

Report on the CDC-CRCPD Workshop:
**Alliance to Expand Radiological
Emergency Preparedness in Public Health**

Conducted April 1-2, 2009



Conference of Radiation Control Program Directors, Inc.

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Alliance to Expand Radiological
Emergency Preparedness in Public Health**

Conducted April 1-2, 2009
Atlanta, Georgia

Prepared for the Centers for Disease Control and Prevention (CDC)

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EXECUTIVE SUMMARY

The workshop titled “Alliance to Expand Radiological Emergency Preparedness in Public Health” was held in Atlanta, Georgia, on April 1-2, 2009. The workshop was co-sponsored by the Centers for Disease Control and Prevention (CDC) and the Conference of Radiation Control Program Directors (CRCPD). Its purpose was to solidify, formalize and further develop partnerships established among radiation control and public health organizations, and to address priorities for radiological emergency preparedness that were established during the June 2008 “Roundtable on Communication and Teamwork: Keys to Successful Radiological Response,” also co-sponsored by CDC and the CRCPD. The main objective of the workshop was to produce an action plan to carry out the recommendations made at the 2008 roundtable.

The following four major focus areas were identified for the workshop:

- Addressing the need to develop consistent radiological capabilities nationwide
- Continuing to build relationships among participating organizations
- Addressing training, drill and exercise issues identified during the 2008 roundtable.
- Addressing the need for funding specifically allocated for radiological emergency preparedness in public health.

To address the four major focus areas, the workshop organizers convened more than 30 experts in the fields of health physics, public health preparedness, hospital preparedness, epidemiology, and emergency response. Care was taken to include among the participants, representatives from organizations identified as key to further developing partnerships for effective radiological preparedness in public health. The organizations represented included:

- Association of State and Territorial Health Officials (ASTHO)
- Conference of Radiation Control Program Directors (CRCPD)
- Council of State and Territorial Epidemiologists (CSTE)
- National Association of County and City Health Officials (NACCHO)

The workshop included initial presentations on topics related to the purpose, objectives, and logistics of the workshop, as well as an overview of the June 2008 Roundtable on Communication and Teamwork. In addition, information was provided on lessons learned from radiation control programs’ successful

collaborative projects, the CDC Public Health Emergency Preparedness Cooperative Agreement Program, and the Federal Emergency Management Agency's (FEMA) National Training and Exercise Program and an example of a successful Alliance ("Image Gently").

Following the initial presentations, participants were divided into three cohorts and were assigned to rotate through three facilitated breakout sessions, with each breakout session led by subject matter experts, or "champions," for the following topics:

1. Building Alliances and Capabilities
2. Training and Exercises
3. Funding for Radiological Preparedness in Public Health.

The findings, recommendations and action plans for the three topical areas are summarized below.

Building Alliances and Capabilities

This breakout session worked on the following two objectives:

1. Creating an alliance; and
2. Addressing building capacity and capabilities.

The majority opinion of the participants was that the development of an alliance was a worthwhile goal. It was agreed that the Alliance should have a formal structure with a vision, mission and charter as a starting framework. The consensus of the session was that CRCPD would be the initial convener with ASTHO, NACCHO, CSTE, and CRCPD as founding members, and that CDC would act in an advisory role.

The establishment of the Alliance would begin with the creation of a steering committee that would be charged with exploring the feasibility of developing an alliance among the professional organizations listed above. The goal would be to develop consistent radiological emergency preparedness capabilities nationwide, increase communication among interested parties, and share radiological emergency preparedness resources, tools and information.

In order to meet the second objective of building capacity and capabilities, the session participants identified several actions that must be taken, including:

- Redefining the public health role in radiological emergencies.
- Assessing skill sets needed to execute public health roles and define core competencies.

- Establishing minimum standards and performance measures for readiness levels to protect the health of the public.
- Identifying and disseminating best practices.

Training and Exercises

The focus of this breakout session was two-fold: to determine ways to encourage and facilitate radiological training for the various professions that would have a role in a radiological emergency, and to explore ways to involve multi-agency participation in exercise development and delivery and integration of other health professionals into existing exercises with radiological scenarios.

Three main interconnected areas were identified by the participants as needing effort:

1. Promote interagency training and exercise.
2. Push for a paradigm shift in the way radiological preparedness is viewed and implemented. Traditionally, radiological emergency preparedness is centered on nuclear power plant emergency response. Radiological emergency preparedness should be expanded to include all types of incidents involving radioactive materials.
3. Develop training programs and job aids that are effective for the target audience.

There was consensus within the group that due to lack of dedicated funding a registry database would not be developed and standing by to receive data. The group acknowledged that it would be valuable to establish a data collection standard template, coordinated and approved by CDC, for victim exposure information to be used for both treatment of confirmed victims and tracking of the worried well.

Funding For Radiological Preparedness in Public Health

Two objectives were established for this breakout session: to re-define the post-9/11 role of radiation control programs in public health and to explore funding mechanisms for enhancing radiological preparedness within that framework. The primary actions needed to achieve these objectives are:

- Development of a radiation overview to raise awareness of radiation issues within the public health preparedness community;
- Development of a clear role of radiation response in public health in an all-hazards framework;

- Piloting outreach through a state chemical, biological, radiological, nuclear, or explosives (CBRNE) Summit;
- Promotion of interagency discussions; and
- Provision of templates for seeking funding.

Some of the conclusions reached at the workshop are summarized below:

- While there are some unique things about radiation, the message needs to be conveyed to public health agencies that a radiation event will involve the same or similar public health activities that would be required for responding to any other public health event, with radiation being an extra component.
- The radiation community can help public health and other responder programs do their regular jobs well and safely.
- CDC will continue to work with the participants and explore further collaborative efforts for expanding radiological preparedness in public health.
- The workshop proved to be very valuable to all the participants, as shown by the progress that has already been made in some of the areas. For example, some partnerships between public health and radiation control programs have already been established. Representatives from CRCPD, ASTHO, and NACCHO met in Columbus, Ohio, on May 20, 2009, during the National Conference on Radiation Control, to discuss plans for a steering committee for Alliance development. Details of the activities completed or in progress are provided in the Path Forward section.

INTRODUCTION

To better prepare the nation for a public health threat involving nuclear and/or radiological incidents, the Centers for Disease Control and Prevention (CDC) and the Conference of Radiation Control Program Directors (CRCPD) convened the “CDC-CRCPD Workshop: Alliance to Expand Radiological Emergency Preparedness in Public Health” on April 1-2, 2009, in Atlanta, Georgia. The objective of the workshop was to develop an action plan for implementing recommendations developed at the initial CDC-CRCPD “Roundtable on Communication and Teamwork: Keys to Successful Radiological Response” held June 17-18, 2008, in Atlanta, Georgia. The April 2009 CDC-CRCPD Workshop brought together a number of attendees from the initial roundtable in 2008, as well as additional invitees, to identify ways to:

- Build alliances among public health organizations concerned with improving radiological emergency preparedness in public health.
- Develop consistent radiological emergency capabilities, nationwide.
- Encourage and facilitate multi-agency participation in radiological training and exercises.
- Leverage existing funding to expand radiological emergency preparedness, and further explore potential funding mechanisms to better utilize and sustain radiological preparedness capabilities in the future.

The roundtable convened over 30 experts in the fields of emergency medical services, health physics, public health preparedness, hospital preparedness, and epidemiology. Several key organizations were identified as necessary for building the partnership for effective radiological emergency preparedness in public health. Participants included representatives from the following organizations:

- Association of State and Territorial Health Officials (ASTHO)
- Conference of Radiation Control Program Directors (CRCPD)
- Council of State and Territorial Epidemiologists (CSTE)
- National Association of County and City Health Officials (NACCHO).

The meeting started with the following introductory presentations:

- Overview of the CDC-CRCPD Roundtable held June 17-18, 2008
- Objectives for the CDC-CRCPD Workshop

- Overview of the “Image Gently” Alliance to reduce pediatric radiation dose
- Case Study: Development of a Radiation Response Volunteer Corps in Florida
- Overview of the Public Health Emergency Preparedness Cooperative Agreement Program
- Overview of FEMA Training and Exercise Programs

The introductory presentations were followed by an explanation of how the workshop break-out sessions would be conducted, how participant feedback would be captured, and how a workshop action plan would be developed.

A complete agenda is included in Appendix A.

A complete list of attendees is included in Appendix B.

SUMMARY OF PRESENTATIONS

Dr. Charles Miller, Chief of CDC's Radiation Studies Branch, extended a welcome to the participants and defined the meeting's goal as increasingly important to a strong homeland security system.

Ms. Frieda Fisher-Tyler, chair of the CRCPD Committee that planned the workshop, also welcomed the group and described the circumstances that led to the 2008 roundtable and this workshop. She described the Homeland Security Forum held at the 2004 CRCPD annual conference, which included several federal agency representatives, and the wide concern that surfaced among state and local radiation control programs regarding possible expectations or needs for radiation professionals to provide radiological emergency response to terrorist or other criminal incidents in the post-9/11 world. Based on that forum, a number of task force activities were initiated by CRCPD.

In 2006, a CRCPD task force produced a Radiological Dispersal Device (RDD) Handbook and pocket guide targeted to the first responder community. These publications were used by many radiation control programs to reach out to emergency responders in their communities to educate them about radiation hazards and who they could contact to support their response to a radiological emergency.

The warm reception to the RDD Handbook and pocket guide, and CDC's experience with tracking travelers in London during the Po-210 spy poisoning incident, led to CDC's funding a CRCPD roundtable in June 2008 to brainstorm on radiation response-related gaps, capabilities and solutions.

The roundtable revealed various levels of capabilities scattered across different federal, state and local jurisdictions. In addition, radiation control programs recognized a need to redefine their radiological preparedness roles in order to integrate most effectively into the post-9/11 public health system. *Ms. Fisher-Tyler* stated that the goal of this meeting is to develop a workshop action plan to address the issues and recommendations made at the roundtable.

Dr. Adela Salame-Alfie, who had chaired the 2008 roundtable, provided an overview of that meeting, which launched the collaboration between public health and radiation control programs. (The full report is posted on the CRCPD website: www.crcpd.org.)

Given the states' different organizational frameworks, simply identifying the right point of contact in a state was a challenge. The roundtable revealed the need to increase the awareness and understanding of mutual responsibilities for radiological incident preparedness and response, to strengthen

communications and improve working relationships among the participating organizations, to share information on available resources, and to increase awareness of emerging roles and responsibilities regarding radiological events. Over 30 experts from federal/state and local agencies participated in the roundtable, as did professional organizations including CRCPD, ASTHO, NACCHO, and CSTE.

Initial comments from the roundtable indicated that public health was not ready for a mass casualty event, even though it is tasked to do that, and there is a lack of population monitoring exercises with public health. (Population monitoring was exercised in the subsequent Empire 09 large-scale national exercise). Few in public health have the training and expertise to do population monitoring. The most common observations from the roundtable were the identification of needs to:

1. Develop consistent radiological capabilities;
2. Coordinate and build relationships among participating agencies;
3. Encourage multi-agency training and exercising in radiological emergency response; and
4. Provide funding specifically allocated for radiological emergency preparedness.

Several near- and future-term activities were listed that were anticipated to be addressed at this workshop. Primary recommendations were developed to take action on the needs identified above, and one more was added: to develop guidelines for establishing a radiation registry, in partnership with CSTE.

