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School of Public Health

**Michigan Center
for Public Health
Preparedness**

**Berrien County Health Department
Project Public Health Ready
Training Needs Assessment**

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Executive Summary

The needs assessment study utilized two methods: focus groups and a survey. Three focus groups were completed in March of 2006. One group included only management staff and special staff. The other two groups included non-management employees.

The focus group participants nominated a large number of public health emergencies for which the Berrien County Health Department (BCHD) employees needed further response training. Five types of emergencies, however, received the highest number of nominations: Terrorist Incident, Transportation Accident, Nuclear Plant Accident, Chemical Spill, and Water Contamination. It is interesting to note that the most votes among management team focus group were for Transportation Accident and for Nuclear Plant Accident, while the two staff groups were more likely to vote for Terrorist Incident and for Water Contamination.

The primary focus of the group discussions were the training needs for nine specific core emergency preparedness competencies. The authors read all recorded notes for the groups' discussions and identified content themes within the notes. A variety of content themes were identified indicating the types of training needs discussed during the focus group sessions:

1. Staff Roles & Work Assignments
2. Communications
3. Chain of Command
4. Emergency Plans
5. Training for Specific Hazards
6. Flexible Response and Problem Solving Skills
7. Training Exercises
8. Communication Equipment
9. Personal-Family Emergency Plans
10. Providing Feedback to Staff

Many of the thoughts of the participants focused on training needs for all employees of the BCHD, not just the leaders and managers. It was especially evident that many employees did not know what their job role would be in specific emergencies or who they would report to or what job activities they would perform. Specific example quotes are provided for each content theme to clarify the thoughts of the focus group participants.

At the end of the focus group discussions, the participants wrote down a title of a class that reflected their ideas for the most pressing training needs for the BCHD. The authors of this report classified the class titles into categories revealing common themes. The categories were:

1. Role in an Emergency
2. Response in an Emergency
3. Planning/Training for an Emergency
4. Communication
5. Coordination

Again the importance for all BCHD employees to know their job role and responsibilities were common themes.

The survey method was utilized to understand the perceptions of public health emergency training needs among all the BCHD employees. We developed an internet-based survey procedure and encouraged all BCHD service managers to invite all employees of the BCHD to complete the survey. During a three week period in June and July of 2006, most employees (n=87; response rate=69%) completed the survey.

The BCHD employees initially indicated the perceived training needs for specific public health emergencies. They reported training needs for natural hazards (e.g., severe winter weather), man-made hazards (e.g., chemical spill), and public health hazards (e.g., flu pandemic). More than 25% of the respondents reported that extensive training was needed for four natural hazards:

1. Dam Failure
2. Earthquake
3. Subsidence (sinking of Earth's surface)
4. Wildfire

More than 25% of the respondents reported that extensive training was needed for only one man-made hazard (Terrorism/Sabotage/Weapons of Mass Destruction) and for only one public health hazard (Water Contamination/Biological Outbreak).

The BCHD also rated their perceived level of emergency preparedness competence for five different emergency scenarios:

1. Nuclear power plant accident
2. Industrial chemical spill incident
3. Chemical/Biological Contamination of Water Supply
4. Infectious Disease Outbreak
5. Widespread Power Outage

Low average ratings were used to identify training needs. In response to all five scenarios, the lowest average competency rating were for describing the "BCHD's responsibilities", for describing "my job responsibilities" in emergency response, and for demonstrating "my job responsibilities." Higher competency ratings were noted for identifying the person "I should report to." In general, the competency ratings were lower for the chemical spill incident, the water contamination incident, and the power outage incident scenarios.

The survey respondents also reported perceived competency ratings for 10 other competencies (without reference to specific emergency scenarios. The lowest average competency ratings (indicating the highest training need) were reported for describing "my job responsibilities during a mass distribution clinic," and for responding to "a food borne disease outbreak." The ratings of competencies related to using various communication devices revealed that the BCHD employees felt competent in using fax machines, cell phones, two-way radios,

and email. They felt less competent in using 800 MHz radios, and the Health Alert Network (HAN).

The personal impact of public health emergencies were also covered on the needs assessment survey. The BCHD employees were polled on how likely they would report to work during a variety of emergencies. Almost 60% indicated they would not likely report to work during a radiological or nuclear incident. The highest number of employees indicated high likelihood of reporting to work during an E. coli outbreak and a pandemic flu outbreak. The employees felt most at risk during a radiological incident, a large natural disaster, a smallpox incident, and an ice storm. Some employees felt that reporting to work might put their families at risk during a smallpox incident, a pandemic flu outbreak, and a large natural disaster. Ratings on a 1-4 scale averaged around 2 or less. Over half of the employees reported not having a public health emergency plan for their families. Many of the employees did not feel like their role was very important during a variety of public health emergencies. Only 44% considered themselves essential personnel for public health emergencies.

The summary and recommendations emphasized the overarching training need theme of the employees need to know their personal role in the department's response to public health emergencies and the specific types of public health emergencies that were of the highest personal concern to the employees.

Background

The purpose of this project was to assist the Berrien County Health Department (BCHD) in their progress towards becoming recognized as "public health ready" by the National Association of County and City Health Officials (NACCHO). The Project Public Health Ready program required each site to complete tasks in three key areas: emergency preparedness planning, workforce competency development, and demonstration of readiness through exercises/simulations.

One of the first steps is to submit a comprehensive, long-term training plan integrating a training needs assessment, a review of past exercises, and plans for future training. The Michigan Center for Public Health Preparedness had experience developing and implementing needs assessments to local health departments and viewed this project to be a valuable endeavor for collaborating with the practice community and advancing preparedness efforts for the public health community.

Under the direction of Dr. Thomas Reischl at the University of Michigan, School of Public Health, staff from the Michigan Center for Public Health Preparedness (MI-CPHP) conducted three focus groups and an online needs assessment survey of all BCHD employees to assess the training needs of public health professionals working in the Berrien County. The focus of these studies was to identify emergency preparedness training needs for the department's workforce.

Competency Training Needs

Training needs were conceptualized in terms of nine emergency preparedness core competencies as described by the Centers for Disease Control and Prevention (CDC) & Columbia University School of Nursing, Center for Health Policy (adopted April, 2001). The nine competencies were general and applicable to nearly all staff involved in emergency response:

1. DESCRIBE the public health role in emergency response in a range of emergencies that might arise. (For example: "This department provides surveillance, investigation and public information in disease outbreaks, and collaborates with other agencies in biological, environmental and weather emergencies.").
2. DESCRIBE the agency chain of command in emergency response.
3. IDENTIFY and LOCATE the agency emergency response plan (or in large agencies, the pertinent portion of the plan).
4. DESCRIBE his / her functional role(s) and responsibilities in emergency response and DEMONSTRATE his / her role(s) in regular drills.
5. DEMONSTRATE correct use of all communication equipment used for emergency communication (phone, fax, radio, etc.).

6. DESCRIBE his / her communication role(s) in emergency response: Within the agency; With the media; With the general public; Personal (with family, neighbors).
7. IDENTIFY limits to his/her own knowledge, skills and authority and IDENTIFY key system resources for referring matters that exceed these limits.
8. RECOGNIZE deviations from the norm that might indicate an emergency and DESCRIBE appropriate action (e.g. communicate clearly within the chain of command).
9. APPLY creative problem solving and flexible thinking to unusual challenges within his/her functional responsibilities and EVALUATE effectiveness of all actions taken.

Procedures and Timeline

We projected that the project would take five months to complete (see Table 1). The first task was to convene a focus group of the BCHD management team—the directors of each "service area" at the BCHD. The second task was to conduct similar focus groups with non-management employees. Both focus groups discussed issues related to the readiness of the BCHD for public health emergencies.

The focus group discussions were used to help develop the questions for a survey questionnaire study. All BCHD employees were invited to complete the questionnaire on a website built by the MI-CPHP staff. The questionnaire also focused on emergency preparedness training needs.

Table 1. Timeline for Project Public Health Ready Needs Assessment Project

Task:	Timeline: (2006)
<ul style="list-style-type: none"> • Convene focus group of management team • Draft initial needs assessment questions • Schedule two focus groups of public health professionals from health department 	March
<ul style="list-style-type: none"> • Conduct two focus groups • Write brief report on focus group discussions • Create online needs assessment tool/review of tool/final version produced 	April
<ul style="list-style-type: none"> • Pilot online needs assessment tool/make modifications • Distribution of URL for completion of needs assessment by all health department employees • Follow-up with non-responders 	May-July
<ul style="list-style-type: none"> • Data collating • Conduct initial data analyses • Convene work group to review initial data analyses • Complete final data analyses • Complete final report 	July-August

Phase I: Focus Group Procedures

The first step involved convening a focus group with the Berrien County Health Department's management team and selected special staff (e.g., the Epidemiologist) on March 8, 2006. This group was directed to discuss the training needs of the management staff and of the non-management staff. The second and third focus groups included BCHD non-management staff strategically selected by managers from all departments within the BCHD. Managers were instructed to select a variety of 15 staff members who are able to articulate their own training needs and those of staff members they work with.

The selected staff was directed to discuss the training needs of the non-management staff. The goals of all three focus group discussions included:

- A. Identify the training needs in terms of specific work tasks and work skills associated with the nine emergency preparedness core competencies.
- B. Identify the training needs in terms of the specific types of public health emergencies that are most likely to involve the BCHD workforce.

The BCHD was responsible for identifying the participants in the focus groups, for securing a room for the focus groups, for notifying the participants of the time and location of the focus group, and for making arrangements to facilitate the participation of the participants (e.g., informing supervisors, arranging for work coverage).

The UM faculty and staff wrote detailed field notes during the discussion and typed the field notes into MS-WORD documents. We also audiotaped the discussions and referred to the audiotape when the field notes were incomplete. After the field notes were typed into MS-WORD documents, the UM faculty and staff conducted thematic content analyses – identifying common themes and provocative comments about the training needs of the BCHD workforce.

The identification of common themes facilitated an understanding of the training needs of the BCHD workforce.

Results from Focus Group Discussions

Training Needs for Specific Types of Emergencies

The first question discussed by each focus group was "What are all the types of public health emergencies that the Berrien County Health Department staff should be ready for?" This was the "ice breaker" question to help the participants think about emergencies the BCHD might be required to respond to. The participants named types of emergencies that were recorded on an easel sheet at the front of the room. The responses of all three focus groups are listed in Table 2.

