

## **Crisis and Emergency Risk Communication – Radiation**

**Host: Belen Moran**

**Moderator: Belen Moran**

**Presenters: Leeanna Allen, MPH, CHES**

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### **Operator**

I would now like to turn the meeting over to Ms. Callie Campbell. Thank you, you may now begin. (00:00:05)

### **Callie Campbell**

Thank you. Welcome to the Crisis and Emergency Risk Communication–Radiation 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. This webinar should last approximately an hour. If you have a question for one of the presenters, you may use the Q&A button located at the top left portion of your screen. Type in your question and then hit enter to send the question to the presenters. The selected questions will be read out loud to the group during the question and answer portion of the webinar. At the top right-hand side of your screen, you will see a feedback tool that has a colored square next to it. If you select the drop-down arrow next to the feedback, you can alert me if you're having trouble hearing or need help. To the left of the feedback is a symbol that looks like a golden notebook. This is where the presenter has left notes 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. Belen Moran of the CDC is your host, and she will be taking over the presentation from here. (00:01:08)

### **Belen Moran**

Thank you, Callie. Welcome to a special CDC/NPHIC webinar. Many of you are familiar with the principles of crisis and emergency risk communication. Today's webinar will focus on CERC and radiation. Before I introduce our speaker, I have some NPHIC news to share with you. Next Wednesday, July 27, the Virtual Immunization Communication Network, a project of NPHIC, will sponsor a webinar on reaching communities of color through social and ethnic media. You can register for the webinar at the NPHIC website. If you are planning to attend the CDC's Health Communication Marketing and Media Conference in Atlanta, August 9th through the 11th, please stop by the NPHIC booth and say hi to the NPHIC executive director, Laura Espino. Lastly, for those of you who are active on Facebook and Twitter, let your followers know that you are participating in today's NPHIC presentation on radiation emergency communication. It's good for them to know that you are strengthening your skills and good for them to hear about NPHIC and CDC activities. Our speaker today is Leeanna Allen, a health education specialist with the Oak Ridge Institute for Science and Education. Since 2008, she has worked full-time

with the CDC radiation studies branch on radiological and nuclear terrorism preparedness communication and training. Previously, she served in the hospital preparedness program for the Georgia Division of Public Health and as an emergency risk communicator and health educator for the Arizona Department of Health Services. Leeanna, thank you for joining us today. (00:02:54)

### **Leeanna Allen**

Thank you, Belen, and good afternoon, everyone. Thank you all so much for inviting me to speak to you today on effective communication in radiation disasters. I last spoke to some of you on a different conference call late last March while we were in the middle of the response to the tragic events in Japan. Today's talk is going to focus a little more broadly on what we know about the unique aspects of communications during radiation emergencies. I know many of you have recently gotten a crash course in this with the events over the past few months. So my hope is that you can combine your recent experiences with some of the research conducted by the CDC Radiation Studies Branch and take away some practical tools and strategies to use in your own communication plans. (00:03:43)

Our objectives today are to identify communications issues that are especially unique to radiation emergencies. Many of the same strategies and theories of crisis and emergency risk communication that we use every day also apply in radiation emergencies. But we'll concentrate on those things that will be different or even magnified. I will also be sharing some results from some of the most recent CDC communications research. The public health and medical community will be integrally involved during a radiation disaster. Communications and public information is a crosscutting role that will inform and affect other roles and responsibilities as you can see listed on this slide. Effective communications will go a long way in making other areas of the response go more smoothly. When I talk about providing public information and communicating with the public during a radiation disaster, I am not just talking about the excellent public information officers and risk communicators that we have on the phone with us today; although you will certainly be leading this effort. But anyone who has any interaction with the public, from a radiation worker performing a contamination screening to a volunteer answering a hotline to the clinician at the hospital will be providing public information and communication. And it's important for those people that we work with in our response effort to understand their role in terms of communications. Radiation disasters are unique in 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. (00:05:52)

