Communicating Risk/ Determining Risk: Developing Multi-Lateral Communication Mechanisms with At-Risk and High-Risk Populations

David Abramson
PEPH Webinar / NIEHS
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1. To reinforce the critical importance of effective risk communication
2. To explore the ways that different “market segments” (AKA at-risk and high-risk populations) hear and attend to different messages and media
3. To describe a community engagement approach to risk communication development – “Cells and Circles”
4. To review key findings about message and mechanism
1. Risk communication is a form of community engagement: “transmitters” and “receivers” are not fixed roles played by public officials and their respective constituents
   - Risk communication with high-risk and vulnerable populations requires back-and-forth (bilateral) channels, and may occasionally demand multiple (multilateral) pathways

2. Preparing and practicing risk communication with communities is the foundation of public health practice
   - Q: Is there a “spillover effect” from disaster preparedness that can carry over to other health domains?
• NYC Subways began shutting down at 7 pm

• Mandatory evacuation order for 375,000 NYC residents, including 26 public housing projects. Evacuation zone included 4 hospitals and 9 nursing homes

• Only second general population evacuation order in city history
Only 33% of residents living on the mandatory evacuation zone complied with the order.
Which led to improvised mid-storm and post-storm evacuations, and sheltering-in-place despite the absence of heat, hot water, and electricity.
• Headline: “Evacuations raise deportation fears”
  – “Seeing U.S. agents and being asked for ID at rescue centers spark concern among illegal immigrants, making them wary of seeking help.”
    » LA Times, Oct 28, 2007

• Discussions with San Diego public health officials
  – Described how the undocumented immigrants were “Elusive Communities” who did not heed evacuation orders, and did not respond to public health offers of help and health services
The problems – (a) different segments of the population perceive, process, and act upon disaster risk differently, (b) if these market segments do not hear or attend to warnings or messages they could be at increased risk

One potential solution – develop risk communication mechanisms and messages specific to different market segments that is embedded in a community engagement structure: the “Cells & Circles” pilot project
Cells and Circles Study Objectives

- To design, implement and test the feasibility and effectiveness of a mechanism for two-way communication between public health risk messengers and diverse, at-risk populations.

- Although NOT a study objective, the project permitted an exploration of specific risk message comprehension and suitability, particularly for at-risk groups.
Key Assumptions

1. Social networking matters – think Amway and multi-level marketing
2. People can respond to tangible disaster scenarios – such as community tabletops
3. Different types of scenarios can elicit different types of communication issues
4. The communication mechanism is critical
5. The communication message is critical
6. The mechanism has to be able to be activated with 24-hour notice (a CDC requirement for the pilot funding)
Circle 1: **Urban teens** (Harlem Children’s Zone / Children’s Health Project)
  - Four “cells” led by Explainers
Circle 2: **Rural homebound** (Putnam County health department)
  - Cells included Department of Aging groups, Heart Transplant support group, Alzheimer support group
Circle 3: **People living with HIV/AIDS** (Hudson Valley AIDS Network)
  - Cells organized by network sites
Circle 4: **Undocumented immigrants** (HITN broadcast network)
  - Cells in CBOs in multiple cities
• Focus Group 1: pandemic outbreak with message directing population to community-based PODs
  • Sub-themes: Stigma, Disclosure, Access
• Focus Group 2: toxic gas release with message directing population to evacuate and register with family reunification systems
  • Sub-themes: Disclosure, transportation and mobility, trust
• Focus Group 3: Ebola-like viral outbreak with message directing population to isolate and quarantine
  • Sub-themes: Risk uncertainty, trust, preparedness, informal supports
## Engagement Measures - 1

<table>
<thead>
<tr>
<th>By group</th>
<th>N</th>
<th>Comments per individual</th>
<th>Comment quality (1 – 5 scale)</th>
<th>Participation score (quantity x quality)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban teens</td>
<td>48</td>
<td>6.19</td>
<td>1.85</td>
<td>12.32</td>
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<tr>
<td>Homebound</td>
<td>72</td>
<td>7.47</td>
<td>2.48</td>
<td>18.07</td>
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<td>PLWHA</td>
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<td>7.49</td>
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<td>Immigrants</td>
<td>74</td>
<td>8.34</td>
<td>1.99</td>
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## Engagement Measures - 2

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<th>Comment quality (1 – 5 scale)</th>
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<tr>
<td>Novel virus</td>
<td>117</td>
<td>6.66</td>
<td>2.24</td>
<td>16.22</td>
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<td>Toxic plume</td>
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<td>10.69</td>
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<td>Ebola</td>
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<td>4.73</td>
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## Engagement Measures - 3

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<tr>
<td>In-person</td>
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<td>9.51</td>
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<td>18.93</td>
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<td>Conf. call</td>
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<td>1.25</td>
<td>5.70</td>
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</table>
• Broad conclusions:
• Initial investment ranging from 2.5 - 4 months to recruit the full circle
• Pre-established groups had a much easier time recruiting – these groups took less time and were more willing to participate
• Issues which may affect participant engagement:
  • Confidentiality
  • Trust in research, captain, institution
  • Time commitment
  • Obtaining parental consent
Groups with mobility (homebound) or transportation access issues are sensitive to messages that imply an allocation of a scarce resource – **Last in Line Syndrome**

Groups with stigma or disclosure issues are sensitive to messages that imply eligibility criteria or patient identification requirements

Households are as prepared or as resilient as their weakest / most vulnerable member

Teens can function as critical fulcrums for families (translation, access to new technologies and information sources)

With exception of teens, internet use and texting was very limited among these at-risk groups

Unanticipated peer influence led to enhanced preparedness – suggests a role for community-based tabletops as preparedness intervention
• Can these risk communication / community engagement mechanisms increase or enhance community preparedness and community resilience?

• Is there a community engagement “spillover effect” to other public health domains?
Thank you!

David Abramson, PhD MPH
Associate Professor, Global Institute of Public Health
Director, Program on Population Impacts, Recovery and Resiliency: PiR²
New York University
david.abramson@nyu.edu

Lauren Walsh, MPH – DHHS ASPR
Jonathan Sury, MPH – Columbia University

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