Table 2. Types of Emergencies Named by Focus Group Participants.

Type of Emergency	Focus Groups		
	Management	Staff 1	Staff 2
Nuclear Plant Accident	X	X	X
Transportation Accident	X	X	X
Tornado	X	X	X
Pandemic Flu	X	X	X
Civil Unrest	X	X	X
Chemical Spill	X	X	X
Snow Storm	X	X	
Undertow	X		
Temperature Extremes	X		
Flooding	X	X	
Outbreak	X		X
Pipeline Accident	X		
Terrorist Incident	X		X
School Incident	X		
Water Contamination		X	X
Food Contamination		X	
Plague		X	
Animal Diseases		X	
Agricultural Issues		X	
Fire		X	
Power Outage		X	
Evacuees		X	
Other Infectious Disease		X	

Participants in all three groups named Nuclear Plant Accident, Transportation Accident, Tornado, Pandemic Flu, Civil Unrest, and Chemical Spill.

After naming the types of emergencies that BCHD should be ready for, the participants in all three groups were asked to vote for three of the named emergencies where there is the greatest need for training in Berrien County. The votes were tallied and are presented in Table 3.

Table 3. Number of Votes for Emergencies with Greatest Training Need in Berrien County Health Department.

Type of Emergency	Focus Groups			Total Votes
	Management	Staff 1	Staff 2	
Terrorist Incident	6	0	9	15
Transportation Accident	9	1	5	15
Nuclear Plant Accident	9	4	1	14
Chemical Spill	5	5	4	14
Water Contamination	0	10	4	14
Pandemic Flu	2	5	2	9
Snow Storm/Blizzard	4	4	0	8
Food Contamination	0	6	1	7
Outbreak	2	0	3	5
Tornado	1	2	1	4
Power Outage	0	4	0	4
Other Infectious Disease	0	4	0	4
Flooding	0	3	0	3
Temperature Extremes	2	0	0	2
Civil Unrest	0	0	1	1
Animal Diseases	0	1	0	1
Undertow	0	0	0	0
Pipeline Accident	0	0	0	0
School Incident	0	0	0	0
Plague	0	0	0	0
Agricultural Issues	0	0	0	0
Fire	0	0	0	0
Evacuees	0	0	0	0
Total Votes	40	49	31	120

There were seven emergencies that received votes in all three groups. Five of these emergencies, however, received the highest number of total votes (at least 14 votes out of 120 total votes cast):

1. Terrorist Incident
2. Transportation Accident
3. Nuclear Plant Accident
4. Chemical Spill
5. Water Contamination

It is interesting to note that the most votes among the management team focus group were for Transportation Accident and for Nuclear Plant Accident, while the two staff groups were more likely to vote for Terrorist Incident and for Water Contamination.

The participants in the three focus groups had a chance to comment on the results of the voting within their group. They expressed a variety of opinions about the need for training for Nuclear Plant Accidents:

“I am surprised since the health department has been trained for nuclear incidents.”

“We need training in radiological aspects.”

“If a problem were to occur at the nuclear plant today at 2pm, I would not know how to respond.”

Some participants expressed that despite the amount of preparedness training in recent years, many health department employees have not been trained:

“Not all of the groups within the health department have been trained in these areas.”

“Family planning has not been trained at all in emergency preparedness. We have not been involved in planning for an emergency.”

“Not all departments were included in last year’s training.”

Training Needs for Specific Emergency Preparedness Competencies.

A goal of this needs assessment project was to understand training needs of public health workers in terms of broadly defined competencies for responding to public health emergencies. For the focus group discussions and the survey project described below, we adopted a set of emergency preparedness competencies published by the Columbia University School of Nursing Center for Health Policy and the Centers for Disease Control and Prevention (CDC), titled "Bioterrorism and Emergency Readiness Competencies for All Public Health Workers." These Competencies are also used by NACCHO as primary guidance for this year’s iteration of Project

Public Health Ready. In this CDC publication, there are nine core preparedness competencies for all public health workers including:

1. Describe the public health role in emergency response in a range of emergencies that might arise.
2. Describe the chain of command in an emergency response.
3. Identify and locate the agency emergency response plan.
4. Describe his/her functional role(s) in emergency response and demonstrate that role(s) in regular drills.
5. Demonstrate correct use of all communications equipment used for emergency communication.
6. Describe communication role(s) in emergency response: Within the agency using established communication systems, With the media, With the general public, and Personal.
7. Identify limits to own knowledge/skill/authority and identify key system resources for referring matters that exceed these limits.
8. Recognize unusual events that might indicate an emergency and describe appropriate action.
9. Apply creative problem solving and flexible thinking to unusual challenges within his/her functional responsibilities and evaluate effectiveness of all actions taken.

The nine competencies were used for writing needs assessment questions for all three focus group discussions. The protocol for the competency training need questions was:

Now I want to talk about some general competencies that national experts say are needed for public health professionals to respond to public health emergencies. I will read out loud a core competency and I want you all to talk about what you think the training needs are to help public health professionals in Berrien County become more competent.

- a. *Describe the public health role in emergency response in a range of emergencies.*
- b. *Describe the chain of command in emergency response.*
- c. *Identify and locate the agency emergency response plan.*
- d. *Describe his/her functional role(s) in emergency response.*
- e. *Demonstrate his/her role(s) in regular drills.*

- f. *Demonstrate correct use of all communication equipment used for emergency communication.*
- g. *Describe communication role(s) in emergency response:*
 - *Within your agency*
 - *With the media*
 - *With the general public*
 - *Personal communications (with family, neighbors)*
- h. *Identify limits to own knowledge/skill/authority and identify key system resources for referring matters that exceed these limits.*
- i. *Apply creative problem solving and flexible thinking to unusual challenges within his/her functional responsibilities.*
- j. *Evaluate effectiveness of all actions taken.*
- k. *Recognize deviations from the norm that might indicate an emergency and describe appropriate action (e.g. communicate clearly within the chain of command).*

The three focus groups responded to each competency and were asked to identify the training needs for each of these competencies. The responses were recorded by a note taker who attempted to record the exact words of the participants, but it was not always possible to record the responses exactly. The quotes are approximate rather than exact.

The content analysis of the responses about competency training needs involved identifying common themes. The theme codes were assigned to as many of the participants' responses as possible. Some responses were not coded because they were not about training needs. For instance, several of the responses explained how a public health employee might specifically respond in an emergency rather than identify training needs. The list of theme codes is included in Table 4. It is interesting to note that the content theme codes are not always about preparedness competencies. It seems that the questions about competencies stimulated a variety of ideas about training needs that went beyond the competencies.

Table 4. Theme Code Definitions

Theme	Definition
Staff Roles & Work Assignments	Training needs related to defining roles for all staff members during an emergency. Statements also refer to specific job assignments.
Communications	Training needs related to internal and external communications (risk communications)
Chain of Command	Training needs related to administrative and supervisory responsibilities within the health department (Who reports to who?)
Emergency Plans	Training needs related to the Health department's emergency plans (content of plan; location of plan)
Training for Specific Hazards	Training needs related to a specific type of health hazard or emergency
Flexible Response and Problem Solving Skills	Training needs related to needing problem solving skills and being flexible in responding to specific emergencies, to knowing that job responsibilities may be different or expand depending on the situation.
Training Exercises	Needs for training exercises and drills
Communication Equipment	Training needs related to operating communication equipment
Personal-Family Emergency Plans	Training needs related to personal and family emergency planning
Providing Feedback to Staff	Training needs related to providing feedback to Health Department staff

I. Staff Roles & Work Assignments.

Perhaps the most prevalent theme of the focus group discussion about preparedness training needs was the need for BCHD staff to understand their roles and work assignments during a public health emergency. Some participants noted the general lack of understanding of job roles and tasks during an emergency. Others noted that only some BCHD staff had received training or knew their roles. Still others cited a need for staff members to understand other staff member's roles. Example quotes:

"It is hard for staff to identify their need since they don't know what is needed. Some staff are very knowledgeable about their role for emergency, but emergency preparedness should be in everyone's job description."

"Some staff knows their own role, but not the role of other people in the agency."

"It is important to know departments role in order to fit yourself in and figure out what your role would be to assist."

"I've been told my role, but don't know what others are doing in the event."

"If the bird flu comes to our county, will people know their role?"

"People are uncomfortable with their role in an emergency. Everyone is a potential responder and should be involved in training."

II. Communications.

Many participants noted training needs related to communications during a public health emergency. Example quotes:

"We need training on the risk communication plan."

"The topic of communication always comes up as something to improve on. We all agree that all staff need training."

"The staff doesn't all know where to direct media to in the event of an emergency."

III. Chain of Command and Incident Management.

Some participants suggested that the BCHD staff needed training on the chain of command during an emergency. Some comments referred to the lines of responsibility within the health department. Other comments referred to the lines of responsibility and authority among different organizations and agencies that would be involved in emergency response. Example quotes:

"The chain of command in the health department is clear, but it is not clear when it comes to outside agencies."

"We need training on who to report to? Where to show up?"

In comment on Chain of Command training needs, some participants noted specific training needs in incident management procedures. Example quotes:

"A lot of training still needed in NIMS [National Incident Management System]."

"We need to work to be more comfortable in NIMS' role."

IV. Emergency Plans.

During the focus group discussions, there were frequent references to the emergency response plan manual for the BCHD. Some of the training needs mentioned made specific reference to this set of emergency plans. It appears that not all BCHD know what is in the

emergency response manual and some do not know where to locate the manual. Example quotes:

"Do we all know where it (the book) is at?"

"Some staff knows where the plan is and have been drilled. Others don't know where to find the plan."

"We should review the location and content of the plan periodically at meetings."

"We should know the location of the plan at other health department sites."

V. Training for Specific Hazards.

While the focus group discussions were focused on general training needs for emergency response, some participants spoke about training they thought was needed for specific hazards. Example quotes:

"We need training to ensure safe food and water and for protection from diseases."

"If there was a chemical spill, HAZMAT would be called. Need to train all public health workers. If event occurs there are only a few people that have had the appropriate training."

"West Nile virus—we were not trained properly on how to handle. Calls about dead birds were important to let us know that the virus was here, but then the calls just kept coming."

