NACCHO
National Association of County & City Health Officials
The National Connection for Local Public Health

[REPORT]
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A Mixed-Methods Approach to Understanding Radiation Preparedness within Local Health Departments

Background

Radiation preparedness remains an important public health consideration for local and state governments. The breadth of events emergency planners must plan for include both accidental and intentional threats (e.g., nuclear power plant incidents, dirty bombs, terrorist activities). Even though radiation preparedness is an important public health planning priority, it is a well-established fact that local health departments (LHDs) do not always have the necessary funding needed to properly plan and prepare for these radiological events. When it comes to radiation preparedness, there are many key players involved (e.g., fire, police, hazmat, state/local emergency management agencies). The National Association of County and City Health Officials (NACCHO) is primarily focused on how public health, specifically LHDs, is planning/preparing for possible radiological events. The purpose of this project was to better understand how public health emergency preparedness coordinators at LHDs across the nation are currently planning for radiation events, as well as to examine the barriers and facilitators to radiation preparedness planning.

Methods

A mixed-methods approach (survey and key informant interviews) was used to better understand how local jurisdictions are currently planning for radiological emergencies. A survey was developed by Oak Ridge Associated Universities (ORAU) and the Centers for Disease Control and Prevention (CDC) Radiation Studies Branch to assess radiation response efforts being made by emergency preparedness coordinators. NACCHO compiled a list of emergency preparedness coordinators located within 10-mile emergency planning zones (EPZs) and within 50-mile EPZs. ORAU administered the survey using NACCHO's list of emergency preparedness coordinators and NACCHO was given access to the survey data for analysis purposes. In order to be eligible to participate in the survey, respondents had to meet the following eligibility criteria: (1) plan for radiological/nuclear events; (2) work at a state/territorial/tribal/local agency; and (3) work in the field of

public health preparedness, radiation control, or emergency management. Randomly selected participants were e-mailed a survey invitation and asked to complete the online survey using the SurveyMonkey.com platform. Using the findings from the survey, and in attempt to better understand the differences between small (<60,000 population size), medium (60,000-300,000 population size), and large (300,000+ population size) health departments with regard to radiation response planning, seven key informant interviews were conducted with emergency preparedness coordinators from LHDs. For these key informant interviews, two interviews were held with small LHDs, three with medium-sized LHDs, and two with large LHDs.

Results

Survey Findings

The survey was e-mailed to 175 emergency preparedness coordinators across the country, and a total of 38 emergency preparedness coordinators successfully completed the survey for a final response rate of 21.7%. For the remainder of this report, the term "survey respondents" is used to describe the emergency preparedness coordinators who participated in the survey.

General Characteristics

The majority (76%) of survey respondents reported working in local government, followed by 18% who reported working for the state government, and 5% who reported working at the county government level. Fifty-three percent of respondents reported working at public health agencies, while 45% reported working for emergency management agencies. Survey respondents had a wide range of experience in the field of radiation planning, with many having less than five years of experience (32%), some having between five and 10 years of experience (13%), and the majority having more than 10 years of experience (55%). The majority (82%) of survey respondents reported having a nuclear power plant within 10 miles, (being within a plant's 10-mile EPZ). The majority (84%) of survey respondents also indicated that his/her agency participates in the Federal Emergency Management Agency's Radiological Emergency Preparedness Program, and the majority (90%) also reported having a radiation emergency plan in their agency's all-hazards plan. The general characteristics of survey respondents can be located in Table 1.