Ms. Fisher-Tyler outlined the workshop objectives, which included developing an action plan for activities that could be pursued with existing resources, as well as those that may require future funding. She acknowledged the significant challenges posed to state/local government over the year since the roundtable was held, including the national economy, state budget crises and transitions with the new administration, both nationally and at the state level. Priorities are shifting, but what remains constant is the need to be effectively prepared to meet a radiation emergency in an uncertain world. As experts on public health emergency preparedness, those at this meeting were charged with collaborating creatively to identify steps to help better prepare the population to cope with the public health and economic disruption that would ensue following a serious radiation emergency. She stated that the workshop objectives included:

- Developing an alliance among radiological and public health organizations for expanding radiological preparedness in public health;

- Redefining the role of radiation control programs in the post-9/11 public health system;
- Partnering more effectively on training, drills and exercises;
- Leveraging existing resources and address confusing funding issues; and
- Developing more consistent radiological preparedness capabilities nationally.

The agenda included information sharing on the first morning, followed by breakout sessions and reports. Based on the breakout session reports, a workshop action plan was developed on the second day.

Following introductions of all present, four presentations were provided and are summarized below. The PowerPoint slides for three of the presentations are provided in Appendix E.

“Image Gently” Campaign

Presenter: Ruth McBurney, Executive Director, CRCPD

Ms. McBurney presented a model of a focused campaign by an alliance of professional organizations with a shared purpose and explained how this model could be used to expand radiation preparedness capabilities. "Image Gently" was developed by the Alliance for Radiation Safety in Pediatric Imaging, with a goal to raise awareness and change the practice of pediatric imaging, reducing unnecessary radiation dose to children. The Alliance developed educational resources for those doing pediatric imaging and crafted messages to communicate those resources electronically and through presentations. The strategy was to create partnerships to increase the likelihood of success. Other tools to promote buy-in to the campaign included suggested behaviors/actions customized to the targeted groups (e.g., technologists, physicists, etc.).

Since one recommendation from the June 2008 roundtable was to establish an alliance of the professional organizations present, Ms. McBurney related how the “Image Gently” model could be applied. This new alliance would identify the primary goal and target population, create partnerships and leadership, and seek initial funding (e.g., from the organizations represented and/or federal agencies). Subsequently, focused messages would be developed, as would tools and training materials, which would be compiled and posted on a joint website or disseminated by another mechanism. The members also would contribute to the body of knowledge on the shared website. A communication plan would be developed to get messages out to the membership and other receptive constituents.

Florida: Development of a Radiation Response Volunteer Corps

Presenter: Ms. Debbie Bray Gilley, Environmental Manager, Florida Bureau of Radiation Control

Ms. Gilley indicated how Florida has developed their Radiation Response Volunteer Corps. These are individuals who already have some skills related to the processing of personnel or equipment that may be contaminated. After additional just-in-time training, this group will be used to supplement the needs of Florida in the period 12 to 72 hours after an event of concern. These are not first responders.

In the event of a radiological incident, the objective of this group is to perform population monitoring to determine who may be contaminated or exposed to radiation. They may also be used to relieve the fears of individuals who are NOT contaminated or have NOT been exposed to radiation. Typically, these activities would take place at Red Cross shelters, community reception centers or alternate medical centers.

Florida used the Medical Reserve Corps structure to recruit health physicists and other radiation professionals who work at facilities where radioactive material and/or radiation-producing equipment are used. One-day training in population monitoring was provided each volunteer, and when an event occurs, short additional training on specifics will be provided. Funding for the initial training was provided by CDC through a Public Health Preparedness Grant.

Future activities will include reaching out to more physicians, medical physicists and nuclear medicine technologists. The majority of volunteers are likely to be in major metropolitan areas, which are the more likely terrorist attack areas. Communication material needs to be developed to assure all participants deliver the same message.

Overview of Public Health Emergency Preparedness Cooperative Agreement Program

Presenter: Ms. Christine Kosmos, Director, Division of State and Local Readiness, Coordinating Office for Terrorism Preparedness and Emergency Response, Centers for Disease Control and Prevention

Ms. Kosmos discussed the current public health emergency preparedness cooperative agreements and shared some thoughts on how these cooperative agreements could change as they undergo revision in the near future. Ms. Kosmos was able to draw from her experience as the former emergency preparedness director for the City of Chicago in offering suggestions for revising the agreements.

The public health emergency preparedness cooperative agreements are very important to state and local governments since they provide a major source of funding for emergency preparedness. Currently, there is a disparity between preparedness for biological and natural events and preparedness for radiological and chemical events. It is important to increase radiological and chemical emergency preparedness levels and bring them on par with biological emergency preparedness; however, this must be done without competing for the limited funding resources.

Funding has fallen off sharply and state and local governments are already being stretched just to maintain their current levels of biological preparedness. Ms. Kosmos challenged the workshop participants to find creative and more sustainable strategies to develop a stable funding stream for preparedness activities, including radiological, so that competition for limited resources could be avoided.

One strategy for revising the public health emergency preparedness cooperative agreements includes having CDC staff look at recent documents and use them to identify the priority areas and core competencies that should be developed by states and local governments using the decreasing funds available. Once the priorities are defined and vetted, the state and local agreement awardees could be asked to develop a strategic plan that would span the entire five years of the agreement. Awardees may also be asked to conduct a gap analysis to identify needs, establish priorities and measure progress.

Beginning with year one of the agreements, CDC could use the gap analysis to look at trends and determine if discrepancies exist in areas such as radiological preparedness. In particular, it needs to be determined if states with nuclear power plants have integrated their radiological emergency plans into their local health department response plans. CDC can use this information to determine what should be done to support state and local needs.

Another recommendation was to integrate public health preparedness for radiological emergencies into the target capabilities list, a tool used by the Department of Homeland Security that describes the capabilities related to the four homeland security mission areas: prevent, protect, respond, and recover. It defines and provides the basis for assessing preparedness. The target capabilities list also establishes national guidance for preparing the nation for major all-hazards events, such as those defined by the National Planning Scenarios. Although it may not fit well with public health, it is gaining widespread use in homeland security preparedness and its use should be explored for public health preparedness. A Department of Homeland Security factsheet on the target capabilities list can be found at http://www.nwcphp.org/docs/competencies/TCL_FactSheet_041405.pdf

In order to assure that awardees are successful, CDC may encourage awardees to hire a project manager to guide public health emergency preparedness work. The public health emergency preparedness manager would ensure gaps are filled via a work plan, deliverables, timelines, etc. Along with this, CDC plans to provide more proactive technical assistance to help awardees with issues such as hiring freezes and procurements.

Ultimately we want to be able to monitor our progress through a repeated gap analysis that will become the method by which awardees report back to CDC. This will be a more useful reporting tool than the narrative process currently in use. Progress can be measured by developing a “national public health emergency preparedness core capability.” This core capability will be defined from our priorities and measured by our gap analysis. Hopefully, within five years we will be able to say this is our national platform for public health emergency preparedness and that we have made progress toward achieving a national standard and addressing the identified gaps. We need to build a framework that includes a gap analysis to actually show where capabilities are gained and lost according to changes in funding. This is something we have not been able to demonstrate well.

In the past, Ms. Kosmos suggested to the Directors of Public Health Preparedness that the CDC-funded Centers for Public Health Preparedness be used to help prepare radiological response plans in addition to providing training and education. She feels that too much training is conducted without having fully developed response plans in place. This suggestion was not acted upon and the opportunity was missed to engage the Centers for Public Health Preparedness in helping advance radiological and chemical preparedness. Every awardee is faced with developing their own plans for the various emergency situations and, as a result, many of them are unable to develop a decent response-ready radiological response plan.

Ms. Kosmos still believes it is a good idea to get the Centers for Public Health Preparedness involved in radiological response planning and did so for Chicago. Since Chicago had no radiological expertise within the public health department, she worked with the University of Illinois at Chicago, a Center for Public Health Preparedness, and tasked them with developing a radiological response plan. They assembled subject matter experts who developed an operational plan for Chicago that covered a broad range of topics, such as first responder protection, generic risk communication messages, identification of medical countermeasures, etc.

Ms. Kosmos suggested that planning should be regionalized and that Centers for Public Health Preparedness, or other academic centers with radiological expertise, should be used to help us develop templates for operational plans, worker safety, risk communication messages, etc. These templates, along with guidance already available from CDC, could be combined into a suite of toolkits

that public health emergency preparedness awardees could modify for their own use. Without this type of approach, Ms. Kosmos feels radiological preparedness will not advance far outside the major metropolitan areas or areas with nuclear power plants. She stressed that jurisdictions need examples of good operational plans that they could modify for their needs.

Discussion after the presentation:

- In addition to looking at the gaps in preparedness, it is very important that we also identify our strengths. Perhaps a tool such as the technical assistance review could be used for a gap analysis. The technical assistance review is used in the Strategic National Stockpile program to measure progress over time and to identify both strengths and weaknesses.
- Oregon has been working on changing the hazard vulnerability analysis to call it a “public health hazard vulnerability analysis” in order to elevate the contributions of public health. Local emergency managers have been doing hazard vulnerability analysis for years and often do not include public health. Public health and emergency management organizations may not know each other. However, when they do meet they realize how important they are to each other and specifically how much public health can contribute.
- Issues that are important to local agencies will drive state priorities. Oregon is developing an approach called “disaster epidemiology,” which will identify the common epidemiology tools and skills used in response to communicable diseases and to occupational, environmental, chemical and radiological emergencies. By identifying and developing these common skills, Oregon can be better prepared to respond to any emergency. This is an example of how limited funding can be used to support several emergency preparedness gaps. CDC is interested in this approach.
- A participant asked if a national organization could be used to develop the templates for regional response plans. Ms. Kosmos said that was certainly possible. However, plans may be more useful when they are developed by organizations located within a region. These organizations will have better knowledge of the area needs and can use regional expertise. This would be a good project for the Centers for Public Health Preparedness but they are already working on many other assignments. Future use of the Centers for Public Health Preparedness can be considered. The University of Illinois at Chicago should be able to share the plan developed for Chicago. If done by a national organization, the plan could include the basic components necessary for any plan along with resources

to be used by state and local governments to fully develop their own plans.

- Ms. Kosmos was asked how threat intelligence information and the decreasing level of funding might impact her strategic plan for the five year Public Health Emergency Preparedness cooperative agreements. Considering those issues, she hopes we can agree as a nation on the basic capabilities that all awardees should achieve. Mass dispensing of countermeasures would probably be one of those basic capabilities. There are other capabilities that will be specific to certain localities or regions and that can be worked on regionally. Hurricane preparedness would be an example of a regional capability. Decreasing levels of funding will force us to look at different ways of doing things in areas such as radiological and chemical preparedness, where awardees often have very limited capabilities and expertise. She again emphasized the need for a regional approach using national organizations to develop models or templates for radiological response, which could be modified according to state and local needs.
- Florida has only one urban area with a nuclear power plant; therefore, a regionalized approach to radiological planning would make sense there. Applicable parts of other disaster plans (i.e., hurricanes) could be used in radiological plans. This could help demonstrate that response to radiological events may be very similar in some aspects to the way we respond to other emergencies.
- A regional approach also makes sense because mutual aid will be needed from surrounding areas if an immediate area is decimated.
- We need to build on what is already available since our resources are limited. Capabilities already exist in some jurisdictions; however, information about this is not well shared. We need to spend time looking at the materials that have already been developed, organize them and then make them ready for distribution. This was the approach used by the CRCPD HS/ER-2 Committee when they developed the Radiological Dispersal Device (RDD) Handbook. They looked at the information already available, and then identified the remaining gaps and critical needs.
- Support was expressed for Oregon's "disaster epidemiology" concept, which encourages epidemiologists to "think out of the box" and consider things beyond infectious diseases. We need to encourage health physicists to do the same thing, that is, they need to consider how their skills can be applied beyond radiation.

