

COCA Call/Webinar: Practical Tools for Radiation Emergency Preparedness

Date/Time: November 9, 2010; 2:00 p.m. EST

Speakers: Dr. Jeffrey Nemhauser, MD (CDC); Kevin Caspary, MPH, RSO(ORISE); Leeanna Allen, MPH, CHES (ORISE)

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Operator:

Good afternoon and thank you for standing by, I would like to remind all parties that your lines have been placed on listen-only until the questions and answer portion of today's conference. At that time if you are wishing to ask a question, please press star one on your touch tone phone and clearly record your name when prompted. Your name will be necessary in order to introduce your question. At this time, it is my pleasure to turn the call over to Miss Callie Campbell with Schatz Publishing. Thank you ma'am, you may begin. (00:37)

Callie Campbell:

Thank you and welcome to the "Practical Tools for Radiation Emergency Preparedness" webinar hosted by the Centers for Disease Control and Prevention. My name is Callie and I'm going to walk everyone through the procedures and tools available in this webinar. This webinar should last approximately one hour. If you have a question for one of the presenters, you may use the Q&A section. It is located at the top left-hand corner of your screen. All you have to do is type in your question and then hit enter to send the question to the presenters. If you are addressing a specific presenter, please state that in your question. Presenters will read selected questions out loud to the group. At the top right-hand side of your screen, you will see several tools available to you. The feedback tool has a colored square next to it. If you select the drop-down arrow next to the feedback, you can alert me if you are having trouble hearing or need help. You can also alert the presenter to let them know if you need them to slow down. To the left of the feedback symbol is a symbol that looks like three pieces of paper; this is where handouts are available for you to download. This meeting is being recorded. If you have technical difficulties at any time during this presentation, you may call our technical support line at (877)283-7062. Thank you all for coming. LeShaundra Cordier is your host and she will be taking over the presentation from here. (02:00)

LeShaundra Cordier:

Thank you, Callie. Good afternoon everyone. My name is LeShaundra Cordier and I am representing the Clinician Outreach and Communication Activity (COCA) with the emergency risk communication branch at the Centers for Disease Control and Prevention. Today's COCA conference call and webinar is titled "Practical Tools for Radiation Emergency Preparedness." Today's webinar will consist of presentations followed by a question and answer session. We are using a PowerPoint presentation that you can access via Live Meeting at the link provided on our website, that's emergency.cdc.gov/COCA. You can click on conference call and the link can be found under the information with today's call. You can direct link using that URL indicated for webinar access. The meeting ID is 110910 and the password is CDC. You can also access the webinar content using the troubleshooting and additional information URL, or the webinar registration link. By selecting click here to join webinar, under the meeting details, you will directly connect your PowerPoint slides. (03:00)

Registration is not required for you to access this webinar and please feel free to participate in listen-only mode via the phone if you are unable to access the Web content. This presentation will be archived and available on the COCA web page shortly following the conclusion of today's webinar. This presentation will not include the discussion of unlabeled use of products, products under investigational use. CDC, our planners, and our presenters would like to disclose that they have no financial interest or other relationships with the manufacturers of commercial products, suppliers of commercial services, or commercial supporters. There is no commercial support for this presentation. (03:37)

The objectives for today's webinar are that participants will be able to describe the process flow in a Community Reception Center; identify the key stations in the Community Reception Center; distinguish the unique psychological effects of radiation disasters; and define skills and techniques used when performing psychological first aid in radiation disasters. (03:56)

We have some amazing presenters for you today. Our first speaker is Dr. Jeffrey Nemhauser, a captain in the US Public Health Service, who serves as a medical officer for the Radiation Studies Branch in CDC. Our second presenter, Kevin Caspary, is a health education specialist for the Oak Ridge Institute for Science and Education (ORISE), working with CDC's Radiation Studies Branch. He has developed training and educational materials for public health personnel, planners, and first responders. And our third presenter today is Miss Leeanna Allen. She served as the lead planner and educator on the development of psychological first aid and radiation disasters. She is currently a health education specialist with the CDC's Radiation Studies Branch as well.

I now want to welcome our first the presenter, Dr. Jeffrey Nemhauser. (04:40)

Jeffrey Nemhauser:

Hello, and welcome to this afternoon's clinician outreach and communication activity. I am Jeffrey Nemhauser, senior medical officer in the Radiation Studies Branch at the CDC. At my last COCA call, back in 2008, I introduced the Radiation Emergency Medical Management or REMM web portal. We have made some significant improvements to REMM and added a lot of new content since that time. If you have not visited REMM lately, I strongly encourage you to do so at www.remm.nlm.gov. And while

you're checking out and downloading new REMM content, please make sure to also join the listserv so that you can be notified of all the new and important changes we have planned for REMM. Today though, my colleagues and I here at the CDC are going to be speaking with you about two brand-new learning tools that were developed and recently released by CDC's Radiation Studies Branch. Part of the mission of the Radiation Studies Branch is to help protect people from radiation related health threats, both from unintentional and intentional, or terrorist, releases of radiation into the environment. (05:56)