TABLE 1. GENERAL CHARACTERISTICS OF SURVEY RESPONDENTS

General Characteristics of Respondents	n	%
Type of government		
Local	29	76.3
State	7	18.4
County	2	5.3
Type of agency		
Public Health Preparedness	20	52.6
Emergency Management	17	44.7
Radiation Control	1	2.6
Length of time in the field of radiation/nuclear planning (years)		
0–5	12	31.6
5–10	5	13.2
10+	21	55.3
Agency is located within 10-mile emergency planning zone of a nuclear power plant		
Yes	31	81.6
No	7	18.4
Agency participates in Radiological Emergency Preparedness (REP) Program		
Yes	32	84.2
No	1	2.6
Missing	5	13.2
Agency has a radiation emergency response plan/annex located in all-hazard plan that addresses public health responsibilities		
Yes	34	89.5
No	4	10.5

Response Plan Characteristics

Survey respondents were asked to indicate whether or not their agency had response plans that contained several preparedness activities related to radiation preparedness. The top 10 radiation preparedness activities reported were (1) identifying vulnerable populations; (2) identifying impacted populations; (3) providing personal protective equipment; (4) setting up community reception centers; (5) establishing public shelters; (6) distributing medical countermeasures; (7) issuing protective action recommendations; (8) communicating radiation risks to the public; (9) establishing worker dosimetry programs; and (10) staffing community reception centers. Table 2 contains all of the radiation activities being offered by those who responded to the survey.

TABLE 2. COMPONENTS INCLUDED WITHIN RESPONDENT'S RESPONSE PLANS

Components Included within Respondent's Response Plans	n	%
Health and Safety		
Providing personal protective equipment (PPE) recommendations	28	73.7
Establishing a worker dosimetry program	27	71.1
Establishing radiation control zones for responders	25	65.8
Community Reception and Decontamination		
Setting up community reception centers (CRC)	29	76.3
Staffing CRCs	27	71.1
Establishing decontamination protocol	25	65.8
Establishing contamination screening protocol	24	63.2
Sheltering		
Establishing public shelters in radiation emergencies	28	73.7
Supporting radiation monitoring in public shelters	24	63.2
Monitoring shelter residents for health issues	23	60.5
Laboratory Condsiderations		
Coordinating environmental sampling (e.g., air, soil, water, and crop samples)	12	31.6
Prioritizing people for biological sampling (e.g., blood and urine samples)	6	15.8
Coordinating (e.g., collecting, packing, shipping) biological sampling	5	13.2
Public Health and Medical		
Identifying vulnerable populations	32	84.2
Identifying the impacted population	31	81.6
Providing counseling/mental health services	20	52.6
Creating a registry for public health follow-up	18	47.4
Conducting internal contamination assessments	13	34.2
Distributing medical countermeasures	28	73.7
Managing medical treatment of radiation causalities	18	47.4
Coordinating mortuary services for mass fatalities	13	34.2
Communications Considerations		
Issuing protective action recommendations for the public	28	73.7
Communicating radiation risk to the public	28	73.7
Developing health messages for the public	26	68.4

Planning Efforts

When survey respondents were asked which partners they engaged in radiation planning, the top five planning partners included (1) local emergency management; (2) state emergency management; (3) state public health agencies; (4) local public health; and (5) state radiation control. A list of all radiation planning partners is contained in Table 3. Sixty-three percent of respondents indicated that a template was used to develop his/her organization's radiation plan; of those respondents, 42% of respondents indicated that the template was taken from a state plan, 42% indicated that the template was taken from another jurisdiction, and 38% indicated that an existing plan was modified to meet the organization's radiation planning needs. Survey respondents noted that their response plans were funded from state funds (34%), Public Health Emergency Preparedness Grants (29%), Assistant Secretary for Preparedness and Response Hospital Preparedness Grants (5%), and other types of funding (32%) such as utility funding.