We should encourage health physicists to become more involved with public health issues.

- Ms. Kosmos suggested that thought be given to integrating the Public Health Emergency Preparedness grants with the Hospital Preparedness Program grants in terms of radiological preparedness. Many jurisdictions may not realize they have radiological expertise existing within their hospital system. Participants applauded this suggestion.
- Dr. Miller expressed support from the Radiation Studies Branch for Ms. Kosmos' suggestions and approach. He explained that the Radiation Studies Branch's approach in developing guidance documents is to first identify the issues and methods to be considered then assemble a consortium of partners the Radiation Studies Branch in developing guidance on population monitoring and handling radioactively contaminated decedents.
- A CDC contractor is currently developing a model plan that could be distributed to states and locals to show them what they should consider in developing their own plans. CDC staff suggested having an organization work with the CDC contractor to compile relevant information and develop a model radiological/nuclear public health emergency response plan that state and local public health agencies across the nation could use in state or local-specific plan development. CRCPD representatives felt this was a good idea and could probably be accomplished via a CRCPD task force working with CDC.
- Another participant stated that we must also find ways to get more resources to the local level. If that cannot be done, then no one will be there to use the plans and tools we are proposing to develop.

Overview of Federal Emergency Management Agency (FEMA) Training and Exercise Programs

Presenter: Michelle Donahue, Chief, Policy Branch, National Preparedness Directorate, Department of Homeland Security/FEMA

Ms. Donahue described the purpose and organization of FEMA's National Preparedness Directorate. Established in April 2007, the directorate provides strategy, policy, and planning guidance to build prevention, protection, response, and recovery capabilities for natural disasters and other incidents among all levels of government throughout the nation. Within the directorate, the radiological emergency preparedness program provides the national safety planning standards and an exercise preparation guide for planning and

evaluating a radiological emergency response exercise. The national standard for evaluation is the Homeland Security Exercise Evaluation Program, which provides commonality for all exercise aspects: scheduling through corrective actions, terminology, and a platform through which to collect experiences—Lessons Learned Information System. The Homeland Security Exercise Evaluation Program also provides a voluntary compliance mechanism for state, local and tribal use of limited Department of Homeland Security grant funds available for exercises.

In order to transition smoothly on the integration of radiological emergency preparedness and the Homeland Security Exercise Evaluation Program, FEMA began conducting National Exercise Program Regional Training/Exercise Planning Workshops in 2008. These developed into a five-year action plan for coordinating the National Exercise Program with federal, regional and state priorities and providing training workshops throughout the country.

Radiological emergency preparedness-Homeland Security Exercise Evaluation Program integration challenges were described. The radiological emergency preparedness requirements and best practices are yet to be fully incorporated into the Homeland Security Exercise Evaluation Program process. Integration will require revision of regulations, stakeholder involvement and experience with pilot exercises in order to be successful.

WORKSHOP FORMAT

The participants broke into three groups to address

- A. Building Alliances and Capabilities
- B. Training and Exercises
- C. Funding for Radiological Preparedness in Public Health

Each team rotated through all three breakout sessions. Each breakout session had a “champion,” who was the subject matter expert assigned to lead the discussions and report back at the end of the workshop; a facilitator, whose role was to keep the process moving within the time constraints; and a scribe to capture the information discussed and complete the report forms and action plans from the breakout sessions.

There were several forms developed to be used as tools during the breakout sessions. A breakout session report form was developed for each session with the purpose of framing the discussion topics that came out of the CDC-CRCPD Roundtable on Communication and Teamwork: Keys to Successful Radiological Response held in 2008 and to generate goals or objectives to incorporate into an overall action plan deliverable that will guide the activities for this initiative going forward. The purpose of the second tool, the workshop action plan, was to develop a plan that identifies actionable objectives and provides a mechanism for monitoring progress. The breakout session report forms are provided in Appendix C and an example of a workshop action plan can be found in Appendix D.

Participants were asked to engage fully in the discussions in each group and to be creative in developing actions that could be pursued with existing resources as well as actions that would require future resources. An “A ha” light bulb sheet was also provided to participants to jot down other ideas that did not get captured during the breakout sessions.

After the participants had rotated through all three breakout sessions, the workshop participants convened as a group. Each breakout session champion reported preliminary findings for their topic. The issues were discussed further by the entire group.

The following morning, the participants reconvened within the breakout sessions in which they had the most interest and/or expertise to identify their objectives, prioritize, discuss, and develop action plans to address the issues listed on the previous day.

The workshop was completed with final reports and discussion of action plans by the entire group.

BREAKOUT SESSION REPORTS AND WORKSHOP ACTION PLANS

SESSION A. BUILDING ALLIANCES AND CAPABILITIES

Jim Blumenstock was the champion for this group and Patricia Gardner was the scribe. Mr. Blumenstock reported the following as a summary of the breakout session's discussions and action plans.

This breakout session developed two objectives:

1. Create an alliance among radiological and public health organizations for expanding radiological preparedness in public health; and
2. Build capacity for radiological response by defining the role of public health and developing consistent radiological preparedness capabilities.

All the participants agreed that having an alliance was worthwhile. The majority felt that the Alliance should be more formal, rather than an informal roundtable, but not so overly formal as to bar participants who want to join. The Alliance should create a vision, mission, and charter as a starting point of its governing framework, and then develop a recruitment and marketing package to bring in participants.

The Alliance's purpose/activities would be to improve public health practice as it relates to radiological emergency response with a national focus. Any advocacy role (in a lobbying sense) would be minor. The Alliance would:

- Serve as a repository of knowledge; there would be a peer-review component to identify and share best practices.
- Be an integrator of program services, including the cross-training of the public health community;
- Work to secure funding for radiological preparedness in the public health preparedness cooperative agreements;
- Serve as a communication portal to provide a strong unified voice for the radiation protection community and address the breadth and depth of issues in the field;
- Develop criteria for and different tiers of memberships (e.g., founding, core, governmental/private sector, etc.) before starting

an enlistment campaign. There also could be informal “memberships,” such as a commercial affiliate status.

In terms of the structure and administration, other successful alliances similar to “Image Gently” also should be explored. The details to be discussed in creating governance include incorporation (e.g., as a 501(c)(3) nonprofit), and what (or if) federal agencies should be included.

The Alliance should form writing/research groups to define radiation preparedness— that is, the desired goals and the ways to achieve them, and the performance measures, matrix, and other evaluations involved. It should develop criteria/approaches to involve private sector assets (e.g., funding, intellectual) to build the Alliance and build capacity at state and local levels.

Objective 1: Create an Alliance

The participants decided that the founding members of an Alliance to expand radiological preparedness in public health should be ASTHO, NACCHO, CSTE, and CRCPD, with CRCPD serving as the initial convener. CDC would act in an advisory role. The Alliance was envisioned to be a mechanism for sharing radiological emergency preparedness resources, tools and information.

The workshop participants recommended the following action plan for this objective.

Action Plan

The following is the sequence of actions recommended to create an alliance:

1. Create a steering committee to lay out the framework for the entire project. The four associations (NACCHO, CSTE, ASTHO and CRCPD) and CDC would constitute the steering committee. CRCPD would be the principal convener. After the initial steering committee is set up, it could be expanded to include other agencies.
2. Conduct due diligence and search for similar alliances, to explore the best formation model to adapt to these needs.
3. Develop a “package” that includes the vision, mission, purpose and charter.
4. Draft a business plan and draft work plan for all, paralleled by the development of membership criteria/categories.
5. Continue to identify resources in the business plan.

6. Provide the product to the four associations as the core of the Alliance. It is expected that formal approval will take time.
7. Identify needed resources, including in-house assets and extramural funding.
8. Launch the Alliance with board membership and marketing packages to bring in additional members.

Discussion

Dr. Miller agreed with the concept and actions needed and offered the services of CDC as an advisor to the steering committee. Dr. Miller suggested that there may be modest funding available for Alliance development through several potential mechanisms.

Objective 2: Build Capacity by Defining the Role of Public Health and Developing Consistent Radiological Preparedness Capabilities

The second objective presumes that the Alliance has been created and is operational. The Alliance members would need to center the discussion on how to best go about building capacity, defining the role of public health as it relates to radiological emergency response, and developing consistent radiological preparedness capabilities. Participation by all members is essential for the successful completion of this objective. There are many existing products and lessons learned from other emergency preparedness exercises (e.g., biological) that can be used for the development of roles and core competencies for radiological preparedness. The Alliance will represent organizations that vary greatly in size, authorities, roles and current levels of radiological preparedness. Therefore, it will be very important to obtain feedback from each member agency as the Alliance is being formed.

Discussions by the entire group centered on the following areas:

1. Determining the niche of public health in the larger picture of emergency response, taking into consideration the various levels of public health in government,
2. Developing a central message about the need for inclusion of radiological preparedness as an essential function in public health,
3. Creating benchmarks and core competencies—looking for a level of preparedness that is adequate to meet minimal requirements,
4. Identifying capabilities and gaps.

Action Plan

It was agreed that modest funding (to contract out some work) would be required to get started, though in-kind contributions may cover most initial work. A target date of July 2010 was suggested for the Alliance to:

1. Redefine the public health role in radiological preparedness.
2. Assess the skill sets needed to execute the public health role; define core competencies for each role of the public health community responsible for radiation protection.
3. Establish minimum standards for readiness levels to protect the public's health.
4. Develop core competencies, performance measures/metrics to show achievement, integrating government and commercial entities. This involves a gap analysis by the CDC grantees – but will also rely heavily on the private and service sectors – to identify what they have and what gaps remain.
5. Identify/disseminate best practices.
6. (CDC) Develop a communications plan in a usable format for use by every practitioner and entity that needs to know about the Alliance.

SESSION B: TRAINING AND EXERCISES

Michelle Donohue was the champion for this group and Eric Matus was the scribe. Ms. Donohue reported the following as a summary of the breakout group's discussions:

There was wide agreement among the participants that public health and healthcare workers are usually an afterthought when it comes to radiological preparedness and training. In jurisdictions that do not have a nuclear power plant, and therefore do not receive radiological emergency preparedness funding from that source, radiation incidents are still widely viewed as unlikely and therefore receive less attention than chemical and biological hazards. The group felt strongly that public health needs to partner with radiation protection professionals to encourage interagency and interdisciplinary training and exercises, and to produce simple, field usable job aids.

There was also agreement that the creation of a standing radiation registry for exposure victims would not be feasible due to cost of design and maintenance. However, development of a standard data collection template to gather the elements necessary for an effective registry would be a valuable tool.

