

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

**Final Report**

**Prepared for NACCHO by the Levy  
County Health Department, FL**

**November 2008**



## **Brief Summary Statement**

The Levy County Health Department (LCHD) is located in the heart of rural north Florida and serves a primarily rural population of slightly more than 40,000. After completing the Self-Assessment tool, members of the team determined that the key area where performance of the LCHD needed to be enhanced was in criteria IX-C: evaluate the effectiveness and quality of all local health department programs (LHD) and activities and use the information to improve LHD performance and community health outcomes. Members acknowledged that development of this capacity during the short time frame of the project would be ambitious so they decided to tackle a more pressing problem that had an immediate impact on the public served by the LHD. This was the problem of timely and accurate animal bite reporting.

## **Background**

LCHD is located in a county of slightly more than 40,000 residents. Slightly more than 83% of the population is white with nearly 13% black. While nearly 20% of Florida's total population is Hispanic, only 5.6% of Levy's population is Hispanic (though that population is growing immensely). Though only 31% of Florida's residents live below the federal poverty level, slightly more than 45% of Levy County's residents fall into that category. In addition, nearly one out of every five Levy County residents is uninsured. The LCHD provides environmental health services; adult and child primary care; Healthy Start services; family planning services; and education and outreach.

After completing the self-assessment, the quality improvement team (QI) deliberated extensively on potential projects to tackle. While these deliberations were underway, an animal bite incident in the county received a lot of attention. QI team members then looked into the LCHD's animal bite reporting program. And while the program was in place, to the best of anyone's knowledge, there had never been any sort of community campaign about timely and accurate reporting of animal bites.

While the animal bite reporting project was important unto itself, the real desire of the LCHD team was to learn the skills associated with quality improvement processes while implementing those skills in a real-world setting. As such, the LCHD team could replicate the processes learned on a wide variety of other key issues that were indicated as potential areas of improvement in the self-assessment.

## **Goals and Objectives**

The aim was to improve timely and accurate animal bite reporting. With the scope of the project so short, the aim was altered to educate Levy County residents on the importance of timely and accurate bite reporting. The actual aim statement: *By November 30, 2008, Levy County residents will demonstrate greater awareness on six key components of bite reporting compared to baseline tests given prior to community education on bite reporting awareness.*

The goals or the aim did not change during the project (due to the project's short duration), but near the end of the project, we realized that improving awareness was not or should not have been the real aim. The real aim of the project should have been to increase the percentage of animal bites that were reported in a timely and accurate fashion.

## **Self-Assessment**

The LCHD decided to use a local consultant, WellFlorida Council, to facilitate both the self-assessment and the quality improvement process. WellFlorida is one of 11 of Florida's local health councils. Their expertise is in the area of health planning, community engagement, strategic planning and quantitative and qualitative data gathering and analysis. WellFlorida recommended a half-day retreat to conduct the self-assessment. The team members below brought all critical documentation and background materials that were needed to the retreat and each element of the self-assessment was addressed until consensus was reached on the score. Members who were more familiar with certain elements provided background accordingly. Consensus was reached in all areas. In terms of any difficulties, these were noted during the survey we completed on the self-assessment tool itself. The greatest difficulty encountered by the LCHD in completing the tool was the fact that many areas seemed redundant and present across multiple indicators. Also, because the health department governance structure in Florida does not have local health boards, some of the questions pertaining to certain aspects of the local health board were not relevant.

### Self-Assessment Team Members

Name	Title, Department or Role
Barbara Locke	County Health Department (CHD) Administrator
Brenda Brown	Business Manager
Johnnie Jones	Sr. Human Services Program Manager
Donald May	Environmental Health Specialist III
Shirley Jeannie Norris	Senior Community Health Nurse
Elizabeth Powers	Community Health Nursing Director
Diane Wilson	Nursing Program Specialist
Kristina Zachry	Health Educator Consultant
Slande Celeste	Health Educator Consultant

Each of the indicators was assigned one of 24 topic areas. As part of the LCHD analysis, team members tabulated the average score for all the indicators within each topic area to get a topic area average. The four greatest topics of concern for the LCHD were:

