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## Evaluating Quality Improvement to Improve HIV Reporting

### Abstract

The incorporation and evaluation of Quality Improvement into Georgia's public health systems continues to be a focus of the Georgia Public Health Practice Based Research Network. This report describes the process, preliminary results and lessons learned from incorporating Quality Improvement into one of Georgia's public health districts.

### Keywords

PHSSR, Public Health Services and Systems Research, Quality Improvement, PBRN

### Cover Page Footnote

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### Authors

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Quality Improvement (QI) evaluation is a major research focus of the Georgia Public Health Practice Based Research Network (GAPHPBRN). While the use of QI by public health agencies is not well documented in the scientific literature, QI continues to emerge as a strategy to improve the effectiveness of local public health systems.<sup>1,2</sup> The methods and results of one QI evaluation study conducted by the GAPHPBRN and supported by a Robert Wood Johnson Foundation grant are reported here.

This project aimed to 1) enhance the use of measurement science supporting QI within public health systems, 2) assess the effectiveness of QI within public health agencies<sup>2</sup> and 3) improve the accuracy of HIV service reporting within the participating wellness centers. The GAPHPBRN worked with three health districts in Georgia to help build the evidence for QI & Quality Assurance (QA) in GA. The primary focus of this report is a QI project housed within two Wellness Centers in one of the three Georgia Health Districts included in the larger project. The Wellness Centers provide primary care to those with HIV/AIDS and partners with community agencies to enable those in need to access support services.<sup>3</sup>

The Wellness Centers assembled a QI team whose purpose was to select a QI Project Champion, identify the focus of their project and collect and monitor the data. The Wellness Centers' QI Team was comprised of nurses, managers and other Wellness Center personnel.

## METHODS

A mixed methods design was used by combining qualitative and quantitative methods. Qualitative methods were used to provide insight into the QI process from the perspective of project management. Additionally, observation of the QI team group dynamics and roles as it relates to creating a culture of QI in a health districts, was used to assess the effectiveness of QI within public health agencies. Data included observational data, GAPHPBRN weekly meeting minutes and key informant interviews with 7 of the 10 QI team members. All team members were contacted to participate in the interview process. Of the three that did not participate, one was unable to find time to participate and the other two did not respond to our correspondence. GAPHPBRN staff conducted QI trainings for the Wellness Centers' QI Team which provided an overview of the Plan Do Study Act (PDSA) cycle and an orientation to using QI techniques such as root cause analysis, process mapping and control charts. The PDSA and other techniques were utilized by the QI team throughout the duration of the project (Table 1). The roles of the GAPHPBRN staff and the Wellness Centers' QI teams were then reviewed. The Wellness Centers' QI team selected a champion and the QI goal for their project.

The QI goal was to improve the accuracy of HIV service reporting in the CAREware system, which had major gaps in reported services.<sup>2</sup> The quantitative methods used were the Health Resources and Services Administration (HRSA)'s HAB (HIV/AIDS Bureau) HIV Performance Measures. The Wellness Centers' collected data focusing on the 23 predefined HAB performance measures. These measures were created at the federal level with the potential to be used by Ryan White grantees and are currently being used at the state level, in Georgia.<sup>4</sup> These QI performance measures were monitored and used to make informed decisions regarding needed improvements in the consistency

and accuracy of reporting. The qualitative data collected provided additional understanding of the QI process and outcomes, particularly surrounding group dynamics among team members with various QI experience.

Qualitative data collection and analysis were completed by the lead GAPHPBRN staff member associated with this QI project, who is also trained in qualitative data collection and analysis. Thematic and content analyses were conducted within and between the seven interviews collected.

