HHS Public Access

Author manuscript

J Public Health Manag Pract. Author manuscript; available in PMC 2025 June 12.

Published in final edited form as:

J Public Health Manag Pract. 2024 ; 30: S52–S61. doi:10.1097/PHH.0000000000001902.

Using a Cohort-Based Quality Improvement Coaching Model to Optimize Chronic Disease Management for Federally Qualified Health Center Patients

Noel C. Barragan, MPH, MBA,
Gabrielle Green, MPP,
Gerardo Cruz, MPH,
Sarine Pogosyan, MBA,
Deanna Newman, MPA,
Tony Kuo, MD, MSHS

Division of Chronic Disease and Injury Prevention, Los Angeles County Department of Public Health (Ms. Barragan, Ms. Green, and Dr. Kuo); Community Clinic Association of Los Angeles County (Mr. Cruz, Ms. Pogosyan, and Ms. Newman); Department of Family Medicine, David Geffen School of Medicine at UCLA (Dr. Kuo); Department of Epidemiology, UCLA Fielding School of Public Health (Dr. Kuo); Population Health Program, UCLA Clinical and Translational Science Institute (Dr. Kuo).

Abstract

Context—In fall 2020, Community Clinic Association of Los Angeles County, in collaboration with the Los Angeles County Department of Public Health, launched a 3-year, cohort-based quality improvement (QI) coaching program to assist Federally Qualified Health Centers (FQHCs) in improving their clinical management of hypertension, high blood cholesterol, diabetes, and chronic kidney disease.

Program—The QI program utilized a cohort-based coaching model in which 5 FQHCs were each assigned a practice transformation coach who provided them with guidance and support to monitor clinical quality measures. These measures were then used to facilitate changes and improvements in clinical workflows and approaches to patient care. To encourage peer learning and promote inter-organizational collaboration, the coaching team hosted quarterly cohort check-ins and an online group messaging board where the participating FQHCs could share lessons learned. Throughout the program, the FQHCs were provided trainings and resources to advance their clinical quality measures of choice.

Correspondence Noel C. Barragan, MPH, MBA, Division of Chronic Disease and Injury Prevention, Los Angeles County Department of Public Health, 3530 Wilshire Blvd, 8th Floor, Los Angeles, CA 90010 (nbarragan@ph.lacounty.gov).

Financial Disclosure
The authors have indicated they have no financial relationships relevant to this submitted work.

Conflicts of Interest
The authors have indicated they have no conflicts of interest to disclose.

Human Participant Compliance Statement
This article does not contain any research involving human participants, performed by any of the authors.

Implementation—To implement the program, each FQHC selected 2 clinical quality measures to focus on, completing a minimum of 1 Plan-Do-Study-Act cycle per year for each measure. Throughout, the coaches met regularly with FQHC staff to discuss progress, strategize on how best to address challenges encountered, and identify training or resource needs for their clinic sites.

Evaluation—To drive implementation of QI interventions and monitor overall progress, the FQHCs reported quarterly on the clinical quality measures being addressed. By program's end, all 5 FQHCs reached their 10% improvement goals.

Discussion—This QI coaching program allowed participating FQHCs to build new competencies and achieve measurable improvements in how they managed their patients' chronic diseases. This model of practice serves as a promising approach for achieving sustainable clinical improvements in these FQHCs.

Keywords

chronic disease; continuous quality improvement; diabetes; Federally Qualified Health Centers; hypertension

Introduction

Chronic disease is both common and costly. An estimated 60% of American adults have at least one chronic disease. About 90% of health care expenditures in the United States are attributed to these conditions.[1] Nationally, hypertension is among the most common chronic diseases in the general population.[1,2] Approximately 48% of American adults (119.9 million) have hypertension; less than a quarter (22.5%) has this condition under control.[2] In the United States, the costs of hypertension, including direct costs of health care visits and medication and lost productivity due to premature mortality, have been estimated to be approximately $131 billion to $198 billion annually.[3] This disease condition frequently co-occurs with other chronic diseases such as diabetes; for example, more than 2 out of 3 people with diabetes have high blood pressure.[4] To effectively reduce morbidity and mortality among Americans, health systems will need to improve their population health management of chronic diseases such as hypertension, high blood cholesterol, diabetes, and chronic kidney disease (CKD).[5–7]

Optimizing clinical care practices through the integration of tools and activities such as clinical decision support, staff trainings, use of standing orders, and improved workflows can serve as an effective strategy for preventing and managing chronic diseases and their related complications among a broad range of patients.[8] Quality improvement (QI) strategies can support these efforts by facilitating systematic and iterative planning, which helps clinics to more deliberately implement, evaluate, and refine interventions. Through a QI approach, a clinic can test an intervention in a limited setting, observe which components of the intervention worked, and make adjustments prior to scaling up the intervention for use in the entire system.[9] QI strategies have been successfully implemented in a variety of clinic types, including community health centers and Federally Qualified Health Centers (FQHCs), which often serve socioeconomically vulnerable populations with complex health and social needs.[10,11] QI projects in these clinic settings have achieved target goals, including

improved hypertension and diabetes control.[11–13] In one such example, 11 clinics from three FQHCs in Oregon implemented a QI project that successfully adapted strategies originally developed for an integrated care setting to improve guideline-concordant prescribing rates for patients with diabetes.[14] Key QI activities in this project included integration of automated electronic health record alerts, pre-programmed order sets, practice facilitators, and clinician champions.

