

Designing effective risk and warning communication

Transcript

Associate Professors Amisha Mehta (Queensland University of Technology) and Brooke Fisher Liu (University of Maryland) presented their research into effective risk and warning communication during a professional development workshop, hosted 18 August, 2017.

The workshop explored how communities use and share information and how communicators can build and measure trust, set message objectives and develop and adapt messages for the public. The workshop was presented by the Australian Institute for Disaster Resilience and hosted by Queensland University of Technology and has been developed into four-part online video series. The event was supported by AFAC, the Bushfire and Natural Hazards CRC, the University of Maryland and the National Consortium for the Study of Terrorism and Responses to Terrorism.

Accompanying footage

The footage that accompanies this transcript is hosted on the Australian Institute for Disaster Resilience YouTube channel:

- Part 1: <https://www.youtube.com/watch?v=gJliWsFs1eo&t>
- Part 2: https://www.youtube.com/watch?v=vDTqm-m_q70&t
- Part 3: <https://www.youtube.com/watch?v=t0Dg2nhFeQk&t>
- Part 4: <https://www.youtube.com/watch?v=ISigN2Anqw4&t>

Part 1: How communities use and share information

[AMISHA MEHTA] So today's agenda we have four key things that we're covering; looking at how communities share and use information, how to build and measure trust, really looking at that from the communication perspective as well as the organisational perspective. How to set message objectives within an event and how to develop and adapt messages.

So, they are the broad four we're going to be working through and the rough format is we'll share some of the research work that we've done to give you some insights about what's happening and then have a little bit of a workshop based around that so your voices can lead the discussion around that.

And we're roughly looking at about 40 minutes per block of activity, so the break will happen after trust. Any questions about that?

Let's kick it off and thinking about how communities use and share information. One of the things I think mark was talking about the work that we do and the research perspective that we take is very much community centred. So, we see ourselves almost as researchers but also as advocates for the community, here is what people are saying they want in messages, here is what is important to them and here is how they use information.

So, we do adopt that lens when we talk about that research work that we do. You can't come to QUT or to researchers and not expect to see theory, but it is not going to be too deep. A lot of our work draws on the Protective Action Decision Making Model, which has been adapted by Lindell and Perry, researchers who are quite well published in this field. And it is a multi-stage model and I guess

what I just wanted to share with you here is we sometimes have this assumption that a warning is issued, and people will immediately act on that warning.

So, this is the block or the stage where people are taking actions to either protect themselves against an event, seek more information, but we kind of assume that a message hits and boom, we get this response that we want. But this model breaks it up into a number of different stages that it is important to be mindful of. So, community members or the public first need to actually want to receive your information, it needs to break through, cut through to their daily activities to get their attention and they need to be able to understand or comprehend the message, the particular element of what you are asking them to do.

And then as they go through that process they also really assess it and break it down to help them eventually make a decision, so there is a lot of processing that can sometimes happen, and it is not as quick as we think, because there is a lot of mental models and mental thinking that happens before you actually take the action that you are looking to do.

And certainly, as the behaviours are being enacted, you know, if I'm going to start cleaning my gutters or I'm going to pull together my emergency kit, whatever the actions are, there are certain ways or messages we can do to facilitate those or help break down some of the barriers that might be there. But there is an element of stress of course that also links in with these kinds of decisions. So, this is a way of I guess showing the value of information. So sure, the warning message sits here, but there are a number of different elements that are critical drivers to help people move through this process. And of course, it was presented in a beautiful linear fashion there, doesn't necessarily work that way, it can be quite chaotic.

So to follow that line of thinking about here is what the community members do or don't do, and you'll see there are two different slides here, one for bushfires and one for floods, this was some research that we undertook with community members just this year, to help understand what kind of communication resources and platforms they were using to seek information about bushfires or floods or storms.

So, the sample of this was 721 participants for bushfires, there is probably nothing too unusual here, except in some cases we thought family and friends would be higher, but it doesn't seem to play out that way, and television is a really important go-to platform for these participants.

Floods, the big difference or comparison point I guess for floods verses bushfires is the Bureau of Meteorology becomes a really strong player within that. And I think this kind of talks a little bit to the value of interagency messaging and work that kind of naturally happens.

I guess I wanted to throw to you I know that some of you do this kind of research anecdotally or post events, is there anything in there that is different to what you might have seen or is it more confirmatory?

When we presented this last week, Ian Mackenzie was at a workshop with AFAC looking at creating a national framework for flood warnings and he did mention that the family and friends tended to move up a little bit during an event as an important information source, so something to keep in mind.

And I want to throw now to Brooke, who can share with us some of the research that you've done around this space.

[BROOKE FISHER LIU] It's great to be here with you today. If I speak in any Americanisms, I'm learning a lot of Australian jargon here, let me know I'm making no sense. They even went so far as 'you're a legend' which is like to say 'you're a superhero' in the US but it's more common here, so anything like that just stop me and raise your hand.

So, we think about social media in routine times as well as during disasters, we might think about mass public, sending our message out and hoping it sticks in mind right, but there is actually quite a bit of research that categorises different types of people online, and understanding those different types of people might help you identify the different categories in your own communities. So, you're not throwing the message out to everyone, you are throwing it out to certain people who might have more influence.

So, the Pew and Internet Centre, which is a thinktank in the US, has done quite a bit of research surrounding this and they have identified these primary categories. We have people that are content creators, that would be you all, but also people out in the community creating their own content. In America, less than 46 per cent of Americans create their own content. So still about half of the people are creating their own content, but most people are actually content curators or lurkers.

So, content curators are the people you want, right, the people that retweet your message, share your message, aren't creating their own official warning, or their own official risk communication, but sharing what you are doing. We also have lurkers which is the majority, at least in America, people that just read it, they don't do anything. So, a lot of times people will say 'oh no, I only got 200 retweets', yeah but how many eyeballs actually read it? A lot more than that.

So sometimes you want to think about just necessarily looking at the very simplistic measurement tools we have but thinking about it's probably reaching a much larger public. So, we want to be able to identify who our primary content creators are in our local communities, you probably know some already if you can think about people who might be doing a lot of social media work, if not, certainly worth looking to find who those people are.

I'll give you an example in the Jersey Shore, which is where Hurricane Sandy hit, got wiped out, there was a gentleman who had just created a hurricane awareness website, because he had just experienced Katrina and when he moved to New Jersey, he wanted to be ready. Very few people were on that Facebook site, but when Sandy hit, it exploded, and people were sharing with their neighbours they had never met before which gas stations were open, who had food they could share with other people, who had blankets, and so the community came together, not on the official emergency management social media, but on this random Facebook page this guy in the community created. He is now BFFs with local emergency management and they are doing a lot more partnering.

