

Reimagined Care Case Study: Health Quality Partners & Engaging Patients in Hypertension Management

May 2017

Project Snapshot

Aim: Wanted to engage patients in managing their hypertension.

Process: Used human-centered innovation (HCI) to create a home blood pressure (BP) monitoring program.

Contributors: Health Quality Partners (HQP), La Maestra Family Clinic, Neighborhood Healthcare, 50+ patients.

Solution: Designed suite of 15 tools (patient education and care team protocols) for BP management.

Pilot: Tested 14-day protocol with 39 patients across two health center sites, including recruitment, orientation and training, home BP monitoring, and check-in calls and visits with a care team member.

Outcomes: Nearly all patients checked BP at home at least once a day for seven of the 14 days. Many patients checked BP for all 14 days. Patients and staff gave positive feedback about the pilot.

Next steps: Program materials and lessons are being shared and spread to other health centers. HQP also submitted a presentation for the 2017 Community Health Institute & Expo, National Association of Community Health Centers.

About the Reimagined Care Challenge

The Center for Care Innovations (CCI) implemented a one-year program for five grantees in the health care safety net to practice human-centered innovation (HCI) to develop innovative solutions to reimagine how care should be delivered under value-based payment. HCI is an iterative process that applies design principles and tools to addressing a problem or challenge. Grantees were expected to use an HCI approach to complete a project during the program in which their teams would explore, design, and pilot an innovative solution to a strategic opportunity. Grantees received training and resources throughout the program to help complete their projects. Blue Shield of California Foundation funded the program, with some additional funding from Kaiser Permanente.

Reimagine Care consisted of:

- Grantee funding
- Coaching calls with CCI staff
- 3 Swap Meet webinars
- 2 in-person convenings
- Online resources & tools for HCI
- Tailored coaching support from an innovation & design expert

Health Quality Partners

Health Quality Partners of Southern California (HQP) improves health outcomes by implementing progressive and collaborative programs to support community health centers in caring for the safety net population. HQP is a subsidiary of Health Center Partners (HCP), a health consortium that serves as the primary voice and health care policy advocate for community health centers that serve the health needs of communities throughout Southern California.

HQP has 17 member organizations, including community health centers and other safety net organizations that run 122 health center sites throughout San Diego, Imperial, and Riverside counties. These member organizations served over 827,000 patients in 2015 with 2.4 million patient encounters.

Innovation opportunity

HQP was interested in designing a home blood pressure (BP) monitoring program to engage patients with hypertension in their own care. HQP saw the project as an opportunity to support community health centers in designing a new program for partnering with patients in blood pressure management. Additionally, HQP saw the project as an opportunity to test a solution that could be shared and spread to other sites across their member organizations, as they explore value-based care and working with patients outside the health center setting.

When HQP asked its member organizations to partner with them on a blood pressure (BP) management project, two clinics were interested: (1) La Maestra Family Community Health Center's location in the City Heights neighborhood of San Diego, CA, which serves a diverse patient population, including immigrants and refugees from a wide range of countries who speak many languages and dialects; and (2) Neighborhood Healthcare's site in Temecula, CA, located in Riverside County, where the clinic serves a high proportion of Hispanic patients. Both had some experience working with patients on home BP monitoring before through other health center activities and were interested in this approach of human centered design to work with patients on managing their hypertension.

HQP established a core team to lead the project who has experience managing projects and a long history of partnering with health centers. The team included HQP's Director of Programs and its Quality Manager, who both collaborated extensively with clinic staff to recruit and facilitate patients. Both were overseen by the Executive Vice President of HQP, who secured the funding from CCI.

The Innovation Journey: Designing a Home BP Monitoring Protocol

Learning a new approach

Before this project, HQP had not explicitly implemented HCI or design principles as an overarching approach to their work. The team was originally considering a pilot test of different home BP monitoring devices that included patient feedback upon the completion of the pilot. After learning about the HCI approach and vision through CCI, HQP took a step back because the team realized they needed to better understand the context of their opportunity and work closely with patients and clinical staff to develop the program before pilot testing potential solutions. The shift towards more exploration, rather than jumping straight to solution-building and pilot testing, was a notable pivot in the team's approach.

Building partnerships for innovation

A central tenant of HCI is partnering with the people that a solution is being designed for, such as patients, providers, staff, or community stakeholders. Key elements of HQP's project were engaging patients and care teams throughout the project to gather input and strengthening partnerships with the health centers where the solution would be piloted.