Although implementation of QI strategies has been shown to positively impact chronic disease outcomes, it has been challenging for many clinics to engage in such activities due to multiple competing priorities and limited resources. QI coaching, or practice facilitation, can help clinics in this regard by offering a variety of support services such as goal setting, provision of resources and tools, use of practice-level data to drive change, and building capacity to effectively use health information technology.[15,16] There is emerging evidence that the use of a cohort learning model can further help support QI efforts to substantively improve clinical care practices, including in FQHC settings.[17,18] Cohort learning models add an additional layer of value to standard QI coaching practice by offering opportunities for peer-to-peer sharing and engagement in interorganizational learning activities.

In an effort to improve the management of chronic diseases, Community Clinic Association of Los Angeles County (CCALAC), in collaboration with the Los Angeles County Department of Public Health (DPH), launched a cohort-based QI coaching program for FQHC systems in Los Angeles County (LAC), California. The program sought to help participating health centers build new competencies through the provision of technical assistance and support to achieve improvements in hypertension, cholesterol, diabetes, and CKD management. This article describes this model of practice, providing an overview of the key activities implemented by the FQHCs participating in this coaching program. Lessons learned can inform health and public health organizations looking to establish or improve their own QI coaching program.

Community Clinic Association of Los Angeles County

Founded in 1994, CCALAC is a consortium of community health centers across LAC. Its mission is to empower health centers to remain at the forefront of health care transformation by forging partnerships, fostering innovation, promoting health equity, and advocating for the communities they serve. Recognizing that community health centers face many operational and regulatory challenges when providing care to their patients, CCALAC provides its members with a range of trainings, technical assistance, and resources to support the delivery of quality health care. CCALAC's membership consists of 66 organizations that offer medical, dental, and behavioral health services at over 380 primary care sites in LAC. These members include private, non-profit, FQHCs, FQHC Look-Alikes, and community clinics; collectively, they serve upwards of 1.89 million patients annually.[19]

Approach

Overview

In Fall 2020, CCALAC and DPH launched the *Solutions for Healthier Communities Program* (SHCP), a three-year, cohort-based QI coaching program that sought to address key chronic disease areas of interest – i.e., hypertension, high blood cholesterol, diabetes, and CKD. The program's design drew from several sources: CCALAC's previous experience implementing cohort-based QI strategies, principles of practice facilitation, models such as the Institute for Healthcare Improvement breakthrough series, [20] and CCALAC's own rich understanding of their members and the various challenges that these health centers face with making system-level changes (including ongoing demands brought on by the coronavirus disease 2019 [COVID-19] pandemic).

As part of SHCP, each participating FQHC was assigned a practice transformation coach who provided subject matter expertise and guidance to monitor clinical quality measures (CQMs), apply them to facilitate changes and improvements in clinical workflows, and promote patient-centered care approaches. Participating FQHCs were also given some funding support to facilitate participation, and access to technical trainings, peer learning and sharing, and a variety of templates and resources to use. To guide the work throughout the course of the program, each FQHC selected two CQMs to focus on from a menu developed by the CCALAC coaching team ("coaching team") and DPH. These CQMs included: (i) high blood pressure control—percent of patients with diagnosed hypertension whose blood pressure was adequately controlled; (ii) patients prescribed statin—percent of patients indicated as benefiting from statin therapy who actively used or were prescribed statin therapy; (iii) undiagnosed hypertension—number of patients with a blood pressure readings consistent with hypertension in the last 12 months but with no formal diagnosis; (iv) poor diabetes control—number of patients with diabetes who had a hemoglobin A1c value above nine or did not have an updated lab value on record; and (v) CKD screening —number of diabetic and hypertensive patients who had been screened for CKD. Where feasible, CQMs were structured to align with existing FQHC reporting requirements (e.g., Uniform Data System [UDS] reporting) to minimize reporting burden and to facilitate sustainability of CQM use to drive clinic-level changes. To address each selected CQM, the FQHC was expected to implement at least one Plan-Do-Study-Act (PDSA) cycle per year and demonstrate a 5–10% improvement from baseline by the end of the three-year program. Regardless of the CQMs selected, each FQHC was asked to report data on all CQMs on a quarterly basis for program monitoring purposes. Collected data was analyzed via Salesforce. Coaches reviewed results with individual health centers to assess impact of changes implemented and also with the cohort to share progress and encourage friendly competition. To further monitor progress and support clinic efforts toward meeting program objectives, the CCALAC team implemented a five-item Practice Assessment Tool (PAT). Example milestones assessed by the PAT included ability to easily report on CQM data and commitment of leadership to participate in SHCP. The PAT was completed annually by clinic staff, and each milestone was scored as either being in the planning stage, being implemented, or being adopted as standard work.

