PACIFIC ADA CENTER
EMERGENCY MANAGEMENT AND PREPAREDNESS – INCLUSION OF PEOPLE WITH DISABILITIES WEBINAR SERIES
ADA NATIONAL NETWORK LEARNING SESSION: CLEAR & EFFECTIVE EMERGENCY COMMUNICATIONS OVER WIRELESS DEVICES
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>> Lewis Kraus: Welcome to the Emergency Management and Preparedness Inclusion of Persons with Disabilities Webinar Series. I'm Lewis Kraus from the Pacific ADA Center, your moderator for this series. This series of webinars is brought to you by the Pacific ADA Center as a collaborative effort between the ADA National Network and FEMA's Office of Disability Integration and Coordination.

The ADA National Network is made up of centers federally funded to provide training, technical assistance and other information as needed on the Americans with Disabilities Act. You can reach your regional ADA Center by dialing 1-800-949-4232. FEMA's ODIC covers the same 10 regions with regional disability integration specialists. More information about FEMA can be found at www.fema.gov, then type ODIC into the FEMA website search.

This is the fourth year of our webinar series which shares issues and promising practices on emergency management, inclusive of people with disabilities and others with access and functional needs. The webinars provide an opportunity for emergency managers, people with disabilities, and others with access and functional needs, first responders, planners, community organizations, and other community partners to exchange knowledge and information on promising practices in inclusive emergency preparedness and management for the whole community. The series topics will cover emergency preparedness and disaster response, recovery and mitigation, as well as accessibility and reasonable accommodation issues under the Rehabilitation Act of 1973, the Americans with Disabilities Act of 1990, the ADA, and other relevant laws.

The series alternates monthly between the ADA National Network Learning Sessions and FEMA Promising Practices. Upcoming sessions are available at www.adapresentations.org/schedule.php. These monthly webinars occur on the second Thursday of the month at 2:30 Eastern time, 1:30 Central, 12:30 Mountain, and 11:30 a.m. Pacific time. By being here you are on the list to receive notices for future webinars in this series and the notices go out two to three weeks before the next webinar and open that webinar to your registration.

For those of you who are new to this webinar series and its software, we will now review some of the features of the webinar platform before we begin the session.

In this session today only the speakers will have audio. The audio is being broadcast through your computer. Make sure your speakers are turned on and your headphones are plugged in. You can adjust the sound by sliding the sound bar left or right in the audio or video panel.

If you're having sound quality problems, go through the Audio Wizard, which is accessed by selecting the microphone icon in the Audio & Video panel that has a red gear symbol on it. If you do not have sound capabilities on your computer or prefer to listen by phone, you can dial 1-805-309-2350 and use the pass code, 555-2153. Note this is not a toll-free number but you can find local numbers on our website at www.adapresentations.org/local numbers.php.

I want to remind you that the webinar is being recorded and will be able to be accessed on www.adapresentations.org next week in the archive section.

Realtime captioning is provided for this webinar. The caption screen can be accessed by choosing the CC icon in the Audio & Video panel. The box showing the captions can be resized to show more or less text as would like.

You can follow along with the webinar platform with the slides. If you are not using the webinar platform, you can download a copy of today's PowerPoint presentation at www.adapresentations.org/schedule.php.

The Whiteboard, where the presentation slides are shown, can be resized smaller or larger by choosing from the dropdown menu locate above and to the left of this Whiteboard. The default is Fit Page. You can resize or position the chat, participant, captioning, and audio-video panels by detaching and using your mouse to reposition or stretch/shrink. Each panel may be detached using the icon with the several lines and the downward-facing triangle that is in the upper right-hand corner of each panel.

At the conclusion of today's presentation there will be an opportunity for everyone to ask questions. You may submit your questions using the chat area within the webinar platform. The speakers and I will address them at the end of the session so feel free to submit them as they come to your mind during the presentation. On the screen you can see how you can submit the questions. You type and submit in the chat area text box or press control m and enter in the chat area. If you're listening by phone and not logged in, you can ask questions by emailing them to adatech@adapacific.org.

If you experience any technical difficulties during the webinar, send a private chat message to the host by double clicking Pacific ADA Center in the participant list. And when that Pacific ADA Center tab appears in your chat panel, type your comments in the text box and enter. If you're using the keyboard, use FS6, arrow down and select to end your message. You can also send any message to ADA Tech at adatech@adapacific.org or call us at 1-510-285-5600.

Before we begin today, I want to encourage our listeners from California to register for our Getting It Right California conferences. This is disaster planning for the whole community. It will be taking place, two sessions, one in Irvine on Tuesday, June 6, at the Hilton Irvine Orange County Hotel and the second one on Thursday, June 8, at the Doubletree in Sacramento. We will be featuring speakers from the Partnership for Inclusive Disaster Strategies, the California Governor's Office of Emergency Services, FEMA, our Pacific ADA Center, the American Red Cross, disability rights stakeholders and survivors and responders

to the Bute Valley fires. You can register by May 31 at the address on the screen. We'll post that on to the room tab as well so you can copy it if you need.

For those of you who are in other states, watch for Getting It Right announcements from our email list because we are rolling those out across the nation. So they will be coming to you soon.

Today's ADA National Network Learning Session is titled, Clear & Effective Emergency Communications over Wireless Devices. During an emergency alert and warning officials need to provide the public with life-saving emergency messages that inform those in the impacted area and compel them to take protective actions. Emergency information is not always presented in formats accessible to people with different levels of sensory, cognitive and physical disabilities. Likewise, the devices on which they receive emergency information are not always optimized for use with emergency information tools such as WEA, subscription-based alerting systems, or local and state apps like Ready Georgia. This webinar will address composing message content and delivery format features that can enhance the accessibility of the information to people with disabilities. We will also cover smartphone features that can improve the accessibility of emergency messages. The webinar will close with a description and demonstration of an accessible system called Deaf Link's Accessible Hazard Alert System. Today's speakers are:

Salimah LaForce, a research analyst at the Center for Advanced Communications Policy, the home of the Rehabilitation Engineering Research Center for Wireless Inclusive Technologies. She conducts consumer, policy, and industry research and serves as a project director for the Wireless RERC policy and outreach initiatives. Salimah is editor of the monthly policy newsletter, Technology and Disability Policy Highlights, for more than 10 years and has co-authored more than 65 conference papers, presentations, reports, and federal regulatory filings.