Engaging patients in the process

HQP partnered with patients with hypertension from both health center sites throughout the project. Patients participated in “co-design” sessions, which are facilitated discussions, usually with a group of people. Co-design sessions sometimes involve creative activities, such as drawing or testing out a product or process, to help generate feedback and spark new ideas.

HQP collaborated with health center staff to recruit patients with high blood pressure for initial co-design sessions at each clinic site. The goal of these sessions was to learn about patients’ experiences, health care needs, and interest in home BP monitoring. Recruiting patients for the initial co-design sessions was challenging and took more time than HQP expected—some patients declined or were unavailable to participate and clinic staff had to contact more patients. However, **the team reported that the additional effort was worth it since they gained valuable insights from the patients.** For example, the team learned that some of these patients had already tried BP monitoring, either by

“Patients said they want information about what to do to regulate their BP.”

checking their blood pressure at home or periodically visiting a drug store to get a blood pressure reading. Patients also expressed interest in a home BP monitoring program without HQP asking directly about it.

Later in the project, HQP held additional co-design sessions with patients as the team designed their solution. This was particularly helpful when developing educational tools, to make sure materials were easy to understand and user friendly for patients.

HCI often encourages videotaping or taking photos during the sessions to help document the work and ideas shared by participants. However, many patients in the safety net population that HQP engaged with did not want to be video or audio recorded, so HQP adapted their approach to meet the needs of patients. They did not videotape sessions and solicited written permission to take photos.



HQP facilitating patients during a co-design session

Collaborating with health center sites

The team at HQP also gathered input through co-design session with clinical care team members at both sites about what kinds of materials they would like as part of a home BP monitoring program, what questions they had heard from their patients about hypertension, and current gaps in patient resources for home BP management. As the project progressed, HQP also held co-design sessions with the clinic staff to review and discuss the materials and process for the home BP monitoring protocol.

Engaging the health centers throughout the HCI process helped HQP strengthen buy-in, in addition to designing a strong pilot solution that was informed by the expertise and insights of the clinic staff. As one HQP team member noted, “[Staff] were empowered to develop something that worked for their patients.”

Designing a new home BP monitoring protocol

As HQP was partnering with both clinic staff and patients, the team engaged in an iterative process of designing and revising materials for the new protocol. The team then worked with care teams to pilot test of all the materials in a health center environment to see if this approach to engaging patients in home BP monitoring was a viable solution.

“[We are] prototyping with patients [to determine] what they would want in a BP self-monitoring protocol. We aren't sure what they know about clinical materials, such as if they know what to do if their BP is too high, so we want to solicit that feedback.”

Generating prototypes and refining ideas

HQP created 15 draft materials, or prototypes, during their HCI process to develop a suite of resources for the home BP monitoring protocol. As mentioned above, both staff and patients at the health centers were engaged to design and provide feedback on prototypes. By giving co-design participants something tangible to interact with, HQP was able to learn about how user friendly and practical the materials were and gather feedback from the staff and patients. HQP drew on suggestions from the co-design sessions to revise prototypes in preparation for the pilot.

Resources for patients included:

- Program welcome letter
- “How to Take Your Blood Pressure” handout
- “Understanding Your Numbers” blood pressure tutorial
- “Blood Pressure Log” for recording BP readings
- “Monitoring Blood Pressure Action Plan” guideline
- Post-program feedback survey
- Educational materials on hypertension from other organizations (e.g. American Heart Association)
- Resource list for hypertension education

Materials for clinic care teams included:

- Pilot Program Summary and Rationale
- Pilot Timeline and Activities
- Patient Recruitment Criteria
- Patient Recruitment Checklist
- Patient Orientation Checklist
- Follow-up Phone call/Visit Checklist
- Patient Follow-up Responses Form
- Pilot survey

Understanding Blood Pressure Numbers

Systolic:
The upper number, which is also the higher of the two numbers, measures the pressure in the arteries when the heart beats (when the heart muscle contracts).

Diastolic:
The lower number, which is also the smaller of the two numbers, measures the pressure in the arteries between heartbeats (when the heart muscle is resting between beats and refilling with blood).

One in three U. S. adults has high blood pressure. Your blood pressure rises with each heartbeat and falls when your heart relaxes between beats. Blood pressure can change from minute to minute with changes in posture, exercise, stress or sleep. For an adult age 20 or over, your upper (systolic) number should be less than 120, and your lower (diastolic) number should be less than 80.

Normal range less than **120**
(20 years or older) less than **80**

This blood pressure chart reflects categories defined by the American Heart Association.