VI. Flexible Response and Problem Solving Skills.

Many focus group participants mentioned that emergency response often requires BCHD staff to use their problem solving skills and to be flexible in their responses. Example quotes:

"You don't know what the emergency will be until it happens. You may do another role not in your job description based on what is needed at the moment. Your role will vary."

"Some jobs are not directly tied to emergency response. So you could end up doing almost anything."

"If people are cross-trained then they should be able to take charge if someone is absent."

"We need to create an environment for staff to feel comfortable doing what needs to be done--thinking outside the box if a challenge is presented."

VII. Training Exercises.

Many participants cited the need to participate in training exercises to build different response competencies. Example quotes:

"We need to 'war game' different scenarios to determine role, duties, locations, equipment needs before the event."

"We need hands-on at this level. Environmental health needs to test what type of transportation would be needed to get a specific number of dosimeter kits to a field site by actually loading up a car or van."

"We need role specific drills instead of massive full-scale exercise where the majority ends up watching instead of drilling."

"It is important to drill and exercise to encounter and predict difficulties in advance of an emergency."

We should have drills and simulations and throw in obstacles for staff to respond to."

VIII. Communication Equipment.

The participants were asked directly about training they thought was needed for operating communication equipment during an emergency. They noted several areas of training need. Example quotes:

"The 800 MHz radios are difficult to operate. We need training."

"Who has the 800 MHz radios? Who is trained to use them?"

"Not all staff is familiar with email even though they have computers."

We would use email, phone, and cell phone (everyone doesn't have). Many staff don't know how to use email, nor do they want to."

The fax machine is only available to a few people due to confidentiality issues. It is their job to fax things. Many don't necessarily know how to work the fax machine."

IX. Personal-Family Emergency Plans.

While discussing different training needs, several participants spoke about how they would need to attend to their own personal safety and their family members' safety during an emergency response. Example quotes:

"An emergency event could mean mass chaos. People will be concerned about their home environment."

"We need to brief our families about what will be done."

"Craig has told staff through training to be prepared at home for emergency, but training is still needed."

"Advance family issues planning needs to be addressed periodically and presented to new staff. Will new staff be trained?"

"We shouldn't tell family about details of emergency. This can cause the wrong information to get out."

"We need for staff to organize their own family plan."

"Organizing a family plan will ensure that staff is available to respond."

X. Providing Feedback to Staff.

The focus group participants were asked about training needs for evaluating actions taken after an emergency response. The focused on training needs for providing feedback to staff. Example quotes:

"We need to have opportunity for feedback. We need to establish a safe environment to share."

"This health department is able to collect information well, but don't get it out to the rest of the staff well."

"We often have a lack of time to review and learn from incidents."

Specific Training Course Recommendations

At the end of the focus group discussions, the facilitators requested that the participants write down the title of a training course they would like to see offered in the future. The facilitators collected the responses and conducted a thematic content analysis of the training course titles. There were five themes identified (listed in Table 5). A listing of all course title recommendation follows.

Table 5. Themes for Recommended Training Course Titles

Theme	Theme Definition
Role in an Emergency	Course titles that focus on the role that public health professionals will play during a public health emergency
Response in an Emergency	Course titles that focus on specific responses during a public health emergency
Planning/Training for an Emergency	Course titles that focus on planning or training for a public health emergency
Communication	Course titles that focus on communications during a public health emergency
Coordination	Course titles that focus on coordination issues during a public health emergency.

I. Role in an Emergency.

The largest number of course titles focused on the role that public health professionals will play during emergencies. Titles include:

- "Public Health Emergency Preparedness: What Am I Supposed to Do?"
- "What Do I Do in a _____ Emergency? Who's in Charge Here?"
- "Grassroots to Emergency Response—Roles of Public Health in Emergency Response at the Local Level"
- "How to Handle Emergency Situation" (e.g. water/food contamination and bird flu)
- "Public Health Emergencies: What to Do!"
- "What is Your Role During an Emergency?"
- "Are You Competent to Perform Your Role?"
- "Individual Responsibility in an Emergency"
- "Your Role and Berrien County Health Department's Role in Public Health Emergencies"
- "What Will You Do?"
- "Emergency Preparedness Roles"
- "Do You Know Your Functional Role?"
- "My Specific Role as a Public Health Employee to a Public Health Emergency"
- "My Role in a Public Disaster"
- "Emergency Planning and Roles for Unique Emergencies"

- “I Need to Know It All”

Additional topics:

- "Overview of each program's main role & function that would apply (as a minimum) to all emergencies"
- Public health worker's role in emergencies.

II. Response in an Emergency.

Titles include:

- “Berrien County Dealing With a Day of Disaster: Our Emergency Response Call!”
- “How to Competently Respond to Emergency Situations At Every Level”

III. Planning/Training for an Emergency.

Titles include:

- "Making Lemonade out of Lemons: When Plan A Doesn't Work, How Do You Come Up with Plan B?"
- “What Do You Do When Nothing Seems to be Working the Way You Planned?”
- “Survival Training 101: How to Live to See Another Day”
- “Planning Ahead: Preparing for Public Health Emergencies”
- “A Public Health Emergency: Are You Ready”
- “Emergency Ready 101”
- “Effective Emergency Training for Health Agencies”

Other responses:

- "Training on evacuation—needs for family"
- "Health department specific drill—with critique"
- "Some type of disaster: Have nurses and EH staff do actual drill, set up command center, take measurements in field, etc. Radio in things."
- Emergency Preparedness (general and specific)

IV. Communication.

Titles include:

- "Communication with Public"
- "Communication Across County (Who, Where, When, How) In Case of an Emergency"
- “What’s Your Handle Good Buddy?” (Two-way radio training regarding equipment functions and radio procedure)

V. Coordination.

One title focused on coordination:

- "Coordination of Activities Between Different Groups"

Phase II: Online Needs Assessment Survey

Instrument Development

The development of the workforce training survey instrument was a collaborative effort. Goals, objectives and expectations for the survey were discussed during initial planning meetings between the University of Michigan and with key staff at the Berrien County Health Department. The group decided that the survey should focus the main set of questions around the core emergency preparedness competencies established by the Columbia University School of Nursing Center for Health Policy. A decision was made to present the competency questions using a specific emergency scenario, instead of using the vague term "emergency", since competence may vary among individuals in different types of emergencies. The group also thought it would be important to look at including a list of emergencies identified by the Berrien County Emergency Management Division to identify training needs. It was also decided early on in the planning that an online survey would be feasible for all staff in addition to it being the most cost effective and timely method.

Based on their ideas, the University of Michigan researchers wrote and distributed a paper-based draft of a workforce training survey and requested feedback from the group. After receiving comments about the survey a revised version was drafted and sent out again for review. The paper-based questions with revisions were then transferred to a web-based version. A small cohort including planning committee members and University of Michigan staff completed the web-based survey as a pilot test of procedures. This pilot study allowed the University of Michigan researchers to estimate the time to complete the survey, to identify and revise any ambiguous questions and to identify any technological difficulties. A paper-based version of the survey is attached in the Appendix A.

Specific Measures and Indicators

The final version of the survey instrument contained 107 questions. Based on pilot testing, we estimated that the survey would take 15 minutes or less to complete.

Work Background. The survey included questions about the respondent's primary role in their health department (e.g., environmental health staff), the number of years they have worked in their current position and in the public health field, and the service area they work for within Berrien County Health Department.

Hazard Training Topics. To determine the hazard training topic needs of the health department, the respondents were instructed to choose their level of training need from a list of 13 natural and 10 man-made potential hazards that were identified by the Berrien County Emergency Management Department. A list of additional public health hazards were formulated and included as topics.

Emergency Preparedness Competencies. The respondents rated their agreement in their confidence levels for performing 4 emergency preparedness competencies across 5 emergency scenarios using a 5 point rating scale (1=strongly disagree, 5=strongly agree; NA=not applicable)

for job). Respondents also completed ratings on general emergency preparedness competencies. The competencies were adapted from the set defined in the November 2002 document, *Bioterrorism & Emergency Readiness: Competencies for all Public Health Workers* by Columbia University School of Nursing, Center for Health Policy.

Attitudes, Behavior and Perceived Risk. Respondents were asked to rate how likely they would be to report to work during a specified emergency (8 scenarios were listed). In addition, we asked them how likely it would be that they would be putting their family and themselves at risk if they were to report to work during the same eight emergency scenarios. Two questions followed to address whether they had a plan in place for their family during an emergency and whether they considered themselves to be essential personnel during an emergency.

Emergency Preparedness Training. Local health department staff is required to complete several online courses through the Federal Emergency Management Agency (FEMA). In order to determine the progress of staff at the health department we asked each respondent to indicate the completed courses from a checklist. Respondents were also asked whether they had received training that addressed their role in an emergency.

Other Comments. The respondents had the opportunity to record other comments concerning training needs for themselves, their service area and the Health Department.

Recruitment Procedures

The goal of this study was to generate accurate estimates of the emergency preparedness training needs of employees at Berrien County Health Department. We worked with the Emergency Services Coordinator at the health department to identify the number of full-time and part-time employees before the survey was distributed. At the start of the survey there were 123 employees. We were also given a list containing the number of employees in each of the eight service areas, which are used to group employees at the health department by job responsibilities. The employee count was used as the denominator for estimating the response rate for the study's final sample and the employee/service area count was used as the denominator for estimating the response rates for each health department's service areas.

At the initial planning meeting it was decided that the Emergency Services Coordinator at the health department would distribute the survey instruction letters to all service area supervisors. The supervisors would then be instructed to distribute these letters to their staff. At the management focus group all service area supervisors were made aware of the workforce survey and the expectation of them to encourage staff members to complete the survey. Accordingly, the supervisors received a packet of letters in mid-June (dated June 19, 2006). We also sent a one-page flyer that could be displayed throughout the health department explaining the purpose of the study, the web address for the survey and the deadline. It was noted on all communications that staff should contact their supervisor if they had no access to a computer with an Internet connection to ensure that all staff had the opportunity to complete the survey.

The cover letter also explained that individual's participation and responses would be confidential information and that only aggregated data would be released. We requested that all

surveys be completed by June 30, 2006. A memo was sent to all supervisors alerting them of the response rate for each service area following the deadline. They were instructed that the deadline had been extended for an additional two weeks (July 14, 2006) and they should continue to encourage employees to participate. A third attempt to update the supervisors was made on the remaining week of data collection during a monthly management meeting.

