Considerations for Community Health in Disaster Recovery: Policies, Conditions, and Opportunities

Anita Chandra

April 28th, 2014
Presentation Roadmap

- Current policy environment
- Necessary conditions for recovery
- Opportunities post-crisis for change
- Recovery data
- Use and application
Guiding Principle #1: Community Resilience and Long-Term Recovery Are Inextricably Linked

• Resilience -- the ongoing and developing capacity of the community to account for its vulnerabilities and develop capabilities that aid in:
  • preventing, withstanding, and mitigating the stress of an incident;
  • **recovering** in a way that restores the community to self-sufficiency and at least the same level of health and social functioning as before the incident; and
  • using knowledge from the response to strengthen the community's ability to withstand the next incident

(Chandra et al., 2011)
Guiding Principle #2: Recovery Guidelines Are Not Uniform or Well-Established

- Expectations for recovery and what is “acceptable” recovery has varied

- Role of federal, state, and local actors in recovery discussed but not broadly institutionalized
Guiding Principle #3: Presentation Themes and Recommendations Are Based on Several Sources

- National strategy experience
- National, state and local stakeholder engagement
- Retrospective case study analysis, including literature review
- Pilot communities and resilience implementation analysis
Current Policy Landscape
Ongoing Resilience Strengthening At Key Points Along Preparedness Continuum Can Create More Efficient Plans, Shorten Recovery Time

Prepare
Assessment of population and facility vulnerabilities
Ongoing messages

Immediate Response: Sheltering and/or evacuation of population
Provision of countermeasures

Recovery: Restoration of infrastructure and social functioning

- Integration of preparedness into routine organization and community operations
- Education about acute and slow-moving disasters

- Behavioral health, social and economic supports activated
- Coordinated or integrated data systems to track response for affected

- Leveraging of social and organizational supports to restore sense of community
- Development of policies to support smart rebuilding, long-term community development

Resilience Strengthening
## Community Resilience and Health Recovery Represents Intersection of Community Health Promotion and Emergency Preparedness

<table>
<thead>
<tr>
<th>Community Health Promotion</th>
<th>Resilience, Health Recovery</th>
<th>Emergency Preparedness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Routine surveillance</td>
<td>Assessment of population, structural vulnerabilities and assets</td>
<td>Emergency risk assessment</td>
</tr>
<tr>
<td>Community education</td>
<td>Education about ongoing mitigation and recovery</td>
<td>Risk communication</td>
</tr>
<tr>
<td>Provision of direct health services (e.g., immunizations, home visiting)</td>
<td>Ongoing assurance of health service access; skill building (e.g., PFA)</td>
<td>Provision of shelters, evacuation plans, mass prophylaxis</td>
</tr>
<tr>
<td>Policy support re: health impact</td>
<td>Policies that prepare for routine and emergency conditions</td>
<td>Policy support re: disaster response and recovery</td>
</tr>
</tbody>
</table>
National policies now incorporate community resilience, recovery
Recent policy has included language about key drivers of recovery

<table>
<thead>
<tr>
<th>National Preparedness Effort</th>
<th>Language Specific to Recovery (or Resilience)</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Health Security Strategy (2009)</td>
<td>Community resilience is supported by the promotion of healthy lifestyles, disease prevention, and access to culturally informed, timely and high-quality health care.</td>
</tr>
<tr>
<td>National Disaster Recovery Framework (2011)</td>
<td>Organizing principles of empowerment, resilience, emotional and psychological recovery (among others)</td>
</tr>
<tr>
<td>Presidential Policy Directive-8 (PPD-8) (2011)</td>
<td>Maximize the coverage of the U.S. population that has a localized, risk informed mitigation plan developed through partnerships across the entire community</td>
</tr>
<tr>
<td>FEMA Whole Community Engagement (2011)</td>
<td>Greater empowerment and integration of resources across the whole community</td>
</tr>
<tr>
<td>CDC Guidance (2011)</td>
<td>Create and implement strategies for ongoing engagement with community partners</td>
</tr>
</tbody>
</table>
ESF #14 establishes scale of recovery planning support
National Disaster Recovery Framework identifies health and social services recovery support functions

- Promote
  - continuity or restore essential health, behavioral health and social services
  - affected individuals’ self-sufficiency
  - clear communication
- Reconnect displaced populations with essential health and social services
- Protect health of recovery workers
CDC Standards Identify Elements of Recovery Operations