There's also a strong sense of fatalism regarding radiation disasters. People do not believe that radiation disasters are survivable. And even those who may survive the initial disaster, fear possible long-term or delayed health effects, primarily cancers. Many of which can only be diagnosed years after an exposure. Unlike other types of health emergencies, people generally don't have the background knowledge on radiation that they may have with other subject areas. For example, and this is somewhat of an oversimplification, but if you're communicating information for flu prevention or responding to a flu outbreak, more people tend to have a general sense of what the flu is. You have a larger percentage of the population who have had the flu or know someone who has, and more people are aware of symptoms and how the flu spreads et cetera. With radiation, the knowledge base isn't there as much. Many times in asking people

what they know about radiation, we hear people mention superheroes or super villains. We hear people talk about the three-eyed fish, mutations, or disasters so horrible there's no hope for survival. And these misconceptions really have an impact on how receptive people are to information about radiation and what hurdles communicators must overcome to get the important protective action messages out. Another thing that complicates the communication issues in a radiation emergency is the huge psychological effect that radiation emergencies have. For example, following a 1987 radiation disaster in Brazil, while only about 249 people were found to have some level of contamination of cesium 137, over 120,000 people showed up at monitoring stations to be surveyed for contamination. (00:07:54)

As we know, communicating in a crisis situation also presents challenges. People's ability to process information decreases, and in many cases, the communications infrastructure may be compromised, cutting people off from their normal information channels. With the difficulties in communicating a very technical subject like radiation, with the other challenges that we have in communicating an emergency situation, it certainly provides communicators with an immense challenge. One of the other things that we see in radiation disasters is social stigma. And social stigma can be experienced by people who are contaminated, or even potentially contaminated by radioactive materials, because other people fear the radiation may be contagious. Following the radiation disaster in Brazil that I spoke of, in 1987, 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. And when residents from the region traveled to other parts of the country, they were turned away from hotels and their cars were stoned. Agricultural products from the region were banned. The stigma attached to persons exposed to radiation further isolates them and prolongs recovery. But what we have seen is that effective communication and public information can help to mitigate the effects of social stigma. (00:09:31)

Certainly the tragic events in Japan triggered by the earthquake and tsunami gave us some firsthand knowledge of difficulties in communicating in a radiation emergency. Americans living in Japan or those traveling to and from the country had concerns and questions about the radiation levels. At the same time, radiation monitors in the United States began detecting small amounts of radiation from the reactors, causing alarm among people here at home. And this quote from a woman who was living in the shelter back in March really kind of gives you an idea of how, um, the huge information needs that we had. The data that was coming out, it was very hard for people to be able to interpret that data on their own. The measurements for radiation are different in the United States. We use different units than they did in Japan, which presents some additional challenges. But effective communication in radiation disasters can go a long way in aiding the response effort. For instance, in the case of an improvised nuclear device, or IND, event, we can save lives if we can communicate to the affected population to stay inside for 24 hours. Communicating factual information about radiation and health effects can help reduce rumors and also provide reassurance. And this reminds me of an article that I was sent during the Japan incident, that was talking about how the country of China dealt with a blogger who was spreading a rumor that encouraged people to stockpile and consume vast quantities of iodide salts to combat the potential adverse effects of iodine 131. He was put in jail for 10 days and fined the equivalent of about \$75. And I know for many of us, seeing rumors like this was incredibly frustrating, as it is in any disaster. But as we know, good crisis and risk communication messages and strategies, especially if they come from multiple trusted sources, can go a long way in reducing rumors. Communications can direct people to a community

reception center to be surveyed for radioactive contamination rather than to an overcrowded and overwhelmed emergency room. Much of the United States response to the events in Japan was more of a communication response to public concern here at home and explaining the risk in the radiation levels that were detected. (00:12:11)

This quote is pulled from the second edition of the federal planning guidance for response to a nuclear detonation. I like this quote because it stresses that communications in a radiation emergency is more than just an agency spokesperson providing talking points to the media, or putting a fact sheet on the website for the public, although these are certainly important pieces. But it's also communicating technical information to our elected officials and agency leaders to inform their decisions, and it's making sure that our first responders understand how to safely do their jobs. Radiation is an unfamiliar topic, not only to the public, but to much of the response community, so when thinking about communication plans, it is important to include these audiences as well. Many times especially in radiation emergencies, the main concern of the public is, "Am I safe? If I am safe, how do you know what I am, and if I'm not safe, what can I do or what are you doing to make me safe?" This question doesn't always have an easy answer, particularly when we are talking about radiation. How much of the technical content is necessary to provide for people to make informed decisions about their risk. And how can we talk about radiation in ways that promote responsible public actions, such as reporting to a community reception center to be surveyed for contamination, like in the picture on the left, versus buying up mass quantities of ground kelp for protection against radioactive iodine like the picture on the right. (00:13:49)

