

A Shared Responsibility: the need for an inclusive approach to emergency planning for people with disabilities

A report by the Medical Needs Task Force
of the Emergency Preparedness
for People with Disabilities Committee

prepared by Karen Martin

2009



BC Coalition of People with Disabilities

Table of Contents

Executive Summary.....	3
Introduction and Background.....	10
Setting the Context for Emergency Planning for people with Disabilities.....	12
The Functional Needs Framework.....	16
The Social Organization Framework.....	17
Communication Needs.....	19
Medical Needs.....	26
Maintaining Functional Independence.....	37
Supervision Needs.....	45
Transportation Needs.....	47
Conclusion and Recommendations.....	53
Bibliography.....	56
Appendices:	
Appendix One: Acronyms.....	58
Appendix Two: Definitions.....	59
Appendix Three: Identified Groups in BC.....	60

Executive Summary

Introduction

Background: The Emergency Preparedness for People with Disabilities Committee

The Emergency Preparedness for People with Disabilities Committee (EPPDC) was established in 2006 by the BC Coalition of People with Disabilities. The EPPDC hosted three planning workshops in Vancouver from January to March 2008. Over 30 organizations, individuals with disabilities, and emergency management stakeholders participated. From the workshops the EPPDC has produced the *Road Map to Emergency Planning for People with Disabilities*¹. This document provides recommendations and actions for individuals with disabilities, community organizations, first responders, government programs and other stakeholders to move forward in the areas of: Communication, Medical Needs and Functional Independence, Personal Preparedness, Training, and Transportation.

Out of the workshops, the Medical Needs Task Force was established as a sub-committee of the EPPDC. The Task Force is concentrating its efforts on the area of Medical Needs and Supports, which covers three of the five functional needs areas discussed in this research paper: Medical Needs, Functional Independence, and Supervision Needs. Although, little information exists on planning for supervision needs in emergencies.

The Road Map report identifies the importance of incorporating the needs of people who use medical supplies, medications, and assistive equipment and devices into emergency preparedness, response and recovery. To effectively meet these needs during an emergency, the EPPDC believes that a coordinated strategy utilizing a collaborative approach is required. This collaborative endeavour should involve people with disabilities, the Provincial Emergency Program, health authorities, agencies that provide services to people with disabilities and other key stakeholders. To-date, these government programs and agencies have not sufficiently planned for meeting the functional needs of people with disabilities during emergencies.

¹ The BC Coalition of People with Disabilities, *A Road Map to Emergency Planning for People with Disabilities*, 2008

Road Map: Key Points

1. Many people with disabilities and seniors use assistive equipment and devices to function independently on a daily basis: mobility aids, communication aids, medical equipment, and service animals
2. Some people with disabilities use life sustaining equipment that requires power
3. Many people with disabilities and seniors may use medical supplies on a daily basis to manage health conditions
4. Many people with disabilities and seniors may use medications on a daily basis to manage health conditions
5. During an emergency individuals may become separated from their assistive equipment and devices or service animal
6. During an emergency individuals may have to leave quickly without the opportunity to take medical supplies or medications with them
7. Individuals with disabilities who need assistance with daily living activities may be separated from their caregivers or attendants during an emergency
8. Individuals with dementia, Alzheimer's, severe mental illness, cognitive or developmental disabilities may need supervision
9. Planning for these situations and early identification of individuals with these needs during a response can avoid deterioration of their health and functional independence

Engaging Stakeholders

If health authorities, ESS/municipalities, PEP, community-based organizations serving people with disabilities and seniors, medical equipment and supplies programs, and pharmacare and pharmacists work together toward a coordinated strategy then there will be less cost to government and communities in the long run.

If the key points identified by the Medical Needs Task Force are not met the consequences could be many. A few of these are:

- Lost lives
- Further injury or deterioration of health for individuals and therefore prolonged recovery time
- Extra stress on already stretched health resources during the response and recovery phases
- Extra financial costs on the medical system short-term and long-term
- Extra demand on ESS at reception centres and group lodgings during the response phase

The Functional Needs Framework: C-MIST

The Medical Needs Task Force felt it was important to produce an evidence-based research paper that would demonstrate and support the need for planning for people with disabilities and functional needs, as well as provide examples of planning solutions.

The BCCPD and the EPPDC have promoted the adoption of the Functional Needs Framework for emergency planning in British Columbia. The Functional Needs Framework is a tool to address the individual's needs in an emergency or disaster context. People may have limitations in the following functional areas:

- Hearing
- Seeing
- Breathing
- Walking and mobility
- Manipulating objects
- Speech
- Communication
- Learning
- Understanding

For the purposes of emergency preparedness and response, the Functional Needs Framework looks at five categories.

C-MIST

- Communication
- Medical
- Independence
- Supervision
- Transportation

This research paper is organized around the five functional needs categories.

We examined reports primarily based on the lessons learned from September 11th, Hurricane Katrina and the California Wildfires. All of the reports and guides discussed in this research paper argue for the inclusion of the disability community in emergency planning and response. Developing partnerships with community organizations has the potential to fully optimize human and other resources during response and recovery from disasters. Furthermore, all of the reports recognize that the planning that is currently in place in the US and Canada is inadequate to address the needs of people with disabilities and those with functional limitations.

Key Research Points

1. There has been an increase in the number of people with disabilities living independently in community coupled with an increase in the percentage of Canadians with disabilities.
2. Individuals with disabilities or functional limitations have a higher level of disaster vulnerability than those without disabilities because they face socioeconomic barriers to accessing resources on a daily basis – the vulnerability exists before the disaster occurs.
3. The Canadian Human Rights Code, Section 8, has the provision regarding discrimination in accommodation, service and facility, which government programs must adhere to.
4. Separate “special needs” planning is not effective. It continues to segregate individuals with disabilities. This planning often gets left by the wayside.
5. During disasters many individuals with disabilities lose vital supports and services that are critical to their functioning on a daily basis and that help prevent their health and well-being from deteriorating. These supports and services are critical to an individual’s ability to participate in society.
6. Reports demonstrate that many people with disabilities experience inappropriate placement in special needs shelters or hospitals when they require no medical care.

7. First receivers should not make assumptions that because an individual usually has a care provider for daily assistance needs that that care provider will be available during an emergency.
8. Reports demonstrate that individuals with equipment and assistive devices were often forced to abandon their equipment in order to get evacuation transportation.
9. Reports demonstrate a lack of timely, accessible transportation for individuals with disabilities or functional needs that required it.
10. Many individuals with disabilities can contribute in an emergency if their functional needs are met.

Research Recommendations

The BC Coalition of People with Disabilities and the Medical Needs Task Force recommend the following to the emergency management sector in British Columbia and Canada:

1. Emergency planners should move away from “special needs “ planning and utilize the Functional Needs Framework to plan for all members of a community.
2. The Provincial Emergency Program should incorporate the Functional Needs Framework into its provincial emergency planning and response guidelines and curriculum.
3. Emergency planners should utilize the Social Organization Framework to develop a better understanding of social networks and social capital in order to prepare and mobilize communities and enhance community resiliency.
4. The Provincial Emergency Program, municipalities, and regional districts should support the involvement of community-based organizations in emergency planning, response and recovery through community funding programs in order to build community capacity.
5. Emergency Managers should use multiple methods for public emergency communications, including alternate formats for people with disabilities.

6. Emergency information should be made available to people with disabilities, such as the deaf and hard of hearing, at the same time as those without disabilities.
7. Government emergency programs need to plan for digital inclusion. When deciding the use of technologies to provide emergency information to the public they need to consider the availability, affordability, accessibility, and acceptability of those technologies by different at-risk population groups.
8. Emergency Social Services should implement a system of triaging.
9. Emergency Social Services should work with health authorities and NGOs who work with individuals with disabilities and functional limitations to create specialized teams.
10. Reception Centres and Group Lodgings need to provide universal access shelters for a range of functional limitations that evacuees from the community may have.
11. Individuals with disabilities and functional limitations who live independently in the community should not be segregated at Reception Centres or Group Lodgings or sent to specialized shelters.
12. Specialized shelters should be for individuals with complex medical needs only.
13. More comprehensive planning needs to occur in order to address the replacement of medications, and equipment and assistive devices.
14. There needs to be coordination of accessible transportation for evacuation purposes; this needs to include the methods of provision, roles, responsibilities, and planning for additional time required for loading and unloading accessible vehicles.
15. Individuals should be evacuated with their equipment and assistance animals.
16. If, due to imminent life threatening circumstances, individuals can not be evacuated with their equipment then there needs to be a system established for tagging and transporting the equipment and reuniting the owner with their equipment.

17. Evacuation plans involving community pick-up transportation points need to plan for individuals with disabilities who can not make it to pick-up points.
18. Emergency Social Services need to plan for individuals requiring supervision at Reception Centres and Group Lodgings, such as individuals with dementia.
19. After Action Reviews should involve representatives from the disability community and other at-risk populations in order to understand the full impact of the event on the community.
20. After Action Reports in Canada need to include the impact on and the experiences of at-risk populations in order to build a better understanding and to be able to develop effective emergency plans.
21. The Provincial Emergency Program, Emergency Social Services, and health emergency management should work collaboratively with the BC Coalition of People with Disabilities, the EPPDC, and community-based organizations to address the needs of people with functional limitations.

Introduction

Background: The Emergency Preparedness for People with Disabilities Committee

The Emergency Preparedness for People with Disabilities Committee (EPPDC) was established in 2006 by the BC Coalition of People with Disabilities. The EPPDC hosted three planning workshops in Vancouver from January to March 2008. Over 30 organizations, individuals with disabilities, and emergency management stakeholders participated. From the workshops the EPPDC has produced the *Road Map to Emergency Planning for People with Disabilities*². This document provides recommendations and actions for individuals with disabilities, community organizations, first responders, government programs and other stakeholders to move forward in the areas of: Communication, Medical Needs and Functional Independence, Personal Preparedness, Training, and Transportation.

Out of the workshops, the Medical Needs Task Force was established as a sub-committee of the EPPDC. The Task Force is concentrating its efforts on the area of Medical Needs and Supports, which covers three of the five functional needs areas discussed in this research paper: Medical Needs, Functional Independence, and Supervision Needs. Although, little information exists on planning for supervision needs in emergencies.

The Road Map report identifies the importance of incorporating the needs of people who use medical supplies, medications, and assistive equipment and devices into emergency preparedness, response and recovery. To effectively meet these needs during an emergency, the EPPDC believes that a coordinated strategy utilizing a collaborative approach is required. This collaborative endeavour should involve people with disabilities, the Provincial Emergency Program, health authorities, agencies that provide services to people with disabilities and other key stakeholders. To-date, these government programs and agencies have not sufficiently planned for meeting the functional needs of people with disabilities during emergencies.