So that is an extreme example, but are there other people that you can think of maybe in your communities that are very active on social media, that are well dressed, they could be other government officials too, we see local broadcast meteorologists are highly trusted, not the official government meteorologists but the local ones, so think about who those trusted people are.

You also have novices, those are people who are new to social media, and disasters are a fantastic time to get them involved in your network. So, a lot of people, for obvious reasons, want to know what's happening in a disaster so they might start following you for the first time, using your social media, and if you can keep them in the loop then they are going to get your warning communication earlier next time. And we do see pretty high retention in the US in terms of first use social media users keep on the networks afterwards.

We have elders, so those are people, not saying they are old, but used to be really active on social media and for whatever reason are not, but during a disaster they still might come out. So, they might not be people who are frequently creating content, but in a disaster, they are people that you want to reach out to.

And then the power-users, the people who are posting all of the time, maybe positively, maybe negatively, so knowing who those people are who are spreading rumours and generating misinformation.

We also find from the research in the States that most people still rely on traditional media for facts, despite the fake news comments we see from certain people back home, that people still look to traditional media for facts. Social media is more to check on to see if your family and friends are safe. So, in terms of your messaging strategy, for what warning information risk communication you might want to put online, that might be more about keeping family safe, checking on family, making sure everyone is aware of what's going on, whereas information from the journalist, they are going to them to figure out where is the storm turning, what's happening now, the official warning information. And so, we see in the States people are playing up for that, putting the more family first information on social media and thinking more about the official channels to get out the more scientific risk information.

So, looking at some of the research we have done for the Department of Homeland Security, why do people use social media for disasters, and why do people not? That is important to know as well. So, you can see the reasons up there I'm going to highlight a couple. Social norms, so my friends and family do it, so I'm going to do it as well. So, who are those pockets in your communities that are not on social media, and don't have people in their networks telling them to be on social media? You are going to have to reach them somewhere else.

Humour and levity, which I learned is not a word you use very often, but the idea that during hard times, people need a little something to be happy about. So, the cute cat picture, or the person that was saved, or something just to lighten up, especially in the preparedness and recovery, not me trying to get them to do something a little bit more serious. People look to social media for that and it actually has positive outcomes in their ability to take more of the serious actions and process it.

Obviously, information seeking, particularly timely information we see in the States, that disasters are first reported on Twitter, typically before they get an official message out for things like earthquakes or tornados, so it can be the first source for information to figure out how bad the disaster is, to self-mobilise, to volunteer and to also get emotional support and healing.

So, we find when communities have to evacuate, maybe the only place they can connect with their community is via online. And so, it is a really important way when they cannot come back to their community to still feel connected to their community. And so, agencies can help with that and they can provide spaces for that to happen. After Hurricane Katrina, the American Red Cross put a big effort into finding, creating websites where you could go identify where your family is, and have a space to do that. Providing official ways to do that can be very helpful.

Why aren't people fans of social media? Privacy, security, scams and of course lack of access. So, the power lines go down, people need to turn off their phones. And so, you want to be very careful of course about social media being your only channel, or people not being aware of other channels of information that you might have. Also lack of access, we see in the US there is a very high



penetration, upwards of about 90 per cent of people own smartphones, but a lot of our lower socio-economic status don't have it consistently, so it's turned off because they can't pay their bills, or it is a family phone and is shared among many people within that family. So, you might think that sending out text messages is going to reach everyone, not in certain pockets, where that phone is turned off half the month, or someone else in the family has the phone that day. So, thinking about whether people are actually going to get that message.

And lack of knowledge, new social media seems to pop up every day, I'll show you a chart a little bit later that shows thousands of social media channels organised by category. And so, people don't always know how to use these and whether they even should be using them.

So, in terms of direct types of social media, those are the primary categories we see, I'll just give you a couple of examples of how emergency management agencies in the States have used them in a little bit of an innovative way. So, Angie's List, do you guys have that here? So, Angie's List is where we go to find plumbers and people to help our house, so you get reviews of other people and see whether you want to hire that. We see a lot of schools use that for volunteers, so after a major disaster like earthquakes or tornados they'll post 'please come to the school at noon if you want to volunteer to help with clean-up'. So, thinking about a space where the community is on that site a lot for home repair, and homes just got destroyed, maybe that would be a place people would go even though it is not a traditional emergency management channel by any stretch of the imagination.

With Twitter we saw the Centre of Disease Control as well as the WHO were able to predict were able to predict the outbreak of H1N1 quicker than people going out into the public to do surveys, because people were reporting their illnesses online, and that data you got instantaneously. So being able to predict outbreaks is actually scientifically quicker on Twitter than is actually going out into the communities to collect that data.

We also saw with the recent Ebola outbreak that on Reddit, someone who volunteered to be a part of vaccine trials posted a stream on it and was trying to encourage other people to do it and was answering people's questions, people weren't going to our government agencies to get those questions answered, they were going to this random dude who participated in the trial, thankfully he was in university studying biology and knew a little something about what he was talking about. But he was answering people questions about whether they should volunteer for the trial or not, and it turned out actually quite good.

Are these channels that your public or your community members are using, or are you using these, or not?

So here is my favourite map, you're not going to be able to see it well, this is a consulting agency in the US they just do this for the greater good, every year they provide this map, it's live linked, so if you download it you can link on it and it'll show you all these different social media sites. And they link it by things such as social networking, professional, international sites, so if you're doing a disaster response in multiple countries, by the location. But it's kind of fun, every year new things pop up and go off this, but it is kind of fun to play around if you want to think about different social media channels that you may want to consider using, and they update it in about January every single year to kind of give the new international map on where we are with social media.

Even gaming sites and things like that, and we've seen at least in the health agencies in the States are using gaming to get people thinking about preparedness. So we have our zombie apocalypse app, you can think about how you would evacuate if you want to, FEMA has one as well, so even

things like that that you don't think traditionally about maybe how you could get people involved in preparedness, so it's kind of a fun thing to do over lunch to see what else is going out there in terms of the social media landscape.

So, I want to now talk a little bit about the research we've done of social media. So, the Department of Homeland Security funded my team in 2013 to do the first study on how people use social media in the context of a terrorist event and a fire event. And they were particularly interested in were people using DHS social media versus other channels.

So where did the public want to go to for information about terrorist events or fire, who do they trust, and what do they do when they receive that information. So, we did fire and a hypothetical terrorist attack on a college student sample and then a terrorist attack on a national sample, so I'm only going to present the national sample, but the findings were almost identical with the student sample even though we thought there would be quite big differences between terrorism and natural disasters. Conveniently, we actually started our data collection a month before the Boston Marathon bombings and we were testing a hypothetical bombing, so we were also able to test whether people were exposed in the marathon, if they directly experienced it or were active media consumers and how that affected their response to our experiment, so we had kind of an actual experiment going, and in our lab experiment.