TABLE 3. PARTNERS INCLUDED IN RADIATION PLANNING

Partners Included in Radiation Planning	n	%
Local emergency management agency	32	84.2
State emergency management agency	31	81.6
State public health agency	27	71.1
Local public health agency	27	71.1
State radiation control authority	26	68.4
School officials/planners	24	63.2
Hospital planners	24	63.2
Shelter planners	23	60.5
Nongovernmental organizations (NGOs)	23	60.5
Political leaders/policymakers	20	52.6
Volunteers	18	47.4
Local radiation control authority	12	31.6
Clinicians	5	13.2
Does not engage with other partners	1	2.6

Education/Planning Tools

Forty percent of survey respondents indicated that they used educational tools from the CDC to plan for radiation response efforts. If survey respondents indicated that they used CDC tools, they were then asked to rate the usefulness of specific named tools; in general, survey respondents indicated that the CDC's tools were "very good or good." Table 4 describes the rated usefulness of CDC tools.

TABLE 4. RATED USEFULNESS OF CDC PRODUCTS

Rated Usefulness of CDC Products	n	%
Radiological Terrorism: Tool Kit for Public Health Officials (Website)		
Very good/Good	10	13.3
Fair	0	0
Heard about product, but has not used it	2	13.3
Not familiar with product	3	20.0
Radiological Terrorism: Tool Kit for Emergency Services Clinicians (Website)		
Very good/Good	4	26.7
Fair	0	0
Heard about product, but has not used it	2	13.3
Not familiar with product	8	53.3

Table 4 continues on next page

Table continued from page 4

Rated Usefulness of CDC Products	n	%
Population Monitoring Guide (Guide Book)		
Very good/Good	7	46.7
Fair	0	0
Heard about product, but has not used it	3	20.0
Not familiar with product	5	33.3
Virtual Community Reception Center (vCRC) (Online Training)		
Very good/Good	6	40.0
Fair	0	0
Heard about product, but has not used it	3	20.0
Not familiar with product	6	40.0
Guidelines for Handling Decedents Contaminated with Radioactive Materials (Guide Book)		
Very good/Good	5	33.3
Fair	0	0
Heard about product, but has not used it	3	20.0
Not familiar with product	7	46.7
Public Health Planning for Radiological & Nuclear Terrorism (Video)		
Very good/Good	5	33.3
Fair	1	6.7
Heard about product, but has not used it	2	13.3
Not familiar with product	7	46.7
Radiological/Nuclear Law Enforcement and Public Health Investigation Handbook (Guide Book)		
Very good/Good	6	40.0
Fair	0	0
Heard about product, but has not used it	2	13.3
Not familiar with product	7	46.7
Psychological First Aid in Radiation Disasters (Online Training)		
Very good/Good	5	33.3
Fair	0	0
Heard about product, but has not used it	1	6.7
Not familiar with product	8	53.3
CRC Operations in Radiation Emergencies (Video)		
Very good/Good	3	20.0
Fair	0	0
Heard about product, but has not used it	1	6.7
Not familiar with product	10	66.7
Radiation Basics Made Simple (Online Training)		
Very good/Good	3	20.0
Fair	0	0
Heard about product, but has not used it	2	13.3
Not familiar with product	9	60.0

Table 4 continues on next page

Table continued from page 5

Rated Usefulness of CDC Products	n	%
Screening People for External Contamination (Video)		
Very good/Good	1	6.7
Fair	2	13.3
Heard about product, but has not used it	3	20.0
Not familiar with product	8	53.3
Medical Response to Nuclear and Radiological Terrorism (Video)		
Very good/Good	4	26.7
Fair	0	0
Heard about product, but has not used it	1	6.7
Not familiar with product	9	60.0
Radiological Terrorism: Just-in-Time Training for Hospital Clinicians (Video)		
Very good/Good	3	20.0
Fair	0	0
Heard about product, but has not used it	2	13.3
Not familiar with product	9	60
Training for Handling Decedents Contaminated with Radioactive Materials (Video)		
Very good/Good	2	13.3
Fair	0	0
Heard about product, but has not used it	2	13.3
Not familiar with product	10	66.7

Priorities, Preferences, and Expectations

The majority (84%) of survey respondents indicated that with regard to radiation preparedness, distributing medical countermeasures was the most pressing priority for planners.