Ben Lippincott is a task leader for the Wireless RERC's outreach to consumers with disabilities. Ben has been leading user outreach and working closely to promote industry relations for over 12 years. He is co-editor of the Wireless RERC consumer website and editor of the Re: Wireless electronic newsletter. Ben has been the lead for a nationwide rollout of a series of consumer education workshops that highlight the accessibility features of Smartphones. The workshops are also called Wireless Independence Now and are produced in collaboration with AT&T.

And Kay Chiodo, a certified ASL interpreter and subject matter expert in accessible communications, is the chief at Deaf Link, Inc., a company that leads the nation in development and implementation of services to support inclusion for people with sensory disabilities in emergency preparedness before, during and after a disaster. In 2005, Deaf Link's Accessible Hazard Alert System, or AHAS, sent the nation's first accessible alert in ASL, voice, text, and Braille accessible, to residents in Houston for Hurricane Rita. Ms. Chiodo has testified before the FCC and Congress regarding the need for accessible emergency information. And in 2009, Ms. Chiodo and Deaf Link received the Cleve Allen Award for outstanding support of emergency management in the delivery of accessible emergency information and alerts.

So, Salimah, Ben, and Kay, I'm going to turn it over to you.
>> Salimah LaForce: Ok. Thank you, everyone, for joining us on this webinar today. I'm going to skip to the next slide. This is our introductory slide.

Today we're going to cover the introduction to the Wireless RERC, just to give you a bit of background of who we are. We will briefly go over legislative and regulatory review

regarding emergency communications and their applicability with regards to the ADA. And we'll cover accessible formats and content. From then we will go on to discuss research to practice. And I will go over some of our top research and development findings that have informed policy in practice with delivery of emergency communications. And then I'll turn it over to Ben Lippincott who will discuss and go through really a how to tutorial on how to optimize Smartphones for accessibility. It's not only receiving alerts but also to take protective actions utilizing your device. And then Kay Chiodo will demonstrate and discuss the Accessible Hazard Alert System and then we will open it up for Q&A.

So the Wireless RERC is the Wireless Inclusive Technologies, RERC. Our mission is to integrate wireless technologies with emerging wirelessly connective devices and services for transformative future where individuals with disabilities achieve independence, improved quality of life, and enhanced community participation.

We do this -- this is basically a strip-down process of how we go about achieving our mission but we conduct empirical research and develop accessible products and prototypes which go through their own versions of usability studies. And the outcomes of their research and the product development and usability studies all go into inform policy and industry practices.

We're sponsored by the National Institution on Disability Independent Living and Rehabilitation Research, and the Center for Advanced Communications Policy, as you've already heard, is the home of the Wireless RERC. We also are partners with the University of Texas Arlington, their School of Social Work, Georgia State University, the Center for Leadership on Disability, and Deaf Link and the Shepherd Center.

The national system for local use, for this slide what I wanted to give here was a timeline of development of the Wireless Emergency Alerts which I will refer to as WEAs. They are a component of the integrated public alert and warning system which I will refer to as IPAWS. They are sent to your cell phone and they appear as a child abduction message or Amber Alert, a weather emergency, or a presidential alert which we haven't had any of those. There is no need to subscribe to receive Wireless Emergency Alert messages.

The top user of the IPAWS, for WEA is still the National Weather Service in June 2006, the executive order was signed the Public Alert and Warning System which directed FEMA to coordinate the modernization of the nation's alerting systems ensuring inclusiveness of people with disabilities.

As you see here, soon after, in October of 2006, the Warning Alert and Response Network Act was signed into law, which is actually part of its Section 603(a) of a larger act which is the Security and Accountability for Every Port Act, the Safe Port Act. But within that act, the FCC was directed or the Federal Communications Commission, the FCC, was directed to establish the rules and regulations by which Wireless Emergency Alerts would be governed. And within those rules and regulations, the law stipulated that it must be accessible to people with disabilities. So the FCC convened a committee and they developed the rules and regulations that went through the report and order and further proposed rulemaking and reported order process and in 2008 was their first order.

The rules that impacted the accessibility of the message were there was a specific sound and a specific vibrating cadence. The sound is the same as the tone for the Emergency Alert System. At that time it was limited to 90 characters, which impacted accessibility because of the need to fit all of the information into such a succinct text message, required the use of a lot of acronyms and abbreviations which impede comprehension. It prohibited the use of

embedded resources like urls and dialable phone numbers for fear of network overload. But this was in 2008 when that was an issue. And later these rules were amended as technology has advanced, specifically the network.

So, in 2012, WEAs became publicly available there. An image, at the time it was a CMAS alert, Commercial Mobile Alert System, and there's the image on the screenshot of one of those. So they are publicly available in 2012.

Four years later, 2016, throughout this entire process, there has been public policy engagement in pooling inputs from stakeholders regarding how to make the system more accessible to people with disabilities. We've done a lot of research in the area to determine what were the limitations and what was good about it.

One of the things that we found is that people really did need more information. So as a result of our input and a bunch of other stakeholder input, the rules were changed in 2016 that the characters can be up 360 characters, can now include embedded resources, and there's a new alert category for emergency governmental information which allows for localities to send out messages like boil water advisories, road closures and this sort of thing because WEAs originally were only meant to send like the initial alert, a bell ringer type of alert, and then you would seek additional information and it would have to be imminent threat to life or property not just subsequent additional information. But the public has determined the desire for this information on their wireless devices. So that will be allowable.

So how does the ADA apply to emergency communication? The Americans with Disabilities Act Title II, general prohibitions against discrimination include that people with disabilities cannot be discriminated against or excluded from participation in, the benefits, services, or programs or activities of a public entity. So any type of communications in localities, emergency communication systems that you use fall within this per view.

