Assessing a Quality Improvement Project in a Georgia County Health Department

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Abstract

The study and evaluation of quality improvement among Georgia's public health systems continues to be a major priority for the Georgia Public Health Practice Based Research Network (GAPH-PBRN). This article focuses on the application and evaluation of a Quality Improvement project in a Georgia County Health Department. The QI team sought to reduce the waiting time in the teen clinic; thereby, increasing the Quality Improvement culture one project at a time in this Health Department. The project revealed that Quality Improvement is a continuous process that requires change and adaptation by employees. This initial Quality Improvement project was the first step in helping to establish Quality Improvement culture in the County Health Department.

Keywords

Quality Improvement, Plan-do-study-act, Public Health Services and Systems Research, Practice Based Research Network

Cover Page Footnote

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Quality Improvement (QI) is an important component of the Public Health Accreditation requirements adopted by the Public Health Accreditation Board (PHAB) (1). Employing and evaluating QI methods and tools can aid in identifying and analyzing problems in public health practice and monitoring improvements once they have been implemented (2,3). This article reports on a Georgia Public Health Practice Based Research Network (GAPH-PBRN) QI project in a urban County Health Department (CHD) in Georgia, revealing benefits and challenges of employing QI approaches to reduce waiting times in a CHD teen clinic.

The CHD is comprised of 125 employees and two locations in the county while serving a population of 59,037 individuals. This CHD was one of three sites seeking to implement a QI project where employees were introduced to Quality Improvement, the Plan-Do-Study- Act (PDSA) cycle, and practiced the application of the cycle on a project that had a goal of reducing waiting times in the teen clinic (4). The employees selected this QI project because it was deemed appropriate and manageable for the health department staff. In addition to reducing wait times, the employees had a long-term goal of using this project to facilitate increased use of QI within the CHD. Georgia functions with a decentralized public health infrastructure, which allows the local health departments to have a distinctive culture and various implementation approaches to apply QI to public health programs and services.

METHODS

QI Project

A multidisciplinary QI team was established, including two public health nurse specialists(one who served as the champion) , three public health nurse managers , county nurse manager, laboratory supervisor, health information specialist, billing clerk, lead records clerk, support service worker, and communicable disease supervisor who worked together to resolve the teen wait time issues. PDSA is comprised of four steps: 1) identify the problem and plan the change; 2) implement the plan; 3) analyze the data and examine the results; and 4) refine the approach based on what was learned from the results (5). The CHD employees identified public health services to prevent teen pregnancies and STIs as the focus of QI with the initial QI project goal of reducing waiting times in the teen clinic.

The "wait time" for visits included five distinct visit types: problems, quick start, initial, annual, and refill visits. Later in the project two additional types of visits were included: education and pregnancy tests because teens were seen by the clinic staff for these types of visits. To monitor wait times for these visit types, the employees of the health department documented the time at patient registration, records lab, teen clinic, and billing. Waiting times were documented on universal flow sheets that the County Nurse Manager created and revised. The champion averaged the waiting times from the universal flow sheets. The champion then sent the average times to the Project Leader of the GAPH- PBRN. Control charts were created for the champion to display on bulletin boards in the CHD and share with employees in the organization in monthly reports received by email. The wait time data were collected May 2012- May 2013 (See Figure 1). Additional data was obtained from the Information Technology office to assess the accuracy of the numbers of teens

seen each month in the teen clinic. Process Mapping and Root Cause Analysis were conducted by the QI team during the Plan phase of the PDSA cycle to determine why waiting times for teens were high and how best to solve this at each level. As problems with reliability of the data were identified, a PDSA cycle was employed to improve the quality (accuracy and reliability) of the data.

Evaluation

The GAPH-PBRN team applied a mixed methods approach for evaluation. Qualitative methods included a total of thirteen interviews and direct observations of eleven QI team meetings and clinic processes. The Project Leader from the GAPH-PBRN also provided 10-15 hours a week of technical assistance for the QI project. This included in-person visits, conference calls, materials taught and reviewed, and observations of meetings. In addition, a list of consultants with QI expertise, a number of resource materials including a QI booklet, and training and education around these resources were provided to this site. Virtual meetings were held for districts to share their concerns and ideas with one another throughout the project. Webinars provided by the GAPH-PBRN regarding QI tools and their application in public health were offered. In addition, the district had access to the archived recordings of previous Webcasts.