- Quality Improvement
- Legislative Process
- Policy
- Evaluation

After some deliberation, team members felt that evaluation was the most critical area of upgrade needed based on the self-assessment. And while there was and is a need to build capacity in the area of evaluation among key program staff, upgrading evaluation capabilities was not chosen as the QI project. Instead members of the team wanted to implement a project that would allow them to conduct at least one cycle of PDCA prior to the deadline for project submission. The timeliness of the animal bite issue resulted in "timely and accurate reporting of animal bites" being selected as the QI project

### Highlights from Self-Assessment Results

#### Areas of Excellence

Standard/ Indicator #	Standard and Significance
IC & V C	Conduct or Contribute Expertise to Periodic Community Health Assessment. The LHD conducted a community health assessment in 2004, brought members of the community together to do a Local Public Health Standards assessment, and then brought key stakeholders together for a PEACH process. The LHD brought community partners together to form the Levy County Wellness Coalition. The Coalition has developed a strategic plan that they are currently working on.
II A	Routine Outbreak Investigations The LHD has four staff nurses who have received formal training and are part of a regional Epi Strike team. Our disease case information is entered into a statewide database (MERLIN). The LHD also has County environmental health hazards identified on a GIS system. We have established policies and protocols for case investigation and disease reporting. The LHD also participates in the statewide notification system FDENS.
II D	Take Lead in Emergencies That are Public Health in Nature All LHD staff are required to have ICS 100 on employment. Other key staff are trained in ICS 200,300,400 & 700. LCHD staff participate in drills for the Strategic National Stockpile along with County Emergency Preparedness staff. LCHD staff also have experience working in special needs shelters. Each staff person is a member of a team that has a specific role and responsibility during an emergency. We exercise and train on an annual basis with other government agencies. The LHD participates with local emergency management in completing the CEMP and we have other required plans in place.

#### Opportunities for Improvement

Standard/ Indicator #	Standard and Significance
IX-B	Use evidence-based methodology for evaluation <ul style="list-style-type: none"> <li>• This was an area of weakness for LCHD, as identified through the self-assessment. There are really no evidence-based methodologies being used to evaluate program and system performance at the LCHD. This was considered as an area of focus.</li> </ul>

IX-C	<i>Evaluate local health department programs</i> <ul style="list-style-type: none"> <li>• <i>This was an area of weakness for LCHD, as identified through the self-assessment. There are really no methodologies being used to evaluate program and system performance at the LCHD. This was considered as an area of focus as there is little evaluation activity underway at present.</i></li> </ul>
IX-D	<i>External evaluation of other's programs</i> <ul style="list-style-type: none"> <li>• <i>This was an area of weakness for LCHD, as identified through the self-assessment. With little to no in-house evaluation being performed, there is absolutely no external evaluation underway.</i></li> </ul>

## Quality Improvement Process

**AIM Statement:** *By November 30, 2008, Levy County residents will demonstrate greater awareness on six key components of bite reporting compared to baseline tests given prior to community education on bite reporting awareness.*

**PLAN:** The aim was to improve timely and accurate animal bite reporting. With the scope of the project so short, the aim was altered to educate Levy County residents on the importance of timely and accurate bite reporting. The actual aim statement: *By November 30, 2008, Levy County residents will demonstrate greater awareness on six key components of bite reporting compared to baseline tests given prior to community education on bite reporting awareness.*

After completing the Self-Assessment tool, members of the team determined that the key area where performance of the CHD needed to be enhanced was in criteria IX-C: evaluate the effectiveness and quality of all local health department programs (LHD) and activities and use the information to improve LHD performance and community health outcomes. Members acknowledged that development of this capacity during the short time frame of the project would be ambitious so they decided to tackle a more pressing problem that had an immediate impact on the public served by the LHD.

At the inception of this project, a particular bite incident had been big news in the local media and had highlighted the issue of animal bites, especially in rural communities such as Levy County. Currently, in Levy County animal bites are reported to the County's Animal Control or the CHD's Environmental Health office. Though the reporting program works relatively well, there is little to no community education on how to timely and accurately report an animal bite.

