

Are we prepared for another 9-11?

July 19 2011, By Miles O'Brien and Marsha Walton



Regardless of origin--from hurricanes to earthquakes, blackouts to terrorist attacks--disasters can seem overwhelming. Yet their impact need not be crippling. NSF works with the Administration and other federal agencies in a coordinated effort to anticipate disasters and minimize their effects. Credit: Andrea Booher, FEMA Photo

At the site of a terrorist attack, an earthquake or a tsunami, emergency responders are focused on search and rescue, and saving lives.

Some disaster sites provide an opportunity for experts with different skills than the police, [firefighters](#) and aid organizations that are first on the scene.

With support from the National Science Foundation (NSF), [sociologist](#) Tricia Wachtendorf and teams from the Disaster Research Center (DRC) go to devastated locations to learn more about how lives may be saved in the future.

The DRC started in 1963 at the Ohio State University, and moved in the mid-1980s to the University of Delaware in Newark.

"We try to learn from disasters, not only to make a contribution to science, but also to try to take our findings and find out how we can apply that to better [emergency management](#) practice more generally," says Wachtendorf.

"We also have a very strong educational component," she adds. "We involve graduate and undergraduate students in all of our research."

Wachtendorf spent several weeks near [ground zero](#) after the 9/11 attacks in New York City. She spent time in command centers, watching how critical decisions unfolded.

Wachtendorf says DRC had a good working relationship with New York City emergency personnel before the terrorist attacks and this allowed the center important access even in the chaos.

"They lost friends, they lost family members, and they were very willing to have us shadow them, answer questions, and to actually say, 'Come here, you need to hear this, you need to learn from this,' and tell us what's going right and what's going wrong," says Wachtendorf.

Over the years, DRC research has recommended better ways to recover and handle human remains, streamline accounting of donations and supplies, and ways for small businesses to quickly reopen after a disaster. Through outreach to practitioners, many of their recommendations find their way into practice.

One specific study of the 9/11 response focused on the evacuation of half a million people from lower Manhattan the day of the attacks, including a spontaneous and successful effort by tug, ferry, dinner cruise

and sightseeing boats. DRC Director James Kendra had a major part in that research.

"The mariners have a very particular culture and having worked in that environment in different kinds of ships, I think it was very helpful for us in being able to speak their language," says Kendra, who, in addition to a doctorate in geography, also has an undergraduate degree in marine transportation and a Merchant Marine Master Mariner license.

It was a case of ordinary people springing into action, making good decisions in spite of the danger and uncertainty surrounding them.

"We talked to 100 people who were involved in the evacuation," says Kendra. "Many of them were mariners. They knew there was a terrible calamity at the World Trade Center, and they figured boats would be helpful in some way. That largely stems from what seafarers have to do ordinarily, which is to be creative, to be improvisational, to be ready for anything, even if you don't know what the danger is going to be. They always have to be alert for surprises. That experience and that training carried over into their ability to take part in this evacuation."

Along with a library containing 60,000 publications related to disasters, at DRC, there are also several display cases that contain items from both ancient and recent disasters. Wachtendorf showed some items from the 2008 China earthquake. These objects, she says, are powerful teaching tools.

"A little bit from a teacup and a mah-jongg piece are very indicative of the daily life of what was going on when the earthquake happened. People were engaged in cooking and playing games and sometimes, it's these very small items that we pick off the ground that helps resonate how much this impacted daily life," she explains.

"It's one thing to read a paper about the disruption of a disaster on daily life; it's another to actually take a piece of an item that was scattered on the ground and to bring that message home; to be able to touch it, to feel it and use that in our conversations about the impact of disaster events."

One recurrent observation from DRC field studies is the kindness of strangers.

Kendra documented that compassion when analyzing some responses to the 9/11 attacks.

"People will delay their own evacuation in an effort to help somebody else," says Kendra. "That was reported to us over and over. The crowds were orderly and basically respectful even though they were obviously very shaken up."

And Wachtendorf found a similar sense of community after the 2004 Asian tsunami, meeting with residents of devastated fishing villages in India and Sri Lanka.

"In one village, we found over 50 fishermen who needed to get back to sea. They only had seven boats they were able to get donated to them. They made an arrangement that those boats became the community boats, so they took turns sharing the catch. It was a way to make sure everybody was able to get back in the sea and begin working again," she says.

But Wachtendorf also found inequality in the distribution of resources following some disasters. Often, she says, it's simply the result of access.

"Sometimes we also end up seeing that there are particular areas that get a lot of media attention. They are sometimes the areas that are easy to get into. They might have areas for journalists. And we hear a lot about

those communities. Unfortunately, what sometimes happens is, aid flows to those communities and doesn't always reach neighboring communities that are equally impacted, but don't make it on TV," she explains.

Field study is important for graduate students at the DRC. Rochelle Brittingham is a doctoral student in the School of Public Policy and Administration at the University of Delaware. She has studied evacuation and sheltering projects in North Carolina. She's also doing field work in Japan, following the earthquake, tsunami and nuclear disaster there.

"After such a large-scale disaster in Japan, we want to see, what did the Japanese government do, were non-governmental organizations involved, basically how did it all work? We're going to go and see if there are any answers there," says Brittingham.

Lucia Velotti is also a doctoral student in the School of Public Policy and Administration. She says an understanding of local cultures is critical when spending time in a disaster zone. She did research in Haiti after the 2010 earthquake.

"Listening is very, very important and so is listening to different perspectives. You need to have the whole picture. You need to try to put all the pieces of the puzzle together. When I went to Haiti, we interviewed people from UN agencies. We also talked to non-governmental organizations and grassroots community leaders. We really wanted to understand different perspectives," says Velotti.

DRC's work involves input from many social and physical scientists. Civil engineer Rachel Davidson finds the collaboration critical.

"If you are looking from only one disciplinary domain, you can't see the big picture," says Davidson, who does modeling and analysis of building

codes and evacuation strategies.

Speaking of her social science colleagues, she says, "I've learned a lot from them. In a way they kind of keep us honest. Because (in) developing engineering models, sometimes we're tempted to make assumptions about how the world works. And they'll often tell us, 'No, that's not actually how people make decisions.' Or 'No, that's not how people actually behave'. And so, we want to try to work together to develop better models and better understanding to improve the decision making in the long run. And hopefully, they've learned something from us as well."

Wachtendorf says compared to 50 years ago, there's been a tremendous emphasis on emergency management planning in the United States. Both federal agencies like FEMA--the Federal Emergency Management Agency--and state and local emergency managers have invested in facilities and planning.

But she also notes disaster planning is constantly changing.

"As we have a combination of new threats that face us--natural and technological--as we have changes in climate, as we have changes in population density, in where people are living, people are put at risk and new issues are created. It's never a stagnant field. So something that we might know back in the 1960s, we need to learn again in the 1980s to see how much of that is still relevant, and what has changed. (It's) the same thing now as we look back at that historical research, how do we need to adapt our plans in terms of political context or economic context?" says Wachtendorf.

Provided by National Science Foundation

Citation: Are we prepared for another 9-11? (2011, July 19) retrieved 23 April 2024 from <https://phys.org/news/2011-07-.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.