Up until now, and fortunately so, there haven't been any terrorist events involving radiation or radioactive material, but back in 1987, there was an inadvertent release and dispersal of radioactive material into the environment that some of you may have heard of. This event, which happened in the city of Goiania, Brazil, continues to inform and underlie many of our current assumptions about how public health and the healthcare community would respond to a radiation mass casualty event. Now the complete story of what happened in Goiania can be found at the International Atomic Energy Agency website. I'm just going to provide you a brief outline. In September 1987, two men found a piece of equipment in an abandoned and partially demolished cancer treatment clinic. They took the piece of equipment home and attempted, unsuccessfully, to dismantle it. Along the way they received some severe radiation burns. They then sold the equipment to a junkyard dealer whose workers broke apart the unit releasing a glowing blue powder. The junkyard dealer shared that glowing blue powder with his family and with other people in the neighborhood. It turned out that the glowing blue powder was the radioactive source in the teletherapy head, a material known as Caesium-137, highly radioactive and highly toxic. (07:27)

In all, about 250 people came into contact with the material and some actually internalized the material because it was on their hands. And you can see on this slide that quite a few people were hospitalized and treated for their internal contamination. Not to minimize the suffering of those immediately involved, but from a public-health standpoint, the information on this slide may be the most striking of all. First, once officials identified that radioactive material had been released into the environment; 112,000 people, give or take, presented to be screened and monitored for radioactive contamination. The screening process took place over many months at the local soccer stadium. Coordinating population monitoring is going to be an important public health function following any radiation event, intentional or unintentional. And second, the negative psychosocial impact of the event was overwhelming, and not just for the immediate victims. As it says here, hotels refused to accept residents of Goiania as guests, rocks were thrown at cars having Goiania license plates, and the city found itself largely ostracized by the rest of the country. (08:40)

In fact, if you considered how many concerned citizens presented for screening and the highly negative reaction of Brazil as a whole, you can see why emergency planners and public health officials believe that the mental health impact and psychosocial consequences of any future radiation events are likely to far exceed the number of victims experiencing adverse physical health effects from internal or external contamination or exposure. In today's COCA call, we are going to focus on these two issues and the tools that CDC's Radiation Studies Branch have developed for the public health community to use in the event of a radiation emergency. Our first presenter, Mr. Kevin Caspary, will be speaking on Community Reception Centers and the role they will play in conducting population monitoring. Following Kevin,

Miss Leeanna Allen will showcase CDC's new materials addressing the management of the anticipated psychosocial effects of a release of radiation or radioactive material into the environment. I will be back at the end of the call to summarize and to ask for questions. Kevin? (09:44)

Kevin Caspary:

Thank you Dr. Nemhauser. Good afternoon everybody. I am Kevin Caspary, health education specialist with the Oak Ridge Institute for Science and Education, currently working with the CDC Radiation Studies Branch in Atlanta. In the next 20 minutes or so, I will share with you the CDC's Community Reception Center model for radiation emergency response and demonstrate the Virtual Community Reception Center, a new training program for public health planners, staff, response partners, and organized volunteers. At the end of this presentation, you should be able to describe the process flow in the CRC and identify key stations in the CRC. (10:23)

Community Reception Centers are a local response strategy for conducting population monitoring, that require multi-agency effort coordinated by state and local Public Health. CRCs will be opened to receive evacuees and members of the surrounding communities, twenty-four to forty-eight hours after a radiological or nuclear incident and will be located outside of the hot zone. In terms of planning and staffing, CRC's are comparable to points of dispensing, neighborhood emergency health centers, or mass vaccination clinics like for H1N1. The main services offered at a CRC include screening people for external contamination, decontaminating people, and providing limited medical care. The intent of CRC operations is to prioritize people for further care, and this can help ease the burden on hospitals and manage scarce medical resources, such as radiation countermeasures. This graphic shows how CRCs fit into the evacuation strategy after a radiation emergency. People evacuating the affected area will be directed to the CRC where they will be screened for contamination, decontaminated, and entered into a registry for follow-up purposes. We also anticipate some people in unaffected communities near the CRC showing up for contamination screening. (11:41)

There are three possible end points for people at the CRC. They may be sent home, sent to a public shelter, or sent to a hospital or alternate care site for further care. The CRC is an important precursor to these end points, because it provides an element of contamination control, medical prioritization, and patient tracking that will streamline efforts to provide additional care and follow-up services. Now let's take a look at the CRC in a little more detail. A CRC has seven stations: initial sorting, first aid, contamination screening, wash, registration, radiation dose assessment, and discharge. Some of these stations are located in a contamination control zone and others are located in a clean zone. And actually, I would like to take a quick second to let everybody know that in the handout section in the meeting, you will find a desk reference version of this flow diagram in case you would like to look at it in more detail while we go through each area. Beginning with the initial sorting, the initial sorting station is where staff put people on the correct path through the Reception Center. Staff here identify people who have an urgent medical need, are highly contaminated, have a special need, and people who have received some kind of prior decontamination. (13:07)

