care. Practices are encouraged to use team huddles to improve communication among care team members, promote patients' self-management of their health, and ensure that clinical staff deliver the full range of care they are licensed to perform. In addition, FLHSA helps practices to collect and use data to identify areas for practice improvement and test new ideas in practice using a Plan-Do-Study-Act model. Second, at the workforce level, FLHSA helps practices to integrate care managers into their care teams to support care coordination. Care managers are recruited and trained to identify patients at risk for poor health outcomes, coordinate patient's care among medical and community providers, and provide patients with coaching to improve self-management of health care. They are expected to use a Patient Activation Measure (developed by Insignia Health) to deliver intensive care management services to patients.

[2] Some participating practices are already recognized by the National Committee for Quality Assurance (NCQA) as patient-centered medical homes; however, they still require technical assistance to continue to improve. Other practices are not recognized as patient-centered medical homes; participation in this project will help them to achieve NCQA recognition.

In the first 18 months of the program, FLHSA assisted Cohort 1 and 2 practices with care manager recruitment and helped some practices to transition existing care managers to grant funding. However, recruitment of care managers for Cohort 1 and 2 practices was complicated because practices lacked experience hiring staff and needed help identifying capable candidates (because many practices previously did not employ care managers). In addition, few candidates had the requisite skill set (Cohort 1 was limited to hiring nurse care managers and Cohort 2 was permitted to hire either nurse or social work care managers). Perhaps as a result, there was some turnover in the first 18 months of the program; 4 of the 15 care managers at practices in Cohort 1 left the practices and were replaced. As of December 2013, there were care managers at all Cohort 1 and 2 practices.

FLHSA provides participating practices with financial incentives to support transformation activities. Practices receive stipends and funding for care managers, both of which are allocated to practices based on the size of each practice's patient panel and adjusted for risk. Practices receive support that ranges from a minimum annual stipend of $40,000 and funding for the equivalent of half of a full-time care manager position to a maximum annual stipend of $100,000 and funding for the equivalent of two full-time care managers. FLHSA initially allocated Cohort 1 stipends and care manager resources based on practice providers' care hours. This left the first 19 practices with the equivalent of 15 full-time care managers. After finding that using provider hours in patient care often underestimated a practice's care manager needs, FLHSA changed the allocation strategy for Cohort 1 and 2 practices and based allocations on practices' risk-adjusted patient panel sizes. As a result of the reallocation, five of the larger practices in Cohort 1 were funded to hire additional care managers; three of these practices have hired additional care managers. Most practices in Cohort 2 were funded for the equivalent of one or one-and-a-half care managers; all Cohort 2 practices have filled the funded care manager position. Although the allocation model is improved, it still does not provide adequate care manager resources for the highest-need practices (for example, practices with patient panels composed largely of Medicaid or Medicare patients or specialty practices that treat patients with severe mental illness).

FLHSA staff provide two types of targeted assistance to practices to help them transform care: (1) assessment of individual practice's needs and working with practice staff to develop and test solutions (for example, assisting practices with Plan-Do-Study-Act cycles); and (2) provision of technical support to care managers (for example, to help care mangers report on clinical quality measures through their EHRs). In addition, FLHSA staff organize separate learning collaboratives for practice champions and care managers in each cohort. (Section V provides additional detail on training and workforce development activities.)

In the first 18 months of the program, FLHSA found that practices' technical assistance needs exceeded initial expectations. First, practices had trouble adopting aspects of the patient-centered medical home, such as coordinating ongoing team huddles and collecting and using data for quality improvement. Practices did not have adequate resources inside their organizations and required additional help from FLHSA. To address this challenge, FLHSA hired additional staff to assist practices in implementing the principles of the patient-centered medical home and using data to improve patients' care. Second, although FLHSA initially expected that the planned learning collaborative and training support for care managers would be sufficient to support their integration into practices, FLHSA found that care managers required more individualized support than anticipated. For example, care managers struggled to identify patients for intensive

care management services, create reports in EHRs, and use the Patient Activation Measure as intended in their delivery of intensive care management services. In response to these needs, FLHSA hired three clinical advisors to provide care managers with targeted technical assistance and provided additional training and support on the Patient Activation Measure through care manager learning collaborative meetings.

B. Integration with Community Services

Patients served by participating practices face social and behavioral challenges—such as food insecurity, mental health conditions, and substance abuse—that affect their health and well-being. The program activities support improved connections between primary care and community services (for example, outpatient behavioral health treatment) both broadly across all participating practices and more narrowly for six practices that largely serve a population of high-needs patients. FLHSA hired a social worker/resource coordinator to help care managers identify the social and behavioral health needs of the patient population at all participating practices. This social worker/resource coordinator also provides all practice care managers with training and resources to connect patients with necessary services at community-based service organizations. Across the six practices with a large proportion of high-need patients, Trillium Health worked with the practices to integrate community health workers (CHWs) to educate practice staff on the needs of the local community and connect patients to external resources. However, several of these practices are unclear on how CHWs should function in their practices and are not assigning work to the CHWs. One practice removed the assigned CHW because practice staff were already connecting patients with community services. FLHSA and Trillium Health are working with these practices to address these concerns.

FLHSA also takes a community-based approach to integrate primary care and community services. FLHSA convenes ongoing meetings with leaders from medical and community service organizations (for example, food banks and local elder service providers) to plan for community-level improvement in coordinating care among primary care practices, other medical providers, and community- or home-based service organizations. Ultimately, medical and nonmedical service providers will be able to view and share patient care plans, regardless of the institution at which they are based, through a web-based care coordination platform called Care Team Connect. As of December 2013, 17 providers were piloting the Care Team Connect system. FLHSA plans to roll out the system to all participating providers when New York State approves the system's methodology for protecting patients' information.

C. Primary Care Payment Reform

FLHSA is holding discussions with two commercial insurers, Excellus BCBS and MVP, to develop a new payment model that will provide financial sustainability for the personnel and activities currently funded by HCIA. As a result of these discussions, FLHSA and the insurers agreed that (1) a substantial part of primary care reimbursement should be related to care coordination and population management, rather than be driven by the volume of services provided; and (2) reimbursement levels should be tied to patient outcomes (using measures

endorsed by the National Quality Forum[3]) so that compensation increases with improved quality of care. To support the development of a new model that meets these criteria, FLHSA and the insurers are currently working to identify processes to ensure that the outcomes data are exact and verifiable. FLHSA originally planned to coordinate with other local organizations to advocate for use of the new payment model, but has not needed their help. FLHSA expects to develop the new model by July 2014, giving insurers six months of lead time to implement the changes related to this model before it goes into effect in January 2015.

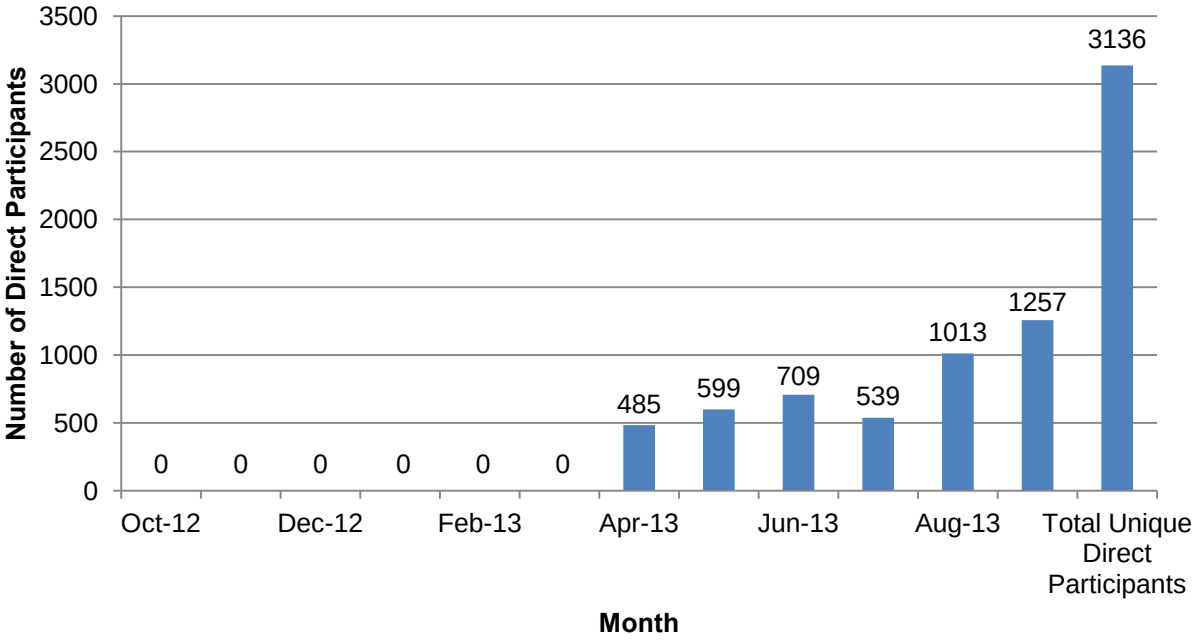
IV. Target Population and Assessment

FLHSA plans to reach almost 7,500 patients at about 65 practices in the Rochester area through intensive care management services. It also plans to reach all patients at the participating practices—including 46 percent of Medicare patients and 44 percent of Medicaid patients in the target area—through the cultural and process changes being implemented at the practice level. As discussed in Section II.C, practices are recruited based, in part, on the proportion of Medicare and adult Medicaid beneficiaries who received care at the practice in the past two years and are at risk for potentially avoidable hospitalizations, hospital readmissions, and preventable ED use. FLHSA plans to offer intensive care management services to a subset of these at-risk patients, although it recognizes that the program's impact will not be limited to them.

Care managers screen practice populations to identify high-risk patients who qualify to receive intensive care management services. They accomplish this in one of two ways: (1) reviewing medical records to find patients with recent hospitalizations or emergency department visits or (2) receiving a provider's recommendation. FLHSA estimates that the program's intensive case management services will reach 1 percent (7,475 patients) of the participating practices' patient panels by the end of the program's third year. As of September 2013, the program offered these services to 3,136 unique patients. Figure 3 shows the FLHSA program's unique participant count by month.

[3] See http://www.qualityforum.org/projects/Patient_Outcome_Measures_Phases1-2.aspx for more detail.

Figure 3. FLHSA Program Unique Participant Count, by Month and Cumulative



Sources: Lewin fifth quarterly reporting period (July through September 2013). Quarterly awardee performance report: Finger Lakes Health Systems Agency. Prepared for CMS and submitted on December 6, 2013.

V. Workforce and Training

FLHSA continues to modify its staffing plan to fit the needs of participating practices. In this section, we describe FLHSA's progress toward meeting its staff recruitment goals. We also provide an overview of the training and technical assistance opportunities offered to members of the program workforce.

A. Practice and Program Staff

A number of staff facilitate the implementation of the program at participating practices (Table 4). At the practice level, FLHSA aims to eventually hire one care manager for each practice (for a total of 65 care managers; it has already hired 15). A primary care physician at each practice serves as a practice champion. In addition, Trillium Health has placed five CHWs at five practices with a large proportion of high-need patients to link patients to community services. At the program level, five practice improvement advisors and a practice improvement coordinator work with all of the practices to help them transform into patient-centered medical homes (for example, identifying processes and resources for managing admissions, discharges, and transitions of patients). Three clinical advisors meet with care managers at least biweekly to discuss challenges and provide education and training on topics such as motivational interviewing, EHR use, and care team relationships (for example, building rapport with other staff at the practice).

Table 4. Number, Location, Roles, and Responsibilities of Practice and Program Staff

Type of Worker	Location	Planned FTE	Actual FTE (as of 9/30/13)	Status	Responsibilities
Practice Champions	Primary care practices	In-kind	Not reported	Existing primary care provider at each practice	Oversees on-site implementation of practice transformation activities; serves as main point of contact with program staff
Care Managers	Primary care practices	0.5 to 2.0 per practice, based on size of practice's risk-adjusted patient panel	44	Newly hired nurses or social workers	Identifies patients at risk for poor health outcomes; coordinates patient care with internal and external providers; coaches patients on self-management and health literacy; and builds and maintains relationship with patients
Community Health Workers	Primary care practices with high-need patient populations	6 (1 per practice)	5	Newly hired by Trillium Health from local community	Connects patients to community resources based on patients' needs; educates providers and care team about community needs
Practice Improvement Advisors	FLHSA	3	6 (including one practice improvement coordinator)	Newly hired	Provides ongoing consultation and technical support to participating practices; assesses individual practice's needs and works with staff to develop and test solutions
Clinical Advisors	FLHSA	Not included in original staffing plan	3	Newly hired	Provides individual technical assistance and support to care managers at participating practices

Source: The Lewin Group. Quarterly awardee performance reports: Finger Lakes Health Systems Agency (first through fifth quarters). Quarterly awardee narrative reports to CMMI (first through sixth quarters). Email communication with awardee, December 9, 2013.

FLHSA = Finger Lakes Health Services Agency; FTE = full-time equivalent.

B. Workforce Development

FLHSA provides a variety of staff training and workforce development activities at participating practices (Table 5). Care managers attend a comprehensive training on fundamental skills, such as data collection and entry, and receive supplementary trainings on specific topics or skills, as needed. Cohort 1 care managers attended five consecutive, day-long training sessions (40 hours total). Because these care managers reported feeling overwhelmed by the amount of training delivered in five consecutive days, FLHSA decided to break up this training for Cohort 2 care managers into a pair of two-day sessions (32 hours total). Care managers hired later in the process attended two 8-hour make-up sessions. Care managers and practice champions attend monthly learning collaboratives, which provide opportunities to share lessons and challenges and

to learn from the experiences of their peers at other sites. Finally, Insignia Health trains care managers on, and provides support for, use of its Patient Activation Measure to provide intensive care management services to patients.

Table 5. FLHSA Workforce Training

Training	Modality	Duration (hours)	Staff Type	Number of Staff Trained (as of 9/30/13)	Description
Care Manager Training Sessions	Online/webinar, classroom, discussion, text	Cohort 1: 40 Cohort 2: 32 Cohorts 1/2 make-up session: 16	Care manager	Cohort 1: 15 Cohort 2: 26 Cohorts 1/2 make-up sessions: 2	• One-time initial training • Covers care coordination, patient identification, assessment, behavioral health, care plan development, self-management support, and data collection
Care Manager Learning Collaborative	Classroom, discussion, text	Cohort 1: 24 Cohort 2: 8 (both cohorts cumulative as of the fifth quarter)	Care manager	Cohort 1: 15 Cohort 2: 26	• Held monthly • Provides opportunity to discuss what is/is not working • A forum to identify areas for skill development and get support • Provides training to support the use of the Patient Activation Measure, with support from Insignia Health staff
Practice Champion Learning Collaborative	Classroom, discussion, text	Cohort 1: 10 Cohort 2: 5 (both cohorts cumulative as of the fifth quarter)	Practice physicians	Cohort 1: 15 Cohort 2: 24	• Held monthly • Provides opportunity to share successes and barriers and discuss potential solutions • Topics at past collaboratives: how best to use care managers, team huddles, and Plan-Do-Study-Act cycles

Source: The Lewin Group. Quarterly awardee performance reports: Finger Lakes Health Systems Agency (first through fifth quarters). Quarterly awardee narrative reports to CMMI (first through sixth quarters). Email communication with awardee, December 9, 2013.

VI. Future Plans

In its quarterly narrative reports and telephone interviews, FLHSA identified several next steps for program implementation:

- The program will expand the network of practices engaging in transformation activities by recruiting practices for its third cohort. The program announced a call for applications in January 2014. FLHSA planned to interview cohort applicants during February 2014 and announce practice selections on March 5, 2014. In response to the needs observed during the first two cohorts, FLHSA plans to provide Cohort 3 practices with additional time and resources to recruit and train care managers.

FLHSA aims to have all Cohort 3 care managers hired and ready to be trained at the beginning of July 2014.

- The program will continue to support practice transformation through learning collaboratives and technical assistance at the practice and care manager levels for each cohort. In addition, the FLHSA program plans to strengthen providers' abilities to connect patients to community and social services through targeted assistance for care managers in response to individual patient's needs (for example, getting transportation to and from medical appointments) and ongoing support for community health workers placed in high-need practices.
- FLHSA will continue to work with its community partners to develop and implement an electronic system that can be used to facilitate communication and information-sharing among primary care and community service providers.
- To further the development of a new payment model, FLHSA plans to continue engaging the two local insurers in discussions about appropriate quality measures and data verification processes to support the proposed changes.

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SUMMARY OF PROGRAM DESIGN AND IMPLEMENTATION EXPERIENCE

MARCH 2014

Joseph Zickafoose and Brenda Natzke

In this brief, we describe the primary care redesign (PCR) program being implemented by the Research Institute at Nationwide Children's Hospital (NCH) in central, southeastern, and northeastern Ohio under Health Care Innovation Award (HCIA) funding from the Center for Medicare & Medicaid Innovation (CMMI). This brief describes the design of the program as it is currently being implemented and highlights implementation experiences one-and-a-half years after the receipt of award. We based the information presented here on a review of program documents, including application materials and quarterly reports, as well as telephone discussions and follow-up communications with program administrators. This brief describes the status of the program as of December 2013. We will update the brief as additional information becomes available.

I. Overview

NCH, in partnership with an existing pediatric Medicaid accountable care organization (ACO) known as Partners for Kids (PFK) and with the Akron Children's Hospital (ACH), received HCIA funding of $13,160,092 to implement its PCR program. The overall goal of the program is to improve care and health and lower costs for children enrolled in Medicaid managed care, particularly for those with complex chronic conditions and those with behavioral health care needs. NCH and its partners aim to replicate a sustainable model of a Medicaid ACO for children, improve care for specialty populations served by NCH and ACH, and reduce preterm birth and related neonatal hospital care. They will address these goals by (1) supporting ACH in reproducing an existing pediatric ACO model already in use by PFK; (2) supporting data analysis to help guide care improvement and cost containment activities within the PFK ACO; (3) improving care for children with behavioral health needs served by NCH and ACH through parent peer partners, tele-behavioral health, and transitional care coordination; (4) improving care for children with complex chronic conditions through standardization of hospital care protocols, family education and self-management resources, and a complex care coordination team for the complex care population; and (5) reproducing a prematurity prevention initiative in ACH's home county. Table 1 summarizes the implementation time line for these components.

Table 1. Time Line: Nationwide Children's Hospital Health Care Innovation (HCIA) Implementation

Date	Activity
July 2012	HCIA funding awarded
July–December 2012	Planning and infrastructure development; hiring and training program staff (ongoing)
September 2012	Operational plan approved by CMS
November 2012	Program launched
November–December 2012	Implemented behavioral health parent partner intervention at NCH; began developing complex care materials

Table 1 *(Continued)*

Date	Activity
January–March 2013	Implemented behavioral health parent partner intervention at ACH; executed telehealth vendor agreements to support video telemedicine services and e-therapy services at NCH; developed prematurity education materials
January 2013–present	Negotiations with Medicaid managed care organizations for ACH-based ACO
April–June 2013	Refined behavioral health and complex care initiatives; initiated infrastructure for prematurity intervention
July–December 2013	Continued to refine initiatives and expand to additional patients

Source: Mathematica analysis of awardee documents.

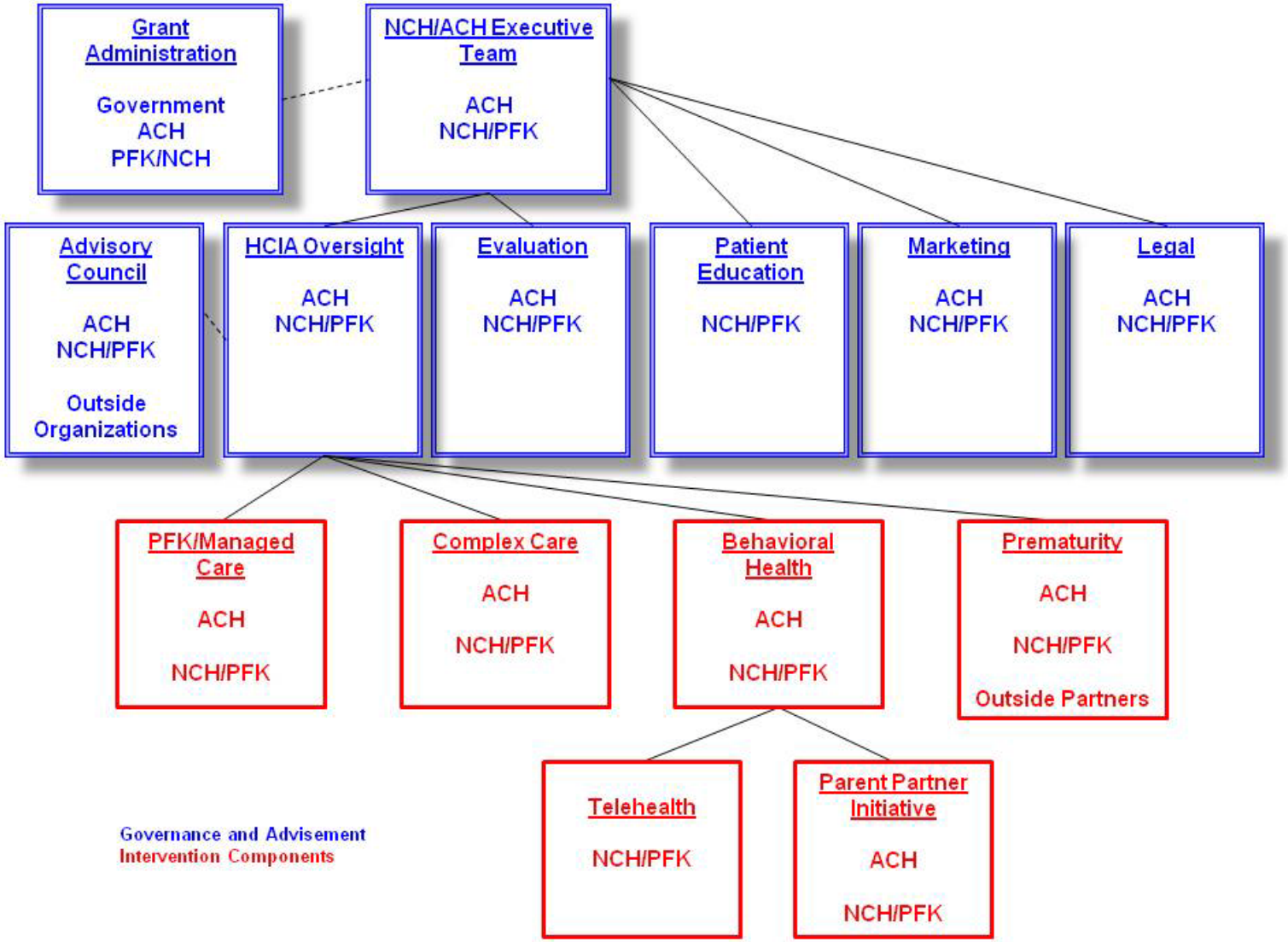
CMS = Centers for Medicare & Medicaid Services. ACH = Akron Children's Hospital. ACO = accountable care organization. HCIA = Health Care Innovation Award. NCH = Nationwide Children's Hospital.

II. Organizational Structure

NCH has partnered with PFK and ACH to implement the award. Both NCH in Columbus and ACH in Akron are pediatric health care systems that include tertiary care pediatric hospitals and outpatient pediatric primary and specialty care networks. PFK is a not-for-profit Ohio-based physician–hospital organization in operation since 1994 that has served as a pediatric ACO focused on Medicaid-enrolled children. PFK members include NCH, NCH-employed physicians, and a broad network of contracted community physicians.

Figure 1 shows the organizational chart, which indicates the program roles and responsibilities of each organization. The red font indicates the intervention components and the blue font indicates administrative and advisory components. Both NCH and ACH are implementing most of the components of the award (organizations involved in each aspect are noted in the organization chart), which we describe in detail in the next section. PFK serves in a mentorship role for the replication of its ACO model at ACH and uses the data analytics services funded by the award to help guide its ACO activities. In addition, ACH is replicating the NCH/PFK prematurity initiative. Figure 2 shows the locations where the program is being implemented.

Figure 1. Organizational Chart



Source: Mathematica analysis of awardee documents.

Figure 2. Geographic Locations of Nationwide Children's Hospital's Health Care Innovation Award Components

Note: Light gray shading represents counties currently included in Partners for Kids (PFK), the Medicaid pediatric ACO affiliated with Nationwide Children's Hospital (NCH) in Columbus. Dark gray shading represents counties targeted by the new Medicaid pediatric ACO that Akron Children's Hospital (ACH) is developing. White shading represents counties that are not involved in the initiative. The locations of Akron and Columbus, where other intervention components will be implemented, are also identified. The blue-shaded area is Lake Erie.

III. Program Features and Implementation Progress

As described previously, the NCH partnership is implementing components in four areas to meet its goals of spreading the ACO model; improving care and lowering costs for children enrolled in Medicaid with some of the most costly and complex medical conditions, including those with behavioral health care needs, complex chronic conditions, and premature neonates; and reducing the rate of premature births in Summit County, Ohio. Table 2 details the intervention areas, specific intervention strategies, and target populations. Following the table,

we describe in detail the four key intervention areas, along with implementation challenges and progress.

Table 2. Intervention Components

Intervention Area	Specific Intervention Strategies	Target Populations
Replication of ACO Model	ACH: risk-based contracting with MCOs; pay-for-performance for network physicians; data infrastructure to guide population health initiatives NCH/ACH: include new population—children eligible for Medicaid based on disabilities	Current ACO population of 295,000 Medicaid-enrolled children, expansion to additional 212,000 Medicaid-enrolled children, including 25,000 children eligible for Medicaid based on disabilities
Behavioral Health	NCH: parent partners; tele-behavioral health (e-therapy program, Welcome Home program, smart phone application [app] development); transitional care coordination via case manager ACH: parent partner; transitional care coordination via case manager	Children with severe behavioral health concerns requiring an inpatient hospitalization or outpatient crisis stabilization at NCH or ACH
Complex Care	NCH: standardization of feeding tube care through protocols (including changes to electronic health records to organize and track information regarding tubes); education workbook, website, and referrals for families; family education and nutritional management smart phone app; complex care coordination team ACH: standardization of feeding tube care through protocols; family self-management resource bundle; complex care coordination team	Approximately 1,000 children with any insurance type receiving care at NCH and 100 children with any insurance type receiving care at ACH who have a feeding tube and a neurological disorder; NCH/ACH estimate about 60 percent are Medicaid-enrolled
Prematurity	NCH: Not applicable ACH: identification of pregnant women eligible for progesterone; progesterone education program for mothers in neonatal intensive care unit with spontaneous preterm birth; distribution of patient education brochures at community agencies; outreach and educational materials for obstetrics/gynecology provider offices and high-risk hospital clinics about progesterone and birth spacing for patient education	Obstetric practices

Source: Awardee documents and telephone interview with awardee.

MCO = managed care organization.

A. Expansion of ACO model

NCH, PFK, and ACH plan to improve the health and health care of and reduce costs for children enrolled in Medicaid through a mix of several interrelated inpatient and outpatient interventions. The first and primary intervention area is the replication of an existing ACO model in a new hospital–provider organization in another region of the state. NCH and PFK (the NCH-based ACO) provide guidance to ACH to develop its own ACO in the Akron region based on the PFK model. Currently, the NCH-based ACO serves about 295,000 children enrolled in Medicaid managed care in 34 counties in Ohio. The HCIA funds the implementation of an ACH-based ACO that will target an additional 12 counties not previously served by a Medicaid ACO, covering about 212,000 more children in Medicaid managed care. Additionally, the NCH-based ACO and the ACH-based ACO initially estimated that together they would enroll almost 25,000 children eligible for Medicaid due to disabilities who were previously excluded from managed care. Ohio had planned to enroll these children into managed care in 2013, but due to delays in Ohio's process in enrolling this population, PFK currently expects to add 8,000 to 9,000 children with disabilities. The projected enrollment in the ACH-based ACO is unclear due to delays in implementation. The existing NCH-based ACO and new ACH-based ACO will cover a broad geographic area, including more than half the counties in Ohio, with a mix of urban and highly rural counties. Key features of the ACO model include risk-based contracting with Medicaid managed care organizations (MCOs); data infrastructure; a pay-for-performance system for network physicians for encouraging quality improvement in primary care; evidence-based population health initiatives in partnership with providers, governmental departments, and community agencies; a patient-centered medical home (PCMH) model with enhanced care coordination; and adjustment of the model for a new population—children enrolled in Medicaid based on a disability.

ACH's implementation of the ACO has proceeded more slowly than planned due to the need to develop administrative and governance structures (which have been established) and engage in contract negotiations. ACH reports making progress in contract negotiations with three MCOs and is engaged in discussions with the other two Medicaid MCOs covering children in the target counties, but as of December 2013, there were no signed contractual agreements. Part of this delay resulted from the state's July 2013 Medicaid managed care reprocurement that changed the state's managed care model from multiple regional MCOs to five statewide MCOs. ACH reports that two MCOs (one of which covers most of the Medicaid managed care population in the 12 target counties) currently are unwilling to move forward with its proposed model that attributes children to the ACO based on a child's county of residence, but it is moving forward with the other three MCOs and will then identify tactics to work with the remaining two. To scale up gradually, the ACH team hopes to partner with all five MCOs in four counties; if it is unable to contract with all five MCOs, it plans to begin with fewer MCOs in the full 12 counties. ACH is also in ongoing negotiations with the state Medicaid agency about a shared-savings model to support the ACO.

Currently, ACH-affiliated pediatric practices are the only primary care practices engaged with the ACO. ACH plans to identify and recruit private practice providers into the ACO in the upcoming quarters of the award.

B. Behavioral Health

NCH and ACH are both undertaking several interventions to improve care for children with behavioral health care needs. These interventions include (1) recruiting and training parents of children with behavioral health care conditions to serve as peer-to-peer support for other parents during and after behavioral health hospital admissions, (2) a dedicated behavioral health care coordination team, and (3) an online therapy platform for the children and their caregivers.

1. Peer-to-peer support. Both NCH and ACH have implemented parental peer-to-peer support programs and are refining their approaches for integrating the parent peers into inpatient care processes, such as the timing of the initial and subsequent interactions with caregivers of children admitted to the hospital. Through managing the needs of their own children, these parent partners have experience with behavioral health needs and navigating the behavioral health care system; extensive training by the awardee has developed the skills of parent partners need for their role. Parent partners provide support to other parents through active listening, sharing their own experiences, and modeling positive interactions with providers. They also provide assistance with navigating the behavioral health care system and make follow-up calls to parents to ensure they schedule the appointments and services their children need.

The behavioral health team at NCH has faced several challenges. First, parent partners have to attend to the mental health crises of their adult children. Additionally, ACH has faced challenges in adapting its training model to meet the needs of individual new parent partners. Finally, existing behavioral health staff were unaware how to integrate parent partners into their care teams, although site staff report that the clinical staff's response to the parent partners has been mostly positive.

2. Dedicated team. NCH and ACH have both hired behavioral health care coordinators and are refining their approaches to the care coordination process. Currently, the care coordinators focus on post-discharge follow-up of children admitted to the hospital for behavioral health needs to ensure follow-up care is accessed and to connect families to any additional care needs.

3. Online therapy platform. In addition, the NCH team is implementing an online e-therapy program for children and their caregivers. The program, known as Triple P[1], includes various modules related to a child's diagnosis that parents and children can work through together. The NCH care coordinators facilitate linkages between Triple P and parents.

Families' uptake of the first e-therapy model has been low; the NCH team believes this is due to families feeling overwhelmed after discharge. NCH proposes changing the model to begin to engage families before discharge. In addition, some families face technological barriers to accessing Triple P online, so NCH is working to provide tablet computers to these families in the future to help them access the web. NCH plans to implement a program in the seventh reporting quarter to provide each discharged child with a computer to link to the care coordinator. Finally, NCH has begun to plan for development of a behavioral health smart phone application.

[1] Triple P is the Positive Parenting Program®. For more information about the program, refer to http://www.triplep.net/glo-en/home/.

C. Complex Care

NCH and ACH are implementing several interventions to improve care for children with complex medical conditions. These include (1) the use of standardized hospital-based care protocols for children with technology dependence, such as feeding tubes or tracheostomy; and (2) multidisciplinary care coordination teams, including nurses, social workers, and dietitians.

1. Standardized protocols for children with technology dependence. NCH and ACH have created and deployed protocols that support the standardization of feeding-tube processes. They have also developed family self-management and educational materials and identified educational goals for caregivers to complete before a patient is discharged. The education bundle that NCH created includes a feeding tube educational workbook that is also available online; inpatient nurses have been encouraged to disseminate the available education materials. Providers will be able to access via a web portal a patient education and nutrition management application NCH developed and will test in the first quarter of 2014. ACH developed patient self-management resource bundles for families. Both NCH and ACH plan to expand these approaches to other complex, high-cost conditions, starting with children with tracheostomies.

2. Care coordination. NCH and ACH have created dedicated care coordination teams, each of which is composed of a nurse, social worker, dietitian, and nonclinical staff member. Plans include adding a pharmacist to ACH's team, to support the complexity of medications taken by this population; eventually, the goal is for the pharmacist to coordinate care with the child's primary care provider (PCP) (currently, the care plan developed by the care coordination team is sent to the PCP, but there is no other interaction/communication). As families enrolled in this aspect of ACH's program, the care coordination team conducts a home visit for a comprehensive evaluation.

Currently, care coordination efforts by NCH and ACH are hospital-based, but a significant proportion of the complex care intervention activities focus on children after they have been discharged from the hospital.

D. Prematurity

ACH is building on prior work done by NCH and the NCH-based ACO to reduce the incidence of premature births and related neonatal hospital care. ACH's intervention is the promotion of progesterone therapy for women with a prior history of a premature birth who are at risk for repeat premature deliveries. Its work involves the identification of at-risk populations of women and the engagement and education of obstetrics providers.

Due to the challenges of engaging and educating providers, ACH has focused on implementing this intervention in only a few clinics. The effort was initially implemented in two hospital-based high-risk obstetric clinics, and it appears that those two clinics have done well with delivering progesterone therapy. The group had wanted to include two other practices with high Medicaid volumes, but ownership of those clinics has changed and their participation is on hold during the transition. ACH hopes to eventually implement the initiative in these clinics and extend it to providers in an additional county.

ACH also works with three neonatal intensive care units in northeast Ohio to identify mothers with spontaneous preterm birth admissions and provide educational materials about the need for progesterone therapy in future pregnancies.

IV. Target Population and Assessment

A. Target Population

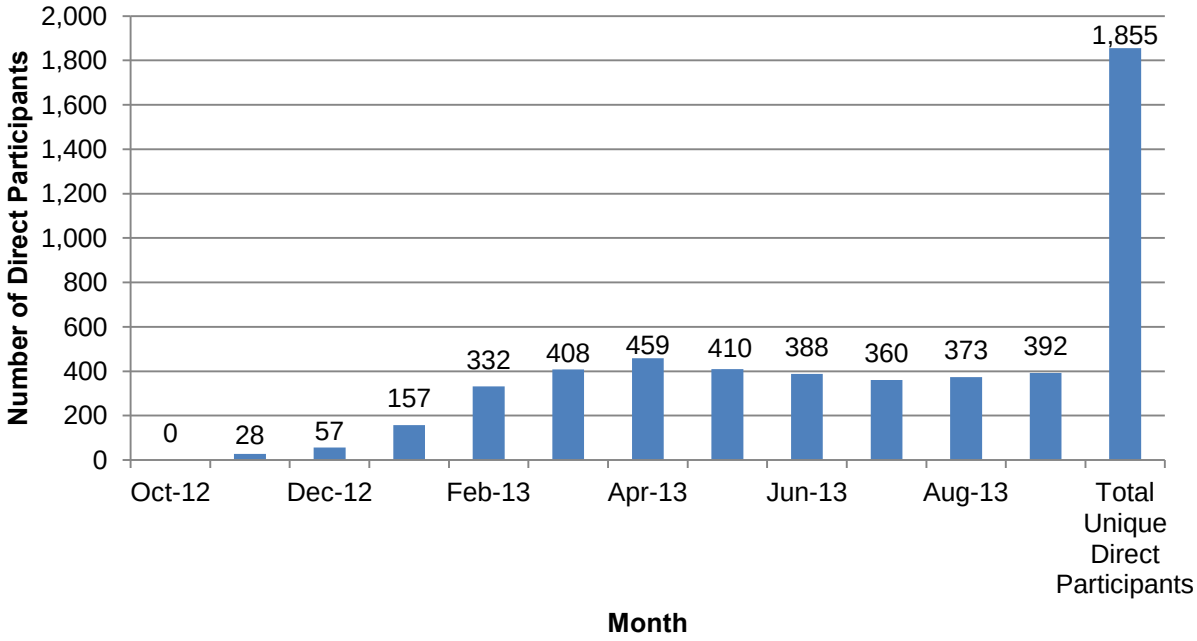
The target population includes children ages birth to 18 in Medicaid managed care in target counties, with a focus on children with complex chronic medical conditions and complex behavioral health needs. The program also focuses on mothers with prior premature deliveries. Details about the target population for each intervention area are shown in Table 2. The extent of the behavioral health interventions beyond children cared for in the respective hospital inpatient units and adoption of the complex care interventions outside of the respective hospitals are expected to be limited during the initiative.

B. Reach

NCH and ACH identify the target population and delivery of services through several strategies. They identify the ACO populations through children's residence in a participating or targeted ACO county. At baseline, NCH and the NCH-based ACO served 295,000 children enrolled in Medicaid managed care through income-based eligibility in 34 counties. Although the award funds no direct interventions for this population, it does fund data analytics services that will help guide the NCH-based ACO interventions outside the award targeting this existing population. ACH plans to develop its new ACO to serve an additional 212,000 children in Medicaid managed care with income-based eligibility in 12 counties in its region of the state. Additionally, all partners plan to include 25,000 more children eligible for Medicaid based on disability as key targets for their interventions. However, the planned enrollment of these children into Medicaid MCOs did not begin until July 2013. ACH has revised its ACO plan to begin with the 4 counties with the largest populations and then add the 8 other counties. ACH also plans to begin with the income-eligible Medicaid population and then enroll those with eligibility based on disability.

The behavioral health program funded by the award is restricted to children in crisis in the behavioral health emergency department (ED) or crisis stabilization unit, or admitted to a psychiatric inpatient unit. The complex care program identifies the population using internal claims databases and then confirms the relevant diagnosis and existence of a gastrostomy tube in the medical chart. NCH estimates its complex care management program reaches about 1,000 children with neurological disabilities and feeding tubes, about 600 of whom are enrolled in Medicaid. ACH estimates its complex care management program reaches about 100 children with neurological disabilities and feeding tubes; ACH does not currently have estimates of Medicaid coverage for these children. The prematurity initiative targets women at risk for premature delivery in the participating obstetrics practices. As of September 2013, the program provided services to 1,855 unique participants. Figure 3 displays the unique monthly participant count since the beginning of the program.

Figure 3. Number of HCIA Direct Program Participants



Source: Lewin fifth quarterly reporting period (July–September 2013). "Quarterly Awardee Performance Report: Research Institute at Nationwide Children's Hospital." Prepared for CMS and submitted on December 6, 2013.

Note: Each bar represents the number of unique participants in that month. Summing two (or more) months would double count those who participate in two (or more) months.