A consistent theme throughout was the reliance on the products of the other two breakout sessions to facilitate the objectives of this group. It is critical that funding mechanisms be identified for the support of multi-agency training and the associated training and job aids, and possibly even more valuable is the formation of a partnership through which the public health community and radiation protection professionals can speak with a consistent voice to address the current shortcomings in funding and planning for radiological emergencies outside of nuclear power plant emergency preparedness zones.

This breakout session developed three objectives:

1. Encourage multi-agency training exercises with a radiological component;
2. Shift the paradigm from nuclear power emergency preparedness to comprehensive radiological emergency preparedness; and
3. Develop radiological epidemiology incident tools.

Objective 1: Encourage Multi-Agency Training and Exercises with Radiological Component

The group focused on two main components of this objective:

- Facilitation of radiological exercises or the inclusion of a radiological component into existing exercise plans; and
- Development of training that is focused on public health and healthcare worker needs.

Several participants expressed that although they had attempted to coordinate training in the past it was difficult to maintain relationships or current contacts because exercise and training coordinators constantly change at the state and federal levels. Although the Department of Homeland Security is the source of many training efforts, repeated reorganization within the department has made it very difficult to achieve continuity. A central location, such as a professional organization's website, should be used to maintain a current listing of contacts, agreements, and training schedules. The proposed Alliance is seen as the ideal mechanism for a comprehensive listing of contacts or links.

Public health attendees expressed a desire to have job aids that are more user-friendly and do not rely on computer access for basic guidance and decision trees. It was acknowledged that very good information is available through CDC, FEMA, and states, but the general consensus was that most of this information was too difficult to access by workers during a crisis. The end users reiterated that quick reference guides, lanyard cards, or similar formats

are preferred for field use, as is personal delivery of training rather than self study or web based training.

It was recommended that a working group be formed to formulate a public health comprehensive radiological emergency response strategy. The group would research and compile existing training opportunities and use this information to develop job aids.

Action Plan

The group suggested the following action steps to encourage training and develop job aids:

1. Distribute and maintain a current contact list for FEMA regional exercise and training coordinators. Ms. Donohue from FEMA agreed to distribute this list to the workshop participants and completed this task shortly after the workshop. The Alliance is expected to develop a website on which current regional and state contacts will be maintained.
2. Organize a public health comprehensive radiological preparedness working group that will include members of the public health, epidemiology, and radiation protection communities. Ms. Donohue (FEMA) and Debbie Gilley from the Florida Radiation Program agreed to provide an initial list of suggested nominees. The working group should be formed under the Alliance but could be started within one of the proposed charter organizations and transition to the Alliance once it is formed. The working group would be charged with the following tasks:
 - a. Research and compile existing radiological preparedness training courses and formats;
 - b. Develop a template to identify levels of training, delivery methods, and a basic syllabus for each level.
 - c. Develop a simple radiological preparedness field reference, perhaps a lanyard card or pocket guide, which can be provided during training and used primarily by public health officials.

(Note: The 2009 outbreak of H1N1 (swine flu) and subsequent deployment of many resources required that some of these actions be delayed. The working group is likely to be formed after the Alliance is formalized).

Objective 2: Shift the Paradigm from Nuclear Power to Comprehensive Radiological Emergency Preparedness

The group acknowledged that it was necessary for them and their counterparts to be proactive and become strong advocates for inclusion of radiological preparedness issues on par with other hazards in chemical, biological, radiological, nuclear, or explosives (CBRNE) training and exercises.

To achieve this objective, the group developed three specific goals:

- Develop a relationship with their regional and state training coordinators.
- Get radiation professionals involved in their state and local training committees, and make sure that public health and healthcare worker needs are addressed during the planning.
- Look for ways to integrate public health, medicine, and epidemiology into existing CBRNE training and exercises.

The proposed Alliance was deemed the best mechanism to pursue this on a national level and would lend weight and credibility to the individual grass roots efforts.

Action Plan

The group proposed the following steps to begin shifting the traditional radiological emergency response paradigm from nuclear power plant centered to comprehensive radiological preparedness:

1. Radiological and public health agencies must be proactive in working with emergency training officers.
2. Identify and poll a cross-section of jurisdictions to determine their radiological training needs; use this needs assessment to pursue support on a national level.
3. Use the Alliance to inform national and state program managers and policy makers of the discrepancies in funding, training and exercising that exist between localities that have nuclear power plants and those that do not. Managers and policy makers should also be made aware of the bias toward chemical, biological and explosives in CBRNE preparedness activities.

Objective 3: Develop Radiological Epidemiology Incident Tools

In the event of a radiological incident, a radiation registry will be necessary to track the exposure, treatment, long-term monitoring, healthcare and effects on

victims. Cancer and toxic exposure registries have been established for specific incidents in the past but there is no template for a very large exposure event.

The group discussed the idea of creating a standing radiation registry but conceded that a registry would be difficult to create and support without a demonstrated need. Therefore it would likely be authorized by congressional appropriation after an event. This sentiment was echoed in the group discussion wrap-up at the end of the workshop.

Although a standing registry is not feasible, the breakout group decided that a standardized collection method should be established that would satisfy the needs of radiation control programs, healthcare professionals, and epidemiologists.

To this end CDC has agreed to take the lead in compiling the information needed for a radiation registry. CDC will draft a template that will eventually be endorsed by the Alliance and shared with state and local decision makers.

Action Plan

The following is the action plan that was discussed.

1. Determine the data elements needed in a radiation registry.
2. Gather information and examples of current data collection methods, tracking sheets, survey records, etc. The CRCPD membership was polled and the best examples of survey and tracking forms will be provided for use in developing the registry.
3. Draft a template that includes initial screening and treatment information and collects necessary baseline data for radiation registry.
4. Circulate template for peer review and edit.
5. Submit for final approval by CDC.

SESSION C: FUNDING FOR RADIOLOGICAL PREPAREDNESS IN PUBLIC HEALTH

John Erickson was the champion for this breakout group. Cindy Costello served as scribe. Mr. Erickson reported the following as a summary of the breakout session's discussions.

The breakout session developed two objectives:

1. Define the role of Radiation Control Programs in the post-9/11 Public Health System, and
2. Secure adequate funding for Radiological Preparedness in Public Health.

Objective 1: Define the Role of Radiation Control Programs in the Post-9/11 Public Health System

The breakout session participants agreed there is a major gap in communication between Public Health Preparedness Programs and Radiation Control Programs. This gap can exist regardless of whether the Radiation Control Program is or is not a part of the Public Health Department. The communication issues could be largely resolved if the preparedness roles and capabilities of Radiation Control Programs are better defined and effectively conveyed to state and local Public Health Departments.

Generally speaking, Public Health Preparedness Programs have a better understanding of their preparedness responsibilities for biological/infectious hazards than they do for radiological or chemical hazards. In defining the role of Radiation Control Programs, it would be very helpful to emphasize the similarities in preparedness and response activities for chemical, biological and radiological hazards as well as noting the unique properties of each. Preparedness planning, in order to be truly all-hazard, needs to be a more coordinated effort involving chemical, biological and radiological program leadership to take advantage of similarities and overlaps in preparedness and response capabilities. This should also help identify preparedness gaps.

The traditional meaning of preparedness in the radiological community is associated with preparedness for nuclear power plant emergencies and is referred to as radiological emergency preparedness. The breakout session participants felt that a broader, more comprehensive definition of radiological preparedness should be developed in this post-9/11 world. The broader definition should include other radiological incidents such as transportation accidents and acts of terrorism such as radiological dispersal devices.

Action Plan

The following are the suggestions from this breakout session for defining the role of Radiation Control Programs in public health.

1. Develop a Radiation Control Program overview to explain why and how Radiation Control Programs should be used by Public Health

Programs in developing comprehensive preparedness programs. Also, develop a Public Health Emergency Preparedness Program overview to explain the role of public health in emergencies.

- a. Directors of Public Health Preparedness should determine if documentation already exists and use it to develop updated overviews as described above. The overviews should be reviewed and approved by appropriate professional organizations such as ASTHO and CRCPD. The overviews could be made publicly available via websites belonging to CRCPD, ASTHO, NACCHO, etc.
- b. The CRCPD HS/ER-2 Committee on Expanding Radiological Preparedness in Public Health will be asked to develop the Radiation Control Program overview that can be used to raise awareness in the public health preparedness community. This overview should emphasize how inclusion of radiation emergency preparedness in an all-hazards approach to public health preparedness strengthens the overall public health preparedness program.
- c. These overviews should be disseminated to state and local public health departments and professional groups such as ASTHO and NACCHO. They should also be given to groups that administer preparedness funding such as the Department of Homeland Security/Federal Emergency Management Agency and the Department of Health and Human Services (CDC and the Office of the Assistant Secretary for Preparedness and Response). CRCPD and the Directors of Public Health Preparedness could be asked to help market this message.
- d. The overviews should be prepared at a level high enough to encompass a national view of how radiation preparedness and public health should blend. This could be a very difficult task since the needs and capabilities of each state and jurisdiction differ.
- e. Participants again expressed the need to engage and include the Hospital Preparedness Program, administered by the Office of the Assistant Secretary for Preparedness and Response, in more radiation preparedness activities. The role of the Hospital Preparedness Program should be addressed in both overview documents.

Discussion

The National Radiological Emergency Preparedness conference would be a good place to have a discussion about how the location of the radiological emergency preparedness program within a state and local agency affects emergency planning. There may be overlap between traditional radiological emergency preparedness and other types of emergency response. People involved in radiological emergency preparedness-specific work likely will also be involved in other responses. However, there are statutory responsibilities under the traditional radiological emergency preparedness plan. Non-nuclear power plant radiation emergency response will involve traditional radiological emergency preparedness if needed, and other state resources will be applied. However, much of this plan is based on informal agreements.

2. Conduct a CBRNE Summit specifically to highlight the similarities and differences in the various emergency preparedness and response situations.

As noted earlier, participants felt that chemical, biological and radiological preparedness efforts should be coordinated. Also, some participants have observed that CBRNE meetings often involve mostly first responders and focus on chemical emergencies. To promote a truly all-hazards approach, it was suggested that a CBRNE Summit be conducted to emphasize the similarities and also recognize the unique aspects of each hazard response. The CBRNE Summit could be organized into functional areas such as: core competencies common to all hazards; core competencies unique to each hazard; formation of coalitions and partnerships; and a wrap-up session with takeaway messages. Potential partners in planning the CBRNE Summit would be professionals in emergency management, public health preparedness and industrial hygiene. It could be pilot tested in one or two states or a region of the country then conducted in other states if successful.

Objective 2: Secure Adequate Funding for Radiological Preparedness in Public Health

The most critical funding issue is that more funds must be designated specifically for use in radiological preparedness. Although preparedness money is available, most of it is not available for use by radiation control programs. Grant monies from CDC are targeted at public health preparedness programs, while FEMA and utility monies go to emergency management programs. Since radiation control programs are not usually housed within public health

preparedness or emergency management programs, funding is not available. The message that radiation control programs have a role in preparedness needs to be conveyed to the managers at the state level who control the money, not just going up from the radiation control programs. Funding should be available to ensure that equitable response capabilities exist for chemical, biological, and radiological/nuclear emergency response.

