

## Overall Framework for Health Planning with Special Attention on Vulnerable Populations

Goal:

Assess and reduce overall health risk during disasters with optimal planning activities.

Enhance physical and mental health resiliency to disasters

Assess vulnerable populations and reduce vulnerabilities.

I propose a brief overview of overarching principles, such as the following:

1. All preparedness, mitigation, response, and recovery activities must be fully inclusive to ensure equal access to services. This means not only that plans must be inclusive, but also that planning activities must have representatives of at-risk/vulnerable groups.
2. A “universal design” approach that plans for the most vulnerable groups benefits everybody. For example, anyone can go up a ramp but not everyone can go up stairs. Another example is liquid formulation of medicines, when available. Almost everyone can swallow liquids but many vulnerable groups cannot swallow pills.
3. The definition of at-risk/vulnerable individuals should emphasize the access and functional needs of the individual rather than the particular category they happen to fall into. For example, it is less helpful to know someone is in a wheelchair than it is to know that they will need assistance with accessible transportation.

Proposal 1:

All disasters have health consequences and as such, disaster planning must include specific health and medical components. Health and medical plans should be based on hazard-vulnerability assessments and include evidence-based risk reduction and resiliency enhancement strategies. Health authorities must participate in the disaster planning process and the health and medical plans must be integrated into any larger community plans. Plans should include the protection of existing community healthcare facilities; incorporation of outside medical teams (mutual aid); and logistical support of healthcare functions. All phases of the disaster cycle should be incorporated into the planning process with emphasis placed on the planning and mitigation for disasters. Multisectoral engagement, including that of the private sector and non-governmental organizations, should be actively sought where possible.

Sub-proposal A:

Physical and mental health wellness is a primary element to individual resiliency. Essential to physical/mental wellness is access to basic primary care and preventive health services for all populations. Special attention and arrangements should be planned and placed for vulnerable populations for reducing vulnerabilities. Risk reduction plans for the health sector should include strategies to provide access to health and medical services on a day-to-day basis.

#### Sub-proposal B:

On the community level, core public health practices should be planned and implemented to provide potable water, high quality nutrition, adequate shelter, an environment free of contaminants, and an acceptable level of security/safety for all populations, including children, women, and elders.

When planning interventions, we must focus on actions that will be most effective and have the greatest potential to reduce the number of deaths and injuries. However, at the end of the day, the budget is limited making it essential to adhere to a cost effective system in which the intervention can make a real change. When the budget is limited, the focus should be on high-risk populations.

#### Proposal 2:

Health planning for disasters must include provisions for the needs of vulnerable/functional special needs populations.

##### Sub-proposal 2 A

There needs to be a standard definition that describes vulnerable populations based on their functional needs during a disaster. These populations should be identified in the planning process and resources to address their needs during disasters documented. Resource gaps should be addressed.

Some sample definitions are listed below for reference.

- FEMA definition-“special needs”-functional based definition in any of the following areas: communications, transportation, maintaining independence, supervision, and medical care.
- HHS definition: functional needs. Consistent with FEMA
- WHO definition of vulnerable populations: Children, pregnant women, elderly people, malnourished people, and people who are ill or immunocompromised, are particularly vulnerable when a disaster strikes, and take a relatively high share of the disease burden associated with emergencies.

#### Sub-proposal 2B

All deployable disaster response teams must have the capability to address the needs of vulnerable populations either through the inclusion of specialist providers or through training of generalist providers. Training needs to include the physical, emotional, behavioral, and social issues related to vulnerable populations. For example, personnel who staff evacuation shelters must be capable of communicating with evacuees who speak all common languages in shelter catchment areas, including sign languages for those who are deaf or hard of hearing.