Program Start-up and Implementation

In an effort to recruit FQHCs to participate in SHCP, the coaching team reviewed data collected on a quarterly basis from its membership to identify FQHCs who had diabetes and hypertension control rates in the 50th-75th percentile and could benefit most from program participation. This effort yielded a pool of eight potential health center participants who were then invited to complete a survey that assessed their ability to meet key program requirements, including having: the capacity to report on key data points, the ability to assign a provider champion to the program, and the commitment to appoint a QI lead who could work on PDSA interventions. The survey also asked prospective health center participants about their general interest in the coaching program and to identify any circumstances or factors they could foresee as potential barriers to participating. Based on these responses, the coaching team met with potential participants to review their eligibility, answer any questions, and confirm interest and enrollment in the program. A total of 5 FQHCs completed the survey and were ultimately enrolled in the program.

After enrollment, each participating FQHC met with their assigned coach and established a SHCP-QI team for their clinic sites. The coach and the team then examined existing clinical priorities and practices, selected the target CQMs they planned to work on, and established project aims. A project charter was subsequently developed to formalize participation in the project as well as commitment to program goals, objectives, and activities. The charter was designed to serve as a document that could be revisited frequently during the course of SHCP to help reinforce commitment and refocus efforts when needed. Upon finalizing the charter, the coaches and SHCP-QI teams met monthly or bi-monthly to: (a) set and achieve program goals using a variety of practical tools (e.g., fishbone diagrams, pareto charts, 5 Whys); (b) identify how best to align program QI activities with each FQHC's existing clinical priorities; (c) track progress; (d) strategize and discuss planned interventions and needed refinements; and (e) identify and address resource and training needs among staff at each participating site. All participating FQHCs were provided individual- and cohort-level trainings to help advance activities tied to selected CQMs. Training topics included management of hypertension, diabetes, and CKD; use of patient-centered medical homes; application of Lean and QI strategies; identification and use of available technology vendors for services such as remote patient monitoring; and the development of scopes of practice for clinical staff. To facilitate peer-learning and collaboration, the coaching team hosted virtual quarterly cohort check-ins as well as an online group messaging board where participating FQHC personnel could share lessons learned and best practices for achieving CQM targets. Throughout the project, the CCALAC team collected feedback from participating clinics through a variety of methods, including informal conversations, post-training assessments, and short surveys. Results were used to determine resource needs, identify opportunities to improve or add on to the program, and to gauge satisfaction with the program. Figure 1 provides a summary of SHCP activities.

Program Outcomes

Of the five FQHCs enrolled in the program, three were relatively small, consisting of two to three clinic sites; two were much larger, comprising 7–11 clinic sites. Collectively, the

participating FQHCs served approximately 117,162 patients per year.[21] The majority of these patients (57%−85%) had an income at or below 100% of the federal poverty level and identified as a racial and/or ethnic minority (79%−94%), and 28%−42% indicated they were best served in a language other than English.

Because participating FQHCs were able to select which CQMs to focus on based on their own needs and priorities (e.g., desire to align with funder priorities, invest in areas of greatest need with no existing QI activities, or augment ongoing efforts), the distribution of selected CQMs was quite varied. Table 1 provides a summary of how many health centers selected each CQM and the various interventions implemented by the FQHCs for each CQM.

High blood pressure control was selected as a CQM of focus by three FQHCs. Key interventions implemented to improve this measure included: training providers and support staff on proper techniques for measuring blood pressure and optimal treatment of hypertension based on the latest clinical practice guidelines; sending text reminders to patients regarding appointments and medication adherence; and creating reminders within the population health analytics platform to flag delinquent actions or emerging care needs.

One FQHC chose to focus on patients prescribed a statin as one of their CQMs. This health center implemented clinic-level interventions such as adding a statin prompt to annual diabetes exam templates and working with their provider team to ensure correct diagnosis codes were used.

Four FQHCs selected the CQM for poor diabetes control. They implemented a number of QI strategies including: creating or updating standing orders; expanding care team roles; developing medication formulary “cheat sheets” for providers; and implementing automatic reminder messages for providers to order patient lab tests.

Finally, two FQHCs selected the CKD screening CQM. They employed approaches such as implementing a routine report within the population health analytics platform for CKD; adding CKD screening to standing orders and visit planning sheets; and activating alerts within the population health analytics platform for patients who were missing CKD screening in their charts.

Because it is not a common quality measure tracked for health center accreditation or reimbursement purposes, no FQHC selected undiagnosed hypertension as their CQM. Nonetheless, all five FQHCs created reports in their population health analytic tool to track data for undiagnosed hypertension following the clinical criteria for the HIPS (Hiding in Plain Sight) algorithm.[22]

By program end, all five FQHCs had met the 10% performance improvement goals for their selected CQMs based on analysis of quarterly program monitoring data. In addition, program monitoring data showed that participating health centers made notable improvements in those CQMs that they had not specifically addressed through SHCP but were required to report on. This improvement was, in part, attributed to the interconnected nature of the program’s conditions of focus as well as clinics’ ability to apply lessons

learned from their own work and that of the cohort into their broader clinical practice. Figure 2 provides an illustrative example of progress made over time for one of the project's CQMs – high blood pressure control. Additionally, each FQHC was able to achieve their target PAT score of "adopted as standard work" for all five milestones assessed. Overall, health center feedback about the program was overwhelmingly positive. For example, a mid-term program evaluation survey showed that participants felt satisfied with the amount of service and support provided by the practice transformation coaches and that the coaches were knowledgeable, professional, and responsive.