As in all communications, knowing the needs of your target audience will be a main driver of your communication plans and strategies. As we saw in Japan, the public's need for knowledge and information will be huge, especially since people don't usually have a lot of knowledge about radiation. Communicators will need to balance the information needs of the impacted area with those outside of the area, and it is possible that communications delivery methods may be very different for these audiences based on the damage to the communications infrastructure. So messages will need to be adapted in order to maximize their effectiveness. For CDC, two of our main target audiences are public health professionals, as well as clinicians. These trusted professionals will be called upon to provide information or answer questions about information already out there. Especially with such a relatively unknown and very technical topic such as radiation, the importance of message consistency across all spokespeople is even greater. (00:14:57)

Radiation, again, is a very difficult subject to communicate on, particularly in an emergency setting. CDC has been conducting a lot of research to try and determine the best language and the best methods to communicate information about radiation pre- and post-event. This slide illustrates some of the research that has been conducted over the past few years. And I'd like to add that all of the findings from these projects and the reports are available on the CDC radiation emergencies website, and I will provide that link later on in the talk and it's also in the shared notes. It is the gold post-it on your screens there. What I would like to do next is just give you some of the findings from our most recent research, which focused on testing draft messages with members of the public in the case of an improvised nuclear device or IND. As part of an overall interagency planning committee on improvised nuclear device response, a communication subcommittee, which was led by FEMA, drafted a series of about 98 questions and answers for use by agencies who may be responding. And these questions ranged from

everything like how do I protect myself and my family, to what will the impact on air travel be. They tried to go ahead and provide some answers to those questions so that we have some canned messages that would be ready to go in an event like this. CDC pulled seven messages from this document, focusing mostly on protective actions as well as food, water, and air safety. These messages, delivered effectively, may have the greatest impact on saving lives and reducing injury. And protective actions, food, water, and air safety were all things that came up as well during the Japan response. So we know that these topics are on people's minds in a radiation emergency. We tested the messages in five of the urban area security initiatives, or UASI, tier-one cities listed here. And we looked at a very diverse cross-section of the general public. We really wanted people of all education, all income, all race and ethnicity, diversity in age, as well, the only people that we didn't want in our focus groups were those who worked in radiation, those who worked in public health or emergency management fields. These groups were conducted in January and February of 2001. So even though there are a lot of differences in terms of an IND scenario versus those events that we saw in Japan in March and April, we found, again, that many of the same issues and questions arose. So this research proved to be very timely. (00:18:05)

For the sake of time, I've just picked out one of the draft messages that we tested to illustrate our finding. This message focused on self-decontamination. In a radiation emergency, just to give you some background, one of the most effective steps that people can take if they think they have been contaminated, besides getting indoors, is to take a shower to remove any contamination as soon as possible. This message that I am going to show you in a minute, provided information and instructions on self-decontamination. We showed participants a short, about three-minute video, to show them what an IND event might look like and then we played the message with audio only. I am going to show you the printed version, but we did audio only because in this type of event, it is likely that we'll have some damage to our communications infrastructure. And the scientists are still working on what exactly may be damaged; what exactly won't be damaged, but most of them agree that radios may still be operational. So we wanted to simulate people hearing this message over the radio, since that's the technology that most of the subject matter experts are pretty sure will work. (00:19:24)

So the question was what should people do if they think they have been contaminated? If you think you have been contaminated, the best thing to do is take a shower. Remove your clothing, being careful not to inhale contamination or get into your mouth or eyes. Put it in a plastic bag and place it outside or in an out-of-the-way area. Shower using lukewarm water and lots of soap and water. Wash your hair with shampoo or soap and water. Do not use conditioner in your hair because it will bind radioactive material to your hair keeping it from rinsing out easily. Be careful not to scratch the skin. (00:20:02)

If you have water but cannot shower, remove the outer layer of clothing and wash exposed areas. This can remove up to 90% of the contamination. Place the clothing in a plastic bag, leave it outside, or in an out-of-the-way area. When dusting off your hair or clothing, stand away from other people and be careful not to break into dust or get it in your mouth or eyes. Wash exposed skin using lots of soap and lukewarm water. If you don't have access to water, use one of the following. It is best to clean off with a moist towelette, wet nap, or baby wipe. Otherwise, clean off with a dry paper towel or cloth and dispose of the towels with the clothing. So we asked people, we were mostly concentrating on do you believe this message, do you understand this message, and do you believe that you can do the actions that the message is asking you to take?