So here is the infographic my team, not me, put together, what it basically shows is that it doesn't matter where people get the information from. We tested national government and we tested local government. So, San Francisco Office of Emergency Management, where the hypothetical bombing was occurring, or DHS, we tested national media versus local media. Did it matter where people got their first warning from? No. So we conclude from that it is the message matters more than the source. People want information and they're less concerned about who is sending it because they are experiencing a terrorist attack, right, and so they want to do something, they want to, in this case, it was evacuate as their recommended action.

We also wanted to look to see what people do when they receive the information, and they obviously seek more information, so where do they go? Most people aren't just going to get the warning and say 'OK, get my go bag, I'm going'. They want to see how serious this is, does it really affect them, so where do they go for that information? They went to friends and families, so the information they sought first was 'hey, did you get this? Do you think it's serious? Should I do this?' So not unfortunately going to DHS's website or an official source, or even the media, but talking with friends and families and we've seen this consistently since the sixties, so pre social media we saw this as well, but we were a little surprised to see it with social media given you've got a lot more access to online information.

We did see difference by gender and age as you would expect. Females were more likely to follow what the government told them to do, and males were not. Males are more likely to watch online videos though, so that's super helpful when you're supposed to be doing something like, you know, evacuate. So definitely a gap in preparedness and response education, especially for males that are not around females to push them out.

We also saw the same thing for older adults, as you would expect, people that have experienced more disasters maybe trust the government more, so older adults are more likely to follow the recommended actions than younger adults. And so what this tells us is that it is more important to get the message out correctly, than necessarily who it comes from, and we want to do what we can to mitigate that information seeking, we don't want them talking to friends and family about what to do, we want to provide information that can potentially motivate them to take action on their own.

Others have done similar research showing how agencies push out similar information at the same time, it's not the exact same message, but more than one government agency pushes out complementary information, people are more likely to take action, and so there are ways that maybe decrease the friends and family phenomena, but we know it is still probably going to happen.

So here is another example of a crisis that happened in the States, this is an example of humour and levity I talked about before, but also maybe how you can take advantage of a rumour situation, so it's called Tigernado we'll watch a little video about it first:

VIDEO: *...I'll tell you what way to get to your destination as the roadways will be flooded and closed, in some cases blocked by debris, some places blocked by high water that is running, other cases blocked by officials who are out here trying to manage this flood emergency that is going on in South Oklahoma City, Moore and Norman. Kevin and Linda, that is what we have right now, I don't think there is any imminent problem with the tornado, the flash flooding certainly is the main threat right now.*

Alright, we'll follow up on several stories we told you about earlier we do know that Brady Country Authorities are around that area. At the tiger safari it had a hit by the tornado, tigers and other wild animals are on the loose, they ask that you stay in your home, don't attempt to contact it, call 911 so they can get authorities and wildlife experts into the area to get those tigers and wild animals back into their cages.

Absolutely, that is just amazing that also happened this evening and we're hearing now that a state trooper was en-route to assist the Norman Police Department with a water rescue, Norman PD requested a boat with a motor to assist with several vehicles and their drivers stalled in water on Indian Hills and Eastern, in their city in Norman, they need boats to get cars out of the water...

[BROOKE FISHER LIU] OK, so tigers are on the loose. The thing is though they weren't. There was an anonymous tip that just thought it would be funny to share that and the media just ran live with it. So that is the primary broadcast channel for Oklahoma City. So, we have a couple of questions for you. If you were an emergency manager, how would you respond? So, we did some research around the hashtag Tigernado, the community created a hashtag Tigernado because they're sheltering in place and they've got nothing to do, right, so they've got some time on their hands. And so we were curious to see how do official agencies respond, do they ignore it, did they try to tie into it, did they try to get rid of it, were they wary of it. And most people were wary about getting into this type of humour, you can see the various agencies, we have fire and rescue, weather service, national and local, we have FEMA and we only have the Oklahoma Department of Transportation that didn't totally disengage.

The only one that actually engaged was the Sheriff's Department, and so they put some tweets out and basically were like 'everyone is safe, Tigernado, there is no tiger, Tigernado.' So, they engaged a little bit, meanwhile the public is quite happy about this. So, you can still go to Oklahoma City today, two years later and buy a shirt like this, you can buy a mug, you can buy a shot glass, you can buy lots of Tigernado paraphernalia. This is a one-year anniversary photo, someone with their Tigernado shirt on, and their American football helmet, 'I survived Tigernado, remembering my friends.' So, the public actually still uses this hashtag when tornados happen, as a way to kind of bond as a community.

So, we were curious, what do you guys think about this, if this is something that is ongoing in your community, would you then maybe try to tag in to it in tornado season, would you try to tie in some preparedness communications, what do you do with this sort of naturally occurring phenomenon?

Part 2: How communicators can build and measure trust

[AMISHA MEHTA] I can't remember how many articles we actually read between us, it was something like 200 to survey what was going on in trust but predominantly we found a lot of it was around trust in organisations or trust in the information source, and less about how to seed trust within messages, so this is what we're planning to take forward as a research project in the next few months. But it always talks to the importance of trust within agencies before, during and potentially after recovery is where it tends to get questioned. But the really fabulous thing about trust is that when you ask our publics whether they trust organisations or government we tend to get low reads. So, this is data from 2015, here in Australia we have a 35 per cent trust rate in the government, and we've stayed fairly consistent from 2006 around that. In the US, this is data from 2015, I'm not sure what it would be now.

It is interesting, whenever these trust surveys are done, and they ask you know, do you trust journalists? No. Do you trust doctors? No. But do you trust your doctor implicitly, do you trust your lawyer? Definitely. So, when we personalise, there's a much higher trust rating than when we institutionalise. So, it's always a fascinating part when you think about trust. I think as Mark mentioned, AIDR run a number of different kinds of events and last week Craig Fugate, the former administrator from FEMA was out sharing some insight, and as luck would have it he also wrote a blog talking about the importance of trust, which was a critical piece around public trust and crisis response strategies. So, you have the full blurb here, but I guess a lot of this talks about work that can be done within preparedness, work that can be done within an event and then also the importance of communicating transparently within an event.

One of the interesting points that Brooke I think made when we were talking about tornados, or more terrorism events, when the information comes, we expect people to just act, and trust is given quite swiftly by communities within events because they have no choice, and so they have to trust that information and respond to that information. But the questioning of trust will happen on the back end of an event when people have more time to say 'well why didn't you tell me that earlier, and then I could have done X, Y and Z'. So, we start to see the questioning of trust happen within the recovery space.

