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The National Connection for Local Public Health

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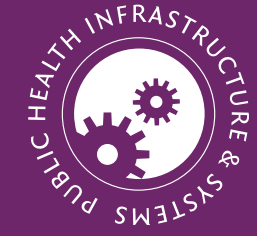
Using Quality Improvement to Respond to H1N1: New Jersey's Greater Somerset Public Health Partnership



Introduction

New Jersey is characterized by 21 counties composed of municipalities in which the residents may choose their type of government (i.e., city, borough, or township). This decentralized system, which is grounded in home rule, has 100 local health departments (LHDs) and 556 municipalities. Thus, LHDs are autonomous and primarily funded through local property taxes.

Established in the 1970s, the Greater Somerset Public Health Partnership (GSPHP) includes 10 LHDs surrounding and including Somerset County, linked together after health officials recognized the need for peer networking and sharing ideas and resources. The partnership remained loosely formed until 2003, when legislation was passed requiring the existence of governmental public health partnerships and adherence to the New Jersey Practice Standards that are linked to the 10 Essential Public Health Services. These standards are included in state-wide legislation and seek to modernize public health and ensure LHD performance by improving identification of emergencies, data collection, capacity for partnering, and more.

After years of collaborating by means of funding from the state around performance improvement initiatives such as Mobilizing for Action through Planning and Partnerships (MAPP),[1] the GSPHP wanted to receive funding directly and deliver services as an organization—so it applied for 501(c)3 status, granted in June 2009. After receiving 501(c)3 status, the GSPHP was able to apply for direct federal grants and other public health agency funding opportunities that previously had not been possible.

In spring 2009, the Centers for Disease Control and Prevention (CDC) announced the novel flu strain H1N1. As public concern increased and media coverage amped up, LHDs began to receive directives from their state health agencies around response to the virus. In New Jersey, the situation grew dire very quickly. The state experienced panic because of some highly publicized deaths and media reports on shortages for high-risk groups. Because of having status as a non-profit service-delivery agency, the GSPHP received funding and directives directly from the CDC to educate

and vaccinate the public. The GSPHP formed a team representing the entire service area consisting of health officers, clinical staff, and others.

Montgomery Township is located within the boundaries of Somerset County and is a part of the GSPHP. Stephanie Carey, Health Officer of the Montgomery Township Health Department (MTHD), has a wealth of experience with accreditation preparation and quality improvement (QI) in an LHD. MTHD was one of the National Association of County and City Health Officials' accreditation demonstration sites, whereby Carey and her team prepared for accreditation with the use of a self-assessment tool, technical assistance, and QI training. She also was involved with the state-wide and local QI efforts involved in New Jersey's participation in the Lead States in Public Health: the Multi-state Learning Collaborative (MLC),[2] a network that brings state and local health departments together with other stakeholders to improve public health services and the health of communities through QI practices. Many of the team members, like Carey, had experience with QI prior to the H1N1 response.

Using QI Tools to Improve H1N1 Response

When first beginning to look at New Jersey's H1N1 response effort, the group realized the response was not working. The public was in a panic, information was sparse, and health departments with vaccines were not able to efficiently market how people could get vaccines. Larger health departments had most of the vaccines, and members of the public were sent to various locations to receive a shot, sometimes to no avail.

Recognizing that clients were being turned away in various locations throughout the GSPHP, the team used a fishbone diagram[3] to conduct a root cause analysis and identified that it needed to address vaccine shortage in different areas of the community. The group brainstormed several potential interventions to address the vaccination shortages and developed the following improvement theory: if the GSPHP were to set up an appointment-based service, then it would limit the shortages, improve customer satisfaction, and decrease unvaccinated clients. As a part of the intervention, the GSPHP worked to coordinate messages, set up appointments with an online and phone scheduling system, and address the areas of highest need first.

After observing the new appointment scheduling process and collecting feedback from the clients, the group noticed some confusion and miscommunication around the phone, online, and in-person scheduling systems. The online scheduling system was being advertised, as was the call-in scheduling system (the "shot line"), but the two systems were not interacting and volunteers were not coordinating. As a result, the team decided to revisit the intervention by more rigorously marketing and using the online and phone scheduling system as a joint effort. Moving forward, all appointments, regardless of their method of scheduling, were inputted into the online system, and vaccines and staff shortages were addressed ahead of appointment times by rerouting clinical staff and supplies. During this cycle, all counties and health departments involved in the GSPHP's activities worked to ensure that messages were consistent, websites were up to date, and staff were directing people to the online scheduling system. The team was able to gather website and phone line data and found that the website received over 32,000 hits and the shot line received 12,000 calls. As a result of the team's response efforts, the communities were able to vaccinate 28,000 individuals, making their vaccination rate about average for the state. The team was very pleased with being able to reach this result without panic or disaster.