We asked people kind of what they liked about this message and overwhelmingly people like that it gave them specific instructions that they could do themselves to stay safe. This relates back to making sure, giving people a sense of self-efficacy, so that they have some control over a situation that they didn't have a lot of control getting into. (00:21:21)

I want to add just something as you are looking at the slides, that the quotes in yellow at the bottom are verbatims taken directly from comments made in the focus groups. So you can see that providing clear instructions, giving people priorities, if you don't have this, don't worry, you can still do this. That was something that they liked. Something that they didn't like was, perceived lack of integration with other messages. The focus groups picked up on potential contradictions with other messages immediately. People wondered why in a previous message we had provided the advice to drink only bottled water and people were wondering how they could, it was okay to shower in water but not to drink it. (00:22:13)

People also wanted more information, instructions, and guidance on how to detect or assess contamination. And this goes back to the lack of knowledge that people have about radiation in general. People weren't really sure what radiation was going to look like. They didn't know if it was dust, if it was mud, if it was going to be a bright, glowing, green sludge. They wanted to know how to assess their risk. Also, some of the directions ended up causing more confusion such as instructions to use lukewarm water and to place clothes in a plastic bag. People were wondering why those specific instructions were given and the reason for the lukewarm water was that obviously you don't want people taking showers in scalding hot water or freezing cold water to prevent skin abrasions or exposure issues. And people were wondering, does the plastic bag has some special protective property against radiation or if I don't have a plastic bag, can they use a paper bag; can I use a cardboard box? People wanted specific options. There was also some additional confusion again caused by the lack of knowledge about how radiation contamination works. People assume that if it was good for you to remove your outer layer of clothing, that removing all of your clothing would probably be better. While this is certainly effective, it is not something that we want to ask people, for example, in Chicago to do in the dead of winter. That creates a whole list of other problems unrelated to radiation exposure or contamination. (00:24:00)

People wanted to hear authoritative language. Do this, don't do that. Providing instructions and steps to take were very positively received. The more specific those steps were, the better. However, we have to be careful with how specific we made it. The more specificity you get to, oftentimes the longer your message ended up being. People wanted more information at the same time they wanted a shorter message. So that was a constant balancing act. (00:24:34)

We also asked the focus group who they wanted to hear messages from. Or if there were specific spokespeople that they trusted more than others. And we heard a lot of the usual spokespeople that we normally think of, elected officials, the president, the mayor, the governor, health officials, response workers, the police chief, the fire chief, media personalities, news anchors and weathermen. We also had a lot of people say they wanted to hear from scientists. But even more important than who the message came from, and this is something we saw in every single city, was that it didn't as much matter who it came from as long as it came from a live person. People really wanted to hear something live from another human being. And this relates back to what I mentioned earlier about the sense of fatalism that surrounds radiation emergencies. Hearing a live voice really reassured people that someone else was out there, other people were alive, and

trying to deal with events the best they could. In terms of talking about pre-recorded or pre-scripted messages, that is something that in radiation disasters we may want to revisit. (00:25:59)

One of the interesting things is that because radiation is so unfamiliar to people, again, people really didn't have much personal experience or instinct about how they might react, so when uncertain, participants based what they would do in situations that were more familiar to them. These situations could be real, such as past disasters or past emergencies that they had either been involved in or had seen on TV. As well as drawing on fictional experiences from movies and TV. It is important for communicators to think about the disasters that have affected their local communities before to try and get a sense of what people might do in the lack of additional instruction. For example, when we talk to folks in New York City, we found that many people might ignore instructions to stay inside because of the events of 9/11. We had many people who said, you know, people who stayed in those towers on 9/11, they died. They were told to stay in and it was the wrong decision. On the other hand, when we talk to people in Houston who had lived through hurricanes, that "stay inside" message was a little bit better received. People in Los Angeles, who were used to preparing for earthquakes, mentioned that they might automatically try to evacuate because that is what they have been told to do in the case of earthquakes. Kind of knowing what people might reference in terms of what they would do in emergency situations is something that is a little bit dependent on where in the country you are in your past experiences. (00:27:47)

We also saw expressed intent of noncompliance, especially among parents. Many people told us that no matter what the instructions were, they would want to go and get their children. A sentiment which I think a lot of us can understand. Some parents said though that if the message specifically mentioned that the schools were keeping kids in for their safety and would not be releasing children, they would be less likely to ignore protective action directives. So looking at targeting schools and parents with some specific communication related to the actions that they are taking in an emergency may be an area for communicators to especially pay attention to. Many of the messages ended with language that encouraged people to stay tuned as instructions will change. And people did not like that at all. Participants understood that as we get more information we'll update you, we'll provide you additional things that you can do, but hearing "instructions will change," that made them think that the actions that they are going to be doing now are going to be found to be the wrong action later on. So using updates, using developed, using words like that tended to get a better reaction. (00:29:16)

