Planning for an Emergency: Strategies for Identifying and Engaging At-Risk Groups

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Social Vulnerability

Characteristics of a person or group in terms of their capacity to anticipate, cope with, resist, and recover from the impact of a discrete and identifiable disaster event.
Social Vulnerability Categories

- Socioeconomic status
- Age
- Gender
- Race and ethnicity
- English language proficiency
- Medical conditions and disability
Why Understanding Social Vulnerability is Important

- Within a community there is a heterogeneous spread of social characteristics that produce unequal exposure to disaster risk

- Populations with higher social vulnerability levels (i.e., at-risk groups) are more likely to experience negative consequences as a result of a disaster event
   - Examples: persons with access and functional needs, low English language proficiency, or low socioeconomic status

- First steps in planning and risk mitigation is to identify type and magnitude of these vulnerabilities
Identifying Social Vulnerabilities

- **Literature review**
  - Universal acceptance in public health that social vulnerabilities impact disaster risk
  - Various public health social vulnerability tools created
  - Little evidence of social vulnerability tools use by Emergency Managers (EMs)

- **Research question:** *What are current approaches in emergency management for identifying at-risk populations?*
  - Findings identified barriers and facilitators
  - EMs interested in tools to help them identify at-risk populations
  - Request for guidance on various approaches and best practices
Barriers to Identifying Social Vulnerabilities

- Difficult to identify, reach, and track certain at-risk populations
- People may not consider themselves vulnerable and choose not to self-identify
- Resource intensive
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"Trying to develop a registry and maintain it and keep it up to date is really kind of an overwhelming task, and I think as soon as you create your registry it’s [going to] be out of date."
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- Resource intensive

“But you’re always worried that somebody is [going to] slip through the gap…not slip through the gap because we forget them, I say slip through the gap because we don’t know about them.”
Facilitators to Identifying Social Vulnerabilities

- Forge partnerships with community groups that serve at-risk populations
- Target outreach efforts that improve messages and communication
- Engage individuals in their own preparedness efforts
- Use social vulnerability tools
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“More partnerships to pool resources and share common messages would be a good thing.”
Facilitators to Identifying Social Vulnerabilities

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“If there was a specific area of the county that was impacted greater than others, we would look at those that fall within those different vulnerability areas…so we can focus on the specific types of resources those groups might require.”
Development of Guidance Document

- Through literature review and research study, identified gaps between availability of social vulnerability tools and use by EMs
- Provide EMs with critical information, strategies, and tools to improve their ability to identify at-risk populations
- Provide examples of approaches and tools
- Encourage dialogue between EMs and public health
Main Resources Used to Create Guidance

- **Original Research:**

- **Other Published Guidance:**
  - *Public Health Workbook to Define, Locate, and Reach Special, Vulnerable, and At-Risk Populations in Emergency*
  - *Identifying Vulnerable Older Adults and Legal Options for Increasing Their Protection During All-hazards Emergencies: A Cross-Sector Guide for States and Communities*

- **Social Vulnerability Index Tool**
- **At-Risk Population Review Panel**
Key informant interviews with EMs and follow-up stakeholders’ workshop

- EMs would benefit from more information on identifying at-risk groups within their communities
- Public health tools to identify at-risk populations have been created
- Most EMs were not aware of these tools, and none had used them

Reducing Public Health Risk During Disasters: Identifying Social Vulnerabilities

Abstract: All regions of the US experience disasters which result in a number of negative public health consequences. Some populations have higher levels of social vulnerability and, thus, are more likely to experience negative impacts of disasters including emotional distress, loss of property, illness, and death. To mitigate the impact of disasters on at-risk populations, emergency managers must be aware of the social vulnerabilities within their community. This paper describes a qualitative study which aimed to understand how emergency managers identify social vulnerabilities, also referred to as at-risk populations, in their populations and barriers and facilitators to current approaches. Findings suggest that although public health tools have been developed to aid emergency managers in identifying at-risk populations, they are not being used consistently. Emergency managers requested more information on the availability of tools as well as guidance on how to increase ability to identify at-risk populations.

Keywords: at-risk; disaster; emergency management; public health; social vulnerabilities.
Other Published Guidance

- CDC Healthy Aging Program publication, 2012
- Provides critical information, strategies, and resources needed to improve planning for and protection of vulnerable, community-dwelling older adults during all-hazard events
- Registries
Other Published Guidance

- CDC OPHPR publication, 2010
- Provides information for public health and emergency planners to better communicate health and emergency information to at-risk populations during all-hazard events
- Community Outreach Information Networks
Social Vulnerability Index (SVI) Tool

- Created by ATSDR Geospatial Research, Analysis, and Services Program (GRASP)

- Uses U.S Census data, GIS software, and GRASP mapping tool to identify location and estimate size of predefined at-risk populations
At-Risk Population Review Panel

- Created by CDC/Health Studies Branch to finalize document
- Composed of public health professionals and emergency managers
  - Federal: CDC and ATSDR
  - State: Georgia and Mississippi
  - Local: Los Angeles County, California and City of Nashua, New Hampshire
- Tasked with reviewing initial drafts and lending current public health and emergency management perspectives from all levels
Guidance Document

- **Individual Approach**
  - Registries
  - Community Outreach Information Networks

- **Population Approach**
  - Social Vulnerability Index Tool

- **Integration of Data Approach**
INDIVIDUAL APPROACH
Individual Approach

- Discusses ways to collect and use information from at-risk groups at the individual level
- Contains information on registries and Community Outreach Information Networks (COINs)
- Based on
  - *Identifying Vulnerable Older Adults and Legal Options for Increasing Their Protection During All-hazards Emergencies: A Cross-Sector Guide for States and Communities.*
  - *Public Health Workbook to Define, Locate, and Reach Special, Vulnerable, and At-Risk Populations in an Emergency*
Registries