Data Collection and Estimates of Response Rate

Data collection began on June 22, 2006 and was completed on July 14, 2006. The best estimate of the number of employees within the Berrien County Health Department at the time the survey was being implemented was 123 people.

Each respondent indicated the service area they were assigned to within the Berrien County Health Department. Eight responses were provided on the survey: Community Preventive Health Services, Environmental Health Services, Health Promotion Services, Personal Preventive Health Services, Substance Abuse Treatment Services, Program Operations, Finance and Administration.

Table 6 shows response rates for each of the eight service areas. A total of 87 employees completed the online survey. The overall response rate was 69%. With the exception of administration, 50% or better responded from each of the remaining service areas.

Table 6. Counts and Percents of Service Areas Represented on Needs Assessment Survey.

Service Area	Sample (n=123)		
	# of Employees	# of Responses	Response Rate
Community Preventive Health Services	26	22	85%
Environmental Health Services	15	13	87%
Health Promotion Services	13	8	62%
Personal Preventive Health Services	28	18	64%
Substance Abuse Treatment Services	16	9	56%
Program Operations	9	9	100%
Finance	4	2	50%
Administration	12	3	25%
Other:	0	3	---
Totals	123	87	69%

Sample Characteristics

Respondents indicated their primary role at the health department. Ten responses were provided on the survey including an "other public health professional" category with an optional blank space to provide a specific role. As seen in Table 7, over 40% of respondents noted they were public health clinical staff or environmental health staff. Around 13% chose other public health staff and indicated an additional primary role. Nearly one fourth was either public health leaders or public health information staff. The remaining 10 responses fell in the response categories of public health nursing staff, public health communicable disease staff and public health laboratory staff. Please note that this question had the least number of respondents compared with other survey questions. Only 52 out of the 87 responded to this question.

Table 7. Counts and Percents of Primary Roles for Each Employee at BCHD That Completed the Needs Assessment Survey.

Primary Role	Sample (n=87)	
	Count	Valid Percent
Public Health Clinical Staff (e.g., nurse, physician, counselor)	13	25.0%
Environmental Health Staff (e.g., sanitarian, environmental health specialist)	10	19.2%
Other Public Health Professional Staff	7	13.5%
Public Health Leader	6	11.5%
Public Health Information Staff (e.g., health educator, public information officer)	6	11.5%
Public Health Nursing Staff (e.g., general PH nurse, field nurse)	5	9.6%
Public Health Communicable Disease Staff (e.g., epidemiologist, CD nurse)	3	5.8%
Public Health Laboratory Staff	2	3.8%
Medical Examiner/Coroner	0	0.0%
Public Health Technical & Support Staff (e.g., administrators, clerical, IT staff)	0	0.0%
No Response (missing data)	35	---
Total	87	100.0%

Just under half of the sample (48%) has worked in the field of public health for five years or less (see Table 8). The average tenure in the field was 10.6 years. Approximately one fourth of the sample has worked for 16 years or greater. The results are fairly consistent when we look at respondent's tenure in their current job. Just over half (52.9%) of the sample has been in their current job for five years or less and less than one fourth of the sample has worked for 16 years or greater in their current job. The average length of time in their current job was 8.5 years.

Table 8. Mean and Range of Years Respondents Have Been Working in Their Current Position at BCHD and Specifically In Public Health.

	Sample
Years Worked in Current Position	n=85
Mean	8.5 years
0-5 years	45 (52.9%)
6-10 years	14 (16.5%)
11-15 years	11 (12.9%)
16+ years	15 (17.6%)
Years Worked in Public Health	n=85
Mean	10.6 years
0-5 years	41 (48.2%)
6-10 years	9 (10.6%)
11-15 years	13 (15.3%)
16+ years	22 (25.9%)

Results from Online Needs Assessment Survey

Level of Training Need

Each survey respondent was instructed to indicate their level of training need from a list of natural and man-made hazards identified by Berrien County Emergency Management Department. In addition, a set of public health hazards were listed for respondents to indicate training level need. The hazard topics listed in the tables are alphabetized and are in no way prioritized. Respondents only were allowed to choose from one of these responses: no training needed, some training needed, extensive training needed, and not applicable. We indicated on the survey that the not applicable response should only be chosen if the respondent would not be part of a response to the specific hazard listed.

Tables 9 through 11 indicate the level of training need for various hazards that could occur in Berrien County. The tables are broken out by natural hazards, man-made hazards and public health hazards. Ratings of training need for natural hazards are listed in Table 9. Approximately 17%-24% of the respondents reported having no training need for hazards that are fairly common in the western part of Michigan such as extreme temperatures, lightning, hail, severe wind, severe winter weather and tornados. The opposite is true when we look at hazards that are less common in Michigan. Greater than 21% of the respondents noted that they needed extensive training to adequately respond to a dam failure, drought, earthquake, riverine flooding, shoreline flooding/erosion, subsidence, and wildfire. If the two training need categories are combined, 40% noted the need for training in all the hazard topics except dam failure and drought. It should be noted that over half of the respondents reported that they would not play a role in the response to a dam failure or draught. The top three natural hazards as reported by Berrien County Emergency Management Department are: severe winter weather, extreme temperature and tornado.

Table 9. Counts and Percents on Level of Training Ratings for Natural Hazard Topics (n=87).

Level of training still needed to adequately respond to each of the hazards below:	Training Need			
	No Training Needed	Some Training Needed	Extensive Training Needed	NA*
Dam Failure	4 (4.6%)	8 (9.2%)	23 (26.4%)	52 (59.8%)
Drought	9 (10.3%)	13 (14.9%)	18 (20.7%)	47 (54.0%)
Earthquake	9 (10.3%)	19 (21.8%)	24 (27.6%)	35 (40.2%)
Extreme Temperature	15 (17.2%)	25 (28.7%)	17 (19.5%)	30 (34.5%)
Hail	16 (18.4%)	27 (31.0%)	10 (11.5%)	34 (39.1%)
Lightning	17 (19.5%)	24 (27.6%)	13 (14.9%)	33 (37.9%)
Riverine Flooding	9 (10.5%)	17 (19.8%)	18 (20.9%)	42 (48.8%)
Severe Wind	17 (19.5%)	22 (25.3%)	13 (14.9%)	35 (40.2%)
Severe Winter Weather	19 (21.8%)	22 (25.3%)	15 (17.2%)	31 (35.6%)
Shoreline Flooding/Erosion*	10 (11.6%)	18 (20.9%)	19 (22.1%)	39 (45.3%)
Subsidence (sinking of the earth's surface)	6 (6.9%)	11 (12.6%)	27 (31.0%)	43 (49.4%)
Tornado	21 (24.1%)	27 (31.0%)	14 (16.1%)	25 (28.7%)
Wildfire	10 (11.5%)	18 (20.7%)	22 (25.3%)	37 (42.5%)

*Task not applicable to participant's job and would not be part of response

Listed in Table 10 are the training need ratings for man-made hazards. The percentages reported for needing no training are less than 12% for all hazards in this table. The training needs identified as "some training" and "extensive training" for an oil and gas well accident (23% vs. 21%), pipeline accident (20% vs. 21%), scrap tire fire (20% vs. 18%), and terrorism (30% vs. 31%) are almost equal between the level of training categories as compared with larger differences noted between these categories for a HAZMAT incident (29% vs. 17%), infrastructural failure (30% vs. 16%) and nuclear power plant accident (35% vs. 18%). The largest training need using the combined training categories (some training and extensive training) is in responding to terrorism/sabotage/weapons of mass destruction (62%) followed by response to a nuclear power plant accident (53%). Just over half of the respondents reported that they would not play a role in the response to a pipeline incident or a scrap tire fire. The top three

man-made hazards as reported by Berrien County Emergency Management Department are: nuclear power, infrastructure failure and structural fires.

Table 10. Counts and Percents on Level of Training Ratings for Man-Made Hazard Topics (n=87).

Level of training still needed to adequately respond to each of the hazards below:	Training Need			
	No Training Needed	Some Training Needed	Extensive Training Needed	NA*
Civil Disturbance	10 (11.5%)	21 (24.1%)	15 (17.2%)	41 (47.1%)
HAZMAT Incident (e.g., chemical spill)	10 (11.5%)	25 (28.7%)	15 (17.2%)	37 (42.5%)
Infrastructure Failure (of gas, water, sewage)	8 (9.2%)	26 (29.9%)	14 (16.1%)	39 (44.8%)
Nuclear Power Plant Accident	10 (11.5%)	30 (34.5%)	16 (18.4%)	31 (35.6%)
Oil and Gas Well Accident	6 (6.9%)	20 (23.0%)	18 (20.7%)	43 (49.4%)
Pipeline Accident	6 (6.9%)	17 (19.5%)	18 (20.7%)	46 (52.9%)
Scrap Tire Fire	8 (9.2%)	17 (19.5%)	16 (18.4%)	46 (52.9%)
Terrorism/Sabotage/Weapons of Mass Destruction	6 (7.0%)	26 (30.2%)	27 (31.4%)	27 (31.4%)
Transportation Accident (e.g., truck, rail)	10 (11.5%)	20 (23.0%)	18 (20.7%)	39 (44.8%)

*Task not applicable to participant's job and would not be part of response.

Training needs for responding to a public health hazard are listed in Table 11. A larger number of respondents indicated that they would be part of the response to the list of public health hazards as compared with the other two tables consisting of natural and man-made hazards. The combined training needs (some training and extensive training) are all 50% or above for each of the five hazards listed. In comparing the three hazard topic tables, the average percentage for respondents choosing not applicable was lowest (32%) for public health hazard topics (Table 6) and highest (45%) for man-made hazard topics (Table 5). When we combine the two training categories (some training needed and extensive training needed) and average the results, the respondents indicated that they needed the most training in public health hazard topics (55%) and the least training in natural hazard topics (40%). The specific hazard with the largest combined response for training is Terrorism/Sabotage/Weapons of Mass Destruction.

Table 11. Counts and Percents on Level of Training Ratings for Public Health Hazard Topics (n=86).

