

Residency Program Collaborative and Community Health Center Collaboration: Evaluation Summary

Background

The Centers for Disease Control and Prevention's (CDC), Division for Heart Disease and Stroke Prevention (DHDSP) and a panel of experts selected the Residency Program Collaborative and Community Health Center Collaborative (RPC/CHCC) for evaluation as a potentially promising practice to prevent and control chronic conditions, such as hypertension. The goal of this collaborative is quality improvement, and its approach closely aligns with CDC's focus on promoting system-level strategies in health care settings to affect health outcomes. The RPC/CHCC works across Pennsylvania to improve the quality of primary care and increase learning opportunities among members. It is operated by the Pennsylvania Academy of Family Physicians (PAFP), and brings together primary care physicians, residents, clinical support staff, and administrative staff from residency programs and community health centers to share strategies for transforming practices and help them achieve patient-centered medical home recognition. DHDSP, in collaboration with ICF International and PAFP, conducted an evaluation to (1) describe the program, (2) identify lessons that other programs might consider, and (3) determine how well they achieved intended outcomes (see textbox: Evaluation Questions).

Methods

The evaluation used a mixed-method design. Qualitative data included review of relevant programmatic materials, in-depth interviews with program implementers and participants, and direct observation of program implementation. Quantitative data included existing data collected by PAFP about the RPC/CHCC, such as programmatic records and aggregate practice-level clinical data for patients with diabetes or ischemic vascular disease (IVD).

Evaluation Questions

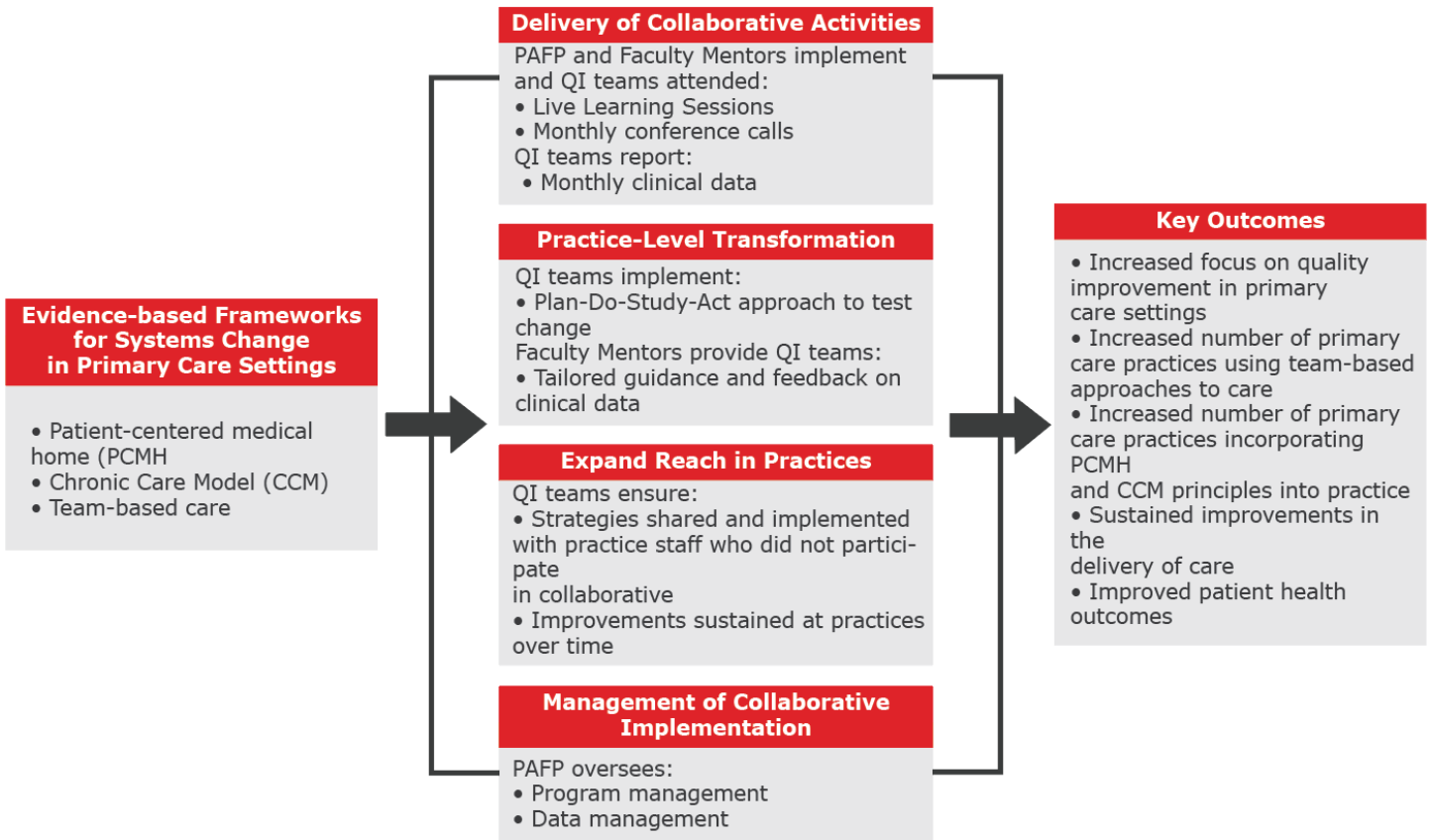
- ✦ What are the core components of the RPC/CHCC intervention?
- ✦ What are the barriers and facilitators to implementation of the RPC/CHCC?
- ✦ To what extent does the RPC/CHCC influence teams' ability to achieve the short-term outcome of patient-centered medical home (PCMH) recognition?
- ✦ To what extent does the RPC/CHCC influence teams' ability to achieve short-term outcomes related to clinical process measures?
- ✦ To what extent does the RPC/CHCC influence teams' progress toward achieving intermediate outcomes related to clinical outcome measures?

