EXECUTIVE SUMMARY
The township of Bloomfield Department of Health and Human Services (BDHHS) is located in Northeast New Jersey and services the suburban community of Bloomfield and the Borough of Caldwell with a combined population of approximately 53,000. Using a quality improvement (QI) project, the department decided to address the low turnout at its rabies clinics. The problem was identified via a brainstorming session. The team thought about some of the issues that had arisen in the site visit report and some concerns they were having with participation in screenings/clinics. The team decided that it would focus on the participation in the bi-annual rabies clinic. By law, all cats and dogs need licenses and all owners must submit proof of rabies vaccination in order to receive their license.

BACKGROUND/INTRODUCTION
BDHHS learned of the beta test in an article in a NACCHO newsletter. After reading the article that put out a call for beta test sites, BDHHS decided that this would be an excellent opportunity to determine where they stood with regard to a national standard. They also felt that participating in the beta test would be a morale booster to the entire department. Additionally, as a forward-thinking department, BDHHS relished the opportunity to be able to contribute to the evidence base of public health science. Lastly, BDHHS, in line with the benefits of being a beta test site, looked forward to the opportunity of pursuing accreditation when the program became official and knew that participating in the beta test would help achieve this goal.

BETA TEST SELF ASSESSMENT
The self assessment was definitely the most labor intensive aspect of the beta test. For this project, the team consisted of the health officer, environmental supervisor, nurse supervisor, and health educator (accreditation coordinator). BDHHS is rather small and undertaking a project of this nature required help from as many employees as possible, but especially from those employees who were the most knowledgeable about their area of oversight. Therefore, the assistance of all of the supervisors was enlisted.

The self assessment took approximately five months working on the assessment 20–25 percent of the time. Therefore, it could be said that it took approximately one month of full-time work. The scoring consensus was left up to the accreditation coordinator as he compiled documents and evidence, evaluated it, and uploaded it into the self assessment.

The self assessment was labor intensive and required more work than BDHHS had anticipated. One of the difficulties that the team encountered was that it required more time, thoughtfulness, and attention to detail to provide accurate, honest, and complete answers. One thing that BDHHS enjoyed while completing the self assessment was the satisfaction that that they could document that they were completing many public health activities and always looking to do more as new topics or public health concerns were identified. One of the unexpected events that occurred was the inability to find and
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prove, in written detail, all the activities that they had completed or planned. The team realized how incredibly important documentation is.

Highlights from Self assessment Results

<table>
<thead>
<tr>
<th>Standard/Measure</th>
<th>Standard and Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.3.2L</td>
<td>Develop and distribute community health data profiles to support public health improvement planning processes at the local level</td>
</tr>
<tr>
<td></td>
<td>* This was a strong point for BDHHS. In 2005, BDHHS conducted a comprehensive health assessment of the community. The assessment was a comprehensive effort to measure the health status of the community, including analysis of objective health data and subjective information submitted by key informants and residents. The report also included findings and recommendations to the community to improve public health.</td>
</tr>
<tr>
<td>3.2.1B</td>
<td>Provide information on public health mission, roles, processes, programs, and interventions to improve the community’s health</td>
</tr>
<tr>
<td></td>
<td>* This was a strong point. BDHHS provides health information to the public through use of its website, numerous printed materials, a cable TV show, and the print media.</td>
</tr>
<tr>
<td>2.1.1B</td>
<td>Maintain protocols for investigation processes</td>
</tr>
<tr>
<td></td>
<td>* This measure and Domian 2.2.2L and 2.1.3B were weaknesses for BDHHS because were doing much of the work in these measures, a lack of detailed written plans, policies, procedures, and reports was evident.</td>
</tr>
<tr>
<td>4.1.1B</td>
<td>Establish and actively participate in collaborative partnerships and coalitions to address public health issues</td>
</tr>
<tr>
<td></td>
<td>* This measure was found to be a weakness because BDHHS was not able to document the constructive partnerships that they are working with throughout the township.</td>
</tr>
</tbody>
</table>

QUALITY IMPROVEMENT PROCESS (PLAN-DO-CHECK-ACT)

PLAN
Assembling the Team
There were two basic factors that influenced the selection of the QI team. Because BDHHS is a relatively small department (23 employees; 18 full-time equivalents), their resources are limited. Mike Fitzpatrick, the health officer, was chosen because he plays an integral part in organizing the rabies clinics. Michele Nemeth was chosen because she is the official record keeper of BDHHS. Additionally, she often has very helpful suggestions for improving some of the processes in BDHHS. Michael Hodges was chosen because he is the accreditation coordinator and has received extensive training in QI procedures. Additionally, he is responsible for BDHHS’s advertising, which plays an integral part in this endeavor.

Identifying the Problem
Because BDHHS was the last site visited by PHAB, they did not receive their site visit report until Oct. 4, 2010. The team conducted their own internal assessment via a brainstorming session and identified some concerns about participation in BDHHS screenings/clinics. The team decided that it would focus on the participation in the bi-annual rabies clinic. All cats and dogs need licenses and all owners must
submit proof of rabies vaccination in order to receive their license. The team noticed that the participation in their last rabies clinic was exceptionally low compared to previous years. Therefore, the team decided to select this process for a QI project. This project relates to Domains 9.1.3B through 91.1.5B that cover to the establishment of goals, objectives, and performance measures for processes, programs, and interventions.