Additionally, a public entity shall take appropriate steps to ensure that communications with applicants, participants, members of the public and companions with disabilities are as effective as communications with others. So again, as a public entity, the systems that you use to communicate during emergencies should be equally effective to your citizens with disabilities as they are to those without. In order for them to be effective, they must be provided in accessible format and in a timely manner.

So what do we mean by accessible formats? First, before I get into that, there are several different ways to send wireless emergency communications. And many localities and organizations, like college campuses, use more than one method. The first is a subscription-based text or email message. It may also be a voicemail or phone call. That's an opt-in system. So the citizen would have to log in and create an account and probably put in their zip code or something like that. Another option is to have a downloadable app which many cities and states have that provide a host of information about emergency communications. And one of the features typically includes an alerting feature. Again, it's opt-in essentially because the user has to choose to download the app to their phone and then also has to either have push notifications or actively use it during an emergency.

Wireless Emergency Alerts on the other hand are opt-out. That was a deliberate decision because it is exceedingly difficult to get people to opt-into systems especially for something that they may only use hopefully never but may only use periodically. So the opt-out has increased the use of the messages amongst the population.

We also have social media feeds which we are seeing an increase over the years in amount of Emergency Management Agencies that use social media as part of their emergency communications toolkits.

Within all of these forms of sending an emergency message, for them to be accessible these following bullet points apply regardless of modality:

The person must be notified in a timely manner of incoming emergency messages. That means the notification signals should also be accessible. And this is more on the device end with regards to the light feature, sound, a tension signal, and vibration signals.

And to be able to access the content of the message there needs to be a text-to-speech or screen reader embedded either within the message or enable on the cell phone itself.

Translation of text into American Sign Language is preferred for people who communicate primarily using ASL.

And use plain language, no jargon or abbreviations. This would impact translation of the text into ASL if there is a lot of acronym and that sort of thing. So these are some general rules that you can follow to ensure accessibility of your content.

So the Emergency Communications Research and Development, this is, again, another timeline of the research and development that the Wireless RERC and the Center for Advanced Communications Policy has been involved in beginning in 2007. We started in 2007 in response to the act being signed following the FCC's committee regarding their rules regarding the system. And we developed and field tested a prototype mobile alerting framework based off the proposed rules for what is now WEA. And we tested that with people with sensory disabilities.

And from those tests we found some issues people identified with regards to having a cochlear implant or hearing aid and being concerned that they would not be able to hear the notification signals when they were sleeping or in the shower. And also another issue was the ASL, that came up frequently in our discussions, the need to translate the message into American Sign Language.

So what we did, that spurred more research. We developed some focus groups in basically a prototype of the ASL video alert and discussed it with users and got feedback on that. We've done several surveys, folks in emergency communications surveys, to gather input on how people were using social media to receive and verify alerts.

We did a comparative study of the Emergency Alert System verse the Wireless Emergency Alert system. We believe some would carry over to WEA so we compared systems by surveying the populous in 2011 after the first nationwide test of WEA. And then another survey of WEA with other questions.

What we found out with that was that people trusted Emergency Alert System messages more than they trusted WEA messages. And we inferred from that that it was probably due to the fact that EAS has been around longer so people are more familiar with that. Later research in 2015 confirmed that -- we found that people who were aware of Wireless Emergency Alerts were more likely to trust the message and less likely to be confused on what they should do, what type of action they should take. And more recently, we are further developing with Deaf Link, a 2017 WEA video platform. So we hope for that to be commercially available.

So our key findings from this research and development is we found that 96% of our respondents with disabilities own mobile phones. So this is a viable method for reaching this

population as long as the device is accessible and the content of the message is accessible as well.

56% of our respondents with disabilities agreed or strongly agreed that they take immediate action based on the information in the alert message. So statistically speaking, 56% is great. That's the majority. But as an emergency manager, you still have to worry about the other 44% of the people who aren't taking action and what type of impact that will have. So we like to see those numbers go up.

64% of all respondents are interested in the inclusion of icons, graphics, are or maps in the alert message. So again, this comes down to when you are trying to decide what system to use, if you're going to go with a subscription-based system in a locality, discussing the use of icons and graphics or maps as a feature that's in that system would be a benefit to the populous.

We also found that 52% would like an internet link included in the message. So this will happen with the WEAs over the next couple of years.

And 21% indicated an interest in the inclusion of ASL interpretation. And Kay will go over that in detail later.

So once again, I'd like to reiterate the individuals familiar with WEA were more likely to act immediately, less likely to be unsure of what action to take, and less likely to make judgments about whether the emergency applied to them. The importance of this finding is that awareness matters. It does impact behavioral response. It does impact trust of a message. So the outreach and public awareness campaigns are critical.

Real quickly, social media. I just wanted to show this slide to show the uptick that we've seen. I know these dates are a little old right now. We had -- we haven't redone this survey. But to receive the alert, you see on Facebook and Twitter, between 2011 and 2013, a huge increase in amount of people with disabilities who use these tools to receive information, emergency alert specifically. And the verify alert, which explains the "Warning, Zombies Ahead" picture, people verify the information to make sure it's accurate and applies to them. So, again, social media is used also to verify the alert. And we've seen an increase from 8.6% in 2011 to 24% in 2013 on Facebook.

So if these trends continue along these lines, and I expect that they have, more and more people are using social media to receive and verify emergency information. So your content on social media should be accessible as well.

Recommendations. So to wrap up, use a variety of methods to reach your populous. Wireless Emergency Alerts, subscription-based, and social media and apps. Educate the public on the option that are available. Ensure that your outreach materials are accessible to people with hearing, seeing, and cognitive disabilities. Do not use jargon, acronyms or abbreviations in emergency messages. And do provide additional links to information, photos and video and actionable information.

And here we have some resources. The first one is a PSA, Public Service Announcement, of a WEA captioned and signed video produced by Deaf Link. IPAWS has online training where you can go through the process of becoming or learning about IPAWS and WEA and becoming a certified alerting authority.

