

Quality of Healthcare Services Provided in Disaster Shelters: An Integrative Literature Review

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1 Background

In light of disasters of the past decade such as Hurricane Katrina, 2005, the East Japan Earthquake, 2011, and Hurricane Sandy, 2012, more focus is on disaster and recovery efforts both nationally and internationally. Shelters can be defined as a displaced neighborhood of convenience, providing physical shelter as well as social and medical services. Traditionally vulnerable populations like children and the elderly along with those with chronic illness have the highest chance of using shelters post-disaster (Wisner, et. al, 2004, Enarson, 2010, Phillips and Fordham, 2010). Chronic illness is also prevalent in shelter populations with nearly one-half of residents post-Hurricane Katrina (Greenough, 2008).

Despite knowledge of populations at risk, relatively little is known about the quality of healthcare provided in disaster shelters (Caillouet, 2012; Owens, 2005; Takahashi et. al., 2012). This is important knowledge to maximize health outcomes of vulnerable shelter populations.

2 Objectives

To conduct an integrative review of literature on assessment, evaluation, and systematic measurement of healthcare services and quality and client outcomes in disaster shelters.

Our review encompassed two concepts:

- Nursing and/or health care in emergency or disaster shelters
- Any systematic assessment, evaluation, quantitative model, outcomes, or metrics for measuring quality of care in this context

3 Methods

Literature search: A comprehensive search was done in six databases (PubMed, CINAHL, Scopus, EMBase, Web of Science, and Google Scholar) to find relevant publications, as well as a manual search of the literature, contributions from experts, and reference reviews. Our search yielded 527 titles for review. After applying exclusion criteria, 42 abstracts were reviewed, then 24 full-text articles. 13 publications were included in this integrative review.



4 Results

13 articles were selected for inclusion in the review, spanning 2007-2012. Content analysis revealed six major themes:

- 1) Staff/preparedness:** We found that most sites were staffed with nurses (LPN, RN, NP) but staffing levels were a concern. Other issues identified were lack of clear leadership, feelings that training was inadequate, and difficulty assigning roles appropriate to skills and licensure.
- 2) Medication/Medication Management:** Issues identified were leaving home without medications, finishing a prescription, needing a new medication, and needing assistance with medication management and administration.
- 3) Infection control and surveillance:** Shelters employed a variety of infection control and surveillance measures. These include screening of clients upon arrival to the shelter, use of aggregate reporting forms, and a cot survey tool to track outbreaks.
- 4) Referrals:** Referrals were made to higher levels of care, including hospitals/EDs at varying rates. The appropriateness of these referrals is largely unknown.
- 5) Communication:** Challenges included orienting new nurses, information lost in hand-offs, and poor communication within the shelter and messages to the public.
- 6) Mental Health:** Mental and psychiatric illness were cited as a major health concern in disaster shelters. Clients also experienced grief, loss, fear, and anger if they survived the death of a loved one. Concerns included the lack of mental health professionals available at shelters.

5 Conclusions

While no studies directly discussed quality of care rendered in disaster shelters, they did suggest important components of quality of care. The review identifies staffing, staff preparedness, and shelter management as important indicators of quality of care. Staff preparedness is inclusive of both licensure and disaster specific education and training received. Infection control might also provide an accurate indicator of care in shelters. The CDC currently provides guidance, a surveillance reporting system, and shelter assessment tool. While surveillance of the population is important, physical assessment of clients and follow-up is also key. An emergent theme suggests that inclusion of mental health professionals on shelters staff as well as appropriate referrals are other aspects that will improve quality and scope of care. In summary, indicators of quality are varied and cover many aspects of care in shelters.

6 Future Directions

- Describe the care currently being provided in disaster shelters in terms of scope and intensity through client record review
- Create a universal tool to collect, analyze, and share data across agencies
- Develop national and international standards for care provided in disaster shelters

7 References

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Search Terms	
- Disasters: Disaster, Natural Disaster, MCI, Relief, Disaster Preparedness, Disaster Response,...	
- Emergency Shelter: Shelter, Internally Displaced Persons, Disaster Shelter, Temporary Shelter,...	
- Quality of Healthcare, Care, Quality, Model, Metric, Outcome, Evaluation, Measure, Indicator,...	
Inclusion Criteria	Exclusion Criteria
- English language	- Not related to disaster shelters
- Qualitative or quantitative data	- Not related to healthcare and prevention in shelters
- Outcome measure is related to quality of care in disaster shelters or metrics that can be used to measure such	- Client demographic and prevalence data only
- Population: shelter residents, shelter staff, experts in the field	- Not original research (editorial or commentary)



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Funding Source:

The Helene Fuld Leadership Program for the Advancement of Patient Care Quality and Safety