Action Steps

The following suggestions for enhancing funding of radiological preparedness were made:

1. In order to facilitate making preparedness funding more available to radiation control programs, the CRCPD HS/ER-2 Committee will develop a position statement to emphasize that radiation emergency preparedness is part of CBRNE and that the all-hazards approach to emergency planning should include radiation. This position statement will be forwarded to CDC to gain support for inclusion of funds specific to radiological preparedness in the Public Health Emergency Preparedness cooperative agreement.
2. Encourage the proposed Alliance to work on the following objectives:
 - a. Engage federal partners in roundtable discussions to prioritize funding needs for radiological preparedness.
 - b. Set up a clearinghouse of opportunities and methods to obtain funding in order to share success stories and processes and avenues to obtain funding. Some states are getting funding from radiation organizations to do task-specific pieces of work (e.g., equipment purchase). This should be compiled and made available to public health and radiological health organizations.
 - c. Look for alternate funding opportunities so that radiation control programs can apply directly for funding (mini grants) from the federal government.
 - d. Create a template for short-term proposals. A template would help create a short description of goals and objectives, so that when a request for proposals is issued with a short response time, it can be answered.
 - e. Develop a target capabilities list subset for radiological emergency response.
 - f. Develop and present a “Grant Writing 101” course targeted to the radiation community of bring awareness of where the

grants are, and “Public Health Preparedness 101” to align radiation and public health emergency preparedness.

- g. Many states have different radiological emergency preparedness and public health preparedness offices. Radiological preparedness needs should be defined and integrated with public health.
- h. Set up the CBRNE Summit described above.

SUMMARY AND CONCLUSIONS

The purpose of the workshop was to solidify and further develop partnerships established among radiation control and public health organizations, by developing a plan consisting of actionable objectives to guide the development and implementation of a formal alliance. Participants were asked to engage fully in break-out sessions focused on three topical areas: Building Alliances and Capabilities, Training and Exercises, and Funding for Radiological Preparedness in Public Health, and to be creative in identifying actions that could be pursued with existing resources as well as actions that would require future resources.

The majority opinion of the participants was that an alliance was a worthwhile goal, and should have a formal structure with a vision, mission and charter as a starting framework, with founding members from ASTHO, NACCHO, CSTE, and CRCPD, with CDC acting in an advisory role. The role of the Alliance would include serving as a repository of knowledge, facilitating opportunities for cross-training within the public health community, promoting or facilitating provision of funding for radiological emergency preparedness in the public health preparedness cooperative agreements, and serving as a communication portal to provide a strong unified voice for the radiation protection community.

Objectives identified for the Alliance to pursue include developing consistent, comprehensive radiological emergency preparedness capabilities nationwide, increasing communication among interested parties, and sharing resources, tools and information. Necessary actions include redefining the post-9/11 public health role in radiological emergencies, assessing skill sets needed to execute public health roles and defining core competencies, establishing minimum standards and performance measures for readiness levels, and identifying and sharing best practices.

The main objectives identified during the breakout session on training and exercises were to encourage and facilitate training of public health professionals in radiological emergency preparedness, and to explore ways to promote integration of multiple agencies in radiological exercise planning, development and participation or inclusion of a radiological component in existing exercise plans.

Actions needed to achieve these objectives included promoting interagency training and exercises, encouraging a paradigm shift in the way radiological preparedness is viewed by expanding beyond the traditional nuclear power plant-based radiological emergency preparedness framework to a more comprehensive model that includes terrorism and transportation scenarios,

and developing training programs and job aids that are effective for the target audience.

Two objectives were identified in the third breakout session—to re-define the post-9/11 role of radiation control programs in public health, and to explore funding mechanisms for enhancing radiological emergency preparedness within that framework. Actions needed to achieve these objectives included: developing a comprehensive radiological emergency preparedness overview to raise awareness of radiation issues within the public health preparedness community, developing a clear role for radiation response in public health within an all-hazards framework, piloting outreach through a CBRNE Summit, promoting interagency discussions, and providing templates to assist public health programs seeking funding.

Objectives and actions identified by workshop participants across all of the categories will serve as a blueprint for future work.

PATH FORWARD

In accordance with the action plans proposed, the participants agreed to pursue the most immediate action items expeditiously. The following actions have been or are currently being taken:

- Prepare a Public Health Emergency Preparedness Program overview and present it to the CRCPD membership.
- Prepare a Radiation Control Program overview and present it to the Directors of Public Health Preparedness Executive Board Meeting.
- Explore the feasibility of developing a CBRNE Summit (the Alliance).
- Prepare a position statement about including radiation emergency preparedness in grant guidance (CRCPD).
- Develop a template for “just-in-time” requests to use when grant funding becomes available on an urgent basis.
- A proposal for funding an alliance steering committee has been made to CDC and is in process for review and approval.
- Materials on data collection regarding contaminated or exposed individuals have been collected from several states.
- Representatives from CRCPD, ASTHO, and NACCHO met in Columbus, Ohio, on May 20, 2009, during the National Conference on Radiation Control, to discuss plans for a steering committee for Alliance development. They established draft purpose and mission statements for the Alliance and identified a funding mechanism from CDC to pursue.
- Jim Blumenstock (ASTHO) made a presentation about public health collaboration and an overview of public health preparedness programs during a special interest meeting on “Expanding States’ Emergency Preparedness Capabilities” at the National Conference on Radiation Control in May 2009.
- Frieda Fisher-Tyler made presentations at the National Radiological Emergency Preparedness Conference in April, 2009 and the National Conference on Radiation Control in May, 2009 on the CDC/CRCPD roundtable and workshop. This provided information on the collaborative work described in this report and introduced the concept of expanding traditional radiological emergency preparedness to a broader more comprehensive definition that includes other radiation incidents such as transportation accidents and acts of terrorism.

- Adela Salame-Alfie made a presentation to a CDC-sponsored workshop held in conjunction with the annual meeting of the Council of State and Territorial Epidemiologists in Buffalo, New York, on partnering with public health to perform population monitoring at community reception centers for the Empire 09 national level emergency management exercise in June, 2009.
- CRCPD representatives attended and provided an exhibit on partnering with public health in radiological emergencies at the NACCHO annual meeting in Orlando, Florida, on July 29-31, 2009.

Plans are ongoing to pursue the objectives identified during the workshop, and to work with CDC on a realistic schedule for accomplishing the tasks identified.

APPENDIX A. AGENDA

Centers for Disease Control and Prevention (CDC)
and
Conference of Radiation Control Program Directors (CRCPD)

"CDC/CRCPD Workshop:

Alliance to Expand Radiological Emergency Preparedness in Public Health"

Marriott Atlanta Downtown Hotel
160 Spring Street NW
Atlanta, GA 30303
Phone (404) 688-8600 Fax (404) 524-5543

April 1-2, 2009

Wednesday, April 1, 2009

8:30 a.m. – 8:45 a.m.

Welcome

Charles W. Miller, PhD
Chief, Radiation Studies Branch
Division of Environmental Hazards and Health Effects
National Center for Environmental Health, CDC

Frieda Fisher-Tyler, MHS, CIH
Chair, Homeland Security Committee for Expanding
Radiological
Preparedness in Public Health
Conference of Radiation Control Program Directors

8:45 a.m. – 9:15 a.m.

Purpose and Objectives

- Roundtable Outcomes and Recommendations
Adela Salame-Alfie, PhD
Assistant Director, Division of Environmental Health
Investigation
New York State Department of Health
- Workshop Objectives
Frieda Fisher-Tyler, CRCPD

9:15 a.m. – 9:30 a.m.

Workshop Logistics/Administrative Matters

*Ronald G. Edmond, Workshop Facilitator
Group Manager,
National Security and Emergency Management Program
Emergency Management Laboratory
Oak Ridge Institute for Science and Education*

9:30 a.m. – 10:00 a.m.

Introductions

Participants

10:00 a.m. – 10:15 a.m.

BREAK

10:15 a.m. – 10:45 noon

Lessons Learned from Successful Collaborations

- “Image Gently” Campaign
*Ruth E. McBurney, CHP
Executive Director, CRCPD*
- Radiation Response Volunteer Corps
*Debbie Gilley
Environmental Manager
Florida Bureau of Radiation Control*

10:45 a.m. – 11:15 a.m.

Overview of the Public Health Emergency Preparedness (PHEP) Cooperative Agreement Program

*Christine Kosmos
Director, Division of State and Local Readiness
Coordinating Office for Terrorism Preparedness and
Emergency Response, CDC*

11:15 a.m. – 11:45 noon

Overview of the Federal Emergency Management Agency (FEMA) Training and Exercise Program

*Michelle Donahue
Chief, Policy Branch
National Exercise Division, National Integration Center,
National Preparedness Directorate, FEMA, DHS*

11:45 a.m. – 1:00 p.m.

LUNCH

1:00 p.m. – 1:30 p.m.

Breakout Group Ground Rules

Ron Edmond

- Structure of Breakout Groups
- Tools
- Goals/Objectives
- Deliverables
- Assignment of Participants to Groups

1:30 p.m. – 4:30 p.m.

Breakout Groups

- **Breakout Group A: Building Alliances and Capabilities**

Champion: James Blumenstock (ASTHO)

- **Breakout Group B: Training and Exercises**
Champion: Michelle Donahue (FEMA)
- **Breakout Group C: Funding for Radiological Preparedness in Public Health**
Champion: John Erickson (WA State Department of Health)

(Refreshments Available at 3:00 p.m.)

4:30 p.m. – 5:00 p.m. **Preliminary Reports from Breakout Groups**
Group Champions

Ron Edmond

5:00 p.m. **Adjourn**

Thursday April 2, 2009

8:30 a.m. – 8:45 a.m. *Welcome Back and Administrative Matters*
Ron Edmond

8:45 a.m. – 11:15 a.m. **Breakout Groups (continued)**

- Complete Discussions
- Groups Prepare Action Plans

(Refreshments Available at 10:00 a.m.)

11:15 a.m. – 12:30 p.m. **Lunch**

12:30 p.m. – 2:30 p.m. **Action Plans from Breakout Groups**
Breakout Group Champions

- Conclusions
- Recommendations
- Action Items
- How to gain “buy-in” and maintain momentum on path forward

2:30 p.m. – 2:45 p.m. **Workshop Summary**
Ron Edmond

2:45 p.m. – 3:00 p.m. **Closing Remarks**
Ruth McBurney,
Frieda Fisher-Tyler, CRCPD
Charles Miller, CDC

3:00 p.m. **Close**

APPENDIX B. ATTENDEES LIST

**CDC/CRCPD Workshop:
Alliance to Expand Radiological Emergency Preparedness in Public Health
April 1-2, 2009**

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CRCPD - Conference of Radiation Control Program Directors
CSTE - Council of State and Territorial Epidemiologists
NACCHO - National Association of County and City Health
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APPENDIX C. BREAKOUT SESSION REPORT FORMS

Appendix C-1. Session A: Building Alliances and Capabilities

This Break-Out Session Report Form is provided for purposes of framing the discussion topics surfaced during the CDC-CRCPD Roundtable held in 2008, and generating goals or objectives to incorporate into an overall "Workshop Action Plan" that will guide the activities for this initiative going forward. Participants are encouraged to be creative in developing achievable objectives that can be pursued with existing resources, AND stretch objectives that will require future resource commitments

Objective	Action/Activity (discussion triggers)	Target dates	Status
Develop alliance among participating organizations	<ul style="list-style-type: none"> • Determine nature of alliance (formal, informal) • Identify Lead Contact for each organization • Establish initial Alliance Coordinator, and map out process for implementing alliance agreement(s) • Answer the questions, <ul style="list-style-type: none"> ○ Who/what/when/where/why the alliance exists? ○ How/where does it derive its authority? ○ Determine: <ul style="list-style-type: none"> - Funding sources (sponsor agency, participants, grants, contracts) - Alliance composition - Diversity of specialties/regions in terms of <ul style="list-style-type: none"> a. Training b. Preparedness planning c. Capability analysis d. Guidance • Develop direct outreach through members and process to advocate for funding and awareness 		

Appendix C-1. Session A: Building Alliances and Capabilities *(Continued)*

Objective	Action/Activity (discussion triggers)	Target dates	Status
<p>Work within the alliance to clarify the role of public health/develop consistent radiological preparedness capabilities</p>	<p>Clarify role of public health (top down analysis)</p> <ol style="list-style-type: none"> 1. Federal mandates, plans 2. Individual State requirements and plans 3. Roles of agencies at various levels of government 4. Public/private partnerships and challenges posed 5. Collect existing products: <ol style="list-style-type: none"> a. Assign person responsible for their specialty b. Identify possible sources outside specialties represented c. Set dates for follow-up 		
	<p>Identify capabilities and gaps (bottom up analysis)</p> <ol style="list-style-type: none"> 1. Agency roles and responsibilities (local, county, state, federal, NIMS issues) 2. Identify private partners 3. Create standardized Radiological Preparedness Poll: <ol style="list-style-type: none"> a. Identify person to poll their area b. Who centralizes results? 		