We wanted to take things a little bit away from the natural hazards space and show you a couple of examples perhaps where trust is shown differently, because trust is more easily ascribed by people to other people, it's I guess important to think about the role leaders play in this space, so I wanted to show this video of Malcolm Turnbull responding following the Sydney terror raids a couple of weeks ago. So, as you are listening to this, can you keep in mind some of the elements that might show trust, or encourage people to trust the government or the emergency response space here.

VIDEO: *...We have the finest security, police, intelligence service officers in the world, working 24/7 to keep you safe. The major counter terrorism operation which has occurred overnight and is continuing, and operations are continuing, is an example of the way in which terrorist plots are uncovered and disrupted due to the extraordinary intelligence services we have and the fine cooperation they have with our police and security agencies. Every day, we are working tirelessly to keep you safe and last night's disruption operations is a very good example of*

the way in which our agencies are delivering our commitment to keep Australians safe from terror....

[AMISHA MEHTA] So I guess just setting up some broad ways of how we might look at trust more generally, now flipping back to the emergency management context, this is from some focus group research we conducted and a comment from a focus group participant around what they do and what they look for in information. Often when we run our focus groups we'll give participants different kinds of informational messages to evaluate and critique and see what they look for in one message from one agency versus another message from another agency. And as Brooke has mentioned there has been research done that converging messages is useful but sometimes there are some people that are sceptical and when they see too much of the same thing they're like 'what am I missing here? What aren't you tell me that I should know about?' and I am questioning to drive different types of decisions, so I might take this deep dive into information searching that might not be necessarily useful here.

But different information sources play an important role around verifying work and trust and that verification role us trust in social media is really critical. Some of the literature that Brooke and I looked at over the last year talks about how trust is really important and is achieved when you have transparent communication, so you're talking not just, agencies aren't just saying this is what we want you to do, but here is how we arrived at that decision, so this is the transparent process we used and reflecting on that rationale is a really important driver.

Congruency, we mentioned that already. Willingness to share personal information can increase trust when you're in group level kind of communication, you know, when you share a little bit about yourself people are going to feel more open. That trust within the disaster space can influence the positive behaviour, the behaviours that we are looking for, that it can also influence blame and performance evaluation following an event so, you know, I think a few people have said to me, who were more in the responder space, that three to four days after an event has occurred is that space where the community start to attack what has happened, so that notion of blame and being evaluated by lay publics is a critical space to navigate.

And this is the final one of trust can reduce perceptions around risk and reduce preparedness. It is some work out of Europe where there are mitigative actions that communities or councils or organisations have taken to reduce the impact of flood and so because there is so much trust in the infrastructure that it can have a negative effect of 'Oh, a flood is not going to affect me because we've got these great levies, or this great infrastructure around us, and they're not going to be affected and so I don't need to feel vulnerable and therefore I won't necessarily take the preparedness actions'. So, when there is that mitigative response that comes through, understanding how that might change trust can be important things to think about.

Some other research that we conducted in partnership with Seqwater, we explored trust in information sources from a range of different organisations, so we looked at Seqwater, local councils, the Bureau, media, QFES, Queensland Police, Main Roads and an insurance provider. And we asked survey participants to talk about their trust in information sources and it is fairly high, even for insurance providers. But when we did some further analysis of this you can obviously see that QFES and QPS have really high ratings, but we looked at the relationships across each of these, and between each of these organisations and it showed very strongly that Seqwater and local council were highly correlated, so whenever people trusted Seqwater they also had high trust in local councils and vice versa.

And so, it is important to think about trust not necessarily, which you do automatically when I ask you that question how do you seed trust before an event, thinking about trust collaboratively is also a really critical piece for communicating within events and I think that can also play a role following events as well. So again, back into a little bit of theory land, when we were looking through a lot of the papers on trust we saw a predominance of work that explored trust in the information and in the information source that was there, so this was evaluated around provision of best information, support decision making, the provision of truthful information about an event, so those two elements are what drives peoples' trust in the information.

But when we look at trustworthiness of organisations, these are the three kinds of elements that are critical. So, the organisation and its employees' ability to respond or deal with this, the organisation and its employees' integrity, the values that drive the response, and then benevolence, does the organisation and its employees care for me, do they care about the outcomes that are important to me. So, I guess thinking about those three elements as the pillars for communicating are probably useful ones and you can see from the Prime Minister's video that he did talk about ability quite strongly there, maybe touched on integrity and perhaps assumed benevolence or care, but it was very strongly emphasising ability.

So what we'd like you to do now is, knowing that trust is quite often questioned after an event, is to think about a time when stakeholders lost or questioned trust in your organisation, don't go deep into therapy land here, but how did you respond, what could you have said or done to prevent this from occurring and what if anything could other organisations have done, reflecting on that collaboration around trust. So, we'll spend a few minutes if you want to have a chat about this with other people and with those of you who are in the same organisation and we'll come together and share some of those insights.

Part 3: Setting risk and warning objectives

[BROOKE FISHER LIU] So we're now going to be moving into our third section which is how to set risk and warning message objectives, we'll talk about different types of objectives you might have, they are not, of course, mutually exclusive, you can have more than one objective within a message. We'll walk through a couple more case studies to see how the objectives were set well, or maybe not so well, and then Amisha will kick us off with the last section for today which will be actually developing messaging at your own tables because we are going to be having you start developing some messages and discussing them, that's why we moved you to the table format.

So, when we look at the different we could have with our pre-event communication, our warning communication or even our recovery communication, research shows that these are the ones that are typically the most effective and the ones that organisations typically use as well, but some of them are used more than others. So, inform and educate, that would be more of your preparedness messaging, trying to tell people what they should do, although it could be in your response as well when you want to explain to them what they are doing and why.

Amisha has shown me some of your warning messages and they are much more comprehensive than what we have in the US, so we tend to give them really kind of pithy 'shelter in place now' and you all have a lot more detail so that is fantastic as I think you have the capacity to do more education during an event than we have currently in the States. We also want to think about empathy and recognising and supporting people's feelings.

So, we know from the research that emotions drive people's actions and in fact people don't tend to think rationally when they receive a scary message or something that's concerning, they think emotionally, and so sometimes it can be beneficial and sometimes it can be negative. So, we find for example anxiety and fear drive people to take protective action, however anger does not, and so thinking about how your public is responding emotionally and trying to lower the emotions by saying, you know, we understand you're afraid, but if you take these steps you will be able to protect you and your family. So actively bringing emotions into what you are saying, or just visually, so many of you said with the Prime Minister, he seemed kind of official and not really kind of relating to people, so even just showing empathy without saying it can be a way of getting people to trust your messaging and feel like you are saying something that actually matters to them.