Blood Pressure Category	Systolic (upper #)	and	Diastolic (lower #)
Normal	less than 120	and	less than 80
Prehypertension	120 – 139	or	80 – 89
High Blood Pressure (Hypertension) Stage 1	140 – 159	or	90 – 99
High Blood Pressure (Hypertension) Stage 2	160 or higher	or	100 or higher
Hypertensive Crisis	Higher than 180	or	Higher than 110

Call your doctor or if it is after hours go to the Emergency Room

Educational resource designed by HQP

Pilot testing in a clinic environment

HQP coordinated with care teams at the two health centers to pilot test a 14-day home BP monitoring program. A group of 39 patients were recruited, trained to take their own blood pressure, given digital BP monitors, asked to check their blood pressure twice in the morning and twice in the afternoon every day, and then refer to the educational materials provided by HQP about how to manage their BP. Clinic staff also successfully reached out to almost all the patients for mid-point and post-pilot check-in calls. The team also gathered reflections and suggestions through a short survey and post-pilot co-design sessions with a sample of patients and debriefed with care teams.

“I liked all the education. It helped me change my routine, like when I have my coffee.”

HQP found most patients followed the home BP monitoring protocol to some extent. Nearly all patients checked their BP at least once a day for seven days out of the 14-day pilot. A number of patients checked their BP at least once a day for all 14 days, but did not follow the protocol of taking two BP readings in both the morning and the afternoon each day.

“I thought the program was perfect. I am saving all my BP logs to give to my doctor.”

HQP also learned that both patients and health center care teams “found at-home BP monitoring useful and informative,” and “patient feedback on the materials was limited and very minor and can easily be incorporated for future implementation.”

Lessons Learned

Applying the HCI approach throughout the whole project was a learning experience for HQP, as well as for the health centers. Key lessons included:

Prioritize partnerships: Team members reflected on how essential it was to foster partnerships with the stakeholders that would implement the project. Buy-in and contributions from the care teams at the two pilot health centers were key, from helping develop and host co-design sessions to conducting the pilot with patients.

“There was a ton of partnering with care teams and patients. In terms of implementing, it was all the care teams. It needed to be that way if they are going to adopt this.”

Understand context: Using HCI to facilitate sessions that discuss broadly what patients value and need for their health and health care, both in the clinic and in their everyday lives, was a new experience for HQP. Rather than starting the conversation with the topic the team was working on—BP management—the initial co-design sessions were structured to be more exploratory and open-ended in terms of getting to know the patient as a person and what was important to them. This was challenging, particularly when patients brought up sensitive subjects or discussions took longer than the team expected, but it allowed HQP to reach a deeper level of understanding of patients’ wants and needs.

“It’s great working with patients. It’s good to remind ourselves these patients come from all walks of life. Many have multiple health problems. Getting to understand their lives and background helped build empathy, which has been instrumental. Especially involving them in our prototyping session, seeing them feel empowered...It was a good reminder of who we are serving.”

Engage patients continuously: A paradigm shift in how HQP approached their project was engaging with patients throughout the exploratory, design, and pilot phases of the work. This is different than conducting focus groups or interviews at discreet points in time before or after a project.

“A lot of health centers do quality improvement (QI) and put a lot of effort in and they’re frustrated when it doesn’t work. I think it’s because they haven’t included the patients enough.”

By gathering feedback from patients in an ongoing fashion throughout the program, the team saw how patients found the experience rewarding and how their participation made the home BP monitoring solution stronger. HQP reported that patients:

- Liked the program, educational materials, and BP monitor (access had been an issue for some)
- Learned throughout the pilot period about their blood pressure
- Liked the extra time with the care teams, through orientation and check in calls
- Appreciated the opportunity to provide feedback and be heard through the co-design process
- Engaged in the process by completing the program and providing feedback after the pilot

Next steps

HQP is presenting the home BP monitoring solution the team developed and the feedback from patients to the consortium’s member health centers. They will share what the team learned and spread the package of educational materials to other health centers who may be interested in implementing a home BP monitoring program. Since HQP is linked to so many safety net organizations in Southern California, there is the potential for the solution developed by HQP to be spread widely and help shape how patients with hypertension are engaged in their blood pressure management in the future.

HQP is also sharing what they learned about HCI with the consortium’s member health centers. For example, HQP has already partnered with CCI to host a webinar for their member centers to introduce other health centers to the HCI approach and tools. HQP is also looking for opportunities to apply HCI capabilities, such as co-design sessions and prototyping, in other grant proposals and projects.

“We can share protocols and materials to give as a package to other health centers to adopt and implement. They can learn from our experience. Our goal was to develop a program to be spread and sustained.”