The Self-Assessment team quickly morphed into the animal bite reporting project team with defined roles and responsibilities for each member. Members of the team included representatives from nursing, environmental health, administration, health promotion and education and the supervisors for Healthy Families and Healthy Start programs. The team also met with a representative from the county animal control to discuss our project and receive input regarding issues or problems related to animal bites.

At our first team meeting, the group had a lively and lengthy brainstorming session about our current animal bite reporting process and our rabies program. The team finally decided that we needed to document our process using a flow chart. By breaking the process down into its component parts, we were able to evaluate each step in more detail. Our initial theory was that there was a lag time between the bite and the health care providers or animal controls report of the bite to the LCHD. At this point, we brought in an additional environmental staff person who maintains a log of all animal bites reported to the LCHD. An analysis of the log indicated that our theory was partially wrong. The victim was the one who delayed reporting the bite or seeking treatment for three or more day's. Additional issues that emerged during our discussion, was that victims of animal bites had many misperceptions about the importance of reporting animal bites, and information about the seriousness of rabies. Essentially, this is how the team concluded that the LCHD needed to educate the community about animal bites. Using the "5 W's" the team developed our final aim statement.

### Improvement Theories:

- If we provided comprehensive community education on bite reporting, then the community's awareness on timely and accurate bite reporting will increase.
- If public awareness on timely and accurate bite reporting increases, then there will be more reporting of animal bites.
- If there is timelier and accurate reporting of animal bites, then more people will receive appropriate treatment for potential exposure to diseases transmitted by animal bites.

The solution that the quality improvement (QI) team determined would have the biggest impact would be to conduct a 6-8 week community campaign on timely and accurate bite reporting.

**DO:** The campaign included the following:

- A rabies educational board that was toured throughout the community for two months including locations such as the senior center, Wal-Mart, county fair, smoking cessation classes, Wellness coalition meetings, CHD waiting room and schools.
- Incentives for interacting with the educational board (reading material and then taking quiz) for adults and children including: coloring books, pens, picture frame magnets, bookmarks and first aid kits.
- Bi-lingual pamphlets with animal bite information.
- Newspaper articles.

In order to test change/improvement, a community-wide pre-test was conducted with 350 respondents. This survey tested awareness of residents in 6 key components of bite reporting:

- What? What animal bite needs to be reported? All animal bites.
- When? When should an animal bite be reported? Immediately
- Where? Where should someone call to report an animal bite? Levy County Health Department
- How? How will the animal be dealt with? Information to lessen fears that animals will be taken from owners.
- Why? Why is it important to report bites? Because rabies is fatal and early medical intervention ensures the best outcomes.

After an 8-week campaign, a community-wide post-test was conducted among 326 residents to determine if awareness levels on timely and accurately bite reporting had increased.

None of the more sophisticated quality improvement tools were used in this project. The QI group utilized structured brainstorming, flow charting, analyzing a bite report log, creating a storyboard and plotting data points for some things for which we recorded data.

**CHECK:** The data collected was the pre- and post-test response to the following key animal bite questions:

- What kind of animal bites should be reported to the authorities?
- How long should you wait before contacting authorities about an animal bite?
- Where should you call to report an animal bite?
- Which statement is true about illness from rabies?
- If an animal with rabies bites you, what is most likely to affect your health?
- What happens to your pet if it bites someone?

The QI study groups expected that there would be improvement on all six key components. However, there was improvement on only four of the six questions. The results of the pre- and post-test are in the table below. The post-test response was worse for what kind of animal bites should be reported and what happens if your pet bites someone. Respondents demonstrated increased awareness on the remaining four questions.

Levy County Health Department Rabies Prevention				
<b>What kind of animal bites should be reported to the authorities?</b>				
<b>Answer Options</b>	<b>Post-Test Response Percent</b>	<b>Post-Test Response Count</b>	<b>Pre-Test Response Percent</b>	<b>Pre-Test Response Count</b>
All bites*	46.6	152	55.6	194
Only bites from stray animals	7.7	25	6.9	24
Any bite that breaks the skin	34.7	113	26.4	92
Any bite that requires medical attention	11.0	36	11.2	39
<i>answered question</i>		<b>326</b>		<b>349</b>