- Identify and monitor public health, medical, and mental/behavioral health system recovery needs;
- Coordinate community public health, medical, and mental/behavioral health system recovery operations
- Implement corrective actions to mitigate damages from future incidents.
Objective 8 of 2009 NHSS emphasized recovery

- Each community will have a capacity plan for health, behavioral health, and social services recovery
- A plan will be developed that describes how health, behavioral health, and social services will be transitioned and coordinated
- A monitoring and evaluation plan of recovery efforts will be in place
Community will have capacity for health, behavioral health, and social services recovery

• Establish recovery coordination capacity to reconstitute health, behavioral health, and social services infrastructure at the local, state, territorial, tribal, and federal levels

• Create plans to promote recovery of the affected community members and responders with behavioral health and social services needs
2015-2018 NHSS integrates recovery across five objectives

1. **Health resilience**
   - Encourage social connectedness
   - Enhance coordination of health and human services
   - Build a culture of resilience

2. **Countermeasures**

3. **Situational awareness**
   - Improve surveillance systems and data-sharing for emerging threats and their immediate, short, and long-term health effects.
   - Promote continuous improvement to support decision making

4. **Integrated public health, health care, and EM**
   - Diversify workforce
   - Strengthen scalability

5. **Global threats**
**Summary**: National policy articulates need for recovery planning and capacity but has implementation limits

1. Poor specification beyond broad stakeholder categories

1. Lack of common time points in recovery transition periods

1. Limited implementation guidance for non federal actors

2. No established recovery metrics
Necessary Conditions For Recovery
Recovery planning must acknowledge full length

Chandra and Acosta, 2009
Conditions for recovery can be grouped in two areas

1. Planning and critical components

1. Needs in short- and long-term
Planning and critical components identified through RAND U.S. recovery plan review and SME discussion

Essential components (Acosta, 2013) includes:

- Continuity of health and behavioral health
- Environmental risk planning
- Asset mapping
- Recovery communications
- Recovery workforce
- Coordination among government and NGO
- Financing plan

Acosta, presentation 2013 (publication in process)
Resilience analysis extends and complements necessary conditions for community rebuild

<table>
<thead>
<tr>
<th>Resilience Strategy</th>
<th>Example approaches</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community education</td>
<td>Public disaster education</td>
</tr>
<tr>
<td></td>
<td>Media partnerships</td>
</tr>
<tr>
<td>Community empowerment</td>
<td>Community involvement in rebuilding</td>
</tr>
<tr>
<td></td>
<td>Expedited project cycle</td>
</tr>
<tr>
<td>Practice</td>
<td>Community training</td>
</tr>
<tr>
<td>Social networks</td>
<td>Local networks of NGOs</td>
</tr>
<tr>
<td></td>
<td>Community councils</td>
</tr>
<tr>
<td>Familiarity</td>
<td>Public familiarity with disaster alert systems</td>
</tr>
</tbody>
</table>

Moore, Chandra, 2012
A range of needs must be monitored in short- and long-term

- Ease of transition from acute to long-term recovery
- Use of formal and informal health and social support services
- Effects on population health - injuries, mental health
- Environmental risk exposures
- Restoration of routine health and social support functioning
- Feelings of normalcy or normal routine
- Sense of community
Summary: Conditions that support recovery are identified through prior disasters, but relative emphasis on recovery capacity development uneven

1. National policy now acknowledges some of the key health and behavioral health implications of disaster

1. But less is articulated in how to:
   • Integrate health and social or human service systems
   • Finance health and social needs in recovery
   • Value and place recovery assets
   • Build recovery workforce
Opportunities Post-Disaster
Despite disaster devastation, key opportunities have been afforded

- Human and infrastructure resilience capacity
- Financing of rebuilding and role of private sector
- Recovery ethics regarding when and how to rebuild, social equity
Human and infrastructure resilience efforts rarely connected

- Questions abound regarding:
  - How to blend people needs in community development (e.g., reimagining community organization)
  - How to prioritize resilience investments for people (e.g., emotional wellbeing) with infrastructure (e.g., green rebuilding)
Financing issues give opportunity for reconsidering role of private sector

- Few studies have monetized the social and health costs
- Role of private sector to support human recovery unclear
  - But does disaster give opportunity for considering public-private collaborations?
Recovery ethics raise questions about social equity

- When and how to rebuild—what is right for vulnerable populations
- Highlights social inequities and opportunities for new solutions
Summary: Consider how recovery phase offers opportunities for restructuring and reimagining community

1. Disaster recovery period raises questions about organizational roles, system design, and support particularly for vulnerable populations and neighborhoods

1. Consider ways to incentivize or promote
   - Reforms to human service systems
   - Smart rebuilding to address future risks
   - Strategies that promote community cohesion
Monitoring and Evaluating Recovery
RAND identified eight levers of resilience, all of which can be measured.