With regard to radiation education, survey respondents indicated that the use of personal protective equipment (71%) was the most interesting radiation training topic, followed by the health effects of radiation (66%). Of note, there did not always appear to be alignment between the priority areas and topics of interest in terms of which items were ranked the highest among survey respondents, which may suggest health departments are not always seeking out or conducting training based on their organization's priorities. A full list of priorities and topics of interest can be found in Tables 5 and 6. Survey respondents were also asked to indicate their preferred method of receiving information about radiation preparedness; the top five most preferred methods were (1) web sites; (2) professional conferences; (3) webinars; (4) newsletters; and (5) e-mail listservs. Regarding expectations from the CDC, respondents indicated that they most expected the CDC to provide guidance (87%) and provide technical consultations (84%) to their organizations about radiation preparedness.

TABLE 5. PRIORITY AREAS FOR PUBLIC HEALTH DEPARTMENTS IN RADIOATION EMERGENCIES

Priority Areas for Public Health Departments in Radiation Emergencies	n	%
Distribute medical countermeasures (if needed)	32	84.2
Support mass care operations	29	76.3
Provide information to the public	28	73.7
Conduct epidemiological surveillance	23	60.5
Support medical operations	20	52.6

Table 5 continues on next page

Table continued from page 6

Priority Areas for Public Health Departments in Radiation Emergencies	n	%
Coordinate screening and decontamination operations	18	47.4
Conduct environmental health monitoring	17	44.7
Other	2	5.2

TABLE 6. MOST INTERESTING RADIATION TRAINING TOPICS

Priority Areas for Public Health Departments in Radiation Emergencies	n	%
Personal protective equipment in radiation emergencies	27	71.1
Health effects of radiation	25	65.8
Risk communication in radiation emergencies	22	57.9
Legal considerations in radiation emergencies	21	55.3
Role of public health in radiation emergencies	18	47.4
Shelter operations in radiation emergencies	18	47.4
Radiation safety principles	17	44.7
Community radiation preparedness	17	44.7
Community reception centers	16	42.1
Psychological first aid in radiation emergencies	16	42.1
Radiation dose measurement	15	39.5
Data sharing in radiation emergencies	15	39.5
Healthcare facility radiation preparedness	15	39.5
Epidemiology in radiation emergencies	15	39.5
Non-pharmaceutical management of radiation health effects	14	36.8
Pharmaceutical management of radiation health effects	13	34.2
Working with law enforcement in radiation emergencies	13	34.2
Fatality management in radiation emergencies	12	31.6
Developing a radiation response workforce	11	28.9
Federal radiation resources	8	21.1
Laboratory response to radiation emergencies	6	15.8

Key Informant Interview Findings

A total of seven key informant interviews were conducted with emergency preparedness coordinators in small, medium, and large LHDs across the country and are referred to as "LHD respondents" throughout the remainder of this report. NACCHO purposefully reached out to small, medium, and large LHDs to assess the similarities and differences in radiation planning among LHDs of different sizes. This report quickly identified that there were not many differences in radiation planning activities based on the size of the LHD; however, radiation planning activities mainly differed based on the distance the LHD was from a nuclear power plant. The findings from these seven key informant interviews are summarized below according to the following themes: (1) radiation planning concerns; (2) barriers to radiation planning; (3) radiation exercise planning; and (4) partnerships/resources. The Appendix contains a full list of the questions asked during the key informant interviews.

Radiation Planning Concerns

For "Radiation Planning Concerns," LHD respondents were asked to describe their immediate planning priorities for radiation activities within their jurisdictions, as well as describe whether or not they perceived their jurisdictions as being potential targets for terrorism. The LHD respondents for these key informant

interviews noted having different experiences with radiation planning, mainly because some LHDs were located within a 10-mile EPZ and others were located farther out. The distance between the LHD and a nuclear power plant appeared to be the biggest predictor of response planning efforts (not size of the LHD); those LHDs closer to a nuclear power plant (within 10-mile EPZ) appeared to have more comprehensive plans in place than those jurisdictions within a 50-mile EPZ. This discrepancy may be due to the fact that jurisdictions within a 10-mile EPZ of nuclear power plants often participate in REP mandated exercises, which occur every other year.