<b>How long should you wait before contacting authorities about an animal bite?</b>				
<b>Answer Options</b>	<b>Post-Test Response Percent</b>	<b>Post-Test Response Count</b>	<b>Pre-Test Response Percent</b>	<b>Pre-Test Response Count</b>
No time, contact authorities immediately*	95.7	312	91.1	317
2-3 hours	1.5	5	5.5	19
At least 24 hours	2.8	9	3.2	11
At least 48 hours	0.0	0	0.3	1
<i>answered question</i>		<b>326</b>	<b>348</b>	
<b>Where should you call to report an animal bite?</b>				
<b>Answer Options</b>	<b>Post-Test Response Percent</b>	<b>Post-Test Response Count</b>	<b>Pre-Test Response Percent</b>	<b>Pre-Test Response Count</b>
Police Department	8.0	26	11.7	41
School	0.0	0	0.3	1
Hospital	2.1	7	4.3	15
Health Department*	53.1	173	47.3	165
Animal Control	36.8	120	36.4	127
<i>answered question</i>		<b>326</b>	<b>349</b>	
<b>Which statement is true?</b>				
<b>Answer Options</b>	<b>Post-Test Response Percent</b>	<b>Post-Test Response Count</b>	<b>Pre-Test Response Percent</b>	<b>Pre-Test Response Count</b>
You always die from rabies	0.0	0	2.3	8
With treatment death may be prevented*	98.5	321	92.0	322
Only weak people die from rabies	0.3	1	0.6	2
Only wild animals carry rabies	1.2	4	5.1	18
<i>answered question</i>		<b>326</b>	<b>350</b>	
<b>If an animal with rabies bites you, what is most likely to affect your health?</b>				
<b>Answer Options</b>	<b>Post-Test Response Percent</b>	<b>Post-Test Response Count</b>	<b>Pre-Test Response Percent</b>	<b>Pre-Test Response Count</b>
Age of the animal	0.3	1	0.0	0
Sickness of the animal	3.7	12	8.0	28
Severity of the bite	2.1	7	4.3	15
How quickly you are treated by a medical professional*	93.9	306	87.7	306
<i>answered question</i>		<b>326</b>	<b>349</b>	
<b>What happens to your pet if it bites someone?</b>				
<b>Answer Options</b>	<b>Post-Test Response Percent</b>	<b>Post-Test Response Count</b>	<b>Pre-Test Response Percent</b>	<b>Pre-Test Response Count</b>

Must always be put down so the brain can be tested.	1.8	6		17
Must always be confined at a facility at owner's expense.	30.7	100	26.7	91
Nothing, if they have been vaccinated	17.5	57	17.0	58
Most often you will have to confine your pet at home for ten days*	50.0	163	51.3	175
<i>answered question</i>		<b>326</b>		<b>341</b>

\* = Correct Answer

**ACT:** The LCHD had two lessons learned regarding the most challenging aspects of the project:

- There is great difficulty in trying to educate the public in a small community with limited media opportunities and with the population being so dispersed.
- There is great difficulty in getting your QI team together on a regular basis. It takes not only a philosophical commitment to quality improvement but also a time and resource commitment.

The LCHD also had a lesson learned regarding the benefits of the process:

- Initially, it was easy to see how the PDCA model and QI was applicable to other areas. But as the group spent time together and as specific progress was achieved, team members were able to see how this process was generalizable to their area of daily expertise.

One final lesson learned is that it is easy to design and implement a project that makes a change. Almost any type of intervention makes a change of some sort. However, is the change an improvement? Before embarking on this process, a group should spend a lot of time pondering its aim statement to make sure it is not merely affecting a change when an improvement is warranted.

## Next Steps

With regards to this particular project, an animal bite education program will become a part of the LCHD's ongoing community educational programs. As the LCHD is a small health department without a dedicated Quality Improvement position, participation in this project was essential in informing the LCHD management team on the importance and benefit of QI processes. Now, the challenge will be to replicate this process across the organization on the many issues that confront us. The repetition and generalization of the process will allow us to prepare for a national accreditation which has QI as one of its benchmarks.

## Conclusions

By virtue of its participation in this project, the LCHD better understands the demands and importance of QI and will be better prepared to respond to the QI requirements that may become the part of any national accreditation standard.

## Appendices

Appendix A: QI Storyboard