#### Sub-proposal 2C

Improved disaster preparedness for vulnerable populations can benefit from international cooperation. Common terminology, data- and other information-sharing, resource-exchange, integrated exercising, and consistent response planning will facilitate more effective and efficient disaster assistance for this challenging problem. Additional benefits would accrue during disasters involving cross-border responses. Establishment of an international center for vulnerable population resilience and disaster preparedness to conduct research and provide assistance can support needed progress in this area. Countries should be encouraged, to the maximum extent feasible, to use existing international frameworks, norms, and coordination mechanisms to facilitate sharing of disaster assistance resources. In particular, during the “preparedness” phase, countries should be encouraged as part of their national preparedness strategies to critically examine their own organizational structures to determine what barriers exist to the rapid acceptance of external foreign aid (e.g. inability to credential foreign medical providers, inability to accept medical countermeasures from outside the country, liability issues), and minimize them as much as possible.

#### Sub-proposal 2D

The planning and implementation processes for improving vulnerable population disaster resilience must include effective representation from among those groups. First, the impacts of disasters on those with functional needs have not been studied extensively, and often are not obvious. Inclusion of people with these needs can help to inform planners. Second, people with functional needs – especially those with disabilities – can be isolated from social networks. Inclusion can help to communicate plans to those individuals.

## Sub-proposal 2E

Nations with available census or other data about vulnerable populations can use that information to understand the scope of this issue. For example, the United States federal government conducts a census every ten years, most recently in 2010. That process counted people with disabilities, which is just one component of population vulnerability. The definition of people with disabilities that was used in this study<sup>1</sup> includes those with communicative, mental, or physical disabilities in non-institutional settings, i.e., these figures exclude people in hospitals, nursing homes, etc. Although it is important to realize that not all of these people have functional needs during disasters, the figures are very suggestive. Here are some of the findings:

- 56.7 million (18.7%) of the total United States civilian non-institutionalized population of 303.9 million was disabled.
- 38.3 million (12.6% of total population) had a severe disability.
- 12.3 million (4.4% of total population) required assistance with activities of daily living.
- 41.1% of disabled people age 21-64 were employed, compared to 79.1% of non-disabled people age 21-64, i.e., disability cut one's employment prospects in the United States almost in half.

Studies to identify the scope of the need are essential first steps to effective planning.

## Sub-proposal 2H

Disaster plans for assisting people with vulnerabilities can be very difficult to develop because the range of hazards may be large and the needs of these groups may be difficult to identify. Development of "registries" where people with vulnerabilities may voluntarily report their needs to planners in advance of disasters is one potential solution that facilitates specific planning for their needs. Other data-sharing methods also might be available. Regardless of method, is important for appropriate privacy protections to be built into such systems, and for planners to recognize in their response system capacity plans that many people with vulnerabilities who have not been included in specific plans nevertheless may require emergency assistance.

## Sub-proposal 2G

In many cases, people with functional needs during disasters face physical barriers that require special planning attention. For example, shelters to which the public is directed to evacuate may not have sufficient ramps or wheelchair-accessible restroom facilities.

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<sup>1</sup> M.W. Brault, Americans with Disabilities: 2010 (U.S. Bureau of the Census Current Population Reports P70-131) (July 2012), <http://www.census.gov/prod/2012pubs/p70-131.pdf>, accessed May 4, 2014.

Where possible, planners should take account of these needs when selecting such facilities. Over the longer term, social resilience will be improved as all structures become more accessible by people with disabilities.

Disasters are a function of the event results. Not every earthquake or storm ends as a disaster (an earthquake 9.5 RS in Alaska can end without any injuries...). The first priority of the Public Health system is to prevent as many deaths as possible, the second priority is to prevent as many injuries as possible and the third priority is damage control.

As an example: Countries will never have enough USAR teams dealing with an earthquake. There is a very short period of time to rescue live people ( 3-5 days). The time until International teams arrive is often lengthy. When the country has 100 USAR teams (???) and 10000 collapsed buildings – they are in a very problematic situation. Articles have shown that 85%-95% of the people who were rescued from under the rubble, and survived, were rescued by family members, neighbors and laymen's.

Courses for volunteers, teaching basic rescue (2 days – how to use a car jack, using car battery for energy, etc.) and local leadership training can make a real difference.

#### Proposal 3:

Healthcare providers, medical professionals, public health specialists and local government should establish systems and method for sharing information and specific needs for vulnerable populations.