However, the program did encounter a number of challenges, frequently requiring the coaching team and the participating FQHCs to pivot and remain flexible in the way they structured and implemented QI activities. Key barriers to QI/PDSA cycle implementation included challenges related to competing priorities, data management, technology, a need to rapidly convert to telehealth during the COVID-19 pandemic, workflow and care gaps, and workforce turnover. These barriers, along with related facilitators that were key to overcoming them, are detailed in Table 2. For example, when it came to selecting CQMs, FQHCs prioritized measures that were incentivized by their funders (e.g., health plans, the Health Resources and Services Administration), making it challenging to concentrate on new focus areas such as undiagnosed hypertension. Similarly, competing patient care demands made it quite challenging to obtain provider and care team buy-in for new QI activities. This barrier was mitigated in part by assigning provider champions at clinic locations to ensure that QI interventions were designed with field practitioners and patients in mind and that disruptions of existing clinic workflows were kept to a minimum.

A key to effective QI implementation is having high quality data to drive the work. However, throughout SHCP, the participating FQHCs faced several challenges with collecting and maintaining high quality data. Individual-level challenges of missed or inaccurate input of diagnosis and screening codes in patient charts were barriers to tracking clinical progress. Likewise, lack of interoperability between the electronic health record and population health analytics platforms within the FQHC system made data management and other activities cumbersome and inconsistent. Issues with interoperability between the two systems also limited the ability of care teams to effectively implement standardized workflows that were critical to achieving several of the CQM targets. To troubleshoot many of these technology issues, several FQHCs explored new technology-based solutions through third party vendors, using these opportunities initiate modernization of their approach to technology infrastructure. Lastly, the abrupt increase in telehealth driven by the COVID-19 pandemic created a backlog of labs and other tests that were needed for patient care. This rapid transition also placed enormous pressure on clinic workflows that were not designed for a primarily telehealth environment. Several of the FQHCs needed support to recalibrate their systems accordingly before any other actions could be taken. However, in spite of these challenges, the increased use of telehealth and the related changes that transpired to clinical practice resulted in alternative options for increasing patient convenience and for reaching those who were previously hard to consistently reach in the clinical setting.

Finally, the participating FQHCs were hampered by numerous workflow and care gaps throughout SHCP. For example, clinic workflows for ensuring timely follow-up between

lab results and treatment were often lacking or inadequate, resulting in many patients "falling through the cracks" with respect to achieving optimal care. Identification of these inadvertent or unexpected workflow and care gaps was an important contribution of the coaching program. It allowed the FQHCs to address suspected problems that were previously ill-defined. Exacerbated by the COVID-19 pandemic, the FQHCs also faced a high volume of staff turnover, which created challenges for ensuring that existing and new workflows and protocols were followed consistently. These personnel shortages created a need for the health centers to be creative and innovate on the margin, which in several instances led to an expansion of care team roles.

Discussion

Models of practice that improve quality of care and can be tailored to both meet the needs of health systems and the diverse communities they serve remain "premium" interventions for reducing health inequities associated with poor access to chronic disease management. Through SHCP, CCALAC and DPH piloted and tested one such model. In addition to demonstrating improvements in key health outcomes, several takeaways can be gleaned from this program's implementation in LAC.

First, SHCP was designed to be adaptive, with common elements and flexible supports that were tailored to each of the FQHC's needs and to the diverse populations they serve. The variation in CQMs selected and approaches taken to address them highlight the diversity found across the different health center systems. To create a coherent program that could effectively support its diverse participants, the SHCP model capitalized on the use of CQMs and on disease management principles that emphasized linkages of commonalities across conditions—e.g., achieving blood pressure control as a common goal for the management of several chronic diseases, including diabetes, heart disease, and CKD, independently or concurrently.

Second, CCALAC was well-positioned to engage in this work, given their representation of and existing relationships with 66 community health center systems in LAC. The knowledge of the region's safety net populations and the established trust CCALAC had with target health centers allowed for the smooth and relatively efficient implementation of SHCP. As such, CCALAC was able to facilitate several activities that would otherwise have taken significantly longer time to start—e.g., rapidly recruiting the five FQHCs at the outset; garnering strong support from each participating health center's leadership (Chief Executive Officer, Chief Medical Officer, Chief Operating Officer, etc.); sustaining the coaching model and sharing best practices at cohort convenings.

Lastly, QI coaching programs inevitably require upfront investments in program and human resources, practical tools, and an infrastructure for providing ongoing technical assistance to providers at participating clinic sites. In SHCP, these start-up requirements were supported largely by CCALAC's partnership with DPH. DPH provided both technical assistance and, more importantly, funding support to help pave the way for the coaching model's development and implementation.

Conclusions

Despite recent technological and treatment advances in chronic disease management, much remains to be done in the U.S. to achieve optimal disease management. [23,24] Through SHCP, the CCALAC-DPH partnership introduced and scaled up a promising model of practice that facilitates provider behavior and system-level changes as key strategies for improving chronic disease control. Overall, this LAC experience serves as an excellent example of how a cohort-based, coaching model could be applied to make meaningful adaptations in safety net clinics across the U.S., each facing unique barriers and facilitators to change. Future research and program development should focus on developing a more sustainable financing strategy to support this type of programming.

