University at Albany Center for Public Health Preparedness

Grand Round Series
October 11, 2007
10:00am – 11:15 ET

Rural Evacuations
October 11, 2007

Guest Speakers

Michael Meit, MA, MPH
Deputy Director,
National Opinion Research Center (NORC)
Walsh Center for Rural Health Analysis

Paul Kuehnert, MS, RN
Exec. Director, Kane County Health Dept.
Fmr. Deputy State Health Officer and Preparedness Director, State of Maine

Sponsors

Funded by the Western New York Public Health Alliance supported by the National Association of County and City Health Officials

University at Albany Center for Public Health Preparedness supported by the CDC (Centers for Disease Control and Prevention)

Call-In

Phone: 800-452-0662
Fax: 518-426-0696

Evaluations

www.UAlbanyCPHP.org/evals
Nursing Contact Hours, CME & CHES Credits Available

www.ualbanycphp.org
Ph: 518-486-7921
Spontaneous Evacuation

- Evacuation should not be conceptualized as the government bringing in buses and taking people to shelters
- Rather, the vast majority of people evacuate on their own, in their own vehicles

Where do they go?
- What are the implications for reception communities?

Key Informant Interviews: Three Groups

- National Experts (6)
  - Academics
  - Government Experts
  - Private-Sector Researchers
- Urban/Rural Pairs
  - Local Rural Preparedness Experts (6)
  - Local Urban Preparedness Experts (5)
  - Emergency preparedness coordinators
  - Public health department directors

Key Informant Interview Findings - Specific Findings

- Urban:
  - Few have considered urban evacuation to rural communities
  - Most feel citizens will go to other urban areas, where they will “feel comfortable”
- Rural:
  - It will take fewer evacuees to overwhelm smaller, rural community systems
  - An analysis of the ratio of evacuees to existing population is an important planning consideration.

Key Informant Interview Findings - Overall Recommendations

- Regional planning to pool resources
- Evacuation “to” AND “through”
- Strengthen infrastructure to address population surge, as well as to enhance overall preparedness

Walsh Center for Rural Health Analysis Evacuation Project

- Funded by HRSA, Office of Rural Health Policy
  - Key informant interviews
  - National survey of urban residents to assess evacuation intentions
  - Findings to inform development of the modeling and spatial analysis tool

walshcenter.norc.org
Key Informant Interview Findings - Overall Recommendations

Cont.
- Federal and state guidance should prompt rural communities to plan for the reception of evacuees
- Use of preparedness funding to support planning should be encouraged
- Cultural competency information & training is needed in destination communities

NORC Walsh Center Nat’l Survey of Urban Residents

- Prior surveys done before 9/11, Anthrax, and Katrina
- Intent was to determine evacuation likelihood given a hypothesized change in national mindset

Expected Reactions to Explosion of a Dirty Bomb

Expected Reactions to a Flu Pandemic

Likelihood of following instructions to Shelter-in-Place and Advice not to Evacuate

Expected Destinations of Survey Respondents
Expected Travel Distances of Survey Respondents

Likelihood of Evacuation by Race/Ethnicity
- Dirty Bomb
  - Black and Hispanic almost 2 times more likely to evacuate than whites
- Pandemic Influenza
  - Black 3.2 times more likely
  - Hispanic 2.5 times more likely

Kane County, Illinois
- Far western Chicago metro area
- Population 500,000
- 500 square miles
- Urban, suburban and rural communities (approximately 40% land mass remains rural)
- County Health Director is also Executive Director of the Office of Emergency Mgmt

Evacuation Assumptions
- Event causing evacuation does not impact metro outside Chicago
- Population of Chicago = 3 million
- 80% would (attempt) evacuation by private vehicle
- 600,000+ to be evacuated by mass transit (include most vulnerable populations)
Routes Thru/To Kane

- 2 major expressways
- 3 U.S. highways
- 11 state highways
- 3 commuter rail lines

Concept of Operation

After a Chicago evacuation order is issued:
- Activate the Crisis Management Team
- The County Board Chairman will issue a “State of Emergency” declaration
- Notify Municipal Elected and Public Safety Officials
- Notify the Public Health System
- Activate the Sheriff’s Tactical Response Plan
- Activate the County Emergency Operations Center

Concept of Operations Cont.