Road Map: Key Points

10. Many people with disabilities and seniors use assistive equipment and devices to function independently on a daily basis: mobility aids, communication aids, medical equipment, and service animals

² The BC Coalition of People with Disabilities, *A Road Map to Emergency Planning for People with Disabilities*, 2008

11. Some people with disabilities use life sustaining equipment that requires power
12. Many people with disabilities and seniors may use medical supplies on a daily basis to manage health conditions
13. Many people with disabilities and seniors may use medications on a daily basis to manage health conditions
14. During an emergency individuals may become separated from their assistive equipment and devices or service animal
15. During an emergency individuals may have to leave quickly without the opportunity to take medical supplies or medications with them
16. Individuals with disabilities who need assistance with daily living activities may be separated from their caregivers or attendants during an emergency
17. Individuals with dementia, Alzheimer's, severe mental illness, cognitive or developmental disabilities may need supervision
18. Planning for these situations and early identification of individuals with these needs during a response can avoid deterioration of their health and functional independence

Road Map: Key Actions/Recommendations

Preparedness:

1. There is a need for coordinated protocols and procedures for the acquisition and dispensing of medications
2. There is a need for refrigeration at reception centres and group lodgings
3. There is a need to do an inventory of facilities regarding backup power for refrigeration
4. There is a need to work with existing service agencies that could help identify people with disabilities that may need assistance

Response:

1. Replacement of essential medical supplies: PEP/ESS should ensure that agreements with medical supplies companies are developed and have some supplies at reception centres
2. Replacement/loan of equipment and devices: PEP/ESS should have a mechanism for loan of equipment and devices by building partnership agreements with existing equipment loan programs

3. Provide psychosocial support at all reception centres

Engaging Stakeholders

If health authorities, ESS/municipalities, PEP, community-based organizations serving people with disabilities and seniors, medical equipment and supplies programs, and pharmacare and pharmacists work together toward a coordinated strategy then there will be less cost to government and communities in the long run.

If the key points and recommendations identified by the Medical Needs Task Force are not addressed, the consequences could be many. A few of these are:

- Lost lives
- Further injury or deterioration of health for individuals and therefore prolonged recovery time
- Extra stress on already stretched health resources during the response and recovery phases
- Extra financial costs on the medical system short-term and long-term
- Extra demand on ESS at reception centres and group lodgings during the response phase

Setting the Context for Emergency Planning for People with Disabilities

In the 1970s there was a move away from the institutionalization of people with disabilities toward an integration of individuals into the community. This change coincided with an increase in the percentage of people with disabilities³. The Federal Emergency Management Agency (FEMA) in the United States, elaborates on this trend by highlighting that the current US population is diverse and aging and wants to maintain independence as long as possible. In the US there is a rise in residential situations that provide “as needed” levels of care, such as assisted living⁴. This holds true for Canada as well. More individuals with disabilities and functional needs living independently in the community increase the challenges for emergency planners. Unfortunately, emergency planning has

³ Rahimi, Mansour, *An Examination of Behavior and Hazards Faced by Physically Disabled People During the Loma Prieta Earthquake*, Institute of Safety and Systems Management University of Southern California, 1993.

⁴ Federal Emergency Management Agency and DHS Office for Civil Rights and Civil Liberties, *Interim Emergency Management Planning Guide for Special Needs Populations*, Version 1.0, August 2008, USA

lagged behind this societal change.

June Issacson Kailes⁵ states that emergency management systems plan for people who can: walk, see, hear, drive, read, speak and quickly understand and respond to instructions. John Lindsay⁶ adds that one of the key assumptions made by emergency planners is that people are mobile, educated, and financially secure.

These planning perspectives and assumptions have contributed to tragic results for people with disabilities and functional needs, as is illustrated in numerous reports discussing the impacts of September 11th, Hurricanes Katrina and Rita, and the 2007 Southern California wildfires.

It can be argued that everyone is potentially vulnerable during a disaster. A disaster occurs in a whole community, but the harm it inflicts varies across individuals depending on a number of factors. For the populations we are focusing on in this research paper, a higher risk to disaster vulnerability exists before a disaster occurs due to disability or functional limitations individuals may have. There is a significant distinction here; John Lindsay notes that Hurricane Katrina, while it brought to light the vulnerability of seniors and people with disabilities, did not create the vulnerability; it already existed as an underlying social and environmental condition. Lindsay states that it is not exposure to the hazard itself, but the fact that there are individuals in our society that are vulnerable on a day-to-day basis, those who are unable to access resources and who are marginalized, such as people with disabilities and functional limitations, that makes them most vulnerable during a disaster. Accessing resources and services during a disaster is difficult for many people with disabilities and functional needs because accessing resources and services on a daily basis often proves to be challenging. John J. Kiefer et al reinforces this argument, stating that vulnerability is *“pre-event inherent characteristics or qualities of systems that create the potential for harm or differential ability to recover following a crisis or hazard event.”*⁷

The US National Council on Disability (NCD), in its report on the impact of hurricanes Katrina and Rita, also supports Lindsay’s argument. This report states that, while the challenges faced by people with disabilities during Katrina were unique in scope and proportion, they were similar to the challenges people with disabilities face on a day-to-day basis.⁸ Kailes also presents the perspective that people with disabilities and functional limitations may have a narrower margin of

⁵ Kailes, June Issacson, *Southern California Wildfires After Action Report*, 2008

⁶ Lindsay, John, *Vulnerability – Identifying a Collective Responsibility for Individual Safety*, Department of Applied Disaster and Emergency Studies, Brandon University, 2007, Ontario

⁷ Kiefer, John J., et al, *Providing Access to Resilience-Enhancing Technologies for Disadvantaged Communities and Vulnerable Populations*, December 2008, USA

⁸ National Council on Disability, *The Impact of Hurricanes Katrina and Rita on People with Disabilities: A Look Back and Remaining Challenges*, August 2006, Washington, USA

resiliency and a higher vulnerability than people without disabilities or functional limitations.

Lindsay's argument is further supported by Health Canada, which states that the Canadian population has many subgroups with different characteristics, which can make them more or less vulnerable to emergencies or disasters. Primarily, if an individual is economically or socially marginalized they may be more at risk.⁹ Susanne MacKinnon also discusses the need to conceptualize vulnerable populations within a socioeconomic and environmental context.¹⁰

An example of this is the heat waves in Europe in 2003 that claimed approximately 70,000 lives – the majority of whom were elderly people who lived alone and had no family support. Health Canada takes the argument further, noting that the National Framework for Health Emergency Management states that identifying the characteristics of vulnerable populations is as important as understanding the characteristics of a hazard. The *Health Policy Research Bulletin*, April 2009, provides the Canadian Red Cross' list of ten high-risk population groups in Canada, which are: seniors, persons with disabilities, medically dependent individuals, persons with low incomes, those with low literacy levels, women, aboriginal populations, new immigrants and cultural minorities, children and youth and transient populations.¹¹

Lindsay discusses the relationship between the individual and the community and argues that the vulnerability of individuals affects the whole community's vulnerability. Therefore, it is essential to view vulnerability and resiliency as a collective experience requiring a collective response. Lindsay's paper actually argues for a collective responsibility for the safety of all members of the community. He states that the determinants of vulnerability are collective social constructs generated in our communities and therefore a community approach is required to address them. Kiefer et al also argue this point when discussing community capacity, which they view as the demonstrated sense of shared responsibility for the general welfare of community members. Keifer et al extend this notion to the demonstration of collective competence as well, which is when the community takes advantage of opportunities to address community needs. The relevance of shared responsibility and collective competence is essential to disaster resilience because if community members have a sense of responsibility for those around them, they are more likely to take action to help themselves and others.

Kiefer et al further argue that the goal for planning should be to achieve shared, desired outcomes, such as health and well-being, community safety and resilience. If these desired outcomes are identified and valued by individuals, families, community groups and leaders, they can provide direction for the

⁹ Health Canada, *Health Policy Research Bulletin, Emergency Management*, April 2009, Issue 15

¹⁰ MacKinnon, Susanne, *Advanced Planning Unit Southwest Region, 2007 Freshet, Vulnerable Populations Review*, Provincial Emergency Program, British Columbia

¹¹ Health Canada, *Health Policy Research Bulletin*

application of resources.

Focusing on a Social Organization framework, which is discussed later in this research paper, would enable planners to effectively build collaborative networks that can be activated in disaster and provides a tool for identifying the strengths and weaknesses within a community.¹²

Kailes adds to Lindsay's argument for a collective or inclusive community plan and response. Her report recommends that separate special needs population planning is not effective; that segregating and isolating the needs of a significant number of the population does not make sense; that there should not be a "critical plan" and then a "special plan". The BCCPD agrees with Kailes; the Functional Needs Framework for emergency planning can be used as an approach to planning for the whole community. Kailes further argues that separate planning is inefficient for budgeting, procurement and resource allocation.

Health Canada suggests that emergency management programs should engage community groups to enhance community resilience. Community group networks can enable greater outreach and help raise awareness, particularly with harder to reach populations. Community partners are knowledgeable about the specific groups they serve; this makes them an important resource to emergency managers. "*Emergency management is only as strong as the communities it supports.*"¹³ Kailes' report reiterates this statement. MacKinnon argues further that emergency management should not overlook the fact that many individuals within vulnerable populations can contribute during an emergency once their functional needs are met.

The need for the involvement of community organizations in planning is illustrated by the survey done by the Canadian Red Cross on the voluntary sector involvement in emergency response. Seventy-percent of emergency management organizations who responded reported collaboration with voluntary organizations serving high-risk populations; however, these were relationships with organizations already involved in emergency response, such as the Red Cross, the Salvation Army and St. John Ambulance. Of the 48 survey respondents, only four cited working with other organizations serving high-risk populations. Equally, survey respondents from voluntary organizations serving high-risk populations cited lack of awareness about emergency management systems as well as a lack of mandate and resource constraints, as reasons for not being involved.¹⁴ Similarly, the Report on Special Needs Assessment for Katrina Evacuees (SNAKE) Project indicated that 85.7% of community based organizations that they surveyed did not know how to connect with the

¹² Kiefer, John J., et al, *Providing Access to Resilience-Enhancing Technologies for Disadvantaged Communities and Vulnerable Populations*, December 2008, USA

¹³ Health Canada, *Health Policy Research Bulletin, Emergency Management*, April 2009, Issue 15

¹⁴ Health Canada, *Health Policy Research Bulletin, Emergency Management*, April 2009, Issue 15

emergency management system.¹⁵

The NOD and FEMA state that it is important to recognize that people with disabilities who experience a disaster may be deprived of vital connections and services that are essential to their daily functional independence, health and well-being, such as: attendants, assistance animals, health services, home support, equipment suppliers, local business owners and even family members that they are dependent on for critical support.¹⁶

The NCD estimated that, immediately after hurricane Katrina, about 25% of the cities' populations hardest hit (Biloxi, Mississippi; Mobile, Alabama; and New Orleans, Louisiana) – 155,000 people – had disabilities. While there is not a specific figure for the number of hurricane-related deaths, it became clear that a disproportionate number of the fatalities were people with disabilities. Seniors comprised only 15% of the population in New Orleans, but the American Association of Retired Persons estimated 73% of Katrina related deaths were individuals age 60 and over. The majority of those individuals had medical conditions and functional or sensory disabilities.¹⁷

“If the value that everyone should be included is not infused into planning, then not everyone will be included.”¹⁸

The Functional Needs Framework: C-MIST

Kailes recommends a function-based approach to emergency planning in order to move away from narrow definitions of disability. She argues that the term “special needs” is not effective because it does not provide guidance to operationalize needed planning tasks. Furthermore, she states that functional limitations are common characteristics of the human experience and that those with functional limitations actually make up a large group, so that viewing them as a “special” few is detrimental to the well-being and safety of individuals and the whole community.

As FEMA puts it *“this function-based definition reflects the capabilities of the individual, not the condition or label”¹⁹* The BCCPD and the EPPDC have

¹⁵National Organization on Disability, *Report on Special Needs Assessment for Katrina Evacuees (SNAKE) Project*, Washington, USA, 2006

¹⁶National Organization on Disability, *Report on Special Needs Assessment for Katrina Evacuees (SNAKE) Project*, Washington, USA, 2006

¹⁷National Council on Disability, *The Impact of Hurricanes Katrina and Rita on People with Disabilities: A Look Back and Remaining Challenges*, August 2006, Washington, USA

¹⁸Kailes, June Issacson, *Southern California Wildfires After Action Report*, 2008

¹⁹Federal Emergency Management Agency and DHS Office for Civil Rights and Civil Liberties, *Interim Emergency Management Planning Guide for Special Needs Populations*, Version 1.0, August 2008, USA

promoted the adoption of the Functional Needs Framework for emergency planning in British Columbia and this paper is organized around the five functional needs categories.