You also want to encourage productive, pro-social behaviours, that's the donations, we call the teddy bear phenomenon in the US, everyone and their mother gets a teddy bear after an incident that affects children, but we indeed don't need millions of teddy bears, we actually might need blood, or you might need food, there are other things we need. So how can we channel people to do productive, pro-social behaviour versus the stuff that actually prevents you all from doing your job and how can we do that in our messaging. And then when people have to do something immediately, how can we call for immediate protective action? Evacuate now, shelter now, get vaccinated now for a pandemic.

So now we want you to think about a particular emergency or disaster that affects multiple organisations, so as we kind of already talked about trust varies via multiple organisations, most of these events you're not responding on your own, so therefore you can't just design your own ideal risk communication strategy. So, pick a message objective or objectives depending upon what the event is, think about how you're going to integrate that into the warning communication for the event, and then think about what different risk message objectives, if any, could be integrated into the future.

So, you have the event, you think about your objectives for that event with multiple organisations, after the event how might you change your objectives, kind of what we were talking about right there. Am I making any sense I'm seeing some kind of confused blank faces, okay. So maybe take about 10 minutes for this and we'll see what you guys come up with. And we're going to use this later for our message mapping activity, you're actually going to develop messages later on, so you're looking at objectives now, we'll do messages later.

So, going into theory land, a new phrase I just learned from Amisha, this is one of the first, if not the first models of risk communication, but it is still widely used today. It is linear in that you'll see kind of a fault with almost all of our theories because it is hard to draw them, they're not in straight lines, but this model is from Mileti and it is looking at the kind of process people go through before they decide whether to respond or not. So, you set your objectives and you want them to do something, what are the people doing with that message objective. So first of all they have to hear it, this is coming more from the warning siren culture in the US, so a lot of our communities, flood communities, tornado communities there is a siren that goes off, and it is every Wednesday at 10am we have one where I live and they are just practicing it so you can make sure you can hear it, literally, and so you know when that goes off, there is probably a tornado or a flooding event or whatever your local community events are, so that is where it is coming from, that people have to be able to hear it but you can think about it in other ways too they have to receive the message, they have to be able to read it, they have to understand it, so how do they first get the message? How does it reach them?

Then, they got the message, fantastic. Is it a bunch of scientific jargon that no one understands what is going on? Is it too short, or is it too long so they don't know what to focus on? Is it in a language that is persuasive for people with lots of experience with your hazard, but not for people who don't? So, what is the content information and are all your stakeholders able to understand it.

Then, believe it or not, if they understand it, doesn't mean they believe it, so you need to persuade them that actually this is serious and they should do something about it, and what the research shows is the personalisation, so the more you can make it sound like 'this is a threat for you' as opposed to 'this is a generic threat for Queensland' and so some of the research in the US showed sometimes you can personalise it talking about neighbourhoods or streets that are even flooded, or where the fire is coming or using local landmarks to let people know, you know, this is for you because you recognise those streets and those landmarks and, guess what, the bushfire just took them out so it is coming close to you. Other ways to personalise it is saying 'you', research has shown, actually has an effect versus, you know, 'people should'.

So in the US were trying to do this technological solution, the jury is still out on whether it is working or not, but all the while there are some emergency alerts which we launched in 2012, we are trying to enhance the polygons, so it is a national warnings system, you can opt out but you are already opted in, you have no choice whether you are in it, and so we are constantly refining the polygons and the idea is that if you receive a warning, therefore it is personalised, research unfortunately is not showing that is the case. So even if it is really refined polygoning, you are in fact reaching the people that are at risk, that doesn't seem to be enough.

So, the message itself and the sources themselves have to do that personalisation for you, it can't just be because you're sending it to the right people, that would be a nice easy solution, unfortunately it's a little more complex than that. So once people hear or receive it, they understand it, they believe it, it's personalised, then they respond. And so, we need to back up our messaging strategy and think about are we doing all of those other things before we send out the message, could we be doing it in better ways to get people to respond quicker or to respond at all.

Other things we want to think about is our instructing information, so are we giving them protective actions that they can take, so maybe financially they have the capability to do it, physically they have the capability to do it, and does it make sense to them. So we think about messages that enhance self-efficacy that make it sound like something that you can do, when we provide resources so people can do it, so for example we have a lot of kits the Red Cross passes out during hazard season among low income communities, so they'll actually go door-to-door and they actually do it after house fires which I think is really quite brilliant, so there is a small house fire in a neighbourhood they'll go door to door and say, 'well did you know that there are other hazards that could happen to you, and here's a pamphlet about what hazards are in our areas and here is your kit to get yourself prepared'. And so really kind of tagging along when is an optimal time people might take your preparedness message and how can you emphasize with them in a way that they think is important to take this action.

Challenges, you all already know these probably, people might get your message and understand it and believe it, but do it too slowly and so they're stuck on the evacuation route, or there is no one else to help them evacuate, so, not only getting them to believe it but getting it in a timely manner, locating the message in time if lots of different messages are going out, are they getting the right one, have they lost the sequencing of the messages? And we certainly want to maintain compliance so how can our messaging encourage people not to forget about this, but always remember where that bridge is. So how can we institutionalise hazards than happen how can our messaging say remember next time this happens this is your route as well, so how we can integrate kind of the



long term behaviours into our short-term messaging?

How many of you have watch Theresa May's press conference statement after the Manchester Arena bombings? I'm trying to get a sense of whether you're all going to be bored out of your minds seeing it again or if I should play the whole thing. Ok I saw one nod. Ok so this was when we had the series of attacks in summer in the UK, this is the one that was targeting the Ariana Grande concert where many of children, or dozens of children were killed. This is the statement she gave after that, I want you to listen and pay attention to the risk communication objectives and that model of receiving understanding believing and then action, and see if you were one of her citizens, how you would take this message.

VIDEO: *...I have just chaired a meeting of the government's emergency committee, Cobra, where we discussed the details of, and the response to, the appalling events in Manchester last night. Our thoughts and prayers are with the victims and the family and friends of all those affected. It is now beyond doubt that the people of Manchester and of this country have fallen victim to a callous terrorist attack, an attack that targeted some of the youngest people in our society with cold calculation. This was among the worst terrorist incidents we have ever experienced in the United Kingdom and although it is not the first time Manchester has suffered in this way, it is the worst attack the city has experienced and the worst ever to hit the north of England.*

The police and security services are working at speed to establish the complete picture, but I want to tell you what I can at this stage. At 10:33 last night, the police were called to an explosion at Manchester Arena in Manchester City Centre near Victoria Train Station. We now know that a single terrorist detonated his improvised explosive device near one of the exits of the venue, deliberately choosing the time and place to cause maximum carnage and to kill and injure indiscriminately.