Core Components of the RPC/CHCC Intervention

The RPC/CHCC intervention is designed to facilitate shared learning among participants and to equip primary care practitioners with the tools necessary to orchestrate ongoing continuous Quality Improvement (QI) within their practice. RPC/CHCC uses a physician-to-physician communication and feedback approach. QI teams receive tailored guidance from physicians and have the flexibility to implement data-driven changes specific to their practice. The RPC/CHCC intervention includes monthly data-focused telephone discussions and in-person sessions across all QI teams (more details about the intervention are provided in the Table on page 2). The following figure depicts RPC/CHCC's core program components. RPC/CHCC consists of 4 broad core components— collaborative activities, practice transformation, expand reach, and management.



Figure 1: Core Components of RPC/CHCC



These four core components are carried out by both the program (PAFP and faculty mentors who are practicing primary care physicians) and the QI teams in the practices. Descriptions of select program and QI team responsibilities are listed in the table below.

Table 1. Core Components of RPC/CHCC

Core Components	Program and QI Team Responsibilities
Delivery of Collaborative Activities	<ul style="list-style-type: none"> ✦ Each year, PAFP and faculty mentors deliver 3 day-long, in-person learning opportunities—called Live Learning Sessions—to QI teams from across the collaboratives. Teams are taught how to apply strategies for systems change, improve health care delivery in their practices, and improve patients’ health outcomes. These sessions serve as important networking and sharing opportunities for the QI teams. ✦ PAFP and faculty mentors facilitate monthly calls with QI teams to reinforce messages related to quality and enable information-sharing among teams. ✦ Each month, QI teams are required to report practice-level data on a specific list of quality measures for certain diseases or conditions selected by PAFP.
Practice-Level Transformation	<ul style="list-style-type: none"> ✦ QI teams apply what they learn from RPC/CHCC to implement systems change strategies in their practices by using the Plan-Do-Study-Act approach to bring about practice transformation¹. ✦ QI teams are working on multiple strategies to improve quality simultaneously. ✦ Faculty mentors monitor practice performance and provide QI teams with tailored feedback on the data reported to RPC/CHCC. <p>¹For the purpose of this project, “practice transformation” refers to the process of a primary care practice making changes to improve quality and become more patient centered in order to be recognized as a National Committee for Quality Assurance patient-centered medical home.</p>
Expand Reach in Practices	<ul style="list-style-type: none"> ✦ QI teams engage primary care staff who did not participate in RPC/CHCC to spread the concepts learned through RPC/CHCC and help facilitate practice transformation. ✦ Engaging staff helps practices sustain what is learned through RPC/CHCC, even after participation has ended.
Management of Collaborative Implementation	<ul style="list-style-type: none"> ✦ PAFP provides day-to-day management of RPC/CHCC and oversees the development and implementation of all key activities. ✦ PAFP selects clinical process and outcome measures for practice reporting and monitoring. ✦ PAFP created a data entry and management system called Data Diamond, which uses real-time data at the team and program levels.