Level of training still needed to adequately respond to each of the hazards below:	Training Need			
	No Training Needed	Some Training Needed	Extensive Training Needed	NA*
Animal Disease Outbreak (e.g., bird flu, mad cow)	7 (8.2%)	30 (35.3%)	20 (23.5%)	28 (32.9%)
Flu Pandemic	11 (12.8%)	29 (33.7%)	19 (22.1%)	27 (31.4%)
Food-borne Illness Outbreak	17 (19.8%)	28 (32.6%)	15 (17.4%)	26 (30.2%)
Infectious Disease Outbreak (e.g., measles, plague, smallpox)	12 (14.0%)	30 (34.9%)	17 (19.8%)	27 (31.4%)
Water Contamination/Biological Outbreak	10 (11.6%)	26 (30.2%)	22 (25.6%)	28 (32.6%)

*Task not applicable to participant's job and would not be part of response.

Ratings of Emergency Preparedness Competencies

Tables 12 through 16 show the responses (counts, percentages) for competencies related to role and responsibility during five different emergency scenarios. Listed in Table 12 are the ratings for competencies regarding role and responsibility during a nuclear power plant accident. Average confidence ratings are between 3.15 and 3.75 on a five-point scale. These average ratings, as a group, were higher than the competency ratings for HAZMAT or industrial chemical spill incident (Table 13), chemical or biological contamination of the water supply (Table 14) and widespread power outage (Table 16). Respondents indicated higher levels of confidence in identifying the person they should report to during this type of event. They reported lower levels of confidence for describing the health department's responsibilities and their own responsibilities during a nuclear power plant accident.

Table 12. Counts, Percents and Average Ratings on Competencies Related to Roles and Responsibilities During a Nuclear Power Plant Accident (n=87).

I am confident I can...	Ratings					NA*	Average Rating
	1 Strongly Disagree	2	3	4	5 Strongly Agree		
Describe BCHD's responsibilities during a nuclear power plant accident.	7 (8.0%)	13 (14.9%)	10 (11.5%)	22 (25.3%)	7 (8.0%)	28 (32.2%)	3.15
Identify the specific person I should report to during a nuclear power plant accident.	6 (6.9%)	6 (6.9%)	7 (8.0%)	28 (32.2%)	20 (23.0%)	20 (23.0%)	3.75
Describe my job responsibilities during a nuclear power plant accident.	10 (11.5%)	11 (12.6%)	9 (10.3%)	21 (24.1%)	11 (12.6%)	25 (28.7%)	3.19
Demonstrate my job responsibilities during a nuclear power plant accident.	9 (10.3%)	11 (12.6%)	7 (8.0%)	24 (27.6%)	9 (10.3%)	27 (31.0%)	3.22

*Task not applicable to participant's job and would not be part of response.

Ratings of competencies regarding role and responsibility during a HAZMAT or industrial chemical spill incident are shown in Table 13. The average confidence ratings were between 2.62 and 3.39. The confidence ratings were highest for the competency associated with identifying the specific person to report to during the incident. The lowest confidence rating was in demonstrating their job responsibilities during a HAZMAT or industrial chemical spill incident.

Table 13. Counts, Percents and Average Ratings on Competencies Related to Roles and Responsibilities During a HAZMAT or Industrial Chemical Spill Incident (n=87).

I am confident I can...	Ratings					NA*	Average Rating
	1 Strongly Disagree	2	3	4	5 Strongly Agree		
Describe BCHD's responsibilities during a HAZMAT or industrial chemical spill incident.	7 (8.0%)	17 (19.5%)	10 (11.5%)	15 (17.2%)	2 (2.3%)	36 (41.4%)	2.76
Identify the specific person I should report to during a HAZMAT or industrial chemical spill incident.	7 (8.0%)	9 (10.3%)	7 (8.0%)	23 (26.4%)	11 (12.6%)	30 (34.5%)	3.39
Describe my job responsibilities during a HAZMAT or industrial chemical spill incident.	11 (12.6%)	14 (16.1%)	9 (10.3%)	13 (14.9%)	4 (4.6%)	36 (41.4%)	2.71
Demonstrate my job responsibilities during a HAZMAT or industrial chemical spill incident.	11 (12.6%)	14 (16.1%)	11 (12.6%)	11 (12.6%)	3 (3.4%)	37 (42.5%)	2.62

*Task not applicable to participant's job and would not be part of response.

Competency ratings for role and responsibility during a chemical or biological contamination of the water supply are listed in Table 14. The average confidence ratings ranged between 2.81 and 3.34 for this group. As with the last table, industrial chemical spill incident, the highest rated competency is the ability to identify the specific person to report to and the lowest rated competency is in their confidence to demonstrate responsibilities during a chemical or biological contamination of the water supply.

Table 14. Counts, Percents and Average Ratings on Competencies Related to Roles and Responsibilities During a Chemical or Biological Contamination of the Water Supply (n=87).

I am confident I can...	Ratings					NA*	Average Rating
	1 Strongly Disagree	2	3	4	5 Strongly Agree		
Describe BCHD's responsibilities during a chemical or biological contamination of the water supply.	9 (10.3%)	17 (19.5%)	12 (13.8%)	17 (19.5%)	5 (5.7%)	27 (31.0%)	2.87
Identify the specific person I should report to during a chemical or biological contamination of the water supply.	8 (9.3%)	12 (14.0%)	9 (10.5%)	22 (25.6%)	14 (16.3%)	21 (24.4%)	3.34
Describe my job responsibilities during a chemical or biological contamination of the water supply.	10 (11.5%)	18 (20.7%)	9 (10.3%)	18 (20.7%)	6 (6.9%)	26 (29.9%)	2.87
Demonstrate my job responsibilities during a chemical or biological contamination of the water supply.	10 (11.5%)	18 (20.7%)	10 (11.5%)	15 (17.2%)	6 (6.9%)	28 (32.2%)	2.81

*Task not applicable to participant's job and would not be part of response.

Listed in Table 15 are the competencies regarding role and responsibility during an infectious disease outbreak. Average confidence ratings for this group of competencies are between 3.16 and 3.65. The average rating (3.33) of the competencies, as a group, is the same as for a nuclear power plant accident. Respondents indicated that they are most confident in identifying the appropriate person to report to during the incident. They reported lower confidence in being able to demonstrate job responsibilities during an infectious disease outbreak.

Table 15. Counts, Percents and Average Ratings on Competencies Related Roles and Responsibilities During an Infectious Disease Outbreak (n=87).

I am confident I can...	Ratings					NA*	Average Rating
	1 Strongly Disagree	2	3	4	5 Strongly Agree		
Describe BCHD's responsibilities during an infectious disease outbreak.	7 (8.0%)	10 (11.5%)	12 (13.8%)	29 (33.3%)	6 (6.9%)	23 (26.4%)	3.27
Identify the specific person I should report to during an infectious disease outbreak.	5 (5.7%)	8 (9.2%)	7 (8.0%)	35 (40.2%)	14 (16.1%)	18 (20.7%)	3.65
Describe my job responsibilities during an infectious disease outbreak.	8 (9.5%)	10 (11.9%)	10 (11.9%)	26 (31.0%)	8 (9.5%)	22 (26.2%)	3.26
Demonstrate my job responsibilities during an infectious disease outbreak.	9 (10.5%)	11 (12.8%)	10 (11.6%)	29 (33.7%)	5 (5.8%)	22 (25.6%)	3.16

*Task not applicable to participant's job and would not be part of response.

Table 16 reports confidence ratings on role and responsibility to a widespread power outage. Average confidence ratings are between 2.69 and 3.25. Widespread power outage has the lowest average confidence rating (2.84) across all competencies as compared with incidents involving a nuclear power plant, industrial chemical spill, chemical or biological contamination of the water supply, and infectious disease outbreak.

Table 16. Counts, Percents and Average Ratings on Competencies Related Roles and Responsibilities During a Widespread Power Outage (n=87).

I am confident I can...	Ratings					NA*	Average Rating
	1 Strongly Disagree	2	3	4	5 Strongly Agree		
Describe BCHD's responsibilities during a widespread power outage.	7 (8.1%)	20 (23.3%)	10 (11.6%)	16 (18.6%)	1 (1.2%)	32 (37.2%)	2.70
Identify the specific person I should report to during a widespread power outage.	6 (7.0%)	13 (15.1%)	9 (10.5%)	22 (25.6%)	9 (10.5%)	27 (31.4%)	3.25
Describe my job responsibilities during a widespread power outage.	11 (12.6%)	16 (18.4%)	9 (10.3%)	17 (19.5%)	3 (3.4%)	31 (35.6%)	2.73
Demonstrate my job responsibilities during a widespread power outage.	11 (12.6%)	16 (18.4%)	9 (10.3%)	17 (19.5%)	2 (2.3%)	32 (36.8%)	2.69

*Task not applicable to participant's job and would not be part of response.

In summary, respondents are most confident in their role and responsibility to respond to a nuclear power plant accident (3.33) and in an outbreak of infectious disease (3.33). They are least confident in their role and responsibility to a HAZMAT or industrial chemical spill incident (2.87), chemical or biological contamination of the water supply (2.97), and widespread power outage (2.84). In all five emergency scenarios, respondents reported being the most confident in knowing who they needed to report to during the event. In almost every emergency scenario, they indicated that they were least confident in their ability to demonstrate job responsibilities during the incident. Ratings for the health department's role and the respondent's role are nearly equal, indicating that if a respondent is unable to describe the health department's responsibilities than they are not likely to be able to describe their responsibilities during the specified emergency scenario. The average percentage of respondents that indicated "not applicable" was highest in the competency group for a HAZMAT or industrial chemical spill incident (40%)

followed by widespread power outage (35%), infectious disease outbreak (25%), chemical or biological contamination of the water supply (29%) and nuclear power plant accident (29%).

Confidence ratings for ten core emergency preparedness competencies are listed in Table 17. The average competency ratings fall between 3.22 and 3.73. Highest confidence was reported by respondents in identifying and locating the emergency response plan at their health department (3.73) followed by recognizing unusual events (3.68) and knowing who to report to during an emergency if their supervisor is unavailable (3.67). Respondents noted the least confidence in describing their job responsibilities during a mass distribution clinic (3.22) and in responding to a food borne disease outbreak. The lowest number of "not applicable" responses was chosen for this set of core emergency preparedness competencies as compared with the emergency scenario-specific competencies.