The Functional Needs Framework is a tool to address the individual's needs in an emergency or disaster context. People may have limitations in the following functional areas:

- Hearing
- Seeing
- Breathing
- Walking and mobility
- Manipulating objects
- Speech
- Communication
- Learning
- Understanding

For the purposes of emergency preparedness and response, the Functional Needs Framework looks at five categories.

C-MIST

- Communication
- Medical
- Independence
- Supervision
- Transportation

In the *Health Policy Research Bulletin*, April 2009, Health Canada discusses the functional needs approach to emergency planning. It also emphasizes that emergency planners must still consider the historic, social and personal contexts that shape the lives of at-risk groups and the BCCPD agrees.

The Social Organization Framework

FEMA states that the most successful jurisdictions during the recovery phase of a disaster are those that have already established relationships with a diversity of community organizations that work with vulnerable populations.²⁰

²⁰ Federal Emergency Management Agency and DHS Office for Civil Rights and Civil Liberties, *Interim Emergency Management Planning Guide for Special Needs Populations*, Version 1.0, August 2008, USA

Kiefer et al introduce the Social Organization Framework in their report on resilience-enhancing technologies for disadvantaged communities. This report fully situates the need for emergency planning and response to address vulnerable population needs within a Social Organization Framework. By focusing on social networks, social capital and community capacity, the community becomes central to the planning, rather than separate from it.

Social networks are essential for providing support to individuals in everyday life and in crisis situations. Most people are part of multiple networks. Some people are entirely isolated and excluded from network participation; this may include people such as individuals with disabilities, the frail elderly, and people living in poverty. It is critical to recognize the role that social networks can play in developing community capacity, which in turn can reduce the vulnerability of those members of the population at greatest risk.²¹

Social Networks:

- *Informal networks* are those relationships with family, friends, neighbours, and work colleagues.
- *Formal networks* include community organizations and government agencies such as: disability organizations, volunteer centres, social service organizations, faith-based organizations, recreational clubs, schools, health and government services.

Social Capital:

At the core of social capital is the interaction and trust amongst social networks. It is about the exchange of information and the reciprocity between individuals. If individuals receive information from community groups that they associate with and trust then the information is more likely to be viewed as credible.

Resiliency:

Resiliency can be defined as the capacity of individuals and systems to cope and maintain positive functioning in the face of significant adversity or risk. Resiliency can be enhanced by building in protective factors that enable people to help themselves and one another during crises.²²

²¹ Kiefer, John J., et al, *Providing Access to Resilience-Enhancing Technologies for Disadvantaged Communities and Vulnerable Populations*, December 2008, USA

²² The BC Coalition of People with Disabilities and the Centre for Emergency Preparedness and Response, Public Health Agency of Canada, *Checklist to Facilitate Health Emergency Planning for At-Risk Populations*, 2008, Canada

Communication Needs

Communication Needs includes people who:

- Have limited or no ability to speak, read or understand English
- Have reduced or no ability to speak, see or hear
- Have limitations in learning and understanding

During an emergency people with communication needs may not, for example, be able to:

- Hear verbal announcements
- See directional signs to assistance services
- Understand the message

The Emergency Preparedness and Emergency Communication Access report on lessons learned from the September 11, 2001 attacks in the United States provides valuable information for emergency planning. The report examines different technologies used to communicate emergency information during and after 9/11: television, telephone, internet, radio, public address systems, signal systems, public message displays, and print media. This report was produced by the Deaf and Hard of Hearing Consumer Advocacy Network (DHHCAN) in the United States and focuses on the September 11th communication experiences of deaf and hard of hearing individuals.

Identified Issues:

Communication is critical in emergencies and disasters. Most emergency programs use auditory systems for informing the public: television, radio, and warning systems. Therefore, hearing loss has a major impact on the ability to receive this vital information.

“Sirens, shouted warnings, calls from rescue workers trying to locate people in rubble, knocks on doors to give urgent information, quick phone calls to give a heads-up about a developing situation, radios, public address systems – all can be useless... Without effective communication systems, deaf and hard of hearing individuals do not know that there is an emergency, cannot learn what steps must be taken to protect themselves and others, and have no access to critical resources in the aftermath of an emergency.”²³

On September 11, 2001 and in the days that followed, many national television networks provided closed captioning. However, there were a number of problems. The caption error rate was high due to the long hours required by captioners. DHHCAN received a large number of reports from individuals who

²³ Deaf and Hard of Hearing Consumer Advocacy Network, *Emergency Preparedness and Emergency Communication Access: Lessons Learned Since 9/11 and Recommendations*, December 2004, USA

were deaf about the loss of captioning on news programs. There was inconsistency in captioning; individuals who were deaf and hard of hearing reported that captions on national broadcasts were sometimes missing. This was often due to TV stations using text updates across the bottom of the screen.

As one woman reported, *“During the minutes and hours after the September 11 attacks, I found national news coverage with captions. Most of it was about the World Trade Center. I was very anxious to learn more about the Pentagon, where many of my neighbors and friends work. The one local station providing most of the coverage on the Pentagon was the last to get captions, hours later.”*²⁴

Individuals for whom American Sign Language is their native language, were the last group of people to receive information about what was happening on the 11th of September. This group of people were unable to hear news reports and unable to fully understand written accounts on television and in newspapers. They needed information in American Sign Language, but most communities did not have a network to reach these individuals.

During the September 11th attacks, some individuals found that the hearing people around them, who were aware of their hearing loss, failed to inform them of what was going on. One deaf employee at the Department of State was actually informed of the attacks through an email from a friend while her co-workers were gathered in the lobby and were watching the news reports on television.

One state agency employee wrote, *“It is demeaning and undignified to depend on hearing co-workers to tell us when an announcement was made and what it was in reference to. Sometimes they are not around.”*²⁵

Solution:

This state employee suggested that a visual public announcement system be used so that people with hearing loss can be alerted to any emergencies.

Identified Issues:

The DHHCAN report further identifies deaf-blind individuals and the deaf and hard of hearing who are non-English speaking as populations that emergency managers need to also consider when providing public emergency information.

Another important consideration that the DHHCAN report discusses is the need for emergency managers to plan for visitors; individuals who are deaf and hard of hearing may *“be speakers at a school, clients in an office, making a deposit at a*

²⁴ Deaf and Hard of Hearing Consumer Advocacy Network, *Emergency Preparedness and Emergency Communication Access: Lessons Learned Since 9/11 and Recommendations*, December 2004, USA

²⁵ Deaf and Hard of Hearing Consumer Advocacy Network

*bank, shopping at a store, doing research in a library, touring a museum, interviewing for a job, or riding on a bus.*²⁶

The DHHCAN report states that, through the inclusion of deaf and hard of hearing individuals in emergency drills in Arizona, the Arizona Technology Access Program has been able to identify problems that need to be addressed. For example, in one full-scale bioterrorism drill hearing aids and cochlear implants had to be removed for the full-body decontamination spraying, but were not returned to the individuals until the drill was fully completed. This made triaging for these deaf and hard of hearing individuals difficult.

Solution:

The DHHCAN report makes an important point – creating effective emergency communication systems that address the needs of those who are deaf and hard of hearing will help all members of the community because in an emergency, many people with no hearing loss may have difficulty hearing. Noise from winds, explosions, fires, officials using megaphones and sirens coupled with stress and confusion, can make it difficult for anyone to hear well.

The NOD, in its *Guide on the Special Needs of People with Disabilities for Emergency Managers, Planners and Responders*, reiterates the DHHCAN report and stresses that communication targeted specifically to people with disabilities can easily be incorporated into a general emergency communication plan.

Identified Issues:

The same emergency communication failures that occurred during and immediately following the September 11th attacks, were repeated during the response to hurricane Katrina. Many of the emergency shelters during Katrina did not provide alternate formats of communication for people who were deaf and hard of hearing; 70% did not have access to American Sign Language; 80% did not have TTY (telecommunications for the deaf and hard of hearing); 60% did not have televisions with open caption capacity; and only 56% had areas where oral communications were posted for reading.²⁷

Identified Issues:

Kailes, in the *Southern California Wildfires After Action* report, highlights some of the ways that individuals with disabilities were left out of the emergency information loop. Some of these were: people with hearing loss could not hear the evacuation announcements or vehicle sirens from patrol cars; people with vision loss could not see police and fire-rescue vehicle and helicopter lights; state

²⁶ Deaf and Hard of Hearing Consumer Advocacy Network, *Emergency Preparedness and Emergency Communication Access: Lessons Learned Since 9/11 and Recommendations*, December 2004, USA

²⁷ Kailes, June Issacson, *Southern California Wildfires After Action Report*, 2008

and local government nor the media consistently provided TTY numbers for information on evacuation centres and local assistance; and in many shelters there was a lack of directional signage to accessible features within the shelters.

The NOD guide also identifies communication problems, all of which occurred during the Southern California wildfires, September 11th and Katrina:

- Text message “crawl” across a television screen in an area reserved for closed captioning makes both messages unintelligible for viewers who use closed captioning.
- Camera operators and editors often do not show the sign language interpreter in the picture who is interpreting next to the official spokesperson providing emergency information.
- Emergency hotlines often do not include TTY/TTD numbers.
- Websites with emergency information on them need to be accessible.

Solutions:

Kailes argues that it is critical for people with disabilities who require alternate methods of communication to receive emergency information at the same time as those people without disabilities. This requires emergency managers to use multiple and redundant means to convey timely information. MacKinnon, in her 2008 paper, *Vulnerable Populations and Emergency Management Integration Strategies*, reiterates this recommendation, arguing that communities are becoming increasingly diverse, which requires a variety of methods of communication and different strategies and tools in order to disseminate emergency information to the public. Kiefer et al in the report, *Providing Access to Resilience-Enhancing Technologies for Disadvantaged Communities and Vulnerable Populations*, also highlight this point. They state that a multimedia approach is needed because no single technology will reach all vulnerable groups throughout all stages of a disaster.

One recommendation in the *Southern California Wildfires After Action* report is that those individuals who provide door-to-door notification should be trained to provide emergency evacuation announcements in pictograms in addition to using loudspeakers. Another recommendation is that emergency planners should establish memorandum of understanding and mutual aid agreements with video remote interpreting services from a number of in-state and out-of-state areas. This is due to the significant shortage of sign language interpreters. It is important to note that in British Columbia there is also a shortage of sign language interpreters.

Kailes recommends that emergency shelters use captions on all televisions and provide signs with symbols in addition to text; the *Southern California Wildfires After Action* report provides examples of non-text signage that can be used. This will enable people with limitations of seeing, hearing, understanding, cognition or intellectual abilities to receive the message.

Solution:

Phillips and Mincin in the report, *Post-Katrina Emergency Messaging for the Disability Community*²⁸, highlight the Access to Emergency Alerts Project in the US. Access to Community Alerts brings together emergency alert providers, local information resources, representatives from telecommunications and public broadcasting, and consumers in a collaborative effort to make emergency warnings accessible.

Identified Issue:

Kiefer et al examines how technologies can be used to enhance communications during disasters, particularly for vulnerable populations. Kiefer's report discusses those populations most likely to experience barriers to using new technologies; these include: people living in rural or remote areas; those living in inner cities; those who are homeless; transients; those living in poverty; those with vision, hearing or cognitive disabilities; elderly; some minorities; those with lower levels of education; and those with limited experience in technology use.

