

Educational preparation for healthcare provider volunteers in disaster relief shelters

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"The function and efficiency of our medical station would have been significantly improved by training before the disaster" (Pierce, 2007)



A nurse examines a baby in a makeshift ER, Red Cross shelter, Manhasset High School, post Hurricane Sandy.

1 Background

In the event of a natural disaster, such as an earthquake, tsunami, or hurricane, there is a surge of displaced persons into local relief shelters, many of whom require healthcare services. The shelters, run almost entirely by volunteers, often have a network of licensed healthcare professionals who respond to medical needs that arise.

During disasters, public health and medical systems are overwhelmed, resources become scarce, and providers are challenged with decisions about how to allocate limited supplies. Despite the demanding circumstances, patients need to be treated according to the Institute of Medicine Crisis Standards of Care.

Many public and private entities across the United States recruit and train volunteer healthcare personnel to be prepared to mobilize in the event of a natural disaster. To date, no formal studies have examined the educational preparation and training of shelter volunteer healthcare providers. Their preparation has serious implications for the health outcomes of individuals who seek care in disaster shelters.

2 Methods

1. National scan of available education and training programs and resources at the community, state (purposeful sample of 5 states known to be impacted by multiple disasters), and federal level.
2. Key informant interviews with subject matter experts in the field, including professionals from NACCHO, American Red Cross, and state government employees.
3. Systematic review of literature (Pubmed, CINAHL Plus, Scopus, Embase) with the following terms: shelter, disaster, education (planning, training, preparation), volunteer (nurse, healthcare provider) to find relevant publications.

200 abstracts reviewed → 18 full-text articles assessed for eligibility → 8 articles included in analysis

Exclusion Criteria:

- Not in English
- Not related to sheltering
- Not related to healthcare in shelters
- Not related to education/training
- Not related to physicians, nurses, EMTs

3 Results/Evaluation

Overview of U.S. disaster response organizations and the educational preparation programs they offer:

•**American Red Cross:** Disaster Health Services Fundamentals 1 & 2, required 2-hour online modules

•**FEMA:** Introduction to National Incident Management System; Introduction to Incident Command System; National Response Framework

•**Medical Reserve Corps:** Volunteer training opportunities, requirements, and curriculum varies greatly among local branches. The most frequently offered course covers the Incident Command System. Licensed healthcare professionals receive the same training as non-medical volunteers.

•**State Health Departments:** CA, FL, IL, LA, NY have developed specific disaster preparedness programs, including their own network of volunteers. All states surveyed require volunteers to complete FEMA training modules. CA, IL, and LA offer additional educational opportunities.

•**Faith-based Organizations:** Most community organizations provided non-medical services such as food, social/emotional support, networking, and prayer.

Key Informant Interviews:

Respondents revealed inconsistencies in training and a lack of adequate knowledge on the part of healthcare volunteers preparing to work in disaster relief shelters. They strongly suggest that most providers do not possess training consistent with the IOM Crisis Standards of Care.

Literature Review:

Following the removal of duplicates, 8 articles were selected for review. These studies were primarily descriptive analyses of medical response efforts to some of the most significant natural disasters of the past decade, including Hurricanes Katrina and Rita (2005), the Alabama tornado outbreak (2011), and the Japan tsunami (2011). Through surveys, interviews and reflections from healthcare professionals involved in disaster relief, the articles emphasized the unique nature of providing medical care to patients in shelters, and the need for additional, specialized training in topics such as disease management and surveillance, outbreak patterns, shelter operations, and responding to patients with special needs. The key findings in the review of literature suggest that specialized education and training would increase competencies of providers, and improve overall function and efficiency of response efforts.

4 Conclusions/ Future Directions

Our findings expose inconsistencies and gaps in the education that healthcare providers receive prior to being deployed for work in a disaster relief shelter. The data demonstrates a need for more organized, consistent training programs to increase provider competency and improve outcomes for patients. Further studies are needed to explore the benefit of developing and implementing a standardized national training curriculum.



5 References

- Disaster Training Courses. (2013). *American Red Cross*. <http://www.redcross.org/tx/waco/take-a-class/disaster-training>
- Hanfing, D., Altevogt, B.M., Viswanathan, K., Gostin, L.O. (2012). Crisis Standards of Care: A Systems Framework for Catastrophic Disaster Response. *Institute of Medicine*. Washington, DC: The National Academies Press.
- National Incident Management System. (2014). *Federal Emergency Management Agency*. www.fema.gov.
- National Incident Management System. (2014). *Federal Emergency Management Agency*. www.fema.gov.
- Pierce, J.R., Pittard, A.E., West, T.A., Richardson, J.M. (2007). Medical Response to Hurricanes Katrina and Rita: Local Public Health Preparedness in Action. *J Public Health Management Practice*, 13(5),441-6.
- Stanford, S. (2014). The 2013 Network Profile of the Medical Reserve Corps. <http://www.naccho.org/topics/emergency/MRC/upload/TTC-NACCHO-MRC-Report-2013-lo-res.pdf>

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