The explosion coincided with the conclusion of a pop concert, which was attended by many young families and groups of children. All acts of terrorism are cowardly attacks on innocent people. That this attack stands out for its appalling, sickening cowardice, deliberately targeting innocent, defenceless children and young people, who should have been enjoying one of the most memorable nights of their lives.

As things stand, I can tell you that, in addition to the attacker, 22 people have died, and 59 people have been injured. Those who are injured are being treated in eight different hospitals across greater Manchester, many are being treated for life threatening conditions, and we know that among those killed and injured were many children and young people. We struggle to comprehend the warped and twisted mind that sees a room packed with children not as a scene to cherish, but as an opportunity for carnage. But we can continue to resolve to thwart such attacks in the future, to take on and defeat the ideology that often fuels this violence and if there turn out to be others responsible for this attack, to seek them out and bring them to justice.

The police and security services believe that the attack was carried out by one man, but they now need to know if he was working alone or as part of a wider group. It will take some time to establish these facts and the investigation will continue. The police and security services will be given all of the resources they need to complete that task. The police and security services believe they know the identity of the perpetrator, but at this stage of their investigations we cannot confirm his name. The police and emergency services have, as always, acted with great courage, and on behalf of the country, I want to express our



gratitude to them. They acted in accordance with the plans they have in place and the exercised they conduct to test those plans and they performed with the upmost professionalism. 400 police officers were involved in the operation through the night and many paramedics, doctors and nurses have worked valiantly amid traumatic and terrible scenes, to save lives and care for the wounded.

Significant resources have been deployed to the police investigation and there continue to be visible patrols around Manchester, which include the deployment of armed officers. For people who live and work in Manchester, there remains a large cordon in place around Manchester Arena and Victoria Station which will be in place for some time. The station is closed and will remain closed while a detailed forensic search is underway. We know that many friends and relatives of people caught up in the attack are still trying to find out what has happened to their children, brothers and sisters, parents and loved ones. So please, think of those people who are experiencing unimaginable worry and if you have any information at all relating to the attack, please contact Greater Manchester Police. The threat level remains at severe, that means that a terrorist attack remains highly likely, but the independent joint terrorism analysis centre, which sets the threat level with the information available to them, will continue to assess this throughout today and in the days ahead.

Later today I will travel to Manchester to meet the Chief Constable of Greater Manchester Police, Ian Hopkins, the mayor of Greater Manchester Andy Burnham and members of the emergency services that have come to Manchester's aid in its moment of need. And as I mentioned last night, the general election campaign has been suspended, I will chair another meeting of Cobra later today. At terrible moments like these, it is customary for leaders, politicians and others to condemn the perpetrators and declare that the terrorists will not win. But the fact that we have been here before and the fact that we need to say this again does not make it any less true. For as so often while we experience the worst of humanity in Manchester last night, we also saw the best. The cowardice of the attacker met the bravery of the emergency services and the people of Manchester.

The attempt to divide us met countless acts of kindness that brought people closer together, and in the days ahead those are the things we remember. The images we hold in our minds should not be those of senseless slaughter but of the ordinary men and women who put concerns about their own safety to one side and rushed to help, of the men and women of the emergency services who worked tirelessly to bring comfort, to help and to save lives, of the messages of solidarity and hope, of all those that opened their homes to the victims. For they are the images that embody the spirit of Manchester and the spirit of Britain, a spirit that through years of conflict and terrorism has never been broken and will never be broken.

There will be difficult days ahead we offer our thoughts and prayers to the family and friends of those affected, we offer our full support to the authorities, the emergency and security services, as they go about their work and we all, every single one of us, stand with the people of Manchester at this terrible time and today let us remember those who died and let us celebrate those who helped, safe in the knowledge that the terrorists will never win and our country, our values and our way of life will always prevail...

Part 4: Developing and adapting messages for the public

[AMISHA MEHTA] Ok, so as Brooke mentioned we brought you into the tables so we can start working on writing up some messages but to guide that we just quickly need to touch base with the

important role of the audience in driving message, Brooke's work around social media and the different roles people play on social media started that conversation but I guess some of the key things here, it's really easy when you're thinking about audiences to have this massive list, but half of the challenge is we do tend to put out one message, one primary message and hope, I use the term 'the spray and pray' approach, you know, we're just going to spray and we hope everybody gets it in the way that we want them to get it, and although there is opportunity to tailor that message in certain ways through different channels, it is useful to think about what you can do with the audience around this and I guess some of the things we want to talk about is the sensitivity of the issue, in part we were thinking about kids, communicating within that kind of context is really key.

Talking about a geographic region where there is a high turnover so there is a change, it's a tourist area or it is quite a mobile work place or workforce that is focusing in that area, so you're needing to be cognisant of those sorts of things because those community members don't have the residual knowledge that we might need to keep in mind, thinking about migrants is a newly created area for migrants or an encouraged area and how will those kind of culturally and linguistically diverse communities need be considered here. Is this a region where people with a higher socio-economic status are in play, so there tends to be good understanding of scientific knowledge so the information need or want from them is different to other areas, so the details are important to those kinds of audiences.

And exposure to media coverage, I guess being an educator I see this all the time, assuming that our young adults understand what I'm talking about, I might talk about different companies or events and they're kind of like, 'what?'. So is it a community that has that constant access to media and understands and digests that kind of information, or do we need to think about what channels are more beneficial to particular areas.

So, this is some research similar to the information sources I showed you where we asked community members to identify or self-report their current knowledge, the information need, their confidence to adequately deal with flooding, the worry they associate with flooding, likelihood of risk and seriousness of risk, so these two maps together to perform a risk perception assessment. We asked the community members to rate all of this and it is really interesting you have the results also for bushfire as well, that while there is a high current knowledge, there is also a high information need, so the questions are what kind of, how much, how would you rate your need for information to make decisions about responding to a flood etc. This was a national sample.

So, one of the things we know from research is that community understanding of a hazard, hazard knowledge, knowledge about its characteristics, is a really important driver to decisions and protective action. So that current knowledge is rated quite high is good, but that information need rated as quite high means they need to fill that gap when they are responding and in part we need to fill that gap and I guess we wanted to ask you what kind of information do you find that the community needs, maybe when you're looking back through social media or evaluating events that have occurred what are the information needs that the community has identified to you?