Table 17. Counts, Percents and Average Ratings on Core Emergency Preparedness Competencies (n=87).

I am confident I can...	Ratings					NA*	Average Rating
	1 Strongly Disagree	2	3	4	5 Strongly Agree		
Recognize who to report to during an emergency when my supervisor is unavailable.	7 (8.0%)	6 (6.9%)	7 (8.0%)	44 (50.6%)	14 (16.1%)	9 (10.3%)	3.67
Identify and locate BCHD’s Emergency Response Plan (ERP) in my workplace.	4 (4.7%)	11 (12.8%)	5 (5.8%)	41 (47.7%)	18 (20.9%)	7 (8.1%)	3.73
Locate specific information in BCHD’s ERP that would help me respond in different types of public health emergencies.	5 (5.8%)	12 (14.0%)	8 (9.3%)	36 (41.9%)	13 (15.1%)	12 (14.0%)	3.54
Describe my job responsibilities during a mass distribution clinic.	10 (11.5%)	11 (12.6%)	14 (16.1%)	27 (31.0%)	10 (11.5%)	15 (17.2%)	3.22

Table 17 (continued).

I am confident I can...	Ratings					NA*	Average Rating
	1 Strongly Disagree	2	3	4	5 Strongly Agree		
Respond to a food borne disease outbreak.	8 (9.2%)	10 (11.5%)	13 (14.9%)	25 (28.7%)	10 (11.5%)	21 (24.1%)	3.29
Identify limits to my knowledge/skills/authority and to identify resources for referring matters that exceed these limits.	7 (8.0%)	9 (10.3%)	11 (12.6%)	35 (40.2%)	15 (17.2%)	10 (11.5%)	3.55
Recognize an unusual event that might indicate an emergency.	7 (8.1%)	2 (2.3%)	12 (14.0%)	45 (52.3%)	12 (14.0%)	8 (9.3%)	3.68
Describe the appropriate action to respond to an unusual event that might indicate an emergency.	6 (7.0%)	7 (8.1%)	18 (20.9%)	38 (44.2%)	5 (5.8%)	12 (14.0%)	3.39
Apply creative and flexible problem solving to unusual events within my functional response requirements.	5 (5.7%)	4 (4.6%)	17 (19.5%)	38 (43.7%)	10 (11.5%)	13 (14.9%)	3.59
Evaluate the effectiveness of the actions I take during an emergency response.	5 (5.7%)	4 (4.6%)	16 (18.4%)	38 (43.7%)	10 (11.5%)	14 (16.1%)	3.60

*Task not applicable to participant's job and would not be part of response.

Listed in Table 18 are the ratings on competencies related to communication methods available at the health department. Average ratings are between 2.82 and 4.52. Respondents indicated confidence in using a cell phone (4.52), fax machine (4.45), and email (4.34). They noted less confidence in using the Health Alert Network (HAN) system (2.82) and 800 MHz radio. Not all staff is aware of the HAN system and therefore is not authorized to send or receive any messages. Also, at the time the survey was conducted, Berrien County Health Department had only trained select employees in the use of the 800 MHz radio, because they have only two

such radios. The results indicate that respondents feel confident in their ability to use traditional communication methods, but lack ability to use other communication systems, which may hinder communication in an emergency if electricity is not available.

Table 18. Counts, Percents and Average Ratings on Core Emergency Preparedness Competencies Related to Communication (n=86).

I am confident I can demonstrate the correct use of...	Ratings					NA*	Average Rating
	1 Strongly Disagree	2	3	4	5 Strongly Agree		
Fax machine	0 (0.0%)	5 (5.8%)	3 (3.5%)	25 (29.1%)	51 (59.3%)	2 (2.3%)	4.45
Cell phone	1 (1.2%)	1 (1.2%)	4 (4.7%)	25 (29.1%)	52 (60.5%)	3 (3.5%)	4.52
Two-way radio**	6 (7.1%)	15 (17.9%)	10 (11.9%)	17 (20.2%)	25 (29.8%)	11 (13.1%)	3.55
800 MHz radio**	9 (10.7%)	20 (23.8%)	23 (27.4%)	9 (10.7%)	9 (10.7%)	14 (16.7%)	2.84
E-mail***	2 (2.4%)	4 (4.7%)	3 (3.5%)	29 (34.1%)	45 (52.9%)	2 (2.4%)	4.34
Health Alert Network (HAN) system***	12 (14.1%)	20 (23.5%)	16 (18.8%)	15 (17.6%)	8 (9.4%)	14 (16.5%)	2.82

*Task not applicable to participant's job and would not be part of response.

Reports of BCHD Employees' Reactions to Specific Emergencies

As shown in Table 19, respondents are most likely to report to work in the event of a food borne outbreak such as E.coli. Respondents are less likely to report to work if there is an ice storm, radiological/nuclear incident, or a chemical spill/explosion. Almost 60% indicated they would not likely report to work during a radiological or nuclear incident. All average ratings for the listed emergencies are less than 2.57 on a 4-point scale (1=not likely to report to work; 4=extremely likely to report to work).

Table 19. Counts, Percents, and Average Ratings on the Likelihood of Respondents Reporting to Work during the Specified Emergencies (n=87).

How likely is it that you would report to work during each of the following public health emergencies occurring in BCHD?	Ratings				Average Rating
	Not at all Likely 1	Somewhat Likely 2	Very Likely 3	Extremely Likely 4	
Chemical spill/explosion	39 (44.8%)	21 (24.1%)	16 (18.4%)	11 (12.6%)	1.99
Power failure	34 (39.1%)	22 (25.3%)	20 (23.0%)	11 (12.6%)	2.09
Radiological/Nuclear incident	50 (57.5%)	9 (10.3%)	11 (12.6%)	17 (19.5%)	1.94
Ice storm	40 (46.0%)	27 (31.0%)	13 (14.9%)	7 (8.0%)	1.85
Pandemic influenza outbreak	25 (28.7%)	19 (21.8%)	22 (25.3%)	21 (24.1%)	2.45
Smallpox incident	29 (34.1%)	12 (14.1%)	26 (30.6%)	18 (21.2%)	2.39
E. coli (food borne outbreak) outbreak	24 (27.9%)	15 (17.4%)	21 (24.4%)	26 (30.2%)	2.57
Natural disaster (on the scale of Hurricane Katrina)	36 (41.9%)	13 (15.1%)	13 (15.1%)	24 (27.9%)	2.29

Shown in Table 20 are respondent ratings for likelihood of putting themselves at risk if they reported to work during the specific emergencies listed. Respondents reported that they were least likely to be at risk during a power failure or during an outbreak investigation. They reported being most likely to put themselves at risk during a radiological/nuclear incident or during a large-scale natural disaster.

Table 20. Counts, Percents, and Average Ratings on the Likelihood of Respondents Putting Themselves at Risk if They Went to Work during the Specified Emergencies (n=86).

How likely is it that you would be putting yourself at risk if you went to work during each of the following public health emergencies?	Ratings				Average Rating
	Not at all Likely 1	Somewhat Likely 2	Very Likely 3	Extremely Likely 4	
Chemical spill/explosion	26 (30.2%)	29 (33.7%)	16 (18.6%)	15 (17.4%)	2.23
Power failure	39 (45.3%)	32 (37.2%)	8 (9.3%)	7 (8.1%)	1.80
Radiological/Nuclear incident	23 (26.7%)	11 (12.8%)	19 (22.1%)	33 (38.4%)	2.72
Ice storm	16 (18.8%)	30 (35.3%)	18 (21.2%)	21 (24.7%)	2.52
Pandemic influenza outbreak*	21 (24.7%)	25 (29.4%)	18 (21.2%)	21 (24.7%)	2.46
Smallpox incident	21 (24.4%)	23 (26.7%)	17 (19.8%)	25 (29.1%)	2.53
E. coli (food borne outbreak) outbreak	43 (50.6%)	17 (20.0%)	12 (14.1%)	13 (15.3%)	1.94
Natural disaster (on the scale of Hurricane Katrina)	20 (23.3%)	20 (23.3%)	18 (20.9%)	28 (32.6%)	2.63

Table 21 shows the likelihood of respondents putting their family at risk if they reported to work during specific emergencies. The average ratings are between 1.69 and 2.33 on a four-point scale (1=not important; 4=extremely important). A power failure emergency was noted as being the least likely to affect family if they reported to work. A pandemic influenza outbreak or a smallpox incident were reported the most likely to affect family if they were to attend work. All average ratings of hazards are listed at the lower end of the scale indicating that the hazard is perceived as causing a low risk to family.

Table 21. Counts, Percents, and Average Ratings on the Likelihood of Respondents Putting Their Family at Risk if They Went to Work during the Specified Emergencies (n=86).

How likely is it that you would be putting your family at risk if you went to work during each of the following public health emergencies?	Ratings				Average Rating
	Not at all Likely 1	Somewhat Likely 2	Very Likely 3	Extremely Likely 4	
Chemical spill/explosion	43 (50.0%)	24 (27.9%)	8 (9.3%)	11 (12.8%)	1.85
Power failure	49 (57.0%)	22 (25.6%)	8 (9.3%)	7 (8.1%)	1.69
Radiological/Nuclear incident	37 (43.0%)	17 (19.8%)	13 (15.1%)	19 (22.1%)	2.16
Ice storm	42 (48.8%)	23 (26.7%)	8 (9.3%)	13 (15.1%)	1.91
Pandemic influenza outbreak	30 (34.9%)	17 (19.8%)	20 (23.3%)	19 (22.1%)	2.33
Smallpox incident	30 (35.3%)	18 (21.2%)	16 (18.8%)	21 (24.7%)	2.33
E. coli (food borne outbreak) outbreak	48 (55.8%)	17 (19.8%)	9 (10.5%)	12 (14.0%)	1.83
Natural disaster (on the scale of Hurricane Katrina)	32 (38.1%)	18 (21.4%)	12 (14.3%)	22 (26.2%)	2.29

Survey respondents were instructed to rate the importance of their role with respect to the eight emergencies listed in Table 22. The average ratings are between 1.52 and 2.22 on a four-point scale (1=not important; 4=extremely important). The highest average rating reported was for the importance of the participant's role in a large scale natural disaster. The lowest average rating was for participant's role in an ice storm.

Table 22. Counts, Percents, and Average Ratings on the Importance of the Participant's Role in the Specified Emergencies (n=86).