Effective Communications for People with Disabilities before, during, and after emergencies give a very in-depth review of everything I talked about and more.

12 Considerations for Accessible Emergency Communications is a brief one-pager handout for things to consider from the technology standpoint, the policy standpoint, and the training and outreach standpoint.

And finally, Common Misconceptions regarding people who are deaf and rely on ASL goes through the common misconceptions and realities of several different situations that would improve your outreach and communications to the populations.

And that concludes my session.

Thank you. And now, Ben Lippincott?

>> Ben Lippincott: Thank you, Salimah.

This next series of slides we're going to be going through some smartphone features to optimize device accessibility and Wireless Emergency Alerting access. This series of slides was modified -- as Lewis indicated in the introduction. I put on a series of workshops that teach people with disabilities how to use the accessibility features on their devices and what those accessibility features do. So this series of slides was kind of modified from this workshop that we've been going around the nation and talking to people about. And that's a collaboration with AT&T.

I think the first slide, if we can advance the slide, please, I think it's helpful to start this conversation off by giving a brief overview of the two main and most popular operating systems. And those are Android and -- Google Android and Apple's iOS, the two most popular operating systems. To give a short overview, I created a chart here of Google Android on the left and Apple iOS on the right. When we look at the latest versions for Google Android, we're talking about Android Version 7, otherwise known as Nougat and for iOS their latest version is iOS 10.

Some of the differences between the Android and iOS. For Google Android, you've got very highly customizable settings on the device. You can really tailor the settings on the device to your own needs. That's quite a bit different than Apple iOS where you have very limited customization settings. And that's not necessarily a bad thing. People sometimes like their device to operate a certain way. Sometimes when they change too many settings, they have a fear that it may interrupt the operation of other features that have already been set. So those limited customization settings in Apple iOS is not necessarily bad. And it could be a good thing.

So for Google Android, one of the differences between manufacturers is that they often use skins. This can create different looks between devices of manufacturers. If you don't know, Google Android is on a variety of devices by manufacturers. So we have LG, HTC, Google makes a phone, Samsung, etc., etc.; whereas Apple only makes one type of device, the iPhone or the iPad which use iOS.

Contrasting with Google, because they only have the iPhone and the iPad, you have a familiar look, feel, and operability between those devices. And what this means is that when you pick up your iPhone, it's going to look and operate the same way as it does on your iPad. This is not necessarily the case with Android where if you pick up your Samsung phone, your HTC tablet might have a different look and feel to it. So that can kind of create some cognitive issues when using Android.

And for Google Android, the operating system versions across devices may not be consistent because of how they are upgraded. So that can be an issue as well; whereas with Apple iOS, the OS versions across the devices will be the same. Granted, if you have not the latest and greatest Apple devices but, you know, they certainly haven't upgraded the first

generation of the iPhone, say, to iOS 10 but generally the third generation out usually has latest and greatest systems for Apple iOS.

So this next series of slides I'm going to be showing a lot of screenshots here. I know that the text can be kind of small on these slides, but I would encourage you to do one of two things, or both actually. One, if you have your device, follow along with me as we're going through these screenshots. They are the screenshots of Android and iOS on Apple devices. So you could follow along. If you're also having difficulty reading the text, I would encourage you to download this presentation after this webinar and view it in full screen mode on your own laptop and use the accessibility features on your laptop to magnify the text or enlarge the text in whichever way you choose.

So, when we were talking about customized, highly customized, settings, this is the case for Android's Wireless Emergency Alerting setting. They have a whole feature list of WEA settings that you can toggle on and off.

To get there, we go into settings. We go into Sound. And that from Sound if we scroll down, there is an option to select Emergency broadcasts. And while we're in Emergency broadcasts, we have the option to turn on and turn off extreme threats, severe threats, amber alerts. We can turn on and off notifications altogether. We can turn on alert reminders. We can have it vibrate whenever you receive an alert. And we can have text-to-speech enabled so that when an emergency alert comes on, TalkBack, which is the screen reader on the device, will actually speak what that alert is saying.

There is an option to toggle on test broadcasts. So when that test message does come in, you will be notified of that. There is a CMAS test broadcast. And then there is a show opt-out dialogue option to opt out of CMAS alerts as well. But you will still get presidential alerts no matter what. Those are kind of on by default. You can't turn off those.

Next slide, please.

In contrast, iOS' WEA settings, as we were saying, iOS has limited customization settings and this is very apparent in their WEA settings. So to get to iOS' WEA settings, we would go into Settings, scroll down until we get to Notifications. Select Notifications. And then scroll all the way down -- you might have to scroll pretty far if you have a lot of apps and notifications enabled on your device that receive those notifications. Scroll all the way down until you get to a section called Government Alerts. And from there you only have two options to opt in or opt out of alerts. Those two options are opting in and out of Amber alerts or opting in and opting out of Emergency Alerts.

So those two slides you really get to see the difference in the customization setting levels on WEA settings for both of these operating systems.

Next slide, please.

This next set of slides are about accessibility features that can be enabled on these devices so that you can verify third party information on your mobile device. So we're talking about things like websites, on apps, on video, and on text.

The first slide we're going to talk about is on Android. It's accessibility features for blind and low vision users. The first is TalkBack. It is a screen reader for the Android device. And to get it and enable it, we would go into Settings. We'd locate Accessibility. Once we're in Accessibility, we want to find TalkBack. And then we want to toggle TalkBack on.

If you enable TalkBack, please note that it takes specific gestures for it to operate. It changes way the phone operates. So you have to learn specific gestures in able to operate it. So two-finger swiping, double tapping and things like that. If you don't really know how to use

it, I would discourage you from turning it on because it may make your phone behave in a manner that you're not used to.

For a screen magnifier we have a setting called Magnification gestures. It's located in the Accessibility setting. You would locate Magnification gestures in Accessibility and turn it on. And there are direction there's on the Magnification gesture screen to tell you how to operate it, to pan and adjust zoom levels. You can read those directions on there.

Next slide, please.