Key Findings

The following are key findings related to the implementation, reach, and impact of RPC/CHCC.

Factors Affecting Implementation

Facilitators

- ✦ It is especially important to have faculty mentors who are dedicated and available to serve as mentors to QI teams. Faculty mentors are designated physicians who offer their expertise regarding clinical strategies and solutions to practice issues.
- ✦ Feedback on monthly data reports and a data system that charts progress over time facilitates practice improvements and motivate QI teams to stay engaged in RPC/CHCC.
- ✦ In order for the program to remain sustainable and grow over time, retention of QI teams is an important facilitator. It is critical to renew team participation agreements annually to ensure continued commitment to RPC/CHCC participation requirements.
- ✦ PAFP facilitates program management and data reporting for QI teams by having a centralized Web-based data system. This in-house capacity also provides a rapid response time to data inquiries.
- ✦ Support from practice leadership enabled QI teams to participate in RPC/CHCC activities.

Barriers

- ✦ As is common with many initiatives, insufficient time and resources are barriers to implementation. Fully participating in program activities can be challenging when there are not enough staff members at a practice.
- ✦ Each practice uses a unique electronic health records (EHR) system from which its QI team mines and reports practice data, making the comparison of data at the program level difficult and the tracking of teams' and practices' progress challenging.
- ✦ Having technical resources and expertise—such as EHR vendors or health system technical support staff—available at the team level to make changes to EHR systems is essential for reporting appropriate data to PAFP, but can be time consuming.

Reach

- ✦ There are a total of 45 QI teams (24 residency program teams and 21 community health center teams) involved in RPC/CHCC across Pennsylvania.
- ✦ These 45 QI teams represent 80% (24 out of 30) of family medicine programs and 11% (21 out of 200) of community health centers operating in Pennsylvania.

Achieving National Committee for Quality Assurance Recognition

- ✦ Participation in a higher number of Live Learning Sessions (i.e., in-person professional development and facilitated interaction among participants) resulted in a significant increase in residency program teams being recognized by the National Committee for Quality Assurance (NCQA) as patient-centered medical homes. QI teams that attended 2 to 4 Live Learning Sessions were 3.6 times more likely to obtain such recognition, compared to QI teams that attended 1 or no sessions.

Clinical Process Measures

Exposure to the program and performance in clinical process measures

- ✦ Among all practices, the more months a practice was enrolled in RPC/CHCC the more patients met targets for several diabetes process measures, including a 1%–5% increase in patients' receiving eye exams, eye referrals, and nephrology exams, and having self-management goals.

Practice transformation² and performance in clinical process measures

- ✦ Data from a self-report survey to measure practice transformation efforts was administered during 3 time periods, and revealed significant improvements in factors related to service delivery (i.e., coordination of care, patient population management, and team-based care).
- ✦ Teams with more organizational changes (i.e., leadership, staff and resident engagement, and QI team functioning) were more likely to have improved ischemic vascular disease (IVD) process measures, especially the number of patients offered statins and of smokers who received smoking cessation counseling.