The first aid station; people with an urgent medical need go to the first aid station for medical care and possible transport to a medical facility or alternate care site. An urgent medical need is defined as any medical condition that requires immediate medical attention. This could include cardiac arrest, heat injuries, or open wounds that could potentially be contaminated or get contaminated in the CRC. I would like to emphasize that life-saving care should not be delayed for extensive decontamination. And, in most cases, removing the outer layer of clothing will be sufficient. The contamination screening station is where staff monitor people for external contamination. Staff can use a combination of partial body and full body screenings, using either hand-held detectors or portal monitors to screen for contamination. Also, an express lane can be established for people who have decontaminated before coming to the CRC. People who are contaminated go to the wash station for decontamination; people who are not go to the registration station. At the wash station, people clean themselves. Some people may need only minimal decontamination, such as washing their hands or removing the outer layer of their clothing, while others may need to shower. Screening staff at the wash station will check people for contamination after they clean themselves. If contamination is still present after two showers, that person may be internally contaminated and will require additional screening at the radiation dose assessment station. After being screened for contamination or decontaminated at the wash station, people register with Public Health staff. Information collected at this station can be used to identify people who need immediate medical follow-up at the radiation dose assessment station. This information can be used for long-term tracking and potential follow-up as well. (15:06)

Staff at the radiation dose assessment station screen people for internal contamination, assess radiation exposure, assess the need for bioassay, assess the need for treatment, and prioritize people for short-term follow-up. Not everyone at the CRC will be evaluated at the radiation dose assessment station. For example, pregnant women, people showing signs of acute radiation sickness, people who are suspected to be internally contaminated and people who are externally contaminated when they enter the CRC may be prioritized for referral to the radiation dose assessment station. (15:47)

The discharge station is the last stop in the CRC. Staff here assess the need for counseling and provide referrals for further care. Discharge staff also provide information for people who are being discharged to their homes and facilitate placement in a public shelter. This modular CRC process can be adjusted to meet the capabilities of your jurisdictions, in terms of instrumentation and personnel. And additional processes can be added as resources become available or to meet different demands. Now that we have reviewed the CRC process, I am going to share with you a new training tool that we have released, the Radiation Studies Branch has released, called the Virtual Community Reception Center. And what you will want to do here, is if you are viewing on a smaller window size, you're going to want to maximize that window so you can see the full screen when we bring this up. (16:52)

Very good, okay. The Virtual Community Reception Center, which I will be calling VCRC from here on out, was developed by the CDC Radiation Studies Branch and the Oak Ridge Institute for Science and Education. It is a web-based training program for public health planners, staff, response partners, and organized volunteers. Basically anybody, the intended audience is anybody that will be expected to be involved in a Reception Center operation. The program features an animated exploration area, an

interactive flow diagram, embedded video segments, and supporting resources for CRC operations. So what I'm going to do now, this is the entrance screen for VCRC. And so, in our case, since we're short on time instead of watching the introductory video, we are going to jump right into the program. What we're looking at here, this is the default view of the VCRC and consists of four panels. We have the "My View" panel in the upper left-hand corner. The "Flowchart" panel, lower left-hand, the "Floorplan" panel in the lower right-hand corner, and the "Information" panel in the upper right-hand corner. Three of these panels, the ones with the plus signs, can be enlarged, so you can get a better look at the content in those areas. And they are navigable in a variety of formats. To advance through the Reception Center, we have two options, we can either use the white navigation panel, or we can move by the flowchart. (18:36)

Either selecting 'yes' or 'no' at each question, or skip sections entirely by clicking on a specific box. When we are looking at the Exploration Panel, the My View Panel, you will notice that there are these icons with an "I" in the middle. These are information icons and in each one of these icons, we have an embedded video segment with additional information. A short video segment that has more information about that specific step and it also links to additional resources such as job aids, job actions sheets, and summaries that are pertinent to that scene. And we have about 22 of these sprinkled throughout the Virtual Reception Center, that will enhance learning these processes. So what I'm going to do now, actually, is back up a little bit. We are going to follow three different paths through the reception center. We are going to look at a person who shows up and has an urgent medical condition and see what happens to them. We will look at a person who is contaminated and how they are routed through the Reception Center and then we will look at someone who is not contaminated but is concerned and wants it verified that they are not contaminated. To begin with, let me maximize this so we have a little better view. When people arrive at the Reception Center, we obviously greet them and we'll assess for an urgent medical need. In this case, we will see what happens if someone does require additional care. (20:13)

People requiring additional care or have an urgent medical need will be sent to the first aid station where their condition will be assessed and then we will determine whether or not we need to provide medical transport for them. In our case, the condition is serious enough that we need to send them to a hospital or an alternate care site, and that brings us to the first and most immediate end point in the reception center. It is worth reiterating that we don't delay life-saving care for thorough decontamination. The risk of cross contamination, risks posed by cross-contamination, are minimal compared to the risk posed to the patient's health when it is a life-or-limb threatening injury. Having reached the end of that path, we will go back to the beginning and explore a different path through the Reception Center. After greeting and arrival, assessing that there is no urgent medical need, maybe we determined this person is highly contaminated. After evaluating the cleaning options we determine that a shower is necessary, and once decontaminated, we provide a full body decontamination screening to determine whether or not the person is still contaminated. In this case, we'll say they did a good enough job showering where they are not contaminated and we will send them along to the registration station. I apologize if I went to quickly there, I am realizing now that it is taking a little bit more time to load. It runs much quicker when it's downloaded to your system. After registration, we determine whether or not this person requires immediate follow-up. Since this person arrived at the CRC and was contaminated, we are going to refer them to the radiation dose assessment station. At the radiation dose assessment station, we will screen for

internal contamination, we will assess radiation exposure, assess the need for bioassay and potentially collect specimens for analysis. And then we will provide a clinical evaluation and assess the need for treatment. (22:34)