For blind and low vision users using Apple's iOS, their screen reader is called the VoiceOver. To locate VoiceOver, you would find Settings, go into General, locate Accessibility, and under the heading Vision, you have the VoiceOver option there. You would turn that on. And, again it operates through different gestures just like Android but you have also other options to increase or decrease speaking rates, change pitches, use sound effects; there's also other customization options for speech and speech levels and things like that.

For the screen magnifier on iOS, their screen magnifier is called Zoom. Again, it's under Accessibility, under the Vision heading. And you'll notice that -- and this is quite a bit different than Android but Apple iOS' Accessibility settings are grouped according to disability categories, which makes it pretty easy to locate those specific features for a given disability category. So we have vision, hearing, I think there's one for thinking, and then dexterity. And gestures. So the screen magnifier, again, located under Vision, under Accessibility. And it's called Zoom. You can toggle that on and off as well.

Next slide, please.

Some accessibility features for deaf and hard of hearing. One thing we like to tell people, and this is great for everybody, actually, it's called the Pulse notification light. It utilizes the flash on the front of your phone to alert you of incoming alerts, text messages, phone calls. It's a very handy little feature not only for deaf and hard of hearing individuals but for folks with all abilities. It's called Pulse notification light. It is not under the Accessibility features. It's actually under Sound and Notification. So go into Settings, Sound and Notification, and then you can toggle on or toggle off the Pulse notification light.

Captioning, of course, is very important for people who are deaf or hard of hearing. To locate the captioning options, you would go into Accessibility, under Settings, and turn on those captions on or off. You then have the option to change languages. You can increase or decrease the text size according to your needs as well as captioning style. So I think there's a whole host of captioning styles, so white on black, black on white, yellow on black, as well as some other options. So it's very customizable.

Next slide, please.

This set of features for deaf and hard of hearing for iOS, again we have some of the same exact features for Android. This one's name on iOS is called LED Flash for Alerts. Again, this utilizes the Flash on the front-facing camera of the device to make you aware of text messages, phone calls, and these WEA alerts. So to locate that we would go into Settings, into General, locate Accessibility, turn on LED Flash for Alerts under the heading of Hearing Features.

Subtitles and captioning for iOS, we have that for Apple as well. It's under Accessibility, under Media. You would select Subtitles and captioning. Turn on closed captioning and STH.

Next slide, please. Skipped one? Ok.

This next slide we wanted to feature apps that will actually enhance WEA access. So once you receive a WEA alert, you want to verify that alert. And some of these apps that are available will help you do that. So we wanted to make you aware that translation apps, the app Google Translate is free for Android and iOS and it will help you translate any information that you would need to verify that alert.

There are maps, Google Maps is free for Android and iOS. This could be helpful for locating shelters. It could be helpful for determining evacuation routes. So Google Maps is a very handy app.

Salimah talked about social media. Twitter is a very popular app for people to use during emergencies. It's free for Android and iOS and works with the screen readers, TalkBack and VoiceOver.

Disaster assistance apps. So first aid via the American Red Cross is a very helpful app. And then the FEMA app. Both of these apps are free for Android and iOS.

And then we also wanted to make people aware that broadcast news, local radio and TV stations often have their own apps that are very helpful for people to verify information from those local media stations. I know for a fact that our local TV station, WSB TV has a great app to use during weather events and also to verify traffic patterns as well. So we just want to make you aware that those local news and TV and radio stations are very helpful apps to have as well.

Next slide, please.

Some helpful consumer focus sites that we want to make you aware of. Of course we want to plug our Wireless RERC site, www.wirelessrerc.org, to keep abreast of our latest research and development activities as well as outreach activities. It's also a place where you can find our latest presentations and papers, research papers, etc.

On our Wireless RERC site we do have a full apps for enhancing WEA alerts paper on there. So I did mention on the previous slide some of these helpful apps that you can download to your wireless device but the full paper actually has even more information, resources on there. So I would encourage you, after the presentation, to go to our website and download that paper as well.

We also have a Need to Know information about WEA on there as well. It's very helpful. The Integrated Public Alert and Warning System, the IPAWS information, materials for the public is on the FEMA.gov website; very helpful resource to look over.

And to determine whether or not you have or need or want an accessible or accessibility phone and app on your device, the global -- the Global Accessibility Reporting Information website, gari.info, has a phone finder on its website. It's a great way to select accessibility features on a device that you would like and then it would present a curated list of devices and apps that meet those criteria.

CTIA's access wireless website is another great website to visit to determine wireless information for a given disability category, so hearing, thinking, vision, and dexterity needs.

Let's see. Is there another slide? I don't believe there is.

Thank you very much. I'd like to turn it over to Kay Chiodo.

>> Kay Chiodo: Thank you, Ben. I appreciate it. And I learned a lot.

>> Ben Lippincott: Thank you.

>> Kay Chiodo: I appreciate the opportunity to do this today. This subject is very important to me as it is with a lot of people on this call. As a child, I bounced between orphanage and several foster homes. One of the homes that actually accepted me had 12 children. There was

an array of people who were deaf, hard of hearing, blind and DeafBlind. As being the only hearing child in the group, it was amazing. They gave me more than just acceptance and a language, they actually shaped my future. They are the reason for what I do today.

During this time I was able to learn a lot of the challenges and barriers that people with sensory disabilities face not just every day but especially their need for effective communication. This is something that hasn't changed today.

The Accessible Hazard Alert System, known as AHAS -- I don't know what I was thinking of when I named that but it was specifically developed to meet the communication needs of individuals with sensory disabilities.

Lewis, if we could go to the next slide, please.

As stated today by our presenters, the Americans with Disabilities Act requires emergency managers to provide information that's accessible. I truly believe that emergency managers want to provide inclusion and emergency information to everyone in their community. I'm thinking that they're really not sure how to make that happen. It's important, the first step, is to understand the significant challenges that a segment of your community faces.

I'd like to share a quick story. I'm sure Salimah is laughing because she knows I don't do any quick stories. But this is back in 2005 when evacuees were coming in from New Orleans. We were in the shelter in Dallas. We're setting up video equipment for sign language access in the medical area. Most people who have grown up signing tend to talk and sign at the same time which makes you a very visible person to anyone that's in the area who is deaf.