Kiefer et al, argue digital inclusion is necessary. Many government programs are moving to electronic formats to provide information to the public, however many vulnerable populations may have limited access to newer technologies and low-to-negligible technology skills.

Solution:

Providing emergency information through electronic formats may further marginalize vulnerable populations, therefore government and communities must be proactive in ensuring that all segments of the population have access to the technologies government programs are using to provide vital information.²⁹

Identified Issues:

Kiefer et al highlight four broad categories of barriers that may limit the utilization of technology during disasters: availability, affordability, accessibility and acceptability. Obviously, if emergency programs are going to use a particular technology to inform the public the technology has to be available to the population. For example, mountainous or isolated regions may have limited or non-existent cable or satellite television access and haphazard cell phone or broadband coverage. Kiefer et al argue that the technology can not just be available, but it also has to be affordable. Many people, including those amongst

²⁸ Phillips, Brenda and Mincin, Jennifer, *Post-Katrina Emergency Messaging for the Disability Community*, National Emergency Management Resource Center, December 2005, USA

²⁹ Kiefer, John J., et al, *Providing Access to Resilience-Enhancing Technologies for Disadvantaged Communities and Vulnerable Populations*, December 2008, USA

the most vulnerable populations, do not have the financial means to purchase the latest technologies. As well, emergency programs in smaller less affluent communities are less likely to be able to afford the latest communication systems. Another important consideration is the accessibility of the technology being used. Disaster information being provided by television, computers, or sirens means that many individuals with visual, auditory and cognitive disabilities may not receive important emergency information. Finally, some people are reluctant to use new technologies due to a number of factors: age, culture, education, experience and personal traits.

Kiefer et al state that how effectively a community addresses the four barriers of availability, affordability, accessibility and acceptability will be a determining factor of how resilient vulnerable populations will be across the disaster cycles.

Identified Issue:

Kiefer et al state that landline telephones are used broadly and are accessible among all populations, even the most vulnerable and that Reverse 911 works well with landlines. However transient populations often rely on cell phones as their primary mode of communication. It should be added that many young adults also use cell phones as their primary mode of communication. Thus, these populations may not receive Reverse 911 notifications if they fail to register their cell phones.

Solution:

The cell phone is also used broadly across populations, including vulnerable populations. Kiefer et al present Cell Phone Message Notification (Voice and SMS) as a means for emergency managers to quickly send out text messages and even call cell phones with a spoken message. Because these systems can convert text to speech over cellular technologies, it has significant potential for use with populations such as individuals with visual disabilities and the elderly who, traditionally, do not use text messaging. Kiefer et al do caution, however, that many individuals within vulnerable population groups do not currently use cell phones or text messaging.

Identified Issue:

The message and mode of communication needs to compensate for age-related changes in perception and physical ability.

Solution:

Kiefer et al introduce the Social Organization Framework and situate the use of technologies in emergencies within the context of this framework. As they state, ultimately, emergencies require a human response that requires human interaction. This paper suggests that planners and emergency managers should

consider utilizing already existing community groups' email lists and alerts, which are activated for a number of reasons. This would tap into the social networks and the social capital that already exist in the community to provide emergency information.

Medical Needs

Medical Needs includes people who need assistance with:

- Activities of daily living – bathing, eating etc.
- Managing chronic, terminal, contagious health conditions
- Managing medications, IV therapy, tube feeds
- Dialysis, oxygen, suction
- Managing wounds, catheters, ostomies

During an emergency, for example:

- Some people may be separated from family and friends
- Early identification of needs and disaster response intervention can avoid costly deterioration of health and functional independence
- Some people may need to operate power dependent equipment to sustain life

Identified Issue:

Thirty-four percent of the evacuees during the Katrina hurricane, who went to Red Cross shelters, arrived with symptoms requiring immediate attention (dehydration, shortness of breath, or injury), and 56% had a chronic disease: hypertension, diabetes, pulmonary disease, psychiatric illness.³⁰

During the response phase for hurricanes Katrina and Rita, one Red Cross volunteer informed officials of the lack of accessibility to medical services in the Cajundome. *“I have told Cajundome officials, medical staff, and Red Cross personnel about this problem. But I have been unsuccessful in getting it resolved. I have seen many frail people struggle to climb or descend the stairs in order to get medical attention, and I have personally seen two very exhausted men in wheelchairs almost decide to forego triage or other medical attention because of the difficulty of accessing this unit.”*³¹

Solution:

FEMA's *Interim Emergency Management Planning Guide for Special Needs Populations, 2008*, addresses Human Services, Medical Management and Medical Resources. The guide states that emergency plans should identify personnel, pharmaceuticals, NGO and private sector medical resources, trained professionals who work with people with disabilities and functional needs, and

³⁰ Hutton, Dr. Dave, Public Health Agency of Canada, *Putting the Puzzle Together*, Emergency Preparedness Conference, Vancouver BC, November 25, 2008.

³¹ National Council on Disability, *The Impact of Hurricanes Katrina and Rita on People with Disabilities: A Look Back and Remaining Challenges*, August 2006, Washington, USA

mental health services available in the community to support a surge in the number of people that will require ongoing medical support.

Mental Health

Identified issue:

During Katrina, individuals with mental illness were often discriminated against; some shelter staff sent them to jails, emergency rooms, nursing homes or psychiatric institutions.³²

Identified issue:

The DHHCAN report states that heightened anxiety and increased symptoms of depression were reported by numerous deaf and hard of hearing individuals in New York City following the September 11, 2001 attacks on the World Trade Centre. There was a short supply of mental health and counselling services by those trained to work with deaf and hard of hearing individuals and they were unprepared for the heavy demand.

Solution:

The League of Hard of Hearing in New York City held two community meetings for support and discussion; one meeting was for deaf individuals who use American Sign Language and the second was for hard of hearing people who use English. The League provided some crisis intervention and ongoing support through their mental health services.³³

Identified issue:

The FEMA guide states that an emergency event may result in increased stress and some individuals may have difficulty identifying themselves and/or providing basic information to authorities. Individuals with pre-existing mental health conditions may have their symptoms exacerbated as a result of the event.

Solution:

FEMA states that some jurisdictions have implemented an electronic tracking system using bracelets.

³² Hutton, Dr. Dave, Public Health Agency of Canada, *Putting the Puzzle Together*, Emergency Preparedness Conference, Vancouver BC, November 25, 2008.

³³ Deaf and Hard of Hearing Consumer Advocacy Network, *Emergency Preparedness and Emergency Communication Access: Lessons Learned Since 9/11 and Recommendations*, December 2004, USA

Solution:

FEMA states that authorities should ensure adequate support mechanisms to meet mental and behavioural health needs in the weeks and months that follow an event.

Medications, Medical Equipment and Supplies

In October 2007, California experienced 15 wildfires that caused the largest evacuation in California history with over 20,000 people taking refuge in more than 50 emergency shelters and about half a million people were evacuated.³⁴

Identified issues:

The *Southern California After Action Report* by Kailes examines the experiences of people with disabilities in the emergency shelters. Individuals reported having trouble accessing medications, durable medical equipment, and consumable medical supplies; there was a lack of options for special dietary needs; problems with assistance in refrigerating medications; and difficulty replacing essential medications. Individuals found they could not replace their medications if they had filled their prescription within the last 30 days. Restrictions placed on the refilling of medications for some prescriptions make it difficult for individuals to maintain a 7-day emergency supply. This needs to be addressed.

Medications were also a significant problem during the Katrina disaster. Eighty-one percent of the Katrina evacuees who went to Red Cross shelters were taking medications; of those individuals, 48% did not have their medications when they arrived and 20% still lacked medications two weeks later.³⁵

The FEMA guide discusses this issue under the section of Pharmaceuticals and Durable Medical Equipment. The guide highlights the issue of restrictions on the amount of prescription drugs an individual can order at one time. This may limit a person's ability to refill prescriptions immediately following an emergency and this must be considered in planning. The BCCPD has received anecdotal reports of small scale emergencies where this has been a problem in British Columbia as well.

³⁴ Kailes, June Issacson, *Southern California Wildfires After Action Report*, 2008

³⁵ Hutton, Dr. Dave, Public Health Agency of Canada, *Putting the Puzzle Together*, Emergency Preparedness Conference, Vancouver BC, November 25, 2008.

Solutions:

In order to address the Medical Needs issues that arise during emergencies and disasters, the Advanced Planning Unit for Vulnerable Populations, Freshet 2007 in British Columbia, put forward some considerations. Group lodgings, whether general or specialized, should: have a designated area for mental health activities; have back up generators to ensure medical devices that require power can be accommodated; and ensure that there is adequate storage and refrigeration of medications.

Age, Disability, and Climate Change Impacts

Identified Issue:

Seniors and those with pre-existing health conditions, such as, cardiovascular disease, neurological and mental illness, diabetes, asthma and other respiratory diseases, cancer, and those taking certain medications are most vulnerable to climate change health impacts. People who are ill may be more sensitive to vector-borne infectious diseases, water-and food-borne contamination, and smog and heat events. With Canada's aging population and growing chronic disease trends, it is expected that the health impacts due to climate change will increase as well. This will lead to an increased demand on health services in Canada. During extreme weather events health and social services can become overwhelmed resulting in further impacts to the health of individuals and communities.³⁶

Solutions

The Health Canada report, *Human Health in a Changing Climate*, argues that the gaps in existing knowledge of the risks for vulnerable populations need to be addressed and we must build adaptive capacity and develop effective solutions to minimize the harm to Canadians. The report suggests that there is opportunity to address existing disparities in capacity among individuals and communities and to revise and strengthen current public health policies and practices to ensure that there is an adequate focus on vulnerable populations.

Identified Issue:

In order to understand vulnerabilities to the health impacts of climate change there needs to be an understanding of three interacting variables: the exposure of individuals to climate hazards; individual sensitivity to the impacts; and the adaptive capacity of individuals and communities. The adaptive capacity of individuals is influenced by the determinants of health; individuals in poor health,

³⁶ Health Canada, *Human Health in a Changing Climate: A Canadian Assessment of Vulnerabilities and Adaptive Capacities, Synthesis Report*, 2008, Canada

living in poverty, and with limited social networks and access to resources have more difficulty coping with environmental stresses. Vulnerabilities within a population are uneven; some people may be more exposed or more sensitive to climate hazards and some may have a greater capacity to cope.³⁷

Solution:

Identifying the differences amongst vulnerable populations will help us to develop effective interventions and adaptations to protect the most at risk.

Identified Issue:

High levels of ozone occur annually in the Lower Fraser Valley. The main health effects of ozone include acute and chronic damage to the respiratory system, as well as negative impacts on the cardiovascular system. Health Canada estimated that air pollution causes 5,900 premature deaths in eight Canadian cities each year. Climate influences on air quality also arise through forest fires. During the 2003 wild fires in British Columbia 45,000 people were forced to evacuate their homes and around 350 homes and businesses were destroyed. The Okanagan Mountain Park fire near Kelowna produced some of the worst effects on health and well-being of residents; there were increased levels of particulate matter air pollution that led to an increase in respiratory complaints. There was a significant increased demand placed on health services that had to evacuate and care for hospital patients and chronic care facilities residents. The Health Canada report demonstrates concern for increased health effects from air pollution, especially on vulnerable populations, such as seniors and those with chronic diseases.

Triaging

The paper, *Vulnerable Populations & Emergency Management Integration Strategies* by Susanne MacKinnon, discusses the need for triaging of evacuees to identify needs upon arrival in order to mitigate any unnecessary deterioration of the individual's health or condition.

Solution:

MacKinnon provides the example of the State of Texas' hurricane and evacuation mass care plan; in this plan, when an individual evacuee arrives at a shelter they are triaged, registered and assigned to a shelter that matches their immediate needs.