And all of those assessments will play into whether or not this person is prioritized for short-term follow-up or medical care beyond the scope of the reception center. After being assessed at the radiation dose assessment station, people will proceed to the discharge station, where they will be assessed for psychological impact and we will assess their need for counseling. If a referral is necessary, discharge staff will provide that. Given that this person showed up to the reception center and was contaminated, we would want to refer them for additional medical screening. And so we provide that. And basically, that brings us to the second of the three end points, three possible end points through the Reception Center. And again I would like to point out that if you look around these scenes, in addition to the animated graphics, there is also the information icons spread throughout the center. We are going through it relatively quickly because we have limited time, but exploring this in its fullest detail will take about an hour and you will have an opportunity to explore all these additional nuggets of information. (23:58)

For our final path through the Reception Center, we start off by greeting the arrivals, we assess there is no medical need and again we are looking at someone who is not contaminated at this point, not highly contaminated. If there is a special need, we will arrange assistance for that individual and that will allow them to progress through the center. When we say special need, we put a little bit of a different twist and it than what is traditionally considered a special need. For reception center operations, we look at special needs as being anything that would require assistance for that person to go through the entire process. This could be a mobility issue; this could be a sensory deprivation issue; this could be a language barrier even. Or, in the example of children being evacuated from the school in the impacted area, arriving at a Reception Center, it's unaccompanied minors. So with special needs, you want to make sure that we arrange assistance necessary to get people in through the center. (25:25)

If the person has already been decontaminated, then it is a pretty straight shot into an express lane for full-body contamination screening. In this example, since it has been what we have seen in the field is many jurisdictions have adopted portal monitors for their radiological emergency response programs. In the Virtual Community Reception Center, the express lane consists of a portal monitor dedicated for those individuals. This person is not contaminated and will progress into the registration area for registration and then we will determine whether or not they need immediate medical follow-up. Again, with this person, not being contaminated, potentially coming from the surrounding area, we don't feel immediate medical follow-up is necessary in the radiation dose assessment area. So they get sent to the discharge station. (26:34)

Like everybody else who passes through the discharge station, we assess the need for counseling and then provide the appropriate referrals, say, in this case, if there is a referral necessary for counseling we could provide that. If there is no referral necessary we are free to discharge that person to their home if the home is in an unaffected area or an un-impacted area, or to a public shelter. And a point that I want to clarify on the Virtual Community Reception Center is there really is no right or wrong answer as you go

through the VCRC. It is designed to be a user experience; an exploration of this process that really demonstrates the complexity of putting people through the reception center. We decided to pursue this design because we wanted to elaborate on the flow diagram. Not everybody is a chart-oriented person, and if you sit through an entire training based on a flow diagram, it can get pretty boring for a lot of people. That is why we decided to take the sites, and honestly, some of the footage that we have seen in Community Reception Center exercises and try to learn from those and bundle those into a virtual package that gives people a flavor for reception center operations without having them have to go through the entire process of setting up a reception center. Hopefully, our hope is that this program will give people enough of a background in reception center operations that they will be able to conduct their own planning and run their own drills. And really quickly, one thing I wanted to point out is we have embedded a lot of information, support information, for the community reception center, for Community Reception Center operations. (28:33)

All of these resources are items ranging from executive summaries to job action sheets to wall posters. Things that come bundled into this program. So, if you download the VCRC onto your computer, you get all these resources and the majority of them are actually customizable. So if you need to put your own jurisdiction's stamp on it, there you go, you can use it as a planning template. All of that stuff comes in the package with VCRC. And this program is available. Give me one second to pull out the next slide. It is available from the CDC Radiation Emergency's website. I am trying to multitask here. Having a little trouble. Okay, there you go, www.emergency.cdc.gov/radiation/crc/vcrc and we do have hard copies of this available on CD-ROM that can be ordered through CDC info by sending an e-mail to that address, cdcinfo@cdc.gov. So now I will hand it over to Leeanna Allen, who will take you through the psychological first aid training for rad emergencies. (29:53)

Leeanna Allen:

Thanks, Kevin. Good afternoon. Once again, my name is Leeanna Allen and I'm the health education specialist with the Oak Ridge Institute for Science and Education working with the CDC's Radiation Studies Branch. Today I'd like to talk to you about some of the potential psychological consequences of radiation disasters and how critical managing these consequences are to the success of the response effort. Our objectives today are to distinguish the unique psychological effects of radiation disasters from those of non-radiation disasters. We will also discuss psychological first aid skills and techniques that anyone responding to a radiation disaster could use to help manage psychological effects. Many of you may already be aware of psychological first aid as it is already a part of many existing disaster response plans and protocols. In case you need a review, psychological first aid is a way to help reduce the initial distress caused by traumatic events. Psychological First Aid uses basic information gathering techniques to help make rapid assessments of survivors immediate concerns or needs and also to reduce levels of stress and anxiety. In a radiation incident, public health agencies may be involved in population monitoring to screen people for internal and external radioactive contamination. And in some cases, to determine the dose that was received. (31:17)

