Challenges to Research in Urban Community Health Centers

Stephenie C. Lemon, PhD, Jane G. Zapka, ScD, Barbara Estabrook, MSPH, Evan Benjamin, MD

Community health centers (CHCs) are important settings for research aimed at reducing health disparities. However, CHCs pose many challenges to research at patient, provider, and system levels.

We summarized lessons learned from a multimethod, formative study to develop intervention strategies for improving colorectal cancer screening in CHCs, and make recommendations for future research. The call for research in "real world" settings such as CHCs must be matched with greater understanding of the challenges, as well as the resources to meet those challenges. (*Am J Public Health*. 2006;96:626–628. doi:10.2105/AJPH.2004.057976)

Policy and research agendas increasingly call for efforts to reduce health disparities. Community health centers (CHCs) are a central component of the US primary care safety net. Their mission is to provide comprehensive health care for medically underserved patients including racial/ethnic minorities, Medicaid recipients, and low-income employed persons who are uninsured or underinsured but ineligible for Medicaid coverage.[1,2] Thus, CHCs are an important setting for achieving these agendas.

We describe lessons learned about conducting health services research in urban CHCs from a multimethod, formative study designed to develop interventions to increase colorectal cancer screening.

METHODS

Our study was conducted from March 2001 through February 2003 in Springfield, Mass, at 2 urban CHCs that are affiliated with a large, integrated delivery system. The city is designated an "Enterprise Community" by the Department of Housing and Urban Development, with poor economic conditions and health status of residents. In the 2000 census, 44% of the residents identified themselves as nonwhite (21% African American, 27% Hispanic). Higher proportions of minorities reside in the neighborhoods served by the CHCs.[3]

Qualitative and quantitative methods were used to complete formative research at the patient, provider, and system levels at the CHCs. A computerized information systems database collected basic information about patients aged 50 to 84 years. A medical record audit was completed to estimate current prevalence of referral and completion of colorectal cancer screening tests (flexible sigmoidoscopy, colonoscopy, and home fecal occult blood test) among a sample of eligible patients (aged 50 to 84; ≥1 clinic visits during 2000).

Semistructured, face-to-face key informant interviews were conducted with 26 CHC primary care providers (PCPs) and support staff, 4 gastroenterologists who provide endoscopy to CHC patients, and 2 specialty appointment schedulers. A brief self-administered provider survey was distributed to all PCPs (attending and resident physicians, nurse practitioners, and a physician's assistant), with a 72% response rate (n=68). A telephone survey was completed by a sample of 65 African American patients, stratified by gender, age, and CHC. Qualitative methods were conducted with both patients and community members to gain a broader perspective. Four focus groups (n=34) were conducted with African Americans. Key informant interviews and focus groups were conducted with Hispanics who only or primarily spoke Spanish (n=12). Data synthesis involved a systematic triangulation process by which findings from multiple methods, data sources, theories, and/or investigators were combined to obtain an in-depth understanding of the colorectal cancer screening at the CHCs.[4]

RESULTS

Details of the results of this study are provided in the 2 text boxes accompanying this report. The first text box (p 627) describes in detail the challenges to research that were encountered in this study at the system, provider, and patient levels. Briefly, several systems-level challenges were identified. Review of administrative patient data revealed unreliable and missing data and inconsistent data coding. The medical record audit was complicated by difficulty in locating records, poor organization of records, and problematic data collection/coding practices. Additional difficulties were encountered because of the staffing of the clinics by residents, time restrictions on patient visits, and ineffective processes for communication between PCPs and specialists.

Provider-related challenges included poor perceptions of patients, competing demands, and lack of skill and self-efficacy in counseling patients. Patient characteristics posing challenges included high levels of comorbidity, lack of transportation, mistrust of providers among African Americans, and communication barriers with Spanish-speaking patients. The second text box (p 628) suggests strategies to overcome potential difficulties related to study design, subject recruitment and retention, data quality and collection, and quality improvement.

DISCUSSION

Reducing disparities in health services delivery and outcomes is a continuing challenge.[5] Researchers have tackled this important issue, but disparities persist, including for colorectal cancer screening.[6] Community health centers have a history of commitment to providing care for minority and other underserved populations,[1,7] and are attractive research settings. However, the challenges to conducting effectiveness research in CHCs must be recognized and addressed.

To effectively conduct intervention research in "real world" settings requires feasible research designs and intervention strategies. Our preliminary studies and the work of others clearly highlight the need to utilize ecological approaches[8] that target practice systems, providers, and patients.[9] Randomized controlled trials, generally considered the gold standard, are often not plausible. Victora and colleagues[10] argue that there is a pressing need for the development of quality standards for implementing and evaluating trials when randomized controlled trials are not feasible. Quasi-experimental designs may be better suited for CHCs because of feasibility of implementation and the likelihood of making significant impact on patient outcomes because of greater likelihood of long-term sustainability. Another major barrier is the difficulty in funding necessary quality improvement efforts because they are generally excluded from grant funding and CHCs lack resources to fund quality improvement. Funders must recognize that resources needed by CHCs to compensate for many of their challenges exceed those of other settings, and therefore make allowances to include funding for quality improvement efforts that are essential to effectively conducting research.