Identified Issue:

³⁷ Health Canada, *Human Health in a Changing Climate: A Canadian Assessment of Vulnerabilities and Adaptive Capacities, Synthesis Report*, 2008, Canada

Post Hurricane Gustav, access to services required long waits in line-ups during hot, muggy weather and for many individuals this posed undue hardship because of medical conditions that affected their ability to wait in long line-ups.³⁸

Solution:

Triaging for people with disabilities and functional needs must be considered for the recovery phase as well as the response phase.

Specialized Teams

Solutions:

MacKinnon argues for the creation of a system for triaging evacuees when they arrive at reception centres in British Columbia. Her report states that addressing health and mental illness related conditions is out of the jurisdiction of ESS and, therefore, the role of health authorities and ESS needs to be clearly defined. With this consideration in mind, the Advanced Planning Unit for Vulnerable Populations, Southwest Region during the 2007 Freshet, explored the idea of specialized teams: specialized mobile response teams or a permanent health services team. A specialized mobile response team would commute to and from each reception centre and would be made up of medical personnel as well as other care providers. A health services team, made up of essentially the same make-up of personnel, would have a permanent location at a reception centre.³⁹

Another example provided to illustrate solutions is the Reception Centre Disaster Health Services Task Force in Victoria, BC. This task force has developed a document that promotes the use of a specialized team within a reception centre that would be comprised of healthcare providers and Ministry and NGO representation.⁴⁰

After the Katrina hurricane in 2005, one of the recommendations of the SNAKE report was to create a team to support disability and senior issues in emergency planning and response. The report recommended that teams should consist of federal, state, and local (or regional) representatives who are knowledgeable in emergency management and disability and aging services. What the teams would oversee is information dissemination, resource allocation and service coordination among disability and aging organizations to address accessible

³⁸MacKinnon, Susanne, *Advanced Planning Unit Southwest Region, 2007 Freshet, Vulnerable Populations Review*, Provincial Emergency Program, British Columbia

³⁹ MacKinnon, Susanne, *Advanced Planning Unit Southwest Region, 2007 Freshet, Vulnerable Populations Review*, Provincial Emergency Program, British Columbia

⁴⁰ MacKinnon, Susanne, *Advanced Planning Unit Southwest Region, 2007 Freshet, Vulnerable Populations Review*, Provincial Emergency Program, British Columbia

transportation and durable medical equipment needs. The team on the ground during an emergency would include expertise/advocacy groups who would be present in shelters, temporary housing, and other assistance centres. Team members would need to be skilled in assessing the general health and well-being of individuals and have the ability to access support services needed by the disability and senior populations. As well, team members would orient shelter personnel and emergency managers about people's functional needs.

In the United States, FEMA is partnering with federal and nongovernmental agencies to develop the Functional Needs Support Unit (FNSU). This will be a unit that can be deployed to a mass-care shelter or it can be a stand-alone shelter with trained and certified staff.⁴¹

An example of specialized teams in action is the Functional Assessment and Service Teams (FAST), which are part of the new disability-specific plan component of the California Department of Social Services (CDSS).⁴² FAST was tested for the first time during the October 2007 Southern California wildfires. FAST consist of government employees and NGO staff who can be deployed to disaster areas to work in shelters. The team members have expertise working with at-risk populations and have knowledge about support services such as housing, benefit programs and disaster aid programs. The team members have a range of experience with a diversity of disabilities as well as aging, substance abuse and nursing experience.

During the wildfires FAST was able to minimize the adverse impacts for evacuees. They were able to assist people with a number of disability-specific needs: obtaining alternate format access to communication and information; personal assistance services; and replacement of durable medical equipment, consumable medical supplies and medications. FAST is discussed further in the section Maintaining Independence in this paper.

Besides FAST, the Disability Emergency Briefing Team was also introduced during the Southern California wildfires response. This team consisted of six disability organizations, two home support service agencies and FEMA's National Disability Coordinator. This was an effective, but phone-dependent tool that was employed on a daily basis to identify and problem-solve where and what individuals had essential unmet needs. This group helped facilitate response from local disability service community providers.⁴³

⁴¹ Federal Emergency Management Agency and DHS Office for Civil Rights and Civil Liberties, *Interim Emergency Management Planning Guide for Special Needs Populations*, Version 1.0, August 2008, USA

⁴² Kailes, June Issacson, *Southern California Wildfires After Action Report*, 2008

⁴³ Kailes, June Issacson, *Southern California Wildfires After Action Report*, 2008

General Population Shelters (Reception Centres and Group Lodgings)

Identified issues:

The SNAKE Report on Katrina argues that the still prevalent medical model of disability in the United States resulted in some people with disabilities being transferred inappropriately to medical shelters and nursing homes, which separated them from their families and support networks.

The scope of the disaster during hurricanes Katrina and Rita exceeded the capacity of the American Red Cross to respond. With more inclusive emergency planning, many of the problems faced by people with disabilities at shelters could have been avoided. Many of the 1,300 shelters refused to admit people with disabilities or inappropriately referred them to special needs shelters. Also, many evacuees with disabilities had difficulty accessing shelter services, such as, medical care, communication, washrooms, food and shuttle services. The American Red Cross actually implemented a discriminatory policy to refuse access to shelters to anyone with a visible disability. This resulted in some families being separated and some evacuees with disabilities ended up living in the streets. For those individuals with disabilities that were admitted to shelters, some were segregated from the general population by physical barriers.⁴⁴

The report, *The Impacts of Hurricanes Katrina and Rita on People with Disabilities*, by the NCD, states that individuals who are able to live independently in their communities should not be segregated during an emergency. The report also states that the existence of special needs shelters should not relieve general shelter managers of their legal obligations to provide reasonable accommodations for people with disabilities.

Similarly, in Canada there are also legal obligations, which emergency programs would be required to uphold. The Human Rights Code, Section 8, addresses discrimination in accommodation, service and facility whereby an individual or "class of persons" can not be denied any accommodation, service or facility that is customarily available to the public.⁴⁵

Solutions:

The *Advanced Planning Unit Southwest Region, 2007 Freshet* report, reiterates what the SNAKE report recommends; that people with disabilities without medical need should not be segregated, but should have access to the same ESS facilities and services as other community members.

⁴⁴National Council on Disability, *The Impact of Hurricanes Katrina and Rita on People with Disabilities: A Look Back and Remaining Challenges*, August 2006, Washington, USA

⁴⁵ Canadian Human Rights Code, Section 8, *Discrimination in accommodation, service and facility*, 1996

MacKinnon presents three ways of addressing the functional needs of evacuee populations in British Columbia: firstly, adopting the FNF into the specialized services unit of the Reception Centre organizational chart; secondly, that group lodgings facilities can accommodate individuals with functional needs who require minimal care by their caregivers; and thirdly, specialized group lodgings could be set up for individuals with more complex medical needs. MacKinnon presents the example of the states of Florida, Texas, and Louisiana that encourage the use of Medical Special Needs Shelters.

Specialized Shelters (Reception Centres and Group Lodgings)

Identified issue:

Special needs shelters during hurricanes Katrina and Rita were not run by the American Red Cross and, at their peak, these shelters served about 9,600 people. These shelters were set up to help individuals who were homebound, chronically ill or that required medical or nursing care. Unfortunately, the existence of these shelters provided excuses for those running general shelters to discriminate against individuals with disabilities and refuse them access.⁴⁶

Solution:

The APU for Vulnerable Populations in the Southwest Region of British Columbia also explored the idea of specialized group lodging facilities for those with more complex health needs so that there could be continuity of medical care. The report provides the example of residents in shelters after Katrina who experienced worsening of chronic or acute medical problems; furthermore, special dietary needs were not adequately addressed in the shelters.

Solution:

The NCD states that in Duval County, Florida an “Adopt-a-Shelter” program was implemented during hurricanes Katrina and Rita that partnered area hospitals and medical supply companies with special needs shelters to develop an inventory and ensure that these shelters are fully stocked prior to disasters. These shelters also have intake procedures that ensure the resources of special needs shelters are going to those who need them.

⁴⁶ National Council on Disability, *The Impact of Hurricanes Katrina and Rita on People with Disabilities: A Look Back and Remaining Challenges*, August 2006, Washington, USA

The FEMA guide, Section D addresses Sheltering and Mass Care and calls for appropriate assistance and integration into the emergency response system for individuals with functional needs. The FEMA guide discusses specialized shelters that can be co-located within a general population shelter, be a unit within a medical shelter or a stand alone entity. An important point that this guide makes is that a specialized shelter plan must take into consideration that an individual who may have a caregiver on a daily basis may be separated from that care provider during the emergency or the care provider may have medical conditions themselves. Therefore, the plan can not make the assumption that the regular care for this individual will be available.

The FEMA guide states that individuals needing acute medical attention should be taken to medical shelters or hospitals.

Hospitals and Care Facilities

Identified Issue:

In September 2003, Hurricane Juan was one of the most powerful and damaging hurricanes to ever affect Canada. The impacts in Nova Scotia included: over 300,000 people were without power for up to 10 days, disruption of telephone service, and a compromised water infrastructure. Major hospitals were affected. The Victoria General Hospital in Halifax had to relocate over 200 patients to other facilities, which made beds at those functioning facilities scarce. Most patients could not be discharged from hospitals because there was no power, water or telephone service, which were essential resources individuals needed to manage their own care.⁴⁷

Solution:

One of the lessons learned from Hurricane Juan was that specific personnel need to be allocated to the management of relocated patients, staff and medical equipment.

Identified Issues:

The Ice Storm of 1998 that happened in Eastern Canada was also unprecedented with regards to the number of individuals affected, the intensity of the freezing rain and the duration of the event. Like Hurricane Juan, the Ice Storm disrupted power and water supplies. It also disrupted public and health services. Lack of access to communication sources also hindered emergency services. Approximately 260 communities in Ontario and Quebec declared it a disaster. More than 3.5 million people lost electricity; for some, it took more than

⁴⁷ Health Canada, *Health Policy Research Bulletin, Emergency Management*, April 2009, Issue 15

three weeks to have power restored. The storm also resulted in mass evacuations, which forced some people to use temporary shelters. There was a high-demand for medical attention at hospitals. Hospitals had to accommodate people who were being transferred from smaller hospitals, nursing homes, and home-care programs that could no longer provide essential services – such as power respirators.⁴⁸

The reports on the ice storm and hurricane Juan do not directly speak to the experiences of people with disabilities. However, the disruption of power would have affected anyone using medical or assistive equipment requiring power and would certainly have been critical for anyone using life-sustaining power equipment. As well, the compromised water infrastructure that occurred during hurricane Juan would have put individuals with compromised immune systems at greater risk than the general public.

⁴⁸ Health Canada, *Health Policy Research Bulletin, Emergency Management*, April 2009, Issue 15

Maintaining Functional Independence

Functional Independence includes people who:

- Use assistive equipment and devices to function independently on a daily basis, such as:
 - Mobility aids – wheelchairs, walkers, scooters
 - Communication aids – hearing aids, computers
 - Medical equipment – oxygen, syringes
 - Service animals
- Require medications to function independently

During an emergency, for example:

- Individuals may become separated from their assistive equipment and devices or service animal
- Evacuate individuals with disabilities with their assistive equipment whenever possible
- Do not separate an individual from their service animal at Reception Centres

Individual Self-Protective Ability

Emergency management programs in Canada strongly argue for personal preparedness. What emergency planners and Emergency Social Services need to understand is that within the population of people with disabilities, there will be a wide range of self-protective ability depending on a person's disability and the emergency or disaster that occurs.