We also had a lot of the terminology that was very confusing or unfamiliar to the focus groups. People didn't know who responders were when we mentioned responders. They weren't sure if we were talking about fire, police, government officials, other agencies. They also did not know a lot of the terms about radiation. They didn't know what radioactive material was, they didn't know what it looked like, they weren't sure what contamination meant or how to recognize it. The same with exposure. Sheltering and shelter in place was also another term that was very confusing to participants. We had a lot of people interpret that terminology to mean that they should go out and try and find a shelter, such as a Red Cross shelter and other congregate shelter. And this is certainly not the message we wanted to be sending. So if you are putting out messages that say sheltering or shelter in place, you may want to take a look at that and make sure that the folks that you're communicating to are going to know what that means. (00:30:28)

Many of the suggestions that the focus group participants made fit right in with what we already know about basic principles of emergency communications. Keeping messages short and simple

while still providing relevant information is something that we always strive to do, especially keeping messages short if you are only delivering them through audio. Also providing action items that people could do and people felt comfortable taking to protect themselves and their family as well as tailoring messages to specific target audiences and their environments was also important. For example, some of our instructions told people to go to the basement to shelter in place. But these instructions were immediately dismissed by folks in Houston who often don't have basements. One of those silver linings, I guess you could call it, of radiation communications is that you don't really have to worry as much about making information too basic. Or turning off pieces of your audience by sounding too condescending. What we saw in Japan was that professional responders and clinicians were asking many of the same questions as members of the public. So many of the messages and language that we were developing, or that we were putting out, were appropriate for many different types of audiences. As in all communications, it is important to consider the needs of special populations, including non-English speakers. For example, in some other research that CDC has conducted, we found that explaining that radioactive contamination is like dust or mud, and if you think you have been contaminated, treat yourself as you are covered in dust or mud, you know, be very careful in removing your clothing so as not to stir up the dust, keep it away from your face, try not to breathe it in. Using that analogy, that tended to work really well with helping people understand contamination and why we tell people to remove the outer layer of clothing and take a shower. One of the interesting things that we found in conducting focus groups among Spanish-speaking audiences was that there are so many different words for dust or mud in Spanish language, and that these words have different connotations that are dependent on the person's culture or their country of origin. So just because this message is effective in English, or an analogy is effective in English, it doesn't mean that it will have the same success if you just directly translate it. (00:33:07)

The information needs during a radiation emergency will be huge as we saw during the events in Japan. So using every method available to you to put out a consistent message will be an important part of everyone's plan. But it's important to consider how messages need to be adapted to fit your delivery method. How will you adapt your message to a 140-character tweet or 420 character Facebook status update? And utilizing social media was something that we did a lot during Japan, and a lot of people were linking back to CDC using social media sites. So, the technology is changing incredibly fast. So it's important that we adapt our messages to fit in with those new technologies. At the same time that we are thinking about utilizing the latest technologies, it is also important to remember to plan for the low-tech communications method, particularly if there is a great deal of infrastructure damage. Educating first responders to deliver protective action messages in the immediate aftermath of an emergency can not only save lives but can also enable responders to work more effectively. One of the challenges that we constantly face with communicating about health and radiation is that there just aren't a lot of subject matter experts there. Providing education and training to our community leaders, to our agency leaders, and to our response partners can help serve as a force multiplier so we have other people out there who can explain the basics and can evaluate the risk effectively. (00:34:54)

The full report from the message testing focus groups that I shared today, as well as reports from other radiation communications research can all be found at [www.emergency.cdc.gov/radiation/audience](http://www.emergency.cdc.gov/radiation/audience). So I encourage you to check those out. The most recent reports that we have done are the top two that are listed on the page. In addition, I also encourage all of you to download the *Federal Planning Guidance for Response to a Nuclear*



*Detonation*, and make sure you get the second edition, as the information on communications in this type of event is not in the first edition. If you Google the title, it comes up in several different sites, but I've included the link that was on the Health and Human Services Radiation Emergency Medical Management site, or REMM site, which also has a lot of great information more specific to clinicians and healthcare providers. The Environmental Protection Agency also has a booklet on communicating radiation risk, crisis communications for emergency responders and that is another good resource. And you can obtain a copy of this from the CDC public health radiation toolkit, which I'll speak to in a minute. I would also strongly encourage you, if you haven't already, to get in touch with your state radiation control program directors. They are great resources that will help you on any technical issues or questions that you may have. (00:36:27)