- **Most common types of registries**
  - Access and functional needs
  - Medical needs
  - Transportation

- **Registries involve development and maintenance**

- **Challenges**
  - Reaching desired population
  - Gaining participation
  - Long-term maintenance
  - Legal liabilities
Community Outreach Information Networks (COINs)

- **Phase 1: Define at-risk groups**
  - Define and identify groups considered at risk in your community
  - Start by finding out what is already being done

- **Phase 2: Locate at-risk groups**
  - Locate groups identified as at risk within your community
  - Reach out to organizations, existing services, key contacts, trusted sources, gathering places
  - Use mapping to assist in visualizing geographic distribution
  - Keep members engaged
  - Create and maintain database of members
Community Outreach Information Networks (COINs)

- **Phase 3: Reach at-risk groups**
  - Identify best communication method to share emergency messages with at-risk groups
  - Survey agencies and organizations
  - Conduct community assessments (CASPERS, focus groups)
  - Develop communication strategies
  - Identify trusted messengers
POPULATION APPROACH
Population Approach

- Introduces concept of identifying community vulnerabilities by assessing population-level statistics, such as U.S. Census data
  - Point-in-time estimate of number of people in various social vulnerability categories within communities
- Introduces ATSDR’s SVI interactive mapping tool
SVI Tool

- Free, web-based tool
  - Interactive map
  - Prepared county maps
  - Downloadable data and geoprocessing tools

- Uses U.S. Census and American Community Survey data
SVI Tool: Rankings

- Creates overall social vulnerability percentile ranking and percentile rankings based on four main themes.
- Presents percentile rankings at census tract level.
- Calculates percentile rankings using national-level or state-level data.
SVI Tool: County Map Report

Social Vulnerability Index 2010
DeKalb County, Georgia

Overall Social Vulnerability

Social vulnerability refers to a community’s capacity to prepare for and respond to the stresses of hazardous events ranging from natural disasters, environmental degradation, to human-caused threats, such as DHA. The Social Vulnerability Index (SVI 2010) County Map depicts the social vulnerability of communities at census tract level, within a specified county. SVI 2010 groups fourteen census-derived factors into four themes that summarize the extent to which the area is socially vulnerable to disaster. The factors include economic data as well as data regarding education, family characteristics, housing, language, etc. Overall Social Vulnerability is constrained at the variables to provide a comprehensive assessment.

SVI Themes

Socioeconomic Status

Household Composition

Race/Ethnicity/Language

Housing/Transportation

Agency for Toxic Substances and Disease Registry

Final - For External Use
SVI Tool: Mapping Dashboard Census Tract Report

Social Vulnerability Index (SVI) Mapping Dashboard

SVI Year | Theme | State | County
---------|-------|-------|--------
SVI 2010 | Overall Vulnerability | Georgia | DeKalb County

Now Showing: Overall Vulnerability | Georgia | DeKalb County
(Data Classified by Georgia Census Tracts)

SVI 2010 Georgia Report For Tract 022007 (DeKalb County, Georgia)
Total population: 3,783
Total number of housing units: 1,451

SVI Total Vulnerability Across All Themes
Overall Vulnerability: 96th
Percentage rank represents the overall percentile rank among all tracts of the state.
Total SVI Flags: 4
Flag count is the number of measures of all 15 SVI measures that are in the 90th percentile or above of social vulnerability among all tracts of the state.

About the SVI Theme you are exploring....
You are currently viewing the SVI Overall Vulnerability Across All Themes, a measure of social vulnerability combining all four themes comprising the SVI. Each theme consists of between two and five measures, as shown in the theme tables below. All measures are described with a number that is meaningful to the user, that number’s margin of error (MOE), and a percentile rank of the number (if the number is an ACS estimate), that number’s percentile rank among all tracts of the nation or state, and the tract’s SVI flag value. Each theme section includes a summary that presents the tract’s percentile rank for all measures in that theme and the tract’s summed flag value for all measures in that theme. Please note that in the theme summary there are no entries in the total columns for numbers or percentages as the units of measure vary in type.

Socioeconomic Theme
Measure | Number | Number MOE | Percentage | Percentage MOE | Per Centile Rank (among all CA tracts) | SVI Flags
---------|--------|------------|------------|---------------|---------------------------------------|--------
Persons below poverty estimate, 2010-2014 | 1,025 | 424 | 26.3% | 10.1% | 75th | No

Zero population census tracts
Potential Uses of SVI Tool

- Information on location and relative concentration of different types of social vulnerabilities at census tract level can help EMs locate and plan for specific needs of their communities
  - Allocate emergency preparedness funding based on community need
  - Identify areas in need of emergency shelters
  - Estimate the number of emergency personnel needed
  - Plan evacuation routes accounting for functional and access needs
  - Identify areas that might need continued support during recovery
INTEGRATION OF DATA APPROACH
Integration of Data Approach

- Data from both approaches can be integrated to gain a broader picture of needs of at-risk groups within communities

- **Examples:**
  - Using SVI tool to identify areas from which to recruit community organizations and key partners for COINs
  - Overlaying individual-level information onto SVI maps to identify gaps in coverage
Conclusions

- Sharing of guidance document (conferences, webinars, emails) way to start dialogue and begin collaboration with EMs
- Integrated approach will give broader and richer picture of at-risk groups within communities
- Guidance can help EMs and public health professionals strengthen overall approach to at-risk populations in all phases of disaster life cycle
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The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.
References

- Social Vulnerability Index (SVI) [http://svi.cdc.gov/](http://svi.cdc.gov/)