Well, as I'm working -- we had been there several days, sleeping in our car. I wasn't at the top of my game by any means. But as I'm sitting at this table, a very strong arm grabbed by the shoulder. And as they pulled me out of my seat, across the floor -- because it was a visitor in the shelter that day, which I wasn't even aware of until this happened, and it was Mayor Ray Nagin. And this person was pulling me by the sleeve of my shirt and signing to me, interpret for me. And she was signing big so that means she was being loud. So she was yelling "Wait! Wait! I need to talk to the President of New Orleans."

Well, that got us some questioning looks, of course. But Mayor Nagin stopped in his tracks and turned around. Someone had called him president. And with this particular person, I'm sure it's because she had seen him on TV a lot and he had to be a very important person, like a president. As we stepped up to him and his little security group cleared a path, she asked him -- she said, "I need you to bring back my 3-year-old."

A lot of families had been separated during this evacuation. And for a lot of people who were deaf and rely on ASL, American Sign Language, for clear and effective communication, some of them didn't even know what state they were in. And this was also something we learned about people who were DeafBlind in the shelters.

But this lady asked him to return her son, her 3-year-old. He smiled and said, "Give me his name. I'll find what shelter he's in and we'll get you back together." And the lady said, "No, no, no. He stayed in New Orleans." And Nagin told her, "No, no, no. That place is empty. It's evacuated. No one's left there."

She started signing and she made the sign for a house, did the legs hanging over the roof as she's sitting on the roof. And she said, "I know it's not safe, and it's dark." She did the sign for snakes. And then she did the sign for death floating by -- I'm sorry, dead floating by. And then she signed alligators.

I think at that moment you could hear a pin drop in that medical area of that shelter. By now I'm just standing there in tears, not being a very good interpreter. She signed her

3-year-old. She had him hold around her neck. Then she picked up her twins, one in each arm, and lowered herself off the roof into the water. As she fought to keep above the water and pushing off with cars underneath, struggling -- it was a very visible message showing how the babies choked and struggled. Then she got right up in his face and said, "Maybe I'm being punished because I'm a deaf mom. I couldn't hear my 3-year-old tell me, Mom, I can't hold." And she did the sign for him dropping.

Well, she arrived in the shelter with one of the twins. I think the other one was in the hospital. But one other thing she said to him was, "You shouldn't decide who gets to know about this and who gets to live and die."

This lady depended totally on American Sign Language for clear and effective access to any information. The other people we met in the shelters, they talked about people writing them notes trying to tell them where to go or not hearing the helicopters when they were on the roof trying to cover from the sun. This is so important. And it's not just people who are deaf. It's all sensory disabilities.

So this is something, again, that I hope everyone takes to heart. Text alerts do not provide equal access and inclusion for everyone. And this not only includes people who are deaf, rely on ASL -- and I'm not talking about prefer ASL. I'm talking about rely on it. Because American Sign Language has no roots in English. I believe it's the third most taught foreign language in our colleges today. It's a visual, gestural language that has no roots in English. It's not manual English on an interpreter's hands.

So also, texts do not provide access to emergency information for people who are illiterate. As Ben was talking about, the accessibility that's available on the phones, to be able to activate a lot of those accessible services that are provided, you've got to be able to read the instructions.

I can tell you today, a lot of people contact me. I get video calls from a lot of places, even asking for access to go into the place they buy the phone to find out how to use it. There's not an interpreter standing in all of those places. So a lot of these accessibility features, they are not accessible to a lot of people whose lives depend on something like that.

So I'd like to go to the next thing which is social media. Social media is an awesome tool. But, again, if it's text or voiced, you still got a segment of your population who is not going to be able to access that information.

There are a lot of people from the Deaf community who will put videos on social media. Unfortunately there's been incidents where they have believed they've understood clearly emergency information and then shared it and it wasn't correct. So again, that's becoming something that's a challenge within the Deaf community.

When you're told to stay tuned to your local media, you know, even people who are visually impaired or blind when they hear that beep, beep, and they know that something is scrolling across the bottom of their TV, that's a challenge. And for people who are deaf and rely on American Sign Language, it's just not going to happen. It's a foreign language. And that's what it's taught as in our colleges.

Then I have that little statement which my staff says what does that mean, accessible emergency preparedness information without accessible alert. Well, we're very blessed that a lot of people have taken some of their emergency preparedness information and made it accessible, like how to make a to go kit in the event of a disaster. The sad thing is, it's not -- you're telling them how to make a kit but you're not going to tell them when to use it. And I am actually quoting a friend of mine who is deaf and said, well, I guess they'll find it floating

by my body. Without having knowing when to use what they're taught, they're asking me, What is the point? They are giving this information but won't tell us when to use it.

So can we go to the next slide, please?

This is just a quick outline. AHAS is a subscriber-based system that's opt-in. It works on all computers, mobile devices. A lot of things that states have, and I'm not sure about every one of them, but they have a voucher program where someone with a disability can get a voucher to get a device, whether it be an iPad or a phone. We wanted to be sure that they didn't have to buy anything special because the hearing community really doesn't. But if the hearing community can get access to information on the device they have, we wanted to be sure they could do it on the device they owned as well and it didn't require something special.

AHAS alerts are in ASL video. They are voiced in English-Spanish, voiced -- the text is English and Spanish.

We learned years ago when we first were just doing -- we never thought about the low literacy population until we realized that we were getting a lot of registrants on the accessible alert services who did not check that they were deaf, blind, hard of hearing. Basically they were illiterate and weren't understanding the text messages. Again that challenge of activating that accessibility feature on a device, you've got to be able to read it to do it. Sometimes even those of us that can do that it's a challenge to make that work.

Also, one of the features, again, that we're talking about is providing accessible emergency preparedness information. That's important. It is. You've got to have the education as well as letting them know when to use it.