So these are some kind of inputs that you could think about as you're framing messages, that there is a need to re-balance some of the knowledge and information need, confidence to adequately deal with events is quite high, but for some members of the community it is not there, so how do you offset or balance that, and worry has a bit of a mixed pattern here, for bushfires I guess the risk perception side of this was higher, largely because we went to rural areas with our national sample, so we did get those that are more bushfire prone.

So, thinking about hazard knowledge as a seeder for elements in message design, we wanted to share with you some of the key elements of messages, so these are kinds of ways of crafting a message that might help to address some of the issues that exist within the community as well as be more effective. So direct statements we saw a lot of in the Theresa May response and we use a lot of it already in messaging, this is a direct instruction, a direct piece of information about what we want you to do, quite fact-based information.

Elucidating explanations are where you have a term where you might need to provide a bit more clarity, one that always applied to me is 'catchments', maybe I'm biased, I've been primed having done some research with Seqwater, you know, the community has really different understanding of what catchments mean, they don't know it, it's not an easy part of our dialogue, but they do make good attempts at guessing what it is, but to provide more elucidating statements you would say 'this is what a catchment is, this is not what a catchment is', so you provide both sides of the coin there.

Quasi-scientific is when you are dealing with that data and I think Peter you made the point of at the Bureau you love to be able to say 'hey I'm looking at science and here is the data that drives the decisions that I make', so sometimes the challenge comes in translating what that science is, and so one of the ways to do that is through visuals, or breaking down the life cycle of a cyclone, or here is what a heatwave looks like etc.

So how can we use pictures or metaphors to better capture that, the process, and transformative text of explanations occurs when we see lay people making assumptions or having incorrect rumours or facts about what something is and what something is not, and so we tend to want to use transformative text to say, acknowledge that there is misinformation out there, and then provide further information to counter that, so we've seen it with the myth busting campaigns that ran through around the floods, so you want to show an alternative, correct pathway to counterbalance some of the factors there. So controlled burning is one of the issues that sometimes the community thinks 'well why are you doing controlled burning, you're still putting a fire near me?' But the rationale for that is X, Y and Z.

This is a campaign that Brooke shared around Ebola in the US, and we were talking to see if we could find an Australian equivalent, but I don't think we had one, it wasn't as big a threat here, so we didn't really have cases, not that I could recall of the top of my head anyway. But an example of a direct statement, we are giving you some facts about Ebola. And then an elucidating statement, so if there is an assumption, this message says you can't get Ebola through air, if there is an assumption about how Ebola is transmitted, just correcting that. And then transformative text, you can't get Ebola through food grown or legally purchased in the US.

[INAUDIBLE AUDIENCE QUESTION]

[AMISHA MEHTA] Definitely, I mean if you are going to distrust the government then you can't really help people like that in my opinion. Personal opinion.

I think this is challenge we all aim for 100 per cent compliance but it is never going to happen, people are people, but this is a way I guess of fact checking and myth busting if there are some positions out there about how transmittable Ebola could be. So, I'm going to throw to Brooke now, but I guess as we work to the exercise just keep in mind some of those different message statement options you would have.

[BROOKE FISHER LIU] So in the States right now and what I've heard from some of you, we're really interested in the quasi-scientific messages, how do we communicate risk visually with the rise of social media as well as infographics, maybe that is a way to be more persuasive.

So we did a study for the Department of Homeland Security that took the standard emergency alerts, WEAs, those are the ones everyone gets on their phone unless you opt out, but you have to do that in a very complex way, and we tested the standard message to be something like tornado warning in this area until 6:30pm, take shelter, check local media and NWS, or our bureau, National Weather Service. So, we took the standard message that actually goes out and then we added a map to it and see if people could see where they are on the map in comparison to the risk, whether that would help people understand the science more.

Would that type of quasi-scientific message work out better? Slightly, but not as much as we had hoped. And so, we found that actually compliance to the message was not driven by the visual, but whether people felt fear, so whether those emotions were primed, so whether they were scared essentially it is going to be something bad, that primed it more than the actual message or the visual. Whether they had any clarity in understanding, so people's maps literacy appears to be quite low in the US, so are they able to process the visual message, and if they are, there is a better understanding of the risk, as you would expect.

However, across the total sample of adults in the US, there was actually a small negative effect on the maps, so it lowered people's intentions to whether it was shelter in place, we looked at, you see the hazards up there, active shooter, tsunami, radiological detonation, and some were shelter in place, some were evacuate, but actually seeing the map was too confusing essentially and people were not able to process it.

And so the US Government is still playing around with this, they just changed the WEAs so they actually are going to be map enabled moving forward, so they didn't want to stop with the study and move forward, but we're still trying to figure this out, and so we don't really have a lot of science to know when to use a visual, when not to, how to make the visual more appealing so it actually works, so that is something that's a gap. What have you guys just found from your practical experience? When you are trying to quasi-scientific messages, so putting science into visuals, essentially, what have you seen that works versus doesn't work like our maps experiment.

So changing gears slightly but kind of going back to what Amisha was talking about in terms of knowing your audience, so at least in the US we take a 'one size fits all' approach to our messages which I think is obviously highly problematic because there are very different audiences and so this is a study we just completed this summer, funding by the National Oceanic and Atmospheric Administration and they are in year three of funding at least five or six years of research on tornado communication in the south-east of the US, so with 'Tigernado' I told you that was the mid-west, tornado alley, south east is not typically where you get a lot of tornadoes.

However, we had the huge storm in Tuscaloosa, Alabama where it pretty much wiped out that university town, and from that there was kind of a need to think about these high-risk communities. So when you look at the data only 25 per cent of the tornadoes, on average, to hit the US hit this part of the country, however, we have the most fatalities in the south east, for a variety of factors, some of them are they have a lot more killer tornadoes there, so higher impact tornadoes, they also happen at night, and so people are sleeping, they might not get your message, or don't want to get out of bed and get dressed and do something about it, and they are harder to predict, it's harder to warn when you can't see it and it is going through forests, so south east has a lot of forests, mid-west is open plains, so there are prediction challenges here.

But there are also some challenges for the community that they are not as well informed about tornado communication and there are very low socio-economic status communities in these areas, we call them mobile home communities, I think you would call them caravan communities here, but there is a very large penetration of mobile home communities in this area as well. That is a problem because the only single official warning message is 'shelter in place' which is the exact opposite thing you should be doing if you live in a caravan community. To put the icing on the cake you are about 13 minutes from warning to tornado touchdown, so this is a really high challenge, so we did four surveys with about 4000 folks in the south east, so across the entire south east and we did focus groups in three cities with 77 people to figure out what information do they want, how can the government better warn and what about these difference among audiences, we focused on mobile home, caravan, communities, as well as the general population.