C. Self Monitoring and Evaluation

For self-monitoring, the grantee and partners use a combination of primary data collection of process measures and obtaining Medicaid claims data for tracking and reporting targeted outcomes. They had planned to use claims data to measure behavioral health outcomes, but they have been unable to obtain claims data for the large amount of outpatient mental health care delivered to Medicaid enrollees through a state-funded community mental health system. They changed plans to use caregiver-reported outcomes through telephone contact.

V. Workforce and Training

A. Staffing

Implementation of NCH and ACH's multiple interventions required new and retrained personnel. Staffing has largely progressed according to plans. In the first two reporting quarters, the NCH and ACH teams faced internal delays in transferring existing employees to award activities and an insufficient pool of qualified candidates. As such, the staffing total relative to projection was low in the first two reporting quarters. The program teams overcame most of these barriers, and staffing was at projection in the third and fourth reporting quarters and slightly below projection in the fifth reporting quarter. As of the fifth reporting quarter, total staff numbered about 34 full-time equivalents (FTEs), including parent peer partners, behavioral health and complex care coordinators, social workers, dietitians, and supervisory and administrative staff. Table 3 shows the numbers and types of new nonadministrative staff hired

by NCH and ACH for the behavioral health, complex care, and prematurity interventions. ACH's complex care team hired one nurse care coordinator and staffed the rest of the team with existing employees.

Table 3. New Nonadministrative Staffing for the Behavioral Health, Complex Care, and Prematurity Interventions

	NCH	ACH
Behavioral Health		
Parent partners	6	5
Parent partner supervisor or coordinator	1	1
Behavioral health care coordinator	1 part-time	1
Complex Care		
Nurse care coordinator	2	1
Dietitian	1	0
Prematurity		
Project coordinator	n.a.	1

Source: Quarterly awardee performance reports submitted to Lewin.

n.a. = not applicable.

B. Training

NCH and ACH's training programs serve multiple purposes, including orienting new staff to the program and the hospital's electronic health record; training clinical staff on the use of the electronic health record for documenting case management and using the complex care tools and templates; and training parent partners and their supervisors on the program, use of the electronic health record, and motivational interviewing (see Table 4 for a list of courses).

Table 4. Staff Training Courses, Number of Trainees per Course, and Modality

	Number of Trainees					
Training Courses	**Q1**	**Q2**	**Q3**	**Q4**	**Q5**	**Training Modality**
Human Subjects Research Training	5	2				Online/webinar
Conflict of Interest Training			10			Online/webinar
Parent Partner Initiative Training		6				Online/webinar, classroom, discussion
National Alliance on Mental Illness—Ohio Conference Training				9		Classroom
Nationwide Children's Hospital						
Parent Partner Initiative Clinical Training			6			Discussion
Electronic Health Record Documentation Training for Parent Partners			7			Discussion, computer
Motivational Interviewing for Behavioral Health Team				2	4	Classroom, discussion (Q5)
Electronic Health Record Training for Behavioral Health Team				1		Online/webinar, computer
Electronic Health Record Ambulatory Training for Complex Care Team			4			Discussion, computer

Table 4 *(Continued)*

Training Courses	Number of Trainees					Training Modality
	Q1	Q2	Q3	Q4	Q5	
Motivational Interviewing for Complex Care Team				3		Classroom
Akron Children's Hospital						
Parent Partner Initiative Clinical Training			6			Discussion
Parent Partner Training by Behavioral Health Consultant				5	17	Classroom, discussion (Q5)
Parent Partner Administrator Training by Behavioral Health Consultant				2	2	Discussion, telephone
Motivational Interviewing for Behavioral Health Team				7		Classroom
Electronic Health Record Training for Behavioral Health Team				8		Online/webinar, computer
Margaret Clark Morgan – NEOMED training				7		Classroom

Source: Quarterly awardee performance reports submitted to Lewin.

Note: Quarters are program quarters. Q1 is July to September 2012; Q2 is October to December 2012; Q3 is January to March 2013; Q4 is April to June 2013; And Q5 is July to September 2013.

As of December 2013, NCH and ACH had implemented their training programs on schedule, with some changes in planned content in response to needs identified during implementation. For example, in early 2013, NCH increased training for parent partners to help families identify community resources. From July to September 2013, NCH had planned to offer additional joint training for parent partners and inpatient behavioral health providers to increase emphasis on family-centered care. ACH's team found that motivational interviewing skills were valuable for staff and intends to train inpatient behavioral health nursing staff in motivational interviewing.

VI. Future Plans

NCH and ACH hope to accomplish several goals through their programs over the next 18 months:

- Completing contracts with MCOs for ACH's ACO and including children eligible for Medicaid based on disabilities in both the NCH/PFK and ACH ACOs
- Refining the behavioral health intervention approach, including improving uptake of Triple P by providing tablet computers to families to enhance web access
- Piloting and implementing the NCH complex care patient education and nutrition management application with providers
- Expanding the NCH and ACH complex care interventions to children with other complex, high-cost conditions, beginning with those with tracheostomies
- Implementing ACH's prematurity initiative in additional clinics

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PACIFIC BUSINESS GROUP ON HEALTH

SUMMARY OF PROGRAM DESIGN AND IMPLEMENTATION EXPERIENCE

MARCH 2014

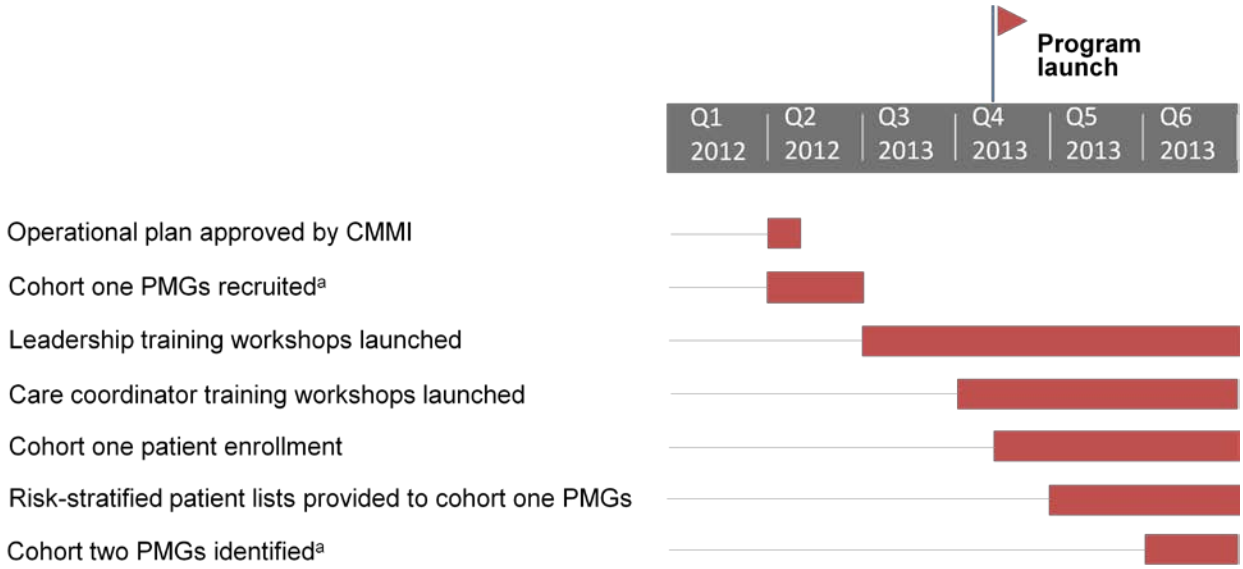
Rosalind Keith and Rebecca Coughlin

In this brief, we describe the primary care redesign (PCR) program being implemented by Pacific Business Group on Health (PBGH) in primary care practices in Arizona, California, Idaho, and Washington under Health Care Innovation Award (HCIA) funding from the Center for Medicare & Medicaid Innovation (CMMI). The purpose of this brief is to describe the design of the program as it is currently being implemented and the implementation experience one-and-a-half years after the receipt of award. We based the information presented in this brief on a review of program documents, including application materials and quarterly reports, as well as telephone discussions and follow-up communication with program administrators. This brief describes the status of the program as of December 2013. We will update the brief as additional information becomes available.

I. Overview

PBGH received a three-year, $19.1 million dollar award to implement a care management program, known as the Intensive Outpatient Care Program (IOCP), in 20 participating medical groups (PMGs) in four states. Currently, many provider organizations in Arizona and California lack the health information technology infrastructure or processes to identify medically complex patients and, therefore, are unable to prioritize patients for enrollment into care management programs. Implementation of the IOCP will support participating provider organizations in developing the capabilities to identify and provide personalized care for medically complex patients most in need of care management and, in turn, improve the quality and lower the cost of care for 27,000 medically complex patients at participating practices in two years. By the end of the award, PBGH expects to (1) reduce hospital utilization by 11 percent, (2) reduce emergency department utilization by 5 percent, (3) improve patient experience by 2 to 3 percent, (4) reduce costs by 5 percent, and (5) improve health care quality and health status (for instance, glycated hemoglobin and low-density lipoprotein testing) by 2 percent, as measured by a variety of indicators related to chronic conditions. The program launched in May 2013 and enrolled its first patients the same month. Figure 1 outlines the time line of IOCP implementation to date.

Figure 1. Time Line: IOCP Implementation



Source: Awardee quarterly reports submitted to CMMI, first through sixth quarters.
[a] Cohorts will be discussed in Section II.
CMMI = Center for Medicare & Medicaid Innovation; PMG = participating medical group.

II. Organizational Structure

A. Primary Awardee

PBGH is a nonprofit business coalition of 50 members, including public and private employers such as Boeing, Disney, the University of California system, and Wells Fargo. PBGH and its members work with health insurance plans, physician and consumer groups, hospitals, and the California Health and Human Services Agency to improve access to and quality of health care without increasing costs.

In Table 1, we list the PBGH staff hired with award funds to support IOCP implementation. PBGH staff provide program management and technical support to participating PMGs. PBGH hires consultants as needed to provide technical assistance in clinical leadership, training, implementation, data reporting, and evaluation.

Table 1. PBGH Administrative Staff

Position	FTE	Roles and Responsibilities
PBGH Program Office		
Project Director[a]	1.0	PBGH Program Office: • Manage overall program • Manage vendors • Manage stakeholders • Make design decisions • Coordinate internal resources
Senior Manager, Clinical Redesign[a]	1.0	
Senior Manager, Data and Measures[a]	1.0	
Senior Manager, Clinical Redesign	1.0	
Senior Manager, Improvement	1.0	
Director of Data and Measures, PBGH	0.25	
Chief Operating Officer, Executive Sponsor	0.05	

Table 1 *(Continued)*

Position	FTE	Roles and Responsibilities
PBGH Project Management		
Director	0.8	PBGH Director and Project Manager: • Manage overall planning and work streams and IOCP risk • Support PMG project teams and coordinate communication across project teams • Are responsible for CMS reporting
Project Manager[a]	2.0	
PBGH Award Administration and Compliance		
Award Administrator[a]	1.0	PBGH Award Administrator: • Manages award and compliance • Provides administrative support
Total	9.1	

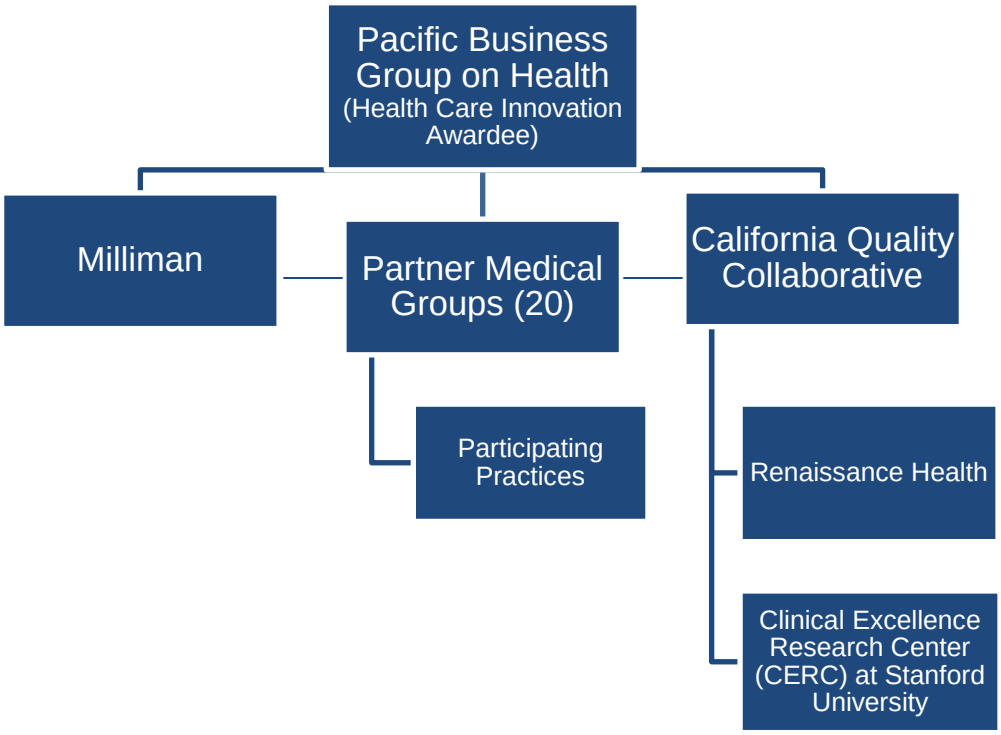
Source: Communication with program staff, January 2014.

[a] PBGH staff hired from August 2012 to March 2013.

B. Partner Organizations

PBGH partners with four organizations and 20 PMGs to implement the IOCP, as shown in Figure 2. Milliman, a consulting and actuarial firm, processes Medicare claims through a proprietary algorithm to provide participating PMGs with risk scores for their patients. PMGs use the risk scores to identify high-risk patients to target for enrollment into the IOCP. In addition, Milliman analyzes Medicare claims and clinic data to provide PMGs with health care quality and service use information for IOCP patients. PMGs use this information to guide rapid-cycle change, including tracking their progress, identifying areas for improvement, and adjusting their strategy for achieving the intended change. PBGH works with Milliman to provide training on the use of Milliman technology and provides ongoing support to PMGs through regular calls, in-person leadership training workshops, and online tools and resources. The California Quality Collaborative, an organization managed by PBGH and focused on improving health care in California, facilitates the implementation of the IOCP, with support from Renaissance Health and the Clinical Excellence Research Center (CERC) at Stanford University. Renaissance Health is a private consulting firm that provides technical expertise in the development and implementation of health care delivery innovations. CERC designs and tests new models of health care delivery. Renaissance Health and CERC both serve as technical experts for the California Quality Collaborative leadership training workshops, a core component of IOCP (described later).

Figure 2. IOCP Organizational Chart



Source: Communication with program staff, November 25, 2013.

PBGH also partners with 20 PMGs to implement the IOCP. The participating PMGs are either health care foundations or independent practice associations (IPAs). The IOCP model is implemented at the PMG level, and each PMG in turn works with its affiliated primary care practices to implement the program. To facilitate IOCP implementation, PBGH communicates directly with IOCP administrators at the PMGs through regular meetings, operational telephone calls, site visits, in-person trainings, and by using online tools and resources. PBGH does not communicate directly with the practices.

During the first year of the program, PBGH contracted with eight PMGs using a number of selection criteria, discussed later in this case study (see Table 2 for a list of PMGs).1 The first cohort of PMGs began enrolling patients in May 2013. Beginning in October 2013, PBGH enlisted 12 additional PMGs, for a total of 20 PMGs currently participating. The second cohort of PMGs began enrolling patients from January to March 2014.

[1] One of the eight PMGs is a composite of three affiliated groups. PBGH does not contract directly with primary care practices and, therefore, does not track enrollment and evaluate implementation experience at the primary care practice level.

Table 2. Name, Location, and Organizational Structure of PMGs Participating in IOCP

Participating Medical Group	City	State
Cohort One (PMGs recruited from October to December 2012)		
Brown and Toland	San Francisco	California
Cigna Medical Group	Phoenix	Arizona
John Muir Health	Walnut Creek	California
Partnership Health Plan	Fairfield	California
Sharp Community	San Diego	California
Sharp Rees-Stealy	San Diego	California
St. Joseph Health System	Irvine	California
Sutter Health Network		
Sutter Gould	Modesto	California
Sutter Pacific	Santa Rosa	California
Sutter Sierra	Sacramento	California
Cohort Two (practices recruited from October to December 2013)		
Arizona Care Network	Phoenix	Arizona
Dignity Health Medical Group, Dominican	Santa Cruz	California
Dignity Health Medical Foundation, Mercy Medical Group	Sacramento	California
EPIC Management, L.P.	Redlands	California
Greater Newport Physicians	Newport Beach	California
Presbyterian Intercommunity Hospital	Whittier	California
Scottsdale Health Partners	Scottsdale	Arizona
Southern California Integrated Care Network, San Bernardino	San Bernardino	California
Southern California Integrated Care Network, Ventura	Ventura	California
St. Luke's Health System	Boise	Idaho
The Polyclinic	Seattle	Washington
Woodland Clinic	Woodland	California

Source: Communication with program staff, February 3, 2014.

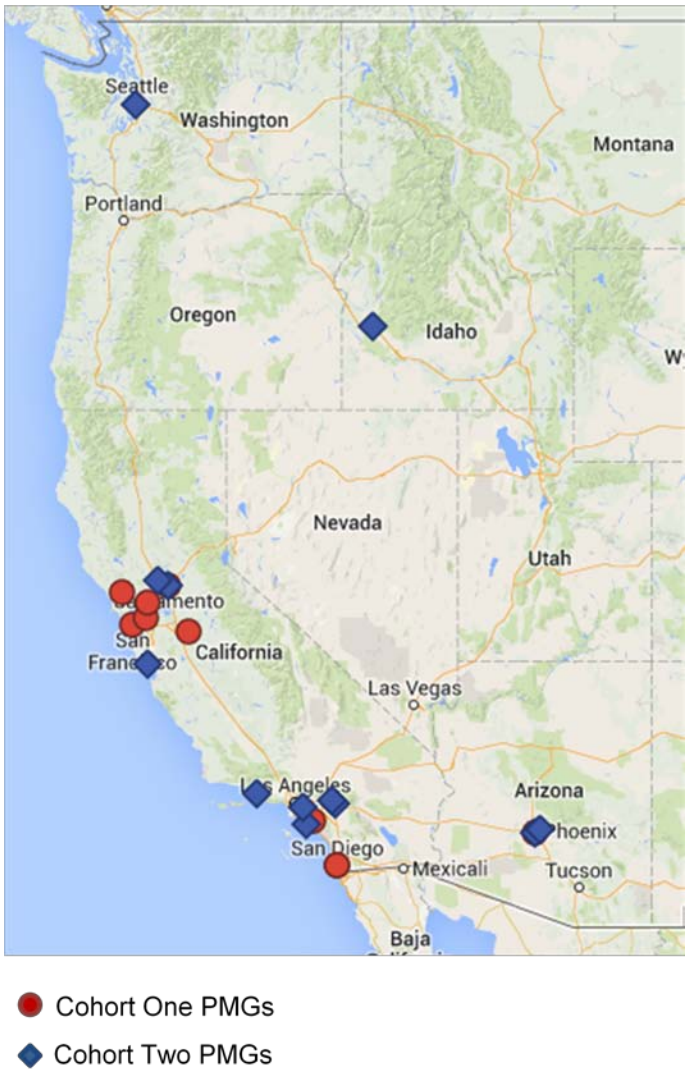
PBGH used several selection criteria when recruiting the PMGs in cohort one. First, given the focus of the HCIA initiative on improving care and reducing costs for high-risk Medicare beneficiaries, PBGH wanted to contract with PMGs serving a relatively large number of Medicare patients. Second, PBGH sought PMGs with a financial incentive to target and offer care management services to high-risk patients and could retain the savings expected to result from the more intensive outpatient care provided to those patients, such as those who were part of a Medicare accountable care organization or Medicare Advantage plan. Third, PBGH sought PMGs with a leadership that was committed to the goals of IOCP. Capacity for practice transformation was also a factor, as determined by PBGH from its earlier work with PMGs. Finally, PBGH saw the award as an opportunity to align private and public payers to support patient-centered care; because many private payers expressed interest in supporting this care model, PBGH recruited PMGs with a substantial number of commercially insured patients, in addition to those covered by Medicare.

During the second year of recruitment, some potential PMGs felt they did not have the capacity to participate due to their concern about how the Patient Protection and Affordable Care Act would affect the enrollment of new patients and related efforts to restructure internally. As a result, in cohort two, PBGH decided to include PMGs that did not meet the cohort one selection criteria (including demonstrated capacity to implement the intervention), but that expressed interest in participating and had strategic goals philosophically aligned with the goals of IOCP. PBGH also decided to contract with PMGs that met the selection criteria but were located outside of the targeted regions.

Selected PMGs have an interest in practice transformation and an internal champion dedicated to supporting IOCP implementation. However, according to PBGH, some PMGs are more actively engaged in the implementation process than others. One key factor that appears to be correlated with implementation progress is whether the PMG is affiliated with a health care foundation or an IPA (see Table 2). Because foundations directly employ physicians, their medical teams often share a common mission and a dedication to the goals of their employers. IPAs, on the other hand, are based on indirect staffing networks in which physicians can have contracts with multiple practice associations, which makes implementation more challenging. For example, the medical director of one participating IPA has to meet individually with each physician to obtain his or her buy-in into the program, whereas a foundation's medical leadership is more likely to be dedicated to population health and to champion IOCP implementation goals.

The IOCP has been implemented in Arizona, California, Idaho, Nevada, and Washington State. Figure 3 shows the locations of participating PMGs in each state.

Figure 3. Locations of Cohort One and Cohort Two PMGs



Source: Communication with program staff, February 3, 2014.

III. Program Features and Implementation Progress

To achieve its goals of improving health care quality and health status, increasing patients' satisfaction with care, and reducing hospital use and costs, PBGH is implementing two core program components: (1) stratifying patients to identify those at risk for hospital readmissions, and (2) integrating care coordinators in primary care teams to provide intensive, practice-based care management services. We describe these components next, along with the implementation challenges that PBGH faced and the progress made on each.

A. Risk Stratification

Risk stratification enables providers to identify the roughly top 15 percent of empanelled patients with the greatest likelihood of being hospitalized and to target these high-risk patients for enrollment into IOCP, where they will begin working with care coordinators to try to avoid these hospitalizations (see Section B). PBGH expected to use the Milliman Advanced Risk Adjusters model to calculate risk scores for PMGs based on their Medicare fee-for-service claims, and PBGH expects PMGs to submit claims and obtain risk scores for all patients in the future. However, due to the reporting requirements, which were new to these providers, and the quality of the claims data, the development of risk-stratified patient lists has taken longer than PBGH expected. To avoid further delays, PBGH developed alternative pathways and guidelines for enrollment. The enrollment guidelines include (1) direct referral by primary care physicians; (2) transfer of patients from existing care coordination programs; and (3) use of internal risk assessment guidelines to identify patients, such as those who have more than three hospitalizations or ED visits in the past six months, among others (see Table 3).

Table 3. Patient Eligibility Guidelines for the IOCP.

One or more of the following risk factors:
Three or more hospitalizations and/or ED visits in the past six months
Three or more chronic conditions
Eight or more medications
A combination of factors, such as: (a) One chronic condition and one of the following: two or more ED/hospitalizations in the past six months, or age 65 and five or more medications; or (b) Clinical referral and one of the following: two chronic conditions or three or more specialists or the expectation that the patient might end up in the hospital or die in the next six months
Demonstrated fragmentation of care (for example, no primary care attribution of more than two primary care providers attributed)

Source: Communication with program staff, November 25, 2013.

PBGH reported that by February 2014 Milliman began providing risk scores to all participating PMGs. However, because the Milliman reports are based on claims, providers have to manually review their medical records to identify patients with chronic conditions versus those who experience a single acute care event (the Milliman data have no indicator for that). As a result, the Milliman reports have become a secondary source of risk information for PMGs that have developed, or are developing, the capacity to stratify their patient populations based on internal algorithms or predictive models. Because the health care needs of patients in each region differ, the alternative pathways and risk assessment guidelines allow for greater flexibility in PMGs to identify and enroll patients into the program. As a result, some PMGs use the reports to identify patients for enrollment in IOCP, but others continue to use the alternative pathways. The

ability of PMGs to target and enroll patients at greatest risk of hospitalization varies, depending on which strategy they use to stratify their patients.

B. Care Coordinators

After patients enroll in IOCP, they begin working with a care coordinator. Care coordinators are responsible for developing an ongoing relationship with patients, providing individualized care management services, helping to develop a patient-driven action plan, and helping patients achieve patient-specific treatment goals. The first interaction between a patient and his or her care coordinator is the so-called super visit, which occurs within one month of enrollment. The super visit must be in person and entails a holistic assessment of the patient's medical, behavioral, social, and mental health conditions and the development of a patient-driven action plan. During the super visit, the care coordinator measures the patient's health-related quality of life to track changes in the physical and mental health status of the patient during the program. After the super visit, patients must have at least one interaction with the care coordinator per month. The minimum length of active patient participation in the program is one year.

PMGs can implement two types of care management models:

1. **Intensivist model.** This model involves the primary care practice in which the patient's primary care provider and care coordinator are located. Under the intensivist model, a patient might have to change his or her primary care provider to a participating provider if the patient wishes to enroll in the IOCP.
2. **Distributed model.** The distributed model involves care coordinators traveling to different primary care practices or to patients' homes to provide care management. Under this model, care coordinators are affiliated with different primary care practices and maintain a specific patient caseload. At least two of the care coordinators must be licensed clinicians (such as registered nurses).

Among PMGs using the distributed model, some initially resisted hiring more than one licensed clinician due to the cost of the position, which the award does not cover. But, according to PBGH, their resistance has diminished over time as PBGH works with PMG leadership to communicate IOCP principles and the importance of care coordinators. PBGH also reported that several PMGs hired additional staff (including clinical pharmacists and social workers) after a certain number of patients were in a caseload. PBGH also reported that PMGs have experienced difficulty finding care coordinators with the patient care training necessary for effective care management. Even when registered nurses have the necessary clinical skills, they might not have the ability to engage patients. Some PMGs have been able to shift registered nurses with patient engagement skills from existing disease management programs to the IOCP.

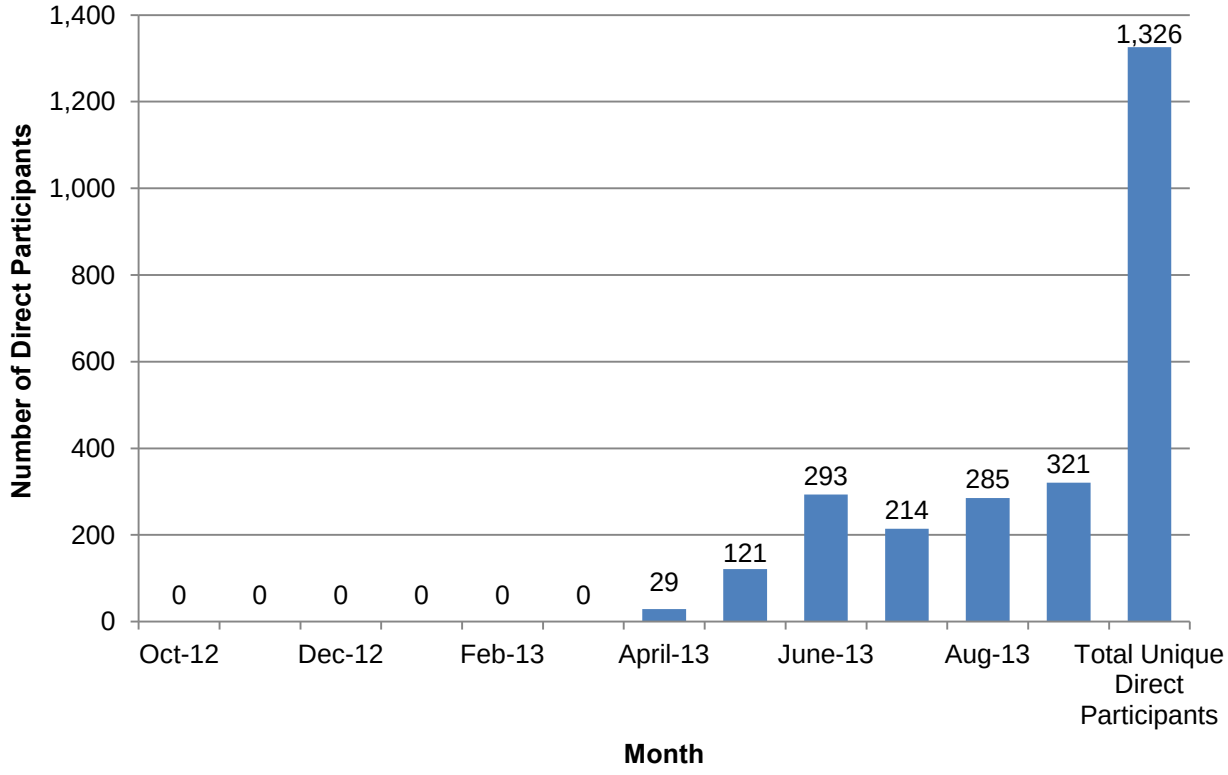
For successful care management, primary care providers must take an active role in patient enrollment and care management. They must also facilitate access to patients' medical records to communicate the necessary information to the care coordinator. Given the importance of primary care providers to the success of the care coordination program, each patient enrolled in IOCP is assigned to a primary care provider. If a patient does not have a primary care provider, the care coordinator will work with a clinician with whom the patient has a relationship to identify a primary care provider and assign the patient to that person. After the patient has been assigned to a primary care provider, the PMG is required to submit the provider's information to Milliman,

together with the claims needed to produce the risk score. If a PMG fails to submit the required provider information, Milliman will use claims to attribute the patient to a provider.

IV. Target Population and Assessment

The target population is high-risk Medicare beneficiaries. This group represents roughly the top 15 percent of patients likely to experience a hospitalization and includes patients who are dually eligible for Medicare and Medicaid. PBGH aims to enroll 27,000 of these patients. By September 2013, PBGH had enrolled more than 1,300 unique direct participants in the program. Figure 4 illustrates patient enrollment by month. Patient enrollment varies across the PMGs, from very low to 100 percent of the patients contacted for recruitment. PBGH staff suggested that the organizational structure of the PMG might also be a factor in patient enrollment. Foundations have higher percentages of successful patient enrollment, due in part to direct referrals from staff physicians. PBGH also reported that the timing and location of patient recruitment also makes a difference: patients recently discharged from a hospital are more likely to enroll than patients who learn about the program after receiving a letter in the mail or other promotional material.

Figure 4. Direct Participants, PBGH, October 2012–September 2013



Source: Lewin quarterly awardee performance reports prepared for CMMI, second through fifth quarters.

V. Workforce and Training

PBGH mainly targets PMGs to implement the IOCP and, in turn, as the parent entity, the PMGs work directly with the practices to implement the IOCP. Therefore, we do not have specific workforce information in terms of clinical staff involved at the practice level. As described in Section II, all staff paid out of the award are PBGH administrative staff. In this section, we describe the training provided by PBGH and its partner organizations to facilitate IOCP implementation.

Training for PMG Staff. PBGH targets PMG administrators and clinical personnel for training related to IOCP implementation. In the first 18 months of the program, PBGH trained 791 people for a combined total of 10,676 training hours (see Table 4). Staff from the California Quality Collaborative facilitate most of the IOCP training through leadership training workshops. PBGH established the California Quality Collaborative (based on the Institute for Health Care Improvement's collaborative model) to cultivate peer-to-peer learning augmented with coaching to facilitate change within provider organizations.

Training workshops for PMG administrators are held quarterly and include training on analytic methods to identify high-risk patients, principles of team-based care, techniques for rapid-cycle change, and approaches to incorporate patient feedback into clinical program design. PBGH relies on Renaissance Health and CERC to teach these topics during the training workshops. In addition, PBGH works with Renaissance Health and CERC to conduct site visits to PMGs before initiating patient enrollment to ensure the PMGs have the infrastructure needed to support IOCP. Because training workshops focus on PMG administrators, practice-level leaders and medical staff are typically not invited to attend. As of September 2013, 205 people had participated in the leadership training workshops.

Table 4. PBGH Workforce Development Activities

Training Course	Training Modality	Number of Trainees	Cumulative Number of Training Hours (first through fifth quarters)
Leadership Training Workshops	Classroom	205	3,280
Care Coordinator Academy	Classroom	150	3,600
Care Model Overview (distributed model)	Webinar	30	23
Care Model Overview (intensivist model)	Webinar	32	24
Care Coordinator Office Hours	Webinar	130	7,160
Medical Team Orientation	Webinar	124	372
Project Manager Orientation	Webinar	47	141
Milliman Technology Demonstration	Webinar	73	292
Total		791	10,676

Source: Lewin fifth quarterly report, July through September 2013.

Training for care coordinators. As of September 2013, PBGH has trained about 150 care coordinators to provide care management services to patients enrolled in IOCP. Through its Care Coordinator Academy, PBGH developed a curriculum to train care coordinators on transitional care, motivational interviewing, management of chronic conditions through evidence-based guidelines, health insurance coverage, and working with family caregivers and community agencies. Care coordinator training sessions generally occur on a quarterly basis and were originally limited to 60 care coordinators per training session. However, due to the higher-than-

anticipated demand, PBGH has had to exceed this cap several times and plans to conduct three training academies in the first quarter of 2014. By the end of the program, PBGH expects to train more than 300 care coordinators.

New staff orientation training. In addition to the leadership training workshops and the care coordinator training sessions, PBGH conducts trainings to orient new staff, demonstrate the Milliman technology, and introduce PMG management to the IOCP model. Renaissance Health conducts the new staff orientations and Milliman conducts the demonstrations of its risk-stratification technology. As of September 2013, Renaissance Health held orientation programs for 124 clinicians and 47 project managers; Milliman conducted technology demonstrations for 73 people. PMGs also hire on-site project managers and information technology analysts who are responsible for coordinating IOCP activities and data systems, respectively.

VI. Future Plans

In the next year, PBGH will begin to apply the lessons it learned from the first year of implementation to the second cohort of PMGs. For example, PBGH will help PMGs develop protocols to improve the efficiency and quality of their claims submissions in hopes of expediting the availability of risk scores for their patients. During upcoming leadership training workshops, PBGH will also ask the first cohort of PMGs to share their implementation experiences with those that joined the program in 2014. PBGH will continue to provide training and technical assistance activities to both cohorts of PMGs. In addition, PBGH will focus efforts on expanding patient enrollment by monitoring enrollment across PMGs, identifying best practices for successful patient enrollment, and replicating them among PMGs.

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SUMMARY OF PROGRAM DESIGN AND IMPLEMENTATION EXPERIENCE

MARCH 2014

Boyd Gilman and Rebecca Coughlin

In this brief, we describe the primary care redesign (PCR) program being implemented by PeaceHealth Ketchikan Medical Center (PHKMC) in southeastern Alaska under Health Care Innovation Award (HCIA) funding from the Center for Medicare & Medicaid Innovation (CMMI). The purpose of this brief is to describe the design of the program as it is currently being implemented and to highlight implementation experience one-and-a-half years after the receipt of award. We based the information presented in this brief on a review of program documents, including application materials and quarterly reports, as well as telephone discussions and follow-up communication with program administrators. This brief describes the status of the program as of December 2013. We will update the brief as additional information becomes available.

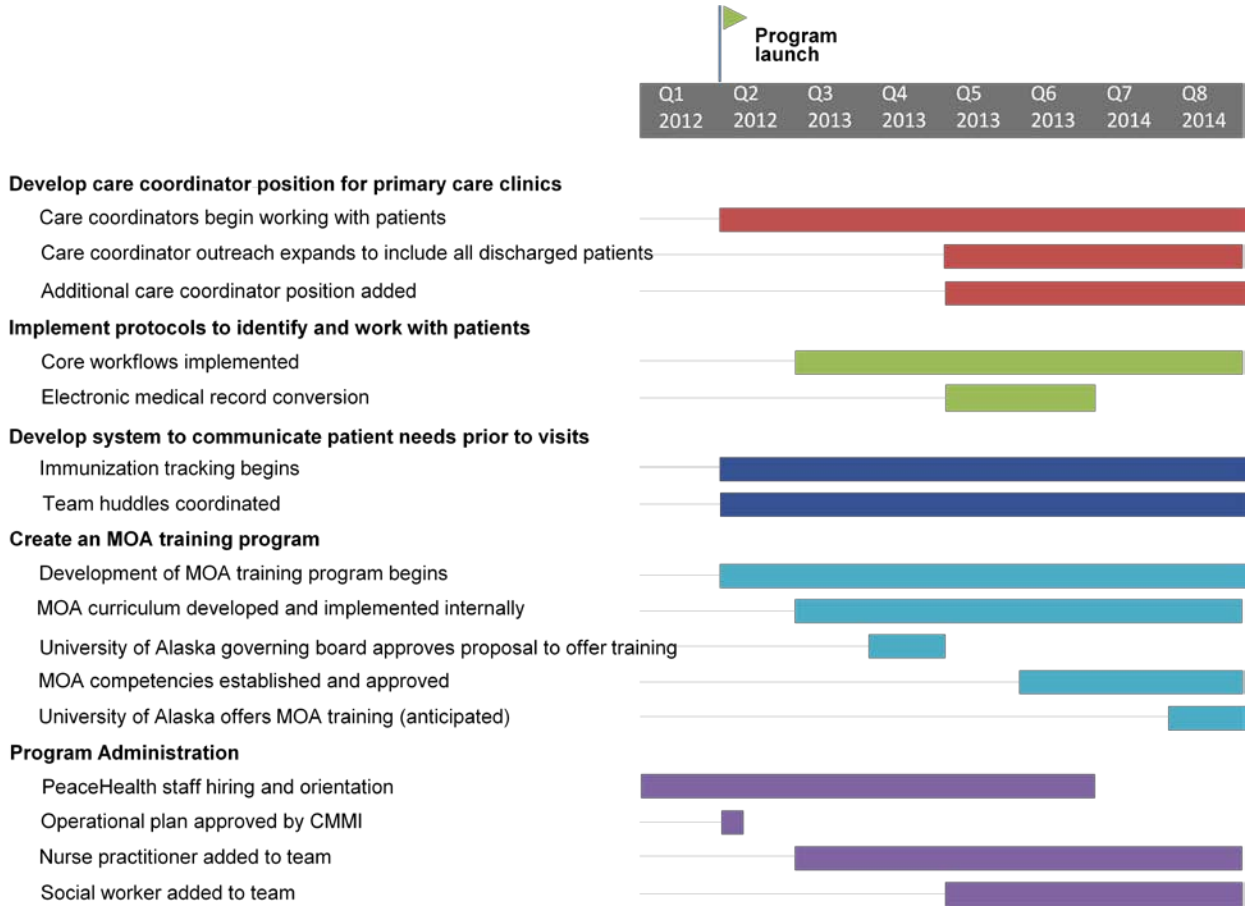
I. Overview

PHKMC received a three-year, $3.2 million dollar HCIA to implement a program titled *Better Health Through Coordinated Care – A Plan for Southeast Alaska* (hereafter referred to as the Coordinated Care Program). Through this program, PHKMC aims to improve access to primary care, increase support to and improve outcomes for high-risk patients, and bolster primary care teams. PHKMC will achieve these aims by (1) placing care coordinators in each of PHKMC's two primary care clinics and using those care coordinators to contact high-risk patients and facilitate their care, and (2) developing a new medical office assistant (MOA) training program. By doing this, PHKMC hopes to transform its operating model from an acute care model to a prevention and care coordination model, ultimately improving health outcomes while reducing unnecessary hospitalizations and related costs. Over the life of the program, PHKMC aims to (1) decrease 30-day readmission rates by 20 percent, (2) reduce costs associated with emergency department (ED) visits by 75 percent, (3) reduce emergency travel and associated costs by 15 percent, and (4) reduce overall costs by 15 percent over the life of the program. Additionally, PHKMC aims to improve a variety of clinical outcomes related to diabetes, heart failure, and health maintenance.