Clinical Outcome Measures

Exposure to the program and performance in clinical outcome measures

- ✦ The percentage of IVD patients reaching low-density lipoprotein (LDL) targets was significantly improved (a 4.45% increase) from baseline to follow-up (approximately 30 months).
- ✦ The number of Live Learning Sessions attended had no observable impact on a practice's performance in diabetic or IVD outcome measures.
- ✦ Practices saw improvements when RPC/CHCC targeted a specific clinical outcome, while still pursuing other clinical outcomes. For example in improving blood pressure in diabetic patients, practices were able to achieve significant improvements (a 5% increase) in the number of diabetic patients with controlled blood pressure over a 4-month period.

Practice transformation and performance in clinical process measure

- ✦ Organizational factors (i.e., leadership, staff and resident engagement, and QI team functioning) appeared to have the most significant effect on blood pressure (< 130 mmHg) and cholesterol (LDL < 100 mg/dL) among diabetic patients.

Conclusions

The evaluation findings highlight how a model focusing on quality improvement and collaborative learning can be used to reach primary care providers in different settings and provide insight into how to replicate this strategy in other settings. Although there was variability in the magnitude of improvement across the measures, the results indicate the potential for using this model to improve the delivery of care within primary care settings. Overall, the findings contribute to the evidence base regarding successful system-level strategies for increasing the quality of care in primary care settings, and show promise in using this approach to target specific outcomes such as diabetes and hypertension control. The model affords primary care practices a unique opportunity to engage in peer-to-peer learning and to share information and successful strategies. This collaborative model has the potential to contribute to the development of a primary care workforce in an evolving health care landscape.

Considerations for Program Replication

The following are some key lessons that are important to take into consideration when replicating RPC/CCHC model in other settings.

- ✦ **Pair faculty mentors with QI teams appropriately.** Faculty mentors paired to work with specific QI teams need to have experience and knowledge of the type of practice the team represents. For instance, it is important to have mentors who can provide tailored feedback and guidance for community health centers and residency programs.
- ✦ **Identify the unique needs of the audience.** There is variability in how specific types of primary care practices operate and the factors that affect their efficiency and effectiveness. The unique characteristics of a collaborative's target audience should be considered when developing information and the method by which the information is shared.

- ✦ **Ensure QI teams are ready for participation.** Because QI teams (and the practices they represent) may enter a collaborative at a different stage of readiness for practice transformation, it may be helpful for program management to define a benchmark for QI teams to meet before joining the program. Ensuring a minimum level of readiness on certain criteria will benefit all QI teams and practices that participate because it will increase the likelihood of full participation in collaborative activities.
- ✦ **Ensure strong data management and data-driven focus.** Transparency in data reporting from all participants is key to the success of the collaborative because it facilitates making strong decisions based on data and the QI teams' ability to compare their progress to that of other QI teams. Such comparison helps QI teams remain motivated and engaged over time. Therefore, a strong data management system is critical to implementing a collaborative. PAFP created and now uses an in-house data warehouse, ensuring that QI teams can receive data in real time, and that data entry is user-friendly, reducing the chance for data entry errors. PAFP can make changes to the system rapidly and as often as needed, so that the system can evolve with the program over time.

²Practice transformation was measured using a self-report instrument called the PCMH Monitor, which QI teams completed at 3 points to assess their practices' progress toward becoming patient-centered medical homes. This instrument has 11 domains and each domain has specific items to assess the extent to which a practice has moved toward a new model for delivering care. The 11 domains are (1) leadership, (2) staff and resident engagement, (3) QI team functioning, (4) registry and measures, (5) NCQA recognition, (6) curriculum redesign, (7) population management, (8) patient-centered care, (9) team-based care, (10) coordination of care, and (11) access and scheduling. These domains are grouped into 22 categories; for example, domains 1–6 measure organizational changes, or the early changes necessary to move toward PCMH, and domains 7–11 measure the next steps related to service delivery.

Notes

For more details on the evaluation study findings, implementation information, and recommendations, please send an e-mail to arebheartinfo@cdc.gov.

Additional implementation information can be found in the *Implementation Guide for Public Health Practitioners: Residency Program Collaborative and Community Health Center Collaborative* on the CDC DHDSP web site at http://www.cdc.gov/dhdsp/evaluation_resources.htm.

Disclaimer: The opinions and conclusions are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

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