Policy Directions from Findings of a Disaster Preparedness and Emergency Response Survey from Persons with Mobility Impairments and a Course for Health Care and Emergency Management Professions

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Persons with mobility impairments and other disabilities are often unprepared for disasters (NOD, 2005). Preparedness plans for persons with disabilities often do not exist in local planning efforts and among public and private establishments (Fox, et al., 2007, Kendall-Tackett & Mona, 2005). This is despite evidence that persons with physical disabilities are at risk of death in natural disasters and residential fires (Chou et al., 2004; Runyan et al, 1992). The empirical study of the Nobody Left Behind (NLB) project found that a majority of the local emergency plans in the U.S. lack policy guidelines on how to assist persons with disabilities prior, during and after disasters. In addition, a majority of the local emergency managers had not taken a FEMA training course or similar instruction on disasters and persons with disabilities (Fox, White, Rooney, & Rowland, 2007). After Hurricane Katrina policy makers could no longer ignore what had been learned from other disasters. Specifically, disaster plans need to cover persons with disabilities and health, safety, and disaster relief personnel must understand the range of possible assistance needs of persons with disabilities to provide effective services. Thus, NLB researchers sought to gain additional knowledge from a consumer perspective to apply to preparedness, response efforts, and policy decisions.

Methods

An on-line survey was administered on the project's website, www.nobodyleftbehind2.org. It asked persons with mobility impairments who had experienced a disaster what was helpful for survival, difficulties experienced, lessons learned, and recommendations for future directions for emergency management.

56 persons submitted an on-line survey that met the qualifications to participate in the study. The primary diagnosis for mobility impairments among the survey participants was spinal cord injuries, multiple sclerosis, arthritis, muscular dystrophy, and cerebral palsy. 29% of the participants reported multiple diagnoses contributing to the mobility impairment.

Natural disaster types

Informants

Table 1

Natural and Man-Made Disaster or Emergency Types and Total Number of Key Informants Experiencing Them (Rooney & White, 2007)

Hurricane or tropical storm

Earthquake

Flooding	5	
Severe storms	5	
Tornadoes	3	
Power outage	2	
Man-made disasters or emergency types		
	0 , , 1	
Disaster	Informants	
Disaster		
Disaster Fire	Informants 5	
Disaster Fire Terrorist - bomb or bomb threat	Informants 5 4	

Study Results

Survival Measures

Airplane accident

Terrorist - 9/11

Preparedness measures are known to save lives and prevent injuries. Both general and specific disability preplanning and preparedness measures were deemed by survey participants as helpful for survival, health, and safety. They also allowed for continued independence and mobility during and after a disaster.

Spontaneous networks often formed with co-workers, strangers and family to provide assistance for a person with mobility impairments during and after the event. For example, a hotel guest assisted another guest with sight and mobility limitations down a flight of stairs to evacuate. Family, friends, neighbors, and the general public (strangers) provided the majority of assistance.

Common Difficulties During and After Disasters

Difficulties arose during and after disasters for persons with mobility impairment due to:

- lack of community and workplace evacuation plans;
- being left behind when persons without disabilities were evacuated;
- inaccessible shelters and options for accessible temporary housing;
- disaster relief personnel who were unaware of disaster relief options for persons with disabilities;
- infrastructure failures (power, public transportation, and access to potable water, elevators, air conditioning); and
- difficulties returning to daily routines because of trauma, lack of mobility, and the need for clean-up and repair of the environment.

Many of these situations were avoidable, and unfortunately often lead to health complications, and temporary loss of independence and/or mobility of the individual

Other Lessons Learned

Table 2 is the results of the researchers taking tips and lessons learned by the survey participants and placing them in a "do's and don'ts checklist" format.

Table 2

Recommendations for "Do's and Don'ts" Related to Disaster Preparedness for and by Persons with Mobility Impairments (Rooney & White, 2007)

Individual Disaster Preparedness		
Do	Don't	
 Create an individualized emergency plan 	Wait until it happens to you	
 Assemble a "to go" kit that includes a week's supply of meds 	Forget to conduct quarterly drills of your personal plan	
 Register with or form a registry with emergency responders 	• Leave out those who can assist you in the planning process	
 Develop a network of family, friends, and neighbors to assist 	 Forget a flashlight, radio, and two routes for exiting your home 	
 Check out accessibility of local shelters and hotels 	• Put yourself in a dangerous situation when the power goes out	
 Have a portable generator or adaptor and car battery for power 	Think it won't happen to you	
Have adequate rental or home insurance	Forget small details, including having extra ready cash	
 Get training on and then direct others to turn off gas and water 	Procrastinate with safety	

Community Disaster Preparedness		
Do	Don't	
 Get involved at work, residential, and community disaster planning 	Wait until a disaster and persons with disabilities are left behind	
 Get prepared at home and expand preparedness to public setting 	Assume disaster preparedness plans exist for persons with disabilities	
 Form an "Accessibility Committee" at work and other public places 	Assume you will be evacuating with everyone else	
 Explore evacuation options with emergency managers and others 	Overlook alternatives, such as evacuation chairs	

Policy Directions

Examples of recommendation provided by survey participants for future directions for health and safety personnel to assist persons with mobility impairments included:

- offer disability related disaster education for home preparedness and evacuation plans;
- require disability related disaster education for emergency managers, first responders, relief and health personnel;
- mandate that all buildings have in their plans disability-related preparedness;
- secure alternatives for escape if the buildings depend on elevators;
- make stair descent devices standard equipment;
- train staff in public and private buildings to assist with evacuation;
- increase participation of person with disabilities and organizations representing persons with disabilities in disaster planning;
- develop insurance policies allowing for stockpiling of medications for emergencies;
- remind emergency responders to get whatever mobility devices and durable medical equipment out of the building (wheelchairs, ventilators) and reunite with the person.