PHKMC is a local health system composed of a critical access hospital and three affiliated clinics. The hospital and two clinics are located in Ketchikan, Alaska, and the third clinic is in Craig, Alaska. Through the inpatient medical center and its affiliated primary and specialty care clinics, PHKMC serves the population living in the southern region of southeastern Alaska (about 25,000 people). This is a thinly populated, remote island region with up to 100 miles between communities. Health care facilities are sparse; traveling to receive care often requires a boat or plane and weather regularly restricts transportation. A chronic shortage of health care professionals further challenges health care in this area of Alaska, with PHKMC experiencing difficulty both recruiting and retaining staff. Given these challenges, in 2010 PHKMC began implementing an integrated care coordination program for preventative health and chronic disease management. However, the medical center lacked sufficient staff to implement the program fully. The HCIA funding enables PHKMC to expand its previous work and address a

lack of proactive health maintenance work in its center and affiliated clinics. Figure 1 outlines the time line of the Coordinated Care Program implementation to date.

Figure 1. Time Line: Coordinated Care Program Implementation



Source: Awardee quarterly reports submitted to CMMI.

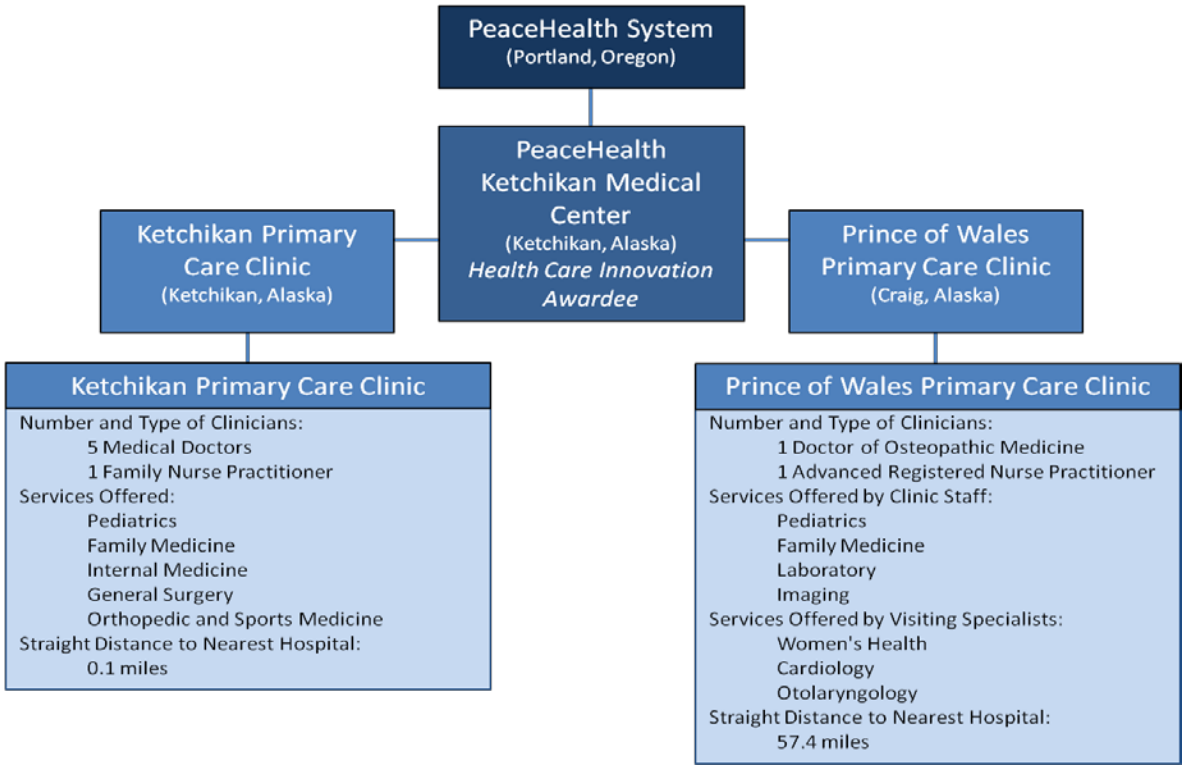
II. Organizational Structure

PHKMC is part of the PeaceHealth System, a health system headquartered in Portland, Oregon, that has eight hospitals and 42 clinics in Alaska, Oregon, and Washington State. PHKMC leadership oversee the Coordinated Care Program. The vice president of ambulatory care at PHKMC is the program director, spending about 10 percent of her time supervising this program, including supervision of the program coordinator. In addition to program oversight, PHKMC provides support in human resources, award coordination, and financial management. Figure 2 illustrates the relationships among PeaceHealth System, PHKMC, and the primary care clinics that implement the program.

PHKMC's application states that, as the program progresses, PHKMC will work with additional organizations, including the Ketchikan Public Health Department, Ketchikan school district, University of Alaska, and local providers. The most recent awardee's report indicates that program staff hope to partner with other external organizations to conduct community outreach activities to promote awareness of smoking cessation, breast and colon cancer, and diabetes.

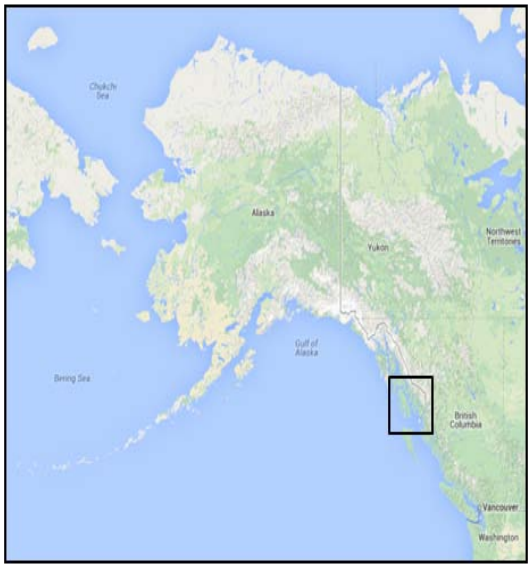
PHKMC is implementing the Coordinated Care Program through its two primary care clinics, one in Ketchikan and the other on Prince of Wales Island. Figure 2 provides information about the clinic's staffing and services and Figure 3 illustrates the locations of the two clinics. The clinic in Ketchikan is adjacent to the medical center and is staffed by six primary care clinicians. The clinic offers primary and pediatric care, orthopedic and sports medicine, and general surgery. The Prince of Wales clinic is located in Craig, Alaska, 57 miles from the PHKMC inpatient facility. The Prince of Wales clinic is more remote than the Ketchikan clinic; Prince of Wales Island has a population of 4,500 and is accessible only by plane or boat. Two permanent primary care clinicians staff the clinic and offer primary and pediatric care, as well as specialty care through visiting specialists. Both clinics are open during standard business hours. The Ketchikan clinic is currently experimenting with extending its hours to include three evenings and two early mornings each week. Program staff report that the two clinics provide primary care to about 70 percent of the population in Ketchikan and 50 percent of the population in Craig. Approximately 51 percent of the patient population is covered by Medicare or Medicaid, 40 percent by private insurance, and 9 percent is uninsured.

Figure 2. PHKMC Organizational Chart and Characteristics of Participating Clinics



Source: Communication with program staff (November 2013) and PeaceHealth Medical Group website, available at http://www.peacehealth.org/phmg/ketchikan-craig/locations/212-carlanna-lake-road/Pages/Default.aspx. Accessed January 29, 2014.

Figure 3. Location of PeaceHealth Ketchikan Medical Center Primary Care Clinics



This map of Alaska shows the location of the Ketchikan region in Southeast Alaska

This map of the area outlined by the box in the map at left shows Prince of Wales and Ketchikan islands and the primary care clinic locations

III. Program Features and Implementation Progress

The Coordinated Care Program has three main goals:

1. Develop a system to improve the delivery of coordinated preventive and primary care, with a focus on childhood immunizations, mammograms, and colorectal screening
2. Develop targeted interventions to help manage care for high-risk patients to improve health outcomes and reduce costs, with a focus on diabetes and congestive heart failure
3. Develop a skilled workforce to facilitate proactive and comprehensive coordinated care

To achieve these goals, PHKMC focuses on four features of care: (1) develop the care coordinator position for primary care clinics, (2) implement protocols to identify and work with high-risk and newly discharged patients to improve treatment compliance and health outcomes, (3) develop a system to identify and communicate patients' care needs before scheduled visits, and (4) create an MOA training program. In the rest of this section, we discuss each of these features and describe PHKMC's progress toward meeting its implementation goals.

1. **Develop the care coordinator position for primary care clinics.** Care coordinators, positions newly created for the award, are supposed to identify high-risk and newly discharged patients, make the initial contact with those patients, identify their care needs, and work with them and their care teams to ensure that their care needs are met. PHKMC expected care coordinators to work with high-risk patients only, but expanded their scope in the fifth quarter (summer 2013) to include all patients on a PHKMC primary care

physician panel discharged from the hospital or ED. PHKMC originally intended to hire four care coordinators, but later added a fifth position to meet the increased workload created by following up with discharged patients. Although PHKMC conducted a national search, program administrators reported difficulty recruiting and retaining care coordinators. Two care coordinators resigned during the first year of the program and had to be replaced. As of September 2013, PHKMC had filled all five of its care coordinator positions, placing four in the Ketchikan clinic and one in the Prince of Wales clinic. Four of the care coordinators are registered nurses and one is a licensed practical nurse. In December 2013, care coordinators attempted to contact 100 percent and successfully contacted 70 percent of all high-risk patients after their discharge from the hospital. Program administrators reported that following up with patients after hospital discharge resulted in cost savings to the medical center. As of December 2013, program staff projected a 14 percent reduction from 2012 to 2013 in cost per beneficiary per encounter (all payers), and a 5 percent reduction in overall payments. This corresponds to a 38 percent reduction in 61- to 120-day all-cause readmission rates over the same period.

2. **Implement protocols to identify and work with high-risk and newly discharged patients to improve treatment compliance and health outcomes.** Care coordinators identify high-risk and newly discharged patients using several automatically generated electronic medical record system reports, including a hospital discharge report, a registry of diabetic patients, and a hospital readmission report for patients with congestive heart failure. Care coordinators can also identify patients through physician referrals. After patient identification, care coordinators then follow a workflow of steps to provide additional support, including ensuring patients have a follow-up visit in the clinic within seven days of discharge, ensuring they understand how to take their medications, connecting them with social work services or physical therapy, and providing information about clinic hours and services. As of December 2013, formal workflows have been established and implemented for follow-up calls for all patients discharged from the hospital, discharge planning coordination with hospital staff, diabetic outreach, upcoming appointments for patients with diabetes, provider referrals for coordinated care, breast cancer screening outreach (mammograms), child immunization outreach/maintenance, and congestive heart failure. PHKMC transitioned its electronic medical records to a new system (Epic) in the fifth quarter. Although the transition disrupted implementation of this feature, program staff expect the new system will improve the ability of care coordinators to address their patients' needs.

3. **Develop a system to identify and communicate patient care needs before scheduled visits.** Clinic staff developed a system to assess patient care needs before all visits. Assessing a patient's needs before a visit ensures that all of the patient's care needs are identified and met, reducing the number of times the patient has to return to the clinic. Three to seven days before a scheduled visit, a care team reviews the patient's records to identify needs that can be addressed while the patient is in the clinic. The care team includes the primary care provider, a care coordinator, and an MOA. The care team typically reviews the patient's chart to identify any needs related to diabetic lab tests, mammograms, and colorectal screening, as appropriate. The care team also reviews state and national immunization registries to identify immunization needs. After identifying the patient's needs, the care coordinator orders the necessary lab tests, notifies the primary care provider, and informs the patient that the procedures and/or immunizations are due. The care team reviews the patient's needs on the day of the visit. Care

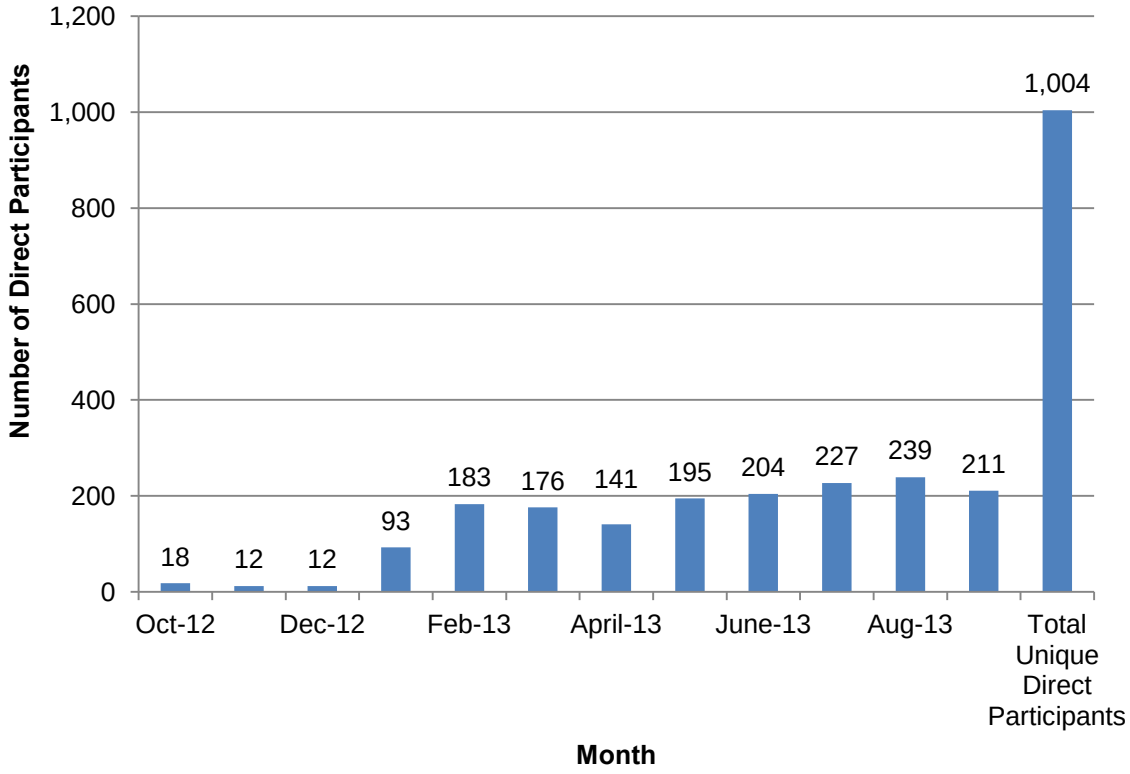
coordinators organize daily huddles with clinic staff to discuss the needs of the patients with an appointment for that day.

4. PHKMC faced two challenges implementing the systematic review of patients' records. First, the transition to Epic delayed the identification of colorectal and mammogram screening needs. The process should improve as the care coordinators learn the new system. Second, the state's immunization registries, and PHKMC's internal electronic systems, are not up to date, requiring manual review of patients' charts to establish immunization needs. In addition, the Prince of Wales clinic does not have the equipment to perform mammograms and, as an alternative, offers mammography services two weeks every year through a mobile van. The lack of local mammography services means that the identified needs of patients who receive primary care at the Prince of Wales clinic might not be addressed in a timely manner.
5. **Create an MOA training program.** The fourth feature of the Coordinated Care Program is the establishment of a training program for MOAs. MOAs are similar to medical assistants in that they support physicians in their daily tasks, but MOAs do not have to be licensed and cannot give injections. PHKMC currently has a shortage of MOAs in its clinics due to recruitment challenges associated with being in rural Alaska. Because there is currently no formal medical assistant training program in the Ketchikan region, program staff developed a curriculum that the University of Alaska's Ketchikan campus will offer in the spring of 2014. The new training program will provide training for current MOAs and help to develop a pool of future MOAs in Ketchikan. Care coordinators currently use the curriculum to train MOAs internally. Despite the training efforts, program administrators report that PHKMC will continue to have difficulty recruiting enough staff to fill the MOA positions.

IV. Target Population and Assessment

The target population of the Coordinated Care Program is all patients on a PHKMC primary care clinician's panel (about 11,000 people). PHKMC defines direct participants as those who receive any services from HCIA-funded program staff (care coordinator, social worker, or nurse practitioner). From July 2012 to September 2013 there were 1,004 unique direct participants, representing about 10 percent of PHKMC's total primary care panel. Figure 4 illustrates Coordinated Care Program direct participant enrollment by month. In Table 2, we show the distribution of direct participants by insurance status. Almost half of participants had Medicare, Medicaid, or dual insurance coverage. An additional 39.8 percent had private insurance coverage and 11.3 percent were uninsured.

Figure 4. Direct Participants, PHKMC, October 2012–September 2013



Source: Lewin quarterly awardee performance reports prepared for CMMI, Quarters 2-5.

Table 2. Percentage of Direct Participants, by Type of Insurance, July 2012–September 2013

Insurance Type	Percentage of Direct Participants
Medicaid Only	14.9
Medicare Only	26.5
Medicare and Medicaid	5.7
Private Plan	38.9
TRICARE	0.5
Indian Health Service	0.3
Uninsured	11.3
Other or Unknown	1.8
Total	100.0

Source: Lewin first through fifth quarter awardee reports, July 2012 through September 2013.

A possible spillover effect of the Coordinated Care Program interventions is that PHKMC's primary care patients who did not directly receive HCIA-funded services might receive indirect benefits. For example, the program might benefit these patients through its outreach activities, the training of MOAs, and other workforce development activities. The awardee is therefore tracking both direct and indirect participants. Indirect participants include all patients on a PHKMC primary care clinician panel who do not receive HCIA-funded services. The program had 10,133 indirect participants from July 2012 to September 2013.

V. Workforce and Training

A. Intervention Staff

A team of eight intervention staff implement the Coordinated Care Program, including a program coordinator, five care coordinators, a nurse practitioner, and a social worker. Table 3 lists the staff members responsible for providing intervention services, the clinics in which they are located, and the amount of time each spends working on the program. As the table notes, each care coordinator in the Ketchikan clinic has a specific focus: two care coordinators specialize in family medicine, one in internal medicine, and one in pediatric medicine. Three of the five care coordinators are full-time and two are half–time employees. Two care coordinators perform other program functions in addition to care coordination. One of the family medicine care coordinators also serves as the program clinical educator, allocating half of her time to each role. The clinical educator is responsible for the MOA training program, including developing the curriculum and training the MOAs currently on staff. The care coordinator at the Prince of Wales clinic allocates half of his time to data and reporting. The program also supports a new full-time nurse practitioner. Her role is to increase access to primary care by offering same-day appointments to clients. Finally, PHKMC added a full-time social worker at the beginning of the second year. Her role is to address nonmedical barriers to care, such as cost and transportation.

Table 3. Number and Type of Intervention Staff

Position	Clinic Location	Number of FTEs
Program Coordinator	Ketchikan	1.0
Care Coordinator – Family Medicine	Ketchikan	1.0
Care Coordinator – Family Medicine/Clinical Educator	Ketchikan	1.0
Care Coordinator – Internal Medicine	Ketchikan	0.5
Care Coordinator – Pediatric Medicine	Ketchikan	0.5
Nurse Practitioner	Ketchikan	1.0
Social Worker	Ketchikan	1.0
Care Coordinator/Data and Reporting Specialist	Prince of Wales	1.0

Source: Awardee application, submitted to CMMI on January 24, 2012; Lewin quarterly awardee reports, quarters 1-5; fifth quarter awardee narrative.

B. Workforce Development and Training

The Coordinated Care Program has two workforce development programs, one for care coordinators and one for MOAs (see Table 4). All care coordinators will be trained through Oregon Health Sciences University's Training for Care Management Plus course. This training has an in-person component followed by eight weeks of online training. The training provides skills in teaching self-management strategies to patients, identifying barriers to care and potential strategies to address those barriers, leveraging resources to provide timely and appropriate care, identifying patients' risks and strategies to address them, and using data to identify problems and successes. As of December 2013, four care coordinators had completed the Care Management Plus course. As discussed earlier, th**e** Coordinated Care Program will also establish a formal MOA certification program, the first of its kind in the region. As of September 2013, Coordinated Care Program staff had trained 32 MOAs.

Table 4. PHKMC Staff Training Programs

Training Program	Total Number of Participants	Status of Training Program
Care Management Plus	4[a]	Four care coordinators completed training.
Medical Office Assistant	32[b]	Curriculum was developed and training delivered internally; it will be offered by the University of Alaska in spring 2014.

Source: Awardee's sixth quarterly report (October 1, 2013 through December 31, 2013), submitted to CMMI on January 30, 2014; Lewin fifth quarter awardee report (July 1, 2013 through September 30, 2013), submitted to CMMI on December 6, 2013.

[a] As of December 2013.

[b] As of September 2013.

VI. Future Plans

In the first year, PHKMC overcame challenges related to staffing and a transitioning electronic medical records system. During the coming year, program staff will continue to adjust to the new electronic medical records system and protocols, refine staff roles and responsibilities, strengthen team huddles, and establish new workflows. PHKMC will also work to incorporate its MOA training into the University of Alaska's curriculum. Additionally, program staff expect to increase participation in the Coordinated Care Program through increased community outreach and extended clinic hours in Ketchikan. Increased community outreach will include program-supported community awareness campaigns, such as immunization programs, partnering with schools to promote behavior change to reduce diabetes and obesity among students, and public service announcements to promote breast and colon cancer screening.

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SUMMARY OF PROGRAM DESIGN AND IMPLEMENTATION EXPERIENCE

MARCH 2014

Rosalind Keith and Cara Stepanczuk

In this brief, we describe the primary care redesign (PCR) program managed by the Center for State Health Policy at Rutgers, the State University of New Jersey. The program is being implemented by four provider organizations within the People Improving Communities through Organizing (PICO) National Network, under Health Care Innovation Award (HCIA) funding from the Center for Medicare & Medicaid Innovation (CMMI). The purpose of this brief is to describe the design of the program as it is currently being implemented and to highlight the implementation experience one-and-a-half years after the receipt of award. We based the information presented in this brief on a review of program documents, including application materials and quarterly reports, as well as telephone discussions with program administrators. This brief describes the status of the program as of December 2013. We will update the brief as additional information becomes available.

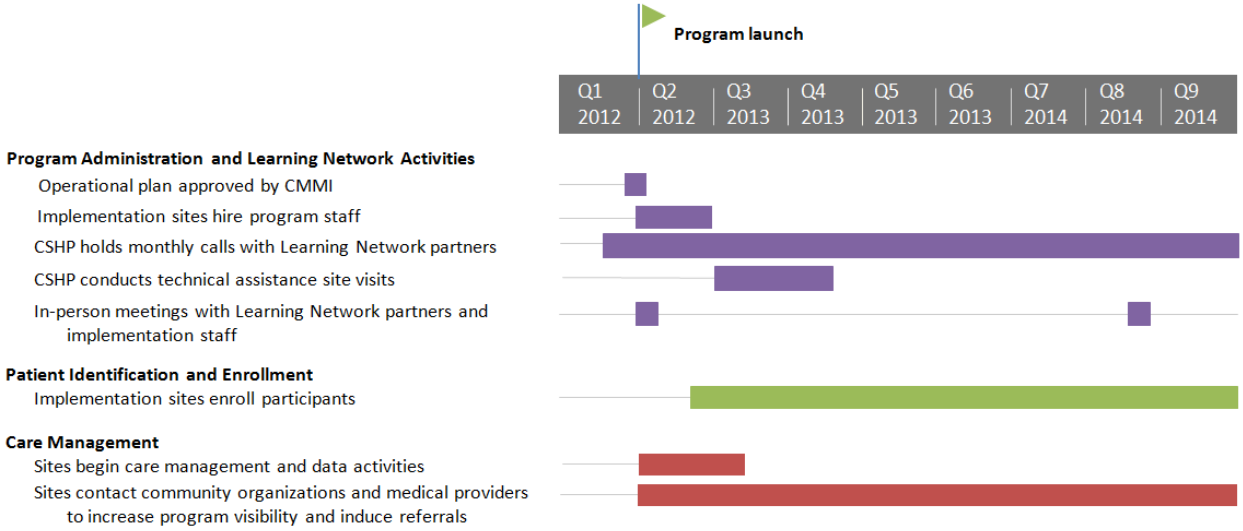
I. Overview

The Center for State Health Policy at Rutgers (CSHP) received $14,347,808 in HCIA funding to implement a PCR model. CSHP supports four provider organizations in adapting a care management model pioneered by the Camden Coalition of Healthcare Providers (Camden Coalition). The model features multidisciplinary, community-based care teams that connect high utilizers who have chronic diseases to appropriate clinical and social services and help them manage their conditions—as well as address socioeconomic obstacles to care—to reduce their need for acute care and improve their health outcomes. By the end of the three-year demonstration, CSHP expects that use of the model of care will result in reduced hospital and ED use and decrease average annual costs for the target population by 14.8 percent. Although CSHP does not offer projections of the program's impact on preventable hospital inpatient and emergency department (ED) use, studies of similar programs showed that participants had 20 to 40 percent fewer hospital and ED visits per month[1]. Figure 1 outlines the implementation time line for the sustainable high-utilization model, to date.

[1] Green, S.R., V. Singh, and W. O'Byrne. "Hope for New Jersey's City Hospitals: The Camden Initiative." *Perspectives in Health Information Management*, vol. 7, spring 2010.

Sadowski, L.S., R.A. Kee, T.J. VanderWeele, and D. Buchanan. "Effect of a Housing and Case Management Program on Emergency Department Visits and Hospitalizations Among Chronically Ill Homeless Adults: A Randomized Trial." *Journal of the American Medical Association*, vol. 301, no. 17, May 6, 2009, pp. 1771–1778.

Figure 1. Time Line for CSHP's Implementation of the Sustainable High-Utilization Model

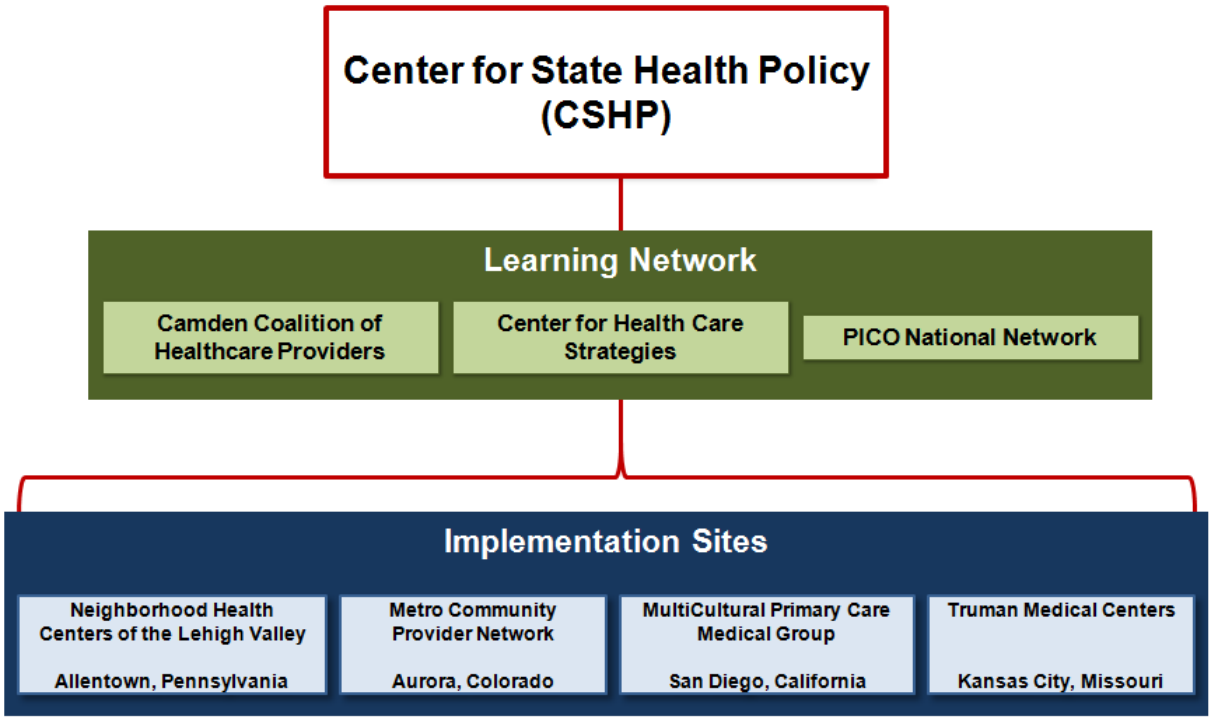


Sources: Awardee quarterly reports submitted to CMMI and communication with CSHP staff, January 8, 2014.

II. Organizational Structure

CSHP is the lead awardee; its primary role in the program is to coordinate the technical assistance provided by three partner organizations—Camden Coalition, Center for Health Care Strategies, and PICO—to the four implementation sites (See Figure 2). CSHP created a management structure to support adaptation of the sustainable high-utilization model in each implementation site and also foster cross-site learning. This management structure is composed of a steering committee and a learning network. The steering committee includes representatives from each partner organization and project directors from each of the four implementation sites. The steering committee meets by teleconference quarterly to oversee all clinical and administrative activities taking place under the award, establish priorities for technical assistance, and ensure compliance with CMMI reporting requirements. The three partner organizations comprise the learning network, which provides targeted and ongoing technical assistance to the implementation sites.

Figure 2. Organizational Structure for Implementing the Sustainable High-Utilization Model



Source: Original CSHP application submitted to CMMI and communication with CSHP staff, November 21, 2013.

Next, we describe each partner organization and the specific technical assistance it provides to the implementation sites through the learning network.

- The Camden Coalition is a nonprofit organization that developed and has operated a high-utilizer care management program for nearly a decade. It provides guidance on the implementation of the sustainable high-utilization model, focusing on program start-up, patients' identification and enrollment, care management activities, and participants' graduation. The Camden Coalition held conference calls with each implementation site to discuss elements of the Camden experience that other sites could use or modify, and it provides ongoing guidance on the implementation of the model via monthly conference calls with the implementation sites.
- The Center for Health Care Strategies is a nonprofit health policy resource center dedicated to improving health care access and quality, especially for low-income people with complex and costly health care needs. The Center for Health Care Strategies provides technical assistance to the four implementation sites focused on sustainability planning. It works individually with implementation sites to develop program sustainability strategies, targeting state Medicaid agencies and philanthropic organizations. Because the sites exhibit varying levels of sophistication in interacting with policymakers, legislative staff, and philanthropic institutions, the Center for Health Care Strategies and CSHP are developing a sustainability tool kit that contains

templates of financing, communication, and data briefs for sites to use in developing and executing sustainability strategies.

- The PICO National Network is a consortium of faith-based organizations that enables community residents to advocate for better health care access. Even before the HCIA funding, PICO worked with the Camden Coalition to replicate its model under a $2.2 million grant from the Atlantic Philanthropies. PICO viewed the HCIA funding as an opportunity to augment its resources for further replication of the Camden Coalition model in provider organizations within its network. Thus, PICO selected four provider organizations in its network (based on organizational capacity for implementing the program and connectedness to the local community) to participate in the CSHP-led program. PICO enlisted CSHP to lead the HCIA application process and oversee program implementation.

Table 1 reviews details about the four implementation sites: the type of institution, location, and the organizational characteristics each possesses for implementing the program. Two of the sites have high operational capacity for implementing the program (Metro Community Provider Network and Truman Medical Centers), whereas the other two sites employ strong community outreach strategies (Neighborhood Health Centers of the Lehigh Valley and MultiCultural Primary Care Medical Group). In Figure 3, we illustrate the location of each implementation site and the associated target region for enrolling high utilizers.

Table 2. Name, Organizational Structure, and Location of Implementation Sites

Site	Institution Type	Level of Community Outreach[a]	Level of Operational Capacity[b]
Neighborhood Health Centers of Lehigh Valley Allentown, Pennsylvania	Nonprofit operator of two FQHCs	High	Low
Metro Community Provider's Network Aurora, Colorado	Nonprofit community health center	Low	High
Truman Medical Centers Kansas City, Missouri	Nonprofit health system with two hospitals	Low	High
MultiCultural Primary Care Medical Group San Diego, California	Independent private physician association	High	Low

Source: Communication with CSHP staff, November 21, 2013.

FQHC = federally qualified health center.

[a]A site with a high level of community outreach is characterized by CSHP staff as having a good understanding of the target population and its needs, as well as close relationships with local medical and social service providers that can help address participants' needs.

[b]A site with a high level of operational capacity is characterized by CSHP staff as having the ability to comply with award requirements, manage the program and staff effectively, shift resources to respond to implementation challenges, conduct data collection and reporting without assistance, and use data links for eligibility determination.

Figure 3. Locations of Implementation Sites

Source: Original CSHP application submitted to CMMI.

III. Program Features and Implementation Progress

The sustainable high-utilization model is a community-based care management program that is integrated with the existing clinical and social service networks at each implementation site. The program is designed to support participants in learning to manage chronic illness and ultimately connect them with medical homes so that the program itself is short-term, but the goals of reduced hospital and ED use and decreased average annual costs for the target population are achieved. CSHP and its partners facilitate the implementation of three core program components: (1) identification of high-utilizer patients and enrollment into the program, (2) care management provided by multidisciplinary care teams, and (3) transitioning participants out of the program and into a medical home within 60 days of program enrollment and following up with the participants to monitor their transitions.

A. Patient Identification and Enrollment

The Camden Coalition's program, which is the model being replicated through this HCIA initiative, begins with the identification of prospective participants through a centralized database, the Camden Health Information Exchange. This database includes information about patients' admissions, discharges, and transfers from local hospitals, as well as access to patients' electronic medical records to confirm their eligibility for the program (for example, only insured adults ages 19 to 80 with two or more hospital admissions are eligible for the intervention). Access to this information enables members of the care team to approach potential participants in the hospital, before discharge.

CSHP implementation sites do not have access to a centralized database comparable to the Coalition's. Therefore, CSHP sites use various methods to identify potential participants,

including hospital data, when available, and referrals from local primary care providers, hospitalists, case managers, health plans, social service organizations, and faith-based organizations, after hospital discharge. Table 2 shows the various methods and data sources used by the different implementation sites to identify prospective participants.

Table 2. Method of Participant Identification, by Site

Site	Data Sources Accessed for Identification	Data Sources Used for Eligibility and Exclusions	Nondata Referral Sources
Neighborhood Health Centers of the Lehigh Valley	Lehigh Valley Health Network includes: •2 hospitals •Primary care and specialty physicians •Community health centers and clinics	•Internal practice management software (patient profiles, appointment information, discharge summaries, and so on) •Triage forms from other referral sources	•Local case managers •Social workers from various hospitals •OACIS[a] •Fresenius Medical Care[b] •Visiting nurse services
Metro Community Provider Network	•University Hospital ED and inpatient	•Internal EMR	None
Truman Medical Centers	•Truman Medical Centers is a hospital and ambulatory care system •Kansas City Health Information Exchange	•Internal EMR	•FQHCs •Other primary care clinics •PICO (community outreach) •Identify and locate patients anywhere in the Truman Medical Centers system, including inpatient, primary care, and Health Home program
MultiCultural Primary Care Medical Group	None	•Hospital fact sheets •Medical records •Health plan reports	•PCPs (medical groups) •Health plans •Hospitals •Community referrals

Source: Email communications with CSHP in January 2014.

[a] OACIS stands for optimizing advanced complex illness support. Lehigh Valley Health Network's OACIS program, a specialized palliative medicine service appropriate for any age and at any stage in a serious illness, can streamline care.

[b] Fresenius Medical Care provides dialysis care services at a nationwide network of facilities. There are four Fresenius facilities in the Lehigh Valley Health Network.

ED = emergency department; EMR = electronic medical record; FQHC = federally qualified health center; PCP = primary care provider.

For patient enrollment in the Camden model, a member of the care team travels to the facility where the prospective program participant is admitted and attempts a pre-enrollment visit at the patient's bedside. In the CSHP implementation sites, care team members try to meet the prospective participant in the hospital, but pre-enrollment visits occur more frequently at the patient's home, within two weeks of discharge. Because of the difficulty obtaining access to patients' medical records, sites require each enrolled participant to sign a consent form so that program staff can access their medical information.

B. Care Management

Care management is intended to stabilize enrolled participants and help them establish a relationship with a primary care provider. A member of the care team, such as a community health worker (CHW), health coach, or social worker, conducts an initial home visit as soon as possible after a participant enrolls. Priorities for the initial visit include completing enrollment forms (if incomplete), determining the root causes of the participant's hospital use, developing a

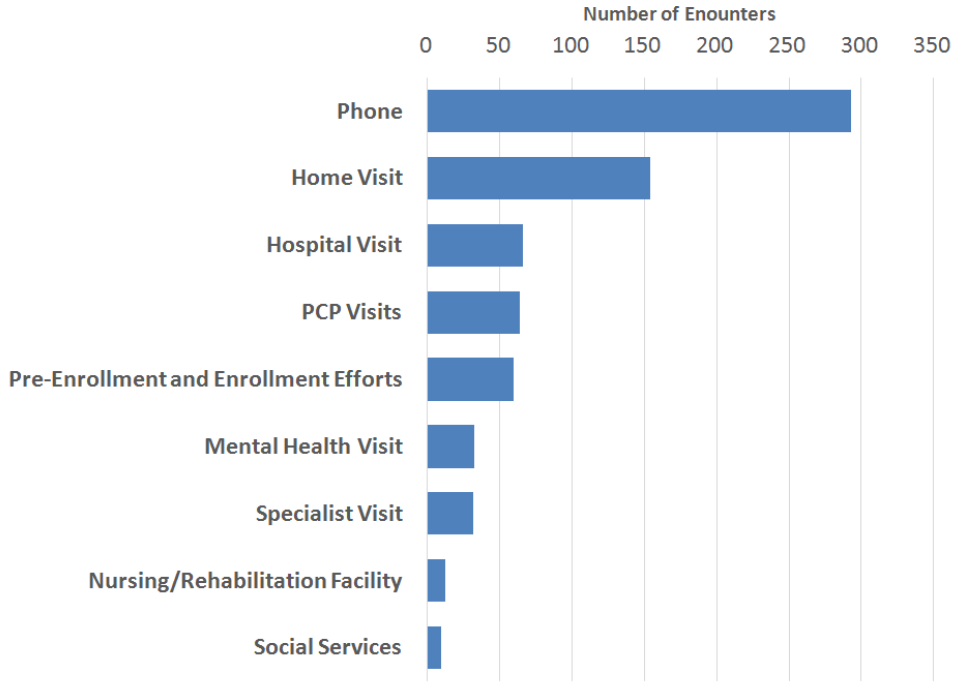
care plan tailored to the participant's medical and social needs, and building the participant's rapport. The care teams also discuss with participants what to expect by participating at the first visit. For example, they help patients set goals and clarify responsibilities for the participants and the care teams to pursue those goals.