Acknowledgements

The findings and conclusions presented in this article are those of the authors and do not necessarily represent the views of the funder, grantee, or any of the other organizations referenced in the text. The authors thank Matt Moyer, Amy Kim, and Carol Nguyen at Community Clinic Association of Los Angeles County, and Jessica King and Natalie Martin at Elevation Health Partners, for their efforts in establishing and implementing the cohort-based quality improvement coaching program. The authors also thank East Valley Community Health Center, Harbor Community Health Centers, San Fernando Community Health Center, Valley Community Healthcare, and Venice Family Clinic for participating in this program. Their dedication to improving patient health outcomes was instrumental for achieving the measurable improvements at their health center clinic sites.

Funding

This work was supported in part by funding from the Centers for Disease Control and Prevention [NU58DP006619].

References

1. Buttorff C, Ruder T, Bauman M. Multiple chronic conditions in the United States. https://www.rand.org/content/dam/rand/pubs/tools/TL200/TL221/RAND_TL221.pdf. Published 2017. Accessed September 3, 2023.
2. Million Hearts. Estimated hypertension prevalence, treatment, and control among U.S. adults. https://millionhearts.hhs.gov/data-reports/hypertension-prevalence.html. Accessed September 3, 2023.
3. Centers for Disease Control and Prevention. Office of Policy, Performance, and Evaluation. Health topics – high blood pressure. https://www.cdc.gov/policy/polaris/healthtopics/highbloodpressure/index.html. Accessed September 3, 2023.
4. Centers for Disease Control and Prevention. National Center for Chronic Disease Prevention and Health Promotion. Heart disease and stroke. https://www.cdc.gov/chronicdisease/resources/publications/factsheets/heart-disease-stroke.htm. Accessed September 3, 2023.
5. Bundy JD, Mills KT, Chen J, et al. Estimating the association of the 2017 and 2014 hypertension guidelines with cardiovascular events and deaths in US adults: An analysis of national data. JAMA Cardiol. 2018;3(7):572–581. [PubMed: 29800138]
6. Golden SH, Maruthur N, Mathioudakis N, et al. The case for diabetes population health improvement: Evidence-based programming for population outcomes in diabetes. Curr Diab Rep. 2017 Jul;17(7):51. [PubMed: 28567711]
7. Cholesterol Treatment Trialists' Collaborators. The effects of lowering LDL cholesterol with statin therapy in people at low risk of vascular disease: Meta-analysis of individual data from 27 randomized trials. Lancet. 2012 Aug;380(9871):581–590. [PubMed: 22607822]
8. Agency for Healthcare Research and Quality. Prevention and chronic care. https://www.ahrq.gov/prevention/chronic-care/index.html. Accessed September 3, 2023.

9. Hughes RG. Tools and Strategies for Quality Improvement and Patient Safety. In: Hughes RG. Patient Safety and Quality: An Evidence-Based Handbook for Nurses. Rockville, MD: Agency for Healthcare Research and Quality; 2008. Accessed September 3, 2023.
10. Fontil V, Bibbins-Domingo K, Nguyen OK, et al. Management of hypertension in primary care safety-net clinics in the United States: A comparison of community health centers and private physicians' offices. Health Serv Res. 2017 Apr;52(2):807–825. [PubMed: 27283354]
11. Pasha M, Brewer LC, Sennhauser S. Health care delivery interventions for hypertension management in underserved populations in the United States: A systematic review. Hypertension. 2021 Aug;78:955–965. [PubMed: 34397275]
12. Modica C, Lewis JH, Bay RC. The value transformation framework: Applied to diabetes control in Federally Qualified Health Centers. J Multidiscip Healthc. 2021 Oct;14:3005–3014. [PubMed: 34737572]
13. Behling EM, Garris T, Blankenship V, et al. Improvement in hypertension control among adults seen in Federally Qualified Health Center clinics in the stroke belt: Implementing a program with a dashboard and process metrics. Health Equity. 2023 Feb;7(1):89–99. [PubMed: 36876238]
14. Gold R, Nelson C, Cowburn S, et al. Feasibility and impact of implementing a private care system's diabetes quality improvement intervention in the safety net: A cluster-randomized trial. Implement Sci. 2015;10:83. [PubMed: 26059264]
15. Baskerville NB, Liddy C, Hogg W. Systematic review and meta-analysis of practice facilitation within primary care settings. Ann Fam Med. 2012 Jan;10(1):63–74. [PubMed: 22230833]
16. McHugh M, Brown T, Liss DT, et al. Practice facilitators' and leaders' perspectives on a facilitated quality improvement program. Ann Fam Med. 2018 Apr;16(Suppl 1):S65–S71. [PubMed: 29632228]
17. Arora S, Mate KS, Jones JL, et al. Enhancing collaborative learning for quality improvement: Evidence from the Improving Clinical Flow Project, a Breakthrough Series Collaborative with Project ECHO. Jt Comm J Qual Patient Saf. 2020 Aug;46(8):448–456. [PubMed: 32507466]
18. Thies K, Schiessl A, Khalid N, et al. Evaluation of a learning collaborative to advance team-based care in Federally Qualified Health Centers. BMJ Open Qual. 2020 Jul;9(3):e000794.
19. Community Clinic Association of Los Angeles County. About. https://ccalac.org/about/. Accessed September 3, 2023.
20. The Breakthrough Series: IHI's Collaborative Model for Achieving Breakthrough Improvement. IHI Innovation Series white paper. Boston, Massachusetts: Institute for Healthcare Improvement. https://www.ihi.org/resources/Pages/IHIWhitePapers/TheBreakthroughSeriesIHIsCollaborativeModelforAchievingBreakthroughImprovement.aspx. Published 2003. Accessed September 9, 2023.
21. Health Resources and Services Administration. Health center program Uniform Data System (UDS) data overview. https://data.hrsa.gov/tools/data-reporting/program-data?grantNum=H80CS00286. Accessed December 20, 2023.
22. Meador M, Osheroff JA, Reisler B. Improving identification and diagnosis of hypertensive patients hiding in plain sight (HIPS) in health centers. Jt Comm J Qual Patient Saf. 2018 Mar;44(3):117–129. [PubMed: 29499808]
23. Yu S, Wan R, Bai L, et al. Transformation of chronic disease management: Before and after the COVID-19 outbreak. Front Public Health. 2023 Mar;11:1074364.
24. In: Banatvala N, Bovet P. Noncommunicable Diseases: A Compendium. London, UK: Routledge; 2023. https://www.taylorfrancis.com/books/oa-edit/10.4324/9781003306689/noncommunicable-diseases-nick-banatvala-pascal-bovet. Accessed September 9, 2023.