With this information, people can be screened for external contamination, and if appropriate, given medical care for internal contamination. Public health may also be involved in establishing clinical registries to record key information about all persons screened after the screen. This will enable monitoring for both physical and mental long-term health effects. Gassing this information will put public health in an excellent position to screen for mental health needs and deliver supervised or secure mental health crisis services. The registry may also provide important psychological benefits for effective communities, providing survivors with reassurance that public services will be available. You don't have to be a mental health practitioner to benefit from psychological first aid training. This training is important for all public health professionals, clinicians, first responders, as well as volunteers who may respond to a radiation disaster. Anyone who may be working with survivors of a radiation disaster can benefit from being trained in psychological first aid whether you are answering phones at a call center or using a survey instrument to screen someone for contamination. However, it is also important to include mental health professionals in your plan for responding to radiation disasters. (32:32)

Radiation disasters are very unique in a large part because of the public's intense fear of radiation. Unlike many other threats, radiation is invisible, silent, and odorless and can only be detected with specialized equipment. It is also unfamiliar to, and not well understood by, the general public. Even common radiological medical procedures are often referred to in terms that mask any reference to radiation. There's also a strong sense of fatalism regarding radiation disasters. People do not believe that radiation disasters are survivable. Even those who may survive the initial disaster fear possible long-term and delayed health effects, primarily cancers, many of which can be only be diagnosed years after the potential exposure. Social stigma is also a problem we see in radiation disasters and can be experienced by people who were contaminated or even potentially contaminated by radioactive material, because other people fear the radiation is contagious. Following the radiation disaster in Brazil in 1987 that Dr. Nemhauser mentioned, assistance to victims was denied by physicians and other health providers, and even family members, because of the fear of radiation. In addition, neighbors, community members, and potential volunteers were unwilling to provide aid. Agricultural products from the region were banned. People knowledgeable about radiation understand that help should not be denied to survivors reporting to community reception centers or help facilities. The stigma attached to persons exposed to radiation further isolates them and prolongs psychological recovery. (34:08)

We've shown you the "Phases of Disaster Model" up here to illustrate the psychological reactions of survivors over time. Let's quickly review each of these phases in more detail. The model begins with the threat, warning, and impact phases. The threat phase is the time before impact and involves the hazards or threats that could potentially affect the community. During the warning phase, communities receive notice of the disaster. Disasters that happen with no warning, such as terrorist attacks, leave survivors feeling more vulnerable, unsafe and fearful of the future as compared to survivors of disasters who have warning. In addition to the speed of onset, the amount of disruption caused during the impact phase, the actual event, also affects the reactions of survivors. The greater the scope of community losses, the greater the psychosocial effect on the affected people. In the immediate aftermath of the disaster, an intense effort to rescue others, provide safety, and help individuals survive the event takes place. This is called the heroic phase. Altruism is prominent among those survivors and emergency responders, and

adrenaline is high. During the honeymoon phase, governmental assistance becomes readily available. Large numbers of volunteers offer help and survivors experience a short-lived sense of optimism. During the inventory phase, survivors recognize that disaster resources are limited. Multiple stressors cause them to become physically and emotionally exhausted. The optimism during the honeymoon phase gives way to discouragement and fatigue. During the disillusionment phase, survivors may feel abandoned or resentful as they see disaster assistance agencies and volunteer groups pull out. (35:48)

Gatekeeping regulations and red tape may discourage many survivors from receiving assistance. The final phase is recovery. It is during the period that people and communities rebuild their physical property and recover their emotional well-being. This phase can take years. Now let's review these phases of disaster surrounding a radiation event and note some of the differences. As we discussed earlier, public awareness of radiation threats can be low. In the warning stage, radiation events can be sudden or prolonged and difficult to detect. In some radiation events, even the immediate impact is difficult to assess. We also found significant differences in the heroic and honeymoon phases. Because of the extreme fear and lack of familiarity about protection from radiation, some people, including medical personnel and even family members, may choose not to assist victims of radiation disasters. The lack of social support system may reduce the heroic efforts often undertaken to assist the victims and decrease the sense of optimism. The remaining phases of inventory, disillusionment, and recovery are difficult and prolonged in a radiation disaster. In cases of severe contamination, recovery in the immediate area may be impossible and residents may be permanently relocated. The stigma attached to persons exposed to radiation further isolates them and prolongs the recovery phase. For victims of severe radiation events, the return to normal or pre-event mental health may not occur for generations, and often they must define a new normal. (37:19)

But as a responder in a radiation disaster, there are several steps that you can take to provide psychological first aid to survivors. First, when working with survivors, introduce yourself and ask the survivor their name. Let the survivor know you are there because you want to help and actively engage them. You can also help by being an attentive listener. You can do this through nonverbal strategies by standing or sitting squarely facing the survivor, keep your posture open and do not cross your arms or legs. Lean forward and maintain eye contact. These techniques communicate your openness and total attention. Offering accurate information about disaster and relief efforts underway help survivors understand the situation. Lead the survivor to focus on concrete, close-ended questions or questions that involve a straightforward answer. Sometimes you can serve the survivor best by making what's known as a referral. A referral is recommending that a survivor speak to a professionally trained expert who is more competent to handle the difficulties and complexities of their needs. Always be respectful, even when emotions become intense. There are also a few things you should not do when working with survivors. Sometimes we think we are bringing hope in being helpful if we can tell survivors what they want to hear. But it is never the right or the best thing to do. (38:36)