An interview guide was utilized for the interviews, containing twelve questions, which referenced the interviewee's current role in the project, the quality of the data, the display of the data, and group dynamics and behaviors. The interview guide was developed from literature reviews and past experience of prior QI projects by the GAPH-PBRN members. In addition, when observing meetings the Project Leader utilized a Group Process worksheet that was created by the GAPH-PBRN members. This worksheet allowed the Project Leader to document observation, participation, decision-making, and organization of roles. Atlas/Ti software was used to store all interview texts and codes. Data collection and analysis occurred simultaneously. Analyses began with in-depth reading of the transcripts. After multiple readings, the Project Leader coded the text on a line-by-line basis then attached the codes to sentences. Themes that were revealed included: the role and value of QI, the QI team's ownership of the project, and the quality and sharing of data. The Georgia Southern University Institutional Review Board (IRB) approved the study.

RESULTS

Results of the QI Project

Wait times did not significantly improve during the first eight months of the project, which was partially attributed to problems with collecting and using the data, including lack of time and access. (See Figure 1). The initial wait time data used to inform the QI process proved to be inconsistent because patient wait times were not consistently recorded by the various departments. The need for reliable data on wait times in different PDSA cycles led to employee trainings on the importance of consistent documentation. The lack of consistent data delayed the use of the data to inform decision making and to motivate employees. A four month delay in sharing and posting data on performance also reduced the potential for employee motivation and ownership of the problem. Use of data to inform operations and decision making did not appear to be a routine practice prior to the project and it took some adapting before the data could be well integrated into PDSA cycles.

Evaluation of QI Project Implementation

Direct observation of the QI meeting revealed that team members connected with each other demonstrating face-to-face communication during QI meetings. The champion encouraged an environment where everyone talked and listened. Through interviews that lasted approximately forty- sixty minutes, the Project Leader learned that **s**ome QI members did not understand their role on the team; therefore, in some instances tasks were primarily completed by the champion. The QI members felt that some employees of the health department did not understand the importance of using QI for the wait time project and for the overall organization. Furthermore, interviews indicated that changes were not always implemented after the meeting. QI team members needed to follow up with each other after meetings to support QI activities and bring about agreed upon changes. The CHD QI project demonstrated that a committed champion, employee buy-in, refining the problem, reliable data and the effective use of this data are required to produce a successful quality improvement project. Refining data collection and use, on-going clarification of QI team roles, and repeated PDSA cycles to assess problems and overcome obstacles need to be repeated frequently during initial QI projects if an effective QI culture is not present.

Table 1. Key Findings

Key QI Elements	Action/Progress	Accomplishments
Problem/PDSA cycles:		
Problems with check-in	Review and revise check-in process for teens after staff turnover.	Refined the check-in process for teens.
Problems with data collection	Review and revise process for collecting monthly data on the teen clinic.	Refined data collection and recording process, ensuring that routing slips are completed properly for accurate data collection by conducting a workshop.
Staff unable to provide information on clinic services.	Created cheat sheets that would help each employee know what services are provided in the health department.	Health department is utilizing the cheat sheets and universal flow sheets.
Staffing shortages	Reviewed staffing and identified opportunities for correcting shortages	Cross trained nurses in various departments of the health department.
Problem with treating all visits the same	Identified and clarified reasons for visits according to the service provided.	Created a universal flow sheet for the entire health department and established time goals for visit types

Continuous review of progress	Through monthly meetings, the QI team is continuing to examine and evaluate ways to improve teen wait times using PDSA cycles.	QI reports were sent to QI team members, higher administration and employees of the health department.
Teamwork & Input from all levels of staff and stakeholders	Continuing to have monthly meetings with the QI team.	Have monthly meetings where a participatory process is in place to ensure that all members have an opportunity to voice their opinions.