Implications for Policy & Practice

- A cohort-based QI coaching program or model of practice can help FQHCs build new competencies and achieve measurable improvements in health outcomes for chronic diseases such as hypertension.
- A cohort-based QI coaching program can provide opportunities for peer-to-peer learning and collaboration. This model can serve to create a supportive environment that facilitates engagement and friendly competition among participating health centers, thereby promoting accountability and quality of care.
- Regional community clinic associations are well positioned to lead cohort-based QI coaching programs, given their representation of and established relationships with local safety net health centers. These associations' rich understanding of their members' challenges represent a potential resource that participating health centers can rely upon to mitigate barriers related to program start-up and implementation.
- The LAC experience serves as a practical example of how a cohort-based QI coaching program could be applied to make meaningful adaptations across safety net health centers in the United States. Research and program development in the future should focus on developing a more sustainable financing strategy to support these types of model practices.

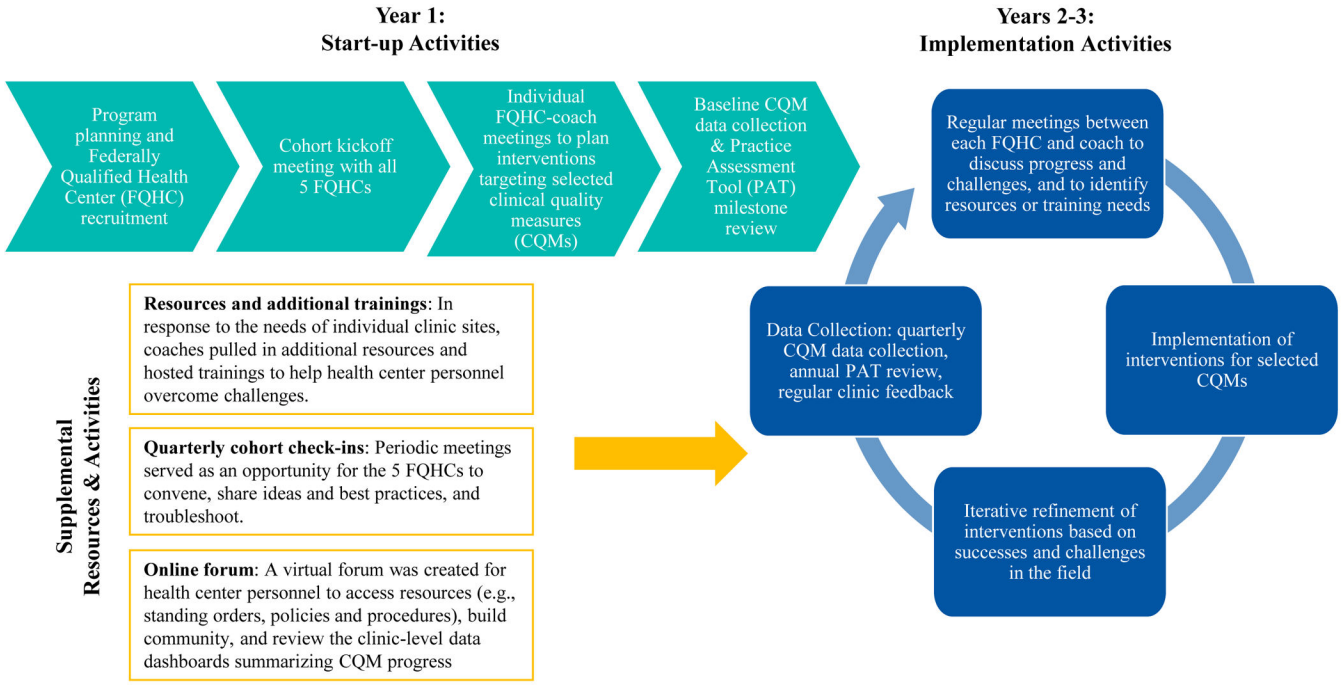

Figure 1.
Solutions for Healthier Communities Program Activity Summary

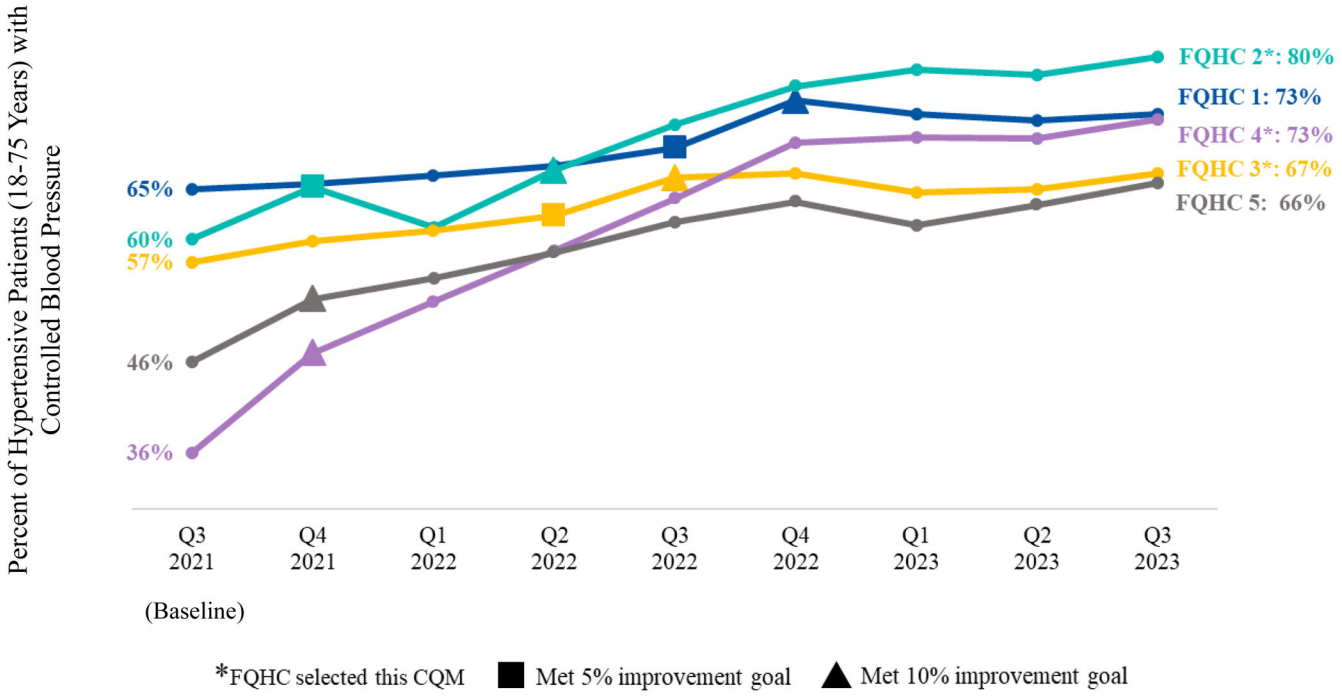

Figure 2.
Clinical Quality Measure Spotlight: High Blood Pressure Control Over Time

Table 1.

Summary of Quality Improvement Activities Implemented for Each Clinical Quality Measure