Beginning with the first visit and continuing throughout a participant's enrollment in the program, the care management team provides enrollees with ongoing, in-person care designed to address their clinical and social needs. Examples of care management services provided by care team members include the following:

- Scheduling and accompanying participants to appointments with primary care providers and specialists
- Medication reconciliation
- Conducting home visits and telephone calls to support disease management
- Assisting with enrollment in social and mental health services

Although care team members accompany participants to primary care and specialty appointments, care management encounters often take place in participants' homes, on the telephone, or at social service agencies. Figure 4 shows the distribution of different types of encounters care team members conduct with participants in a typical month.

Figure 4. Average Number of Encounters with Care Team per Month, Aggregated Across Sites



Source: CSHP's measurement and monitoring plan, December 31, 2013.

Note: Social services include (but are not limited to) housing services, substance abuse services, and public assistance.

PCP = primary care provider.

CSHP staff characterize the care management work as labor-intensive and time-consuming, as staff must design a care plan with different goals, approaches, and tasks for each participant. Aggregate monitoring data provided by CSHP in December 2013 show that the median participant across all four sites receives 9 in-person visits and 3 telephone calls, for a total of 12 encounters while enrolled in the program. A typical in-person visit lasts about an hour and a typical telephone call lasts about 15 minutes.

The care teams monitor participants' progress on a regular basis, with most checking in with participants on a weekly basis. Early feedback from implementation sites suggests that participants in different sites experience the program differently. The MultiCultural Primary Care Medical Group reported that allowing more than one week to pass between check-ins increases the probability of readmission, and Truman Medical Centers received feedback from participants that weekly visits are overbearing and that care teams are "too in their business."

C. Transition to Medical Homes

The ultimate goal of the program is to graduate participants from the program through a so-called warm hand-off to a primary care medical home or a primary care provider that will help the participant manage his or her own care. Before graduation, care teams at each site consider participants' progress toward their goals, whether their medical and social needs have been stabilized, and whether they are prepared to navigate the health system without assistance. Of the 205 participants who exited the intervention by December 2013, 79 percent graduated successfully; the other 21 percent exited the intervention for other reasons, such as moving out of the catchment area, becoming unreachable by care team staff, or declining to participate further. All sites complete at least one check-in telephone call after a participant graduates to monitor the transition; three of the sites continue to conduct monthly check-in calls with graduates.

One of the challenges that surfaced in the program's early months is the potential for scope creep, a term CSHP uses to describe when the care team takes on tasks that are better handled by the participant's family or other social support system. CSHP reports that allowing scope creep to delay a patient's graduation results in a participant's over-reliance on care teams, unmanageable care team case loads, and program staff burnout. Although all sites struggle with scope creep to some degree, Truman Medical Centers has had the most difficulty graduating patients on time. CSHP believes Truman Medical Centers' intervention extends longer than others because staff work with participants to meet every social and psychological need before recommending graduation. Metro Community Provider Network, on the other hand, has an advantage in keeping to the intervention's intended time frame because there is an existing medical home to which staff can hand off patients (Metro Community Provider Network is a federally qualified health center).

To facilitate implementation of the three core program components across the CSHP sites, the Camden Coalition hosted individual calls with each site to discuss Camden's experience with implementing the sustainable high-utilization model. CSHP staff also conducted intensive site visits that included hands-on training in specific areas, such as strategies for increasing and tracking enrollment, monitoring program activities, and developing efficient workflows. CSHP continues its support via monthly conference calls with site leadership and annual in-person meetings with all partners, site leadership, and representatives of care teams. CSHP staff are

organizing the next Learning Network annual meeting to occur in March 2014. The meeting will focus on the unique adaptations being made across the four implementation sites to achieve goals of the sustainable high-utilization model. CSHP reports that sites are receptive to in-person meetings and have requested more peer-to-peer learning opportunities with other sites and the Camden Coalition.

Additionally, CSHP facilitates implementation by coordinating monthly case conference calls that enable clinical staff at each site to discuss implementation of the program components with staff at other sites, the Camden Coalition, and CSHP. During the call, sites take turns presenting patient cases for group discussion and resolution. CSHP staff believe monthly case conferencing is a good way for sites to help each other overcome implementation challenges, such as determining when it is appropriate to graduate participants to usual care. CSHP recently instituted a monthly conference call with site leadership dedicated to discussing methods of integrating behavioral health into care management.

IV. Target Population and Assessment

A. Target Population

The Camden Coalition defines high utilizers as those with two or more inpatient admissions in six months, more than one chronic condition, and social comorbidities such as homelessness and difficulty receiving care. Using the Camden Coalition's model as a guide, each CSHP implementation site requires participants to have multiple inpatient admissions and two sites also require participants to have multiple chronic diseases. Like the Camden Coalition, CSHP sites also exclude people who have conditions that would not benefit from care management (such as cancer), a behavioral health diagnosis only, or a lack of cognitive capacity that would require a patient to have a full-time caregiver. We describe the unique eligibility and exclusion criteria of the sites in Table 3.

Over time, the sites have adjusted participant eligibility in an effort to balance enrollment targets with staff capacity. For example, Truman Medical Centers expanded its geographic limits and reduced its admissions criteria from two hospitalizations in 6 months to three in 12 months and added the option to count ED visits with hospital stays. Even with these changes in eligibility criteria and recent acceleration in patient recruitment, sites are not expected to achieve their original ambitious enrollment goals. CSHP is reworking the estimates with sites now.

Table 3. Participant Enrollment and Eligibility Criteria, by Site

Site	Eligibility Criteria	Exclusions	10-Month Enrollment	Total Target Enrollment
Neighborhood Health Centers of the Lehigh Valley	Participants must meet all three: • 2 hospitalizations in 6 months • 2 or more chronic conditions • 6 or more medications[a]	• Solely behavioral health diagnosis • Progressive medical condition (that is, cancer, pregnancy, or palliative care) • Postsurgical • Lack of cognitive understanding or capacity (that is, Down's syndrome or severe dementia)	56	475
Metro Community Provider Network	Participants must meet either: • 3 or more hospitalizations in 6 months • 3 or more ED visits in 6 months	• Primary diagnosis of personality disorder or substance abuse • Progressive medical condition • Postsurgical • Lack of cognitive understanding or capacity • Violent offenders or sex offenders	226	900
Truman Medical Centers	Participants must meet both: • 2 or more hospitalizations in 6 months (or 3 hospitalizations in 12 months) • 1 or more chronic illness	• Undocumented patients[b] • Currently open to all payer groups (initially required to have Medicare or Medicaid FFS) • Pregnancy • Terminal cancer	138	300
MultiCultural Primary Care Medical Group	Participants must meet: • 2 or more hospitalizations in 6 months	• End-stage renal disease • Cancer diagnosis	68	100
TOTAL			488	1,775

Source: Email communications with CSHP and implementation sites, December 2013.

a Six or more medications were on the list of eligibility criteria we received from Neighborhood Health Centers of the Lehigh Valley but were not included in CSHP program documents.

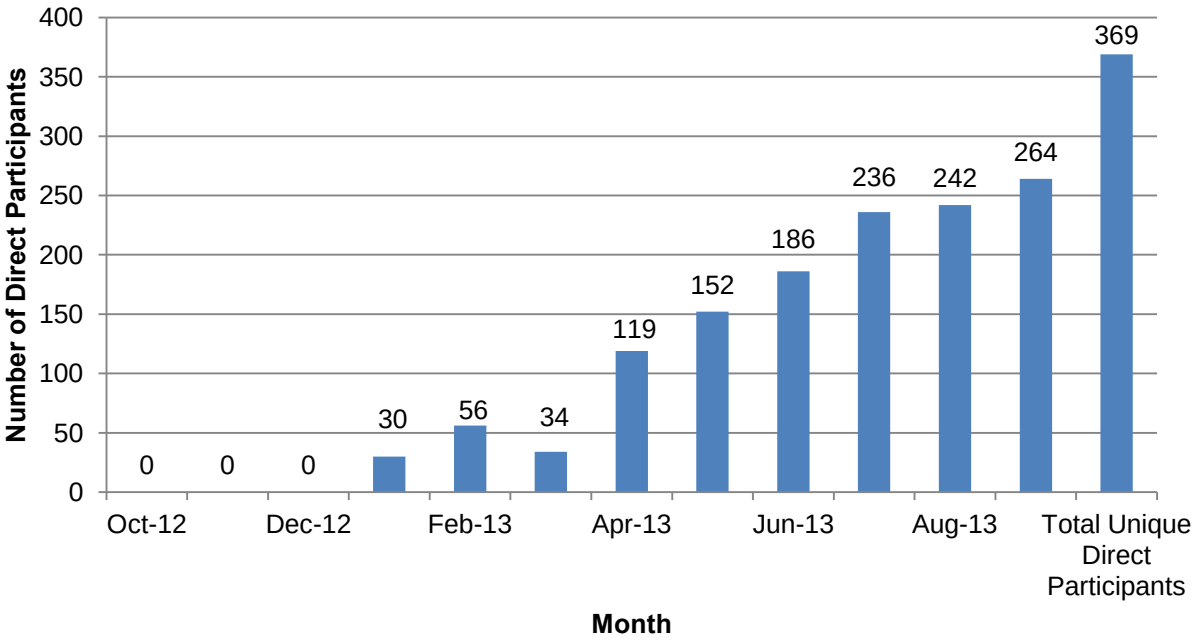
b Undocumented patients were on the list of eligibility criteria we received from Truman Medical Centers but were not included in CSHP program documents.

FFS = fee-for-service.

B. Assessment

As of September 30, 2013 (nine months after sites began enrollment), participants had a median of four ED visits and two hospitalizations in the past six months at the time of program enrollment. Almost half of the participants had three or more chronic conditions, the most prevalent of which are asthma, depression, chronic obstructive pulmonary disease, diabetes, heart failure, and hypertension.[2] Table 3 shows participants' enrollment roughly 10 months after program launch at each site and target enrollment. Figure 5 shows the aggregate enrollment by month across the four sites nine months after sites began enrollment.

Figure 5. Direct Participants, CSHP, October 2012–September 2013



Source: Lewin quarterly awardee performance reports prepared for CMMI.

V. Workforce and Training

The CSHP HCIA does not include a formal training component as part of program implementation. As described in sections II and III, CSHP, with its partners, facilitates program implementation through the Learning Network and ongoing activities, such as the monthly case conference calls that involve front-line staff involved in the delivery of care through the sustainable high utilization model. In this section, we describe these front-line staff members and the composition of the care teams in each CSHP implementation site.

[2] CSHP's measurement and monitoring plan, September 30, 2013.

A. Care Teams

Across sites, care teams composed of three to five people conduct care management activities. The care teams providing the care management services are designed similarly, though not identically, across the implementation sites. Typically, a medical director helps troubleshoot problems and makes strategic decisions about the care management services provided to individual participants, but is not part of day-to-day decision making. Reporting to the medical director, advance practice registered nurses lead care teams that consist of CHWs, health coaches, medical assistants, and social workers. As shown in Table 4, sites have one to three teams. The last row of the table shows the structure of the Camden Coalition model, which CSHP sites have been adapting.

Table 4. Comparison of CSHP and Camden Coalition Care Team Configurations

Site	Care Team Members	Number of Teams	Care Team Support Roles	Total Participant Capacity
Neighborhood Health Centers of the Lehigh Valley	1. RN 2. LPN 3. CHW 4. Community connector 5. Social worker	1		Unknown
Metro Community Provider Network	1. CHW 2. Medical provider 3. Clinical care coordinator 4. Health coach	3	• Behavioral health provider	150
Truman Medical Centers	1. RN health coach 2. Community client liaison 3. Community health advocate	2[a]	• Social worker • Nurse practitioner • Psychologist	Unknown
MultiCultural Primary Care Medical Group	1. RN care manager 2. Social worker 3. CHW	1	• Volunteers from community	Fewer than 63
Camden Coalition (Model)[b]	1. LPN #1 2. LPN #2 3. Community Health Worker 4. Health Coach #1 5. Health Coach #2	2	• RN • Social worker • Intervention specialist	54

Sources: Email communication with CSHP, January 8, 2014. Email communication with the Camden Coalition on February 9, 2014. Narrative progress report for Cooper University Hospital for reporting period ending December 31, 2013, submitted to CMS on January 31, 2014.

[a] Truman Medical Centers currently has staff to run only two teams but is working on building a third.

[b] The Camden Coalition is not part of the CSHP HCIA, but serves as a consultant to the four implementation sites.

CHW = community health worker; LPN = licensed practical nurse; RN = registered nurse.

B. Staff Recruitment and Retention

CSHP reports that all sites found the initial recruitment of care team staff to be time-consuming, though the first six to eight months of the program had high retention rates. However, by the end of the first year, at least two sites experienced turnover among care team members. CSHP reports that care management "is a high-burnout job." Each site handles staff burnout and turnover differently. For example, CSHP reports that MultiCultural Primary Care Medical Group uses volunteers from the local medical school to help ease the burden on its staff. These medical students lead weekly check-in calls with enrollees and monthly follow-up calls

with graduates of the program, freeing the care team to work on other tasks. Two sites, Metro Community Provider Network and Truman Medical Centers, are able to shift staff from other roles within their organizations to fill open care team positions. Both are in the process of re-recruiting, but CSHP staff believe it will be difficult to hire good candidates when funding for the program beyond 2015 is uncertain.

VI. Next Steps

CSHP reports that the implementing sites are still in "model-tweaking mode;" they are working to adapt the model pioneered by the Camden Coalition, which continues to be adapted itself. One staffer likened this experience to "building the plane as we are flying it, with students in the cockpit." In March 2014, CSHP is hosting the second annual in-person meeting with the partner organizations—Camden Coalition, The Center for Health Care Strategies, and PICO—to provide support to implementation site staff. In addition to ongoing support for implementing the components of the sustainable high-utilization model (participant identification and enrollment, care management, and graduation to medical homes), the sites continue to cultivate community partnerships, which is important for encouraging health care providers and social service agencies to accept referrals of such complex patients. All four implementation sites are attempting to collaborate with local hospitals to streamline identification and patient enrollment. The sites are also establishing relationships with a variety of local organizations, including home health agencies, specialty providers, visiting nurse associations, refugee services, multiple sclerosis clinics, developmental disability organizations, and other nonprofits. The sites are also beginning to engage community policymakers and health care leaders to communicate lessons, best practices, and paths toward sustainability after HCIA funding ends in 2015.

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SANFORD HEALTH ONE CARE

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SANFORD HEALTH ONE CARE

SUMMARY OF PROGRAM DESIGN AND IMPLEMENTATION EXPERIENCE

MARCH 2014

Boyd Gilman and KeriAnn Wells

In this brief, we describe the primary care redesign (PCR) program being implemented by Sanford Health in Minnesota, North Dakota, and South Dakota under Health Care Innovation Award (HCIA) funding from the Center for Medicare & Medicaid Innovation (CMMI). The purpose of this brief is to describe the design of the program as it is currently being implemented and to highlight implementation experience one-and-a-half years after the receipt of award. We based the information presented in this brief on a review of program documents, including application materials and quarterly reports, as well as telephone discussions and follow-up communications with program administrators. This brief describes the status of the program as of December 2013. We will update the brief as additional information becomes available.

I. Overview

Sanford Health received a three-year, $12.1 million dollar HCIA award to create patient-centered medical homes (PCMHs) that specialize in treating patients with chronic health conditions and co-occurring behavioral health conditions. Sanford's HCIA initiative, known as One Care, incorporates team-based primary and behavioral health care, health information technology (IT), and standardized clinical metrics to support better health; better care; and cost efficiencies for patients in Minnestoa, North Dakota, and South Dakota. By the end of the award period, Sanford Health aims to (1) have more than 325 health care professionals practicing fully integrated primary and behavioral health care; (2) achieve clinically significant and meaningful improvements in clinical outcomes, quality of life, and functional status measures for targeted patients; and (3) reduce overall costs of care for targeted patients.

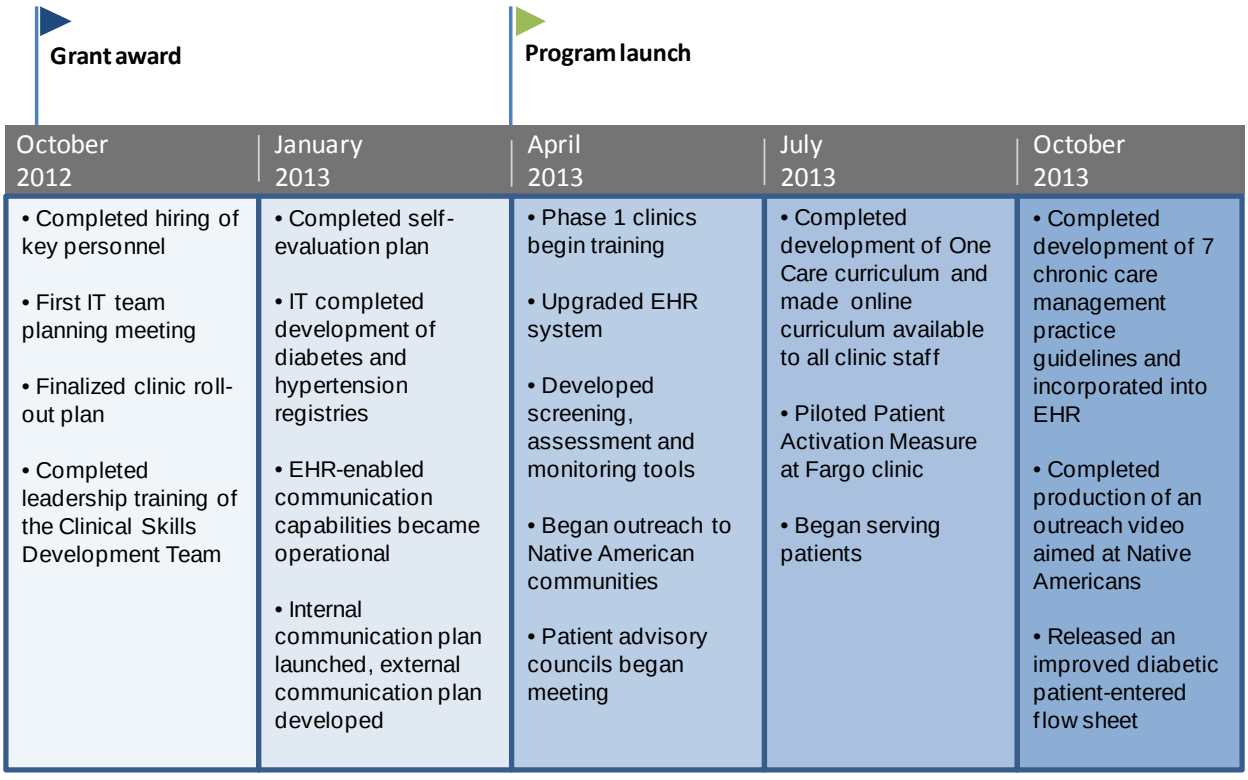
Sanford Health has experience successfully transitioning primary care clinics to PCMHs. From 2003 to 2005, primary care clinics in the Fargo region participated in a two-year medical home pilot project with Blue Cross Blue Shield of North Dakota. The pilot served patients with diabetes, coronary artery disease, and hypertension, and Sanford Health observed a 6 percent reduction in hospital admissions and a 24 percent reduction in emergency department (ED) visits. Participants also had lower hospital admission rates and smaller health expenditure increases than patients in a control group. Additionally, in 2009 in Sioux Falls, Sanford Health received a grant from the Small Health Care Provider Quality Improvement Grant program to implement a two-year rural medical home project integrating PCMHs with chronic disease management and health IT. Sanford Health is building on these past experiences, using HCIA funding to refine and expand the fully integrated PCMH model to new Sanford Health clinics.

According to interviews with the awardee, the origin for the One Care program occurred two to three years before receipt of the HCIA, when a new employee with a background in behavioral health joined Sanford Health and was tasked with proposing ways to integrate behavioral health into the network's outpatient care practices. Sanford Health's leadership felt

that behavioral health integration was compatible with the PCMH approach to care. With passage of the Patient Protection and Affordable Care Act and the creation of HCIA, Sanford Health seized an opportunity to obtain funding for its transformation initiatives and to demonstrate the possibilities of its programs. In January 2012, Sanford Health applied for $26.9 million to launch its initiative, proposing to transform all of its primary care practices. During the approval process with the Centers for Medicare & Medicaid Services (CMS), Sanford Health scaled back the number of HCIA-funded participating practices to accommodate its lower-than-requested award amount of $12.1 million. CMS approved the operational plan on October 24, 2012, and Sanford Health launched One Care on April 1, 2013. Figure 1 presents a time line of major One Care initiative milestones.

One Care aims to transform primary care delivery through creation of PCMHs with fully integrated behavioral health care services that improve collaboration, communication, cultural appropriateness, health condition management, and patients' engagement. The awardee proposes that a system using a redesigned primary care team—including health coaches and behavioral therapists, and addressing chronic disease using a fully integrated health IT system—will lead to an engaged patient population. Activated patients in turn work with their care teams and improve their care indices, thereby leading to reduced ED visits and reduced hospitalizations, ultimately realizing cost savings.

Figure 1. Time Line of One Care Initiative Development and Implementation



EHR = electronic health record

II. Organizational Structure

The Sanford Health system is the largest rural nonprofit health system in the nation, spanning nine states, 126 communities, and employing more than 25,000 people.[1] This system also includes 39 hospitals, some of which are critical access hospitals, ranging in size from those with fewer than 10 to some with more than 500 beds. The awardee estimates that it owns nearly 70 ambulatory primary care clinics, including several run by physician assistants or advanced practice nurse practitioners. About 1,200 physicians/providers are directly employed (but not necessarily salaried) in the Sanford Health network. Sanford Health also operates a health plan and a research division that researches topics like cancer biology and children's health.

Figure 2 displays One Care's organizational structure. The One Care initiative currently has three principal investigators leading the project. Recognizing a need for regular reporting to leadership throughout the organization, principal investigators convened an operational leadership steering committee composed of the physician senior executive vice presidents from each city, the chief operating officers from each city, and the operational vice presidents from the North and South regions. The steering committee has a structured meeting every two weeks. One Care principal investigators also convened an award and budget management team composed of senior leadership, finance personnel, and compliance representatives.

In addition to leadership teams, a number of administrative teams and staff support One Care:

- In December 2012, the Sanford Health marketing department designated a marketing representative to One Care; the representative is responsible for developing internal and external communication plans and educational materials for targeted patients.
- The health IT team works on enhancing the electronic health records (EHRs) system to support improved care processes, incorporating tools such as patient flow sheets, patient screening and assessment tools, and program measurement and monitoring tools.
- The decision support team includes a decision support analyst and a cost of care analyst, who submit data to CMS and its contractors and report on EHR-sourced measures to inform project leadership.
- Foresight Logic is the partner in charge of program evaluation. Foresight Logic has focused on developing and monitoring performance measures and works closely with the health IT team and decision support team.
- The cultural liaison is in charge of outreach to Native American communities and other community stakeholders in the region to ensure culturally appropriate care. The cultural liaison oversees development and distribution of videos, educational materials, and chronic care management support groups for local Native American communities. The cultural liaison also participates in curriculum development.

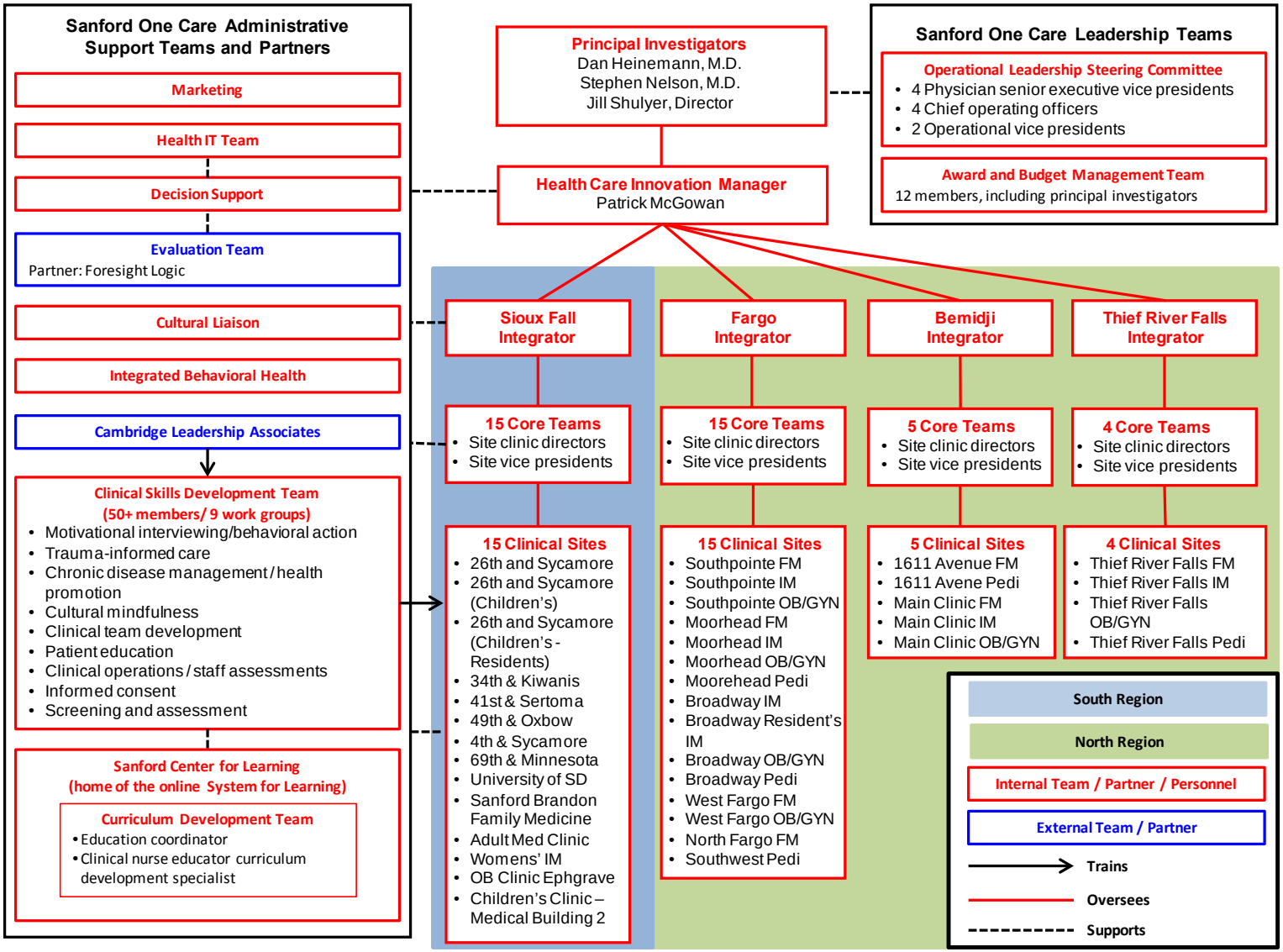
[1] Sanford Health also operates some remote clinics outside of the five states.

- An integrated behavioral health representative oversees aspects of the program that incorporate behavioral health into the medical home.
- Cambridge Leadership Alliance (CLA) provides intensive training in leadership and organizational change to the clinical skills development team, using a train-the-trainer approach.
- The clinical skills development team (CSDT) is a multidisciplinary team of providers who are tasked with designing the One Care model, developing the curriculum that will be used for workforce development, and delivering the training to clinics The CSDT meets weekly in each region, and includes nine subject-focused work groups that develop curriculum modules and identify appropriate assessments and processes for the redesigned care approach. CSDT coordinators also work with clinic directors to establish clinic baselines and to develop individualized training and implementation plans.
- The curriculum development team, part of Sanford Health's Center for Learning, participates in CSDT meetings to support the curriculum development process and works to translate lessons into online modules on the Center for Learning's electronic platform, the Sanford Learning System.

One Care principal investigators worked with HCIA-funded practices to develop core teams at each site. Core teams include clinic directors and vice presidents who lead the roll-outs at their individual sites. With this approach, One Care's goal is for sites to take ownership of the trainings and new processes, pulling in rather than pushing in the transformation. Principal investigators meet weekly with core team leadership via teleconference.

A member of the CSDT, the health care innovation manager, serves as regional coordinator, acting as a liaison between principal investigators and the four intervention communities. To reduce travel for the health care innovation manager, in the sixth quarter Sanford Health scaled up an integrator position from Thief River Falls. Each of the four cities now has an integrator who reports to the health care innovation manager and acts as contact person, chief communicator, facilitator, coordinator, and problem-solver in the four respective communities. Integrators are high-level staff, such as clinical managers, who are located in the intervention cities and therefore are optimally situated to anticipate and troubleshoot challenges and to champion the transformation.

Figure 2. Sanford One Care Organizational Diagram



FM = family medicine; IM = internal medicine; Pedi = Pediatrics; OB = obstetrics; OB/GYN = obstetrics/gynecology

All One Care intervention sites are part of the Sanford Health system and are located in Bemidji, Minnesota; Fargo, North Dakota; Sioux Falls, South Dakota; and Thief River Falls, Minnesota. Sioux Falls constitutes the South Region and Bemidji, Fargo, and Thief River Falls constitute the North Region. Fargo and Sioux Falls are urban regions, whereas Thief River Falls and Bemidji are rural regions. Sioux Falls clinics are located in a primary care health professional shortage area and Fargo clinics are located in a medically underserved area. Clinics specialize in family medicine, internal medicine, obstetrics/gynecology, or pediatrics. Several family medicine, internal medicine, and pediatric clinics in Fargo and Minnesota are also designated health care homes according to the Minnesota Department of Health, although none are currently recognized by the National Committee for Quality Assurance (NCQA) as PCMHs. Table 1 lists One Care sites and their characteristics.

Although the One Care operational plan projected reaching about 47,000 patients across 60 sites of care, its current program includes 38 sites of care located in four cities (Figures 3a–3d). Many care sites are colocated, such as the Southpointe clinic in Fargo, which includes both family and internal medicine intervention sites. Criteria for selecting sites included diversity, rural location, comprehensive primary care services, and proximity to a Native American reservation. Participating clinics are allocated into four phases of implementation. Of the 38 transforming sites, 13 started participating in Phase 1 (April–September 2013), 12 started start in Phase 2 (September–December 2013), 4 will start in Phase 3 (January–June 2014), and 9 will start in Phase 4 (July–December 2014). To assign clinics to phases, the One Care team used a clinic readiness tool, assessing clinics on factors such as health IT capabilities, presence of care team staff, and use of chronic care protocols. Training is ongoing for all clinics regardless of their stage of implementation.

Table 1. Sanford One Care HCIA Patient-Centered Medical Home Sites

PCMH	Specialty	City, State	Phase	Rural	MUA	HPSA	HCH
26th & Sycamore	Family medicine	Sioux Falls, SD	1			Y	
49th & Oxbow	Family medicine	Sioux Falls, SD	1			Y	
Women's Internal Medicine	Internal medicine	Sioux Falls, SD	1			Y	
Children's Clinic – 26th & Sycamore	Pediatrics	Sioux Falls, SD	1			Y	
Broadway	Internal medicine	Fargo, ND	1		Y		Y
Southpointe	Internal medicine	Fargo, ND	1		Y		Y
Moorhead	Internal medicine	Fargo, ND	1		Y		
Broadway – Resident's Clinic	Internal medicine	Fargo, ND	1		Y		
Southwest	Pediatrics	Fargo, ND	1		Y		Y
Thief River Falls	Family medicine	Thief River Falls, MN	1	Y		Y	Y
Thief River Falls	Internal medicine	Thief River Falls, MN	1	Y		Y	Y
Thief River Falls	Obstetrics/gynecology	Thief River Falls, MN	1	Y		Y	
Thief River Falls	Pediatrics	Thief River Falls, MN	1	Y		Y	
34th & Kiwanis	Family medicine	Sioux Falls, SD	2			Y	
41st & Sertoma	Family medicine	Sioux Falls, SD	2			Y	
4th & Sycamore	Family medicine	Sioux Falls, SD	2			Y	
69th & Minnesota	Family medicine	Sioux Falls, SD	2			Y	
University of South Dakota	Family medicine	Sioux Falls, SD	2			Y	
Sanford Brandon Family Medicine	Family medicine	Sioux Falls, SD	2			Y	
Adult Medical Clinic	Internal medicine	Sioux Falls, SD	2			Y	
Children's Clinic – 26th & Sycamore – Residents	Pediatrics	Sioux Falls, SD	2			Y	
Children's Clinic – Medical Building 2	Pediatrics	Sioux Falls, SD	2			Y	
Southpointe	Family medicine	Fargo, ND	2		Y		
West Fargo	Family medicine	Fargo, ND	2		Y		
Broadway	Pediatrics	Fargo, ND	2		Y		Y
1611 Avenue	Family medicine	Bemidji, MN	3	Y	Y		Y
1611 Avenue	Pediatrics	Bemidji, MN	3	Y	Y		Y
Moorhead	Family medicine	Fargo, ND	3		Y		
North Fargo	Family medicine	Fargo, ND	3		Y		
Southpointe	Obstetrics/gynecology	Fargo, ND	3		Y		
Moorhead	Obstetrics/gynecology	Fargo, ND	3		Y		
Broadway	Obstetrics/gynecology	Fargo, ND	3		Y		

Table 1 *(Continued)*

PCMH	Specialty	City, State	Phase	Rural	MUA	HPSA	HCH
West Fargo	Obstetrics/gynecology	Fargo, ND	3		Y		
Obstetrics Clinic Ephgrave	Obstetrics/gynecology	Sioux Falls, SD	4			Y	
Obstetrics/Gynecology Clinic	Obstetrics/gynecology	Sioux Falls, SD	4			Y	
Main Clinic	Family medicine	Bemidji, MN	4	Y	Y		Y
Main Clinic	Internal medicine	Bemidji, MN	4	Y	Y		Y
Main Clinic	Obstetrics/gynecology	Bemidji, MN	4	Y	Y		
Moorhead – Future TBD	Pediatrics	Fargo, ND	TBD		Y		
Total 39 (Phases 1–3: 38)	**4**	**4**	**4**	**9**	**20**	**19**	**10**

Source: Sanford One Care narratives; MUA: http://muafind.hrsa.gov/; HPSA: http://hpsafind.hrsa.gov/; HCH: https://apps.health.state.mn.us/hchcertification/publicReports/publicCertifyClinicianList.seam?sort=orgs.organizationName&cid=15.

HCH = Minnesota Department of Health: health care home; HPSA = clinic serves populations in a primary care health professional shortage area MUA = medically underserved area; TBD = to be determined.

Figure 3a. Sanford One Care's Intervention Sites

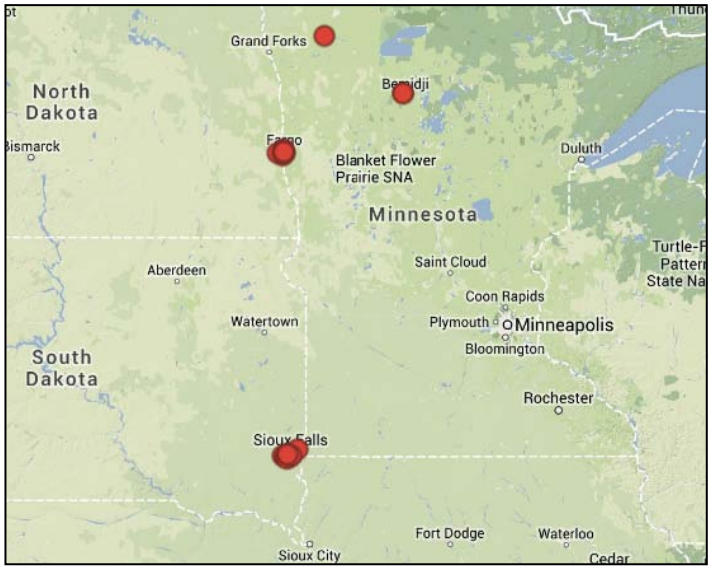


Figure 3b. Sanford One Care's Sioux Falls Intervention Sites

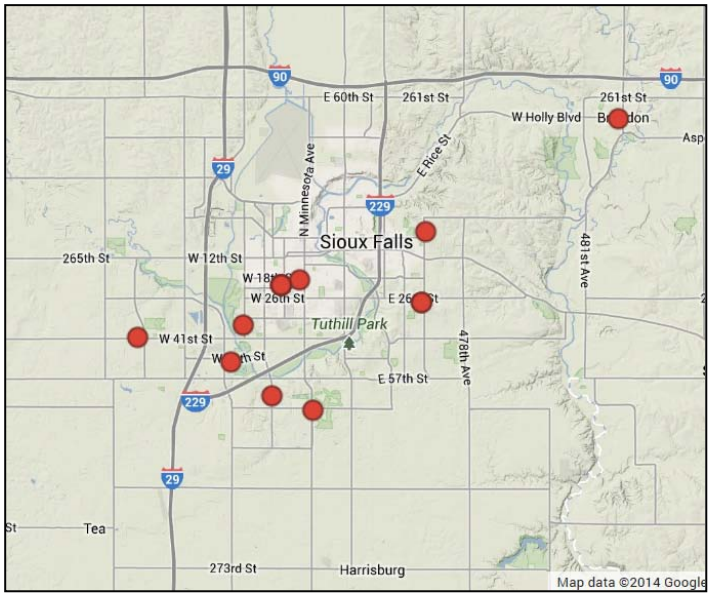


Figure 3c. Sanford One Care's Fargo Intervention Sites

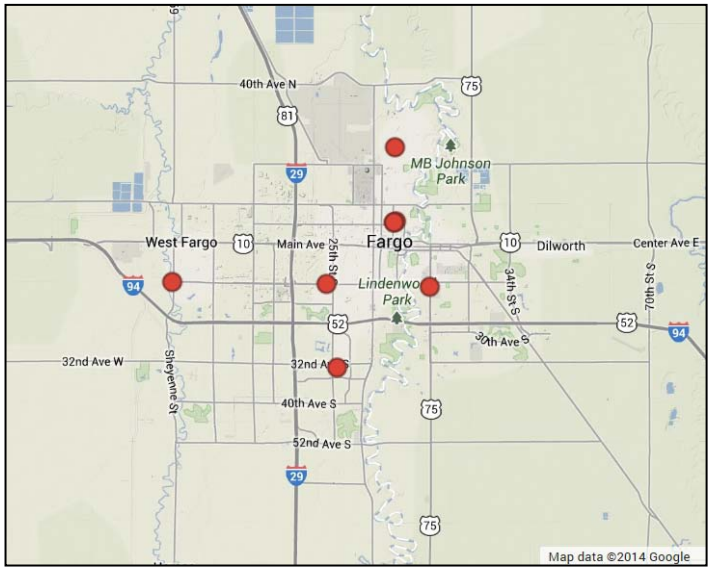
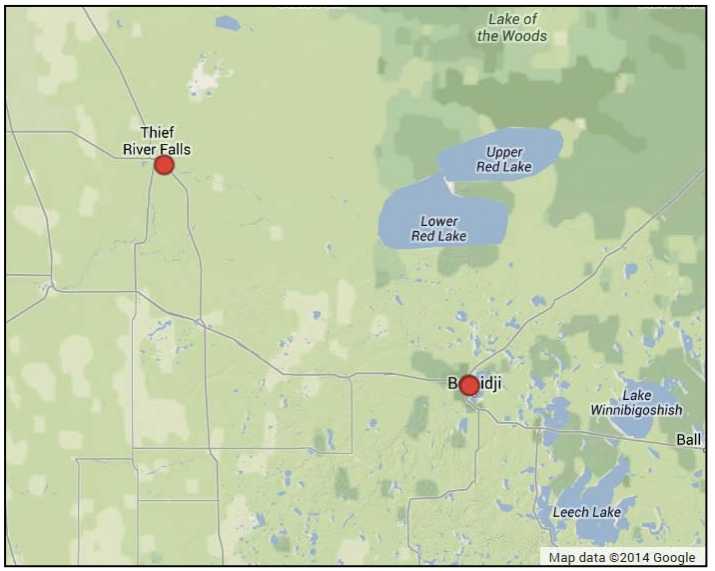


Figure 3d. Sanford One Care's Minnesota Intervention Sites



III. Program Features and Implementation Progress

To accomplish its goals, One Care is transforming the role of the primary care physician, integrating registered nurse health coaches into redesigned care teams, incorporating behavioral health into the medical homes, maximizing the integration of health IT, and standardizing clinical metrics to monitor performance.

