

**Accreditation Preparation &
Quality Improvement
Demonstration Sites Project**

Final Report

**Prepared for NACCHO by the
Wauwatosa Health Department,
WI**

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Summary Statement

The City of Wauwatosa Health Department (WHD) is located in Southeastern Wisconsin, and serves a suburban population of about 46,000. Using the NACCHO LHD Self-Assessment Tool for Accreditation Preparation and a quality improvement process, the Wauwatosa Health Department worked to develop a continuous, standardized data collection system to track health department activities and essential services as it relates to health priorities.

Background

In 2007, WHD started the foundation towards a departmental quality improvement process in preparation for voluntary accreditation in 2011. In July 2007, the department held a retreat to review previous work plans, progress to date, and the future direction of the health department. At the retreat, the health department administration oriented staff to the newly formed Health Improvement Committee (HIC), the subcommittee structure, and their roles and responsibilities. (See appendices B and C for the HIC structure and responsibilities.) The first charge of the subcommittees was to develop logic models describing goals, objectives, and interventions for each health priority. The Public Health Specialist and Nursing Supervisor drafted a template logic model and trained staff on how to fill out the logic models. The HIC Committee provided guidance and oversight to the subcommittees on the logic models. The subcommittees began their work on the logic models in August 2007, and completed their models in July 2008. (See appendices D and E for examples of the logic models. More robust logic models are available upon request.)

Since many of the goals and objectives in the logic models necessitated continuous data collection for ongoing monitoring, WHD realized that a relational database depicting health department activities needed to be developed. Without data, it is impossible to track any quality improvement. Previous data on selected activities were tracked using Microsoft Excel spreadsheets; the spreadsheets proved to have limitations in analyzing the data. Thus, WHD contracted with a database consultant in spring 2008 to develop a more robust, relational database. (See appendices F and G for examples of the databases.) Even with the spreadsheets' limitations, one theme emerged from a cursory analysis – inconsistent coding of the activities among staff. The NACCHO self-assessment affirmed the department's need to focus on a consistent data collection system of WHD's internal functions and activities.

Goals and Objectives

The ultimate goal of the project was to establish the database and begin tracking health department activities. The initial goals included:

1. Develop modules with identified fields for relational database by May 1, 2008.
2. Format database with information technology consultant by June 15, 2008.
3. Beta test database for bugs by July 1, 2008.
4. Enter data 'live' by August 1, 2008.
5. Analyze and evaluate data for standardization via new database by October 1, 2008.

As the project progressed, the objectives were modified due to delays. The IT consultant was delayed formatting the database due to area-wide flooding in June; the consultant was busy reconstructing his customers' systems that were damaged in the floods. In addition, two HIC members resigned from WHD this summer and another was on extended medical leave, which delayed progress on module development. The planned modules for inclusion in the pilot program included the following: inquiries, referrals, birth reports, case manager, adult health clinic, Women-Infant-Children (WIC) program, immunization program, WHD programming. The number of developed modules was reduced (inquiries, referrals, birth reports, and case manager), the activities were refined to focus on nursing services, and the data was minimally analyzed with the current Microsoft Excel spreadsheets.

Self-Assessment

The original plan for the self-assessment process was not implemented due to a local Measles outbreak in April through May. The plan was for the WHD administration team to discuss and complete the first

draft of the assessment tool, and then allow the Health Improvement Committee (HIC) and the Board of Health (BOH) to provide feedback on the draft. After the comments were received by the two entities, then the administration team was to finalize the version to be sent to NACCHO. Due to the compressed timeline in light of the urgent situation that needed addressing, the BOH and the HIC was given a copy of the assessment tool after it was submitted to NACCHO. However, neither the BOH nor the HIC contradicted the number values submitted on the self-assessment.