Clinical Quality Measure	Federally Qualified Health Center	Key Activities
High Blood Pressure Control	#2	• Trained providers and clinical staff on the latest hypertension management guidelines • Implemented text message patient reminders for appointments and medication adherence • Established a new blood pressure protocol in collaboration with the health education department, nutrition department, and clinical care teams
	#3	• Trained medical assistants on proper blood pressure measurement • Piloted a program offering patients Bluetooth-enabled home blood pressure monitors along with weekly check-ins
	#4	• Created reminders within population health analytics platform to close care gaps and add necessary CPT II codes • Trained providers, optometry support staff, medical assistants, and dental support staff on hypertension
Patients Prescribed Statin	#2	• Added a statin prompt to annual diabetes exam template • detailed patient lists to help providers close care gaps • Held regular meetings with provider team to ensure the correct diagnosis codes were being used • Regularly reviewed care gap reports with quality improvement and care teams
Poor Diabetes Control	#1	• Created standing orders policy to include diabetes order set and protocol for adhering to California Medical Board Medical Assistant scope for standing orders, including adding diabetes order set to EHR • Trained quality improvement staff on Lean and Six Sigma tools to help identify and address workflow challenges • Trained providers and medical assistants on standing orders to ensure clarity across roles • Tracked diabetes measures monthly to monitor changes in the number of patients with HbA1c>9 or missing labs • Implemented unblinded provider scorecards for providers to review during provider meetings and share best practices with each other
	#3	• Implemented point-of-care HbA1c testing • Leveraged best practices and tools from existing nurse practitioner-run diabetes clinic • Implemented automatic messages program through population health analytics platform for patient lab test reminders • Proactively identified patients not assigned to a primary care provider and assigned one • Implemented multiple modalities to recall patients into the clinic (e.g., phone calls, text messages, postcards)
	#4	• Created reminders within population health analytics platform to close care gaps and add necessary CPT II codes • Streamlined lab orders to facilitate accurate selection of CPT II codes by medical assistants • Trained providers on latest medication formularies by health plan and created “cheat sheets” for providers to reference • Implemented automatic text messaging outreach campaigns for patients with high or missing HbA1c values
	#5	• Reviewed and updated diabetes management standing orders • Trained care team staff, including patient care navigators, medical assistants, and registered dietitians, on HbA1c standing orders • Expanded registered dietitians’ scope of practice to document standing orders • Ran monthly reports to identify and schedule appointments for patients with HbA1c>9 or missing labs • Worked with a clinical pharmacist to support patients and train providers on insulin titration
Chronic Kidney Disease Screening	#1	• Implemented a report within population health analytics platform for CKD screening • Added CKD screening to standing orders and visit planning sheets • Established and trained care teams on a new workflow for CKD screening and follow-up • Implemented unblinded provider scorecards for providers to review during provider meetings and share best practices with each other
	#5	• Implemented a report within population health analytics platform for CKD screening among diabetic patients • Added CKD screening to standing orders and visit planning sheets • Activated alerts within population health analytics platform for diabetic patients missing CKD screening

J Public Health Manag Pract. Author manuscript; available in PMC 2025 June 12.

Key: CKD = Chronic Kidney Disease; CPT II = Current Procedural Terminology Category II; EHR = Electronic Health Record; HbA1c = Hemoglobin A1c

Table 2.

Barriers and Facilitators Encountered by FQHCs When Implementing Quality Improvement Strategies for Chronic Disease Management

Theme	Barriers	Facilitators
Competing Priorities	• It was challenging to obtain provider and care team buy-in for new activities when they were balancing many competing priorities • FQHCs prioritized clinical quality measures that were incentivized by health plans, making it challenging to focus on new measures (e.g., CKD, undiagnosed hypertension)	• Assignment of provider champions to specific clinical quality measures ensured the measures continued to remain a priority • Alignment of QI activities with existing programming helped encourage commitment to action
Data	• Data discrepancy issues such as inaccurate translation of EHR data to population health analytics platforms created challenges for regularly monitoring data and informing QI activities • Inaccurate input of diagnosis and screening codes created challenges for accurately assessing clinic and patient progress • Lab results from external vendors did not always feed directly into FQHCs' EHR or population health analytics platform, requiring manual input and creating opportunities for missed or inaccurate entries	• Addressing data discrepancies created opportunities to review and audit reports and data flows, and identify care gaps
Technology	• Unequal staff access to population heath analytics platforms and their lack of integration with EHR systems made task sharing and implementation of standardized workflows more challenging at some FQHCs • Interoperability challenges between server and population health analytics platform at one FQHC caused data discrepancies and prevented accurate data reporting • Lack of IT capacity for automatic CPT II coding created opportunities for missed or inaccurate data entry	• Collaboration with external technology vendors created new opportunities for affordable, high-quality care management solutions • Availability of new technologies renewed FQHC leadership interest in exploring innovative options for addressing care caps
Telehealth/ COVID-19 Pandemic	• The abrupt transition to telehealth brought on by the COVID-19 pandemic contributed to a backlog of patient labs and tests needed for effective patient monitoring • Established workflows were not optimized for heavy reliance on telehealth, leading to longer periods of time between receipt of lab results and initiation of therapy	• The success of telehealth demonstrated during the COVID-19 pandemic created new opportunities for long-term use of telehealth that were previously unavailable, including the ability to bill for health care services that are provided remotely • Telehealth made it possible to provide care more effectively to high-acuity patients or patients that struggled to make appointments related to unmet social needs
Workflow and Care Gaps	• Existing workflows did not adequately ensure timely follow up between lab results and therapy onset, or accurate diagnosis and screening coding • Lack of integration among the QI and provider teams created communication and care gaps • Staff were not consistently trained and implementing existing workflows and standing orders • Workflows did not always provide sufficient guidance regarding patient follow-up which led to care gaps • Alerts were not always in place or turned on, which created care gaps	• Identification of workflow and care gaps created actionable leverage points for making changes that allowed health centers to have a greater impact on clinical quality measures
Workforce	• High volume of staff turnover across many roles (e.g., nurses, medical assistants, and quality improvement leads) created challenges to ensuring workflows and protocols were consistently followed	• Workforce shortages created new interest in utilizing community health workers to support patient outreach • Collaborations with additional staff such as clinical pharmacists provided new approaches to addressing disease management

Key: CKD = Chronic Kidney Disease; CPT II = Current Procedural Terminology Category II; COVID-19 = Coronavirus Disease 2019; EHR = Electronic Health Record; FQHC = Federally Qualified Health Center; IT = Information Technology; QI = Quality Improvement

J Public Health Manag Pract. Author manuscript; available in PMC 2025 June 12.