

Chronic Renal Insufficiency and Diabetes Mellitus following Disasters: A Model For Reform

A.C. Miller,¹ B. Arquilla²

1. State University of New York Downstate Medical Center, Brooklyn, New York USA
2. USA

Background: Chronic diseases result in significant morbidity and mortality following disasters, but traditionally their incidence and treatment have been under-recognized.

Objective: To formulate a model for responding to post-disaster diabetic needs based on the nephrology community's response to post-disaster dialysis needs.

Discussion: In the wake of natural disasters such as the recent earthquakes in Pakistan, Iran, Japan, and Indonesia, the south Asian tsunami, as well as the hurricanes affecting the US gulf-coast, much attention has been focused on the care and prevention of primary illnesses such as traumatic injuries. However, while the exacerbation of secondary illness such as chronic disease, comprise a sizable health burden, the literature provides little information regarding the treatment of large numbers of chronically ill patients in post-disaster scenarios. Surveys estimate that 25–40% of persons living in the regions affected by Hurricanes Katrina and Rita had at least one chronic disease. In response to the 1989 Armenia earthquake, the International Society of Nephrologists and United States National Kidney Foundation worked together to form a disaster relief task force that has proven effective in responding to the dialysis needs of victims following the 1999 Turkey and 2005 Pakistan earthquakes. Recent data suggest the need for a similar effort for responding to post-disaster diabetic care needs.

Conclusions: By recognizing and addressing the impediments to proper glycemic control, creating supply stockpiles, educating patients and caregivers, and incorporating diabetes specialists into planning and relief efforts, we can greatly enhance the quality, delivery, and effectiveness of the care provided to diabetic patients during relief efforts.

Keywords: diabetes; disaster; kidney; public health

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Do Healthcare Providers Responding to Disasters Have Public Health Awareness and Preparedness?

D.B. Brahmabhatt,¹ J.C. Chan,² E.H. Hsu,³
H.M. Mowafi,² T.K. Kirsch,³ P.G. Greenough²

1. The Institute for Johns Hopkins Nursing, Baltimore, Maryland USA
2. Harvard Humanitarian Initiative, Boston, Massachusetts USA
3. Johns Hopkins Emergency Medicine, Baltimore, Maryland USA

Introduction: Both Hurricane Katrina and Hurricane Rita caused major population displacements. This forced the American Red Cross to manage the largest shelter operation in their history. Response efforts identified the importance of increased public health awareness.

Methods: A collaborative partnership among Johns Hopkins University, the Harvard Humanitarian Initiative, and the American Red Cross (ARC) was formed to con-

duct a rapid assessment of public health needs. Trained team members traveled to five ARC-identified regions in Texas. A survey focusing on shelter demographics, basic public health knowledge, shelter healthcare training prior to deployment, and the referral system was distributed. Data were collected through observations and informal discussions with healthcare providers in the shelters.

The public health awareness of staff members was ascertained by scenarios based on infectious case definitions. Respondents needed to make decisions regarding treatment and next steps of care. Convenience sampling was conducted. **Results:** Forty-three shelters were surveyed. Of these, 82% utilized resident nurses and emergency medical technicians as healthcare providers, and 60% of the shelters included medical doctors. Of the shelter managers, 75% reported having prior shelter training. Of the respondents, 33% had public health training, and 56% felt that prior public health training would have been helpful in the management of shelter populations.

Respondents felt that pre-deployment orientation on public health and immediate public health consultations would be extremely valuable.

Conclusions: Public health awareness and training is a necessity for staff members who run shelters. Additional training and educational interventions should be provided for any staff members interested in shelter care management.

Keywords: American Red Cross; evacuee management; hurricanes; population displacement; public health

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Session 3: Flooding

Chairs: M. Hoejenbos; Knut-Ole Sundnes

A Population-Based Cluster Survey of Vulnerability and Disease Burden for Hurricane Katrina Evacuees Displaced to Shelters

P.G. Greenough,¹ M. Lappi,¹ E.B. Hsu,² S. Fink,¹
Y.H. Hsiang,² A. Vu,² C. Heaton,¹ T.D. Kirsch²

1. Harvard Humanitarian Initiative, Cambridge, Massachusetts USA
2. Johns Hopkins Medical Institutions, Baltimore, Maryland USA

Introduction: The burden of disease and vulnerability level of the population displaced to shelters by Hurricane Katrina was unknown. The purpose of this study was to define the demographics and health profiles of these evacuees in order to guide the humanitarian response.

Methods: We performed a two-stage, 30 by 21 cluster sample survey of the shelter population (38,804) residing in Louisiana Red Cross shelters two weeks after Hurricane Katrina. Shelter clusters were randomly selected using probability proportional to size methodology. Heads of households were then randomly selected to yield 551 households representing 1,597 individuals.

Results: Nearly half of the sample was single, widowed or divorced; the majority was female (57.7%) and African-American (68.8%). Underemployment (54.3%), dependency on assistance (42.6%), lack of home ownership (61.7%), and lack of health insurance (43.6) suggested vulnerability. Of the sample population, 56.3% arrived with at least one chronic disease. The prevalence of hypertension (33.9%),