**Table 1. Summary of PDSA cycles**

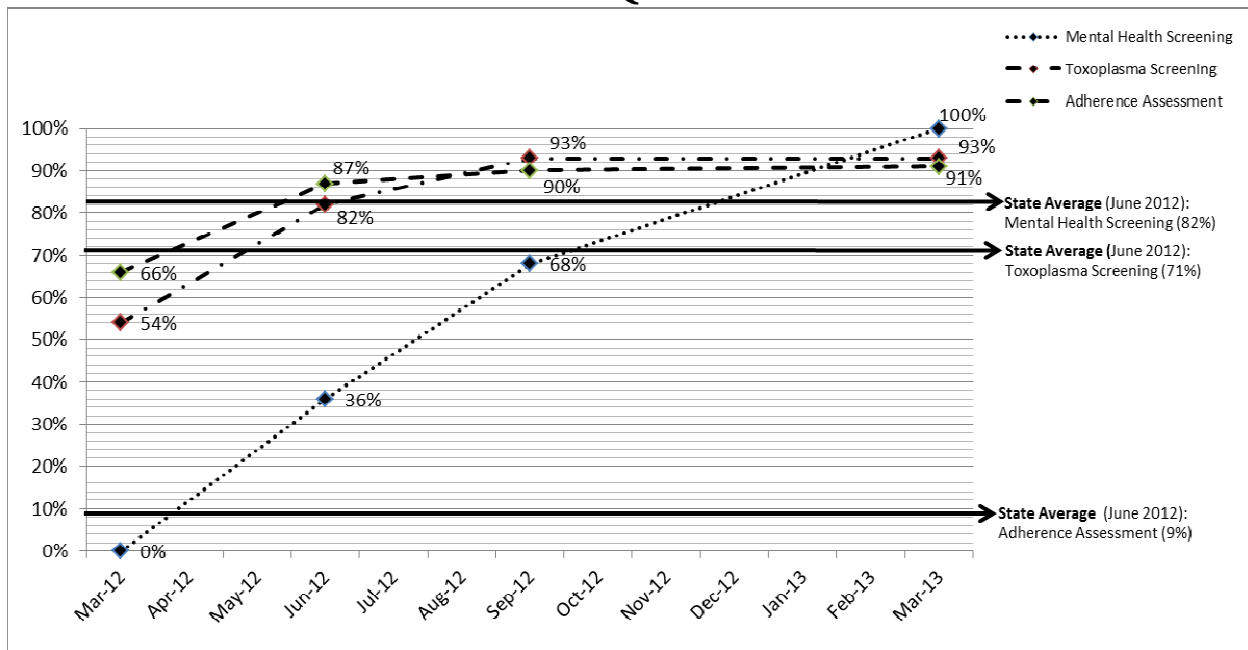
PDSA Cycles					
	Purpose	Plan	Do	Study	Act
1	Improve the Wellness Centers' HAB Performance Measure Outcomes (CAREware)	Create process map to determine data entry steps  Review Current Data and Compare to State Average  Collect monthly performance data outcomes	All items from the "Plan" were carried out  Data collection began	The staff noticed inconsistencies with the services delivered and the outcomes recorded in CAREware  A root causes analysis was conducted to determine the cause of the inconsistencies	The Wellness Centers created a more efficient data entry process which included assigning more than one person for all data entry responsibilities
2	Monitor outcome changes with new data entry process	Continue to collect monthly performance data outcomes	Staff continued to collect monthly data	Staff determined increases in 22/23 performance measures as a result of the new data entry process	Continued implementation of new data entry processes
3	Improve consistency of CAREware and EMR data (State Electronic Medical Records)	Adapt the new data entry process created through the first PDSA cycle	New process adopted	Staff noticed similar increases in outcomes	Continued implementation of new data entry processes

## PRELIMINARY RESULTS

### *Quantitative*

The Wellness Centers collected HAB performance measure data from March 2012 through March 2013. At the beginning of data collection in March 2012, 16 of the 23 performance measures were below the June 2012 state average. Through the use of QI techniques, the sites determined that the low compliance indicated by the 23 measures was generally due to data entry errors rather than clients not receiving the mandated services. After creating a data entry protocol and assigning additional staff to assist with data entry, the Wellness Centers' performance measure compliance increased. At the culmination of data collection in March 2013, only 1 of 23 measures was lower than the state average. Three of the twenty-three performance measures (Mental Health Screenings, Toxoplasma Screening, & Adherence Assessment) are shown in Figure 1 to provide an overview of the change in compliance from March 2012-March 2013. Additionally, the June 2012 state average has been included to compare county and state compliance for the aforementioned performance measures.