Once the EOC is activated the OEM staff will:
- Obtain bed availability for area hospitals
- Poll the area hotels/motels to determine the number of available beds
- Establish a media center

Plan Components

- Traffic:
  - Private vehicles
  - Commuter trains
  - Mass care & feeding
  - Communications
  - Public health & health care
  - Volunteer management
  - Data management
  - Security

Lessons Learned

- Tabletop conducted in Fall, 2006
- Viable... IF numbers of evacuees are limited
- Surge of >1500 would be beyond capacity for triage, shelter and care
- Resources may be strained

Recommendations

- Convene/participate in regional evacuation task forces
- Consider both spontaneous and planned evacuation scenarios
- Be as creative and flexible as possible
- Advocate for resources
WNYPHA APC Project: An Environmental Scan

- Community risk assessments focus on issues within the specific community not implications of population surge from evacuating urban residents.
- Public health infrastructure is likely to be stretched thin and/or overwhelmed

Continued...

WNYPHA

- Funded by NACCHO as a Rural Advanced Practice Center
  - Spatial Analysis Web-Based Tool
    - Predict post-event rural population surge resulting from the mass evacuation of an urban area

WNYPHA APC Project: An Environmental Scan

Continued...

- Public health infrastructure is likely to be stretched thin and/or overwhelmed
- Evacuation planning research focused on the exodus of urban citizens with little focus on likely destinations or secondary impacts.

Modeling and Spatial Analysis Tool

Continued...

- Used as an educational tool to inform policy makers about the issue of population surge
- Includes information on the number of likely evacuees, evacuee demographic information (such as presence of children, disability status, etc.), and local planning information

How The Tool Works – Three Types of Variables

Scenario Specific Variables:
- Dirty bomb, pandemic flu, industrial/chemical
- How much “push” does it have?
- How many urban citizens are likely to evacuate as a result?

Demographics Variables:
- Who is more or less likely to evacuate?
How The Tool Works –
Three Types of Variables

Cont.

Pull Variables:
- Which areas will be more or less attractive to evacuees?
- Attractive features: road networks into the county, number of hotel rooms and second homes, family networks, etc.

Creating the Tool

- Identified content to be included in partnership with WNYPHA members
- Developed modeling algorithms using national data sets
- Set variables using historical evidence, research data, and expert opinion
- Worked with the Pennsylvania State University Center for Environmental Informatics to develop a user friendly web-based interface
Next Steps

**National Expansion**
- Include at least the 100 largest U.S. urban centers and surrounding counties within at least a 150-mile radius.

**Refining Algorithms and Variables**
- Refine algorithms and identify variables for enhanced precision of estimates.

**User Testing**
- Conduct web-based user testing to refine the user interface and produce optimal outputs to stimulate preparedness planning.

Future Directions

- Integrated training component
- Planning guidelines
- Modeling of non-evacuees
- State-specific versions

Call-In

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E: cphp@uamail.albany.edu

Resources

- Walsh Center for Rural Health Analysis [walshcenter.norc.org](http://walshcenter.norc.org)
- Western New York Public Health Alliance [www.wnypha.org](http://www.wnypha.org)
- NACCHO Advance Practice Centers [www.naccho.org/topics/emergency/APC.cfm](http://www.naccho.org/topics/emergency/APC.cfm)
- Kane County Health Department, IL [www.kanehealth.com](http://www.kanehealth.com)
November 8, 2007

Rad Events:
Psycho-Social Issues and Risk Communication

Dr. Tim Tinker, TIM TINKER, MPH, Dr.PH
Senior Vice President, Widmeyer Communications
Co-Founder, Consortium for Risk & Crisis Communication

Dr. Brian Flynn, Center for the Study of Traumatic Stress at the Uniformed Services Univ. of Health Sciences in Bethesda, MD

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