The awardee cites five concurrent, overlapping components of One Care:

1. **Disease-specific treatment and care management guidelines.** Despite originally lacking an enterprise guideline approval process, the One Care team developed guidelines for the eight targeted adult conditions, except substance abuse. The team decided that substance abuse did not lend itself to a care guideline and is exploring other options for systematizing substance abuse care management.
2. **Team-based care.** The awardee is training the primary care workforce to adopt a team-based approach to care. Primary care physicians lead the teams, which also include behavioral health triage therapists (BHTTs), mental health clinicians, nurse coaches and panel care assistants. Teams can also include cultural advisors, such as traditional healers who facilitate culturally appropriate care for Native American patients. Team-based care strategies include scheduling team huddles, redefining patient care workflows, changing staff roles and responsibilities, and training coaches and behavioral health staff in their new roles. For example, BHTTs, discussed in more detail later, are rebranded social workers learning to triage patients to the appropriate level of care, even if patients do not present with behavioral health complaints.
3. **Workforce development.** Sanford Health conducts face-to-face trainings and develops online modules for workforce education around such issues as motivational interviewing, patient activation, chronic disease/chronic care, cultural mindfulness, leadership, organizational change, team-based care, health promotion, and use of guidelines. Workforce development is available in online modules that are uploaded onto the electronic Sanford Learning System so that providers in different locations can access these resources at their convenience. The CSDT leads face-to-face trainings inside of clinics, which are each equipped with classroom space.
4. **Integration of behavioral health into primary care.** One Care integrates behavioral health into its PCMHs. This includes adding behavioral health staff, but Sanford Health is also trying to overcome limited resources by (1) educating primary care physicians about how to screen and treat behavioral health conditions; and (2) working with health IT staff to facilitate integration of behavioral health, such as adding a depression screening instrument to the EHR.
5. **Health IT.** Sanford Health is expanding its EHR system to support EHR-integrated workflows. The awardee aims to support each PCMH site by making relevant information more accessible in the EHR system, streamlining the documentation workflow to include fewer clicks. To facilitate chronic disease management, the IT team is building registries around the eight chronic conditions and integrating patient-centered flow sheets (called MyChart) into a patient portal to facilitate patient tracking and engagement. Health IT also enables primary care physicians to remotely communicate with psychiatrists and other care team members.

The new care approach emphasizes patient activation via motivational interviewing, a core focus for registered nurse health coaches. Motivational interviewing is a patient-engagement technique shown to outperform traditional advice-giving in the treatment of a broad range of behavioral problems and diseases. Motivational interviewing aims to activate patients to more effectively manage their chronic diseases and/or behavioral problems. A core component of motivational interviewing is agenda-setting, which helps nurses communicate with patients in less time but with greater patient satisfaction. Registered nurse coaches trained in motivational interviewing report more confidence and comfort speaking with patients, as well as more productive conversations.

One Care has faced challenges maintaining staff engagement and scheduling trainings, citing clinical staffs' hectic schedules as one barrier. In response, One Care leadership began offering trainings that include continuing education credits for physicians, nurses, and social workers and has provided a stipend for trainings. The awardee is also leveraging its Center for Learning to incorporate online trainings and tools that staff can access at their convenience.

Incorporating patients' screenings and assessments into the EHRs has also been challenging. One barrier is that EHR vendors must first obtain licensure to incorporate many proprietary screening/assessment tools into an EHR. Assuming it can obtain a license for a tool, the EHR vendor must then work with clinic staff to program EHR interfaces for gathering screening and assessment data. However, Sanford Health reports that the bigger problem incorporating these tools into its EHR has been developing the organizational capacity to adopt new learning and new practices in a clinical setting. One team in Fargo addressed this challenge with the Patient Activation Measure (PAM) assessment tool by having the registered nurse health coach identify patients who will receive the PAM assessment ahead of time, and then read the questions aloud to the patient from the computer and enter the patient's responses immediately into the EHR. The awardee plans to scale this learned practice to other intervention clinics.

The awardee tracks clinic implementation progress of 51 tasks using an Excel-based implementation dashboard. Tasks include pre-implementation actions such as identification of a core team, baseline assessment, and introduction of One Care to all clinics. Other tasks focus on staff completing various training modules, implementation of patients' screenings and surveys such as the nine item Patient Health Questionnaire (PHQ-9), incorporation of chronic disease guidelines, introduction of team-based care processes, and progress on health IT milestones. Tasks are scored for each clinic as not started, started, or complete. As of December 2013, clinics collectively had completed 39 percent of tasks, started 14 percent of tasks, and not started 47 percent of tasks. As expected, Phase 1 clinics are further along in their transformation and Phase 3 and 4 clinics are less far along. Regionally, Fargo is furthest along in its transformation, whereas clinics in Bemidji and Thief River Falls are less far along. Figures 5a and 5b display One Care implementation progress as of the December 2013 implementation dashboard.

Figure 5a. One Care Implementation Progress, by Phase as of December 2013

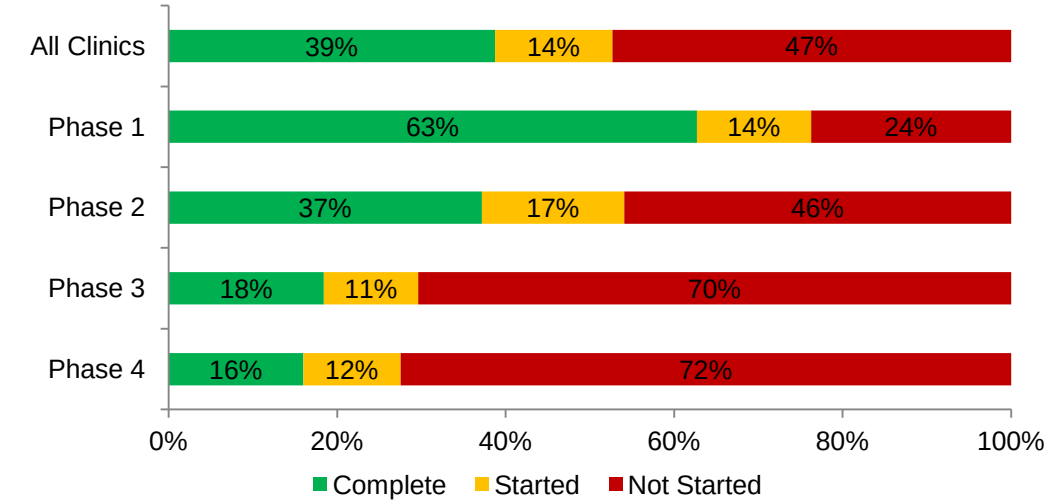
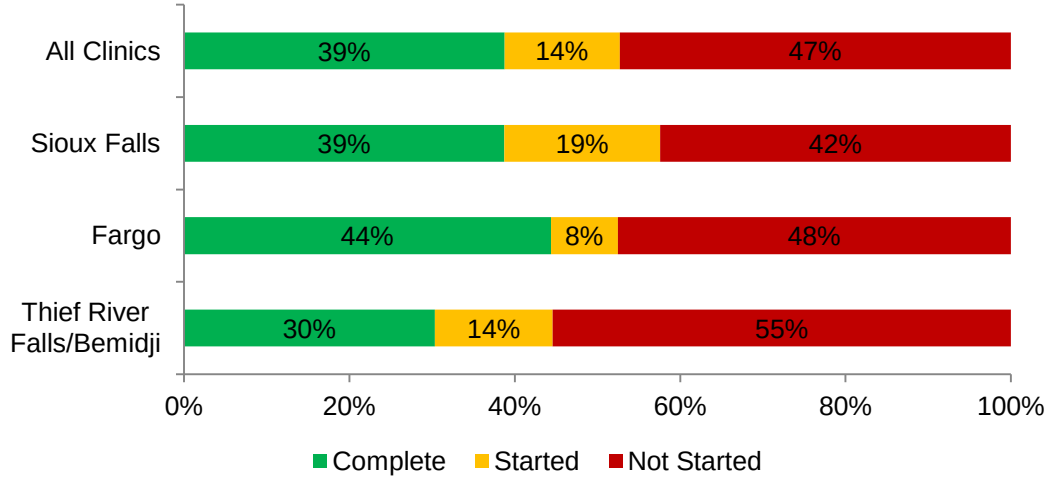


Figure 5b. One Care Implementation Progress, by Region as of December 2013



IV. Target Population and Assessment

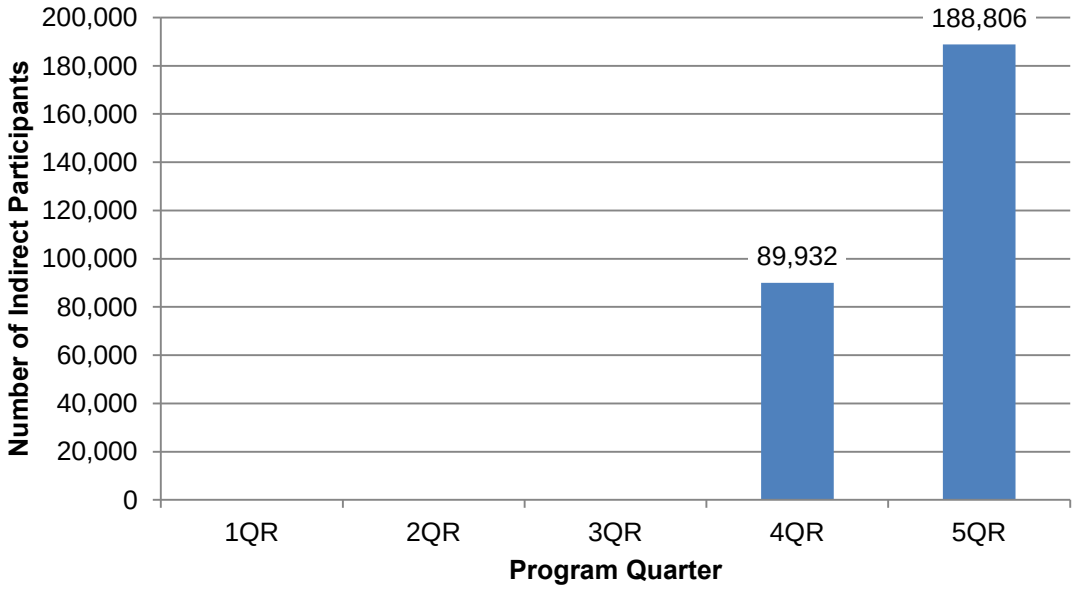
Although the One Care initiative is designed to reach all patients at transforming clinics, One Care especially targets patients of all ages with chronic health conditions and co-occurring behavioral health conditions, specifically by identifying any patient with at least one targeted condition. This population is particularly vulnerable to poor health given various factors. In addition to residing in medically underserved areas and primary health professional shortage areas, patients in targeted regions disproportionately have low incomes and are elderly compared with the overall population in their respective states. Both the lack of public transportation and extreme winter weather make it difficult for patients to travel to medical appointments outside of their communities, particularly to tertiary care centers that are often more than 100 miles from rural communities. Furthermore, the awardee describes its target patients as rural people who take pride in self-reliance, noting that although self-reliance is a positive attribute, too often it translates into postponing health care until an acute exacerbation of a condition(s) leads to an ED visit or a preventable hospital admission. One Care clinics also serve many people who work in

agriculture, which the Centers for Disease Control and Prevention ranks as among the most hazardous industries. Finally, much of Sanford Health's service area is adjacent to Native American reservations, whose residents currently face substantial health disparities, such as higher rates of chronic conditions and behavioral health diagnoses than seen in the general population, complicated by a health system that does not always align with Native American communities' values.

One Care's strategy is to work on the practice level to enable patient-level results. By implementing team-based care and new workflow protocols, all One Care clinic patients can benefit from new and improved processes. Therefore, One Care patients are considered indirect participants, with no formal enrollment or recruitment. However, One Care gives specific attention to eight chronic conditions among its primary care population: asthma, anxiety, depression, diabetes, heart disease, hypertension, obesity, and substance abuse. Although the intervention generally targets the same chronic conditions in both its pediatric and adult patients, some guidelines are specific to the pediatric population. The One Care program includes developmental and autism screenings for the very young and attention deficit hyperactivity disorder screenings for the middle and older adolescent groups. Otherwise, the targeted conditions for children and adolescents are similar to the adult population, although conditions such as heart disease are rare in the younger population.

One Care clinics began serving patients in April 2013, coinciding with the start of the fourth program quarter. In the fourth quarter, One Care clinics treated nearly 90,000 patients. As more clinics launched the program, in the fifth quarter One Care more than doubled its patient penetration, serving more than 188,000 patients. These numbers include all patients seen at clinics that have launched the program. Figure 4 displays the number of Sanford Health patients served by program quarter. Results from the sixth quarter are not yet available.

Figure 4. Indirect Participants, Sanford One Care July 2012 Through September 2013



V. Workforce and Training

A. Workforce

The fifth quarterly report states the One Care project uses 20.3 HCIA-funded full-time equivalent (FTE) staff, which is 9.0 FTE below projection. Of these, 18.1 FTE are new hires. These FTE include 193 people[2] distributed across 38 clinical sites into the following roles:

- 20 BHTTs
- 1 care coordinator/case manager/patient navigator
- 34 clinical support staff
- 22 health educators/health coaches
- 4 IT technicians/specialists
- 15 management or administrative staff
- 15 registered nurses
- 42 licensed practical nurses
- 7 nurse practitioners
- 31 physicians
- 2 cultural advisors

In the fifth quarter, 325 people, both HCIA- and awardee-funded, worked on the initiative. Six people separated from the organization in that time, resulting in a 98.2 percent staff retention rate in the fifth quarter.

Program staff consist of both new hires and existing staff in redesigned or new roles. Sites are at different stages of staffing, with Fargo and Thief River Falls further along than other sites. At each clinic, care team members include primary care physicians, nurse coaches, and behavioral health staff. The awardee is currently working to ensure that teams also include a panel care assistant and a cultural advisor.

- Nurse health coaches provide patient-centered coordination of care services, such as pre- and post-visit planning, referral coordination, and facilitation of communication among agencies involved in patient care, that is, behavioral health specialists, social services, corrections and schools. The awardee aims to have one nurse health coach for every five primary care providers. Nurse health coaches have been in place at some sites for as long as four-and-a-half years; in other sites, they are a new role.

[2] To illustrate, a nurse who works 50 percent of his or her time on the project would be reported as 0.5 FTE and as one person. One Care often designates only 10 to 20 percent of a clinician's time to the HCIA intervention, which accounts for the large difference between FTE and individual counts of staff.

- Panel care assistants help the registered nurse health coaches with data needs, such as running disease registry data to identify patients in need of care. The panel care assistants also manage administrative tasks, freeing the nurses to work at the top of their licensure and to focus on patient care. The awardee planned to add the first seven panel care assistants to care teams in the sixth program quarter (October through December 2013).
- BHTTs are licensed social workers who assess patients for clinical and psychosocial acuity to triage patients to the most appropriate level of collaborative care. BHTTs also provide crisis management, counseling, and patient education. The awardee aims to have one BHTT for every 10 primary care providers. The behavioral health therapist is a new position in Sioux Falls, which previously had the fewest behavioral health patients and now plans to fully integrate these counselors in the seventh quarter. Fargo had a strong existing behavioral health program, but the triage therapist is a new position in that region as well.
- Cultural advisors are there for patients with culturally specific needs to ensure that they receive culturally appropriate care. Cultural advisors can include Native American traditional healers.

B. Training

As a practice-level intervention, workforce training and development is central to the One Care initiative. An integral resource for workforce development is the Sanford Center for Learning, which occupies about 14,000 square feet in Sioux Falls and consists of a clinical skills lab, video conference room, classrooms, computer labs, meeting rooms, a video studio, and office space for clinical nurse educators. The Center for Learning manages the online learning system, which includes learning modules, resources, and tools that clinic staff can access from any place at any time. The Center for Learning also supports the CSDT, which facilitates face-to-face trainings at clinical sites. Classroom sessions focus on chronic care professional training, cultural mindfulness, motivational interviewing, team-based care, chronic disease management/health promotion, patient activation, trauma-informed care, behavioral health care integration, and guideline usage.

The fourth and fifth quarterly reports indicate that staff completed 3,502 training hours through September 2013, and additional training has occurred since then. All care team members participate in various trainings. One highlight of Sanford Health's training approach is the concurrent training of BHTTs and registered nurse health coaches, who initially receive 40 hours of training across topics via a blended learning approach. Conducting trainings concurrently helps both roles understand the interaction of clinical and psychosocial patients' needs, and staff can also earn chronic care professional certification. This approach is consistent with Sanford Health's interdisciplinary approach to workforce development. Table 2 summarizes all One Care training completed through September 2013. Training data from the sixth quarter are forthcoming.

Table 2. One Care Training Completed

Training Course Topic[a]	Modalities	Duration of Sessions	Personnel[b]	Total Staff Hours
Chronic Care Professional	Online/webinar, classroom, discussion, text	6 hours	363	2,178
Cultural Mindfulness	Online/webinar, classroom, discussion	20 minutes to 1 hour	496	389
Motivational Interviewing	Classroom, discussion	1 hour	315	315
Team-Based Care	Online/webinar, classroom, discussion	20 to 45 minutes	342	146
Chronic Disease Management and Health Promotion	Online/webinar	30 minutes	261	100
Patient Activation Measure	Online/webinar, classroom, discussion	10 minutes to 3 hours	68	100
Trauma-Informed Care	Classroom, discussion	1 hour	94	94
Full Clinic Presentation	Classroom, discussion	30 minutes	159	80
Mental/Behavioral Health Integration	Classroom, discussion	45 minutes	59	44
Guideline Use	Classroom, discussion	1 hour	38	38
Psychiatric Medications for Children and Adolescents	Classroom, discussion	45 minutes	24	18
Total	**-**	**-**	**2,219**	**3,502**

Source: Fourth and fifth quarterly reports.

[a] Specific training courses are summarized by course topic.
[b] This is not an unduplicated count because one staff member can participate in more than one chronic care professional course and more than one motivational interviewing course.

VI. Future Plans

One Care leadership anticipates working toward the following milestones in the seventh quarter:

- Patient lifestyle and behavioral monitoring through telehealth and motivational interviewing
- Collaborating with community organizations to address substance abuse
- Increasing staffing ratios to maximize effective team-based care
- Prioritizing online behavioral health screening functionality with the EHR patient portal and integrating tablets to enable on-site entering of patients' data
- Building and operationalizing the PAM assessment into the EHR
- Focusing on establishing partnerships, coalitions, and local champions in Native American communities
- Building EHR-based chronic disease registries for asthma, chronic heart failure, and coronary artery disease

- Operationalizing chronic disease registries using panel care assistants in each region
- Coaching and monitoring of initial clinics that have already completed the curriculum
- Launching next-phase clinics in Fargo, Sioux Falls, and Bemidji

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FOUNDATION FOR CALIFORNIA COMMUNITY COLLEGES
AND THE TRANSITIONS CLINIC NETWORK

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FOUNDATION FOR CALIFORNIA COMMUNITY COLLEGES AND THE TRANSITIONS CLINIC NETWORK

SUMMARY OF PROGRAM DESIGN AND IMPLEMENTATION EXPERIENCE:

MARCH 2014

Rachel Shapiro and Jennifer Lyons

In this brief, we describe the primary care redesign (PCR) program being implemented by three partner organizations—the City College of San Francisco (CCSF); University of California, San Francisco (UCSF); and Yale University—under Health Care Innovation Award (HCIA) funding from the Center for Medicare & Medicaid Innovation (CMMI). The purpose of this brief is to describe the design of the HCIA-funded program as it is currently being implemented and to highlight implementation experience one-and-a-half years after the receipt of award. We based the information presented in this brief on a review of program documents, including application materials and quarterly reports, as well as telephone discussions and follow-up communication with program administrators. This brief describes the status of the program as of December 2013. We will update the brief as additional information becomes available.

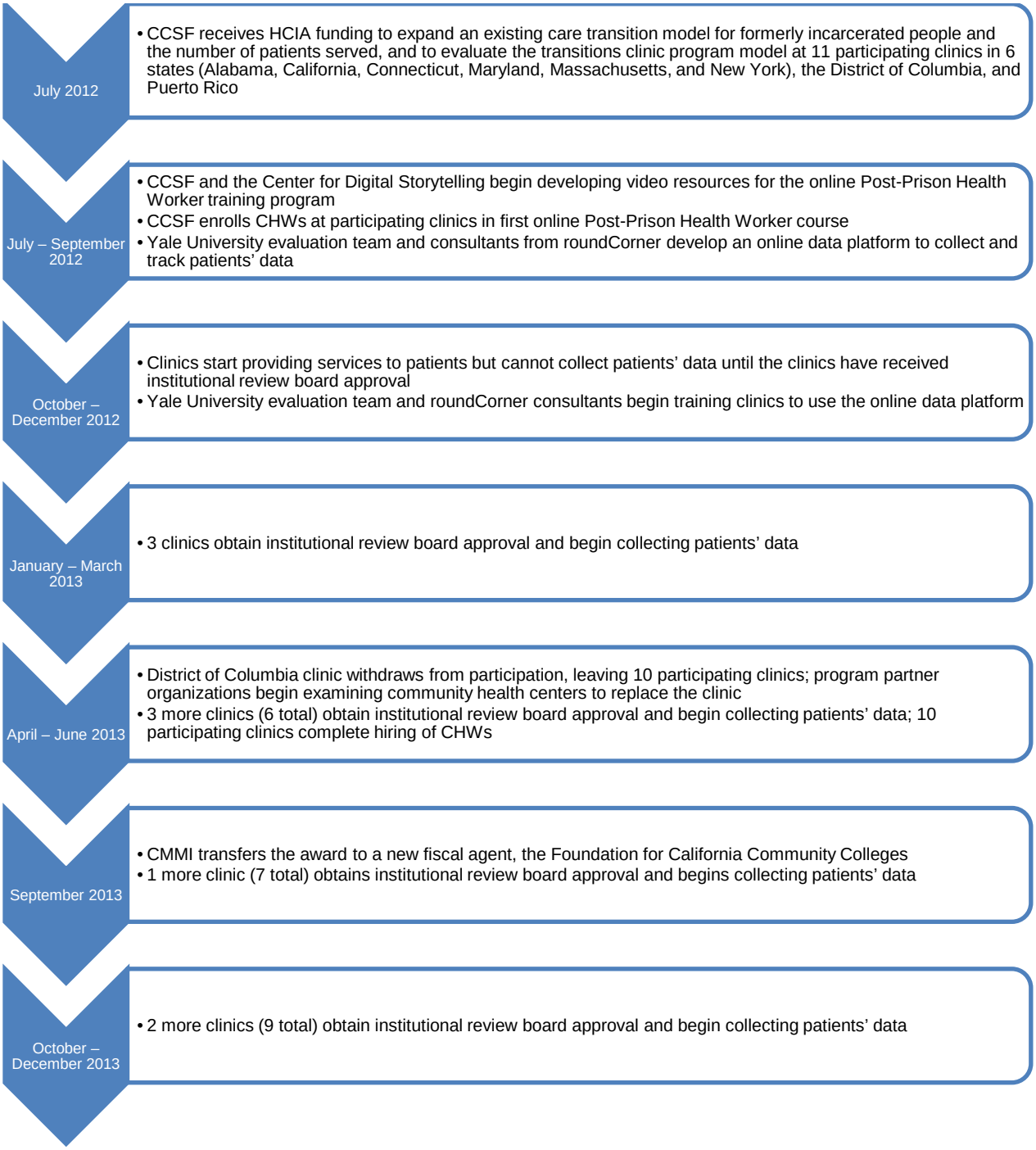
I. Overview

In 2012, CCSF received a $6.8 million HCIA award to provide high quality care to formerly incarcerated people at 10 specialized clinics in six states (Alabama, California, Connecticut, Maryland, Massachusetts, and New York) and Puerto Rico. With the HCIA award, the program partners are using three strategies to help community health center staff provide high quality care to formerly incarcerated people at the 10 specialized clinics (5 of which were already implementing the program model) located in community health centers. First, CCSF is adapting its existing Post-Prison Health Worker certificate program to an online format to train formerly incarcerated people as community health workers (CHWs), who work with other formerly incarcerated people in the participating clinics. Second, the CHWs connect people released from prison to primary care and other community services. Third, the evaluation team at Yale University—in collaboration with consultants at roundCorner, a company that helps nonprofit organizations implement cloud-based data collection systems—developed an online platform that provides participating clinics with real-time data on services patients receive at the clinics, and whether patients are admitted to the hospital (data come directly from patients' responses to a health survey completed at each clinic visit); the goal is to encourage clinic staff to understand patients' service use and improve the quality of care the clinics provide. In addition, to ensure that the clinic staff are familiar with the program model, the program partners provide clinical staff with training on the transitions clinic program model and cultural competency training on how to provide care to formerly incarcerated individuals.

The program partners hope that the HCIA funding will help them further develop and sustain the transitions clinic program model and lead to future replications of the model. By the end of the award period, the program aims to (1) improve clinical outcomes for chronic conditions affecting people leaving prison, as measured by patients' blood pressure readings and self-reported symptoms of depression and use of alcohol, drugs, and tobacco; (2) improve the quality of and access to care, as measured by the percentage of patients receiving primary care within four weeks of release from prison and preventative care (for example, screenings for colorectal or cervical cancer); (3) improve patients' satisfaction and self-reported health status, as measured by patients' responses to anonymous annual surveys; and (4) achieve cost savings

through reductions in unnecessary inpatient admissions (related to alcohol withdrawal, asthma, chronic obstructive pulmonary disease, diabetes, and drug overdose), emergency department (ED) visits, and duplicated diagnostic tests. Figure 1 provides a detailed time line of the program.

Figure 1. Time Line for Expansion of the Transitions Clinic Network



Source: HCIA narrative progress reports (first through sixth quarters); Foundation for California Community Colleges.

II. Organizational Structure

Three core program organizations are partnering to administer and support program implementation:

1. **CCSF** leads the workforce development team, which manages the development and delivery of online CHW training through the Post-Prison Health Worker certificate program (a program developed and in use before the HCIA funding).
2. **UCSF** leads the health care team, which provides training on the program model and ongoing technical assistance to clinics implementing the transitions clinic model as part of the program. In addition, UCSF oversees cultural competency training to prepare staff to identify and respond to the unique needs of previously incarcerated people.
3. **Yale University** leads the evaluation team, which oversees data collection to inform quality improvement and provides staff at participating clinics with ongoing training on collecting and using patients' data.

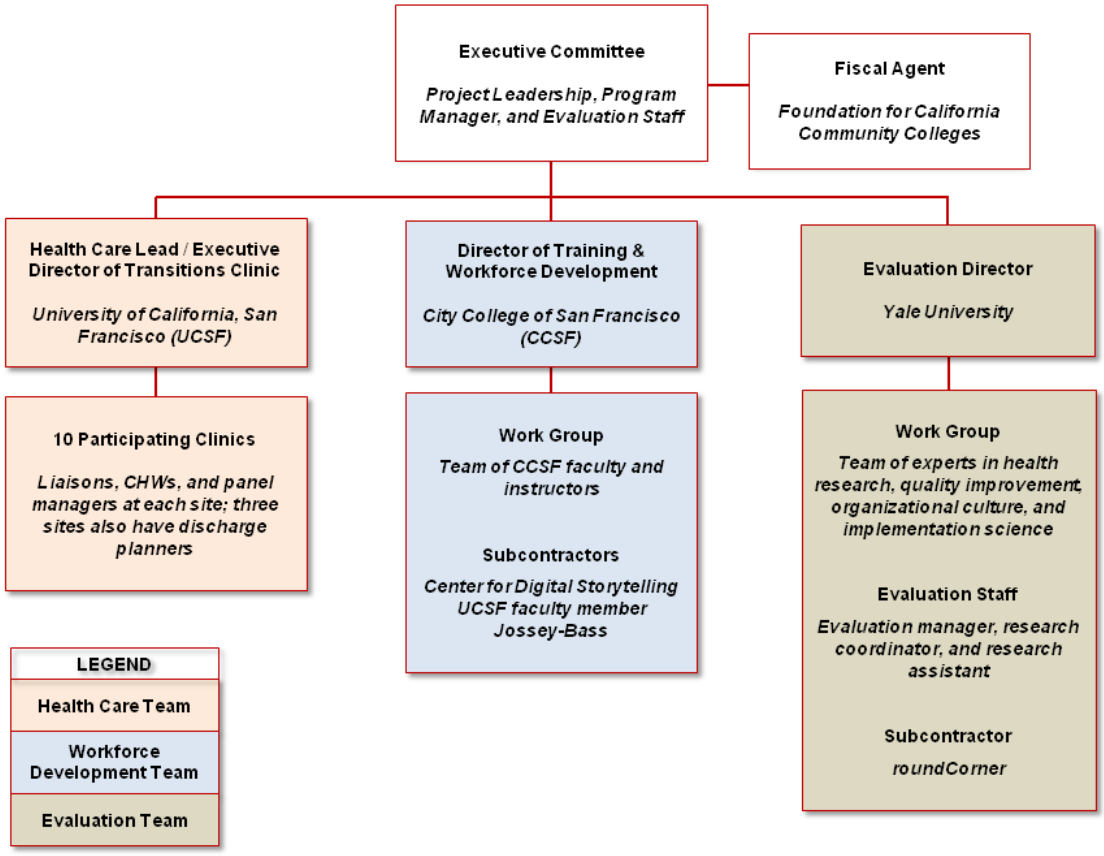
Program leaders from each partner organization hold biweekly executive committee meetings to make decisions related to the program and troubleshoot issues as they arise. Figure 2 presents the current organizational structure for the program.

As shown in the figure, several organizations and stakeholders support the program. For example, the Center for Digital Storytelling helps CCSF develop curriculum activities and create online training videos in support of the Post-Prison Health Worker certificate program. In addition, content experts help CCSF to develop content for the online training curriculum, and actors perform role-play exercises that are recorded and included in the curriculum. Jossey-Bass, a publisher, is creating an online textbook specific to the Post-Prison Health Worker certificate; a UCSF faculty member is editing the curriculum content.

Consultants from roundCorner provide support for data collection. For example, in the first year of the program, these consultants worked with Yale to develop an online platform for data collection, sharing, and visualization. They continue to provide participating clinic staff with online training on this platform.

When HCIA funding was first awarded in July 2012, CCSF was the fiscal agent for the program. However, at the same time, the Accrediting Commission for Community and Junior Colleges, Western Association of Schools and Colleges, one of seven regional accrediting commissions in the United States, decided to terminate CCSF's accreditation effective July 2014, if CCSF did not correct and address deficiencies identified by the commission. Because the CCSF administration was focused on overturning this decision (and not other contractual issues), the HCIA-funded program experienced delays in contract and invoice processing in the first year of operations. To alleviate these issues, in September 2013, the program partners decided to shift the institutional home of the HCIA-funded program to the Foundation of California Community Colleges. Although the foundation is now the fiscal agent for the program, it has no active role in its implementation. In addition, although CCSF no longer has fiscal responsibility for the program, CCSF faculty and staff continue to play an active role in program administration and workforce development activities.

Figure 2. Program Organizational Chart



Sources: HCIA narrative progress reports (first through sixth quarters); Foundation for California Community Colleges. Personal communication with awardee, December 12, 2013.

To identify clinics that were suitable candidates for the program, the partner organizations conducted a needs assessment, examining each potential participating clinic's current resources and capacity across three criteria: (1) the clinic's location in a high-need community acutely affected by incarceration, (2) desire among clinic staff to implement the transitions clinic program model, and (3) the clinics' capacity to implement each of the programs three components. Because the program received less funding than requested, the program partners limited the number of recruited clinics to 11 (with full funding, they had expected to recruit 16 clinics). One of the 11 clinics, located in the District of Columbia, subsequently withdrew from participation in the program's fourth quarter (April through June 2013) because of concerns about the program's requirements for collecting data. To replace this clinic, the partners are currently pursuing partnerships with potential clinics in the Navajo Nation; San Jose, California; New Haven, Connecticut; and East Richmond, California. Figure 3 presents a map of the 10 currently participating clinics and potential future clinics.

The 10 clinics currently participating in the program are organized into two cohorts. Clinics in cohort 1 already used the transitions clinic program model before program implementation. Before participating in the program, cohort 2 clinics were not working specifically with formerly incarcerated people; these clinics required additional support from program partners to scale up

for implementation (for example, hiring CHWs and panel managers or administering a culturally competent program of care). Table 2 presents the list of practice clinics, by cohort.

Figure 3. Map of Current and Potential Clinics

Source: Personal communication with awardee, January 20, 2014.

Note: Cohort 1 clinics are labeled in green; cohort 2 clinics are labeled in red; clinics that might participate in the future are labeled in blue.

Table 2. Participating Clinics, by Cohort

Clinic	Affiliation	Location
Cohort 1		
Richmond Health Center*	Contra Costa Health Services	Richmond, CA
Comprehensive Health Care Center*	Montefiore Medical Center	Bronx, NY
Southeast Health Center*	San Francisco Public Health Foundation	San Francisco, CA
Women's Initiative Supporting Health-Transitions Clinic*	University of Rochester Medicine in Psychiatry Service	Rochester, NY
Yale Primary Care Center	Yale New Haven Hospital	New Haven, CT
Cohort 2		
Boston Health Care for the Homeless*	Boston Health Care for the Homeless	Boston, MA
East Baltimore Medical Center	Johns Hopkins University	Baltimore, MD
Coming Home Program of the Center for Comprehensive Care	Coming Home Program of the Center for Comprehensive Care	New York, NY
Cooper Green Mercy Hospital Outpatient Medical Clinic*	University of Alabama-Birmingham	Birmingham, AL
Corporacion S.A.N.O.S.	University of Puerto Rico Medical Sciences Campus	San Juan, PR

Source: Personal communication with awardee, January 20, 2014.

* Indicates clinic is housed in a federally qualified health center (FQHC).

III. Program Features and Implementation Progress

At the start of the program, the partner organizations developed detailed plans to implement the three program components. Although the partner organizations have made steady progress in implementing these components as planned, they are experiencing delays in enrolling patients and collecting data at the clinics. In this section, we describe the three program components and their implementation status.

A. Expanding the Reach of Post-Prison Health Worker Training

The program provides training to CHW staff to introduce them to the program model and prepare them to work effectively with patients who were recently incarcerated and released from prison in the past six months. Because participating clinics are located across the United States, CCSF is adapting its existing Post-Prison Health Worker certification program to an online format. In the first 18 months of the program, the workforce development team created four new online courses for the program; the team will develop a total of six online courses over the course of the award period. The workforce development team also collaborated with the Center for Digital Storytelling to create nearly 200 video resources for the online program courses. The team is currently developing an online facilitator guide to accompany the online textbook; Jossey-Bass will digitally publish these resources in 2015. Program staff also are developing materials (for example, a resource guide with articles and film clips) for the cultural competency training planned for early 2014.

B. Coordinating Care

At each participating transition clinic, CHWs conduct outreach to potential patients (targeting those with a history of incarceration), assisting patients with enrollment in appropriate benefits and treatment, and working to keep patients engaged in treatment by helping them to navigate the health care and social service systems. Currently, all participating clinics have either retrained or hired new staff to serve in this role. Each participating clinic implements the program model differently, adapting it to the clinic's unique needs and resources. For example, some clinics focus on serving specific patient populations, such as homeless patients or people with HIV. Moreover, at some clinics, all providers see the patient population targeted through the program, whereas at other clinics, only one or two providers see this population. In addition, the broader community health center in which each clinic is housed may offer access to very different resources to participating patients; these resources can include on-site mental health providers, substance abuse treatment providers, podiatrists, or nursing staff. Participating clinics also vary in their connection to external providers and resources. However, at each clinic, the CHW helps patients identify and obtain access to resources as needed.

C. Improving Quality of Care

To promote constant quality improvement, the program provides participating clinics with the tools and training necessary to collect and use patient data. Working with consultants from roundCorner, the program's evaluation team developed a cloud-based data platform that enables clinics to collect, share, and display patient data (for example, through simple graphics) on health, health care use, and cost outcomes. The evaluation team and the roundCorner consultants provide online training on data collection and reporting to staff at participating clinics and offer

additional training resources through an online video library. To date, eight clinics track data using the data platform.

However, clinics face challenges in collecting and using data. A number of clinics experienced delays in collecting patients' data because they were delayed in receiving approval from their institutional review boards to participate in the program (described in Section IV). Among the clinics that have implemented the data platform, many staff are not yet comfortable using the platform. To address this issue, the program partners provide clinic staff with increased training and support on how to collect data and use the data platform to track patients' data. When they are familiar with the data platform, staff can also access online training videos on data collection developed by consultants at roundCorner. In addition to the staff discomfort with technology, several clinics also are hindered in reporting data because most of their consultation rooms lack computers through which to enter patients' data. The evaluation team is working individually with sites to identify solutions to this challenge.

IV. Target Population and Assessment

The program targets adults living in the service area of participating clinics who were released from prison within the past six months, have Medicaid or are Medicaid-eligible, and either have chronic health conditions (related to behavioral health, substance use, or physical health) or are older than 50. The patient identification and enrollment process varies among clinics. Patients are primarily recruited by CHWs, who often connect with potential patients by walking around community streets and visiting homeless shelters and halfway houses. Some clinics also receive patient referrals directly from prisons. To more actively engage incarcerated people and alert them to the possibility of receiving health care at participating clinics, program leadership is working with clinics to develop relationships with local departments of correction.

