



Best Practices in Coastal Storm Risk Communication

Cara L. Cuite, PhD
Associate Research Professor
Department of Human Ecology
Rutgers Cooperative Extension

Rachael Shwom, Ph.D.
Assistant Professor
Department of Human Ecology

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Additional team members

- Karen O'Neill, Department of Human Ecology
- William K. Hallman, Department of Human Ecology

- Steven Decker, Department of Environmental Sciences
- Chris Obropta, Extension Specialist in Water Resources, and Department of Environmental Sciences
- David Robinson, Department of Geology, NJ State Climatologist

Background

- Before, during, and after storms, local emergency managers (EMs) are often on the front lines of communicating with the public
 - Providing information
 - Encouraging protective behaviors
 - Assisting with recovery
- Not everyone heeds their advice
 - For example, during Sandy, 49% of NJ coastal residents who were under mandatory evacuation did not evacuate (Monmouth Polling Institute, 2013).

Goal of project

- Help coastal EMs better communicate with their local community by creating a “Best Practices in Coastal Storm Risk Communication” guide that is:
 - Based on empirical evidence
 - Focused on issues and questions about coastal storm risk communication important to EMs
 - In an easy-to-use, flexible format
 - Adaptable to multiple modes of communication

Overview of study

1. Qualitative interviews with coastal EMs in CT, NJ & NY
 - Spring 2014
 - Identify past challenges/successes, specific needs, format in which they would like to receive communication guidance
2. Quantitative Internet survey with coastal residents in CT, NJ & NY
 - Summer -Fall 2014
 - Testing effectiveness of coastal storm risk messages
3. Creation of best practices guide
 - Create initial version late Fall 2014
 - Usability testing, revisions and final version release Winter 2015

1. Qualitative Interviews of Local EMs

Objectives

- Gather information about content and delivery of messages before, during, and after Sandy
- Investigate EM perceptions of success and failures around risk messaging
- Understand how to make a “best practices in risk communication” guide useful to EMs through understanding:
 - What communications trainings they currently receive, from where and in what format?
 - What guidance would they like? Questions do they have?
- What beliefs about risk communication they have that we could test? Objectives
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 - Investigate EM perceptions of success and failures around risk messaging
 - Understand how to make a “best practices in risk communication” guide useful to EMs through understanding:
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1. Qualitative Interviews--Methods

- Semi-structured interviews
- Gathered input from research team on interview protocol.
- Piloted interview with three subjects and made changes.
- Conducting convenience sample of 3 local emergency managers from each state (NJ, NY, and CT). Also planning on adding one Public Information Officer from each state.

1. Qualitative Interviews--Completed to date

- 3 pilots: 1 with a medium city with river flooding in NJ, 1 small wealthy coastal town in NJ, 1 medium size city in CT
- 3 EM interviews in CT : 2 medium diverse coastal cities, 1 high income smaller town
- 3 EM interviews in NY: 2 small coastal towns on Long Island, one coastal town near NYC
- 1 EM interview in NJ: 1 small coastal town

1. Qualitative Interviews- Evacuation Messaging

Content

Evacuation messages

1. Most do not use mandatory evacuation – since there is no way to enforce
2. All communicate that if they choose not to evacuate there may be a point where they can not be rescued if it puts responders lives in danger
3. Some use “scare tactics” such as filling out “next of kin” paperwork and writing social security number on their arm in permanent ink

1. Qualitative Interviews - EM Messaging before during and after Sandy Delivery

Internet:

- Town websites in larger towns tend to be updated regularly and draw public traffic, smaller towns struggle more due to inactivity/infrastructure needs
- Many did NOT use facebook before Sandy but have since added it after
- Some have found Twitter to be less effective because tweets can contest weather information and be confusing

1. Qualitative Interviews- EM Perceptions of Success and Challenges

- Successes: Most felt storm Preparation and Evacuation Processes Went Well

Challenges:

- Delivering recovery and post-disaster information is challenging.
- Localized information competes with metro forecasts
- Transient populations are a challenge to reach – i.e. either tourists/vacationers/renters new to the area – or cities with constant turnover

1. Qualitative Interviews

What communications trainings they currently receive, from where and in what format?

- Many have traveled to Emergency Management Institute or done on-line trainings.
- All mention there being a “communication” component of their training. Few can state what principles they’ve been taught.

1. Qualitative Interviews: What questions do EM's have for us ?

- Where does my town go for information?
- Do fear appeals work or have a down-side?
- What does the public understand about storm surge and does it matter ?
- Will visuals of Sandy disasters/ devastation be effective in next warnings?

2. Quantitative survey--Methods

- Summer and Fall 2014
- Internet-based survey with GfK Custom Research
- 2000 coastal residents in CT, NJ & NY
- Sampling strategy
 - Using multiple sampling techniques
 - Approximately 860 from KnowledgePanel: Representative, randomly selected sample
 - Remaining (approximately 1,150) from opt-in panels
 - Selected based on zip code and other screeners

2. Quantitative survey--Methods

Message testing

- Between subjects experimental design
- Hypothetical coastal storm-related scenarios

Dependent variables:

- Perceptions of vulnerability
- Trust in communicators and government
- Behavioral intentions
 - Information seeking
 - Transmitting information to others
 - Taking recommended protective actions

2. Quantitative survey--Methods

What messages to test?

- Likely to include:
 - Personalized messages
 - Uncertainty formats (“1 in 8” vs “12%” vs “12 in 100”)
 - Guilt appeals
 - Storm surge information
 - Matching message with medium
 - Reverse 911, social media, traditional media, face-to-face

3. Best Practices Guide

Will provide empirically-based guidance for EMs

- Based on literature
- Based on interviews with EMs
- Based on quantitative survey

Likely formats include:

- Web-based
 - To be housed on NJ State Climatologist's website
- Apps for mobile devices
- Training modules

3. Best Practices Guide

Create a draft of best practices guide



Pilot/usability testing with EMs



Revisions as needed



Release to all EMs

3. Best Practices Guide

veracitymedia

For More Information:

Cara Cuite, Ph.D.
Associate Research Professor
Department of Human Ecology
Rutgers Cooperative Extension
Rutgers, The State University of New Jersey
New Brunswick, NJ 08901-8520
(848) 932-4544
cuite@aesop.rutgers.edu

Rachael Shwom, Ph.D.
Assistant Professor
Department of Human Ecology
Rutgers, The State University of New Jersey
New Brunswick, NJ 08901-8520
(848) 932-9235
shwomrac@rci.rutgers.edu