If we could go to slide three, please. Oh, you can tell I just got out of sync on my presentation. I'm the worst on following a PowerPoint. But, again, this is what I just talked about. Let's go to slide four, please, Lewis.

This is an example of the devices that the Accessible Hazart Alert System, AHAS, is available on.

I need to back up a slide. Lewis, can you back up one slide, please? There you go.

Ok. This is an example of the devices. I have in the middle of this slide a TV because the Accessible Hazard Alert System is ready for broadcast, is air ready. Having that relationship with your broadcasters in the area if they want, they have the ability which includes showing, stripping the voice off of these alerts and showing it on air which will hit more of the residents. It's a very important relationship, I believe, to develop when you're offering the services.

And with the new wireless Braille readers that are out, this is awesome that you can have a device on your wrist that can give you access if you're DeafBlind to emergency information that your neighbor down the street is getting.

Lewis, ok, now -- ok.

This slide here is showing something that we're very proud of. It's being able to provide your consumers with access to information on your website. It shows the city of Fort Worth and also the second one is Oklahoma City.

You know, people aren't going to go and sign up for a service that they don't understand. You know, your Q&A on your websites, with these here, I hope you click on these and look at these later. All your questions and answers come up voiced in sign language. It's awesome because this is the kind of access that's never existed for this segment of your population before.

I'd like to go to the next slide, please.

One -- the slide -- is it your right or left? It's showing the Accessible Hazard Alert System preparedness information. This is for Alachua County. If you're deaf and rely on ASL, having access to this type of information is awesome. This is preparing you to take action when you do receive that accessible alert.

What I'd like to do now if we can, Lewis, is click on the Accessible Hazard Alert, the demo alert with the one picture in it. We have this embedded. I believe you said it works now.
>> Lewis Kraus: One second.

Just so everyone knows, this is going to be working maybe not exactly well for everyone. It depends on your own system. So let me type this in. One second.
>> Kay Chiodo: Ok. Well, and what this alert is showing is -- let's suppose that you're out and about and the weather looks bad but you're not aware that there's flood alerts or even let's say a chemical spill in the area. This gives immediate access in a timely manner, which is required by the Americans with Disabilities Act to information, again, that is lifesaving.

And this is an example of a tornado watch.

While he's working on that, I'm going to go ahead and tell you that besides being able to provide this level of access, we have some communities and counties that are doing this now. I'm going to talk about this while Lewis is seeing if he can get that to work.

The former emergency manager in Fort Worth, he really understood the need for accessible information alerts. He, himself, is bilingual, so he knows that in his community there's people who rely on Spanish and the same thing for those who are ASL users.

I think he's got this up and working now. Lewis, did I put you on the spot here? Do we just need to keep going?
>> Lewis Kraus: Yes. I think we should – this may not work for everyone.

Just so everyone knows, we did put all of these links that Kay is showing on a separate document at the ADA Presentations website with all of the other slides and what not.

It's looking like it's not going to load for us right now so let's keep going. If people want to visit this, they can do that through those documents.
>> Kay Chiodo: Ok. Hopefully you all will download and look at what this looks like.

As I was saying, we've had Juan Artiste who wanted to ensure his community had access. We also had Lieutenant Frank Barnes, Emergency Manager for Oklahoma City, he became even more aware of the need after the more tornadoes in 2013. So these people have become champions for this segment across the United States. And Rob [Indiscernible], San Diego County, Office of Emergency Services, are very progressive in their approach to providing accessible information to the community.

You know, besides just providing the accessible alerts to inform the community, and like Salimah says, it's the bell ringer, they follow up with their accessible press releases which gives even more detail regarding what actions to take. We couldn't be more excited with this kind of example for our nation.

And it's not just weather-related information that needs to be accessible to all segments of your community. It's terrorist events. It's any threat to life or property. And this is something that's available. Technology has moved forward and it's now proven that this segment of your population can be included.

Can we go to the last slide, please, Lewis?

So, again, the ability to provide clear and effective emergency communications is available today. And with the new solutions and technologies on the horizon, we can ensure there's inclusion for your whole community.

I appreciate your time today. And thank you for listening to me.

Back to you, Lewis.

>> Lewis Kraus: All right. Thank you so much to all of you, Salimah, Ben, Kay. This was a great presentation.

I want to remind everyone who is listening to submit your questions in the chat window and we'll get to those in a moment. Let's start, actually, with the first question.

Kay, I believe this was aimed at you. A person asked: Are the services that you provide free or at a cost?

>> Kay Chiodo: The service will be -- services we provide -- well, they're purchased through a city or county. And the costs for AHAS is dependent on the size of the community and the features selected by the city or the county or the state. And they're provided just like your text messages to your community, provided at no charge to your residents.

>> Lewis Kraus: Ok. Next question. This was aimed at Ben, I believe, but now given what Kay said, maybe it goes to her, too.

Given that there's people on this webinar that are emergency, local Emergency Management Agencies, there seems to be a potential for those agencies to educate their populous about the phone capabilities that, Ben, that you reviewed. Are there materials that the agencies can refer to or to push out to their communities or to use to do some other trainings and be the conduit for getting their community to be aware of the phone's capabilities for their own emergency information?

>> Ben Lippincott: Sure. Thank you. That's a great question. There absolutely are.

So as part of the Wireless Independence Now or WIN workshop that I work with AT&T on, we produced a series of five presentations which are featured on our website. What I went over today was just a small subset of accessibility features available on these devices. There are so many features. So we've created five presentations: one for people with visual impairments, one for hearing impairments, one for dexterity and mobility impairments, and one for cognitive impairments. And then the fifth one is kind of a general presentation. It's a blending of all five of those. So those five presentations go into accessibility features for that specific given disability category. So those are available on our website. The presentations are free to download.

And I am actually working with AT&T in coming up with a new series of Wireless Independence Now workshops that we're hoping to launch within the next month or two. And when those are available, we'll have the dates available on our website. As I said, I go around the country teaching and hosting these workshops. So the dates will be available and the presentations will be available.

And I should note -- apologies for taking so long. The operating systems on the presentation that are available on our website are the previous versions. We're going to be updating that very soon to include the latest versions in the next month.

