

of the importance to take into account the specificities of older people during the application of emergency measures and the recovery period of a community.

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(A134) Special Needs of the Elderly During Disasters – Suggested Strategies and Lessons Learned from the 2007 Tulsa, Oklahoma Ice Storm

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Special Needs of the Elderly During Disasters – Suggested Strategies and Lessons Learned from the 2007 Tulsa, Oklahoma Ice Storm. On the evening of December 7, 2007 an ice storm occurred in the south central United States causing severe power outages in Tulsa, Oklahoma. In Oklahoma alone, 900,000 people were without power for periods of up to 3 weeks. Approximately 13.2% of the population in Oklahoma aged 65 + live in institutional care (2000 US Census Report). There are 498 nursing home facilities in Oklahoma serving this majority of this population (a small percentage live in other types of care facilities). Of these facilities 143 lost electrical power for up to six days, 88 lost power but had generators available within 24 hours or less, and 55 had no alternative source of power. Of the 55 without power, 42 relocated residents. Critical infrastructure failures during natural disasters can create a cascade of direct and indirect losses due to a number of physical, social and economic interdependencies that exist (Rinaldi, Peerenboom & Kelly 2001). The elderly present some unique characteristics that make them more vulnerable during natural disasters. Chronic health problems, physical mobility and cognitive limitations make them unable to adequately prepare for disasters (Aldrich & Benson 2008) making them entirely dependent on the facilities. In the three years since the storm the Oklahoma Disaster Institute has focused its efforts on developing and implementing mitigation strategies to address power loss in nursing homes. These strategies included discussions with the Department of Health, Emergency Medical Services Authority and local hospital officials. As a result of these discussions, table-top exercises were conducted in multiple venues, and speakers from the Department of Health, EMSA, and emergency management were arranged in an Extended Care Facility Workshop. This paper will look at lessons learned, mitigation strategies and successes in protecting the elderly in nursing homes during natural disasters.

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(A135) Preliminary Results of Post-Flooding Impacts on Rural Elderly in Hainan Province, China

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Background: Limited information is available on the health outcomes of the rural older population in developing countries is affected by disasters. In October 2010, Hainan Province

experienced severe flooding following heavy rains. Nearly four million people were affected and many had undergone resettlement. This study investigated the impacts of the flooding on people living in the disaster-affected rural communities. The findings were compared with baseline information collected in 2010 about health issues in rural villages in Hainan. Health outcome comparisons also were made between ethnic groups (Han versus Li).

Methods: A two-stage cluster-sampling, cross-sectional post-disaster study was conducted. The entire Hainan Island was categorized into ranks of different severity in rainfall amount and associated damage in October (most severe, intermediate, least severe). The county with the most rainfall and the most severe ranking and the one with least rainfall and the least severe ranking were identified. In each county, one Han and one Li village were chosen by using a computer-generated random number, so four villages were sampled in total. More than 100 individuals ≥ 50 years of age were interviewed by face-to-face survey. Data on disaster-related injuries, socio-demographic information, non-communicable disease, lifestyle, and mental health were collected.

Results: Findings indicated the severity of impact was associated with self-reported health outcomes of older population. Gender and ethnic differences were found in reported health outcomes. Predictors of adverse post-disaster health outcomes in older populations in rural communities were identified.

Conclusions: The results demonstrated significant differences in the impacts of flooding in rural populations. Targeted services and interventions should be planned to address the disparity and meet the physical and mental health needs post-disaster.

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(A136) Elderly in Emergency

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Elderly in emergency – Presentation: Psychosocial support is essential to prevent mental health disorders in the elders subjected to trauma in emergencies that induces to isolation as well as risks or vulnerability for them and their environment. Financial crisis, natural disasters, attacks, poverty, violence and loneliness in the social environment turn threatening for them. Reality becomes hard and produces disorganization in mental health.