Research Directions

Research options to assist with policy development include:

- identifying preparedness strategies for person with disabilities and best practices for evacuation pans in business and other public settings;
- establish national consumer standards for stair descent devices;
- develop alternative and affordable electricity sources to be used in power outages; and
- create model education and training curriculums.

Course for Health Care and Emergency Management Professions

Ready, Willing, & Able

Due to the need for additional education, we developed a 4-hour disaster preparedness and response course on meeting the needs of persons with disabilities (sight, mobility, cognitive, hearing) for health and public safety personnel. The course is titled *Ready, Willing, & Able.* A free 2-hour Internet video version will soon be out on Kansas-TRAIN for continuing education credits. Both courses are taught by professional educators with one educator being a person with a disability.

Course Participants and Locations

13 courses have been taught to approximately 538 people at 5 health or emergency management association or other state meetings, through 4 hospitals or medical centers, a public health department, home health agency, nursing school, and center for independent living for persons with disabilities.

The course attendees represented 20 different occupations including hospital and emergency room nurses, public school nurses, respiratory therapists, social workers, and hospital administrators, planners, information specialists, managers, and trainers. Additional course participants included several public safety personnel (emergency management, safety officer, biological terrorism coordinator, risk communicator, CERT volunteers, and Red Cross volunteers). Several health professionals also held dual roles in the health care field and in public safety (i.e. Red Cross, Medical Reserve Core volunteer, EMS).

Post and Pretest Results

A statistical analysis was conducted on the pre- and post- tests for knowledge and confidence levels and course satisfaction ratings of course participants. The results are:

- Participants averaged one point better on the tests; thus, demonstrating an increase in both knowledge and confidence after taking the course.
- No differences in mean knowledge or confidence levels for the three occupational groups (nursing and health, emergency field, and others).
- Persons in the field the longest learned the most and those with the less experience increased their confidence much more than those with more experience.
- No differences among the pre- and post- knowledge or confidence by the course locations.
- The course was well received by all. See Table 3 for comments on the course.

Overall Results

The course evaluations demonstrated that training is a worthwhile investment to increase knowledge and confidence levels of health and safety personnel and staff in independent living centers in assisting persons with disabilities during catastrophic events.

Table 3

Comments by Course Participants in the Satisfaction Rating Sheet Regarding the 4-hour "Ready, Willing, & Able" Course, Conducted in 2006

Course Participants Responses

- "I enjoyed the most that the material was presented by a person with a disability—first hand experience," said a nurse.
- According to a first responder, "I obtained new, useful information to be utilized for planning for preparedness."
- The topics most valuable are the "sensitivity issues and ADA"
- "I now know how to respond and make appropriate accommodations in a disaster situation."
- A BT Coordinator found the use of signage and other communication tools the most useful part of the course.
- "The most helpful information was on the wheelchair evacuation techniques and seeing eye dogs and disability," according to a Safety Chairperson.
- I came away from the course knowing more on "how to respect people with disabilities."
- "Great Course," writes a staff person from an independent living center.

Questions to Poster Viewers: If you answer "no" to one of the following questions, it may be time for new policy directions.

- Are disability-related disaster preparedness and evacuation policies and procedures included in preparedness plans at your place of employment or in the local emergency plan?
- Have persons with disabilities (sensory, mobility, cognitive) been consulted in the planning process?
- Have policy measures been taken to address specific difficulties faced by persons with disabilities (as outlined by this research) regarding evacuation, sheltering, temporary housing or preparedness?
- Have you received training on disability-related disaster preparedness and response?

Resources

Research website:

www.nobodyleftbeind2.org

Course:

Available in September, *Ready, Willing, & Able*, 2-hour KS-TRAIN Internet video course for CEUs https://ks.train.org

Individual preparedness for persons with disabilities:

Kailes, J. I. Emergency Evacuation Preparedness: Taking Responsibility for Your Safety. A Guide for People with Disabilities and Other Activity Limitation. www.cdihp.org/evacuation/toc.html

American Red Cross and FEMA. Preparing for Emergencies: A Checklist for People with Mobility Problems Disaster Preparedness for Seniors by Seniors: What We Can Do to Save Our Live. www.redcross.org

National Organization on Disability. Guide on the Special Needs of People with Disabilities for Emergency Managers, Planners and Responders. www.nod.org/publications/

Business preparedness plans:

NFPA. Emergency Evacuation Planning Guide for People with Disabilities www.nfpa.org
Secretary of Transportation." Emergency Preparedness for People with Disabilities."
www.dotcr.ost.dot.gov/documents/dotpart/pwd_guidelines.htm

Batiste, Linda Carter and Beth Loy. (2004) "Employers' Guide to Including Employees with Disabilities in Emergency Evacuation Plans." www.jan.wvu.edu/media/emergency.html

Local emergency management planning:

See "Appendix on Persons with Disabilities," in the report: Report on Exemplary and Best Practices Disaster Preparedness and Response for People with Disabilities. (March, 2007). www.nobodyleftbehind2.org, under "Findings".

U.S. Fire Administration. *Orientation Manual for First Responders on the Evacuation of People with Disabilities*. Pub. No. is FA-235, Publications Center (800) 561-3356 www.usfa.fema.gov/USFAPUBS

ADA

"Resources on Emergency Evacuation and Disaster Preparedness". www.access board.gov/evac.htm

U.S. Dept. of Justice. "An ADA Guide for Local Governments: Making Community Emergency Preparedness and Response Programs Accessible to People with Disabilities." www.usdoj.gov/crt/ada/emergencyprep.htm

Pandemic Planning:

www.pandemicflu.gov or www.cdc.gov/flu/pandemic/healthprofessional.htm

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