Appendix C-2. Session B: Training and Exercises Plan

This Break-Out Session Report Form is provided for purposes of framing the discussion topics surfaced during the CDC-CRCPD Roundtable held in 2008, and generating goals or objectives to incorporate into an overall "Workshop Action Plan" that will guide the activities for this initiative going forward. Participants are encouraged to be creative in developing achievable objectives that can be pursued with existing resources, AND stretch objectives that will require future resource commitments

Objective	Action/Activity (discussion triggers)	Target dates	Status
Need for multi-agency training and exercises	Promote interagency training and exercises: <ol style="list-style-type: none"> 1. Identify training and coordinator in each State (training exercise officer in EMA) 2. Review state training plan and volunteer to participate on training committee 3. Identify radiological SMEs to learn HSEEP requirements: part of REP POLL, to use federal funding HSEEP must be met 4. Plan a tabletop that is rad-specific 5. Identify exercises that can have rad added as a component (must meet objectives first) 		

Appendix C-2. Session B: Training and Exercises Plan *(Continued)*

Objective	Action/Activity (discussion triggers)	Target dates	Status
Develop radiation registry	<ol style="list-style-type: none"> 1. Develop purpose statement, i.e., assist exposed individuals, track long term health effects 2. Develop standard inputs; is there a chronic or infectious disease surveillance format that would work? Adapt from established health surveillance standards 3. Identify: <ol style="list-style-type: none"> a. Who is responsible b. Who maintains data c. Who funds it d. How IT is based (centralized or Web-based) e. How IT support can be provided 4. Data security (HIPAA), what is standard for cancer registries? 		

Appendix C-3. Session C: Funding for Radiological Preparedness in Public Health

This Break-Out Session Report Form is provided for purposes of framing the discussion topics surfaced during the CDC-CRCPD Roundtable held in 2008, and generating goals or objectives to incorporate into an overall "Workshop Action Plan" that will guide the activities for this initiative going forward. Participants are encouraged to be creative in developing achievable objectives that can be pursued with existing resources, AND stretch objectives that will require future resource commitments

Objective	Action/Activity (discussion triggers)	Target dates	Status
Need for funding specifically allocated for radiological emergency preparedness	<p>Promote radiological preparedness funding on a par with biological and chemical agents.</p> <ol style="list-style-type: none"> 1. Identify existing funding streams that can be pursued: <ol style="list-style-type: none"> a. Grants b. Contracts c. Existing budgets d. Examples of successful applications e. Leveraging of funds 2. Push for funding agencies to call out radiological preparedness and recovery 3. Partner with local responders and public health agencies to include radiological preparedness in existing processes (e.g., REP, ESF-8) 		

APPENDIX D. WORKSHOP ACTION PLAN

Example of the Form Used in Each Session

Purpose: To develop a plan that identifies actionable objectives (specific, measurable, achievable, relevant and timely) and provides a mechanism for monitoring progress, to enable the alliance partners to realize their central goal: to expand radiological preparedness in public health agencies, nationwide.

Goal:



Results/Accomplishments:

Action Steps <i>What Will Be Done?</i>	Responsibilities <i>Who Will Do It?</i>	Timeline <i>By When? (Day/Month)</i>	Resources <i>A. Resources Available B. Resources Needed (financial, human, political & other)</i>	Potential Barriers <i>A. What individuals or organizations might resist? B. How?</i>	Communications Plan <ul style="list-style-type: none">• <i>Who is involved?</i>• <i>What methods?</i>• <i>How often?</i>
Step 1:			A. B.	A. B.	
Step 2:			A. B.	A. B.	
Step 3:			A. B.	A. B.	
Step 4:			A. B.	A. B.	
Step 5:			A. B.	A. B.	

Evidence Of Success (*How will you know that you are making progress? What are your benchmarks?*)

Evaluation Process (*How will you determine that your goal has been reached? What are your measures?>*)

APPENDIX E. POWERPOINT PRESENTATIONS



CDC-CRCPD Roundtable on Communication and Teamwork: Keys to Successful Radiological Emergency Response

Adela Salame-Alfie, Ph.D.
New York State Department of Health


Partnership



Sponsored by the Centers for Disease Control and Prevention (CDC)




Organized and Executed by the Conference of Radiation Control Program Directors (CRCPD), Homeland Security/Emergency Response Council's HS/ER-2 "Committee for Fostering Partnerships and Developing Operational Guides to Support Emergency Preparedness and Response"



Genesis for the Roundtable

The Polonium-210 Russian Spy poisoning incident in London in 2006 reverberated internationally, resulting in recognition by the Centers for Disease Control and Prevention (CDC) of an opportunity to better prepare the nation for a public health threat involving nuclear/radiological incidents.



Key Concerns

- Increase awareness and understanding of mutual responsibilities for preparing and responding to radiological incidents;
- Strengthen communications and improve working relationships among participating organizations;
- Share information on available resources; and
- Increase awareness of emerging roles and responsibilities regarding radiological events.

Roundtable Partners

- Association of State and Territorial Health Officials (ASTHO)
- Centers for Disease Control and Prevention (CDC)
- Conference of Radiation Control Program Directors (CRCPD)
- Council of State and Territorial Epidemiologists (CSTE)
- National Association of County and City Health Officials (NACCHO)

Participants

- Over 30 experts in the broad fields of:
 - Health physics,
 - Hospital preparedness,
 - Epidemiology,
 - Public health preparedness,
 - Risk communication,
 - Psychology and
 - Emergency medicine.
- Represented federal agencies, state and local agencies, and professional organizations.

Format of Roundtable

- Initial presentations by the participating agencies
- Facilitated scenario discussion to elicit ideas from the participants regarding their roles in response to a radiological event
- Presentation on the roles of public health during a radiological emergency
- Presentations of successful partnerships between radiation control programs and public health programs
- A series of "silent brainstorming" activities

Initial Presentations

Key Questions to Get to Know Each Other

- What roles do your member agencies have during a public health emergency? Do your member agencies have any roles specific to a radiological emergency? If so, please describe.
- How does your organization support your member agencies in fulfilling their emergency preparedness and response roles? Do you provide specific support during a radiological emergency?
- Are there any tools/guidance developed by your organization for use in preparing for and responding to radiological emergencies? If so, please provide examples.



Facilitated Scenario Discussion

- A covert radiation emission device that started as a possible food borne disease outbreak at a shopping mall.
- Several participants were assigned roles and were asked to answer questions based on information they had at the time.



Facilitated Scenario

- Helped point out that many traditional roles carried out by local and state public health agencies will be carried out during a response to a radiological event.
- Provided a good opportunity to discuss how to build on our strengths by knowing and partnering with the radiation control programs.
- Set the stage for follow-up discussions on the role of public health during a radiological emergency.
- Provided a good opportunity to raise some issues discussed later in the facilitated exercise.

Examples of the Initial Comments and Conclusions from the Facilitated Scenario

- "Public health is not ready for a mass casualty event. We don't do healthcare, we do public health, but we are being tasked to do this response. That's the weakness."
- "Population monitoring will fall to public health. And we don't exercise, we're not funded – it's huge and we're not adequately prepared to do it."

Other Examples...

- "Most health departments are comfortable doing that, or accommodating large populations in Point of Dispensing facilities (PODs); needs tweaking, but can be adjusted for a radiological event."
- "Need to look at public health skills, tools, resources in place, and how they might be used in a radiological event. And keep track: emergency medical technicians (EMTs), ambulances, physicians, nurses, won't treat – have to educate NOW."
- "The message needed isn't just for the public – the responder community needs education."



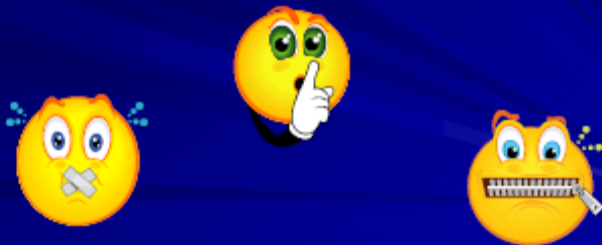
Brainstorming Activities



- Gather the most information possible
- Actively involve the participants
- Optimize use of the allotted time.

The Main Activity...

"Silent Brainstorming" session followed by a Facilitated Discussion



Facilitated Discussion

- Designed to increase awareness of potential issues encountered during a community's response to a radiological incident.
- Provided the participants an opportunity to gain perspective from colleagues, recognize their common attributes, and discuss potential for collaboration.

Facilitated Discussion

- Utilized Post-it® Notes for capturing participant comments and suggestions.
- Encouraged participants to identify issues, note and place the Post-it® Notes on the tri-fold boards under the appropriate heading.



Example of Brainstorming Activity

- Identify each organization's **gaps** related to their ability to respond to a radiological event.
- List their organization's radiological response **capabilities**.
- Identify **strategies** that could either bridge the gaps or share their capabilities with other organizations

Other Brainstorming Activities

Used to identify:

- Short-term issues, long-term issues, and strategies:
 - Strengthen communication
 - Partnerships
 - Emergency awareness responsibilities
- Internal issues, external issues, and strategies.

Result from Silent Brainstorming



Most Common Observations

- Awareness of the need to develop *consistent radiological capabilities*
- Need to *coordinate and build relationships* among participating agencies
- Need for *multi-agency training and exercising* in radiological emergency response
- Need for *funding specifically allocated for radiological emergency preparedness*

The Broadest Theme

“Need to raise radiological emergency preparedness to the same level of importance as other disasters”

Near Future Suggested Initiatives

- **Follow-up** expanded roundtable, to include more medical and public health organizations, first responders (EMTs, hospital staff)
- Form an **alliance** of the partner organizations that participated in roundtable
- Create **tools to raise awareness** of local health agencies to their broader role in radiation and other emergencies
- **Incorporate population monitoring in grants** and other funding opportunities
- **Tabletop exercises** that focus on **recovery**, not just response

Committee Recommendations

1. Develop alliance of various organizations with the shared objective of expanding radiological emergency preparedness capabilities nationwide
2. Work within alliance to clarify and elevate recognition of the roles and responsibilities of public health agencies in a radiological emergency

Committee Recommendations

3. Pursue radiological emergency preparedness-specific funding on a par with biological and chemical preparedness, through appropriate funding mechanisms
4. Promote inter-agency training and exercises for radiological emergency preparedness and response
5. Develop guidelines for establishing a radiation registry, in partnership with CSTE

How can I get a copy of the report?