>> Lewis Kraus: Ok. Great. And Ben, talking about the Wireless RERC website, is that right?

>> Ben Lippincott: Yes.

>> Lewis Kraus: I have put that address, for those of you, into the chatroom if you would like to go and see those presentations and what not there.

Ok. Next question.

Oh, go ahead, Kay.

>> Kay Chiodo: I was going to add one thing to that. The presentations that you are talking about in the website, again, that information, it would be wonderful and provide a higher level

of inclusion if that information is also -- you know, add an interpreter to those videos. Make it accessible to that community.

>> Lewis Kraus: Ok. Good point.

All right. Next question. Has anything been done to provide alerts for people with developmental or intellectual disabilities in an understandable format?

>> Salimah LaForce: I can address that. I can't speak for every single alerting system that there is available, but I do know that the FCC has asked questions of the public in their Further Notice of Proposed Rulemakings about accessibility to people with cognitive disabilities. And right now -- that's why as the Wireless RERC and in our other research, we always say to not use jargon, don't use abbreviations; use plain language, this sort of thing. Because that will impact comprehension of the message by people of all abilities and standardize it.

Some of the phone features will allow for a simple presentation of the device so that the device itself doesn't impede receipt of the message. But it's something that is under investigation on how best to alert this population.

When I was at a conference in Colorado, emergency management conference, I was talking about alerting people with sensory disabilities. And one of the people in the audience said, Well, what about a person on the spectrum? You know, whereas generally you would want the flashing lights to be loud and noise to be loud but for someone on a spectrum that might have the adverse effect with regard to receiving the emergency information. So the considerations of the alert notification. So a new consideration for us. That's when we realized, really, to improve accessibility and inclusion, these types of things had to be customizable and not to assume that bigger, better, louder is always better because it's not.

>> Lewis Kraus: Ok. Thank you.

Next question, and I believe this is for Kay. Kay, have you had a college campus purchase services?

>> Kay Chiodo: No, we haven't. We've actually put that into some of our presentations before. Some of our precanned messages, especially for active shooters or to shelter in place -- again, putting this into sign language and making it available for your students who attend college.

I'd like to add one thing that may sound strange but I've gotten permission from a friend of mine who has a Master's -- I mean, a degree in computer science who is deaf. He runs circles around most everyone I know of intelligence. It's just that his language is different. And one of the words, which is evacuate, he signed it as evaluate. People have to keep in mind this is not a matter of intelligence or being able to read and write. This just isn't their language. So for people from this community, you might as well be sending information in Swahili if it's not my native language and I don't understand it.

So, no, to answer you more directly, we haven't. We've presented it. And it's not happened yet. But thank you for that question. I appreciate you pointing that out.

>> Lewis Kraus: Ok. Next question. Do you have any information on how often cell phones continue to work in an emergency? For example, in a city, the system may be overwhelmed in an emergency so no one can get a signal. What do you advise?

>> Salimah LaForce: Yes, that's kind of proprietary information so we don't have exact data about network overages and that sort of thing but we know that it does happen or did happen. I'm not sure how bad it is now with today's network. We expect it to increasingly improve as [Indiscernible] rolls out. But it is an issue. Because despite the intention of wireless alerts being a bell ringer, people don't say, ok, I am going to put my phone down, watch TV or do whatever.

Most times people are not in front of a television is actually the case. So they seek out additional information on their device. So it can cause network congestion.

But we don't have the exact numbers on that. The FCC probably has some information and data on that that they get from the industry as part of their reporting requirements but it's not a shared information for, you know, competitive reasons.

>> Lewis Kraus: Ok. Next question. Someone has an Android phone but was unable to find the emergency broadcast option that was being shown on the screen. Is it not available on every phone style?

>> Ben Lippincott: That's a great question again. That gets me back to that first slide I showed where we had the overview of Android versus Apple iOS. I went over the latest version of Android. It happens that manufacturers don't update the versions of the Android operating system all at the same time. So you might have an older version on your device that doesn't have all of these features. And that was kind of the point I was trying to make of Android versus Apple in that, you know, if you have an Apple device, all of your devices are going to be updated to the same operating system whereas an Android, that may not be the case.

Does that answer the question?

>> Kay Chiodo: Do they know what operating system means?

>> Ben Lippincott: If you want to find out which operating system you have, I think you go into Settings. There's -- it should be the very last option. I think it's About Phone or something like that. Where you can find the version number.

>> Lewis Kraus: So, Ben, if the person would like to contact you directly to sort of deal with this question, they could do that, right?

>> Ben Lippincott: Sure. Yeah. Definitely. Feel free to contact me.

>> Lewis Kraus: So there's the contact information for the person -- for the questioner, if you would like to get to Ben at his address.

All right. I'm getting a few questions here that I want to tell everyone there have been quite a few webinars in our series. They have covered many of the topics of question that are being brought up about evacuation information for individuals in wheelchairs and those in residences and also about active shooters. So please feel free to go back to www.adapresentations.org/archives.php, under the Archives tab, and review those because you will find many previous presentations as good or maybe not even as good as this one was today that might answer a lot of questions that you're looking for.

And with that, I think we're running out of time. So we realize that some of you may have still have questions for our speakers and apologize if you did not get a chance to ask your questions. You can contact them at these addresses or you can also contact your regional ADA Center at 1-800-949-4232.

You will all be receiving an email with a link to an Online Session Evaluation. So please complete that evaluation for today's program as we value your input and want to demonstrate to our funder the impact of our project.

We want to thank our speakers today for sharing their time and knowledge with us. That was very informative.

A reminder to everyone that the session was recorded and it will be available for viewing next week at www.adapresentations.org/archives.php.

Due to the California Getting It Right conference, sponsored by the Pacific ADA Center, we will not be having a webinar in June but watch your e-mails for the announcement of the next webinar that will occur over the summer.

And with that, I will thank you for attending today's session. Thank you, again, to our speakers and bid you all a good afternoon. We will talk to you the next time.

Bye-bye.