So here is an infographic that is hard for you to see on this screen but highlights some of the focus group findings and probably the most interesting one, surprising for us was the role of religion, now you're going to say to me, 'no duh, this is the bible belt', but going in, no one was thinking about faith-based communication and how that may be a way to motivate people into action taking, not from the government, obviously, given our separation of church and state, but thinking about these community partners, and who are the people that you may be wanting to see, and we did actually see in our survey that the primary action that people in caravan communities took was prayer, so they felt like they were going to die and couldn't do anything, so they were going to put it in god's hands. And so, thinking about your preparedness communication, getting those communities involved and maybe thinking about what neighbours, whose homes could they go to during the watch, because we do have that pre-warning communication, and not wait for the warning.

We saw a lot of people looking at environmental cues, that's the leaf in the corner, they wanted to see the twister, before they took action, or they wanted to see how their animals responded, so if the cows were lying down, or if your dog is lying down, there is some urban legend that it is really coming, and so doing some education about actually you should listed to the meteorologist instead of the cow, that might get you a little bit further in terms of information.

We saw the same thing with our terrorism study, people looked to family and friends before going to official warnings, but with huge exception of their broadcast meteorologist, there are just some beautiful quotes, they tell you no one can predict the weather than James Span, he's better than god. So, there are these beautiful quotes about these broadcast meteorologists they have a real bond with, and they think they are a lot more accurate than the National Weather Service and they trust them more, so that is a real path forward working with those meteorologists, as well as trying to increase some trust in the National Weather Service.

So, what we saw from our survey, kind of the key findings from that, I already told you that people aren't seeking shelter and not a single person in our 4000-person sample was seeking shelter outside of the home, so that is a huge problem. There are not community shelters, so they need to rely on churches or friends and other places. So, we can take the obvious conclusion there that preventive actions are not well communicated or not communicated at all in that case.

We also saw less information access from mobile home community members, so they were literally using less sources to find out about tornadoes. Very sadly, some of these mobile homes are built so that the NOAA weather radio doesn't work, so that is kind of you hear the sound, we have these radios where the siren goes off if there is an event and unfortunately with the metal in the homes that doesn't work for a lot of these communities, they might not have mobile phones, so they are

not getting the WEA, and it is the middle of the night, so they don't have the broadcast TV turned on, so that is a real challenge. Not a huge reliance on social media, again those local meteorologists are like god, we have this great picture from Facebook where local schools are building cakes to look like the local weather man, to have a cake for the community and have it look like the weather man, so a really huge trust there.

And then religiosity predicting people's protective actions, as well as some emotional coping, so anxiety and anger predicted but sadness and confusion did not. So, pretend like you are me, and what recommendations would you give then how can government people in this region of the country better communicate warnings, now we've already turned in our final report, but if you had this data, what would be your recommendations, how can they more effectively reach people in the south east?

So, the next step for my research team we've got almost final approval, we are going to be observing meteorologists at the national weather services, we are actually going to go live with them in their labs during tornado season and see how they make decisions, how they decide to warn what risk communication decisions choices they make, how they develop community partnerships and we're doing that over the course of two years, so we are going to flip it away from the public and go to the meteorologists and there has been no prior research on that in the US, so everybody studies broadcast meteorologists, but no one has actually studied the official meteorologists that develop the warnings that everyone else reports on, so we are really excited to see what we find from that and hopefully how we can influence the message from the onset as opposed to after it goes out.

So now I want to walk you very briefly through I think a really intuitive tool that a lot of US agencies use this as a way to guide their message development. How many of you guys have done message mapping before? Ok I'm getting two yeses, three, four, five yeses, ok. So, the idea here is you think about who your intended audience, or audiences are, internal audiences, external audiences, and then breaking it down even more to maybe those caravan communities versus others.

You think about what your intended media channel is, of course you are going to craft a message quite differently if it is a 90 character tweet, 280 character Facebook post or one of your beautiful multi-page official warnings, so thinking about the channel, and you might have different messages for different channels, we're thinking about complementing the information we send out, you might have a core message but they emphasise different things for different channels to get kind of that message redundancy and persuade people more to take action. When you're thinking about what your message is first you want to think about what problem you are trying to solve. So, what is your question, what is your concern, what is the topic you are trying to address in your message? And then you want to pick your spokesperson, is that Theresa May because she is powerful for terrorism, is it multi spokespeople, who is going to be the most effective spokesperson or message source if you are posting it online. Will this come from our official social media channel, with it come from people's personal social media channels, what is going to be the most effective source?

And we generally think of having three, thereabouts, key messages, there was a widely supported psychological study that just got debunked a couple of months ago, but there was this kind of assumption that people can't process more than three messages during stress, that has been debunked but you can still use that as a rule of thumb, don't give people ten messages.

So, think about it in a fairly concise, and consistency across messages, what is your key message, what are your facts to support that message, doesn't have to be three supporting facts but you've got the message, now give them the evidence to believe that message. And then you think about if



you have a second key message, what are the facts, if you have third or fourth key message, what are your facts? Then when you are delivering this message, if you are doing it orally like we saw with Theresa May, you want to express empathy or caring, state the key message, facts, key message, facts.

Now we did discuss how she kind of went all over the board and some of you thought that was great and some of you thought it wasn't so great, and we are going to see that with every message, right, not one is going to love a message, but one way to think about it is, you know, what is the key message, what is the supporting, and then going back and forth like that. Also, if you have supporting facts that support more than one key message you can bridge them together as well.

You want to repeat your key messages at the end, so people remember what you think is the most important thing at the end, especially for a really long press conference statement, people are probably not going to, you guys didn't YouTube that right, I think I saw one hand say 'oh yeah, I looked that up'. Unless you are maybe forced to listen to the whole thing, you might listen to the beginning or the end. So, you want to repeat those messages and indicate the next steps, both what are you doing as an agency, and what do you want people to do if you want them to do something.

So, you've got your map, and then you think about how you are going to express this, either in a press conference or you could do the same thing with social media. That was relatively quick, but did it make sense? Enough sense for you guys to do this? So, recall your event before, unless you want to change it, but for timing maybe keep your crazy cyber-attack or your floods and the heat that you guys picked. We are having you develop a Facebook post or an emergency alert, 160 characters ok, so we get 90 in the US, you guys get 160 for your emergency alerts so you should feel really blessed.

Facebook posts are typically about 280 characters is what research shows tend to be effective, but you don't want to sit there and count it, just think about that general length. So, we got you to talk about your message objectives before, now you are going to use the map, that is the problem you are solving, that is your objective, and develop a message for Facebook based upon your intended audience, and then do it for your emergency alert.