The challenges identified in this project are potentially generalizable to other urban CHCs because of similarities in structure and patient populations. Findings may also be relevant for other preventive services because of similar barriers at each level. However, the potential impact of addressing these challenges is difficult to estimate because of variable resources and motivation and prioritization of clinical leaders regarding prevention initiatives.

As we attempt to translate research into practice, CHCs will be a continued focus. This project demonstrated pervasive challenges to effective health services research in CHCs that may limit research efforts. The call for more "real world" and diffusion research must be matched by the understanding of the challenges and resources needed to organize the centers to accommodate these challenges. ■

Research Challenges, by Intervention Level

SYSTEM
- Documentation of Administrative Patient Data (IS)
  - Unreliable contact information
  - Unreliable or missing race data
  - Missing language-preference data
  - Inconsistent coding of visit type (e.g., health maintenance, follow-up, urgent care)
- Medical Records Data
  - Lack of electronic medical records
  - Difficulty locating records
  - Poor system for tracking down records
  - Poor distinction of patient and visit type (e.g., primary care or urgent care only)
  - Inconsistent organization, including documentation of a problem list, documentation of referrals
- Scheduling: Time restrictions for individual visits
- Staffing Largely by Residents
  - Lack of continuity for patient over time
  - Each resident sees few patients
  - Turnover requires ongoing orientation and training
  - Competing educational and clinical demands limits research participation
- PCP/Specialist Communication
  - Incomplete or missing documentation of orders
  - Inconsistent reporting or documentation of results
  - PCPs often rely on patients for reports
  - Varying reports about who is responsible for follow-up and surveillance
- Size and Catchment Area: Often serve small numbers of patients

PROVIDER (KII, PS)
- Perceptions of Patients: Often inaccurately perceive patient as not interested in prevention and early detection
- Competing Demands
  - Lack of clerical and nursing support limits time for research participation
  - Research often not perceived as part of role
- Counseling and Referral Skills
  - Lack of awareness of coverage and specialist's procedures
  - Perception of own counseling as ineffective, particularly given time restrictions for visits

PATIENT (AAFG, AAPS, HKII, HFG)
- Competing Priorities
  - High levels of comorbidity
  - High levels of poverty
- Among African Americans, Issues of Mistrust
  - Mistrust of medical care system in general, but not of personal PCPs
  - Mistrust of residents in general, but not of personal PCPs
- Lack of Transportation: Difficulty coming to the clinic to participate in study
- Among Hispanics, Inability to Communicate Effectively
  - Communication challenges persist even with Spanish-speaking staff
  - Poor show rates and confusion regarding study purpose, even with multiple reminders

Note. IS = information systems database; PCP = primary care provider; KII = key informant interviews; PS = provider surveys; AAFG = African American focus groups; AAPS = African American patient telephone surveys; HKII = Hispanic key informant interviews; HFG = Hispanic focus groups.

About the Authors

Stephenie C. Lemon, Jane G. Zapka, and Barbara Estabrook are with the Division of Preventive and Behavioral Medicine, University of Massachusetts Medical School, Worcester, Mass. Evan Benjamin is with the Department of Medicine, Tufts University School of Medicine, Boston, Mass, and the Division of Healthcare Quality, Baystate Health System, Springfield, Mass.

Requests for reprints should be sent to Stephenie Lemon, PhD, Division of Preventive and Behavioral Medicine, University of Massachusetts Medical School, Worcester, MA 01655 (e-mail: stephenie.lemon@umassmed.edu).

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Contributors

All authors were responsible for interpretation of findings and review of article drafts. S.C. Lemon originated the article, synthesized analysis, and led writing. J.G. Zapka conceptualized and designed the study, supervised implementation, and contributed to the origination and analysis of the article. B. Estabrook assisted with the study and performed analysis. E. Benjamin supervised study implementation and assisted with study design.

Strategies to Overcome Challenges to Research in Urban Community Health Centers

STUDY DESIGN

Promote Rigorous Quasi-Experimental Designs: given small organizational size and variability in environment and targets, randomization by site, provider, or patient frequently not feasible (operationally or financially)

RECRUITMENT AND RETENTION

Budget for High Cost for Participant Recruitment

- Research assistant time needed for challenging environment and target population
- Time for primary care provider involvement to overcome distrust
- Some financial incentives generally required for partnering with other community organizations
- Allowance of extra time and resources for recruitment of research staff with passion and ties to community

Budget for High Cost for Participant Retention

- Telephone and mail contacts between study time points
- Race/ethnic matching among intervention staff and participants and research staff, and participation for data collection

QUALITY IMPROVEMENTS

Plan and Budget for Collaborative Quality Improvement Strategies: limitations in medical record and administrative data systems should be expected

INTERVENTION STRATEGIES

Enhanced Medical Education and Training for Providers

- Training in patient-centered counseling techniques to increase skills and self-efficacy
- Frequent coaching to compensate for low volume per resident and high physician turnover

Ecological Interventions: multilevel interventions that target patients, providers, and systems and are tailored to a specific setting and population

Human Participant Protection

This study was approved by the institutional review boards of the University of Massachusetts Medical School and the Baystate Health System.

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