



## Frontiers in Public Health Services and Systems Research

Volume 1  
Number 3 *Quality Improvement in the Public  
Health Practice-Based Research Networks*

Article 6

December 2012

### Building Capacity to Support and Study QI in Local Georgia Public Health Systems

William C. Livingood

*University of Florida/Shands-Jax-CHEQR & Georgia Southern University JPHsuCOPH,*  
william.livingood@jax.ufl.edu

Nandi Marshall

*JPHsuCOPH, Georgia Southern University,* nmarshall@georgiasouthern.edu

Angela Peden

*JPHsuCOPH, Georgia Southern University,* apeden@georgiasouthern.edu

*See next page for additional authors*

Follow this and additional works at: <https://uknowledge.uky.edu/frontiersinphssr>

 Part of the [Public Health Commons](#)

#### Recommended Citation

Livingood WC, Marshall N, Peden A, Gonzales K, Shah GH, Toal R, Penix K, Alexander D, Davis K, Nixon S, Cummings P, Riley W, Woodhouse L. Building Capacity to Support and Study QI in Local Georgia Public Health Systems. *Front Public Health Serv Syst Res* 2012; 1(3).  
DOI: 10.13023/FPHSSR.0103.06

This Article is brought to you for free and open access by the Center for Public Health Systems and Services Research at UKnowledge. It has been accepted for inclusion in Frontiers in Public Health Services and Systems Research by an authorized administrator of UKnowledge. For more information, please contact [UKnowledge@lsv.uky.edu](mailto:UKnowledge@lsv.uky.edu).

---

## Building Capacity to Support and Study QI in Local Georgia Public Health Systems

### Abstract

The study of quality improvement within Georgia's local public health systems provides important insight into the use of regional bodies as quality improvement (QI) collaboratives and multijurisdictional entities. This report describes QI initiatives following a RWJF funded quick strike research grant to assess health district capacity to conduct QI in Georgia's local public health systems. These QI initiatives use QI to improve public health outcomes including: Adolescent pregnancy and Sexually Transmitted Infection prevention, HIV prevention and control, and HIV Management.

### Keywords

PHSSR, Public Health Services and Systems Research, Quality Improvement, Multi jurisdictional entities, Cross jurisdictional sharing, PBRN

### Authors

William C. Livingood, Nandi Marshall, Angela Peden, Ketty Gonzales, Gulzar H. Shah, Russ Toal, Kellie Penix, Dayna Alexander, Kay Davis, Sylvester Nixon, Purity Cummings, William Riley, and Lynn Woodhouse

## Introduction

A study, supported by a Robert Wood Johnson Foundation Practice Based Research Quick Strike Quality Improvement (QI) research grant, focused on health districts in Georgia as regional mechanisms for cross jurisdictional sharing and promoting QI through QI Collaboratives (QICs).<sup>1</sup> The RWJF-supported Quick Strike research confirmed broad recognition of the potential for the capacity of Health Districts to support local public health QI across multiple public health constituencies and across counties with a broad spectrum of demographic characteristics.<sup>1</sup> This brief report describes the expansion of efforts to study QI in public health within districts as QICs and cross jurisdictional entities.

QI continues to emerge as a major strategy to improve the effectiveness and the visibility of local public health systems.<sup>2-3</sup> The Public Health Accreditation Board (<http://www.phaboard.org/about-phab/>) identifies its primary purpose as continuous quality improvement in Tribal, state, local, and territorial public health departments. However, a recent systematic review of QI in public health also revealed very few reports of improved outcomes utilizing QI in public health agencies,<sup>4</sup> and Georgia is not recognized by NACCHO (<http://www.naccho.org/topics/infrastructure/accreditation/statemap.cfm>) as being substantially involved with Quality Improvement in public health systems. The study of successful implementation of QI within a variety of public health settings is essential to develop the evidence and best practices for public health QI.

Health Districts have emerged in a primary role in Georgia's public health system for promoting local public health QI despite the fact that statutory authority for public health is primarily vested in county health departments and their boards of health. The large number of counties and relatively small population size of many of the counties have resulted in regionalization of local public health into what might be considered mature cross sharing or multijurisdictional entities. Following our previously reported study of districts as key structures for implementing local public health QI and accreditation through their role as multijurisdictional entities and QICs,<sup>1</sup> the PBRN received another grant from RWJF to: 1) support development of young PHSSR researchers to study the development of QI in Georgia's local public health systems, and 2) advance the study of QI within Georgia local public health systems. This study of QI interventions employed concepts of Developmental Evaluation,<sup>5</sup> an approach of using evaluation to study both the impact of an intervention (QI) and provide input and feedback to support development and refinement of the intervention. In this case, the research of the QI interventions involved a developmental approach with extensive Technical Assistance (TA) on QI activities and measures.

### Developing QI TA and Aspiring Researcher capacity

Developing young PHSSR-QI researchers /evaluators required the building of substantial QI technical capacity in addition to training the aspiring researchers in research and evaluation study designs and methods that would be appropriate for studying QI in local public health systems. Three approaches were used to develop QI capacity: 1) weekly seminar meetings using QI textbooks, reports in journals, and other examples of QI applications in public health; 2) Collaboration with the University of Minnesota Public Health QI Center to build capacity, and 3) a Six Sigma Green Belt certification process through on line training for the new investigators.

The RWJF grant supported the appointment of a doctoral candidate (dissertation phase) as a co-principal investigator for this QI study and the university provided dedicated graduate assistantships for two DrPH students (one first year and one second year) to focus on QI technical assistance and research of local public health applications of QI.