Most LHD respondents indicated that radiation planning fit with other preparedness planning efforts within the LHD and that oftentimes radiation plans were used as model for other types of planning such as planning for Ebola, Zika, and Anthrax. In general, most LHD respondents indicated that their LHD was located in a nuclear radiation transit zone (i.e., jurisdiction contained routes along which nuclear material is transported).

Most LHD respondents indicated that their jurisdictions' immediate role in the event of a radiological incident would be to participate in screening/monitoring/decontamination/sheltering; a couple of LHDs noted that they would be responsible for dispensing KI (potassium iodine) if needed. Local health department respondents reported mixed responses about their perceptions of sites within their jurisdiction being a target for terrorism—with some LHDs identifying specific locations (e.g., malls, stadiums, marinas) as potential terrorist targets and others not perceiving any sites within their jurisdictions as being targets for terrorism. One medium-sized LHD respondent suggested that their jurisdiction would not be prepared for a "dirty bomb," mainly because terrorism was low on the list of threats when using an all-hazards planning approach. Two of the LHDs from medium-sized locations indicated that planning for companion animals was one of the top planning priorities for radiation because there is very limited guidance available on this topic. Another LHD from a medium-sized jurisdiction stated that one of the top planning priorities for radiation preparedness was to ensure that staff from all LHDs in the state were appropriately trained about radiation preparedness so that these LHDs could assist in the event of a radiological response.

> *"All local health departments in the state can assist with an event if they have the same level of knowledge. Therefore, we would like to see all local health departments trained in radiological response activities, which would include trainings on how to operate radiological monitoring devices." –Medium LHD*
>
> *"Yes, we are a target for terrorism, but that's just the nature of being around nuclear power plants. But terrorism is not a big planning priority." –Large LHD*

Barriers to Radiation Planning

Local health department respondents were asked directly to describe the barriers (e.g., staffing, funding levels) they experience when exercising/planning for radiation events. LHD respondents indicated that lack of funding, training, and staff capacity were all barriers to radiation preparedness planning. All of the interviewed LHD respondents, regardless of size, indicated that only one or two staff were currently working on radiation preparedness activities. Several LHD respondents noted that the lack of available trainings on the topic of radiation preparedness for LHD staff was a significant barrier to radiation planning. It was also noted that even if radiation trainings are available for staff, it is a costly burden to require non-preparedness staff (e.g., health educators, nurses) to attend radiation preparedness trainings. Concern over the cost of in-person radiation trainings was also noted, as some LHD respondents suggested that trainings are often held in metropolitan locations too far away from the LHD. Some LHD respondents also indicated that training staff can be difficult because there is not enough equipment for staff to practice on during trainings. Access to staff trainings was described as a barrier and some respondents suggested that equity in the quality of training across states was also an issue. In general, responses to this question did not differ based on the size of the LHD; however, both small LHD respondents indicated that they felt very comfortable with their jurisdictions' radiation response plans mainly because respondents had years of experience in the field of radiation preparedness.

"If I were to step out in front of a bus, no one would have the training or education in radiation to be able to fill in." –Small LHD

"Radiation response plans require specific skillsets that public health employees do not have. These required skills not only involve an understanding of radiation and its impact on health, but also how to operate radiation monitoring devices. Planning efforts for a radiological response are probably the most challenging with respect to educating a response team." –Medium LHD

Radiation Exercise Planning

Local health department respondents were asked to provide feedback on what makes radiation planning and exercises run smoothly. One medium-sized LHD suggested that having volunteers play victims during exercises was an easy way to ensure that staff could truly engage and learn from the exercise instead of having to play victims themselves. Another medium-sized LHD suggested that one way to ensure that full-scale radiological exercises run smoothly is to train staff a couple of weeks prior to the actual exercise. One large LHD suggested that being able to use response plan templates from nuclear power plants was a good way to ensure that all bases were covered in terms of radiation planning.