Identified Issues:

The Institute of Safety and Systems Management at the University of Southern California conducted face-to-face interviews with 33 individuals with moderate to severe disabilities who had experienced the Loma Prieta earthquake in 1989.⁴⁹ During their day-to-day activities the majority of the respondents were able to move about without the assistance of other people by using their mobility aids and were able to use door knobs, taps and valves, and light switches in their adapted living environments. Yet, respondents indicated that if their wheelchairs or walking aids were inoperable or not available they would not be able to move around their living quarters. The research revealed that even with their assistive devices, 23 of the respondents could not use stairs as emergency exits.

⁴⁹ Rahimi, Mansour, *An Examination of Behavior and Hazards Faced by Physically Disabled People During the Loma Prieta Earthquake*, Institute of Safety and Systems Management, University of Southern California, 1993

At the time of the earthquake, 13 of the respondents were living alone and only four of these people said that they relied on neighbours or others for assistance in emergencies. About one-half of the interviewees reported that they were alone when the earthquake happened and no one came to their assistance during and immediately after the shaking.

This report further states that the safety of building occupants, including people with disabilities, depends on what self-protective measures they are able to take and how they react during and immediately after the impact of an earthquake. Twenty-four of the respondents were wheelchair users and this made it difficult for them to initiate quick self-protective action. Approximately one-third of the respondents held on to their wheelchairs during the earthquake. Most of the respondents engaged in passive behaviour during the shaking by “staying put” and not moving from their location, which was detrimental to their self-protective needs. Some did not know what to do, one person was unable to get out of bed on his own, another yelled for help.

In addition, Kailes’ report on the Southern California wildfires of 2007 states that people with disabilities and functional needs may not have the resources and support systems required for undertaking mitigation activities in their home in order to protect against fires, earthquakes and flooding.

Accessibility of Shelters and Temporary Housing

Identified issue:

During the Southern California wildfires in October 2007, NGO staff with experience in addressing the functional needs of people with disabilities volunteered to help evacuees with disabilities that were in the shelters; however, they were told by shelter staff that there were no individuals with disability-related needs in the shelters. NGO staff disregarded this information and entered the shelters and discovered individuals with unmet needs. Kailes reports that some emergency shelters were fairly accessible, while others had significant barriers; for example, non-accessible entrances, restrooms, showers, and cots.

Solution:

The Functional Assessment and Service Teams (FAST), which were deployed during the wild fires, played a key role in getting accessibility needs met; they helped procure accessible showers and toilets and then advocated to get ramps built to the accessible, portable showers and toilets.⁵⁰ FAST demonstrated how it

⁵⁰ Kailes, June Issacson, *Southern California Wildfires After Action Report*, 2008

helped individuals maintain their independence, through screening and assisting with independence needs. This enabled individuals to maintain health and mobility and to successfully manage in mass shelters.

Solution:

The *Southern California After Action* report recommends emergency planners should require contractors to provide accessible portable restrooms and showers. Emergency personnel operating shelters should have continual vigilance to ensure that all walkways and entrances and exits are clear of obstacles at all times.

Identified Issue:

In emergency shelters during the 2005 Gulf States hurricanes, many individuals with mobility disabilities could not use emergency shelters because they were not wheelchair accessible, could not use portable washrooms because they did not have ramps, and could not stand in line-ups because they had had to abandon their wheelchairs or assistive devices.⁵¹

Identified Issue:

For example, Selena, a quadriplegic, lived independently in her own home in Alabama before the hurricanes. She was evacuated to a crowded and understaffed special needs shelter where she had to sleep in her wheelchair because there was a lack of beds. This shelter was short-term only, so she was evacuated to a bed-and-breakfast that opened its doors to evacuees. Unfortunately the bed-and-breakfast did not have accessible bathrooms or other facilities. Selena developed life-threatening bedsores because of her evacuation experiences and ended up living in a nursing home; she lost her pre-hurricane independence.⁵²

Solution:

The NOD report mentions that there were a number of exemplary general population shelters. During Katrina they found that in one town the Mayor designated a convention centre as a general shelter and made sure that it included sign language interpreters, accessible shuttle services and information on how to find accessible housing.

⁵¹ Hutton, Dr. Dave, Public Health Agency of Canada, *Putting the Puzzle Together*, Emergency Preparedness Conference, Vancouver BC, November 25, 2008.

⁵² National Council on Disability, *The Impact of Hurricanes Katrina and Rita on People with Disabilities: A Look Back and Remaining Challenges*, August 2006, Washington, USA

Identified issue:

The NCD states that after hurricanes Katrina and Rita, the trailers provided by FEMA as short-term housing during the recovery phase were not accessible. Many of them were located in gravel fields that wheelchairs could not navigate. Even if the trailers had ramps, there was insufficient space to turn a wheelchair around in the trailers; the bathrooms were inaccessible and there was no room for them to prepare food in the kitchens.

Solution:

The SNAKE report suggests that the rebuilding process in the Southern Gulf States offers an opportunity to build accessible communities and adaptable housing on an unprecedented scale, which would enable people with disabilities to maintain or improve their ability to live independently.

Identified issue:

During the 1997 flood and fire in Grand Forks, North Dakota, one man who was a wheelchair user was flooded out of his accessible home. After the waters receded, his home needed major repairs and cleanup. He was offered temporary accessible housing, but it was 250 miles away and would have removed him from his support network.⁵³

Solution:

Local emergency planners, working with a Volunteer Organizations Active in Disaster (VOAD) member group, arranged for the accelerated repairs and cleanup and the man was able to return home without a prolonged disruption. The NOD guide stresses the importance of minimizing further distress to impacted individuals and returning individuals, families and their support networks back to familiar patterns as quickly as possible.

Loss of Medical Equipment, Assistive Devices and Support Services

Identified Issue:

"I got a phone call from a woman who was using a power chair who was given literally seconds to get evacuated out of her home. The policeman came with a hand on his gun telling her to get out. There was no way for her to get out, no transportation. They grabbed a neighbor, picked her up, put her in the back of a

⁵³ National Organization on Disability, *Guide on the Special Needs of People with Disabilities for Emergency Managers, Planners & Responders*, revised edition, USA

car and took her to the high school... she was left in the back seat, nobody wanted to be responsible. That "I" word of liability came into play and nobody wanted to do anything for her...luckily someone knew about the... (Independent Living Center).⁵⁴

Solutions:

Kailes recommends that evacuation and emergency transportation plans need to include accommodation to transport mobility aids, such as wheelchairs and scooters, oxygen tanks or other medical equipment and service animals. If, due to imminent life threatening situations, an individual is evacuated without their medical supplies or equipment, planning should consider how individuals can quickly replace essential consumable medical supplies and durable medical equipment. This will significantly assist individuals in maintaining their health, safety and independence and ensure fewer unmet needs.

The FEMA guide supports these recommendations and further states that there needs to be an established mechanism for tracking the person's equipment and that durable medical equipment should be labeled for owner identification. The FEMA guide also refers to the Americans with Disabilities Act (ADA), which provides a definition of service animal, which is, "any guide dog, signal dog, or other animal individually trained to provide assistance to an individual with a disability". The FEMA guide states that during a disaster, a service animal should accompany its owner in rescue/evacuation vehicles, shelters, clinics and any other facility related to the emergency.

Identified issue:

The problem of forced abandonment of equipment was raised prior to the Southern California wildfires in the SNAKE Report after Katrina. This report states that during Katrina, some people were forced to leave expensive durable medical equipment – wheelchairs, walkers, respirators, and communication devices at airports, bus loading areas, and shelters.

Solutions:

The SNAKE Report recommended that every effort should be made to transport durable medical equipment with the user, tag the owner's equipment, and attempt to return durable medical equipment to the owner as soon as possible. The report emphasizes that assisting people to quickly replace critical durable medical equipment and essential medication is important for returning individuals to their level of functional independence and allowing them to manage in a general population shelter and in temporary housing.

⁵⁴ Kailes, June Issacson, *Southern California Wildfires After Action Report*, 2008

Solution:

The FEMA guide states that general population shelters should identify sources of suppliers of durable medical equipment and medications and provide these to those who need them in order to avoid inappropriate placement of individuals. Making advance arrangements with these suppliers will help individuals needing these supports to function independently in the immediate aftermath of a disaster.

Solution:

The reality was that during Katrina and Rita many non-profit and advocacy groups stepped up to provide people with disabilities who were in shelters with the resources they needed, such as teletypewriters, wheelchairs, walkers and oxygen; the majority of shelters did not provide these resources. The lack of resources that shelters provided was exacerbated by the fact that shelters were closed down and evacuees were sent to other locations.⁵⁵

Identified Issue:

The NCD reported that many people with disabilities could not evacuate during hurricanes Katrina and Rita because to do so would have meant they would have to abandon support services and personnel that they needed to maintain their health and functional independence.

Identified Issue:

The SNAKE report highlights that the aftermath of Hurricane Katrina has led to large-scale displacement of people that has interrupted the networks of support that individuals with disabilities have; from assistance with activities of daily living to assistance with activities needing judgment, decision-making and planning, and for some, primary medical care. Individuals with disabilities often have to arrange and coordinate services among multiple providers and after Katrina many of them had to try and arrange these essential services in new environments with limited contact and little knowledge of local resources at a time when they were also trying to meet other essential needs such as access to appropriate housing and food.

The experience of Charles, a quadriplegic, is a key example of how the disruption of support services can have devastating effects. Charles had a good job, his own accessible home in New Orleans and flood insurance before the hurricane. He became homeless. He has been in the hospital twice because of the lack of access to personal care and because of this he developed a staff

⁵⁵National Council on Disability, *The Impact of Hurricanes Katrina and Rita on People with Disabilities: A Look Back and Remaining Challenges*, August 2006, Washington, USA

infection. His insurance would cover the costs to repair his home, but his community was destroyed – there was no transit, health services or grocery stores.⁵⁶

Identified issues:

In the weeks following the September 11, 2001 attacks on the World Trade Centre towers, many people with disabilities living in Lower Manhattan experienced additional impacts than the general population did.⁵⁷

- Paratransit service in the Ground Zero area was suspended and placed under stricter limits citywide
- Many people with disabilities were not able to make critical health appointments because they were unable to find transportation or were afraid to leave their homes.
- Many repair shops were closed so that wheelchair and other equipment repairs were delayed or unfinished
- Some people were not able to get necessary prescriptions filled
- People who are blind or have low vision had to relearn how to navigate the changed city streets/environment on foot or by re-routed public transportation.

Solutions:

The NOD guide provides important recommendations:

- Allow access by attendants, home support services, assistance animals, and health services in emergency shelters or other impacted areas
- Identify how an interruption in utility services will impact individuals with disabilities
- Provide accessible emergency shelters and accessible temporary housing during recovery
- Address how people with disabilities who are workers of businesses that are able to open soon after a disaster will get to work
- After Action Reviews should involve representatives from the disability community in order to fully capture a comprehensive impact of the disaster and to improve planning for the future.

Identified Issue:

During the summer of 2001 there were the rolling blackouts in California, which impacted individuals who relied on life-sustaining electrical equipment.

⁵⁶ National Council on Disability, *The Impact of Hurricanes Katrina and Rita on People with Disabilities: A Look Back and Remaining Challenges*, August 2006, Washington, USA

⁵⁷ National Organization on Disability, *Guide on the Special Needs of People with Disabilities for Emergency Managers, Planners & Responders*, revised edition, USA

Solution:

The San Francisco Office of Emergency Services (OES) worked with utility companies in order to notify individuals who relied on life-sustaining electrical equipment in advance of energy reduction. The NOD guide states that this is standard practice in the USA for power concerns and for customers with critical needs.