Some 3 types of information centers should be set up to work for these situations:

1. Sharing national and International data, researches, information and lesson learnt from disasters and MCIs.
2. Information centers for persons looking for injured relatives.
3. Information centers providing knowledge to the population, for example, telling the locals how to behave and what to do in specific situations.
4. Information centers for the professionals, for example, in an epidemic or pandemic – an information center for the primary MDs.

#### Proposal 4:

Develop standard nomenclature for all field deployable medical assets

Health resource typing will enable host nations to determine which assets are best suited to assist with a disaster. Using a functional or capabilities-based system will allow teams to better describe what services they are capable of providing and permit host countries to better understand (and select) those assets needed for assistance.

A collaborative health care system would help achieve more optimal use of all available medical resources and further optimization could be achieved if participating countries and organizations adhered to a standardized classification and coordination system. The increased coordination at both the preparatory and deployment stages could lead to decreased mortality, morbidity, and disability among the devastated population.

#### Proposal 5:

Building the Resilience of Nations and Communities to Disasters emphasized the importance of “making hospitals safe from disasters” as a key activity to reduce underlying disaster risk factors by ensuring that all new hospitals are built with a level of resilience that strengthens their capacity to remain functional in disaster situations and implement mitigation measures to reinforce existing health facilities, particularly those providing primary health care (Hyogo Framework for Action 2005-2015).

##### Sub-proposal A:

Safe health facilities are those in which health services remain accessible and functioning at maximum capacity during and immediately after disasters, emergencies or other crises. In order for health facilities to protect the lives of patients and staff, they must be physically resilient and able to remain operational and continue providing vital health services (Risk Reduction in the Health Sector and Status of Progress, [http://www.preventionweb.net/globalplatform/2007/first-session/docs/Workshops/4\\_2\\_1\\_Reducing\\_risk\\_health/Background\\_Paper.pdf](http://www.preventionweb.net/globalplatform/2007/first-session/docs/Workshops/4_2_1_Reducing_risk_health/Background_Paper.pdf)).

Therefore collaborative activities should be planned and placed for achieving the goal of “Safe Hospitals” such as laws, ministries, financial sources and local authorities.

##### Sub-proposal B:

In order to achieve the goal of “Safe Hospital” key technical factors should be addressed and implemented not only in the health sector but also in general building code and laws. Such as hazard assessment, site evaluation, appropriate conceptual design, competent analysis, complete pre- construction detailing, quality control during

construction, planned maintenance, independent checking by knowledgeable and experienced agencies is critical to ensuring that health facilities can continue to function and that health services are adequately prepared to ensure continuity of services during and after a disaster.

In addition, it should be a condition (or requirement) that every hospital can function independently for at least 3 days after a disaster, that is, it can manage without receiving resources from the outside including power, electricity, water and food. In addition, medical supplies and devices should be distributed and stored in different storage areas around the town/country, so that in time of disaster resources will be available (that is, "we shouldn't put all the eggs in one basket"). If we operate according to this approach, then during a disaster the local system will be able to function and care for the injured and sick, while repairing water, food or electrical supplies. The national priorities of preventing as many deaths and injuries, illnesses and other types of damage will be most effective with this approach.

Hospitals, providers, and other sites that deliver medical care should be encouraged to set up networks and coalitions to plan, prepare, and if necessary respond most efficiently in the event of a public health emergency. This should include consideration of "surge" or "overflow" situations, where one or more facilities may be overwhelmed and may either need to transfer patients elsewhere, or accept additional resources from unaffected members of the network/coalition. Such planning should be part of the overall preparedness effort of each hospital.

#### Proposal 6 (or possibly 5C)

Enhanced resilience can reduce the long-term impact of disasters. Resilience can be defined as the ability to anticipate, respond to, and recover from emergency events. Research suggests that social capital and social networks predict community resilience. Therefore, preparedness planning efforts should seek to promote coordination and collaboration between health care delivery systems, social services, and other organizations working with vulnerable groups. All these systems should deliver resilience messages to the people they serve that emphasize individual preparedness and social connectedness as central to community preparedness.