If those promises cannot be kept, it can backfire and ultimately cause a lack of hope and distrust of you and the system. It is always more helpful to provide facts as you know them. Do not force people to share their stories with you. Memories of the event can traumatize them yet again. They will offer to share their

story when they are emotionally able and ready to share it. Also, do not give simple reassurances like “everything will be all right” or “this will be over before you know it.” These statements might make you feel better, but they are not helpful for the survivor and are often not true. For the survivor, things aren’t all right and they won’t be all right for some time. Never criticize existing services or relief efforts in front of people in need of those services. Tension is high in a disaster response and communicating with, and providing services to, survivors is always problematic as we have witnessed in past disasters. In other words, there is plenty to complain about. But criticizing these services and relief efforts in front survivors is never beneficial. Survivors are best served when people helping them portray a united and unified effort. You can use psychological first aid principles to promote safety by providing and repeating simple and accurate information on how survivors can meet their basic needs. Under highly stressful situations, it is difficult for people to follow complex directions. Diplomatically asking the person to repeat your instructions to be sure “I gave that to you correctly” can be a good means of ensuring the message was received. (40:03)

Disasters can create anxiety, and being calm can go a long way in helping. You can promote calmness by listening to people who wish to share their stories and emotions. As people are talking, remember that there is no right or wrong way to feel. You can be compassionate and friendly to people even if they are being difficult. Offering accurate information about disaster and relief efforts underway to help survivors understand the situation can also have a calming effect. Rumors cause anxiety and giving accurate information to thwart rumors is an important strategy. Keeping families together and children with their parents or other relatives whenever possible will help to promote connectedness. Self-efficacy is the sense of power or control people feel they have. Often, a disaster strips people’s senses of personal control, and you can help by giving control back or empowering survivors by giving them practical suggestions that steer them toward helping themselves and by engaging survivors in meeting their own needs. You can promote health by finding out types and locations of services that are provided as part of the disaster response and then directing people to those available services. Now let’s see the techniques in action. The following is an example of how all of those working in a community reception center can utilize psychological first aid principles to promote safety, calm, connectedness, self-efficacy and health. This scenario takes place following the explosion of a radiological dispersal device at a college football game. (41:34)

****Technical Problems****

Operator:

Excuse me please, this is the operator, and the telephone audience is no longer hearing the speaker. (42:22)

Leeanna Allen:

Okay, we are doing a video, so I will try to connect it where you can hear. (42:29)



Okay. We are having some technical difficulties with the video. I do apologize for that, but we will give you a link so you can view the whole training following the end. (43:53)

This video that we attempted to watch, I apologize for it not being successful, is available through the Psychological First Aid and Radiation Disasters training. This is a multimedia training program to help clinical and public health professionals better prepare to respond to radiation emergencies. (44:14)

LeShaundra Cordier:

Hello?

Okay. I think we are going to try again. Leeanna.

Leeanna Allen:

I apologize for the video not working. It is a part of the Psychological First Aid and Radiation Disasters Training. This is a program that was developed by the radiation studies branch at CDC to help clinical and public health professionals better prepare to respond to radiation emergencies. This program is meant to serve as a supplement for people who have had previous training or experience in psychological first aid or disaster mental health. We invite you to explore this training and consider the mental health component as a key part of your disaster planning and preparation for all types of radiation disasters: natural, technological or those caused by terrorists. Just to give you a summary of what you can find in the training, in this program we hear from people who have first-hand experience from real radiation emergencies. One of these is the responder to the tragic radiation disaster in Goiânia, Brazil in 1987. Two other interviewees, a psychologist and his son, lived near Three-Mile Island Nuclear Power Plant near Harrisburg, Pennsylvania, when an accident occurred there in 1979. (45:37)

We hear their accounts and their observation of the psychosocial consequences of these events. The training also provide scenarios to illustrate how psychological first aid principles can be applied in variety of response settings, including a public health call center, a community reception center, as well as the hospital. Thank you so much for your attention to this important topic. To access the web-based version of “Psychological First Aid Radiation Disasters, please visit the URL that you see on your screen. A CD-ROM version of the course is also available. Now I would like to turn it over to Dr. Nemhauser for some closing remarks. (46:20)

Dr. Jeffrey Nemhauser:

Thank you, Kevin, and thank you, Leeanna. Radioactive materials have multiple beneficial and peaceful uses in our occupational, industrial, and healthcare environments. Their use is carefully regulated, monitored, and tracked by a variety of agencies and organizations. But as careful as we are, the possibility of an unintentional or even a terrorist release of radioactive materials, or high levels of radiation into the environment, cannot be completely ruled out. In the past 12 months alone, there have been several terrorist attempts on this country, including the failed car bomb attempt in Times Square and most recently the two intercepted cargo packages on their way to Chicago from Yemen. So the potential for

incorporating radioactive materials into these terrorist weapons is there. Public health emergency preparedness means not only being ready to deliver medical countermeasures to victims of radiation events; it also means conducting population monitoring to identify the contaminated and the exposed as well as those who are not. It also means being ready to deal with the many, many individuals--and this includes the public at large as well as emergency responders and healthcare providers--who have worries, concerns, fears, what we are calling here the psychosocial issues in the aftermath of a radiation event. We encourage you to address radiation specific concerns in your emergency response plans and protocols and to help you with that, Kevin and Leeanna presented two tools today. (47:59)