"My health department does training two-weeks prior to the exercise. Training includes a review of what radiation is, types of radiation, contamination vs. exposure, radiation dose, incident command, details of our local plan, mock set up of exercise radiological monitoring equipment, and radiation safety briefings. The exercise runs much more smoothly as a result of the training which is held two weeks prior to the exercise." –Medium LHD

"It was helpful to be able to use the preparedness plan that the nuclear power plant had in place in regards to screening." –Large LHD

Partnerships and Resources

Finally, LHD respondents were asked to describe any helpful resources used for radiation planning, as well as identify any existing partnerships in place with community or preparedness organizations. All LHD respondents interviewed emphasized the importance of community partnerships when developing and exercising effective radiation response plans, enabling planners to have a better idea of the needs of everyone in the community. Some of the recurring community partners cited by respondents included the Red Cross, Salvation Army, Medical Reserve Corps, emergency management agencies, and first responders. One small LHD stated that working with physicists at the local university to develop its jurisdiction's radiation response plans was one of the most beneficial partnerships in place. In terms of helpful planning resources, LHDs described the CDC's Radiation Tool Kit as being helpful, as well as the Federal Emergency Management Agency's (FEMA) guidance and the Center for Domestic Preparedness's resources.

"I have an idea of what everyone around me is doing, and I have formal partnerships in place." –Small LHD

"It's useful to have a broad coalition of partners interested in working together, so that not all radiation preparedness is being done in isolation." –Large LHD

Summary

The findings from this project provide the first preliminary insight into radiation preparedness planning efforts taking place at LHDs and highlight the barriers and facilitators of radiation preparedness planning. Some of the key findings from the survey suggest that LHDs are actively pursuing radiation planning and many respondents indicated that the CDC's resources were helpful for radiation planning. In addition, this assessment allowed NACCHO to learn about some of the most pressing planning priorities for LHDs with regard to radiation, which include distributing medical countermeasures, supporting mass care operations, and providing information to the public. Perhaps one of the most surprising findings from the key informant interviews was that very few differences were found between small, medium, and large LHDs with regard to radiation planning efforts. Distinctions were found based on the respondent's perceived risk of having a nuclear incident in his/her jurisdiction, as well as the distance the jurisdiction was from a nuclear power plant. Many consistent themes emerged

across LHD jurisdiction sizes, such as a need for cost-effective radiation educational opportunities for LHD staff and a need for more funding in order to be able to effectively plan for radiological events. Just as in all other types of all-hazards planning, the planning for radiological events must be tailored to each specific jurisdiction and there is no one-size-fits-all approach to radiological preparedness planning. In addition, it must be noted that potassium iodine (KI) was the only medical countermeasure mentioned by LHD respondents during the key informant interviews; preparedness coordinators must be made aware of other medical countermeasures (e.g., DTPA, Prussian Blue) and their ability to access them when planning for radiation events. Recommendations for the future include CDC and other federal and state radiation preparedness agencies developing webinars or other online e-learning opportunities for LHD staff to save on training costs; however, until these interactive e-learning opportunities can be developed, it is important for LHDs to be made aware of the helpful planning resources located in the CDC's Resource Library.