The team thought that it would be a good idea to approach this issue with a QI analysis because they offer the vaccinations for free. The final aim statement was selected on Sept. 27 and read, “By Oct. 23, 2010, increase by 50 percent (from 24 to 36) the number of rabies vaccinations administered at BDHHS’s bi-annual rabies clinic.”

The initial aim statement was, “By October 23, 2010, increase by 25 percent (from 242 to 303) the number of rabies vaccinations administered at BDHHS’s bi-annual Rabies Clinic.”

There was a change the in the aim statement because the team realized that they were comparing apples to oranges. They were basing the aim on the results of the spring rabies clinic, which historically has higher attendance, making the original aim statement nearly impossible to accomplish. The aim statement was revised to use the numbers from the fall (Oct. 24, 2009) rabies clinic so that the team could measure their improvement during the Oct. 23, 2010, rabies clinic.
Examine the Current Approach
This flowchart shows the straightforward process for planning of the clinic:

1. **Time to have bi-annual Rabies Clinic**
2. **Decide the date of the Clinic**
3. **Decide the location of the Clinic**
4. **Confirm that location is available**
5. **Advertise the clinic**
6. **Hold the clinic**
The five whys were used to do a root cause analysis of the problems of our low participation. The results are below:

Five Whys

1) Why is the participation level low?
   a. People are getting the shots somewhere else.

2) Why are they getting the shots somewhere else?
   a. They don’t know about the rabies clinic.

3) Why don’t they know about the rabies clinic?
   a. The advertising is not extensive enough.

4) Why is the advertising not extensive enough?
   a. BDHHS does not have a formal advertising protocol that allows it to maximize exposure for screenings and clinics.

5) Why wasn’t a protocol ever put together?
   a. Although BDHHS has a usual process for advertising, they do not have a formal protocol that they always abide by. The team did not know how important/effective it would be.

Identify Potential improvements

The team focused on an increase in the quantity and quality of advertising as a potential improvement. The team realized that not enough attention had been given to ensuring that enough of the residents knew about the rabies clinics. The team also realized that it would be fairly simple to determine how participants learned about the clinic, allowing them to measure results accurately and pinpoint what specifically was improving participation. One common cause of variation, however, is that the vaccination that dogs receive lasts for three years, whereas the cats’ vaccination lasts for one year. Therefore, some of the animals need a shot every year whereas others do not.

Develop an Improvement Theory

The team’s implement improvement theory was, “If BDHHS increases the quantity of its advertising for the fall rabies clinic, it should realize at least a 50 percent increase in participation over the fall clinic held on Oct. 24, 2009.

BDHHS recorded rabies clinic participation information for the last several years. The list below indicates that there is historically more participation during the spring clinics.

May 1, 2010: 242
October 24, 2009: 24
May 3, 2009: 210
October 26, 2008: 21
April 27, 2008: 210

The team’s perception of the chosen QI issue did not change. One surprise that occurred during the plan phase was that we realized that we really were not advertising our Rabies Clinics as much as we thought we were.

DO

Data was collected by Michele Nemeth at the rabies clinic. For every participant, she found out how they learned of the rabies clinic and whether they have a cat or a dog. Other data that was collected included the resident status of each participant. Michael Hodges analyzed the data to find out which
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methods of advertising were the most effective for informing residents of the rabies clinic. The following chart shows the advertising interventions instituted with this clinic as opposed to what was done for the same clinic last year:

Rabies Clinic Intervention Strategies for Clinic Held on October 23

<table>
<thead>
<tr>
<th>Date of Implementation</th>
<th>Intervention Strategy</th>
<th>Implemented 2009</th>
<th>Implemented 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>September 22, 2010</td>
<td>Clinic flyer e-mailed to Mary Shaughnessy (Board of Education member) for distribution to Board of Ed and neighborhood contacts – Mary previously offered to provide such a service.</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td>September 22, 2010</td>
<td>Flyer e-mailed to Maria Burak (Head of Human Services in Caldwell and liaison to Bloomfield who contracts with Caldwell to handle public health) to distribute to Caldwell residents and place on the desk in the Community Center – she confirmed that this was done.</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td>September 22, 2010</td>
<td>Clinic advertised on Channel 35 (Bloomfield’s local cable access channel).</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td>September 25–26, 2010</td>
<td>Flyers distributed at Harvest Fest (an annual Bloomfield event held for an entire weekend every September), which includes vendor lined streets, local entertainment, and food.</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td>September 24, 2010</td>
<td>Notification through Nixle (94 users; Bloomfield residents) via text message and e-mail. Nixle could be likened to a form of Twitter where residents receive e-mails and/or text messages informing them of events that the BDHHS is holding. They have to sign up and create an account.</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td>September 28, 2010</td>
<td>Flyers at Bloomfield Safety Council (an eight-member council consisting of residents, BDHHS, fire department, local hospital, and nursing home) dedicated to improving the safety of the township.</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td>September 30, 2010</td>
<td>Flyers distributed in town hall offices (health, building, tax/water Payments, clerk).</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td>October 6, 2010</td>
<td>Flyers distributed at library.</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td>October 6, 2010</td>
<td>Flyers distributed at civic center.</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td>October 6, 2010</td>
<td>Flyers distributed to local pet shops and groomers.</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td>October 1, 2010</td>
<td>Press release distributed to papers (for three-week run).</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>September 22, 2010</td>
<td>Flyer placed on BDHHS website.</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>October 15, 2010</td>
<td>Press release distributed to papers again.</td>
<td>NO</td>
<td>YES</td>
</tr>
</tbody>
</table>
CHECK
BDHHS received an overwhelming response to the clinic via a flyer that was sent directly to individuals whose rabies vaccinations would soon be expiring (see Appendix B). This was certainly an unexpected result since the QI team did not decide that this would be one of the methods that would be used to advertise the clinic. Unbeknownst to the team, a BDHHS staff member decided to perform a direct mailing of the rabies clinic flyer to individuals whose pet licenses would soon be expiring. Nevertheless, it did prove to be serendipitous because it was the best form of advertising for this clinic. However, the team learned a lesson in that, “All processes have to be approved and accounted for so that an accurate test can be performed and accurate information can be gathered for a QI project.” The second best advertising method was the press release in the local papers (see Appendix B).