Conference of Radiation Control Program Directors (CRCPD) website:

➤ www.crcpd.org



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image
gently™



Image Gently: A Model Organizational Alliance for Education and Awareness



Ruth E. McBurney, CHP
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Program Directors

Alliance for Radiation Safety in Pediatric Imaging Initiative: "Image Gently"



- Coalition of health care organizations
- Formed in 2006-2007
- Objective: To raise awareness in the imaging community of the need to adjust radiation dose when imaging children.
- Ultimate goal: Change practice to reduce the risk of radiation-induced disease.

Member Organizations

- Four founding organizations:
 - The Society for Pediatric Radiology
 - American Association of Physicists in Medicine
 - American College of Radiology
 - American Society of Radiologic Technologists
- 32 Alliance affiliate organizations

Alliance Strategy: Focus on CT First



- Founding Members
 - Develop educational resources for radiologists and technologists who perform CT on children
 - Craft messages to communicate availability of resources
 - Designate public spokespersons to present unified message
- Initial costs low—funded by education grant from GE Healthcare

Alliance Strategy

- Create Partnerships to increase likelihood of success
- Affiliate Organizations pledge to:
 - Endorse the primary objective of raising awareness of the need to adjust radiation dose when imaging children
 - Communicate Alliance messages through their organizations' electronic and print media
 - Communicate the Alliance's goals to members and constituents
 - Contribute to the body of knowledge on the Alliance website:

<http://www.pedrad.org/associations/5364/ig/>

Use of "Community Intervention"

- Target population:
 - The "team" of professionals involved with performance of CT scans in children
 - Physicians referring children for CT
- Steering committee wanted all members of the team to receive the same message at the same time.
- Repeat message: broadcast e-mails and website links on professional society websites

Other Tools to Promote “Buy In”

Several behaviors/actions suggested within each health care team subgroup (e.g., physicians, technologists, physicists):

- Personal “pledge button” for taking a pledge to image gently
- Separate logo for those who sign up
- Personal communications
- Occasional updates upon request
- Downloadable PowerPoint presentation (Downloaded 1,062 times as of Nov. 2008)



Next Steps

- Addition of other imaging modalities used on children:
 - Regular diagnostic x-ray
 - Fluoroscopy
 - Nuclear medicine
- Inclusion of other physician and technologist groups
- Messages to parents

Summary of Image Gently

- Education and awareness campaign
- Sponsored by Alliance of health professional organizations
- Simple messages sent to targeted audience
- Goal: to change behavior in the radiology workplace
- Message reinforced through multiple media and direct contact
- Early signs of success: radiology practices are changing regarding imaging of children.

Applying the Model



- Identify the primary goal
- Identify target population
- Create partnerships and leadership for alliance
- Commitment of initial funding for alliance

Applying the Model (continued)



- Develop focused messages/tools/training aids
- Develop communication plan (internal and to membership of Alliance member organizations)
- Members of Alliance contribute to body of knowledge on a shared site

Questions/Comments?



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Establishing a Radiation Response Volunteer Corps

Debbie Bray Gilley*
Florida Bureau of Radiation Control
April 1, 2009



Objective

In the event of a radiological incident there may be a need to perform population monitoring to determine who may be contaminated or exposed to radiation or to relieve the fears of individuals that are **NOT** contaminated or have **NOT** been exposed to radiation



Background

- National Response Plan
- CDC Population Monitoring Information
- Operational Safety Publications of the Health Physics Society



TOPOFF 4

The initial blast from the detonation of the radiation device in Portland, OR
October 2007



Steps to Success

- Determine duties of the Corps
- Determine professions that might qualify with limited training
- Determine if there is an establish mechanism for volunteering
- Determine infrastructure needed for staging a population monitoring center
- Provide Initial Training
- Support Annual Training, Infrastructure and Logistics



Florida's Perspective of the Duties of a Radiation Response Volunteer

- Not First Responders
 - Will not be involved at "ground zero", "cone of doom", or downwind sectors
- Fills the gap in the National Response Plan
 - Radiation Response Annex Section on Population Monitoring
- Respond to the need to monitor the population at off-site locations possible in adjacent counties or communities
 - Population Monitoring Centers
 - Community Reception Centers
 - Entrance to Red Cross Shelters
 - Alternate Medical Treatment Service Centers
- Need to staff "up" between 12 hours after the incident until federal assets can be mobilized (72 hours)



Who are our Radiation Response Volunteers?

Volunteers already trained in identification and contamination procedures as part of their normal employment duties!!!!

- Experience with decontamination procedures
- Knowledgeable and experienced in reducing citizens concern about health risk
- Able to collect and know the value of epidemiological information
- Many have experience in the psychological impact some citizens will face and relieve unnecessary fear
- Can provide "reach back" supervision directly with the Bureau Operations Officer through established communication channels



Determine if There is an Established Mechanism for Volunteering

- The Medical Reserve Corps is a specialized component of the Citizen Corps, a national network of volunteers
- 794 Units Nationwide
- Medical and public health professionals ready to serve their communities in times of need
- www.medicalreservecorps.gov



Determine Infrastructure Needed

- Can use civil defense shelters, schools and government buildings that are defined as emergency shelters for other natural disasters with the goal of assuring the safe use of ionizing radiation.
- Health physicists principally work at facilities where radioactive material or equipment that produces radiation are located such as medical institutions, government laboratories, nuclear power plants, regulatory agencies, universities and manufacturers.



State Resources for Population Monitoring

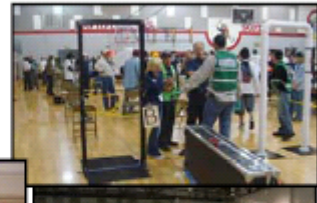
- Portal Monitoring (18 additional strategically located)
- Survey equipment (200 grab and go kits and training)
- Personnel Monitoring (Luxel and TLDs), Electronic Dosimeters
- Reception Facility (county, municipal buildings)
- DeCon equipment (clothing, gloves, etc.)
- Public Information (FAQs, press releases, and fact sheets)
- Personnel
 - County Emergency Management
 - State Assets (Initial set up and reach back)
 - Volunteers

Potential Victims of an RDD



TOPOFF 2007

"Population Monitoring" Reception Center



Radiation Response Training



- 97 individuals
- Health Physicists, Medical Physicists, Medical Reserve Corp state and regional coordinators, emergency response personnel
- Orientation
- Expectations
- Observation
- Participation

Florida's Training Program June 25, 2008



Reference Material



- CDC's Population Monitoring
- CRCPD RDD Handbook
- Florida's Forms
- Articles and Publications
- Contact Information
- Websites of Interest
- Training Presentations



Benefits of Volunteering



- Supported with liability and worker's compensation while serving as part of the MRC during an emergency
- Training and continuing education
- Email notification for license renewal
- Prioritization for vaccines for self and family
- Allows individual to participate in altruistic behavior

Future Actions



- **Need more volunteers**
- **Training and exercises**
- **Target large metropolitan areas**
- **Coordinate with hospital emergency response training**
- **Communication plan**
- **FAQs for response personnel issues**





Contact Information

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National Exercise Division
National Integration Center
National Preparedness Directorate
Federal Emergency Management Agency
Department of Homeland Security

March 2009

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National Preparedness Directorate (NPD)

- Preparedness Policy, Planning, and Analysis (PPPA)
 - Technological Hazards Division (NPD-TSD)
 - Radiological Emergency Preparedness Program (REPP)
 - Chemical Stockpile Emergency Preparedness Program (CSEPP)
 - Nest Notification and Warning Coordination
 - Proactive Action Guides for RDD/ND
 - HAZMAT Response
 - CBR/CA Superfund
 - National Integration Center (NPD-NIC)
 - ERP and NEM
 - Training & Exercise Guidance
 - Training Development
 - Training & Exercise Policy Development
 - Lessons Learned
 - Exercise Certification
 - Corrective Action Program
 - Course Evaluation
 - Instructor Certification
 - Community Preparedness Division (NPD-CPD)
 - Citizen Corps Program
 - Non-Governmental Organizations Integration and Coordination
 - CERT Program Management
 - National Citizen Corps Council and Affiliates
 - Special Needs Coordination
 - VOCAD Support/Coordination
 - Preparedness Coordination Division (NPD-PCD)
 - Provides State and local Council Support
 - Regional Preparedness Coordination
 - Strategic Counseling

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National Preparedness Directorate

Established on April 1, 2007, FEMA's NPD oversees the coordination and development of the capabilities and tools necessary to prepare for terrorist incidents and natural disasters.

The NPD provides strategy, policy, and planning guidance to build prevention, protection, response, and recovery capabilities among all levels of government throughout the Nation.

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National Preparedness Directorate-NPD

- Community Preparedness Division (CPD)
- Preparedness Policy, Planning, and Analysis (PPPA)
- Preparedness Coordination Division (PCD)
- Technological Hazards Division
- Radiological Emergency Preparedness Program (REPP)
- Chemical Stockpile Emergency Preparedness Program (CSEPP)
- National Integration Center (NIC)

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National Preparedness Vision

- National Preparedness Guidelines; September 2007:

"A Nation Prepared with coordinated capabilities to prevent, protect against, respond to, and recover from all hazards in a way that balances risk with resources and need."
- Preparedness Cycle

```

    graph TD
      Plan --> Evaluate[Evaluate & Improve]
      Evaluate --> Organize[Organize, Train & Exercise]
      Organize --> Exercise
      Exercise --> Plan
      Evaluate --> Plan
      Organize --> Plan
      Exercise --> Plan
  
```

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National Preparedness Policy and Guidance

The terrorist attacks on September 11, 2001 and Hurricane Katrina changed the nation's perspective on preparedness

- Homeland Security Act of 2002
- Homeland Security Presidential Directive/HSPD-5 "Management of Domestic Incidents" – February 28, 2003
- Homeland Security Presidential Directive/HSPD-8 "National Preparedness" – December 17, 2003
- Post-Katrina Emergency Management Reform Act of 2006
- National Preparedness Guidelines – September 2007
- National Strategy for Homeland Security - October 2007
- National Exercise Program

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Radiological Emergency Preparedness Program (REP)

- 44 CFR provides criteria for review and approval of State and local radiological emergency plans and preparedness
- NUREG-0654 includes 18 planning standards that provide for "reasonable assurance that public health and safety is not endangered by operation of the facility concerned"
- The REP Exercise Preparation Guide provides assistance to exercise planners and evaluators in preparing for a radiological emergency response exercise.