**Figure 1. Comparison of selected HAB performance measures for Two County Wellness Centers and to State Performance Level over QI Year**



### *Qualitative*

The majority of the Wellness Centers' QI team members had no prior QI experience, with exception of the District QI coordinator, the QI project Champion and one other nurse. Overall, those interviewed described QI, documentation, and the use of data to inform decision making as important. When asked why QI was important, one team member said "It [QI] helps us to do things better". Another team member, who also viewed QI as important, referred to everyone working

together “in unity” to get the job done. When specifically asked whether or not the data was being effectively displayed and shared with staff and stakeholders, there was not a strong consensus. However, according to the QI Project Champion, data were displayed at their quarterly consortium meeting. The consortium’s members include representation from the community, non-profit organizations, health district staff and other stakeholders. Additionally, the QI Project Champion described some pushback from team members who didn’t initially see this “an opportunity to learn”, but the higher level support and the delegation of ‘assignments’ encouraged additional participation. The majority of the participants also believed that the Wellness Centers’ QI projects will continue beyond the current project. One team member said, “Now people believe it (QI and using data for improvement) needs to be done...when I leave, the process is already set up making it easier for the next person to continue QI in the Wellness Center”.

## **LESSONS LEARNED**

Through observation, reviewing the Wellness Centers’ timelines and interview responses, the process completed at this site illustrates the importance of a dedicated champion to any QI effort. Additionally, the encouragement of the District Coordinator and the District Director provided the additional support needed when encountering push back. The presence of support from various leadership levels facilitates the creation of the QI culture which relies on the consistent and frequent use of data to identify ways to improve outcomes. Using data to drive decisions not only fosters a QI environment, but can also engage employees on levels previously not explored.

## **CONCLUSIONS**

As previously mentioned, this QI project was a part of a larger RWJF funded study which included two additional projects within other health districts in Georgia. It is crucial to note that the Health District where the Wellness Centers are located have both a district QI coordinator and an additional QI Coordinator housed within the Wellness Centers. The presence of these personnel indicates that a level of QI culture was already developing. While all of the districts included in the GAPHPBRN QI project have support from their district directors, this Health District also had additional key personnel with QI experience. In particular, the champion of this QI project had prior experience and knowledge of QI before the project began. This Quality Improvement experience and commitment appeared to have accelerated the adoption of a QI culture.

Through the involvement of every level of staff in QI processes, the QI team was able to find the root causes of their compliance issues and identify the most efficient way to improve their outcomes. Consequently, working with this Health District has also exemplified the need to engage people at all levels of an organization to successfully implement and sustain QI. This QI project also reinforces the importance of collecting and using data for informed decision making and the importance of disseminating information to key stakeholders.<sup>5</sup> As a result of the success, the Wellness Centers experienced through this PDSA cycle and other QI activities, the Wellness Centers have applied the same process to another data management system and rendered similar results. Since the culmination of this QI project, the Health District has continued to use QI techniques to improve their processes and build their QI plan in preparation for public health accreditation.

**SUMMARY BOX:**

**What is Already Known about This Topic?** Quality Improvement continues to emerge as a strategy to improve the effectiveness of local public health systems.

**What is Added by this Report?** This study provides additional evidence for the use of Quality Improvement techniques and supports the notion of creating a “QI Culture” within local public health systems.

**What are the Implications for Public Health Practice, Policy, and Research?** Through the use of quality improvement techniques and strong staff, managerial and community stakeholder support, practitioners can build a feedback loop that will continuously improve the organization’s operations and way services are delivered.

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