How important is your role within the Berrien County Health Department during a:	Ratings				Average Rating
	Not Important 1	Somewhat Important 2	Very Important 3	Extremely Important 4	
Chemical spill/explosion	48 (56.5%)	29 (34.1%)	5 (5.9%)	3 (3.5%)	1.56
Power failure	47 (54.7%)	29 (33.7%)	6 (7.0%)	4 (4.7%)	1.62
Radiological/Nuclear incident	41 (47.7%)	23 (26.7%)	13 (15.1%)	9 (10.5%)	1.88
Ice storm	50 (58.1%)	29 (33.7%)	5 (5.8%)	2 (2.3%)	1.52
Pandemic influenza outbreak	39 (45.3%)	23 (26.7%)	11 (12.8%)	13 (15.1%)	1.98
Smallpox incident	39 (45.3%)	21 (24.4%)	13 (15.1%)	13 (15.1%)	2.00
E. coli (food borne outbreak) outbreak	39 (45.3%)	20 (23.3%)	9 (10.5%)	18 (20.9%)	2.07
Natural disaster (on the scale of Hurricane Katrina)	29 (33.7%)	25 (29.1%)	16 (18.6%)	16 (18.6%)	2.22

Listed in Table 23 are the responses to three questions that were used to gauge respondent's personal preparedness. Approximately half of the sample does have a family plan in the event of a public health emergency. Only 44% consider themselves to be essential personnel during a public health emergency. Around 71% have received training that addresses emergency roles.

Table 23. Count and Percent of Responses on Questions about Respondent's Personal Preparedness.

	N	Yes	No
Do you have a plan for your family in the event of a public health emergency?	87	42 (48.3%)	45 (51.7%)
Do you consider yourself to be essential personnel for a public health emergency?	86	38 (44.2%)	48 (55.8%)
Have you received any training that addresses your role during a public health emergency?	87	62 (71.3%)	25 (28.7%)

Respondents were asked to report the emergency preparedness training courses they have completed. These courses are required by the State of Michigan (Table 24). About half have already completed the courses *IS-100: Introduction to the Incident Command System* (56%) and *IS-200 ICS for Single Resources and Initial Action Incidents* (49%). Greater than 70% have completed the *IS-700* and the *Emergency Preparedness Core Competencies for Public Health Workers*. Only one fourth of the respondents indicated that they have completed *IS-800: National Response Plan*.

Table 24. Count and Percent of Responses on Question Regarding Completion of Relevant Preparedness Courses.

Completion of the following online individual study courses:	N	Yes	No
IS-100: Introduction to the Incident Command System	50	50 (57.5%)	37 (42.5%)
IS-200: ICS for Single Resources and Initial Action Incidents	43	43 (49.4%)	44 (50.6%)
IS-700: National Incident Management System (NIMS), An Introduction	68	68 (78.2%)	19 (21.8%)
IS-800: National Response Plan (NRP), An Introduction	24	24 (27.6%)	63 (72.4%)
The Emergency Preparedness Core Competencies for Public Health Workers	65	65 (74.7%)	22 (25.3%)

Additional Comments

Each respondent was given the opportunity to provide additional comments regarding training needs for public health emergencies. The comment boxes were grouped into areas to write about their need, service area's need and the health department's need.

A. Your personal training needs for public health emergencies.

- You need to have a booklet with all the above for all staff to be able to read.
- The Public Health Headquarters seemed important in the beginning, but now we do not practice and never completed the things that were discussed about 8 months ago.
- Being a newer employee I know who to ask for my job responsibilities, however I need to know who to contact if I can not get a hold of those people. As it stands I would most likely do what I'm told since I have no idea what my specific responsibilities would be.
- I would need training and a detailed form to follow.
- Distribute brochures on personal training needs for public health emergencies to staff.
- Past history of first responder along with being a nurse for emergency/ambulance care. Also pediatric, orthopedic, and intensive care background along with homecare.
- I am a new employee with the Berrien County Health Department and have not yet received any emergency preparedness training.
- Extensive training needed.
- More natural disaster and pandemic flu training, ongoing small pox and nuclear emergency training.
- Would essentially need refresher training for any incidents where I may need to respond.
- I feel that I am under used with my outside training that I had coming into this position.
- I need any and all training that would help me be ready for any emergencies.
- I need to be made aware of my role as a prevention specialist.
- Annual training should be provided detailing basic responsibilities.
- I just want to know plainly and succinctly what to do for each of the emergencies. Should I call in? Will I be needed? What should I do? Just basics.
- ID role and train me.
- I am sure I could be of assistance, but would need to be directed in area most needed.
- I have never had any training as to what my job would be in a public health emergency.
- n/a
- Need specifics clarified.
- The training a year ago was on paper and used terms unfamiliar to me. I feel woefully unprepared. Training should include practical hands-on demonstrations and use terms understandable by staff. There could be an instruction sheet checklist for use in an emergency.
- Very unprepared for most emergencies.

B. Your service area's training needs for public health emergencies.

- Same as above. Create a booklet with all the above information for all staff individually.
- More practice in emergency situations.
- How education would be included in any of the emergency readiness plans.
- It would be helpful to know my exact job duties.
- Extensive training needed.
- Same as above...it's been nearly a year since we experienced a simulated training.
- Review one topic at a time. This is what is expected of you if this happens. Not just handing them a p/p and say read it, but go through it step by step even if it is a general nurse is responsible for this and a secretary is responsible for this, etc.
- I may need training in CPR, more training on chemical spills etc.
- I need to be made aware of the area's role.
- ID role and train us.
- Same as above.
- Family Planning has never had any training. None of know what to do and have never been encouraged by our supervisor to be trained or aware of our responsibilities during an emergency.
- n/a
- Public Health HQ training is greatly needed.

C. The Berrien County Health Department's training needs for public health emergencies.

- Same as above.
- Staff should know their role in an emergency situation which most of them do not here at the health department.
- Public awareness of what the health department does would be a suggestion, after all of the employees know what we do.
- I think BCHD is doing a fine job with training needs for those that can help. Those that are clerical, etc. it seems to be a waste of time and the questions just asked have no relevancy.
- Not sure since I do not have the scope of what is needed.
- The most important need that I have observed is getting all nursing staff prepared for any emergency. To date, no PPHS staff has attended any table tops or trainings with respect to county emergencies.
- I think Berrien County is working very hard to get employees prepared for all types of emergencies. It is very hard to say to yourself that you are totally ready. I know the training would come back to each and everyone of us in an emergency. I do, however, look to strong leadership to get us through an actual event.
- Review and get information, take one topic at a time this is what is expected of you if this happens.....
- Service areas outside of community preventive health services and environmental health need training and LOTS of exercise training drills to be able to function well.

- As an agency, I am sure some people in the community will come here in an emergency. Do we know where to tell them to go to get medical help? Will they expect us to help with medical needs, drugs etc.? Are we linked up with local hospitals to provide care?
- ID role and train us.
- I think more hands-on demonstrations would help for each type of emergency.
- Make sure that we all take the tests ourselves without being given the answers to the questions first. We need time at work to do the tests. I was given an answer sheet and told to put the answers in and send the test in so that I could get the certificate. I learned nothing.
- n/a
- Training throughout the department is a major issue, but first we must identify every individual's role and responsibility and training from that starting point.

Summary and Recommendations

One of the overarching themes that emerged from this multi-method assessment of emergency preparedness training needs for Berrien County Health Department (BCHD) employees was **the need for employees to know their personal role** in the department's response to public health emergencies. The employees want to know their responsibilities, their specific work tasks, who they need to report to, and how to communicate with others. In the focus group discussions, we learned that emergency planning and response training has been emphasized for many of the leaders at the BCHD, but many other employees have not received extensive training. The department-wide survey's ratings of preparedness competencies suggested that the highest training needs were for describing one's job responsibilities.

In the survey results, we learned that many of the employees did not feel like their role was very important during a variety of public health emergencies. Only 44% considered themselves essential personnel for public health emergencies. Related to the need to know one's personal role in the department's emergency response was the employees stated need to know more about the **chain of command**, within-agency and across-agency **communications**, and **incident command** procedures.

In both the focus groups and the department-wide survey, the BCHD employees reported on training needs for effective response to a variety of public health emergencies. The results, however, appear to be different from the two methods. In the focus groups, the participants suggested a greater training need for man-made disasters such as terrorist incidents, transportation accidents, and nuclear accidents. More respondents on the survey noted the need for extensive training for a greater number of natural hazards such as dam failures and earthquakes. Many of survey respondents, however, also noted the need for extensive training for terrorism and for water contamination. When we asked about preparedness competency training needs for five specific emergency scenarios, the respondents noted the highest training needs for chemical spills, water contamination, and power outages. In other words, **the results from the two methods did not clearly indicate the specific type of public health emergency that should be the focus of future training efforts.**

One section of the survey focused on **the anticipated personal impact of different public health emergencies**. These results suggest the types of emergencies of most concern to the employees. A majority of BCHD employees believed they would NOT report to work during a radiological or nuclear incident. The employees felt most at risk during a radiological incident. Since Berrien County is home to two nuclear power plants, these results should be taken very seriously. The employees also reported feeling at risk during a large natural disaster, a smallpox incident, and a severe ice storm. Similarly, they reported concern for their families in the face of a smallpox incident, pandemic flu, and a large natural disaster. This set of results suggests that there is a high level of personal concern for public health emergencies that could have widespread impact (radiological, smallpox, flu, etc.). Because the BCHD employees are highly concerned about these types of emergencies, they could provide a useful context for training efforts.

APPENDIX:

**Berrien County Health Department Training
Online Needs Assessment Items**

Berrien County Health Department Training Needs Assessment

The University of Michigan's Center for Public Health Preparedness is conducting this survey to identify training needs and prioritize development of emergency preparedness training courses to assist Berrien County Health Department in becoming Public Health Ready.

While your individual answers will be kept confidential, summaries of combined results will be shared with your agency and other interested groups to build consensus about training priorities. The survey should take about 10 minutes to complete.