CDC has developed two radiation emergency toolkits; one geared toward public health professionals, the other toward clinicians. Both toolkits have all sorts of resources, videos, brochures, guidance documents, training, fact sheets, etc. Things geared toward planners, things geared toward communicators, educators, and trainers. If you already have a toolkit, we have added a few new pieces this year. So if it has been a while since you received your toolkit, you may want to request new one. In the public health kit, we added a joint law enforcement public health radiation emergency investigation guide, an interactive training tool that creates a virtual community reception center, and a self-study training on psychological first aid and radiation disasters. The clinician toolkit also has some resources that might be useful, especially if you communicate with the healthcare providers in your area or work closely with the information officers at the hospitals in your area. The best part is that those toolkits are absolutely free of charge and you can order as many as you like. To place an order, simply send an e-mail to [CDCinfo@CDC.gov](mailto:CDCinfo@CDC.gov) with your name, mailing address, and contact information. Be sure to specify how many of each toolkit—clinician or public health—you are requesting. You can also place an order over the phone by calling 1-800-CDC-INFO. In addition, many of the toolkit resources, especially our multimedia resources, such as videos and self-study training, can be obtained directly from our website at [emergency.cdc.gov/radiation](http://emergency.cdc.gov/radiation). And again, all of these links are provided in the shared notes section of the meeting as well. So with that, I would like to thank you so much for your interest and your attention to this important topic. And I hope that the information provided will be helpful to you in your planning efforts. And at this time, I would be happy to take any questions if we have time. (00:38:38)

### **Operator**

To ask a question over the phone, please press star one. Make sure your phone is unmuted and record your first and last name clearly when prompted. To withdraw your question, you may press star two. Again, to ask a question, please press star one, mute your phone, and record your name. One moment, while we wait for phone questions. (00:38:57)

### **Belen Moran**

Thank you, Leeanna. I really enjoyed this presentation. And while we wait for the questions from the phone, I have one. You mentioned that you only tested a small selection, maybe seven of the draft messages. And I was wondering if you're planning to test more. (00:39:21)

### **Leeanna Allen**

Thanks for that question. We are actually planning to test more. As I mentioned earlier, we tested messages mostly centering around shelter and evacuation, food safety, water safety, and air safety. We are planning to do some additional message testing this fall, and that message testing will concentrate on those messages that deal with health effects of radiation emergencies and radiation disasters. So, we'll be testing some additional questions, mostly focusing on the health effects, and of course, when those results are in, and we get that report written up, we'll post it on our website as well.

We look forward to hearing what folks have to say about health effects, especially with the events this past March and April, what effects that will have on what people think. (00:40:17)

**Belen Moran**

We have also received some questions online, through the webinar system. There is a question that has to do with, you know, in risk communication we are always saying to...let me read it. We are always mentioning that uncertainty is important. But you mentioned that about uncertainty that people are not -- do not feel comfortable with the uncertainty...that we may say that things might change. (00:40:54)

**Leeanna Allen**

Yes, that is absolutely right. And I think there has to be a balance there between us saying, you know, the truth, which is instructions will change and things will change as the situation changes and for the most part in a focus group, people understood that. They understood that the situation is going to develop and we are going to have new information that we are going to be able to share. But hearing that the things that we were telling them to keep themselves safe might change. They kind of got what we were saying, but they would rather us use the words "update," because change tended to imply to them that what we were telling them was going to end up being the wrong thing to do. So it really made them distressed, what actions we were trying to get them to take. (00:41:47)

**Belen Moran**

And I also wanted to ask you if, how do we...how can the states find out who the radiation control people are in their locality? (00:42:01)

**Leeanna Allen**

That is a great question. There is a...they have an association called the Conference of Radiation Control Program Directors or CRCPD. And the link to their website is, again, in the shared notes section. It is CRCPD.org. And on that site you can find a list of the radiation control program directors in every state. And in some states, radiation control is the part of the health department and other states, it is part of natural resources or agriculture or some other department. So every state tends to be a little different. But CRCPD has been a great partner to us, to the radiation studies branch and CDC, and the work that they have been doing. And I'd also like to mention that there's a -- there has been an effort to start a national alliance of radiation readiness called the NARR, and it's a group that -- [ audio not understandable ] is part of it, NATO is a part of it, various organizations are part of it, to help, kind of, bring together all of the radiation and health pieces, because it is kind of one of those subject areas that, you know, in some places it is with the Health Department, in others it's with agriculture. On the federal side, CDC has a role, Department of Energy has a role, Environmental Protection Agency has a role, Nuclear