As part of the evaluation of the efforts, the GSPHP surveyed all those who received services in order to measure results, outcomes, and improve customer satisfaction. According to the results of the survey, customers were satisfied with the overall administration of vaccines through the GSPHP. Also, the increase in public support seen by the counties in the partnership was tremendous: over 1,500 people responded to the survey—during Christmas week—with over 800 personal comments, including the following:

- *Your partnership and clinics should serve as models for other counties in New Jersey [and] other states. [Staff were] organized, efficient, professional.*
- *Do not ever think that you are not needed…that your work is unappreciated or that you have no support in the communities. Thank you so much for all that you do.*

Discovering the Use of QI

The MLC leaders involved in the response effort, Health Officer Kevin Sumner and Health Educator Colleen McKay-Wharton, realized that throughout the response effort the team had been

Guiding Principles:

The team agreed to the following guiding principles to frame the response to H1N1:

1. **Use existing structure (GSPHP) to address response.**
2. **Act and respond in the same way—with one voice.**
3. **Use collective wisdom to develop interim "best initiatives."**
4. **Address community fear and panic with a steady, rational response.**
5. **Implement uniform policies across jurisdictions:**
   - **Appointment-based program**
   - **Common messaging**
   - **Hired health educator/staff/translator**
   - **Staggered scheduling**
   - **Shot line call center staffing with Red Cross support**
6. **Share available supplies to address early vaccine shortage.**
7. **Pool clinical operations and travel from town to town, night after night.**
8. **Share nursing services and coordinate volunteers.**
9. **Target younger audiences with the following strategies:**
   - **Online appointments**
   - **School-located clinics**
   - **Social media**
   - **After-school and after-work schedules**

"In the end, our vaccination rate in our partnership was exactly average for New Jersey. So what was remarkable about our program, that it has received such praise? [We] addressed the fear and panic. We gave the people of New Jersey calm, steady, consistent answers in the midst of media frenzy. We gave them a clearly understandable way to access vaccine that was felt to be fair. We worked with each other so that we weren't competing with each other. We were an example of good government working efficiently. We created as much certainty and consistency as possible in a frightening time. And we built each other up, calling out 'the better angels of our nature' in each of us in public health, to meet the challenge."

—Stephanie Carey, Health Officer, Montgomery Township Health Department

using several QI techniques without knowing it and informally using aspects of the Plan-Do-Check-Act (PDCA) model; they decided to initiate a more formal use of the PDCA framework to address the issue. Moving forward, the group would plan how to address an issue, tackle it, check to make sure it worked, and then decide whether to adopt, adapt, or abandon the intervention. Because of this, team members involved in the H1N1 response who were not yet formally trained in QI received a "warp-speed" introduction to the PDCA process and the concepts of QI. Had the project been initiated with QI in mind, the group would have collected data and tracked the process more thoroughly. Regardless, many good results came from "stumbling upon" QI in this initiative.

Conclusion

GSPHP member Stephanie Carey would recommend that LHDs incorporate QI into their work as a standard way of functioning—not as a burden or an added item in a long list of duties. This mindset continually focuses a team's thinking on its goals. QI "disciplines the mind," according to Carey. QI activities promote accountability and lead to recognition by other individuals and organizations. Carey feels that the most important factor in success of initiatives like this is collaboration. It drives groups toward consensus, leads to stronger and more diverse partnerships, promotes accountability, and makes partnerships more effective. Collaboration takes work, but the outcomes are worth the effort. When asked about the biggest challenged faced by the GSPHP, Carey said, "The challenge was the uncertainty, and the fear that this pandemic could get very bad very quickly (some of the early deaths in the first wave created a sense of foreboding of how bad the fall might be). There were huge technical issues, like liability, funding, and nursing, but they were surmountable once the uncertainty was addressed."

References

1. MAPP is a community-driven strategic planning process for improving community health. For information, visit www.naccho.org/mapp.
2. For more information about the MLC, visit www.nnphi.org/mlc.
3. Fishbone diagrams identify many possible causes for an effect or problem. More information is available at http://asq.org/learn-about-quality/cause-analysis-tools/overview/fishbone.html.

FOR MORE INFORMATION

Contact a member of NACCHO's Accreditation Preparation & Quality Improvement Team at accreditprep@naccho.org.

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