I would also encourage you to avail yourselves of the other radiation emergency preparedness tools developed here at the CDC, including the toolkit for emergency services clinicians, and the toolkit for public health officials. Both toolkits include multimedia and print materials that you can use as part of your training and preparedness efforts to respond to radiation emergencies. Both can be ordered free of charge at cdcinfo@cdc.gov, like you see here. You can ask for the toolkit for emergency services clinicians or the toolkit for public health officials, or both. You can also order these resources by calling toll-free, 1-800-232-4636. Finally, I would like to tell you about the CDC's upcoming public health and emergency preparedness conference that we have titled "Bridging the Gaps." This three-day conference is going to be held here in Atlanta March 21st through the 24th next year, 2011. It is going to feature not only a high-level orientation and overview to radiation emergency response, but also in-depth, so called in-the-weeds type of training, where planners, emergency coordinators, emergency services clinicians, emergency responders, risk communicators can all share their ideas and learn from recognized experts and from each other. We hope that you will join us for this exciting program. You can get more information about this conference at www.cdcradiationconference.org. I want to thank you for your time today, thanks for listening, and we will be happy to take questions. (49:59)

LeShaundra Cordier:

Thank you, Dr. Nemhauser. We will now start the question and answer segment. We will take questions over the phone and via the Live Meeting Q&A tab. Operator, can we open the line for questions from the phone first? (50:12)

While we are waiting for the questions from the phone, we have a few that have come into the Q&A. We are going to start with Tim Owen. And he asked, "I have been hearing that dry decon is a method for decontaminating radiation, not wet." So please address. I will turn it over to Kevin. (50:44)

Kevin Caspary:

Okay. Can you hear me okay? Dry decon has its uses. Dry decon, especially including --dry decon includes removing clothing or wiping down your hands and face with moist wipes is useful in field operations when the availability of water or weather conditions impede wet decon; dry decon, in terms of the rapt removal of potentially contaminated clothing from a patient that needs to be transported to a medical center for life-saving care is also an application of...an appropriate application of dry decon. One of the criticisms of wet decontamination is that water has the ability to mask alphaemissions from certain

radioisotopes making it harder to detect or quantify residual contamination. That said, you will receive the best results removing external decontamination by using a mild soap and warm water to free the contamination from the hair and skin. So dry decon has its uses, but for reception center operations, we're looking at wet decontamination with mild soap and warm water. (51:59)

LeShaundra Cordier:

Thank you. Operator?

Operator:

Thank you, ma'am. If we have anyone on the telephone lines wishing to ask a question or make a comment, please press star one at this time and record your name when prompted. (52:18)

LeShaundra Cordier:

While we are waiting for phone questions, we have another question through the Q&A, this is also for Kevin. And the question is "How has the CRC model of an exercise, and if so, what lessons were learned?"(52:38)

Kevin Caspary:

Okay. The CRC...I guess this is a two-part question. Both answers to both parts are yes. It has been exercised. And CRCs have been around since nuclear power plants started their emergency planning. If you go anywhere where there is a nuclear power plant, the responders and health officials in that area are familiar with reception centers. What we have worked on with CDC, is taking that existing CRC model, which is relatively limited in scope, and expanding that to encompass radiological and nuclear mass casualty incidents. So, after our modifications, again, the answer is still yes, we have practiced this model through a number of national-level exercises and lots of state and local exercises and drills. And we have a lot more coming up this calendar year and we hope to gain more lessons-learned from. One thing I will say, probably the primary lesson that we have learned is that reception centers are very, very resource-intensive both in terms of manpower and trained radiation personnel. The jurisdictions that we have seen accomplish reception center drills and exercises most successfully have had active medical reserve corps units that have worked diligently to incorporate private-sector radiation professionals into their ranks. So you have a subject matter expert that can work with medical reserve corps personnel that you can use to augment state and local public health personnel radiation control and response staff. (54:25)

Operator:

I am showing no questions from the telephone line. (54:32)

LeShaundra Cordier:

Okay, we will go to our next question via online. This question is one of a couple. There's been several about this. What do you do with clients after they are showered from decon? Within the CRC, what type of clothing, are there white suits? Can you speak to that? (54:47)

Kevin Caspary:

Okay, obviously after a person is decontaminated, you will want to provide modesty provisions so that you can conduct an adequate contamination screening. But more to the point, you need to get people in clothes. This is a planning consideration that you will have to address before an incident. Some strategies that we have learned of from our interactions with state and local public health personnel include working with big-box retailers and some charity organizations to enter into, I guess, emergency agreements to provide clothing for people who must be decontaminated for radiological or even chemical contamination. So, that is the best way to approach is, you know, pulling your response partners and make that clothing provision available. In a pinch, what you can do is hit up medical facilities and hospitals for scrubs or uniform providers for extra garments of that nature. Psychologically, there is a potential that any sort of white suits or even a scrub, or a hospital gown, will stigmatize the people who have been decontaminated. So it is better to get them into clothing as soon as possible, but in a pinch, make those emergency provisions by hitting up hospitals and things like that. (56:21)