Figure 1. Performance data
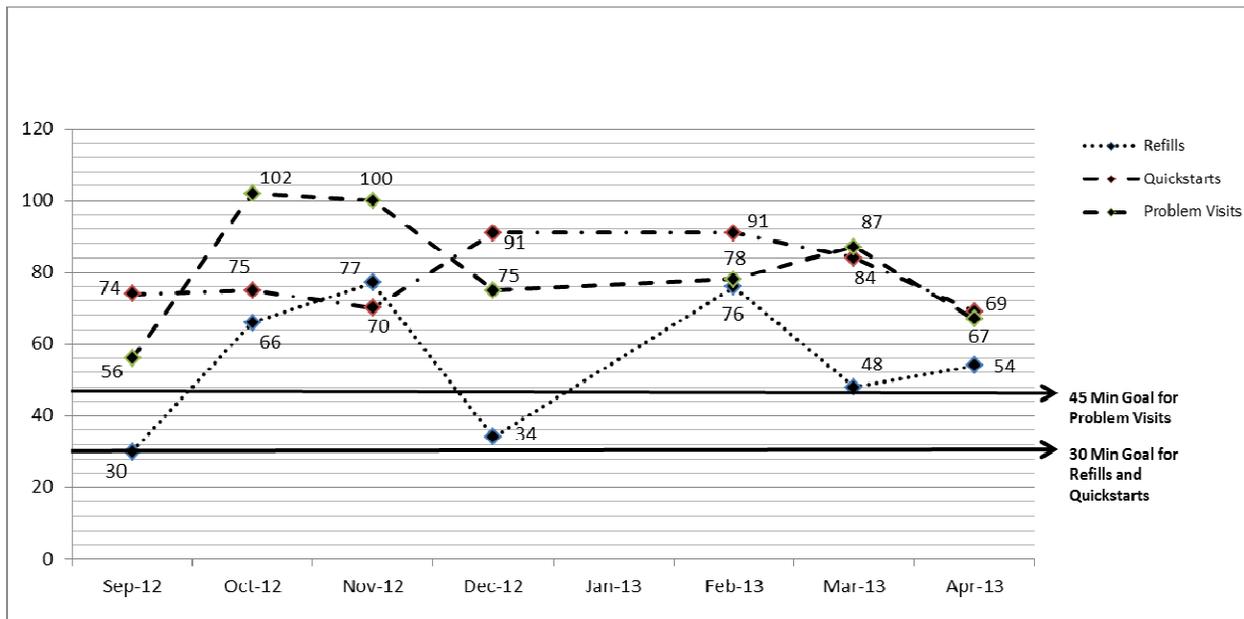
CONCLUSION

The QI process is a continuous process that requires change and adaptation by employees. The QI team had a champion who was willing to learn and was passionate about the teen clinic succeeding. However, effective use of data to inform decision-making during the PDSA cycle appeared to be a slow culture change process. Opportunities for QI improvement did emerge when a lack of progress in reducing wait times was noted by the QI team. The QI team members started to make substantial strides in overcoming many challenges to QI after the team started monitoring the data on clinic wait-times and developing plans to address short comings based on the data. One such improvement was an increase in the nursing staff for the teen clinic and implementation of cross training of the staff. The challenge of implementing QI changes by leveraging QI staff membership to create more empowerment and ownership of employees appears to be a process requiring time and adaptation. It also appears that more regular and standardized feedback on progress in

implementing QI processes needs to be provided to the QI team and Senior Management to obtain optimal results.

It may also be unrealistic to expect QI culture to rapidly emerge from a single project or to even expect positive results early with initial efforts, particularly considering external challenges and competing priorities. Initial QI projects may need to be viewed as a first step in establishing Big QI or a QI culture. This CHD QI project revealed that team members must be committed to the QI efforts and be trained in QI tools and methods to produce successful QI projects. This can occur through sufficient support and resources. QI team members also need training and a realistic time period to adapt to change. Providing in-depth training opportunities for employees allows them to practice and implement QI culture. The use of Participatory Action Research approach applied here has limitations and advantages cited elsewhere. However, the lessons learned from these QI efforts expand insights into the application of QI to public health, helping to bridge a major gap in the public health research and practice literature (6).

SUMMARY BOX:

What is Already Known about This Topic? Quality Improvement (QI) is a data-driven approach that identifies and analyzes problems that improve the quality of a service. Employing QI tools and methods can increase productivity and efficiency among employees who are providing service to communities. Therefore, quality improvement is a priority among local health departments.

What is Added by this Report? Quality Improvement continues to be a focus for Local Health Departments as they prepare for Public Health Accreditation. It is vital that public health professionals with the GAPH-PBRN State Coordinating Center examine and evaluate quality improvement efforts among public health systems in order to serve the needs of the public health practice community and ensure organizations operate efficiently. Thus, this article focuses on the application and evaluation of a QI project in a Georgia health department.

What are the Implications for Public Health Practice, Policy, and Research? The application and evaluation of this project produced improvements at the point of service level leading to a higher quality of care for clients. In future studies, employing policies and resources to continue QI efforts among employees within the organization can bring about changes in the QI culture.

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