Regulatory Commission has a role. There are so many different players, it is not really in one kind of centralized area. (00:43:40)

**Belen Moran**

Okay, Leeanna, I have found the question that has come from one of the attendees. It is a two-part question. The first part was, how does the focus group—I think you have already answered it, but I want to read it—how does the focus group results of people not wanting us to express uncertainty mesh with the traditional risk communication principle of readily admitting to uncertainty? And the second part of the question was, you know, the low-tech communication suggestions might prompt people to come outside when they need them to be inside. Like for example, people may say I can't hear what the loudspeakers trying to tell me. Or, you know, have they dropped leaflets, brochures, I better go to see what is so important for me to know. (00:44:28)

**Leeanna Allen**

Absolutely, well to address the first part of that question, I think it is fine to express uncertainty and absolutely, we should be doing that, especially if it is true. But we just have to be careful in making sure that as we express that uncertainty, we don't make people so unsure of what is going to happen that they ignore protective action instructions that could save their lives. And that could be as easy as saying, "instructions and information will be updated" versus "information will change." It kind of, it means the same thing, but "update" sounds better to people than "change." With regards to the low-tech communications suggestion, certainly, we would never be dropping leaflets for people to come outside if it was unsafe for them to do so. That was just kind of a laundry list of different examples of ways you that you could potentially use low-tech communications if it was in fact, safe to do so and if it was safe for people to receive them. One of the things we've talked about is as first responders, maybe evacuating an area in their ambulances or on foot, they can instruct people as they go along to get inside and stay inside. And that is kind of what we were meaning more so than encouraging everyone to come out. Certainly, we wouldn't be flying a plane through a fallout cloud to drop leaflets off. (00:46:01)

**Belen Moran**

Thanks Leeanna. I would like to allow some questions from the phone. Sarah, are there any questions on the audio line?

**Operator**

Yes, I have two questions queued up so far. Our first comes from Kendra Gurlock. Ms. Gurlock, your line is open.

**Kendra Gurlock**

Hi. Thank you. I wondered where we can find that communication research and the messages that you've tested?

**Leeanna Allen**

You can find them on the CDC website. That link is [www.emergency.CDC.gov/radiation/audience](http://www.emergency.CDC.gov/radiation/audience). Also if you click on the golden notepad at the top of your screen, you should be able to find a link there. You can find all the reports from the research we have done including the ones I talked about today.

**Kendra Gurlock**

Okay, thank you.

**Operator**

We have one more question, it comes from Owen. Sir, your line is open.

**Owen**

Hi, I was wondering that your focus groups from before, it looked like they are all metropolitan areas. I am wondering if in the next round you are going to do any rural areas and specifically with the Native American reservations and tribes?

**Leeanna Allen**

That's a great question, Owen and we did look primarily at major metropolitan areas at these UASA cities. What I did not mention is we did a subset of more suburban groups. What we found in the more suburban groups, and we found this in the urban groups too but not to the same extent, was that the suburban groups really did not see these messages as applying to them because they did not believe that the situation would affect them in the same way that it would affect maybe a more urban area. They saw themselves more as being somewhere that people would go to, particularly for an IND event. We do have some planning, we are going to be testing in some additional cities this fall. We don't have any plans at this time to test messages in Native American or tribal lands, we are just now looking at doing some testing with the protective action messages among special populations, primarily Spanish speakers, but certainly that is something that we need to take into consideration, and would welcome any feedback from the folks who work with those tribal communities on their ideas on adapting those messages to fit the needs of those communities. (00:48:39)

**Belen Moran**

Thank you. I will continue with the questions I've received. Where are you planning to test the messages next?

**Leeanna Allen**

Well, we are still finalizing those cities, but again we are looking at some of the UASE cities. We are looking at possibly doing some additional testing on the West Coast because we saw so much concern with the incident in Japan. As we get that methodology and research protocol approved, we would be happy to keep everyone updated on where we are going next.

**Belen Moran**

And, I have another question. Can we request multiples of the toolkit?

**Leeanna Allen**

Yes. You can absolutely with request multiple copies of the toolkits and not only that, if you get the toolkit and there is a certain piece that you want to get multiple copies of, let's say you want to get 20 copies of the EPA communications booklet to hand out at the meeting or to some of your partners, you can use the same CDC info e-mail or the same phone number, however you wish to place your order to call and order complimentary copies of any of those resources. Again, a lot of the material is also on the web so if it is easier for you to just send out a link or

download that directly, you can do whatever is easiest for you and works best with the technology that you have.

