



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

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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







Yorba Linda, 2008

- **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

- 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

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)

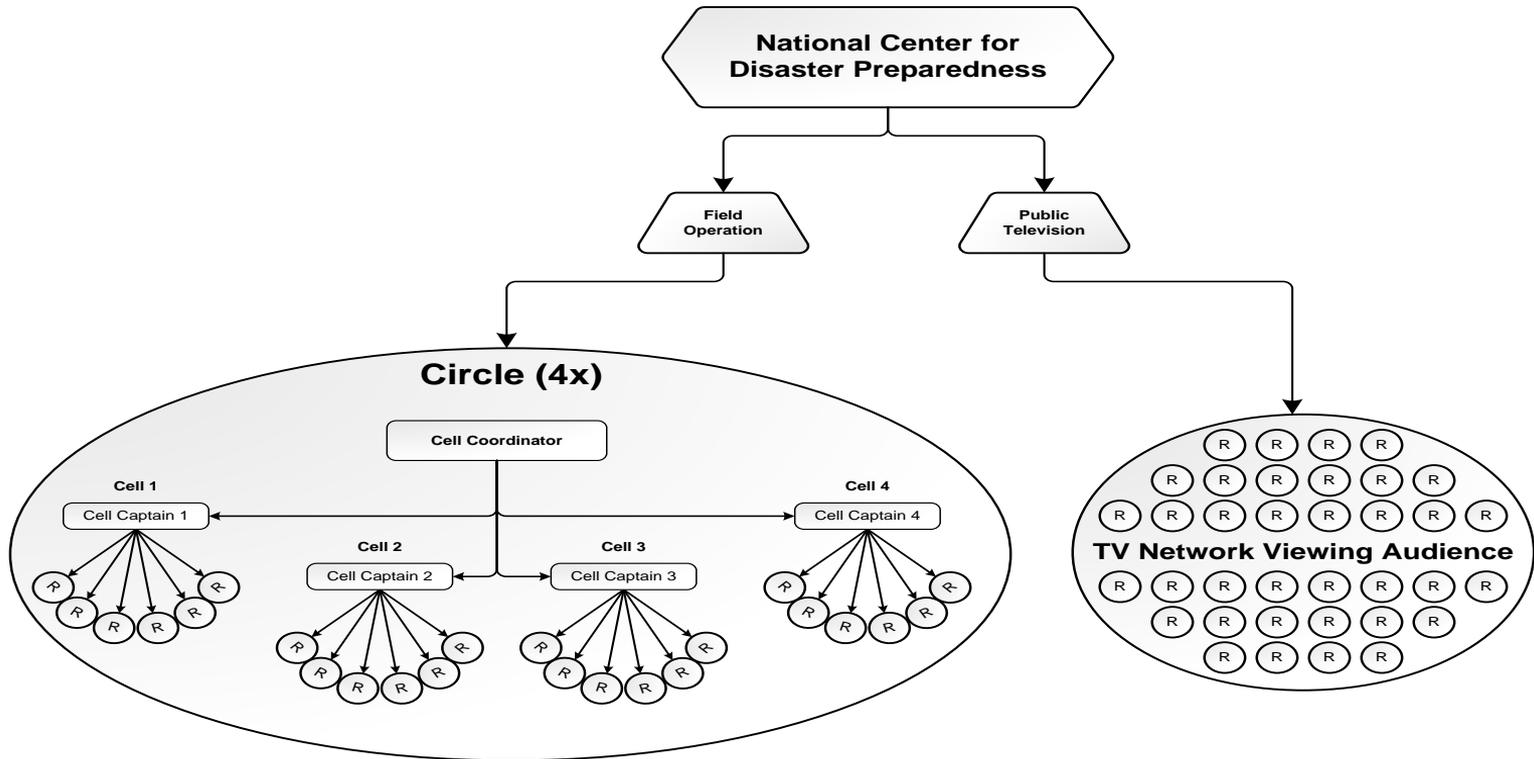
- *Cells included Department of Aging groups, Heart Transplant support group, Alzheimer support group*

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

By group	N	Comments per individual	Comment quality (1 – 5 scale)	Participation score (quantity x quality)
Urban teens	48	6.19	1.85	12.32
Homebound	72	7.47	2.48	18.07
PLWHA	72	7.49	1.78	13.63
Immigrants	74	8.34	1.99	15.93

Engagement Measures - 2

By scenario	N	Comments per individual	Comment quality (1 – 5 scale)	Participation score (quantity x quality)
Novel virus	117	6.66	2.24	16.22
Toxic plume	85	10.69	1.66	17.98
Ebola	64	4.73	1.88	9.78

Engagement Measures - 3

By mode	N	Comments per individual	Comment quality (1 – 5 scale)	Participation score (quantity x quality)
In-person	120	9.51	1.99	18.93
Conf. call	100	4.20	1.25	5.70

- 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!

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