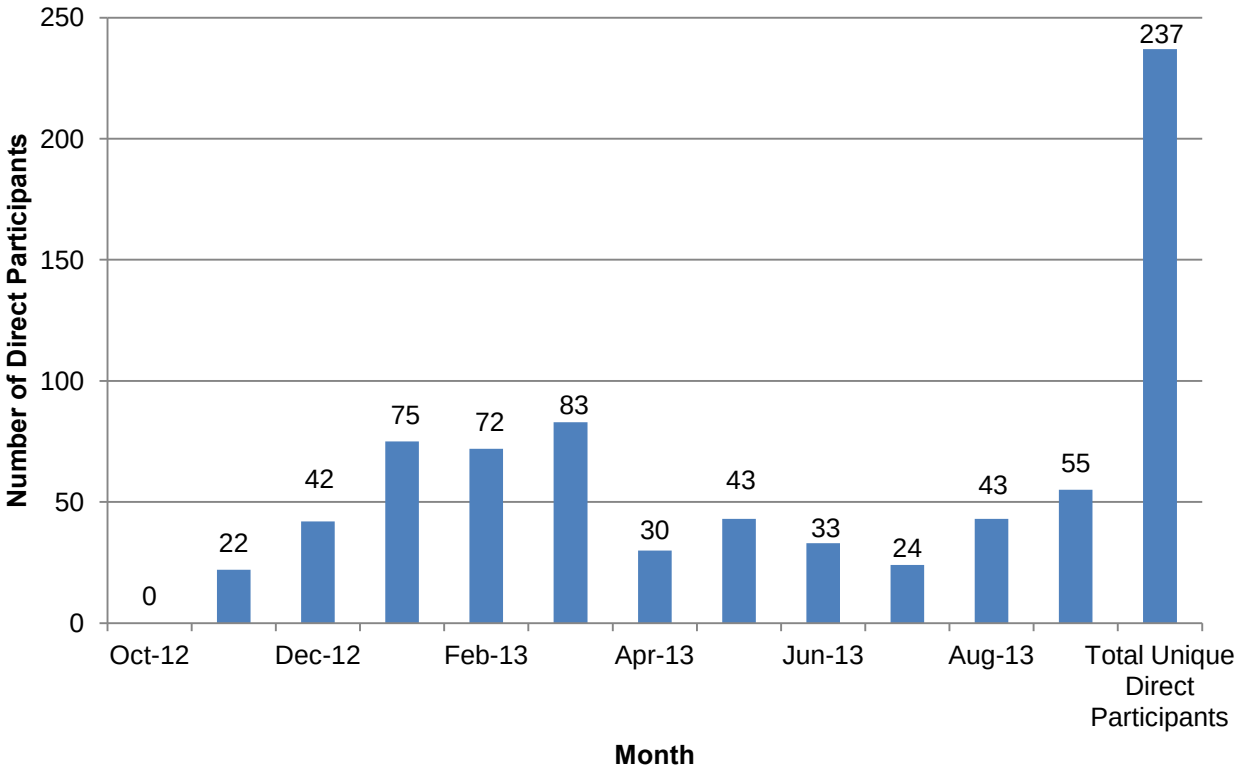
To develop enrollment projections for the program's cohort 1 clinics, the program partners used data from clinics that had already implemented the transitions clinic program model before the HCIA-funded program began. Initial estimates suggested that if implemented in 16 clinics, the program would reach 7,395 patients in the target population over the life of the award. However, it was later discovered that these initial projections were inaccurate because the data used to construct the projections included patients who were released from prison more than six months before enrollment and, therefore, did not meet the enrollment criteria (which specify that patients must be engaged within six months after release from prison).

After downsizing to 11 participating clinics and correcting initial projections, program partners revised the patient enrollment estimate to 5,660 patients. This estimate again decreased after the clinic in the District of Columbia withdrew from the program because of challenges it anticipated in hiring former prisoners, navigating the institutional review board system, and collecting and reporting data; the clinic had been expected to enroll 800 patients.

The enrollment estimates were again revised downward after the program began later than expected (in November 2012, rather than in August 2012), and clinics were unable to get immediate approval for program participation from their institutional review boards. Nine clinics now have approval from an institutional review board; one still awaits approval. The program now expects to enroll from 1,800 to 2,200 patients during the award period. As of September 2013, the program had enrolled 237 patients. Figure 4 summarizes the number of patients

participating in the program each month and the total number of patients enrolled since the program's launch.

Figure 4. Direct Program Participants, October 2012 – September 2013



Source: The Lewin Group. Quarterly awardee performance reports (quarters one through five): Foundation for California Community Colleges.

In the first 18 months of the program, several participating clinics experienced challenges unique to their location or organization that affected patient enrollment. California's statewide prison realignment shifted large numbers of patients from state prisons to local jails. This transition disrupted the strategies to connect patients directly from prison to community treatment and, in turn, reduced enrollment in the two clinics in California. One clinic, New York City's Coming Home Program of the Center for Comprehensive Care, which expected to enroll the largest number patients among the 10 currently participating sites, experienced changes in its organizational leadership; this led to uncertain support for clinic operation and fewer staff than anticipated to support patient enrollment.

V. Workforce and Training

To support the implementation of the transitions clinic program model, participating clinics employ CHWs and panel managers, and new and existing clinic staff receive targeted training on cultural competency, data collection, and program implementation. In this section, we describe these staff and provide an overview of the training and development opportunities provided to participating clinic staff.

A. Clinic Staff

The 10 participating clinics employ a variety of types of staff to implement the program and provide services to patients (Table 3). An administrative staff person or clinical provider at each clinic serves as a liaison between the clinic and the program staff, and supervises the CHWs at the site. At least one primary care physician at each site provides medical care to patients recently released from prison. At each site, a CHW conducts outreach to potential patients and assists with patient enrollment. Panel managers at each site collect and review patient data for the program's self-monitoring and quality improvement process. At 2 of the 10 clinics, discharge planners engage incarcerated patients before their release to prepare them to connect with medical and community services after they leave prison.

Table 3. Workforce Staff Located at Participating Clinics, as of September 2013

Type of Worker	Number of FTEs Supported by the Grant	Number of Clinics	Status	Responsibilities
Liaison	1.5	10	Existing administrative or clinical staff person	Oversees on-site implementation of the transitions clinic program model; serves as main point of contact with program staff
Primary Care Physician	Not available	10	Existing physician	Provides medical care to patients recently released from prison
Community Health Worker	9.0	10	Newly hired or reassigned staff with history of incarceration	Conducts outreach to potential patients recently released from prison; assists patients with enrollment in benefits, as needed; and works to keep patients engaged in care and connected to other health and social services
Panel Manager	3.2	10	Newly hired or reassigned from existing staff	Collects and monitors patients' data
Discharge Planner	0.4	2	Newly hired staff	Provides services to incarcerated patients before their release

Source: Personal communications with awardee, December 2013 through January 2014.

FTE = full-time equivalent.

During the first year of the program, several clinics faced delays and barriers to hiring CHWs because of the associated community health center's existing human resources policies related to hiring people with a history of incarceration. For example, one community health center's policy excluded from consideration candidates with a specific class of drug conviction because of concerns about access to the health center's pharmacy. The program partners worked with the clinics to resolve these difficulties; as of December 2013, all participating clinics were able to hire or retrain staff as CHWs.

After they are hired, CHWs also face challenges as clinics begin to implement the transitions clinic program model. Some CHWs struggle to balance work at clinics with the coursework required to complete the Post-Prison Health Worker certificate program. The program's health care lead at UCSF and other program staff, in collaboration with clinic liaisons, are helping CHWs balance these competing priorities.

B. Workforce Development

The HCIA-funded program provides a variety of training and development activities to staff at participating clinics. CHWs participate in the online Post-Prison Health Worker certificate program, which consists of six online courses and an internship (fulfilled by CHWs' work at the clinics participating in the program). Liaisons at participating clinics receive training about how to implement the transitions clinic program model with fidelity; this training is delivered through monthly webinars and individualized support from program staff, as needed. Beginning in 2014, the program will also use an online grand rounds approach to provide quarterly training on how to deliver culturally competent care (specifically to previously incarcerated patients) to primary care providers and other clinical staff at participating clinics. This training is being held later than expected, both because leadership decided it should be a standalone training rather than incorporated into another training, and because it was decided it would be better received down the line. Table 4 provides further details on workforce training being provided through the HCIA-funded program.

Table 4. Workforce Training, as of September 2013

Training	Modality	Amount of Time Planned	Type of Worker	Description
Post-Prison Health Worker Certificate	Online, discussion, text, on-site internship at clinics	360 hours of coursework; 128 hours of clinic internship	CHWs	• CCSF-led courses train formerly incarcerated people to help patients navigate medical and social services and work with patients to better manage chronic conditions • 20-credit unit course of study, which includes an on-site internship at a participating clinic and 6 required courses: Health 201 and Health 202 (5 credits each); Introduction to Public Health, Health Impacts of Incarceration, and Chronic Conditions (3 credits each); and Conflict Resolution (1 credit) • Can be completed in three semesters if students also complete one summer course
Transitions Clinic Program Implementation	Online, discussion, text, case-based	12 to 36 hours, based on individual clinic needs	Liaisons (clinical or administrative staff)	• The program's health care lead holds monthly webinars that provide a forum for liaisons to share program experiences and learn from other clinics; at each meeting, a different clinic presents about staff's experiences implementing the program model • Program staff provide clinic-specific support to liaisons via telephone and, when possible, in-person visits; the number of hours of support is based on assessment of individual clinics' needs • From October to December 2013, the program held individual quarterly meetings with each clinic to discuss implementation and evaluation progress and goals; program staff created a template to track clinics' progress

Table 4 *(Continued)*

Training	Modality	Amount of Time Planned	Type of Worker	Description
Grand Rounds	Online	1 hour per quarter	Health care providers (primary care providers and other interested clinical staff who interact with program patients)	• The program partners developed the training in response to needs identified by clinic providers during focus groups in the program's first year • The training will provide education on best practices in caring for formerly incarcerated patients and highlight culturally competent approaches • The health care lead at UCSF will engage subject matter experts to deliver this training quarterly starting in 2014; providers will receive a CME credit (awarded by UCSF)
Data Collection and Reporting	Online	Not reported	Liaisons, CHWs, panel managers, discharge planners	• From April to June 2013, consultants from roundCorner provided five training sessions on the data platform, covering data collection and reporting • The program's evaluation team is working with consultants to provide additional online training to clinic staff as additional clinics begin to use the data platform • An online video library provides additional resources on data collection
All-Partner Convening	In person	2 days	Liaisons, CHWs, and panel managers	• One-time conference supported by external (non-HCIA) funding • The program partners provided interdisciplinary training sessions on implementation, evaluation, policy, cultural competence, and core CHW competencies

Source: The Lewin Group. Quarterly awardee performance reports (first through fifth quarters); Foundation for California Community Colleges. HCIA narrative progress reports (first through fifth quarters); Foundation for California Community Colleges.

CME = continuing medical education.

VI. Future Plans

In the quarterly narrative reports and telephone interviews, the program partners identified several next steps for program implementation:

- To continue to develop a workforce prepared to provide care to formerly incarcerated people, CCSF will develop additional online coursework (on health impacts of incarceration and conflict resolution) for the Post-Prison Health Worker certificate program; CHWs from cohort 1 clinics will be enrolled in these courses.
- To support effective implementation of the transitions clinic program model at each site, the program partners will continue to provide clinic liaisons with training and support on the program model. The program partners also will begin to engage subject matter experts in online grand rounds training for primary care and other clinical staff at participating clinics.
- The program's evaluation team will continue to assist with the institutional review board approval process for the one clinic that has not yet received this approval.

- The evaluation team will continue to provide all 10 participating clinics with training on data collection using the data platform.
- In early 2014, program partners will solicit advice on how to sustain the program model from experts on prison health, reentry policy, Medicaid, CHW policy, and education.

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SUMMARY OF PROGRAM DESIGN AND IMPLEMENTATION EXPERIENCE

MARCH 2014

Rosalind Keith and Rebecca Coughlin

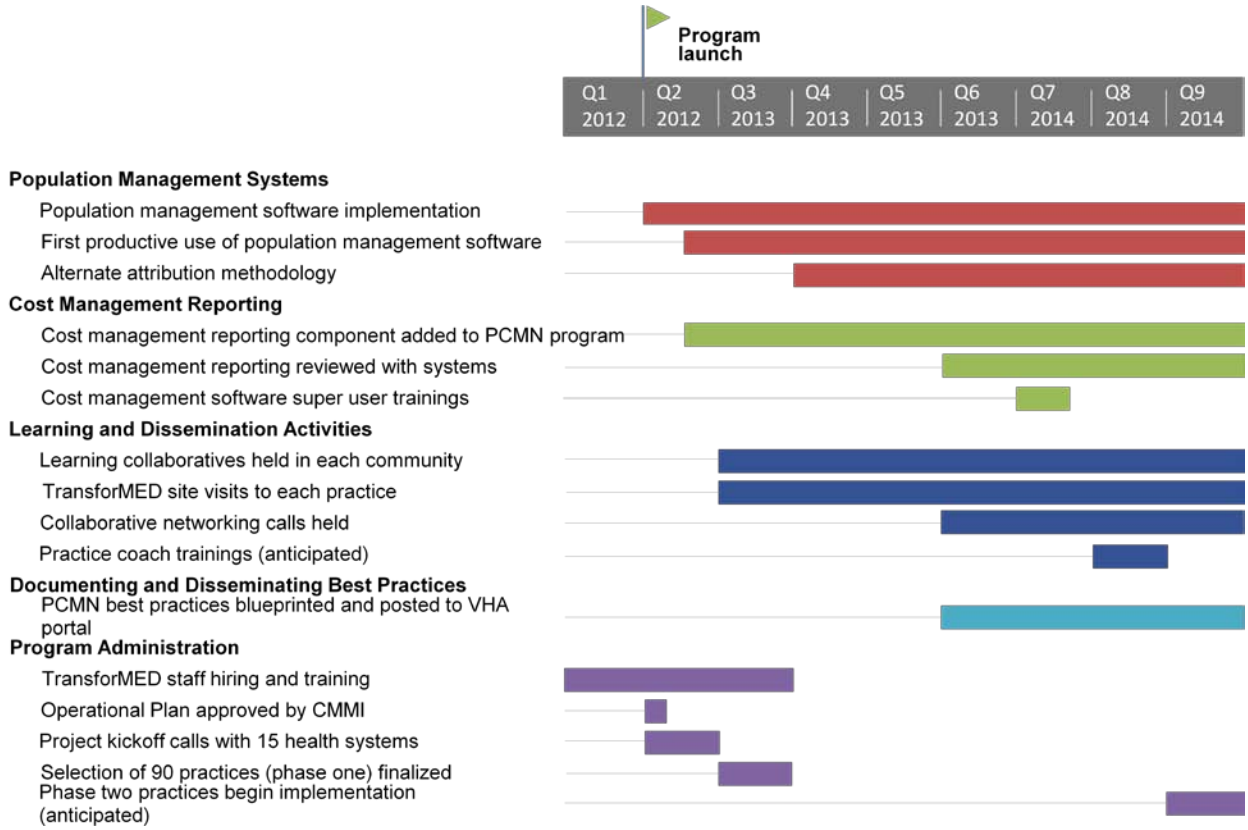
In this brief, we describe the primary care redesign (PCR) program being implemented by TransforMED in 15 communities across the United States under Health Care Innovation Award (HCIA) funding from the Center for Medicare & Medicaid Innovation (CMMI). The purpose of this brief is to describe the design of the program as it is currently being implemented and the implementation experience one-and-a-half years after the receipt of award. We have based the information presented in this brief on a review of program documents, including application materials and quarterly reports, as well as telephone discussions and follow-up communication with program administrators. This brief describes the status of the program as of December 2013.[1] We will update the brief as additional information becomes available.

I. Overview

TransforMED, a nonprofit subsidiary of the American Academy of Family Physicians, received $20.8 million dollars of HCIA funding in July 2012 to implement a PCR model in 15 states. TransforMED is facilitating the implementation of a patient-centered medical neighborhood (PCMN) program, a model of care founded on the principles of the patient-centered medical home (PCMH) program and designed to promote primary care transformation, coordination, and integration across provider organizations. To implement the PCMN program, TransforMED supports the implementation of population management systems and cost management reporting within the 15 health systems and 90 primary care practices. TransforMED facilitates PCMN implementation by organizing resources and learning activities to bring together participating health systems and primary care practices to implement PCMH concepts at a community level. By promoting PCMN transformation, by the end of the three-year demonstration TransforMED expects to (1) decrease overall health care costs for Medicare and Medicaid beneficiaries by 4 percent, and reduce the total cost of care for this population by $49.5 million; (2) improve the health of eligible patients, as demonstrated by an average 15 percent improvement in the quality measures in TransforMED's self-monitoring plan; (3) improve patients' experiences by 25 percent; and (4) scale up the program to 18 to 20 additional practices in each community. Figure 1 outlines the time line for PCMN implementation to date.

[1] In February 2014, one primary care practice withdrew from the PCMN program due to concern regarding the resources necessary to maintain the population management software implemented as a core component of the program. In this case study, we report on the number of participating practices as of December 2013.

Figure 1. Time Line: PCMN Implementation



Source: Awardee quarterly reports submitted to CMMI.

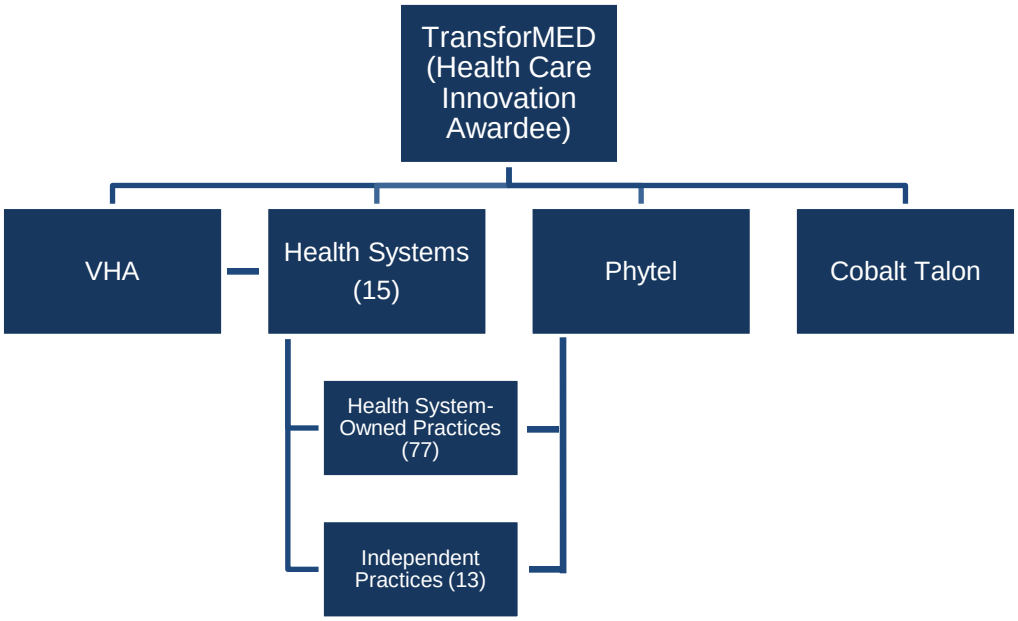
CMMI = Center for Medicare & Medicaid Innovation; PCMN = patient-centered medical neighborhood.

II. Organizational Structure

TransforMED works with three project affiliates—VHA, Phytel, and Cobalt Talon—to implement the PCMN program in 15 communities across the United States. In Figure 2 we show the relationship between TransforMED and the project affiliates. TransforMED's primary role in the program is to facilitate successful PCMN implementation by working directly with the participating health systems and practices to integrate software, analytic tools, and PCMH concepts into clinic and management processes. Each of the affiliates has a clearly defined role in the PCMN program:

- VHA is a national network of nonprofit health care organizations with which TransforMED has collaborated since 2011. TransforMED worked with VHA to identify 15 health systems for participation in the PCMN program. Fourteen of the 15 health systems participating in the HCIA-funded initiative are part of the VHA network. VHA also helps to document and disseminate PCMN best practices.
- Phytel is a health care technology company that provides and installs population management software in each participating primary care practice.
- Cobalt Talon uses Medicare fee-for-service claims to produce cost-management reports that TransforMED provides to each participating health system and practice.

Figure 2. PCMN Organizational Chart



Source: Communication with program staff, November 2013.

In addition to the three program affiliates, TransforMED partners with health systems and primary care practices to implement the PCMN. During the first two years of the program, TransforMED is implementing the PCMN program in 90 primary care practices across 15 communities in 15 states.[2] Figure 3 shows the location of the 15 communities. Each community includes one health system and multiple primary care practices. As shown in Figure 3, many primary care practices are owned by the health system, but some are not. TransforMED asked the 15 selected health systems to nominate 8 to 10 primary care practices within their markets, with the goal of recruiting 6 participating practices that would form the community in which the PCMN program would be implemented. Health systems were asked to nominate family medicine or internal medicine care practices based on practices that have the following:

- Patient volume of at least 350 attributed Medicare fee-for-service and Medicaid patients per provider
- Practice management system and an electronic health record (EHR) that practice staff have actively used for at least one year, and the ability to accommodate Phytel's software requirements for exporting data

[2] In the original application, TransforMED planned to work with 12 communities but increased the number to 15 in response to a CMMI request. CMMI also asked TransforMED to recruit health systems in specific states. As a result, one health system (Via Christi Health) is not in the VHA network.

- Strong, motivated leadership and staff willing to actively engage in quality improvement
- A collection of patient email addresses and/or patients are encouraged to use a patient portal
- Documentation of a patient's preferred primary care provider in the practice management system
- A strong commitment to participating in the PCMN and the potential to be recognized as a leader within the community

Figure 3. Location of Health Systems and Practices Participating in the PCMH Program

Together, TransforMED, VHA, and Phytel selected the final practices to participate in the program from the list of practices nominated by the systems. Some health systems identified many practices interested in participating, whereas others could not find six interested practices, particularly in rural areas. In the end, the number of participating practices in each community ranged from four to eight; each practice implements all the program components.[3] Recruited practices have an average of 7 primary care practitioners per practice and a total of 619 primary care practitioners.

[3] Attachment A lists the health systems and primary care practices participating in the HCIA-funded program and their locations.

TransforMED planned to identify an equal number of health system-owned practices and non-owned practices to participate in the program, but this criterion was difficult to enforce during the selection of the final practices. Among current participants, 14 of the 90 practices are non-owned. During the third year of the program, TransforMED plans to recruit an additional 18 to 22 practices in each community. TransforMED hopes that nonparticipating practices in these communities will also adopt the PCMN model of care.

III. Program Features and Implementation Progress

TransforMED is implementing four core program features. We describe these features next, along with the implementation challenges that TransforMED faced and the progress that it made on each.

A. Population Management Systems

Phytel provides and installs two types of population management software in each site (at no charge to the site). Phytel Insight™ organizes clinical data by patient and population characteristic, chronic disease type, and quality measures. Phytel Coordinate™ automates care management processes within practices by providing care teams with the following capabilities: (1) patient attribution, which involves assigning patients to a primary care provider who is responsible for coordinating their care needs; (2) risk stratification, which involves assessing a patient's health risk status and categorizing the patient based on his or her care needs; and (3) patient outreach, which involves targeting communications to patients based on their individual care needs. The combination of these data organization and automated care management capabilities is designed to enable practices to target procedures toward specific patient populations—for example, identifying patients due for a mammogram and sending those patients automated reminders to schedule the procedure.

TransforMED has found that Phytel software is critical for driving decision making and engaging practices in the transformation process. Practices with Phytel software are able to work with TransforMED to use data to identify areas for improvement, measure change, and determine successful procedures; those practices also are more engaged in PCMN implementation generally than practices lacking the software. Practices that do not have the Phytel software have to make assumptions to identify areas for improvement, cannot measure change, and are less engaged in PCMN implementation. However, integrating the practice management systems and/or EHRs systems used by participating practices with the Phytel software has been difficult. Across participating practices, the number and complexity of systems requiring integration exceeded TransforMED's expectations and increased the amount of time and resources needed to install Phytel software. As a result, the installation of the population management software in participating practices is taking longer than expected, posing two specific implementation challenges. First, practices without the Phytel Insight software are unable to use data to guide PCMN implementation processes. Second, practices without the Phytel Coordinate software are unable to use the automated program to attribute patients to

primary care providers. As of the end of December 2013, 78 of the 90 practices had active users on Phytel Insight and Phytel Coordinate.[4]

Due to the delay in implementing Phytel software, instead of relying on Phytel Coordinate for patient attribution, TransforMED worked with Cobalt Talon to develop a temporary, alternate patient attribution methodology. The Cobalt Talon methodology assigns a patient to a provider based on how often the patient visits the provider and the percentage of total care he or she received from the provider, as identified in Medicare fee-for-service claims. However, this works only for the subset of patients who are Medicare fee-for-service beneficiaries. After Phytel implements its software in all 90 practices, TransforMED should be able to retrospectively attribute commercial and Medicaid patients to providers as well. As of December 2013, all 90 practices had signed a contract to implement Phytel, and 83 of the 90 had started the implementation process.

B. Cost Management Reporting

Cobalt Talon analyzes Medicare fee-for-service claims to produce dashboards on cost of care at the community and practice levels. In the future, the dashboards will have the capability to drill down to the individual provider and patient levels as well. The dashboards provide information on emergency department visits, hospital readmissions, and total cost of care within the community. TransforMED began sharing dashboards with practices and health systems in November 2013 so that they could identify potential areas for reducing costs, improving quality, and targeting care management, care coordination, or care transition services. TransforMED visited 14 communities to introduce the cost management reporting system and discuss with stakeholders how they could use the information. TransforMED identified three so-called super users in each community and is training them to help facilitate the adoption and implementation of the cost management software and the use of the dashboard.

One challenge with implementing the cost management system has been the different needs of the many different users of the systems, both across and within a given practice or system. Cobalt Talon is currently developing a new analytic system and format for presenting the dashboard so that various users (such as practice managers, physicians, and health system administrators) can use the information.

C. Learning and Dissemination Activities

TransforMED uses a variety of strategies and activities to facilitate the implementation of the PCMN program in the 15 communities. These include monthly conference calls with health systems and practices, webinars, site visits, and an online PCMH networking site (called Delta Exchange) that provides resources and facilitates information-sharing among practices. In the first year of implementation TransforMED held monthly conference calls with each health system and made up to four visits to each practice. In addition to these organized activities,

[4] Attachment A lists the participating practices and the dates on which the Phytel software implementation will go live.

TransforMED, health systems, and practices engage in ongoing communication through telephone calls and emails. TransforMED staff meet in person with health system leadership as needed.

TransforMED also organizes learning collaboratives for each community. The learning collaboratives provide an organized forum through which representatives from the participating health systems and practices within a given community can share their PCMN implementation experiences and best practices. They also teach PCMH concepts (such as patient attribution, risk stratification, care coordination, and care teams) that all practices are expected to adopt. Communitywide learning collaboratives are held twice a year in each community. The nature of the learning collaboratives in year one varied slightly depending on community needs. In planning for the second year, TransforMED is strategically customizing activities based on key opportunities and needs in each community. For example, TransforMED might bring certain stakeholders such as specialists and practice managers together within communities, as well as across communities, to encourage conversations instead of formal presentations.

Through these activities, TransforMED works with stakeholders in each community to align the PCMN program with other initiatives and in the first year successfully established a PCMH foundation in each community. Some communities are able to respond to TransforMED recommendations with little guidance, whereas others require more support. This additional support takes the form of more substantial learning activities (for example, webinars, emails, and site visits) to communicate PCMN concepts and program goals. In November 2013, TransforMED added an additional learning activity, PCMN Collaborative Networking telephone calls. These are planned as quarterly forums for the 15 communities to come together and share their experiences with the program.

D. Documenting and Disseminating Best Practices

VHA is responsible for producing 12 Leading Practice Blueprints® and Knowledge Gems about the PCMN program by the end of the HCIA award, in collaboration with TransforMED and the practices highlighted in the blueprints. The VHA-trademarked Leading Practice Blueprints and Knowledge Gems are a formal process for communicating knowledge from leading organizations. Together, TransforMED and VHA will select 12 leading practices based on their performance on a particular process or outcome measure. TransforMED and VHA will work with these selected practices to document their processes and develop a blueprint for dissemination. TransforMED and VHA are currently considering an idea for the first blueprint on access to primary care, highlighting the work of a practice in North Carolina.

IV. Target Population and Assessment

The target population of the PCMN is Medicare and Medicaid patients treated at practices participating in the PCMN. Although the PCMN targets Medicare and Medicaid patients, TransforMED encourages practices to implement program processes for all patients, regardless of payer. Because the PCMN is implemented at a practice level, all patients have the potential to benefit from the program. Program participants are defined as all patients attributed to

participating practices.[5] One program design feature, cost management reporting, is available only to Medicare and Medicaid patients, but all other program components focus on all patients (Medicare, Medicaid, and commercial). When fully operational, the Phytel tools will enable the practices to understand the total number of patients reached, but until then the estimate is based on practices' self-reports. TransforMED projects that each participating practitioner has at least 350 Medicare fee-for-service and Medicaid beneficiaries, for a total of 157,500 Medicare/Medicaid patients reached in phase one.[6]

V. Workforce and Training

A. TransforMED Program Staff

The HCIA award supports 13.35 total FTEs in the TransforMED project (Table 1). The learning and dissemination activities planned to facilitate the implementation of the PCMN program in the 15 communities, as described earlier, are supported by 11 TransforMED staff. Four of these 11 staff members are project managers. Each project manager is responsible for a subset of the 15 communities, managing implementation in his or her designated communities. Five TransforMED staff are center of excellence consultants or program facilitators. Each of these five consultants has a specific subject matter expertise and works with all 15 communities. Their work in the communities includes facilitating activities such as learning collaborative and practice coach training. The 11 facilitation staff are complemented by a trainer and a project data analyst. The trainer is responsible for scaling up the program within each community, beyond the original practices. To do this, the trainer trains practice coaches, adapts the TransforMED PCMH training program for this specific program, and creates a learning management system—a virtual tool to spread learnings. The project data analyst assesses data from Cobalt Talon, Phytel, and practices to identify program gaps and highlight areas needing information. The program director and project controls manager oversee all program operations, with assistance from part-time administrative support personnel.

[5] All participants are considered indirect participants.

[6] TransforMED reported 2,593,25 participants in the first five quarters based on practices' self-reported data, although this is an overestimate because it includes patients attributed to participating practices and those attributed to other practices.

Table 1. Number and Roles of TransforMED Program Staff

Position	FTE	Role
Frontline Staff Implementing Transformation		
Project Manager	4.00	Responsible for overseeing implementation, transformation, and practice coach training in designated client communities
Center of Excellence Consultant (facilitators)	5.00	Responsible for providing subject matter expertise and conducting facilitation services within participating communities, including PCMH implementation, community education, and practice coach training
Trainer	1.00	Responsible for developing and conducting training for TransforMED staff and practice coaches, and developing virtual learning systems to share program learnings
Project Data Analyst	1.00	Responsible for analyzing data at provider, practice, and community levels to identify intervention needs
Grant Management Staff		
Program Director	1.00	Responsible for overall management of PCMN program
Project Controls Manager	1.00	Responsible for monitoring program processes and implementation, and ensuring compliance with reporting requirements
Administrative	0.35	Responsible for providing administrative support to program staff
TOTAL	**13.35**	

Source: Original TransforMED application submitted to CMMI, updated by TransforMED in December, 2013.

B. Workforce Development

As shown in Table 2, TransforMED is undertaking three training activities to teach PCMH principles, facilitate the spread of these principles throughout each community to support PCMN transformation, and provide specific skills to individuals in specialized roles. Only the new employee training had been conducted as of the end of 2013.

Table 2. TransforMED Training Activities as of January 2014

Training Program	Participants	Progress
Practice Coach Training	0	Planned for 2014, currently recruiting practice coaches
Super User Training	0	2 workshops held in January and February 2014
New Employee Training	12	All new TransforMED employees have been trained

Source: Lewin 4th Quarter Awardee Report (April 1 to June 30, 2013), submitted to CMMI on August 31, 2013; TransforMED 5th Quarter Self-Monitoring Measures Report (July 1 to September 30, 2013); communication with TransforMED program director, January 17, 2014.

TransforMED plans to hold two types of one-time trainings. In January and February 2014, TransforMED will facilitate two three-day training sessions for each community's Cobalt Talon super users. The training will provide information about how to use the Cobalt Talon software and its data analytic capabilities to produce a standardized dashboard and how to monitor the dashboard. The super users will also learn how to customize and generate tailored dashboard reports for different users and how to train end users to use the dashboard. The second type of one-time training TransforMED will sponsor is practice coach training. Communities will

identify practice coaches to serve as local experts in quality improvement and PCMH transformation, and to disseminate knowledge throughout the community. Practice coaches are expected to have an active role in leading PCMN transformation efforts during year three, as the number of practices per community increases. TransforMED will train practice coaches in practice facilitation, PCMH and PCMN transformational content, program management skills related to transformation, and knowledge about resources provided through this program. As of January 2014, 10 practice coaches were identified and training is in the planning stages. In addition to the one-time trainings, TransforMED also trains all employees for this program on the PCMH principles and the overall PCMN program. TransforMED trained all current new employees by March 2013.

VI. Future Plans

TransforMED identified some early implementation challenges, including the complexity of data systems across participating practices and differences in readiness for change across communities, practices, and practitioners. It plans to respond to these challenges by adapting a patient attribution methodology and employing a multilevel approach to working with health systems and practices. During the coming year, the completion of Phytel software installation in the rest of the practices and the training and deployment of super users in all communities will continue to advance PCMN implementation. As TransforMED prepares for phase two, which begins in year three, practice coaches will become central to each community's expansion of the PCMN model to additional practices. TransforMED currently works with health systems to identify practice coaches. After identifying all practice coaches, TransforMED will train and continue to support them as they work within each community to strengthen the PCMN.

In February 2014, the University of Alabama at Birmingham Huntsville Family Medicine practice, an independent practice in the Huntsville Hospital community, left the HCIA project due to its refusal to implement Phytel software and concerns over committing future resources to the project. We do not know at this time how TransforMED plans to address this change.

ATTACHMENT A

PARTICIPATING HEALTH SYSTEMS, PHASE ONE PARTICIPATING PRACTICES, OWNERSHIP STATUS, LOCATIONS, AND PHYTEL SOFTWARE GO-LIVE DATES

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Table 1.1. Participating Health Systems, Phase One Practices, Ownership Status, Locations, and Dates When Phytel Software Goes Live

Health System	Phase One Participating Practice	Ownership Status	Location	Phytel Software Go-Live Date
Avera Health, O'Neil, Nebraska	Avera Medical Group	HSO	Creighton, Nebraska	November 2013
	Avera Medical Group	HSO	Crofton, Nebraska	November 2013
	Avera Medical Group	HSO	Hartington, Nebraska	November 2013
	Avera Medical Group	HSO	Niobrara, Nebraska	November 2013
	Avera Medical Group	HSO	O'Neil, Nebraska	November 2013
	Avera Medical Group	HSO	Verdigre, Nebraska	November 2013
Charleston Area Medical Center, Charleston, West Virginia	Cabin Creek Health Systems, Inc.	IP	Dawes, West Virginia	To be determined
	CAMC Family Medicine Center	HSO	Charleston, West Virginia	January 2013
	Charleston Internal Medicine, Inc.	IP	Charleston, West Virginia	November 2013
	Womencare Inc., Family Care Health Center	IP	Scott Depot, West Virginia	To be determined
Columbus Regional, Columbus, Indiana	Columbus Adult Medicine	HSO	Columbus, Indiana	June 2013
	Columbus Family Medicine	HSO	Columbus, Indiana	June 2013
	Columbus Internal Medicine Associates	HSO	Columbus, Indiana	June 2013
	Doctors Park Family Medicine	HSO	Columbus, Indiana	June 2013
	Kavelman Family Medicine	HSO	Columbus, Indiana	June 2013
	Nashville Family Medicine	HSO	Nashville, Indiana	April 2013
	Rau Family Medicine	HSO	Columbus, Indiana	June 2013
	Sandcrest Family Medicine	HSO	Columbus, Indiana	June 2013
Greater Baltimore Medical Center, Baltimore, Maryland	Chapel View Family Care	IP	Baltimore, Maryland	To be determined
	Family Care Associates	HSO	Towson, Maryland	June 2013
	GBMC Hunt Valley	HSO	Hunt Valley, Maryland	June 2013
	GBMC Internal Medicine Residency	HSO	Baltimore, Maryland	June 2013
	Hunt Manor	HSO	Phoenix, Maryland	June 2013
	Jarrettsville Family Care	IP	Jarrettsville, Maryland	To be determined
	Texas Station	HSO	Timonium, Maryland	June 2013
Huntsville Hospital, Huntsville, Alabama	HH Physician Care – Bailey Cove	HSO	Huntsville, Alabama	July 2013
	HH Physician Care - Gurley	HSO	Gurley, Alabama	July 2013
	HH Physician Care – Hampton Cove	HSO	Owens Cross Roads, Alabama	July 2013
	HH Physician Care	HSO	Huntsville, Alabama	July 2013
	HH Physician Care	HSO	Madison, Alabama	July 2013
	UAB Huntsville Family Medicine	IP	Huntsville, Alabama	To be determined

Table 1.1 *(Continued)*

Health System	Phase One Participating Practice	Ownership Status	Location	Phytel Software Go-Live Date
INTEGRIS Health, Oklahoma City, Oklahoma	INTEGRIS Family Care Central	HSO	Oklahoma City, Oklahoma	April 2013
	INTEGRIS Family Care Norman	HSO	Norman, Oklahoma	April 2013
	INTEGRIS Family Care South Penn	HSO	Oklahoma City, Oklahoma	April 2013
	INTEGRIS Family Care Southwest	HSO	Oklahoma City, Oklahoma	April 2013
	INTEGRIS Family Care Yukon	HSO	Yukon, Oklahoma	April 2013
Marquette General Health, Marquette, Michigan	Marquette Medical Clinic – Kingsford	HSO	Kingsford, Michigan	August 2013
	Marquette Medical Clinic – Gladstone	HSO	Gladstone, Michigan	August 2013
	Doctors Park Family Physicians	HSO	Escanaba, Michigan	August 2013
	Marquette General Family Medicine	HSO	Marquette, Michigan	August 2013
	Portage Health Medical Group University Center	IP	Houghton, Michigan	To be determined
North Mississippi Health Services, Tupelo, Mississippi	Barnes Crossing Medical Clinic	HSO	Tupelo, Mississippi	March 2013
	Family Care Clinic of Ripley	IP	Ripley, Mississippi	March 2013
	Fulton Medical Clinic	HSO	Fulton, Mississippi	March 2013
	Hamilton Medical Clinic	HSO	Hamilton, Mississippi	March 2013
	IMA	HSO	Tupelo, Mississippi	March 2013
	Iuka Medical Clinic	HSO	Iuka, Mississippi	March 2013
	Pontotoc Medical Clinic	HSO	Pontotoc, Mississippi	March 2013
North Shore Physicians Group, Salem, Massachusetts	North Shore Physicians Group	HSO	Salem, Massachusetts (400 Highland)	January 2013
	North Shore Physicians Group	HSO	Salem, Massachusetts (331 Highland)	January 2013
	North Shore Physicians Group	HSO	Marblehead, Massachusetts	January 2013
	North Shore Physicians Group	HSO	Lynn, Massachusetts	January 2013
	North Shore Physicians Group	HSO	Danvers, Massachusetts (192 North)	January 2013
	North Shore Physicians Group	HSO	Danvers, Massachusetts (1	January 2013
	North Shore Physicians Group	HSO	Hutchinson) Saugus, Massachusetts	January 2013
Northeast Georgia Health System, Gainesville, Georgia	NGPG Braselton Clinic	HSO	Hoschton, Georgia	June 2013
	NGPG	HSO	Cleveland, Georgia	June 2013
	NGPG	HSO	Dahlonega, Georgia	June 2013
	NGPG	HSO	Dawnsonville, Georgia	June 2013
	NGPG Medical Park I	HSO	Gainesville, Georgia	June 2013
	NGPG Thompson Bridge	HSO	Oakwood, Georgia	June 2013
	NGPG Chestnut Mountain	HSO	Flowery Branch, Georgia	June 2013
	The Longstreet Clinic – Adult Medicine	IP	Gainesville, Georgia	To be determined

Table 1.1 *(Continued)*

Health System	Phase One Participating Practice	Ownership Status	Location	Phytel Software Go-Live Date
Novant Health, Winston-Salem, North Carolina	Family Medical Associates of Lewisville	HSO	Lewisville, North Carolina	November 2013
	Forsyth Internal Medicine	HSO	Winston Salem, North Carolina	November 2013
	Kernersville Family Practice	HSO	Kernersville, North Carolina	November 2013
	Maplewood Family Practice	HSO	Winston Salem, North Carolina	November 2013
	Medical Associates of Davie	HSO	Mocksville, North Carolina	November 2013
	Salem Family Practice	HSO	Winston Salem, North Carolina	November 2013
Orlando Health, Orlando, Florida	Medical Interventions of Central Florida	IP	Clermont, Florida	To be determined
	OHPG Internal Medicine Faculty Practice	HSO	Orlando, Florida	June 2013
	Total Family Care	IP	Clermont, Florida	To be determined
	Southwest Orlando Family Medicine	IP	Orlando, Florida	To be determined
	OHPG – Dr. Phillips Primary Care	HSO	Orlando, Florida	June 2013
Owensboro Medical Health System, Owensboro, Kentucky	MultiCare	HSO	Madisonville, Kentucky	October 2013
	MultiCare – Ohio County	HSO	Beaver Dam, Kentucky	October 2013
	MultiCare	HSO	Tell City, Kentucky	October 2013
	Primary Care Center	HSO	Owensboro, Kentucky	October 2013
Via Christi Health, Wichita, Kansas	Via Christi Clinic at Reflection Ridge	HSO	Wichita, Kansas	June 2013
	Via Christi Clinic	HSO	Newton, Kansas	June 2013
	Via Christi Clinic	HSO	Wichita, Kansas	June 2013
	Via Christi Family Medicine Center	HSO	Wichita, Kansas (1121 S. Clifton)	June 2013
	Via Christi Family Medicine Center	HSO	Wichita, Kansas (707 N. Emporia)	June 2013
	Wesley Family Medicine Center	IP	Wichita, Kansas	To be determined
Western Connecticut Health Network, Danbury, Connecticut	WCMG	HSO	Ridgefield, Connecticut	July 2013
	WCMG	HSO	Brookfield, Connecticut	July 2013
	WCMG	HSO	Southbury, Connecticut	July 2013
	WCMG	HSO	Danbury, Connecticut	July 2013
	WCMG	HSO	New Fairfield, Connecticut	July 2013
	WCMG	HSO	New Milford Green, New Milford, Connecticut	July 2013

Source: TransforMED Staff

CAMC = Charleston Area Medical Center; GBMC = Greater Baltimore Medical Center; HH = Huntsville Hospital; HSO = health system-owned; IP = independent practice; NGPG = Northeast Georgia Physicians Group; OHPG = Orlando Health Physician Group; UAB = the University of Alabama at Birmingham; WCMG = Western Connecticut Medical Group.

