The response to a disaster involves multiple complex adaptive systems. Based on FEMA situation report requests during 9/11 response.
The response to a disaster involves multiple complex adaptive systems

- Emergency Management & response systems
- Health and human services systems
- Community and kinship systems
• Understand the system dynamics
• Mechanisms to control the systems
• Information input/output

Structured information

Community context

Emergency Management & response systems
Health and human services systems
Community and kinship systems
Incident command structure
The system dynamic is not always evident.
Community-dwelling chronic meds

Complex regimens: ESRD, MMTP

Sub-acute Hospitalized

HIV/AIDS
Are the health and human services systems *ABLE* to respond to community needs?

- Can they get there?
- Do they know where their clients are?
- Do they know what people need?
- Is there an effective ICS for health services…
- … and can it acquire the information it needs to “direct” the system?
• Emergency Management & response systems
  • Health and human services systems
  • **Community and kinship systems**
Welcome to Gerritsen Beach, Brooklyn
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The challenge of elusive communities
• 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
  – The problem of “Elusive Communities”
• Rapid research: within two months of H1N1 outbreak
• Semi-structured interviews with 109 undocumented immigrants in four cities: NYC, Los Angeles, Homestead FL, McCallen TX
• Recruited through trusted community-based organizations
• Focus on health beliefs, trust in US and Mexican risk messengers and public health officials, barriers to care
• Mediating aspects of community-based organizations – trusted information brokers – was critical to the more isolated or vulnerable communities of undocumented immigrants

• Willingness to engage with trusted public officials, particularly around health issues
  – US Physicians and public health officials were particularly trusted
CDC-funded research 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
Four “elusive” communities of interest

1. *Urban teens*
2. *Rural homebound & their caregivers*
3. *People living with HIV/AIDS*
4. *Undocumented Latin American immigrants*

- Stigma
- Disclosure
- Isolation
- Inattention
Developed a “Living Lab”

• Tabletop 1: pandemic outbreak with message directing population to community-based PODs
  – *Sub-themes*: *Stigma, Disclosure, Access*

• Tabletop 2: toxic gas release with message directing population to evacuate and register with family reunification systems
  – *Sub-themes*: *Disclosure, transportation and mobility, trust*

• Tabletop 3: Ebola-like viral outbreak with message directing population to isolate and quarantine
  – *Sub-themes*: *Risk uncertainty, trust, preparedness, informal supports*
• 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 want to be involved, and can function as critical fulcrums for families (translation, access to new technologies and information sources)
• Unanticipated peer influence led to enhanced preparedness – suggests a role for community-based tabletops as preparedness intervention
Emergency Management & response systems
Health and human services systems
Community and kinship systems

Structured information
Community context
The “Last Mile” Problem

- Supplies
- Communication
- Community engagement

Gerritsen Beach Parade