I. General Information

1. What service area do you work for at Berrien County Health Department (BCHD)?
(*Check one answer*)

- Community Preventive Health Services
- Environmental Health Services
- Health Promotion Services
- Personal Preventive Health Services
- Substance Abuse Treatment Services
- Support Services
- Program Operations
- Finance
- Administration
- Other [specify]_____

2. What is your primary role at the Berrien County Health Department? (*Check one answer*)

- Public Health Leader (e.g., health officer, director/manager, medical director)
- Public Health Communicable Disease Staff (e.g., epidemiologist, C.D. Nurse)
- Public Health Clinical Staff (e.g., nurse, physician, counselor)
- Environmental Health Staff (e.g., sanitarian, environmental health specialist)
- Public Health Laboratory Staff
- Medical Examiner/Coroner
- Public Health Information Staff (e.g., health educator, public information officer)
- Other Public Health Professional Staff , [specify]_____
- Public Health Technical & Support Staff (e.g., administrators, clerical, IT staff)
- Public Health Nursing Staff (e.g., general PH Nurse, Field Nurse)

3. How many years have you been working in your **current position** at BCHD? _____

4. How many years have you been working in **public health**? _____

II. Level of Hazard Training

The table below lists Natural and Man-Made Hazards that could affect Berrien County. It was produced by Berrien County Emergency Management Department. Please indicate the **level of training you still need** in order to be adequately prepared to respond to each of these hazards. Circle the number that best applies to your level of training need. Choose “NA” only if the task is not applicable to your job and you would therefore not be part of the response.

Type of Hazard:	Level of Training			
	1 = No Training Needed 2 = Some Training Needed 3 = Extensive Training Needed			
<u>Natural Hazard</u>	<i>Circle one answer:</i>			
Dam Failure	1	2	3	NA
Drought	1	2	3	NA
Earthquake	1	2	3	NA
Extreme Temperature	1	2	3	NA
Hail	1	2	3	NA
Lightning	1	2	3	NA
Riverine Flooding	1	2	3	NA
Severe Wind	1	2	3	NA
Severe Winter Weather	1	2	3	NA
Shoreline Flooding/Erosion	1	2	3	NA
Subsidence (sinking of the earth’s surface)	1	2	3	NA
Tornado	1	2	3	NA
Wildfire	1	2	3	NA
<u>Man-Made Hazard</u>	<i>Circle one answer:</i>			
Civil Disturbance	1	2	3	NA
HazMat Incident (e.g., chemical spill)	1	2	3	NA
Infrastructure Failure (of gas, water, sewage)	1	2	3	NA
Nuclear Power Plant Accident	1	2	3	NA
Oil and Gas Well Accident	1	2	3	NA
Pipeline Accident	1	2	3	NA
Scrap Tire Fire	1	2	3	NA
Structural Failure	1	2	3	NA
Terrorism/Sabotage/WMD	1	2	3	NA
Transportation Accident (e.g., truck, rail)	1	2	3	NA
<u>Additional Public Health Hazards</u>	<i>Circle one answer:</i>			
Animal Disease Outbreak (e.g., bird flu, mad cow)	1	2	3	NA
Flu Pandemic	1	2	3	NA
Foodborne Illness Outbreak	1	2	3	NA
Infectious Disease Outbreak (e.g., measles, plague, smallpox)	1	2	3	NA
Water Contamination/Biological Outbreak	1	2	3	NA

III. Emergency Preparedness Competencies

How much do you agree or disagree with the following tasks related to a public health emergency? Please circle the number that best applies. Choose NA if the task is not applicable to your job.

Table 1. Nuclear Power Plant Accident

I am confident I can...?	Level of Agreement					NA
	1	2	3	4	5	
	1=Strongly Disagree 5=Strongly Agree					
	<i>Circle one answer:</i>					
Describe BCHD’s responsibilities during a nuclear power plant accident.	1	2	3	4	5	NA
Identify the specific person you should report to during a nuclear power plant accident.	1	2	3	4	5	NA
Describe your job responsibilities during a nuclear power plant accident.	1	2	3	4	5	NA
Demonstrate your job responsibilities during a nuclear power plant accident.	1	2	3	4	5	NA

Table 2. Chemical Spill Accident

I am confident I can...?	Level of Agreement					
	1=Strongly Disagree 5=Strongly Agree <i>Circle one answer:</i>					
Describe BCHD's responsibilities during a HAZMAT or industrial chemical spill incident.	1	2	3	4	5	NA
Identify the specific person you should report to during a HAZMAT or industrial chemical spill incident.	1	2	3	4	5	NA
Describe your job responsibilities during a HAZMAT or industrial chemical spill incident	1	2	3	4	5	NA
Demonstrate your job responsibilities during a HAZMAT or industrial chemical spill incident.	1	2	3	4	5	NA

Table 3. Water Contamination/Outbreak

I am confident I can...?	Level of Agreement					
	1=Strongly Disagree 5=Strongly Agree <i>Circle one answer:</i>					
Describe BCHD's responsibilities during chemical or biological contamination of the water supply.	1	2	3	4	5	NA
Identify the specific person you should report to during chemical or biological contamination of the water supply	1	2	3	4	5	NA
Describe your job responsibilities during chemical or biological contamination of the water supply.	1	2	3	4	5	NA
Demonstrate your job responsibilities during chemical or biological contamination of the water supply	1	2	3	4	5	NA

Table 4. Infectious Disease Outbreak

I am confident I can...?	Level of Agreement					
	1=Strongly Disagree 5=Strongly Agree					
	<i>Circle one answer:</i>					
Describe BCHD's responsibilities during an infectious disease outbreak.	1	2	3	4	5	NA
Identify the specific person you should report to in an infectious disease outbreak.	1	2	3	4	5	NA
Describe your job responsibilities during an infectious disease outbreak.	1	2	3	4	5	NA
Demonstrate your job responsibilities during an infectious disease outbreak.	1	2	3	4	5	NA

Table 5. Widespread Power Outage

I am confident I can...?	Level of Agreement					
	1=Strongly Disagree 5=Strongly Agree					
	<i>Circle one answer:</i>					
Describe BCHD's responsibilities during a widespread power outage.	1	2	3	4	5	NA
Identify the specific person you should report to during a widespread power outage.	1	2	3	4	5	NA
Describe your job responsibilities during a widespread power outage.	1	2	3	4	5	NA
Demonstrate your job responsibilities during a widespread power outage.	1	2	3	4	5	NA

Table 6. Non-Hazard Specific

I am confident I can...?	Level of Agreement					NA
	1=Strongly Disagree 5=Strongly Agree					
	<i>Circle one answer:</i>					
Recognize who to report to during an emergency, when your supervisor is unavailable.	1	2	3	4	5	NA
Identify and locate BCHD’s Emergency Response Plan (ERP) in your workplace.	1	2	3	4	5	NA
Locate specific information in BCHD’s ERP that would help you respond in different types of public health emergencies.	1	2	3	4	5	NA
Describe your job responsibilities during a mass distribution clinic.	1	2	3	4	5	NA
Respond to a food-borne disease outbreak.	1	2	3	4	5	NA
Demonstrate the correct use of:						
• Fax machine	1	2	3	4	5	NA
• Cell phone	1	2	3	4	5	NA
• Two-way radio	1	2	3	4	5	NA
• 800 MHz. radio	1	2	3	4	5	NA
• E-mail	1	2	3	4	5	NA
• Health Alert Network (HAN) system	1	2	3	4	5	NA
Identify limits to your knowledge/skills/authority and to identify resources for referring matters that exceed these limits.	1	2	3	4	5	NA
Recognize an unusual event that might indicate an emergency.	1	2	3	4	5	NA
Describe the appropriate action to respond to an unusual event that might indicate an emergency.	1	2	3	4	5	NA
Apply creative and flexible problem solving to unusual events within your functional response requirements.	1	2	3	4	5	NA
Evaluate the effectiveness of the actions you make during an emergency response.	1	2	3	4	5	NA

IV. Perceived Risk

How likely is it that you would **report to work** during each of the following public health emergencies occurring in BCHD?

	Not at all Likely	Somewhat Likely	Very Likely	Extremely Likely
Chemical spill/explosion	1	2	3	4
Power failure	1	2	3	4
Radiological/Nuclear incident	1	2	3	4
Ice storm	1	2	3	4
Pandemic influenza outbreak	1	2	3	4
Smallpox incident	1	2	3	4
E. coli (foodborne outbreak) outbreak	1	2	3	4
Natural disaster (on the scale of Hurricane Katrina)	1	2	3	4

Project Public Health Ready

How likely is it that you would be putting **your family at risk** if you went to work during each of the following public health emergencies:

	Not at all Likely	Somewhat Likely	Very Likely	Extremely Likely
Chemical spill/explosion	1	2	3	4
Power failure	1	2	3	4
Radiological/Nuclear incident	1	2	3	4
Ice storm	1	2	3	4
Pandemic influenza outbreak	1	2	3	4
Smallpox incident	1	2	3	4
E. coli (foodborne outbreak) outbreak	1	2	3	4
Natural disaster (on the scale of Hurricane Katrina)	1	2	3	4

Project Public Health Ready

How important is your role with the Berrien County Health Department during a:

	Not at all Likely	Somewhat Likely	Very Likely	Extremely Likely
Chemical spill/explosion	1	2	3	4
Power failure	1	2	3	4
Radiological/Nuclear incident	1	2	3	4
Ice storm	1	2	3	4
Pandemic influenza outbreak	1	2	3	4
Smallpox incident	1	2	3	4
E. coli (foodborne outbreak) outbreak	1	2	3	4
Natural disaster (on the scale of Hurricane Katrina)	1	2	3	4

Do you have a plan for your family in the event of a public health emergency?

- Yes
- No

Do you consider yourself to be essential personnel for a public health emergency?

- Yes
- No

Have you received any training that addresses your role during a public health emergency?

- Yes
- No

V. Specific Courses

Have you completed any of the following online individual study courses? (**check all courses completed**):

- IS-100: Introduction to the Incident Command System
- IS-200: ICS for Single Resources and Initial Action Incidents
- IS-700: National Incident Management System (NIMS), An Introduction
- IS-800: National Response Plan (NRP), An Introduction
- “The Emergency Preparedness Core Competencies for Public Health Workers”

V. Other Comments

Please provide any other comments you may have concerning:

- a. **YOUR** personal training needs for public health emergencies.
- b. **Your SERVICE AREA's** training needs for public health emergencies.
- c. The **Berrien County Health Department's** training needs for public health emergencies.