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SUMMARY OF PROGRAM DESIGN AND IMPLEMENTATION EXPERIENCE

MARCH 2014

Joseph Zickafoose and Brenda Natzke

In this brief, we describe the primary care redesign (PCR) program being implemented by University Hospitals of Cleveland Rainbow Babies & Children's Hospital (UH Rainbow) in northeastern Ohio under Health Care Innovation Award (HCIA) funding from the Center for Medicare & Medicaid Innovation (CMMI). The purpose of this brief is to describe the design of the program as it is currently being implemented and to highlight implementation experience one-and-a-half years after the receipt of award. We based the information presented in this brief on a review of program documents, including application materials and quarterly reports, and telephone discussions and follow-up communication with UH Rainbow program administrators. This brief describes the status of the program as of December 2013. We will update the brief as additional information becomes available.

I. Overview

The overall goal of the UH Rainbow physician extension team (PET) program is to create a sustainable pediatric ambulatory care program that improves care and health and lowers costs for children enrolled in Medicaid. The PET program creates a partnership across pediatric primary care providers, the hospital, patients and their caregivers, managed care organizations (MCO), and the state Medicaid agency to initiate change. The program has five primary goals: (1) decreasing avoidable emergency department (ED) visits through multiple services to improve access to non-ED care, (2) improving the care and health of children with complex chronic conditions through a multidisciplinary care coordination program, (3) improving behavioral health through an integrated program to increase access to behavioral health care in primary care practices and community-based agencies, (4) increasing primary care providers' adherence to national quality measures through a practice facilitation program, and (5) ensuring sustainability of the program through development of an accountable care organization (ACO) infrastructure. In January 2012, UH Rainbow applied for $23,240,968 in HCIA funding to implement the PET program and received an award of $12,774,935. UH Rainbow scaled back its target enrollment and proposed interventions to reflect the lower funding amount. In its initial application, UH Rainbow proposed targeting 130,000 children enrolled in Medicaid in eight counties in northeast Ohio but, given the lower funding, now hopes to enroll 65,000 children. In addition, UH Rainbow originally proposed implementing four telehealth hubs, but reduced the number of hubs to two. After two quarters of planning and infrastructure development, UH Rainbow began delivering program services to targeted children and participating practices in January 2013.

Table 1. Time Line: UH Rainbow Physician Extension Team Implementation

Date	Activity
July 2012	HCIA funding awarded
July – December 2012	Infrastructure development, including hiring staff, negotiations with Medicaid MCOs, and contracting with network practices
January – March 2013	Provision of services begins, including a network of 22 pediatric primary care practices with 122 providers; execution of a shared-savings agreement with one Medicaid MCO
April – June 2013	Implementation and refinement of intervention components; determination of additional hiring needs for high-demand services; first round of incentive payments for network physicians
July –September 2013	Program expands to 28 practices with 154 providers; execution of shared-savings agreements with 2 additional Medicaid MCOs
October – December 2013	Implementation and refinement of intervention components; second round of incentive payments for network physicians

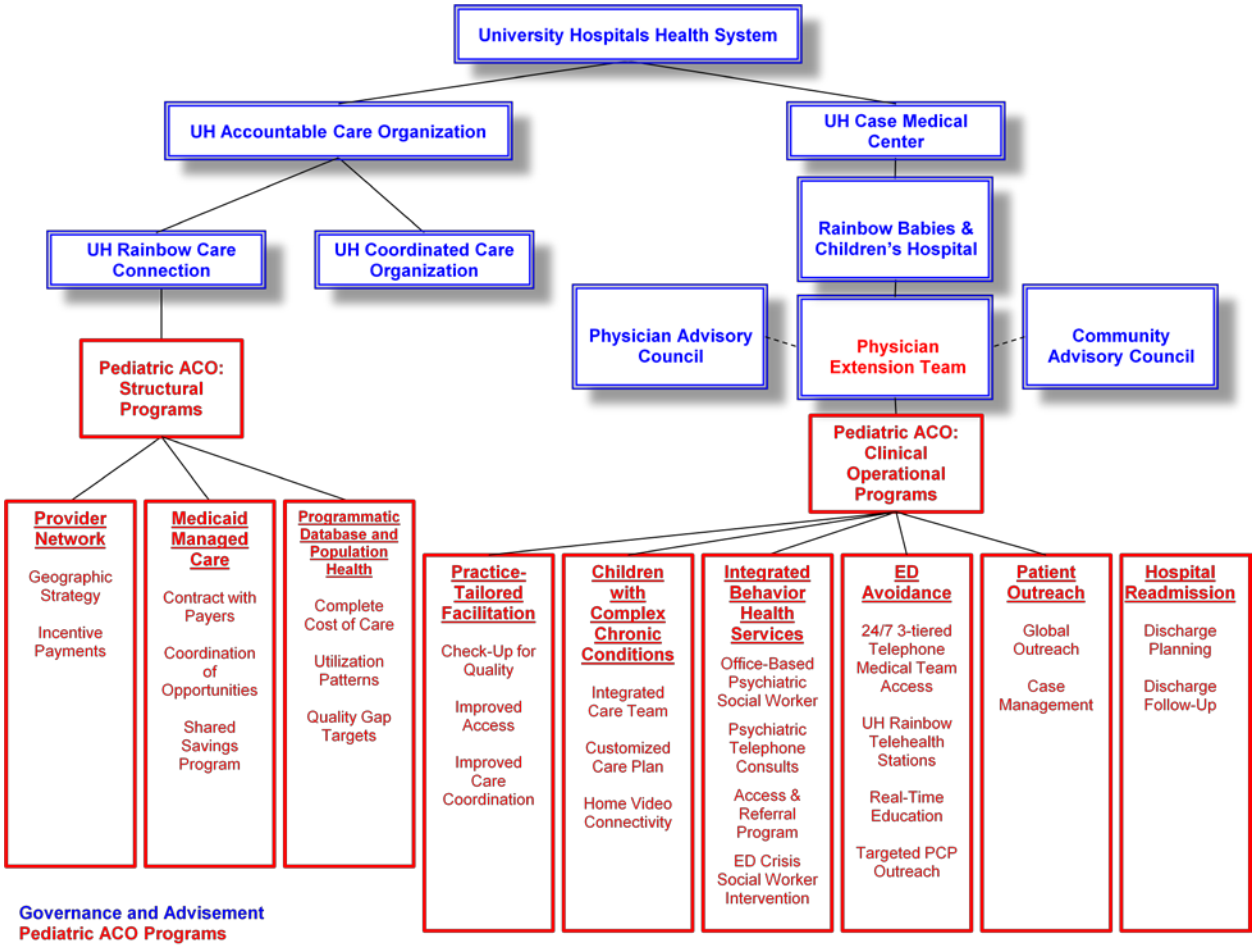
Source: Mathematica analysis of Awardee documents.

II. Organizational Structure

UH Rainbow is a 244-bed pediatric tertiary care hospital located in Cleveland, Ohio and is part of the larger University Hospitals Health System. It offers on-site outpatient primary, specialty, and emergency care services and operates an affiliated network of community-based primary care practices and ambulatory specialty and urgent care centers throughout northeastern Ohio.

Figure 1 shows the awardee organizational chart. The red font indicates the clinical and structural components of UH Rainbow's program and the blue font indicates system structures in place before the HCIA award. The clinical components are program interventions that directly target children and their families or primary care practices servicing children. The structural components are administrative systems UH Rainbow created to support the functioning of the clinical components of PET and to develop a sustainable financial model for the program. UH Rainbow intends for the clinical and structural components of PET to become the foundation for a pediatric ACO for Medicaid-enrolled children receiving care at network practices.

Figure 1. Organizational Chart of UH Rainbow HCIA-Funded Activities

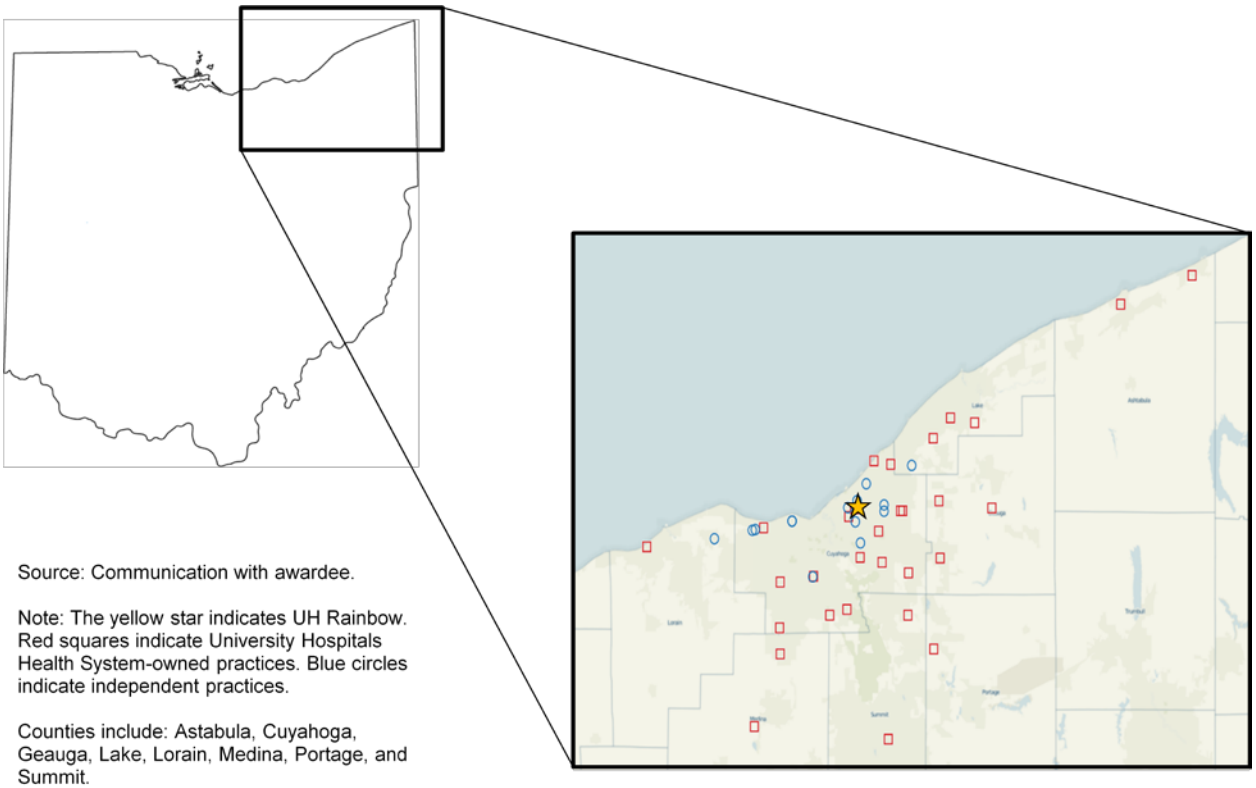


Source: Mathematica analysis of awardee documents.

PCP = primary care provider.

UH Rainbow has engaged a network of 153 pediatric providers in 28 practices across 45 locations to participate in the PET program. Figure 2 shows the locations of the network practices in eight counties in northeast Ohio. Practices are located in urban, suburban, and rural locations, and the proportion of patients covered by Medicaid ranges from 10 to 60 percent. University Hospitals owns about 60 percent of practices (n = 17); 40 percent (n = 11) are independent. One of the independent practices is a federally qualified health center with multiple locations, and the rest are independent private practices.

Figure 2. Location of UH Rainbow Physician Extension Team Network Practices



Source: Communication with awardee.

Note: The yellow star indicates UH Rainbow. Red squares indicate University Hospitals Health System-owned practices. Blue circles indicate independent practices.

Counties include: Astabula, Cuyahoga, Geauga, Lake, Lorain, Medina, Portage, and Summit.

III. Program Features and Implementation Progress

As shown in Figure 1, the PET program has three structural and six clinical components funded by the award. The structural components perform administrative functions to support the clinical components of the program: (1) engagement of a primary care provider network for care improvement activities, (2) arrangements with Medicaid MCOs, and (3) a programmatic database to support population health and care gap analyses. The six core clinical components include (1) practice-tailored facilitation in quality measurement and improvement, (2) care coordination for children with complex chronic conditions, (3) integrated behavioral health services, (4) ED avoidance, (5) patient outreach, and (6) hospital readmission prevention. We describe the implementation status of each of the structural and clinical components of the HCIA-funded program next.

A. Structural Components

1. Engagement of the Primary Care Provider Network

The contract between the UH Rainbow program and participating practices includes an incentive payment program in which approximately 50 to 60 percent of the incentive payments are based on meeting quality measure benchmarks. The UH Rainbow program staff developed the incentive program in consultation with PET's physician advisory council. Table 2 shows the quality measures for the first two years of the HCIA funding. Practice facilitators conduct quality measurement for the incentive payment program through chart reviews during their visits to practices.

Table 2. Quality Measures for Participating Practices

Quality Metric	Definition
Asthma	Use maintenance medication appropriately for persistent asthma
Drug Formulary	Prescribe following drug formulary
Fluoride Varnish	Apply every 6 months once tooth eruption (12 to < 36 months)
Obesity	Calculate BMI and percentile, diagnose weight, counsel
Lead Screening	Order appropriate testing at 12 and 24 months
URI	Do not use antibiotics for URI diagnosis
Well Child Care 3 to 6 Years	Schedule patients ages 3 to 6 for follow-up well visit at time of sick visit, if needed

Source: Communication with awardee.

BMI = body mass index; URI = upper respiratory infection.

In addition to quality of care, incentive payments also reward increases in access to care and improvements in care coordination. As of December 2013, none of the participating practices had received incentive payments for increasing hours of operation. As an additional incentive for increasing access to care, practices receive a discounted rate on the telephone triage service that is part of the ED avoidance component of the program; nearly all practices participated in this service by the end of the sixth quarter. To improve care coordination, practices are required to facilitate the use of the behavioral health program and have the option to use the chronic care program. Practices also must participate in the ED avoidance education outreach.

2. Medicaid Managed Care

In an effort to create sustainable funding for the program, the UH Rainbow program has been negotiating shared-savings agreements with Medicaid MCOs. Shared-savings refers to arrangements between providers and payers in which providers are incentivized to reduce health care spending for a target population through payment of a percentage of the net savings achieved through their efforts. As of September 2013, UH Rainbow completed shared-savings agreements with three of the five Ohio Medicaid MCOs and is currently negotiating with the remaining two. Contract negotiations and implementation were delayed by the Ohio Medicaid managed care reprocurement process in July 2013. As the UH Rainbow team develops experience with shared-savings agreements, they plan to engage a consulting firm to study the challenges and benefits of shared-savings in comparison with other payment models, such as full capitation, to enable sustainability of the program.

3. Programmatic Database and Population Health

To manage the program and guide population health interventions, UH Rainbow is using HCIA funds to develop a system for analyzing Medicaid claims to assess population health and costs of covered services for children enrolled in Medicaid managed care and attributed to participating practices. The program plans to analyze service use patterns, gaps in quality measures, and costs of care. UH Rainbow experienced delays in data analysis due to the need to review and implement the population health software and delays in obtaining claims data from Ohio Medicaid.

B. Clinical Components

Table 3 shows the target populations and specific features for each of the core clinical components of the program.

Table 3. UH Rainbow PET Intervention Components

Component	Features	Target Population(s)
1. Practice-Tailored Facilitation	• Facilitators assist practices in quality measurement and improvement	All patients who receive care at network practices
2. Care Coordination for Children with Complex Chronic Conditions	• Dedicated multidisciplinary care team • Customized care plan developed with family and shared with PCP • Pilot program of home video connectivity to care team	UH Rainbow patients with Medicaid who (1) have significant neurocognitive impairment, (2) have three or more body systems impaired, or (3) are technology dependent or require caregiver assistance with activities of daily living
3. Integrated Behavioral Health Services	• Psychiatric social worker in primary care practices • Psychiatric telephone consults for PCPs • Telephone line for PCPs to facilitate referral and access to community-based mental health agencies • ED behavioral health crisis social worker	All patients who receive care at network practices or in UH Rainbow ED
4. ED Avoidance	• 24/7 telephone triage service with nurse prescriptive authority and physician consultation on ED referrals • Telehealth hubs • Real-time identification of ED high utilizers during ED visits • Targeted education with after-visit contact by program staff and PCPs	All patients
5. Patient Outreach	• Case managers reach out to frequent ED utilizers to encourage follow-up with PCP and provide connections to other care • Community marketing campaign to encourage continuity of care with a PCP and calling before ED visit	All patients
6. Hospital Readmission	• Discharge planning • Discharge follow-up	All patients

Source: Mathematica analysis of awardee documents and telephone interview with awardee.

PCP = primary care provider.

1. Practice-Tailored Facilitation

To increase primary care provider adherence to national quality measures, the PET program uses practice-based facilitators to assist in practice redesign and quality improvement and is based on a recent randomized trial of a practice facilitation model to improve quality of primary care for children conducted by several members of the UH Rainbow team.[1] All 45 locations of the 28 practices are engaged in facilitation. Each year of the award, practice facilitators perform an observation visit to each practice, perform a baseline chart review to gauge performance on targeted quality measures for the project year, and hold feedback and education meetings with each practice location to discuss the results. Facilitators then meet weekly with each practice to problem–solve various approaches to meeting specific quality improvement goals with the practice staff. Facilitators provide practice sites with educational materials (such as patient education handouts and posters for exam rooms), clinician decision tools (such as a survey-based asthma control assessment), and organizational tools (such as binders with drug formularies and desktop document organizers). As part of their visits to the practices, facilitators perform additional chart reviews to provide feedback to practices on their quality measure performance and to evaluate progress of the PET program. The facilitation program also includes an improved access component to encourage, but not require, after-hours telephone triage and expanded evening or weekend hours. At the time of our interview with awardee staff (November 2013), none of the practices had expanded their evening or weekend hours as a result of their participation in the program, but most participated in the telephone triage service.

2. Care Coordination for Children with Complex Chronic Conditions

To improve the care and health of children with complex chronic conditions, the PET program enrolls targeted children in a care management program. The program entails a medical, social, and nutritional assessment of patients and provides a standardized portable care plan. UH Rainbow defined children with complex chronic conditions as those who (1) have significant neurocognitive impairment, (2) have three or more body systems impaired, (3) are technology dependent, or (4) require caregiver assistance with activities of daily living. Targeted children are identified through a review of databases of children receiving care in UH Rainbow inpatient and outpatient departments and in network practices. Caregivers of these children are invited to attend an intake visit with a multidisciplinary care management team. The intake visit includes the multidisciplinary assessment and results in the development of a care plan that is shared with the child's caregivers and primary care provider.

UH Rainbow's original proposal included the use of medical assistants trained as family care advocates to help families navigate the health care system. However, the project team did not feel the medical assistants met the program's needs due to the complexity of the enrolled patients. UH Rainbow redirected program resources to hire additional nursing, social work, and dietician staff who could take on the roles envisioned for the family care advocates.

[1] Meropol, S., N. Schiltz, A. Sattar, K. Stange, A. Nevar, C. Davey, P. Vavrek, and L. Cuttler. "Practice-Tailored Facilitation Markedly Improves Delivery of Pediatric Preventive Care Services: A Cluster Randomized Trial." Presented at the AcademyHealth Annual Research Meeting, Baltimore, MD, June 2013.

UH Rainbow is also implementing a pilot study of on-demand home video connectivity with the care management team for high-risk children and those who live long distances from the complex care clinic. Families receive an audio- and video-enabled tablet device that they can use to contact the care management team during regular office hours to ask questions and that clinicians can use to assess acute concerns. The HCIA included funding for 50 devices. By the end of 2013, UH Rainbow had distributed 10 devices for a trial period and plans to expand to the full number of devices in 2014.

As of December 2013, UH Rainbow enrolled 84 children with complex chronic conditions in the care management program. The awardee had a goal of enrolling 100 children during the first year of the program and attributes the shortfall to an underestimation of the time needed to create care plans for this clinically complex population of children.

3. Integrated Behavioral Health Services

The PET program seeks to improve behavioral health care for targeted children through several interventions, including (1) primary care practice-based psychiatric social workers, (2) a telephone consultation service for advice to providers and telehealth encounters for families, (3) a referral service to help providers link patients to community-based integrated mental health agencies, and (4) a crisis intervention social worker in the UH Rainbow ED. Initially, two psychiatric social workers who filled multiple roles staffed the program; they also worked in network primary care offices to provide on-site mental health visits and consultations, and staffed a telephone consultation service and a referral service. Based on higher-than-expected demand for these services, UH Rainbow hired a third social worker during the fourth quarter of the award. In addition, the program identified a problem with high no-show rates for scheduled visits with the psychiatric social workers. To address this problem, UH Rainbow began a pilot of on-demand telehealth visits linking social workers to network practices. The telehealth program has been piloted at one practice and there are plans to expand it to additional practices.

To improve access and coordination of behavioral health services, UH Rainbow collaborates with various community behavioral health agencies. The program began working with four agencies and recently expanded to three others. Program administrators report that the collaborations with community behavioral health agencies help reduce the waiting times for patients connected through the program referral service. UH Rainbow also hired a crisis intervention social worker for the pediatric ED to help assess patients' needs during emergency care visits for behavioral health concerns, connect these patients to appropriate outpatient services, and potentially avoid hospital admissions. Based on perceived initial successes, the program plans to hire another crisis intervention social worker.

4. ED Avoidance

Through the PET program, UH Rainbow is implementing three interventions to address its goal of decreasing ED visits. These ED avoidance interventions include (1) a 24 hours a day, 7 days a week telephone triage service; (2) community telehealth hubs available outside regular office hours and supported by a medical assistant; and (3) real-time identification of frequent ED users with targeted education and follow-up from program staff and the child's primary care provider.

The telephone triage service is expanding on an existing subscription-based telephone triage service. Award funds enable network practices to subscribe to the service at a discounted rate. In addition, UH Rainbow added two new service levels within the triage system. Nurses take the calls to the service and address them based on protocols. Previously, if the nurse determined the patient had to be treated in the ED, the nurse referred the patient immediately. Under the enhanced telephone triage protocol, an on-call physician automatically triages potential ED referrals to determine the most appropriate site of care. In addition, nurses are empowered to order prescriptions for common nonurgent conditions for which families sometimes seek ED care just to get a prescription. Although practices are not required to subscribe to the telephone triage service, the awardee reports that most practices have subscribed. UH Rainbow reports high satisfaction from caregivers using the service, and early surveys indicate that the service might prevent ED visits based on caregivers' reports of what they would have done if the service had not been available.

Second, UH Rainbow is implementing two telehealth hubs to provide urgent care services in low-income communities identified as having high rates of ED use. These hubs are kiosks staffed by a medical assistant and an on-call, off-site physician. These hubs enable the on-call physician to evaluate patients with the medical assistant using a real-time video link and on-site diagnostic equipment, such as an electronic stethoscope. As of December 2013, one telehealth hub was fully operational in a leased site, and the program was finalizing the lease for the second hub. UH Rainbow plans to conduct a marketing campaign assisted by local community organizations to help promote use of the telehealth hubs.

Third, UH Rainbow uses its electronic health record (EHR) system to identify children seeking care in the ED who have had three or more ED visits to UH Rainbow in the prior year. After the ED visits, case management nurses contact the families of these children four times over 12 weeks to encourage them to reconnect with their primary care providers and to assess any other care needs. In quarter six of the award (October – December 2013), the program began notifying primary care providers of patients with an avoidable ED visit and asking the providers to educate the families on the appropriate use of ED services.

5. Patient Outreach

The UH Rainbow PET program also conducts community outreach programs in an attempt to build relationships with community-based organizations to support the goals of the program. Program staff have planned a marketing campaign to promote the use of primary care offices, the telephone triage service, and the telehealth hubs instead of using the ED. UH Rainbow initially planned to hire a staff person to work on program outreach, but decided that working with community organizations might produce more direct and effective messages. Program staff began conversations with a community foundation about engaging and educating parents in the neighborhood where the first telehealth hub is located. These efforts will be targeted geographically and directed to all patients, regardless of the existence or source of health care coverage. The UH Rainbow program includes case management in its patient outreach programs. However, as of December 2013, case managers were involved in only the ED avoidance programs.

6. Hospital Readmission Reduction

In the sixth quarter of its HCIA, UH Rainbow began planning to use roll-over funds from the first year of the award to develop a program to prevent unnecessary hospital readmissions. Program administrators identified the data and analytic needs to implement this clinical component of the program and held a stakeholder meeting to identify potential interventions to reduce readmissions. UH Rainbow will implement these hospital readmission avoidance interventions if its request to roll over unused funds is approved.

IV. Target Populations and Assessment

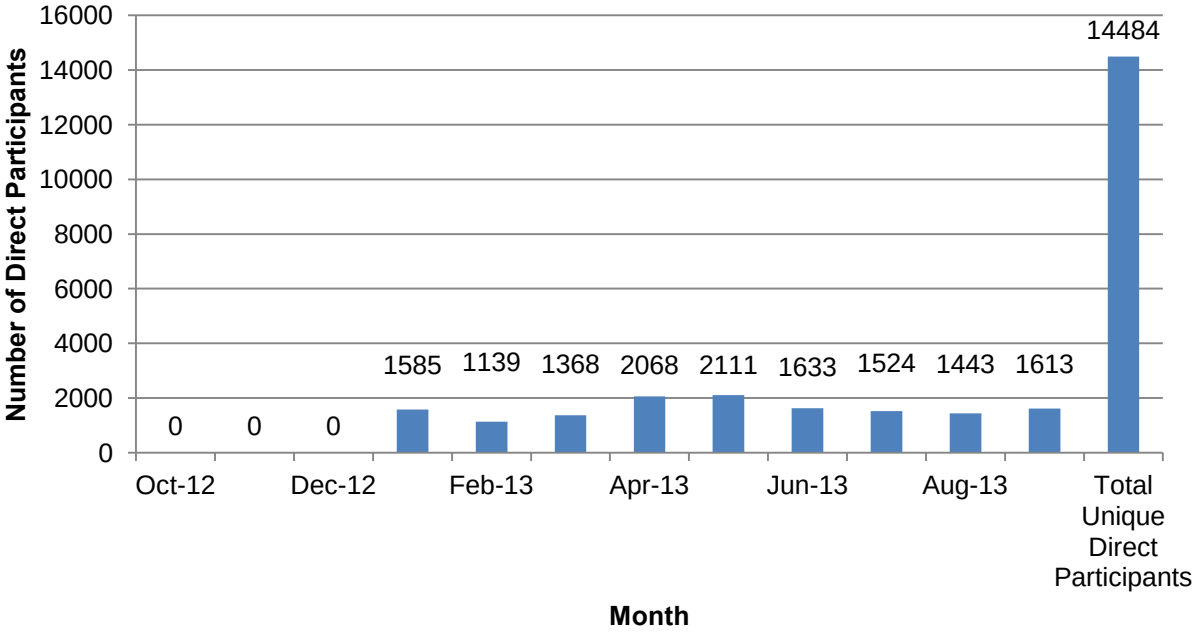
A. Target Populations

The primary target population of the UH Rainbow program is children ages birth to 18 in Medicaid managed care who receive care in the 28 participating primary care practices. However, all patients receiving care in participating practices have the potential to benefit from the PET interventions, regardless of their insurance coverage. In addition, the ED avoidance and patient outreach components of the program are available to any families who choose to use them and are not restricted to children who receive care in participating practices.

B. Assessment

UH Rainbow identifies the target population and delivery of services through several approaches. First, the program team receives Medicaid managed care claims from the state and uses the claims data to attribute children to practices participating in the PET. Children are attributed to practices retrospectively based on where they had the majority of their visits during the time period of the project. Based on this approach, about 65,000 children enrolled in Medicaid managed care receive care in participating practices. Second, the program receives billing data from each of the participating practices, which enables it to estimate the number of children with other insurance types receiving care in the practice. Based on these data, UH Rainbow estimates that some 130,000 children with private insurance receive care in participating practices. Third, the program maintains a database of contacts with components of the program that are not primary care practice-based, such as the telephone triage, behavioral health referral, and complex care services. Based on the database, these components have served 14,484 children since the beginning of the program (Figure 3).

Figure 3. Direct Participants in Program Components Operating Outside Participating Primary Care Practices, University Hospitals of Cleveland Rainbow Babies and Children's Hospital, October 2012 – September 2013



Source: Lewin fifth quarterly reporting period (July through September 2013). Quarterly Awardee Performance Report: University Hospitals of Cleveland. Prepared for the Centers for Medicare & Medicaid Services and submitted on December 6, 2013.

Notes: For this awardee, each bar represents the number of new unique participants in that month. The total of all the bars represents the total number of unique direct participants for the components of the program operating outside the participating primary care practices.

V. Workforce and Training

A. Intervention Staff

The UH Rainbow PET program required staffing new or retrained personnel for each component of its intervention, including practice facilitators, nurses for telephone triage and care coordination, and social workers for care coordination and direct provision of behavioral health services. As of the fifth quarterly reporting period, the UH Rainbow PET program was fully staffed with 43 employees representing 32 full-time equivalent staff (Table 4). Staffing has largely progressed according to plan. However, UH Rainbow had to modify its original staffing plan. In the complex chronic conditions program, UH Rainbow determined that medical assistant qualifications did not meet the requirements for the family care advocate position. The awardee reported that it had underestimated the need for the level of nursing assessment and social work counseling in that role. UH Rainbow eliminated four medical assistant positions and replaced them with an additional half-time social worker, a half-time dietician, and a full-time clinical nurse.

Table 4. HCIA-Funded Staff, University Hospitals of Cleveland Rainbow Babies and Children's Hospital

Staff Type	Number of Employees
Clinical Support Staff	4
Registered Nurses (RNs)	8
Social Workers	6
Other Health Workers (practice facilitators, intake specialists)	10
Management or Administrative Staff	13
Information Technology Technicians/Specialists	2
Total	43

Source: Lewin fifth quarterly reporting period (July through September 2013). Quarterly Awardee Performance Report: University Hospitals of Cleveland. Prepared for the Centers for Medicare & Medicaid Services and submitted on December 6, 2013.

B. Staff Training

The PET training programs are designed to orient new staff to the program, train clinical staff in new skills or augment existing skills, train practice facilitators, and educate participating practice physicians on the goals and components of the program (Table 5). As of December 2013, UH Rainbow had implemented its training programs on schedule. Training courses include those related to new hires, family care advocates, children with complex chronic conditions, telehealth, and practice-tailored facilitation. In addition, UH Rainbow trained newly hired medical attendants for the telehealth hubs and a program intern who holds a master's degree in health care administration on the principles of health care reform and ACOs. In the sixth quarter, UH Rainbow held two continuing medical education events on asthma management for physicians to support quality goals around asthma care. UH Rainbow also trained case managers on following up with frequent utilizers of the ED as part of its ED avoidance component.

Table 5. Training Courses, Number of Trainees, and Training Modality

	Number of Trainees					
Training Courses	**Q1**	**Q2**	**Q3**	**Q4**	**Q5**	**Training Modality**
New Hire Training	1	6	28	8	4	Online or on computer, classroom, discussion, text
Program-Specific Training for Staff		1				Classroom, discussion
Practice-Tailored Facilitation Program Training			7	1		Online or on computer, discussion
Plan-Do-Study-Act Cycle Design for Quality Improvement			1		4	Online or on computer, discussion
Children with Complex Chronic Conditions Program Training			3	6		Classroom, discussion
Family Care Advocate Training				6		Online or on computer, classroom, discussion
Physician Telemedicine Training			7	2		Other modality—hands on

Table 5 *(Continued)*

Training Courses	Number of Trainees Q1	Q2	Q3	Q4	Q5	Training Modality
Medical Assistant Telemedicine Training			2		2	Other modality—hands on
Program Year 1 Recap for Primary Care Providers				64		Classroom
Primary Care Provider Continuing Medical Education				61		Classroom

Source: Quarterly awardee performance reports submitted to Lewin.

Note: Quarters are program quarters. Q1 is July - September 2012. Q2 is October - December 2012. Q3 is January - March 2013. Q4 is April - June 2013. Q5 is July - September 2013.

VI. Future Plans

UH Rainbow hopes to accomplish several goals through its PET program over the next 18 months:

- Continuing to engage its network practices in quality improvement through ongoing practice facilitation and incentive programs
- Increasing ED avoidance activities by opening a second telehealth hub and increasing identification and outreach to families of children with multiple ED visits
- Beginning efforts to reduce hospital readmissions among patients with complex care needs
- Performing internal evaluations, including cost avoidance analysis from Medicaid claims data and a physician satisfaction survey
- Ensuring sustainability of the program through financial agreements with Medicaid MCOs

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WYOMING INSTITUTE OF POPULATION HEALTH: A DIVISION OF CHEYENNE REGIONAL MEDICAL CENTER

SUMMARY OF PROGRAM DESIGN AND IMPLEMENTATION EXPERIENCE

MARCH 2014

Boyd Gilman and KeriAnn Wells

In this brief, we describe the primary care redesign (PCR) program implemented in Wyoming by the Wyoming Institute of Population Health (WIPH), a division of the Cheyenne Regional Medical Center under Health Care Innovation Award (HCIA) funding from the Center for Medicare & Medicaid Innovation (CMMI). The purpose of this brief is to describe the design of the program as it is currently being implemented and to highlight implementation experience one-and-a-half years after receipt of award. We based the information presented in this brief on a review of program documents, including application materials and quarterly reports, as well as telephone discussions and follow-up communication with program administrators. This brief describes the status of the program as of December 2013. We will update the brief in future quarterly reports as additional information becomes available.

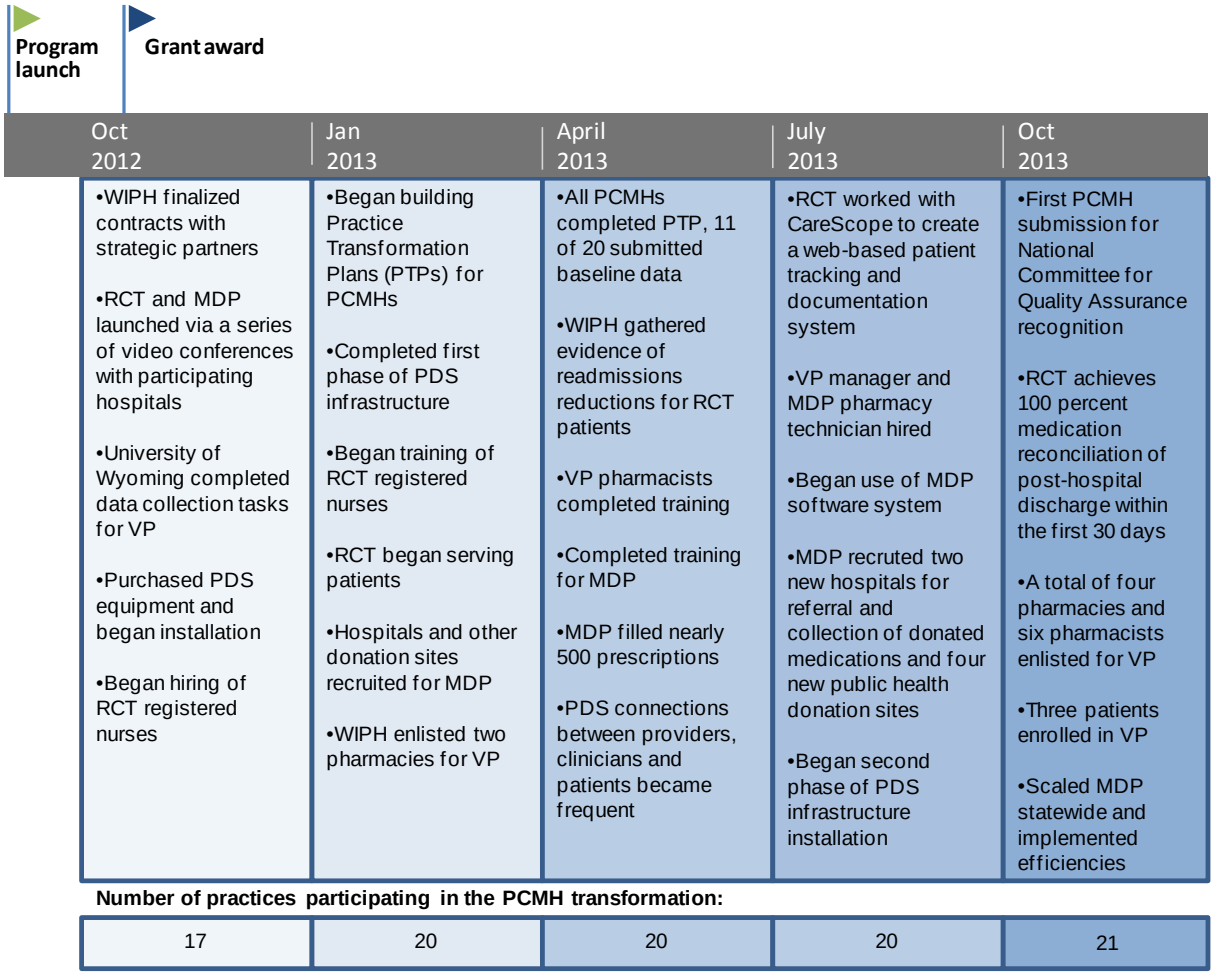
I. Background

WIPH's statewide initiative incorporates team-based primary care, hospital transition assistance, telehealth, and medication access/management to transform primary care across Wyoming. Wyoming is a sparsely populated frontier state with residents who often struggle to access health care due to distant care locations, inclement weather, minimal public transportation, and a shortage of primary care physicians. In response to these challenges and in an effort to reduce demand for primary care services in hospital emergency department (ED) settings, in 2010 WIPH launched a pilot medical homes program in a federally qualified health center (FQHC) in Cheyenne. One year later, WIPH expanded the pilot program to six clinics in Laramie County and enlisted the services of TransforMED to help transform the primary care delivery system in these practices.