**Belen Moran**

Thank you. I have one comment. On attendee said, is it possible to get your meeting notes, so much was in your spoken presentation that was not in the PowerPoint.

**Leeanna Allen**

Absolutely. I try not to read slides as a good communicator. I can provide a copy of those notes to you Belen, and you can make sure that they get posted.

**Belen Moran**

Yes, and I have received so many questions about the presentation and the slides, and they will be posted sometime next week at NPHIC, that is at the National Public Health Information Coalition website, NPHIC.org.

I have received another question. Is there a consistency in messages responders would be delivering and what messages for responders have been developed? (00:51:09)

**Leeanna Allen**

Two very good questions. The answer to the first question, "Is there a consistency in messaging responders would be delivering?" We certainly hope that there will be. And, "What messages for responders has been developed?" There really haven't been any yet. Particularly for this IND situation that we are talking about and that we were testing messages developed specifically for the scenario. I would think that many of those messages, once we finished testing and get them finalized and put them out, that many of those could be adapted for first responders to deliver. Another issue with first responders, and really the whole response community, is also some education on basics of radiation, the health effects, the response, the plan. Making everyone aware of an incident like that and what they would need to do and what their responsibilities and roles would be. I think there's still a lot of fear out there among the preparedness and response community about radiation and responding to radiation events. Certainly if an event like this happens, we will certainly need all our partners to be as educated as possible. (00:52:32)

**Belen Moran**

I'm sorry; I was on mute! Thank you, Leeanna. We are just a few minutes away from the end of this presentation and I would like to give another opportunity for those that are on the phone. Sarah, are there any other questions from the audio line?

**Operator**

I show no question at this time. But again, if you would like to ask a question please, press star one. (00:52:56)

**Belen Moran**

Okay. Thank you. We do have another question and it's this one, "When sending a message of how far out people need to be prepared from an event, should you use something like a mile radius or give them landmarks?" The person that sent this said, "I never heard this discussed, but it does come up now and then in exercises."

**Leeanna Allen**

That is a great question. I guess in talking about how far out people need to be prepared, that is really going to depend on what type of the event. For example, if it is an improvised nuclear device, a lot of things can affect that in terms of how big was the device, where did it go off, if it is in a city with a lot of tall buildings, that could potentially have some mitigating effects on the blast radius. For something like a radiological dispersal device, that is something we expect will be much smaller and have a much smaller impact. I think the problem that you get into with looking at mile own radius' or landmarks, certainly you may want to give both just to be safe, with some people think more in terms of miles, some people think more in terms of landmarks. But some of your landmarks may not be there or may be damaged or it may be hard for people to see them. So there's a lot of modeling work that is also being done right now. And there's also some information in the planning guidance for an IND that gives much better information than I ever could about what we expect the impact of the blast to be, depending on the characteristics of the landscape.

**Belen Moran**

Thanks Leeanna. I just want to make sure, there anymore questions from the audio line?

**Operator**

There are no questions on the phone at this time.

**Belen Moran**

We have one more question. Can you partner with the Health Physics Society for providing basic \_\_\_\_\_ information? (00:55:12)

**Leeanna Allen**

Absolutely. The Health Physics Society has also been a great partner. One of our radiation scientists is the new President-elect of that society and I would encourage folks out there to get in touch with their local HPS chapter. They are a great resort of subject matter experts that are right there, that can provide information, technical support and are also interested really, in what you do in terms of communications. I have spoken to the Atlanta chapter of HPS in the past couple months and they were full of questions about communication. They are another really great resource. I can add the link to their website to the shared notes section as well. (00:56:03)

**Belen Moran**

Thank you, Leeanna. It has been a pleasure to have you with us today and work together again. It has been a very informative presentation, like I've said before. We are going to receive a transcript of the presentation from our partners in the webinar platform. We are hoping that in one week, at least two weeks, we will have the slides, the transcript and the webinar, on the NPHIC website. That is NPH IC.org. If you have any comments about today's webinar, we would love to hear from you. You can either e-mail Ken August at [kaugust@nthic.org](mailto:kaugust@nthic.org) I am Belen Moran, my e-mail is a [mmoran@cdc.gov](mailto:mmoran@cdc.gov) .

Thank you so much for participating. Our next CDC NPHIC call will feature presentations about the new food safety campaign and the new edition of vital signs. That will take place July 28 at 3:00. Thank you so much. Mark your calendars for joining us on August 28. Until then, drink lots of water and stay cool. (00:57:34)