The San Francisco OES worked with the local VOAD who made calls to alert home support providers and Meals-on-Wheels of upcoming emergency reductions. Meals-on-Wheels is not a critical needs customer, but they serve people with disabilities, medical conditions and the elderly who are home-restricted. The telephone calls enabled the providers to make arrangements in advance to adjust their service accordingly. For example, Meals-on-Wheels provided cold meals instead of hot so that no client went without food.⁵⁸

Solution:

Kailes' report encourages disability and aging organizations to register with the Office for Access and Functional Needs at the Governor's Office of Emergency Services. This office has a Community Network Database housed at the California State Warning Center and lists state associations and NGOs that can quickly assist in locating resources for individuals with disabilities and seniors impacted by disaster.

Identified Issue:

As well as people with disabilities, seniors are another high-risk population. Many seniors, especially those with chronic conditions, require assistance from others on a daily basis in order to maintain their independence in the community. Emergency events often disrupt these relationships, which can leave older people at risk for isolation, neglect, exploitation and violence; particularly those seniors with small social networks. Furthermore, age-related physiological changes and chronic illness can make seniors more dependent on health and social services. Seniors' risk for injury, exacerbated health conditions, and death, are greater when health and social services are disrupted or temporarily stopped during emergencies.⁵⁹

⁵⁸ National Organization on Disability, *Guide on the Special Needs of People with Disabilities for Emergency Managers, Planners & Responders*, revised edition, USA

⁵⁹ Health Canada, *Health Policy Research Bulletin, Emergency Management*, April 2009, Issue 15

Supervision Needs

Supervision Needs includes people who have any of the following:

- Dementia, Alzheimer's
- Depression
- Schizophrenia
- Transfer trauma
- Brain injury
- Developmental disabilities
- Severe mental illness

There appears to be very little information or consideration within the reports and guides researched that address the question of supervision needs within emergency shelters, even though emergency shelter or reception centre personnel could be confronted with any number of individuals with cognitive, developmental, or psychiatric disabilities that may require supervision.

The FEMA guide provides some examples of who may require extra assistance, such as supervision, while in an emergency shelter. These individuals could be accommodated with minimal assistance in a general population shelter.

- An elderly person who functions without assistance in his or her home may become confused and disoriented in a shelter environment.
- A person with a cognitive or psychiatric disability may need help because of the disruption to their daily routine.
- An individual that requires a caregiver or attendant will function best when kept with their caregiver or reunited with their caregiver or attendant as quickly as possible

Identified Issue:

As discussed previously, the FEMA guide states that shelter plans must take into consideration that an individual who may have a caregiver on a daily basis may be separated from that care provider during the emergency or the care giver may have medical conditions themselves. Therefore, the plan can not make the assumption that the regular care for this individual will be available.

Identified Issue:

The *Roundtable on People with Developmental Disabilities and Emergency Preparedness: Summary Report*,⁶⁰ states that people with developmental disabilities are very routine driven and, therefore, would have difficulty dealing with changes caused by an emergency. Many individuals with developmental

⁶⁰ Families Matter Co-operative Inc., *Roundtable on People with Developmental Disabilities and Emergency Preparedness: Summary Report*, Ottawa, Ontario, 2008

disabilities would find it difficult to adapt to a shelter environment and planning needs to address such challenges. The report also notes that this population would have difficulty understanding directions and therefore might not respond as needed in the situation.

Solutions:

Re-establishing an individual's routine as quickly as possible will help alleviate anxiety. The Roundtable Summary Report recommends that first responders should be trained to assist people with different functional needs. The BCCPD would add that first receivers should also receive this training.

Transportation Needs

Transportation Needs includes people who cannot drive due to:

- Disability
- Age
- Temporary injury
- Poverty
- Addiction
- No access to vehicle
- Legal restrictions

Identifying Populations

Identified Issue:

The United States Government Accountability Office (GAO) conducted the *Preliminary Observations Evacuation of Vulnerable Populations due to Hurricanes and Other Disasters*.⁶¹ This report states that among transportation-disadvantaged populations are the elderly, people with disabilities, people with low income, and those who do not own vehicles. The GAO states that there has been mixed efforts at the state and local levels to address the evacuation needs of these populations. Many emergency management officials do not have a good understanding of the size, location and composition of these populations in their communities.

Solutions:

The FEMA guide states that it is important to identify facilities and neighbourhoods with a high concentration of populations that may need assistance with evacuation, such as: nursing homes, group homes, assisted living facilities, clusters of home-based care clients and retirement communities. The GAO and Southern California Wildfires reports both recommend this as well.

During the recent evacuation of New Orleans during Hurricane Gustav, the City relied on community pick-up points that were identified through GIS data that was based on concentrations of vulnerable populations. The City of New Orleans is continuing to refine this process.⁶²

⁶¹ United States Government Accountability Office, Testimony Before the Special Committee on Aging, U.S. Senate, *Preliminary Observations on the Evacuation of Vulnerable Populations due to Hurricanes and Other Disasters*, May 18, 2006.

⁶² Kiefer, John J., et al, *Providing Access to Resilience-Enhancing Technologies for Disadvantaged Communities and Vulnerable Populations*, December 2008, USA

Identified Issue:

In its report, the GAO observed that in one location officials were very coordinated and they had a voluntary registry for people with functional needs. It is important to note that while the emergency management officials reported that the voluntary registry they had was helpful during evacuation, they were also quick to point out the number of challenges of keeping a registry. The GAO also points out that many individuals within these vulnerable populations may have fears about discrimination and violation of privacy that may keep them from participating in outreach planning efforts.

Kailes makes an important point about registries and the planning assumption that people with disabilities should be easy to locate because they are homebound; planners “do not acknowledge that this diverse population, just like everyone else, works, volunteers, plays, prays, shops, eats and travels.”⁶³

Access to Transportation and Accessible Transportation

Identified Issue:

Hurricane Katrina, one of the worst natural disasters in US history, highlights the challenges involved in evacuating vulnerable populations from hospitals, nursing homes, and the transportation-disadvantaged living outside of these facilities.

The GAO report examined the difficulty of facilities to evacuate during a major disaster because, due to the high demand for local vehicles exceeding supply, securing transportation is problematic. On top of this the facility must find another facility that is able to receive evacuees. During Hurricane Katrina, two counties in Mississippi had to turn to other states to secure vehicles for evacuation purposes.

The US Nationwide Plan Review Phase 2 Report shows that the availability of timely accessible transportation, especially lift equipped vehicles is a critical, but often overlooked component of the evacuation process.⁶⁴

⁶³Kailes, June Issacson, *Southern California Wildfires After Action Report*, 2008

⁶⁴Federal Emergency Management Agency and DHS Office for Civil Rights and Civil Liberties, *Interim Emergency Management Planning Guide for Special Needs Populations*, Version 1.0, August 2008, USA

Identified issues:

Lack of transportation was a significant reason for not evacuating during Hurricane Katrina; statistics show that 34% reported not having a vehicle or means of evacuating and 12% were physically unable to evacuate because of themselves or a loved one.⁶⁵

The NCD reported that the majority of evacuation buses did not have wheelchair lifts or ramps making them inaccessible, which meant that many people with disabilities were not able to evacuate. The NCD collected reports from individuals with disabilities and from advocacy groups in the region. According to these reports many people with disabilities were unable to evacuate because there was no accessible public transportation or other required assistance. Since emergency transportation and shelters were not equipped to help them, many people were forced to stay behind. People were forced to abandon wheelchairs, but then could not physically wait in lines for evacuation buses for hours at a time, so again, they were unable to evacuate. The day-to-day transportation challenges and barriers faced by people with disabilities were magnified during the Hurricanes.

The SNAKE report states that accessible transportation is critical for many people with disabilities. In a number of cases, accessible transportation was not available during the immediate recovery period after Katrina.

Kailes reports that being able to get accessible transportation was also a problem during the Southern California wildfires of 2007; individuals reported having difficulty getting accessible transportation to and from shelters and assistance centers.

Solution:

MacKinnon's report recommended that evacuation plans in British Columbia ensure that people with disabilities can safely self-evacuate or can be evacuated by responsible individuals. Furthermore, there should be a process for notifying the public on how to access transportation resources during an evacuation.

⁶⁵ MacKinnon, Susanne, *Advanced Planning Unit Southwest Region, 2007 Freshet, Vulnerable Populations Review*, Provincial Emergency Program, British Columbia

Understanding in Planning

Identified Issue:

The GAO, FEMA, Kailes and MacKinnon reports all state that evacuating transportation-dependent populations will require additional time, resources and communication efforts due to a number of factors; some people with functional needs or who use medical equipment, may require extra planning time for the loading and unloading of evacuation vehicles. Furthermore, while some people with disabilities and activity limitations will be able to make it to evacuation pick-up locations by themselves, others, those that are non-ambulatory, will not be able to leave their homes without assistance from the community.

Solution:

FEMA, Kailes, and MacKinnon recommend that emergency plans need to identify methods and providers of accessible transportation available to evacuate people with disabilities, as well as evaluate the type of transportation required, i.e. accessible taxis, vans, and buses in the community.

Identified Issue:

The following event occurred during the Southern California wild fires in 2007 and is a prime example of why emergency planning must address the transportation needs of individuals with disabilities in the community.

"I got a phone call from a woman who was using a power chair who was given literally seconds to get evacuated out of her home. The policeman came with a hand on his gun telling her to get out. There was no way for her to get out, no transportation. They grabbed a neighbor, picked her up, put her in the back of a car and took her to the high school... she was left in the back seat, nobody wanted to be responsible. That "I" word of liability came into play and nobody wanted to do anything for her...luckily someone knew about the... (Independent Living Center)."⁶⁶

Solution:

NOD, FEMA, and MacKinnon all state that equipment and assistive devices and service animals should be transported with the individual being evacuated.

⁶⁶ Kailes, June Issacson, *Southern California Wildfires After Action Report*, 2008

Identified Issues:

The NCD reported that during Katrina the failure of emergency planners was twofold: firstly, many local planners did not understand that many people with disabilities have different evacuation needs than the general public; and secondly, they did not involve people with disabilities in their planning process.

The poignant testimony from a woman from the Spinal Cord Injury Association, illustrates the tragedy:

“A quadriplegic woman in New Orleans had been unsuccessfully trying to evacuate to the Superdome for two days...I stayed on the phone with Benilda for the most part of the day...She kept telling me she’d been calling for a ride to the Superdome since Saturday, but despite promises, no one came...I was on the phone with Benilda when she told me, with panic in her voice, “The water is rushing in” and then her phone went dead. We learned five days later that she had been found in her apartment dead, floating next to her wheelchair...”⁶⁷

Some of the most televised and horrific evacuation failures were reckless abandonment of nursing home residents; leaving the residents at the mercy of the floodwaters. This resulted in the deaths of at least 68 nursing home residents. This event only highlighted the ongoing systemic problem of abuse and neglect in nursing homes in New Orleans and Louisiana prior to the hurricanes. The NCD report argues that this disregard for the rights of people with disabilities in institutions in the USA is a pre-existing national dilemma that was only exacerbated by the disaster.⁶⁸

Solution:

The GAO did find some examples of planning for transportation-disadvantaged populations. In three areas, emergency management officials used pre-existing social networks and community outreach activities to provide preparedness information to these populations. In another city, evacuation preparedness information was disseminated to these populations through health organizations, doctors, and the Red Cross.