- **Wellness**
  - Promote pre-/post-incident health
  - Access
  - Ensure health/social services access

- **Education**
  - Info preparedness, risks, resources

- **Engagement**
  - Promote participatory decision-making
  - Self-Sufficiency
  - Individuals /communities assume responsibility for preparedness.

- **Partnership**
  - Develop strong partnerships within and between government and NGOs

- **Quality**

- **Efficiency**

- **Core components of community resilience**
  - Social/Economic well-being
  - Physical/Psychological health
  - Effective risk communication
  - Social connectedness for resource exchange, cohesion, recovery
  - Integrating/involving govt & NGO in planning, response, and recovery

- **Developing Community Resilience**

- **Community context**

- **Ongoing disaster experience**

[www.rand.org/t/TR915](http://www.rand.org/t/TR915)
These Levers are One Way to Organize Recovery Activities and Measurement

- Health and well-being of the population
- Workforce for recovery
- Access to health and human services
- Partnership with other organizations
- Engagement of individuals and organizations in recovery activities
- Education of individuals about recovery and overall resilience
Steps to Enhance Education and Sample Measures (in context of NHSS 2009)

- Percent jurisdictions using a shared system for interagency communications/total jurisdictions (NECP)

Community develops networks to communicate disaster risks
- Develop and disseminate messages about what to expect in disaster and timelines of recovery
- Develop messages about individual/household and community preparedness

Community improves ongoing health literacy of the population to understand and integrate these preparedness and related messages

Community leverages diverse stakeholder networks to communicate information
- Use social media
- Train community partners to disseminate information

- Percent of local or state health department website users by demographic characteristics (Google)

- Time to issue risk communication message
- Underlying health literacy of population

Percent jurisdictions using a shared system for interagency communications/total jurisdictions (NECP)
Steps to Build Self-Sufficiency and Sample Measures (in context of NHSS 2009)

- % of citizens that have a household emergency plan that includes instructions for household members about where to go (Citizen Corps, see objective 1)

- Does your household have the following for everyone who lives there: 3-day supply of water; 3-day supply of non-perishable food; etc (BRFSS, see objective 1)

Encourage the connection of individual and community preparedness (“me” to “we”)
- Incentivize neighborhoods that promote community level planning (neighbor to neighbor)
- Ensure that individuals/families have plans, including reunification plans

Community members can engage in effective bystander response in initial hours and days of recovery

- Number of residents who are members of volunteer/community serving organizations

- Number of individuals trained in first aid (Red Cross)

Community conducts ongoing civic engagement activities
- Develops and cultivates messages that foster sense of community responsibility, volunteerism, etc

- % of citizens that have a household emergency plan that includes instructions for household members about where to go (Citizen Corps, see objective 1)

- Does your household have the following for everyone who lives there: 3-day supply of water; 3-day supply of non-perishable food; etc (BRFSS, see objective 1)
Steps Needed for Engagement and Sample Measures (in context of NHSS 2009)

A range of community sectors have the capacity to participate (see CDC, 11 sectors) in preparedness, response and recovery activities
- Relevant trainings are provided
- Roles and responsibilities in disaster are clear
- Organizational assets are mapped

Community activates organizational and neighbor to neighbor networks in response and recovery activities

Community identifies relevant stakeholders, particularly those representing at-risk populations
- Involves stakeholders in local emergency planning

- Median number of community sectors in which LHDs identified key organizations to preparedness efforts (CDC PHEP)

- Proportion of key organizations that LHDs engaged in a significant public health emergency preparedness activity (CDC/PHEP)
Steps to Build Partnerships and Sample Measures (in context of NHSS 2009)

**Local PH strengthens efforts across PH programs (emergency preparedness and non)**
- Identifies capabilities of NGOs that can be augmented and offset government participation