Highlights from Self-Assessment Results

Standard/ Indicator #	Standard and Significance
I. A.3	Data Collection, Processing, and Maintenance: LHD maintains and uses an information system. <ul style="list-style-type: none"> As previously stated, the Wauwatosa Health Department lacked an internal standardized data collection system depicting department activities. WHD scored consistently low on indicators related to data collection systems. This was the focus of the NACCHO project.
II. A. 6	Data Collection, Processing, and Maintenance: LHD collects, reviews, and analyzes comprehensive primary data and secondary data from a variety of reliable sources. <ul style="list-style-type: none"> This was another indicator the WHD had previously acknowledged as an area for improvement. WHD focused on identifying primary and secondary data for ongoing collection in the preceding year, as indicated in our logic models.
I. E. 2	Data Analysis: LHD draws inferences from data to identify trends over time. <ul style="list-style-type: none"> Once WHD has a continuous data collection in place, then the health indicators may be trended for patterns, improvements, or areas needing attention.

Quality Improvement Process

PLAN: As previously stated, all of the professional staff was assigned to subcommittees to develop logic models for long-term process improvement process. The HIC committee provided oversight to the subcommittees. A common theme emerged in needing a standardized data collection system to track internal departmental activities as it related to the essential services and health priorities. The current data collection system utilized Microsoft Excel spreadsheets, which were limited in data analysis. Besides continuing with the current spreadsheet method, other solutions included contracting out for data analysis (too expensive), developing an Access database internally for the data (too unstable for the type of data needed), or contracting with an IT specialist for a database with a more robust platform. Our markers for improvement were:

- 1). a functional database and
- 2). the ability to generate reports to standardize the coding system.

DO: WHD contracted with GBL Solutions, Inc. to develop the database. Several meetings were held with the health officer, nursing supervisor, the Public Health Nurse (PHN) assigned to the HIC committee, and the GBL consultant to discuss database fields, which fields related to one another, and program development. Questionable or problematic issues were clarified via email during the database development. After the initial modules were developed, the PHN tested the database for functionality. Many obstacles were encountered during this development phase, including delays due to sentinel events (outbreak, floods) and personnel changes. There were also many glitches encountered during beta testing of the data entry.

CHECK: No and yes. WHD did not complete the 'big PDCA' of database development to begin generating reports. However, WHD did test the database's functionality many times as part of the 'small PDCA's'. As a result, several glitches and areas for improvement were noted and worked on to make the database functional.

ACT: Due to the many delays, the 'big PDCA' of the database development will continue, but with the timeline extended. The plan is for modules 1 through 3 to 'go live' near the end of January 2009. In addition, development continues on modules 4 and on identifying components needed for generating usable reports.

Results

The new database is a work in progress. While work continues with its development, the department will standardize the coding system for departmental activities utilizing the former database coupled with an individualized look at each entry for coding symmetry.

Lessons Learned

A longer timeline to complete the self-assessment tool would have been useful, given other situations that arise in the day-to-day functioning of a local health department. When it comes to developing infrastructure, such as the WHD's database, building in a cushion into the timeline in addition to having contingency plans would have also been beneficial. While the scope of the project was ambitious, planning the PDCA process into smaller, more manageable projects would have focused the team better.

Next Steps

WHD will continue meeting with the IT consultant to get the database to be functional. The plan is to continue beta testing into December with a 'go live' date in January. The Public Health Nurses will continue the process to standardize the coding of activities by prioritizing which essential service to analyze first.

Conclusions

This project was more of a process improvement project than a quality improvement process. Unfortunately, with the delays encountered, the project could not be completed with the desired results within the timeframe of this grant. However, this demonstration site grant afforded the Wauwatosa Health Department to develop the much-needed infrastructure to carry out CQI processes in the future.

Appendices

Appendix A: Storyboard Template

Appendix B: 2008 WHD committee assignments

Appendix C: Logic Model – mental health

Appendix D: Logic Model – high-risk sexual behaviour

Appendix E: Inquiries screen

Appendix F: Referrals screen

Appendix G: WHD Small PDCA Rapid Cycles