Building on these programs, in January 2012, WIPH applied for HCIA funding to create a group of medical neighborhoods across Wyoming. In October of 2012, WIPH received $14,246,153 to implement the Wyoming Medical Neighborhoods program. The program leverages partnerships, creating a five-pronged approach to care transformation. The five components, described in more detail later in this case study, are (1) patient-centered medical homes (PCMHs), (2) the Wyoming Rural Care Transitions (RCT) hospital program, (3) the Physician Desktop Solutions (PDS) program, (4) the Virtual Pharmacists (VP) program, and (5) the Medication Donation Program (MDP).

With these interventions, WIPH's goals include better health demonstrated through improvement on clinical measures, better care demonstrated by improvement on measures of patients' satisfaction and engagement and by a reduction in preventable adverse drug events, and lower costs achieved through reduced hospital admissions and readmissions. WIPH launched its program on September 19, 2012. Table 1 displays several important milestones of the Wyoming Medical Neighborhoods program.

Table 1. Time Line of the Wyoming Medical Neighborhoods Initiative Development and Implementation



WIPH = Wyoming Institute of Population Health; RCT = rural care transitions program; MDP = medication donation program; VP = Virtual Pharmacists; PDS = Physician Desktop Solutions; PCMH = patient-centered medical home

II. Organizational Structure

Located in Cheyenne, Cheyenne Regional Medical Center operates a not-for-profit general acute care regional health care system that provides inpatient, outpatient, and emergency services to patients in southeastern Wyoming and western Nebraska. At the center of this system is a 222-bed tertiary medical center housing a trauma center, the Wyoming Heart and Vascular Institute, and the Wyoming Cancer Center.[1] WIPH, the division of Cheyenne Regional Medical Center leading the HCIA-funded initiative, promotes population health throughout Wyoming. Enlisting providers from across Wyoming, the purpose of the HCIA program is to transform 21 primary

[1] See http://wyomed.org/partners/cheyenne-regional-medical-center.

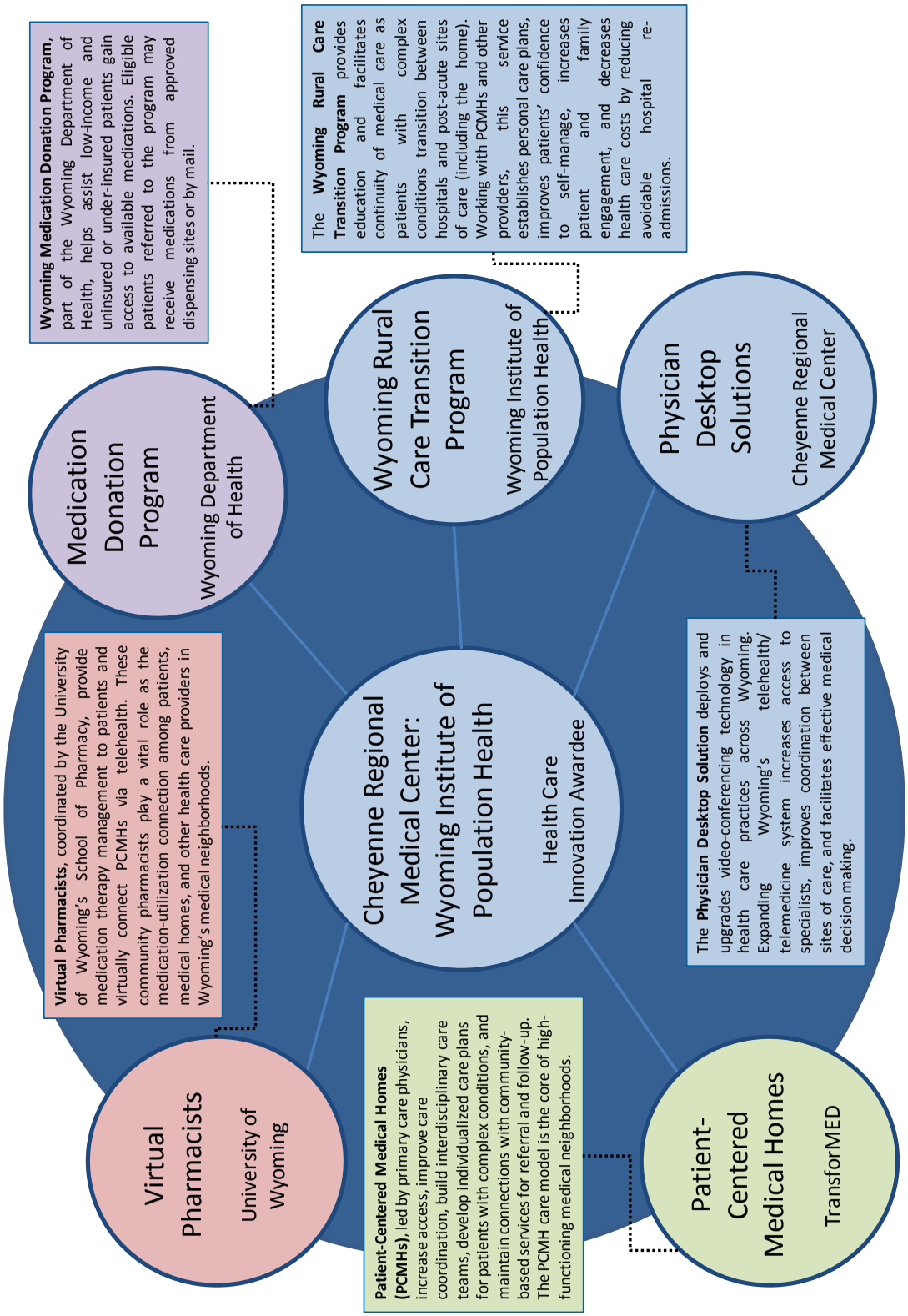
care practices into PCMHs and to embed the new PCMHs into medical neighborhoods.[2] The PCMH will sit at the center of the medical neighborhood, which will foster communication and coordination among primary care teams, specialists, hospitals, community-based organizations, and state and local agencies to improve patients' outcomes, improve care processes, and reduce costs.

The medical neighborhood will supplement the PCMH with four independently administered, collaborative interventions: (1) the Wyoming RCT program, (2) the PDS program, (3) the VP program, and (4) the MDP. WIPH has partnered with TransforMED, the University of Wyoming's School of Pharmacy, and the Wyoming Department of Health to implement and administer the various interventions. Figure 1 describes the five interventions implemented under the HCIA-funded initiative and displays their respective partner leads. Not displayed are two additional partners: Civic Health, which is developing CareScope, a web-based application to support patient-tracking and care coordination for RCT nurses, and LCF Research, who will evaluate the RCT program.

All of the intervention sites are located in Wyoming, with the exception of one primary care clinic participating in the PCMH program and one hospital participating in the RCT program, both of which are located just across the border in Nebraska. Figure 2 shows the broad geographic distribution of HCIA-funded PCMH and RCT intervention sites.

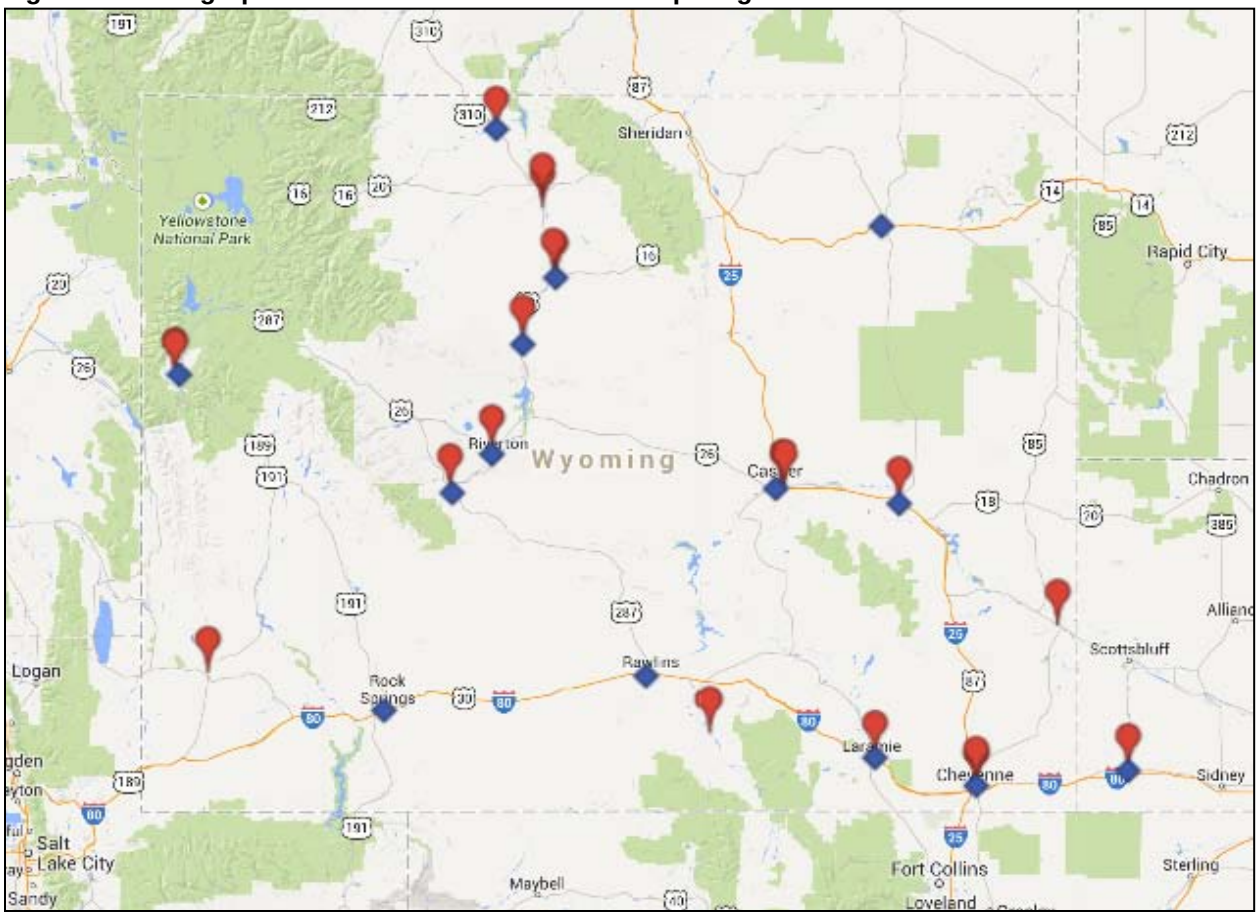
[2] See http://pcmh.ahrq.gov/sites/default/files/attachments/Coordinating%20Care%20in%20the%20Medical%20Neighborhood.pdf for CRMC's source for defining PCMH and medical neighborhood, which is based on the Agency for Healthcare Research and Quality definition.

Figure 1. WIPH Medical Neighborhood Components



Source: The Wyoming Institute of Population Health

Figure 2. Geographic Distribution of Sites Participating in the PCMH and RCT Interventions



Patient-centered medical homes

Rural care transitions hospitals

III. Program Features and Implementation Progress

WIPH and its partners are introducting new care processes into primary care and hospital settings, supplementing the redesigned settings with pharmacy, telehealth and medication programs. During interviews, the awardee characterized its approach as practice-level rather than patient-level, stating that the overall initiative focuses on infrastructure, capacity-building, and workforce development, rather than just on patient-specific interventions.

Each of the five components incorporates workflow changes, workforce development, and health information technology (IT) to systematize improved care processes. The five components of WIPHs initiative are managed as separate interventions. Table 2 lists the lead organizations, the target populations, goals, conditions, and care settings for each component. In the rest of this section, we describe each of the five components of WIPH's HCIA-funded initiative. In the following section, we discuss the target population of each component.

Table 2. WIPH Intervention Components

Component	Lead Organization	Goals	Target Population(s)	Target Conditions	Care Setting
1. Patient-Centered Medical Homes (PCMH)	TransforMED	Achieve NCQA recognition for all 21 participating practices and eventually expand to all Wyoming practices	All patients served at PCMHs	Care management targets diabetes, hypertension, pediatric asthma, and lifestyle choices such as tobacco use	Various primary care settings, including hospital-based, clinics and small independent practices
2. Wyoming Rural Care Transitions (RCT)	WIPH	Reduce hospital admissions and readmissions, especially for patients with targeted conditions	Patients ages 65 and older	Congestive heart failure, chronic obstructive pulmonary disease, coronary artery disease, diabetes, stroke, medical/surgical back disorder, hip fracture, peripheral vascular disease, cardiac arrhythmia, and pulmonary embolism	Hospitals, including home- and telephone- based discharge follow-up care
3. Physician Desktop Solutions (PDS)	Cheyenne Regional Medical Center	Facilitate care coordination using webcams and teleconferencing to connect physicians across the state and increase patients' access to remote telehealth care	Physician, hospital, and pharmacist workforce	None specified, although most patients' consultations are with mental/behavioral health providers	Physician's offices, hospitals, and pharmacies
4. Virtual Pharmacists (VP)	University of Wyoming	Remotely connect pharmacists into medical neighborhoods, creating a local-access point of care for rural patients and transforming pharmacies from product-based to service-based enterprises	Medicaid patients ages 18 to 65	Depression/bipolar disorder, pain, asthma, cardiovascular disease, gastroesophageal reflux disorders/ulcers, and diabetes	Pharmacies

Table 2 *(Continued)*

Component	Lead Organization	Goals	Target Population(s)	Target Conditions	Care Setting
5. Medication Donation Program (MDP)	Wyoming Department of Health	Expand access to medications and improve medication compliance for low-income and uninsured or underinsured Wyoming residents	Patients with incomes up to 200 percent of the FPL, patients with no prescription coverage or who are on the Wyoming Prescription Drug Assistance Program and require three or more prescriptions per month, and Medicare beneficiaries struggling with the Part D donut hole	na	Donation sites, referral sites, and dispensing sites

FPL = federal poverty level; GERD = gastroesophageal reflux disease; NCQA = National Committee for Quality Assurance.

na = not applicable.

A. Patient-Centered Medical Home

The center of WIPH's initiative is the transformation of primary care clinics into medical homes to serve as patients' primary access point to the medical neighborhood. The transforming care settings are diverse, including independent practices, hospital-based sites, three rural health clinics, and one FQHC. WIPH's PCMHs play a key role in facilitating care coordination, developing interprofessional care teams, developing individualized care plans for patients with complex conditions, and maintaining connections with community-based services for referral and follow-up. By the end of the HCIA project, WIPH aims to have all 21 practices obtain National Committee for Quality Assurance (NCQA) medical home certification. WIPH's longer-term goal is to scale PCMH training statewide, modifying primary care education to ensure that health care professionals have the skills and knowledge for interprofessional collaboration and patient-centered care.

Recruitment efforts for PCMH transformation targeted Wyoming primary care practices. The Wyoming Integrated Care Network (WyICN), a system of hospitals, acted as an early advocate, aiding in hospital-based practice recruitment. Outreach and word of mouth informed other practices across Wyoming of the HCIA and practices opted to join. The original operational plan goal was to convert 10 practices, but greater-than-expected enthusiasm enabled WIPH to modify its budget to add 11 more primary care practices to the transformation process. WIPH anticipates that 21 is the final number of practices transforming to PCMHs as part of the HCIA, representing about 50 percent of all primary care physicians in Wyoming.

WIPH contracted with TransforMED to lead the PCMH transformation, providing training and development to the 21 participating primary care sites. TransforMED uses practice transformation plans (PTPs), discussed in more detail later, to guide PCMHs toward NCQA recognition. By the end of the sixth quarter, 6 of 21 HCIA-funded PCMHs had begun their applications for NCQA recognition and 1 of those completed its application.

WIPH's fifth program quarter narrative lists some observed challenges to transformation, which include determining appropriate patient panel sizes, accessing data for quality monitoring and reporting, and enlisting provider and staff engagement. Many physicians seek compensation for the new tasks in their already-hectic schedules. In response, WIPH, with the help of WyICN and Wyoming Medicaid, is finalizing payment arrangements with various payers to incentivize enhanced care delivery.[3] WIPH leadership observes the importance of physicians' involvement at every care site, particularly the presence of a physician champion. They also note that a robust electronic health record (EHR) with patient-tracking and reporting functionalities is critical to successful transformation.

B. Rural Care Transitions

The goal of the RCT program is to train registered nurses to manage home transitions for patients discharged from an acute care setting. The care transition nurses work to improve health

[3] The awardee is using their own funds, not HCIA funds, to negotiate these arrangements.

outcomes by empowering patients to seek appropriate follow-up care (often in a PCMH), and by visiting patients at their homes to provide disease management education and medication reconciliation. The RCT intervention provides patients with 90 days of access to post-discharge services, and nurses are required to visit patients at home within 48 hours of discharge. These efforts aim to reduce hospital admissions and readmissions among the target population, supporting the aims of better health, better care, and lower costs.

In total, 14 of 27 hospitals are participating in the RCT strategy. WIPH targeted 16 hospitals based on their discharge volumes and willingness to comply with the program design; 14 opted to join. Most of these hospitals were recruited from the WyICN. Participating hospitals are dispersed across Wyoming, including 14 cities in 13 counties.[4] One RCT hospital is in Nebraska.

The RCT program has made considerable progress training nurses and staffing the 14 hospitals, with 10 hospitals fully staffed as of fifth program quarter reporting. Nurses have conducted medication reconciliation for 100 percent of RCT patients within 30 days of hospital discharge. Nurses note that post-discharge medication review is particularly important for patients, especially those with several medications and little social support. Medication reconciliation is a priority for nurses, because it reduces rehospitalizations due to medication errors.

The awardee reports challenges tracking patients, as hospitals transition from using a basic spreadsheet to using CareScope. WIPH launched CareScope in Cheyenne's hospital in the sixth quarter, and is currently working to roll out the software in other participating hospitals to alleviate patient-tracking difficulties.

C. Physician Desktop Solutions

The PDS component provides infrastructure for provider connectivity and increases access to telehealth. WIPH is installing PDS at clinics, hospitals, and PCMHs across Wyoming, expanding video-conferencing abilities from hospital settings to physicians' offices. The PDS strategy is to develop a virtual highway for doctors to talk to one another, to hospitals, and to patients. The goals are to facilitate care coordination and increase access to care. The three objectives of PDS implementation are to (1) create a secure environment for physician video-conferencing and desktop webcams, (2) improve hospital-based units to facilitate education and care administration using high-definition software, and (3) implement the technology on physicians' desktop and mobile devices.

WIPH recruited most hospitals' participants into PDS through the Wyoming Hospital Association. Hospital recruitment was relatively simple because of hospitals' existing relationships with WIPH, although there were some administrative challenges securing contracts with hospitals. To recruit doctors, WIPH networked with practitioners who already had the technology, attended medical association meetings and a PCMH collaborative, and connected

[4] With the exception of an RCT hospital in Campbell County and a PCMH in Goshen County, PCMH and RCT strategies operate in the same 12 Wyoming counties.

with hospital-based physicians. Via this outreach and word of mouth, hospitals and physicians opted into the program.

WIPH succeeded in creating a secure environment in fall 2013, enabling physicians to communicate via web-based applications such as Skype. High-definition hospital video-conferencing technology is installed in 16 hospitals, some of which predate HCIA funding, with 5 additional practice sites in the implementation phase. Installation of technology on physicians' devices faced some early challenges, but experienced a breakthrough in July 2013 when WIPH moved from a physician-level to a practice-level implementation approach.

As of the end of the fifth quarter, WIPH had deployed 47 desktop web cams and 10 hospital endpoints as part of the HCIA-funded PDS strategy. Adding that to sites that previously used telehealth, 11 of 14 hospitals participating in RCT and 15 of 21 PCMHs are using PDS. WIPH aims to include all PCMHs and RCT hospitals in the PDS strategy. Additionally, the two VP sites (discussed in the next section) install PDS as part of their implementation process. Because WIPH's emphasis is for the virtual highway to primarily connect physicians to one another (rather than to patients), WIPH has no estimates for the number of patient beneficiaries. However, WIPH's fourth quarter report indicates that physicians, especially behavioral/mental health providers, are using PDS for patient consultations. As of December 2013, HCIA-funded practices had completed 1,541 hours of video-conferencing in the fifth and sixth quarters combined.

D. Virtual Pharmacists

The VP program incorporates pharmacists into the medical neighborhood. The University of Wyoming (UW) School of Pharmacy is leading VP, piloting the approach in UW Family Residency Program practices. VP's goal is to transform local pharmacies into additional access points for patients of potentially distant PCMHs. The primary relationship in VP is between pharmacists and PCMHs; pharmacists do not connect remotely with patients.

The VP program began seeing patients late in 2013, experiencing delays due to an extended vacancy in the team manager position[5] and administrative hurdles due to UW's internal hiring and contracting processes. WIPH indicated that two additional pharmacies are currently enrolled in VP, but are still in an implementation phase and have yet to begin serving patients. All pharmacies have designated space, equipment, and outreach materials for VP. WIPH leadership seeks two additional PCMHs to connect to VP, recognizing that PCMHs with existing connections to pharmacies are better candidates for VP.

PCMHs are very cautious about connecting EHRs to patients' pharmacies, which has presented some challenges. The need to configure workflows at both PCMHs and pharmacies has also burdened the implementation experience.

[5] The first team manager was hired in January 2013, but then resigned due to having a stroke in March and was not replaced until October 2013.

E. Medication Donation Program

According to WIPH, medication compliance is one of the most important modifiable factors in managing chronic or complex diseases to improve health. To address this, WIPH partnered with the Wyoming Department of Health (WDH), which leads the Wyoming MDP to increase access to medication and promote medication compliance for low-income and uninsured or underinsured Wyoming residents. MDP is a non-narcotic drug donation, redispensing, and disposal program providing a secure method for public and health care organizations to donate unused medications for Wyoming residents who cannot afford their medications.[6]

WDH is soliciting drug donations via outreach to nursing homes, assisted living facilities, detention centers, and other sites that could be sources of unused medications. The team created a marketing kit that includes patient brochures; posters for pharmacies; and a new website with comprehensive information about locations, staff, and available medications. Donation collection bins have been placed at each partner facility. Eighteen donation sites and five referral sites were operational as of December 2013. The MDP team maintains a list of available medications, which is updated multiple times per week and has been an important tool for accurately communicating available medications to prescribers.

The technical infrastructure for MDP was deployed in the fifth program quarter after meeting Health Insurance Portability and Accountability Act of 1996 compliance guidelines, and includes all existing patients and reporting procedures. With pharmacy software and a technician in place, the team is working to ramp up its referral/dispensing site recruitment, which originally included adding two or three hospitals per quarter.

IV. Target Population and Assessment

Each program component has unique patient enrollment approaches and targets different patients and conditions. Although not all interventions are available to all patients, substantial overlap enables some patients to benefit from more than one intervention. Table 3 lists all HCIA-funded PCMHs and shows the other interventions to which patients are likely to have access. Table 4 lists all HCIA-funded RCT hospitals and similarly shows other interventions from which patients might benefit. Following the tables is a brief description of each components target patient population and enrollment process.

[6] See http://www.health.wyo.gov/healthcarefin/pharmacy/MedicationDonation.html for a description of MDP.

Table 3. WIPH HCIA PCMH Sites and Available Co-Interventions

				Intervention[a]					
PCMH	**City**	**County**	**Rural**	**RCT**	**PDS**	**VP**	**MDP**	**FQHC**	**RHC**
Adult and Geriatric Medicine	Laramie	Albany	Y	Y	Y				
Banner Health	Torrington	Goshen	Y				Y		
Banner Health	Worland	Washakie	Y	Y					
Big Horn Clinic Basin	Basin	Big Horn	Y		Y				
Big Horn Family Medicine	Worland	Washakie	Y	Y					
Carol Fisher MD	Cheyenne	Laramie		Y	Y		Y		
Cheyenne Plaza Primary Care	Cheyenne	Laramie		Y	Y		Y		
Community Health Center of Central WY	Casper	Natrona		Y			Y	Y	
Jackson Whole Family Health	Jackson	Teton	Y	Y	Y				
Kimball Health Services	Kimball, NE	Kimball, NE	Y	Y	Y				Y
Lander Medical Clinic	Lander	Fremont	Y	Y	Y				
Memorial Hospital of Converse County	Douglas	Converse	Y	Y	Y				
Midway Clinic	Basin	Big Horn	Y		Y				
North Big Horn Hospital Clinic	Lovell	Big Horn	Y	Y	Y				Y
Platte Valley Medical Clinic	Saratoga	Carbon	Y	Y	Y				Y
Red Rock Family Practice	Thermopolis	Hot Springs	Y	Y	Y				
Rendezvous Medical	Riverton	Fremont	Y	Y					
St. John's Family Practice	Jackson	Teton	Y	Y	Y				
South Lincoln Medical	Kemmerer	Lincoln	Y		Y				
UW Family Medicine Residency Casper	Casper	Natrona		Y		Y	Y		
Western Medical Associates	Casper	Natrona		Y					
Total – 21	**16**	**14**	**16**	**17**	**14**	**1**	**5**	**1**	**3**

Sources: Lewin fifth quarter awardee narrative; RCT training roster; interview with awardee; PTPs tracking sheet.

[a] Yes indicates that PCMH patients are likely to benefit from the specified intervention (for example, RCT = Wyoming Rural Care Transitions Program is in the hospital that serves this community; PDS = Physician Desktop Solutions available at PCMH; VP = Virtual Pharmacy connected to PCMH; MDP = Medication Donation Program either refers patients or serves as a medication donation site).

RHC = rural health center.

Table 4. WIPH HCIA Wyoming Rural Care Transitions Sites and Available Co-Interventions

				Intervention[a]						
Rural Care Transitions Site	**City**	**County**	**Rural**	**PCMH**	**PDS**	**VP**	**MDP**	**CAH**	**FQHC**	**RHC**
Campbell County Memorial Hospital	Gillette	Campbell	Y		Y		Y			
Cheyenne Regional Medical Center	Cheyenne	Laramie		Y	Y		Y			
Hot Springs County Memorial Hospital	Thermopolis	Hot Springs	Y	Y	Y			Y		
Ivinson Memorial Hospital	Laramie	Albany	Y	Y	Y					
Kimball Health Services	Kimball	Kimball NE	Y	Y	Y			Y		Y
Lander Regional Hospital	Lander	Fremont	Y	Y	Y					
Memorial Hospital of Carbon County	Rawlins	Carbon	Y	Y	Y			Y		
Memorial Hospital of Converse County	Douglas	Converse	Y	Y	Y			Y		
North Big Horn Hospital	Lovell	Big Horn	Y	Y	Y		Y	Y		
Riverton Memorial Hospital	Riverton	Fremont	Y	Y	Y					
St. John's Medical Center	Jackson	Teton	Y	Y	Y		Y			
Sweetwater County Memorial Hospital	Rock Springs	Sweetwater	Y							
Washakie Medical Center	Worland	Washakie	Y	Y			Y	Y		
Wyoming Medical Center	Casper	Natrona		Y			Y			
Total – 14	**14**	**14**	**-**	**12**	**11**	**0**	**6**	**6**		**1**

Sources: Lewin fifth quarter awardee narrative; RCT training roster; interview with awardee; PTP tracking sheet.

Note: This table will be updated periodically to reflect Cheyenne Regional Medical Center's HCIA sites of care.

[a] Yes indicates that Care Transitions patients are likely to benefit from the specified intervention. PCMH = Patient-Centered Medical Home part of hospital community; PDS = Physician Desktop Solutions deployed at hospital; VP = Virtual Pharmacy connected to hospital; MDP = Medication Donation Program, hospital either refers patients or serves as a medication donation site.

CAH = critical access hospital; RHC = rural health center.

A. Patient-Centered Medical Home

PCMH sites are distributed across Wyoming, serving residents in 15 cities and 13 of 23 counties. As a practice-level intervention, PCMHs are meant to benefit all patients at participating sites, although care management procedures especially target patients with diabetes, hypertension, and pediatric asthma. Provider teams also target patients' lifestyle choices, offering programs such as tobacco cessation. The awardee estimates the patient panel size at all PCMHs totals more than 130,000 patients.

B. Rural Care Transitions

The RCT program serves patients ages 65 and older with specific chronic diseases (cardiac arrhythmia, chronic obstructive pulmonary disease, congestive heart failure, coronary artery disease, diabetes, hip fracture, medical/surgical back disorder, peripheral vascular disease, pulmonary embolism, and stroke). Care transitions nurses review admissions daily to identify eligible patients and then offer the program to them. Patients who opt in sign a consent form. WIPH estimates that the initiative will serve more than 6,000 patients in three years. By the end of 2013, RCT nurses had served 1,319 patients.

C. Physician Desktop Solutions

Although PDS was originally envisioned as primarily connecting physicians, WIPH reports that PDS also facilitates patient encounters, particularly in mental/behavioral health. However, PDS does not explicitly target any specific patient populations. No specific count of patients served is currently available.

D. Virtual Pharmacists

The VP program targets patients ages 18 to 65 years with asthma, cardiovascular disease, depression, diabetes, gastroesophageal reflux disease, and pain. Patients are first identified via Medicaid claims, using exclusion criteria to identify patients with the previously mentioned conditions who are not dually eligible for Medicare and Medicaid and who received care at one of the two targeted PCMHs (only one of which is HCIA-funded). Those patients' pharmacies are then identified and targeted for recruitment. Participating pharmacies use their own data to determine patients who actually take medications to treat one of the targeted conditions, and enroll those patients either when they walk in to the pharmacy or via proactive outreach. PCMHs can also refer patients to a VP. The pharmacists have consent forms and enroll patients directly. At the end of 2013, VP had enrolled three patients.

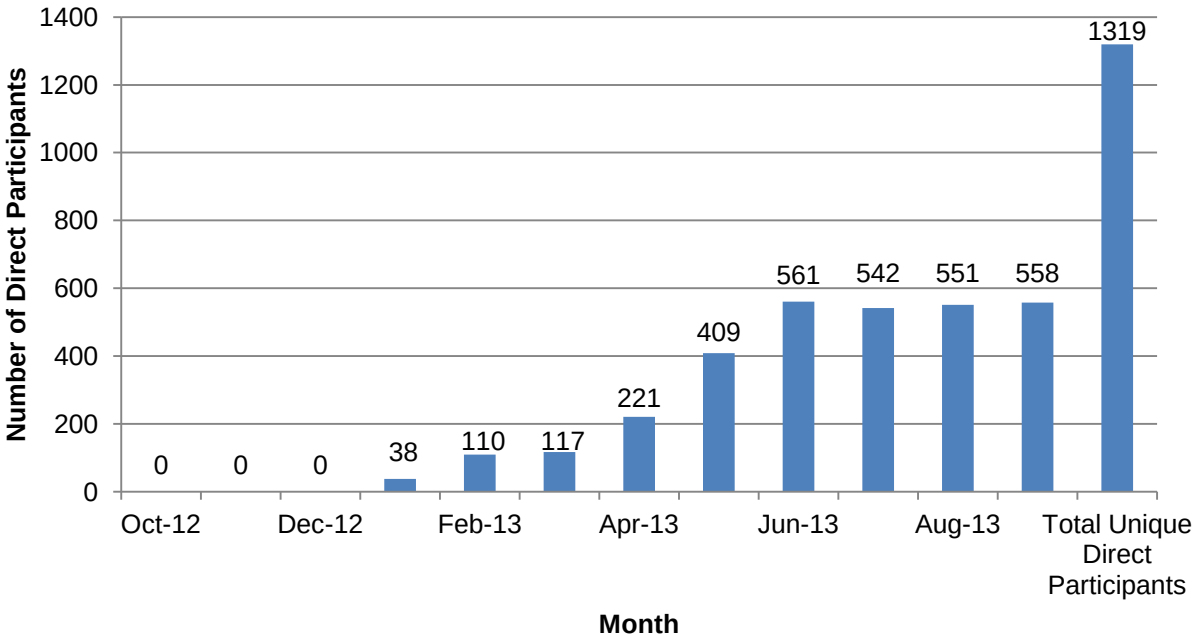
E. Medication Donation Program

Eligible patients can access donated non-narcotic medications at dispensing sites or via mail. Eligible patients include those with incomes up to 200 percent of the federal poverty level and who have no prescription coverage or who are patients on the Wyoming Prescription Drug Assistance Program who require three or more prescriptions per month. The MDP also targets Medicare beneficiaries struggling with the Part D donut hole. Patient recruitment and outreach include conference calls and presentations to community health groups. PCMH providers and RCT nurses refer eligible patients to MDP.

MDP began serving patients in February 2013 (see Table 1). As of the sixth quarter, MDP had served 332 patients via direct mail plus an unknown number of patients served at dispensing sites. WIPH's sixth quarterly narrative states that MDP filled and mailed 1,255 prescriptions in 2013 with a financial value exceeding $165,000 and that 13,409 pounds of donations were collected with a value of $2,409,988. This represents a marked improvement from 2012, during which 727 prescriptions worth $90,950 were filled.

Collectively, the program has helped more than 1,300 unique direct participants since January of 2013. Figure 3 displays the number of direct participants served in Wyoming medical neighborhoods.

Figure 3: Direct Participants, WIPH October 2012 Through September 2013



Source: Lewin, fifth quarterly reporting period.

V. Workforce and Training

The project director and fiscal officer were hired early in the implementation process. The fifth quarterly report states that WIPH employs 28.75 HCIA-funded full-time equivalent (FTE) staff, which is 8.4 FTEs below projection. These FTEs include 35 people distributed across 34 clinical sites into the following roles:

- 25 care transition specialists
- 5 management or administrative staff
- 2 aides/assistants/direct care workers
- 2 IT technicians/specialists

- 1 pharmacy technician

Workforce development is the crux of transformation at the 21 PCMH sites, redesigning the way care is provided into a coordinated, team-based approach. TransforMED implements training and workforce development via quarterly site visits, a quarterly learning collaborative webinar with all transforming PCMHs, and monthly site-specific conference calls. TransforMED uses PTPs to guide transformation, tracking progress on standardized tasks and subtasks, some of which are NCQA-approved PCMH certification requirements. Tasks are grouped into 11 modules:

1. Leadership
2. Performance metrics
3. Practice-based team care
4. Practice-based services
5. Access to care information
6. Care coordination
7. Care management
8. Health IT
9. Quality and safety
10. Patient-centeredness
11. Practice management

Each module contains two to five tasks, which each contain various specific actions for sites to complete. For example, a task under leadership is entitled "Change Management: Leadership and Communication," which directs sites to complete the following specific actions:

- Establish a PCMH leadership team
- Identify opportunities for early wins
- Develop a change management plan for all physicians, nurse practitioners, physician assistants, and staff that includes a decision-making process, a structured communication plan, an implementation process, and an evaluation process

At the outset, TransforMED surveys practices to establish baselines for each practice, to identify subtasks that were fully or partially operational before a practice enrolled in the HCIA initiative. TransforMED then strategizes sequencing and time allocation of tasks depending on practice characteristics such as size and readiness for change. Through its work with the practices, TransforMED updates the PTP for each practice quarterly, enabling both collective and site-specific tracking and assessment. If TransforMED learns that processes identified in baseline surveys as fully operational are actually not implemented consistently across the practice, the PTP will show subsequent scores lower than the baseline.

The November 2013 PTP update indicates that collectively sites are nearest to completing the practice-based services tasks (93.0 percent complete) and farthest from completing the

reducing waste and variability tasks (12.8 percent compete). Compared with baseline scores, sites have made the most progress on the change management: leadership and communication tasks (baseline: 1.7 percent; current: 79.2 percent), but have regressed on population management tasks (baseline: 34 percent; current 32 percent). In its sixth quarter narrative, covering October to December 2013, WIPH reports six PCMHs as high-performing, nine as middle-performing, and six as low-performing,[7] basing these scores on sites' progress on their PTPs.

In addition to the PTPs, TransforMED trains and develops PCMH staff via monthly conference calls and quarterly collaboratives with all PCMHs. The fifth and sixth quarter measurement and monitoring plans indicate that 440 hours of education have been conducted for PCMH staff via the telecommunication system. Including face-to-face training, a total of 50 clinical personnel have each received 43 hours of training, for a total of 2,150 hours.

Regarding the non-PCMH components of the Wyoming Medical Neighborhoods initiative, the fifth quarterly report indicates that staff completed 496 training hours through September 2013, and additional training has occurred since then. This includes RCT nurse coach training and VP pharmacist training. VP pharmacists and RCT nurses are required to complete 16 hours of training. Pharmacists are trained in medication management therapy and motivational interviewing, transforming pharmacies from a product-based to a service-based model. As of December 2013, the awardee states that 6 pharmacists have been trained for VP, in addition to the team manager and a project lead, and that 51 nurses have been trained for RCT, although 11 of these nurses are no longer active or employed. For the MDP, the awardee noted 12 clinical personnel received three hours of training each and one technician received on-the-job training with a pharmacist.

Table 4 summarizes PCMH, VP, RCT, and MDP training completed through December 2013.

[7] The 21st PCMH joined the initiative after the fifth quarter.

Table 4. WIPH Training Completed: VP, RCT, MDP

Training Course	Modality	Hours	Clinical Personnel	Total Staff Hours
PCMH	Classroom, conference calls	43	50	2,150
Virtual Pharmacist Training	Online/webinar, classroom, discussion, text	16	8	128
RCT Registered Nurse Coach	One-on-one instruction, classroom, discussion, text	16	51	816
Medication Donation: Hospital Site Training	Online/webinar	3	12	36
Medication Donation: Technician	On-the-job training with pharmacist		1	

Source: Lewin quarterly reports, correspondence with WIPH and University of Wyoming.

No specific information was reported regarding PDS training and workforce development. The PDS component focuses on technical infrastructure installation and configuration, rather than on staff training. However, the awardee indicated during interviews that physicians do receive some informal training following software installation.

VI. Future Plans

In the final 18 months of the program, the awardee plans to continue implementation progress at each PCMH, using the PTP as a framework and especially focusing on National Committee for Quality Assurance requirements. The RCT intervention will continue to roll out CareScope software to improve patient intake, tracking and reporting processes.. WIPH will begin a formal evaluation of the RCT componenet with an outside partner, LCF Research. WIPH will also continue installation and configuration of PDS software, with an ultimate goal of including all PCMHs and RCT hospitals. WIPH plans to recruit additional pharmacists and PCMHs for the VP component and to continue to support current virtual pharmacists as they recruit new patients. MDP representatives will continue outreach to recruit more referral, donation, and distribution sites and focu on establishing relationships within each medical neighborhood.

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