**Partnerships allow for more effective and efficient response and recovery**
- Resources are marshaled to neighborhoods most in need
- Agencies with the “response reliability” are in lead roles for particular activities

**Community forms relationships with relevant partners from the 11 sectors**
- Develops collaborative agreements with clear roles and expectations for emergency response and recovery

**Strengthen emergency response and recovery capacity and capabilities among these organizations**
- Identifies capabilities of NGOs that can be augmented and in some cases, can offset government participation

- Presence of formal MOUs or MOAs with relevant organizations (RAND)
- Median number of community sectors that LHDs engaged in using HVA data to determine local hazards, vulnerabilities, and risks (CDC/PHEP)
## Other recovery analysis identifies some health metrics

<table>
<thead>
<tr>
<th>Domain</th>
<th>Metric</th>
</tr>
</thead>
<tbody>
<tr>
<td>Functioning of the healthcare delivery system</td>
<td>Number of hospital beds, ICU beds, nursing home beds, etc. per 100,000 population*</td>
</tr>
<tr>
<td>Access to and utilization of healthcare</td>
<td>Percent of individuals with no source for usual care*</td>
</tr>
<tr>
<td></td>
<td>Use of mental health services with ICD-9 codes related to depression or anxiety, CVD, MI,</td>
</tr>
<tr>
<td>Health literacy</td>
<td>Percent of individuals with basic or below basic health literacy (e.g., little to no ability</td>
</tr>
<tr>
<td>Civic engagement</td>
<td>Percent of individuals that volunteer</td>
</tr>
<tr>
<td></td>
<td>Volunteer rate (compared to state or national rate)</td>
</tr>
<tr>
<td></td>
<td>Volunteer hours per resident</td>
</tr>
</tbody>
</table>

*Acosta, presentation 2013 (publication in process)*
## Recovery metrics (continued)

<table>
<thead>
<tr>
<th>Domain</th>
<th>Metric</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-reported “normalcy”</td>
<td>I feel like I am leading normal life (yes/no), Life for me has returned to normal (rate level of agreement)</td>
</tr>
<tr>
<td></td>
<td>I no longer talk about xxxx (event) these days</td>
</tr>
<tr>
<td>Growth or declines in population health</td>
<td>Mortality rate</td>
</tr>
<tr>
<td></td>
<td>Injury rate</td>
</tr>
<tr>
<td></td>
<td>Rates of communicable disease</td>
</tr>
<tr>
<td></td>
<td>Self-reported mental and physical health*</td>
</tr>
<tr>
<td></td>
<td>Rates of substance abuse (smoking, drugs, alcohol)*</td>
</tr>
<tr>
<td></td>
<td>Rates of mental illness (depression, anxiety, emotional disturbance, PTSD)*</td>
</tr>
<tr>
<td>Environmental Health</td>
<td>Proportion of land that is unutilized or contaminated</td>
</tr>
<tr>
<td></td>
<td>Rate of water born disease outbreaks</td>
</tr>
<tr>
<td>Growth or decline in violence rates</td>
<td>Domestic violence rates</td>
</tr>
<tr>
<td></td>
<td>Rates of child abuse and neglect</td>
</tr>
</tbody>
</table>

*A: Estimating values is tricky*  

*Acosta, presentation 2013 (publication in process)*
Other places exploring recovery (or resilience) related metrics

Public Safety Canada

1. Risk Awareness
2. Prior Experience with a Major Emergency or Disaster
3. Protective and Precautionary Behaviours
4. Civic Engagement
5. Social Networks
6. Social Cohesion and Community Belonging
7. Trust
8. Self-efficacy
9. Perceived Health and Activity Limitation
10. Socio-Demographics
**Summary:** Standard recovery metrics are lacking, and systems may not support long-term tracking

1. Determine what are the 3-5 health indicators that provide the most signal value on human recovery

2. Review the extent to which community data systems are connected to effectively track individuals or households

2. Link recovery metrics to the pace and design of funding and other support
Uses and Applications
Recommendations

1. Consider whether there will be strategies for how communities should approach recovery planning
   » Key factors or elements

1. Consider adding a crosswalk table so that jurisdictions can make sense of report recommendations in light of national policy

2. Add section on what disaster “opportunities” exist and how communities have used disaster to advocate for social or infrastructure change