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Radiological Emergency Preparedness Program

- Nearly 30 years of history, provided a foundation for development of NEP and HSEEP
- Multiple requests – Federal/State/local 'integrate HSEEP and REPP to achieve efficiencies'

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National Integration Center (NIC)

- Training and Exercise Integration Division (TEI)
- Emergency Management Institute (EMI)
- Center for Domestic Preparedness (CDP)
- National Exercise Division (NED)
- Incident Management Systems Integration Division (IMSI)

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National Exercise Program (NEP): Creating a Unified Exercise Strategy

- Meets requirements in HSPD-8, Homeland Security Act of 2002 and Public Law 109-295, "Post-Katrina Emergency Management Reform Act of 2006" (PKEMRA)
- Provides a national program and a multi-year planning system to focus, coordinate, plan, conduct, execute, evaluate, and prioritize national security and homeland security preparedness-related exercises activities
- Works as the primary mechanism to improve delivery of Federal preparedness assistance to State and local governments strengthening preparedness capabilities of Federal, State, and local entities

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Homeland Security Exercise & Evaluation Program (HSEEP)

- The NEP provides policy guidance making HSEEP a key pillar of the homeland security preparedness exercises program
- HSEEP established a national standard providing
 - Common doctrine and 'tools' for exercise scheduling, planning/design, conduct, evaluation, assessment, and corrective actions
 - Consistent terminology used by all exercise planners
 - A platform for sharing information (LLIS)
 - 'Compliance' mechanism for State/local/tribal use of grant funds for exercises

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Homeland Security Exercise & Evaluation Program (HSEEP)

- HSEEP incorporates lessons learned and best practices from existing exercise programs (including CSEEP and REPP) and can adapt to the full spectrum of all hazards exercises
- HSEEP integrates language and concepts from;
 - National Strategy for Homeland Security
 - National Preparedness Guidelines
 - National Response Framework (NRF)
 - National Incident Management System (NIMS)
 - Universal Task List (UTL)
 - Target Capabilities List (TCL)

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Homeland Security Exercise & Evaluation Program (HSEEP)

- Guiding principles of HSEEP:
 - Conduct an annual Training and Exercise Plan Workshop and develop and maintain a Multi-year Training and Exercise Plan
 - Plan and conduct exercises in accordance with the guidelines set forth in HSEEP Volumes I-III and the "HSEEP Prevention Exercises" volume as applicable.
 - Develop and submit a properly formatted After-Action Report/Improvement Plan (AAR/IP).
 - Track and implement corrective actions identified in the AAR/IP.

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5-Year Exercise Schedule

- Establish Regional-State exercise plans and schedules based on
 - Regional-State Priorities
 - Current Threat Analysis
 - NEP Implementation Plan guidance
 - Lessons Learned from actual incidents and other exercises
 - Synchronize State prioritized input with Federal priorities
- Establish Regional-State exercise objectives and priorities
 - Exercise mandates and requirements
 - Existing State exercise schedules
 - Prioritized State capabilities to exercise and evaluate
 - Prioritized State exercise objectives

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Scheduling Synchronization

- NRC/FEMA Regional Coordination
 - Establish regional REP priorities
 - NRC/FEMA Regional REP scheduling meetings
- Align exercise scheduling efforts
 - Coordinate regional REP priorities with NEP
 - NEP FEMA Regional Training and Exercise Planning Workshops (TEPW)

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Coordinating NEP Five-Year Schedule with Federal, Regional, and State Priorities

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REP - HSEEP Integration

- What it does:
 - Compliance with elements of HSPD-5, HSPD-8 and PKEMRA
 - Further nationwide standardization for exercise design, conduct, evaluation, and improvement planning
 - Integrates scheduling of REP exercises with other Federal, State, and local exercises under the National Exercise Program 5-year Plans and Schedules
 - Provides an opportunity to reduce Federal, State, and local exercise fatigue by combining multiple requirements into fewer total exercises
 - Provides a suite of standardized tools for scheduling, planning, information sharing, evaluation/corrective action
 - Requires active ownership by REPP, State/local/Tribal, and industry partners in order to be successful

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REP - HSEEP Integration

- What it does not:
 - HSEEP does not establish additional exercises requirement for REPP
 - HSEEP does not require additional activities that will add to the cost of a REPP exercise
 - Require REPP to abandon existing evaluation criteria or to adopt TCL methodologies
 - Require new capabilities or restrict development and implementation of NUREG/REP 1 requirements.

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REP – HSEEP Integration Challenges

- In-depth revisions required to NUREG-0654, REP Program Manual, REP documentation, and REP evaluation guides
- Incorporate REP requirements and best practices into HSEEP documentation review
- Incorporate REP regulatory concerns into the Target Capabilities List (TCL) update effort
- Establish a more comprehensive, standing evaluation capability
- Develop concepts and procedures that synchronize REP exercises with the National Exercise Simulation Center (NESC) concept

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REP – HSEEP Integration Challenges

- Requires buy-in and promotion from leadership
- Stakeholder community engagement and acceptance
- Integration is a process of transition and takes time
- Defining compliance
- Develop procedures to guide 'constructive credit' needs of all preparedness assessments (exercise and real world)
- Requires committed collaboration from the onset of planning
- Requires active ownership by State/local/Tribal, Federal and industry partners in order to be successful

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Training Course Review

- Review and Align all REP & HSEEP training courses
- Review & Crosswalk HSEEP IS-130 (Exercise Evaluation & Improvement Planning) and REP IS-331 (Introduction to Radiological Emergency Preparedness Exercise Evaluation)
- Review & Crosswalk HSEEP G-130 (Practical Exercise Evaluation & Improvement Planning) and REP E/L-304 (Practical Exercise Evaluator Training)
- Make HSEEP courses available to the REP community regionally

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REP – HSEEP Integration Progress Since September 2008

- Document Review
- Training Course Review
- Scheduling Integration
- Pilot Exercises

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Pilot Exercises


- Pilot exercises that follow the HSEEP doctrine, adhere to REP criteria and validate REP – HSEEP integration
 - Palo Verde – March 2009
 - San Onofre – September 2009
 - Browns Ferry – November 2009
- HSEEP available for use during any REP exercise
 - HSEEP Formatted Documents
 - HSEEP Exercise Evaluation Guide
 - HSEEP Tools

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"We're here to help."



FEMA
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FEMA RADIOLOGICAL EMERGENCY PREPAREDNESS



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APPENDIX F.

**Report on the CDC-CRCPD Roundtable on
Communication and Teamwork:
Keys to Successful Radiological Response
June 2008**

EXECUTIVE SUMMARY

The Polonium-210 Russian Spy poisoning incident in London in 2006 reverberated internationally, resulting in recognition by the Centers for Disease Control and Prevention (CDC) of an opportunity to better prepare the nation for a public health threat involving nuclear/radiological incidents. CDC and the Conference of Radiation Control Program Directors (CRCPD) sponsored the “Roundtable on Communication and Teamwork: Keys to Successful Radiological Response” in June 2008 to bring together experts in the broad fields of health physics, hospital preparedness, epidemiology, public health preparedness, risk communication, psychology, and emergency medicine to address several key concerns: insufficient awareness and understanding of mutual responsibilities for preparing and responding to radiological incidents, the need for strengthening communications and improving working relationships among the participating organizations, the need for the organizations to share information on available resources, and the need for increased awareness of emerging roles and responsibilities regarding radiological events.

Participating in the roundtable were representatives from the Association of State and Territorial Health Officials (ASTHO), CDC, CRCPD, the Council of State and Territorial Epidemiologists (CSTE), and the National Association of County and City Health Officials (NACCHO).

Each presenting organization was asked to briefly discuss their role during a public health emergency and specifically during a radiological emergency; how their organization supports their member agencies in fulfilling their emergency preparedness and response roles, specifically during a radiological emergency; and finally, whether their organizations had developed any tools in preparing for and responding to radiological emergencies, and if so, to provide some examples.

Following the initial presentations by the participating agencies, a facilitated scenario discussion was used to elicit ideas from the participants regarding their roles in response to a radiological event. This discussion was followed by a presentation on the roles of public health during a radiological emergency, and finally there were presentations of successful partnerships between radiation control programs and public health programs.

A series of “silent brainstorming” activities followed. The first brainstorming session was used to identify each organization’s gaps related to their ability to respond to a radiological event. Participants were also asked to list their organization’s radiological response capabilities and identify strategies that could either bridge the gaps or share their capabilities with other organizations. Identical activities were used to identify short-term and long-term actions, internal and external communication issues and strategies that could be used to strengthen communication, build partnerships and raise awareness of radiological emergency responsibilities.

Each “silent brainstorming” session was followed by a facilitated discussion designed to increase awareness of potential issues encountered during a community’s response to a radiological incident. Additionally, the facilitated discussion provided the participants an opportunity to gain perspective from colleagues, recognize their common attributes, and discuss potential for collaboration.

The most common observations that emerged from the brainstorming exercise, for each major theme identified during the roundtable are:

- Awareness of the need to develop consistent radiological capabilities
- Need to coordinate and build relationships among participating agencies
- Need for multi-agency training and exercising in radiological emergency response
- Need for funding specifically allocated for radiological emergency preparedness

The broadest theme that came out in the discussions was the need to raise radiological emergency preparedness to the same level of importance as other disasters. There was general agreement that strengthening communication, increasing understanding of emergency awareness responsibilities, developing partnerships and multi-agency training and exercises are needed to bring radiological emergency preparedness on par with biological or chemical preparedness planning.

There was recognition that there are clearly robust opportunities to build partnerships and expand communication among multiple parties engaged in or

impacted by radiological emergency preparedness. Some of the initiatives that were suggested for the near future include:

- Form an initial committee to address issues identified by this roundtable;
- Form an alliance of the partner organizations that participated in the initial roundtable;
- Convene a follow-up roundtable, expanded to include more medical and public health organizations, including bringing in first receivers such as EMTs and hospital staff;
- Create tools to raise awareness of local public health agencies to their broader role in radiation and other emergencies beyond traditional public health functions;
- Integrate with local/state incident management teams/ICS structures;
- Incorporate population monitoring in Public Health Emergency Preparedness (PHEP) and Hospital Preparedness Program (HPP) cooperative agreements or other funding sufficient to develop capabilities including dedicated human resources;
- Conduct a tabletop exercise that will focus on recovery, not just response.

The committee derived the following recommendations based on the suggestions presented during the roundtable:

1. Develop an alliance of various organizations, with the shared objective of expanding radiological emergency preparedness capabilities nationwide;
2. Work within the alliance to clarify and elevate recognition of the roles and responsibilities of public health agencies in a radiological emergency;
3. Pursue radiological emergency preparedness-specific funding on a par with biological and chemical preparedness, through the appropriate funding mechanisms;
4. Promote inter-agency training and exercises for radiological emergency preparedness and response;
5. Develop guidelines for establishing a radiation registry, in partnership with the Council of State and Territorial Epidemiologists (CSTE).

The Conference of Radiation Control Program Directors appreciates the opportunity to have been involved in the development of this roundtable and the beginning of a very exciting new era in radiological emergency preparedness.

APPENDIX G. GLOSSARY

ASTHO	Association of State and Territorial Health Officials
CBRNE	Chemical/biological/radiological/nuclear/explosives
CDC	Centers for Disease Control and Prevention
CRCPD	Conference of Radiation Control Program Directors
CSTE	Council of State and Territorial Epidemiologists
FEMA	Federal Emergency Management Agency
NACCHO	National Association of County and City Health Officials
RDD	Radiological dispersal device