To develop research and evaluation capacity, the young researchers assigned to the State Coordinating Center for GA Public Health PBRN (<https://sites.google.com/a/georgiasouthern.edu/gapublichealthpbrn/>) assisted with the implementation of the previously described Quick Strike QI research and supported a Delphi process to identify Health District priorities for QI at the local public health level. The graduate assistants currently serve as technical assistance (TA) providers and evaluators for each QI project site. Their training in evaluation and research of QI was a combination of practice-based application of research and evaluation, knowledge and skills acquired through their Masters degrees and DRPH training, and mentoring by experienced QI Researcher/ Evaluators.

### **QI Sites, Applications and Performance Measures**

Founding PBRN members (Health Districts) were invited to collaborate with the PBRN coordinating center in studying a QI project to be selected by each Health District. The Health Districts in Georgia are regional, multi-county bodies that collaborate with county health departments to coordinate and consolidate resources to provide greater efficiency and enable smaller communities to offer essential public health services. A basic purpose of PBRNs is the study of issues of concern to network members and the selection of the QI project by each District conforms to that basic principle. Three districts selected three different projects, with the potential to expand the scope of applications of QI to public health issues reported in the literature.<sup>4</sup> The three selected projects are: 1) reduced clinic wait times for teen pregnancy and STD prevention; 2) improved access to HIV Testing and counseling to reduce HIV infection; and 3) improved quality of HIV services by initially improving accuracy of record keeping.

Teen-clinic wait-times was seen as an urgent issue for QI because long wait times were seen as a major barrier to utilization of the health department's clinic services in a community with one of the highest teen pregnancy rates in the state. Improved access to HIV testing and counseling was seen as a critical public health issue for a county with a relatively high rate of HIV infection. Improved accuracy of HIV reporting was identified as an issue for QI due to major gaps in reported HIV services as noted with standard reporting mechanisms. The focus of each QI project was refined through a meeting between the PBRN based TA/evaluators and each Health District QI Team. These meetings were held to clarify the focus of the activity and the scope of the projects that would be good candidates for QI. Three primary criteria were encouraged in selecting QI projects: 1) use of team problem solving, 2) use of data to inform decision making, and 3) focus on internal processes; i.e., issues that the team could control and change rather than blame external partners.

A Rapid Cycle Plan-Do-Study-Act model (Model for Improvement) was used as the primary QI approach. Minimum specific QI techniques planned for each project included: brainstorming, process mapping, root cause analysis, team/group processes, performance measurement/data collection and use, and use of control charts or other techniques to track and display data in the most meaningful way to inform QI team decision making.

Mixed Method research (qualitative and quantitative methods) has been the primary research design. Quantitative data will be site-specific related to the metrics used for the QI problem solving and the outcome of concern. Qualitative data will include direct observations, interviews and archival reviews of meeting notes.

## **Conclusions**

Georgia's health districts present an important opportunity to study cross jurisdictional sharing and the utility of multi-jurisdictional entities to implement QI initiatives in local public health systems. The Georgia Public Health PBRN is in a unique position to support public health system development through meaningful research on local application of QI that can inform public health practice. While focused on local problems, the GA Public Health PBRN's research focus on health districts and QI has important implications for public health systems beyond Georgia as research on regionalization and QI for public health is under reported at this time.

### **Summary Box**

- The study of quality improvement within Georgia's local public health systems provides important insight into the use of regional bodies as quality improvement (QI) collaboratives and multijurisdictional entities.
- This report describes QI initiatives following a RWJF funded quick strike research grant to assess health district capacity to conduct QI in Georgia's local public health systems.
- These QI initiatives use QI to improve public health outcomes including: Adolescent pregnancy and Sexually Transmitted Infection prevention, HIV prevention and control, and HIV Management.

## References

1. Livingood W, Marshall N, a Peden A, Gonzalez K, Shah GH, Alexander D, Penix K, Lawrence R, Toal R, Woodhouse L. Health Districts as Quality Improvement Collaboratives and Multijurisdictional Entities. *Journal of Public Health Management and Practice*. 2012 Nov;18(6):561-70.
2. Honore PA, Wright D, Berwick DM, et al. Creating a framework for getting quality into the public health system. *Health Aff*. 2011;30(4):737-745.
3. Riley, Moran, Corso, Beitsch, Bialek, and Cofsky. *Defining Quality Improvement in Public Health*. *Journal of Public Health Management and Practice*. January/February 2010.
4. Dilley JA, Bekemeier B, Harris JR Quality improvement interventions in public health systems: a systematic review. *Am J Prev Med*. 2012 May;42(5 Suppl 1):S58-71.
5. Patton, M.Q. (1994). Developmental Evaluation. *Evaluation Practice*, 15(3), 311-319.

**Table 1 : Selected Characteristics of Health District QI initiatives**

|            | # Team members | Initial Measure  | QI techniques used or in process                | Public Health Outcome        |
|------------|----------------|--|---|------------------------------|
| District A | 16             | Time from sign in until exit and incremental measures of total   | Brainstorming, Process Map, Root Cause Analysis | Reduce Teen Pregnancy & STIs |
| District B | 6              | # of people accessing CHD clinic for HIV testing and counseling. | Brainstorming, Preliminary root cause analysis  | Reduce HIV Infection         |
| District C | 10             | Increase in accurate HIV Service Reporting                       | Brainstorming, Process Map                      | Management of HIV            |