ACT
The collected data was sufficient to conclude that the improvement was effective. The data analysis also revealed that BDHHS’s electronic forms of advertising (NIXLE, website, Channel 35) were ineffective at increasing participation in the Rabies Clinic. With those points in mind, the team decided to go back to the plan phase and evaluate how to more effectively use residents’ contact information. Since the most effective form of advertising was the direct mail to residents whose pet licenses would soon be expiring, the team decided that it would be advantageous to obtain and use e-mail addresses of the pet owners to determine if that would be an effective (and free) means of informing them. To that end, the team decided to create a sign-in sheet for the next Rabies Clinic, where they can obtain this information. They may also place a line on the Pet License Applications for e-mail addresses.

Because the press release in the papers was the second most effective means of advertising, the team decided to explore the possibility of paying for ad space, which is bit more prominent and eye-catching than a press release. The team be able to determine whether an ad has more impact than a press release. The team had started this project with the intention of increasing participation in all of their clinics. The additional planning will help the team look for ways to incorporate these best practices across the board at BDHHS.

RESULTS, NEXT STEPS, AND ACCREDITATION
Based on the team’s internal self assessment, they looked for a particular process/service that they were offering that could be improved upon. The team’s selection of improving the attendance at their rabies clinic relates to Domains 9.1.3B through 9.1.5B, which deals with the establishment of goals and performance measures for processes, programs, and interventions. The beta test experience has shown BDHHS how important QI is to public health. Without QI processes, public health efforts can become stale and produce lackluster results. The beta test experience, including the requirement of a QI project, has shown BDHHS how important it is to visit and re-visit processes and services in an effort to make them better. The team also appreciated the new QI tools that were introduced (e.g., brainstorming, five whys, fishbone diagram) that can be used to drill down to the root of a problem and then put something in order to address the problem. The team was also happy to see that the new implementations allowed the team to far exceed the goal of their aim statement. However, there are certainly more complex problems that a health department has to solve and processes that need to be improved. By gaining confidence in using a QI on a simple situation, BDHHS will feel more comfortable using this type of process to deal with a more complex problem/process. The team learned that that some of their advertising was not very effective for this type of service. The team
learned that placing information on the BDHHS website and sending out Twitter-like messages did not reach as many people as we anticipated. This will help in future efforts not to waste time on ineffective methods. This project has helped BDHHS prepare for national voluntary accreditation.

LESSONS LEARNED
The self assessment was the most labor intensive aspect of the beta test. The team also realized that what they consider meeting a measure does not necessarily appear that way when it comes to the site visit. Therefore, the team feel that self assessment training is vital if health departments are going to be able to provide the information that will be required. The team recommends that other health departments document everything that they do and make sure that they have clearly defined policies in place for all of the activities that they engage in throughout the workday. These two points cannot be emphasized enough. The team also advises other health departments to keep leadership abreast of what is going on with the entire accreditation process so they understand the volume of work involved. This must be communicated all the way up to the governing entity.

When selecting a QI Team, it is important that you choose individuals that will be very hands on and want the project to succeed. It makes sense to choose a QI project based on the results of the self assessment. Additionally, the project results should be able to be used across the board. Departments should endeavor to do a QI project that can be used to improve several processes/services if possible. That will allow the department to see how valuable this aspect is and will encourage staff to work continuous quality improvement into everyday culture. BDHHS advises departments that are unfamiliar with QI to use the five whys to perform a root cause analysis.

BDHHS also appreciated the technical assistance available from PHAB and NACCHO. They are two very extremely competent organizations with a genuine desire to assist and to see health departments achieve bigger and better things.

APPENDICES

Appendix A: Storyboard

Additional Appendices:

Appendix B: Table Showing the Effectiveness of Various Types of Advertising for rabies clinic