LeShaundra Cordier:

Okay. Our next question: how does this new process address previously existing HAZMAT resources and already-trained personnel? Most HAZMAT teams are through the fire department, why is public health taking over the role for decon? (56:35)

Kevin Caspary:

Okay, this is a really great question, because public health isn't taking over the role of decon, or roll for decon in reception centers. What we are advocating here is a public health initiative to accomplish population monitoring. But it's really an "All hands on deck" scenario. Public Health isn't going to be manning the showers if we can get a mobile decon unit with trained responders handling that component. If you think about the kind of incident that we will be looking at setting up a reception centers for; you know, a worst-case scenario is an improvised nuclear device. We anticipate response resources being overwhelmed. We anticipate people evacuating before any sort of court or decon measures can be taken into effect. And we also anticipate the issuance of a shelter-in-place period, you know, up to or beyond 24 hours. When you have all these factors coming together, it makes it really difficult to say, okay, you know, HAZMAT is going to set up a checkpoint here. So by putting these reception centers that can provide more than just decon, they also provide registration; they also provide services to help people get into shelters; they also provide a degree of medical screening in a more structured environment that is outside of the impacted area. Public Health can greater serve the population that goes into that center. Again, it is a Public Health-led initiative that incorporates every response partner that you have in your book. You are looking at Fire and HAZMAT, law enforcement, radiation control, as well as organized volunteers. (58:27)

LeShaundra Cordier:

Okay and our last question, please clarify when the CRC should be set up in the psychological first aid video, which some of you were not able to access and we apologize for. The concerned lady went to the CRC while responders were still at the incident site. I thought that the CRC should be set up a couple of days after an event, not during an incident. Can you please elaborate? Either one of you, Leeanna or Kevin. (58:50)

Leeanna Allen:

I will take that last part of the question. The CRC should be set up as soon as it potentially can be safely. In our scenario, we did choose to set it up while responses were still going on. In that response, in our specific scenario that we used would have been going on for some time. So we did take a little bit of liberty for the point of getting the psychological first aid and the psychosocial response setup. (59:25)

Kevin Caspary:

I will second what Leeanna said. Reception Centers should be stood up as quickly as we can stand them up. That is a big assumption. That timeline will vary greatly based on the event. If you are looking at radiologic dispersal device or maybe a silent source dispersal device; you don't have the infrastructure impact that you would anticipate with an improvised nuclear device. So the response is going to be greatly impacted by how much damage, how much disorder is caused, that the incident has actually caused. So for a small-scale RDD, if you can get a reception center setup in four hours, that is fantastic. We are trying to give Public Health, especially state and local Public Health attainable goals. Anytime you hear radiation, there is a big barrier for a lot of people that they don't want to show up if it's rad because it is a misunderstood hazard. If you have, if you can get the staff there in a timely fashion, in less than 24 hours, that is great; but 24 hours is not an achievable goal for most jurisdictions. (1:00:52)

LeShaundra Cordier:

Okay, thank you, Kevin and Leeanna. (1:00:53)

Kevin Caspary:

And actually, one more point on that is that the 24 hour number is kind of magic for improvised nuclear devices when we are looking at the rapid decay of the fission products and the fallout to make it safe for people to begin evacuating the impacted areas. (1:01:12)

Leeanna Allen:

Kevin, I would also add that when we are looking at setting up reception centers, it may be that it could be a staged approach. Maybe you get your portal monitors and survey equipment in first, and then add in the medical dose assessment piece at a later time when those resources become available. (1:01:29)

LeShaundra Cordier:

Thank you both. There are several questions addressing the links and resources and having time to access some of the slides. Just so everyone is aware, the audio-video transcript and the links and resources you were told about today are going to be posted to the COCA website at http://emergency.cdc.gov/coca/calls/2010/callinfo_110210.asp. Some are up now, and some are going to be up within the next few days. For those of you who have additional questions for today's presenters, please e-mail us at coca@cdc.gov, again that is coca@cdc.gov. Indicate the speaker's name in the subject line of your e-mail and we ensure that your message is forwarded to them for a response. Continuing education credits are also available for this call. Those who participated in today's webinar, if you would like to receive continuing education credit, you should complete the online evaluation by December 16, 2010, and you're going to use the source code of continuing EC1648. That's E as in Echo, C as in Charlie, and the numbers 1468. All continuing education credits and contact hours for COCA conference calls and webinars are issued online through TCE Online; the CDC training and continuing education online system. The e-mail address there, or web address there is <http://www2a.cdc.gov/TCEOnline/>. To receive information about upcoming COCA calls and webinars, you can subscribe to COCA by also sending an e-mail to coca@cdc.gov and writing "Subscribe" in the subject line. On behalf of COCA, I'd like to thank everyone for joining us today with a special thank you to our presenters, Dr. Jeffrey Nemhauser, Kevin Caspary, and Leeanna Allen. We thank you all for participating. (01:03:20)