The CDC developed a resource library for professionals in the fields of public health, law enforcement, and healthcare on the topic of radiation preparedness. This easy-to-use resource library contains over 100 tools, on topics such as population monitoring, patient management, medical countermeasures, communications, mass fatalities, and sheltering. The following resources that may be beneficial for local health department planners:

- Medical Countermeasures for Radiation Exposure and Contamination
- A Guide to Operating Public Shelters in a Radiation Emergency
- Communicating During and After a Nuclear Power Plant Incident
- Community Reception Center Drill Toolkit
- Population Monitoring in Radiation Emergencies: A Guide for State and Local Public Health Planners
- Radiation Basics Made Simple

One of the biggest limitations of this assessment project was the limited sample size used for both the quantitative survey piece and the qualitative key informant interviews. Many attempts were made to contact sampled participants to increase the response rate for the survey. In addition, it must be noted that the findings from the key informant interviews are only generalizable to those who participated; therefore, significant conclusions cannot be drawn between small, medium, and large LHDs. However, this preliminary assessment of LHDs' radiation planning efforts adds to the knowledge base by providing information to NACCHO and the CDC about the current planning priorities and barriers to radiation preparedness experienced by local jurisdictions across the country.

Appendix: Radiation Key Informant Question Guide

Overall LHD Background

1. What is your role in your local health department's preparedness program? What is your role in regards to radiation preparedness?
2. How long have you worked in radiation preparedness? How long have you worked at this health department?
3. How many people does your local health department serve? [jurisdiction size] Do you serve surrounding jurisdictions as well?
4. What are the immediate concerns in planning for radiation emergencies in your or neighboring jurisdictions? [wait for response and then ask questions below if not addressed]
    a. Do you have a nuclear facility in your LHD jurisdiction (civilian or military)?
    b. Is your jurisdiction a transit zone for radiological/nuclear material?
    c. Is your jurisdiction considered part of the Urban Area Security Initiative and a potential target for terrorism?
    d. What other facilities are of concern regarding potential radiological/nuclear accidents?
5. Do you include any planning priorities appropriate for radiation emergencies that might be geographically remote but could potentially affect your community?
6. About how many employees work at your health department? How about specifically in radiation preparedness?
7. Can you please tell me a little bit about your health department's radiation preparedness program? [wait for response and then ask questions below if not addressed]
    a. How does radiation fit with other preparedness efforts at your health department?
    b. How frequently do you exercise your preparedness plans? Specifically radiation plans? How do you exercise these plans (TTX, full scale, virtual)?
    c. According to your plan, if there were to be a radiation event what would be your local health department's immediate role? What are the immediate vulnerabilities that your jurisdiction would experience in a radiation?
    d. According to your plan, if there were to be a nuclear incident, what would be your local health department's immediate role? What are the immediate vulnerabilities that your jurisdiction would experience in a nuclear incident?
    e. What are the most pressing planning priorities for your jurisdiction in regards to radiation preparedness?

Barriers

1. During the process of developing your radiation response plans, what challenges did you experience? What have been the biggest challenges that you have encountered thus far?
2. What barriers have you experienced when implementing any radiation exercises?
3. Could you comment a little bit about any challenges related to staff capacity and/or monetary barriers that you have experienced in regards to radiation preparedness planning and/or response?

Facilitators

1. During the process of developing your radiation response plans, what has been the most useful in helping you develop your plans? Is there anything in particular that stood out as being the most helpful for radiation planning?
2. How about during radiation exercises, has there been anything that has made exercises easier or run more smoothly?

Partnerships/Resources

1. What partnerships does your health department have in place with other agencies and/or individuals in your jurisdiction (e.g., state/local emergency management agency, hospitals, shelter planners, volunteers, political leaders, etc.)?
2. What type of collaborative agreements have you established to meet gaps in radiation preparedness?
3. What organizations/agencies have you received radiation specific training and information from (e.g. FEMA, RITN, National Guard, etc.)?
4. What tools or resources has your health department found to be the most helpful in terms of radiation preparedness planning?
5. What tools or resources would be most helpful for your jurisdiction in terms of radiation planning and response?

Take Home Message

1. If you had one take home message about radiation preparedness planning for other health departments, similar in size to your own health department, what would it be?
2. Do you have any other comments for NACCHO?

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The mission of the National Association of County and City Health Officials (NACCHO) is to be a leader, partner, catalyst, and voice with local health departments.

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