⁶⁷ National Council on Disability, *The Impact of Hurricanes Katrina and Rita on People with Disabilities: A Look Back and Remaining Challenges*, August 2006, Washington, USA

⁶⁸ National Council on Disability, *The Impact of Hurricanes Katrina and Rita on People with Disabilities: A Look Back and Remaining Challenges*, August 2006, Washington, USA

Coordination and Phased Evacuations

Solution:

The GAO observed one location that had a well-developed plan for evacuating the transportation-disadvantaged population; this plan had the following: clearly defined methods of provision and coordination – including roles and responsibilities; they involved social service providers in the planning process and engaged these organizations' transportation resources during evacuation; and they had a voluntary registry for people with functional needs.

Evacuation plans should allow for the necessary time, consideration, and assistance for people with disabilities to be adequately notified of an evacuation. The NOD reported that some communities have staggered evacuation orders with notification to large care facilities ahead of the general population because of the longer time required to evacuate these populations.

The FEMA guide states that when evacuating entire populations in a community, phased evacuation is required. Therefore, sustaining individuals waiting for evacuation may become critical; this would include food and water as well as assistance in obtaining such necessary items as medicines, durable medical equipment, electricity, and oxygen.

For evacuations from one jurisdiction to another, emergency managers should designate and advertise staging areas for long-distance transportation. However, they should also plan for a certain number of people who are non-ambulatory who will not be able to get to staging areas on their own.⁶⁹

MacKinnon, in the *Vulnerable Populations & Emergency Management Integration Strategies* paper, recommends that in British Columbia there should be appropriate representation in the evacuation unit, such as a health and medical coordinator that could triage priorities for vulnerable populations across multi-agencies.

Kailes recommends that transit providers be included in drills and emergency exercises.

⁶⁹ Federal Emergency Management Agency and DHS Office for Civil Rights and Civil Liberties, *Interim Emergency Management Planning Guide for Special Needs Populations*, Version 1.0, August 2008, USA

Conclusion and Recommendations

All of the reports and guides discussed in this research paper argue for the inclusion of the disability community in emergency planning and response. Developing partnerships with community organizations has the potential to fully optimize human and other resources during response and recovery from disasters. Furthermore, all of the reports recognize that the planning that is currently in place in the US and Canada is inadequate to address the needs of people with disabilities and those with functional limitations.

The BC Coalition of People with Disabilities agrees with John Lindsay that there needs to be a collective responsibility to address the disaster vulnerabilities of at-risk groups. The individual preparedness approach has not proved to be very effective.

Key Research Points

1. There has been an increase in the number of people with disabilities living independently in community coupled with an increase in the percentage of Canadians with disabilities.
2. Individuals with disabilities or functional limitations have a higher level of disaster vulnerability than those without disabilities because they face socioeconomic barriers to accessing resources on a daily basis – the vulnerability exists before the disaster occurs.
3. The Canadian Human Rights Code, Section 8, has the provision regarding discrimination in accommodation, service and facility, which government programs must adhere to.
4. Separate “special needs” planning is not effective. It continues to segregate individuals with disabilities. This planning often gets left by the wayside.
5. During disasters many individuals with disabilities lose vital supports and services that are critical to their functioning on a daily basis and that help prevent their health and well-being from deteriorating. These supports and services are critical to an individual’s ability to participate in society.
6. Reports demonstrate that many people with disabilities experience inappropriate placement in special needs shelters or hospitals when they require no medical care.
7. First responders should not make assumptions that because an individual usually has a care provider for daily assistance needs that that care provider will be available during an emergency.
8. Reports demonstrate that individuals with equipment and assistive devices were often forced to abandon their equipment in order to get evacuation transportation.

9. Reports demonstrate a lack of timely, accessible transportation for individuals with disabilities or functional needs that required it.
10. There is little information or consideration within the reports and guides researched that address the question of Supervision Needs within emergency shelters.
11. Many individuals with disabilities can contribute in an emergency if their functional needs are met.

Research Recommendations

The BC Coalition of People with Disabilities and the Medical Needs Task Force recommend the following to the emergency management sector in British Columbia and Canada:

1. Emergency planners should move away from “special needs “ planning and utilize the Functional Needs Framework to plan for all members of a community.
2. The Provincial Emergency Program should incorporate the Functional Needs Framework into its provincial emergency planning and response guidelines and curriculum.
3. Emergency planners should utilize the Social Organization Framework to develop a better understanding of social networks and social capital in order to prepare and mobilize communities and enhance community resiliency.
4. The Provincial Emergency Program, municipalities, and regional districts should support the involvement of community-based organizations in emergency planning, response and recovery through community funding programs in order to build community capacity.
5. Emergency Managers should use multiple methods for public emergency communications, including alternate formats for people with disabilities.
6. Emergency information should be made available to people with disabilities, such as the deaf and hard of hearing, at the same time as those without disabilities.
7. Government emergency programs need to plan for digital inclusion. When deciding the use of technologies to provide emergency information to the public they need to consider the availability, affordability, accessibility, and acceptability of those technologies by different at-risk population groups.
8. Emergency Social Services should implement a system of triaging.
9. Emergency Social Services should work with health authorities and NGOs who work with individuals with disabilities and functional limitations to create specialized teams.

10. Reception Centres and Group Lodgings need to provide universal access shelters for a range of functional limitations that evacuees from the community may have.
11. Individuals with disabilities and functional limitations who live independently in the community should not be segregated at Reception Centres or Group Lodgings or sent to specialized shelters.
12. Specialized shelters should be for individuals with complex medical needs only.
13. More comprehensive planning needs to occur in order to address the replacement of medications, and equipment and assistive devices.
14. There needs to be coordination of accessible transportation for evacuation purposes; this needs to include the methods of provision, roles, responsibilities, and planning for additional time required for loading and unloading accessible vehicles.
15. Individuals should be evacuated with their equipment and assistance animals.
16. If, due to imminent life threatening circumstances, individuals can not be evacuated with their equipment then there needs to be a system established for tagging and transporting the equipment and reuniting the owner with their equipment.
17. Evacuation plans involving community pick-up transportation points need to plan for individuals with disabilities who can not make it to pick-up points.
18. Emergency Social Services need to plan for individuals requiring supervision at Reception Centres and Group Lodgings, such as individuals with dementia.
19. After Action Reviews should involve representatives from the disability community and other at-risk populations in order to understand the full impact of the event on the community.
20. After Action Reports in Canada need to include the impact on and the experiences of at-risk populations in order to build a better understanding and to be able to develop effective emergency plans.
21. The Provincial Emergency Program, Emergency Social Services, and health emergency management should work collaboratively with the BC Coalition of People with Disabilities, the EPPDC, and community-based organizations to address the needs of people with functional limitations.

Bibliography

BC Coalition of People with Disabilities and the Centre for Emergency Preparedness and Response, Public Health Agency of Canada, *Checklist to Facilitate Health Emergency Planning for At-Risk People*, 2008

Deaf and Hard of Hearing Consumer Advocacy Network, *Emergency Preparedness and Emergency Communication Access: Lessons Learned Since 9/11 and Recommendations*, December 2004, Virginia, USA

Families Matter Co-operative Inc., *Roundtable on People with Developmental Disabilities and Emergency Preparedness: Summary Report*, May 2008, Ottawa, Ontario

Federal Emergency Management Agency and DHS Office for Civil Rights and Civil Liberties, *Interim Emergency Management Planning Guide for Special Needs Populations*, Version 1.0, August 2008, USA

Health Canada, *Human Health in a Changing Climate: A Canadian Assessment of Vulnerabilities and Adaptive Capacity, Synthesis Report*, 2008, Ottawa, Ontario

Health Canada, *Health Policy Research Bulletin, Emergency Management, April 2009, Issue 15*, Ottawa, Ontario

Hutton, Dr. Dave, Public Health Agency of Canada, *Putting the Puzzle Together*, PowerPoint presentation, Emergency Preparedness Conference, Vancouver, British Columbia, November 25, 2008

Kailes, June Isaacson, *Southern California Wildfires After Action Report*, September 2008, California, USA

Kiefer, John J., et al, *Providing Access to Resilience-Enhancing Technologies for Disadvantaged Communities and Vulnerable Populations*, December 2008, USA

Lindsay, John, *Vulnerability – Identifying a Collective Responsibility for Individual Safety: An overview of the functional and demographic determinants of disaster vulnerability*, Department of Applied Disaster and Emergency Studies, Brandon University, 2007

MacKinnon, Susanne, *Vulnerable Populations & Emergency Management Integration Strategies*, August 2008, British Columbia

MacKinnon, Susanne, *Advanced Planning Unit Southwest Region, 2007 Freshet, Vulnerable Populations Review*, June 2007, British Columbia

National Council on Disability, *The Impact of Hurricanes Katrina and Rita on People with Disabilities: A Look Back and Remaining Challenges*, August 2006, Washington, USA

National Organization on Disability, *Guide on the Special Needs of People with Disabilities for Emergency Managers, Planners & Responders*, revised edition, USA

National Organization on Disability, *Report on Special Needs Assessment for Katrina Evacuees (SNAKE) Project*, 2006, Washington, USA

Phillips, Brenda and Mincin, Jennifer, *Post-Katrina Emergency Messaging for the Disability Community*, National Emergency Management Resource Centre, December 2005, USA

Rahimi, Mansour, University of Southern California, *An Examination of Behavior and Hazards Faced by Physically Disabled People During the Loma Prieta Earthquake*, 1993, California, USA

United States Government Accountability Office, *Preliminary Observations on the Evacuation of Vulnerable Populations due to Hurricanes and Other Disasters*, May 2006, USA

Appendices

Appendix One: List of Acronyms Used Throughout the Document

APU	Advanced Planning Unit
BCCPD	BC Coalition of People with Disabilities
DHHCAN	Deaf and Hard of Hearing Consumer Advocacy Network
EPPDC	Emergency Preparedness for People with Disabilities Committee
ESS	Emergency Social Services
FAST	Functional Assessment Service Teams
FEMA	Federal Emergency Management Agency (USA)
GAO	Government Accountability Office (USA)
NCD	National Council on Disability
NGO	Non-governmental Organization
NOD	National Organization on Disability
SNAKE	Special Needs Assessment for Katrina Evacuees

Appendix Two: Definitions

The Medical Needs Task Force of the EPPDC formulated the following definitions:

Assistive Devices and Equipment

Assistive devices and equipment are any tools that are designed, fabricated, and/or adapted to help a person with a functional need perform an action, task or an activity.

*Assistive devices and equipment may include:

Canes	Commodos
Crutches	Shower chairs
Walkers	Hearing aids
Wheelchairs	Alphabet boards
Scooters	Text telephones
Power devices	Text-to-speech conversion software
Long-handled reaches	
Adapted kitchen utensils	

*This list is not exhaustive

Medical Devices and Equipment

Medical devices and equipment are all products, except medicines, that are used in health care for diagnosis, prevention, monitoring or treatment.

*Medical devices and equipment may include:

- Syringes/needles
- Blood sugar meters
- Splints
- Catheters
- Ventilators
- Heart-lung machines
- Dialysis machines
- Continuous Positive Airway Pressure (CPAP)
- Corrective lenses

*This list is not exhaustive

Appendix Three: Identified Groups in British Columbia

The Medical Needs Task Force identified the following programs, agencies and businesses in British Columbia that are involved in the distribution, loan or sale of equipment and assistive devices and medical equipment in order to develop relationships with them for the purposes of emergency planning to address the needs of people with disabilities.

- Contracted Vendors with the Ministry of Children and Family Development and the Ministry of Housing and Social Development
- Home Medical Equipment Dealers
- Home Oxygen Program (administered by the province)
- Product Distribution Centre (government of BC)
- Provincial Respiratory Outreach Program
- Red Cross Loan Services
- Seeing Caucus (Provincial Equipment and Assistive Devices Committee)
- Self-care Home Health Products
- Western Institute for the Deaf and Hard of Hearing