Objectives: Elder people who have gone through one or more of the following situations are the ones who are prone to develop intense or immediate character disorder. With strategies that increase the existing psychosocial protection factors stress at different intervention levels is lowered. Those who have gone through one or more violent experiences are the ones who are prone to develop intense or immediate character disorder. Cultural transferring (between adults and between adults and children) and mutual help between adults and children is held. **Methodology:** Cognitive processing factors associated to each individual's anxiety: stress, depression, loneliness, panic attacks etc. Some techniques have been developed to understand emotions and learn how to manage them: songs, classic tales, puppets, advertisements and anagrams, Kessen cards, etc. All the material and the results were evaluated with clinic tests and professional help.

Conclusion: Additionally, a good cultural understanding of the situation and the adult's feelings are needed in order to provide assistance. The one providing help as well as the one receiving bio-psychosocial help are both part of the link created to overcome the impact of violence, committed to build bridges in the adversity. To prevent post-traumatic stress they are trained in facing disturbing anxiety when facing catastrophes produced by nature or men.

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(A137) Prediction of Short-Term Functional Outcomes of Older People in the Emergency Department

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Background: Advancing age and co-morbid illness result in loss of the ability to perform activities for daily living (ADLs), and are important determinants of loss of independence and autonomy among older persons. Acute illness reduces the functional status of previously healthy older persons. The aim of the current study was to determine the change in ADLs due to acute destabilization in old age one month following discharge.

Methods: Older subjects admitted to the General Medical Wards from the emergency services of the All India Institute of Medical Sciences were included between August and February 2008. The Barthel index of ADL was assessed in a longitudinal design at the time of admission and one month post discharge. The values of the indices were compared using paired samples t-test.

Results: Of 108 subjects who presented to Emergency Geriatric Services at the hospital, 11 were excluded due to incomplete records, inability to trace on follow-up, incorrect telephone numbers, or had since died. Advancing age did not show a significant correlation with pre-morbid ADL score ($r = -0.040$; $p = 0.749$) or post-morbidity ADL score ($r = -0.65$; $p = 0.636$). A 45% decline in ADL score was noted one month following discharge after acute illness in older subjects (pre-ADL = 15.85; post-ADL = 8.78).

Conclusions: Older subjects are at a higher risk of poor functional outcome because they are less likely to recover function lost before admission and more likely to develop new functional deficits during hospitalization and after discharge.

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(A138) Duration of Emergency Department Stay and Injury Profile of Homeless Patients in a Level-1 Trauma Center

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Background and Objective: Immediate resuscitation and early disposition to definitive care improves outcomes. Homeless patients are neglected in emergency department (ED). The duration of ED stay and profile of injury of homeless patients at a Level-1 Trauma center were measured.

Methods: The study was performed from October 2008 to September 2009. Homeless patients were defined as patients

who had no attendant and did not have any shelter. Duration of ED stay was noted from the ED arrival time to entry time at the definitive care (intensive care unit/ward). Clinical and demographic details were recorded. Subjects who had: (1) an attendant; (2) were discharged from the ED; or (3) expired in the ED were excluded.

Results: Forty-one homeless patients were admitted. The mode of injury was road traffic crash in 73.2%; assault in 7.3%; fall from height in 7.3%; and in 12.2%, the mode of injury unknown. The average Injury Severity Score (ISS) was 6.76, with a maximum of 34 and minimum of 1. A total of 24 subjects (59%) had a Glasgow Coma Scale (GCS) score of ≤ 8 (severe head injury), 10 patients (24%) had GCS score 9–12 (moderate head injury), and seven subjects (17%) had GCS score 13–15 (minor head injury). Breath alcohol test was positive in 13%. The average duration of ED stay was 35 (3–173) hours in the homeless group and 12 (0.5–18) hours for patients with an attendant. Twenty-one subjects were admitted to neurosurgery (51.2%) with an average ED stay of 22.4 hours, five to surgery (12.20%) with average ED stay of 56.6 hours, and 15 to orthopedics (36.6%) with average ED stay of 45.3 hours.

Conclusions: The emergency department stay of homeless patients was 35 hours. Orthopedic trauma subjects had a prolonged disposal time. This addresses serious patient safety concerns and immediate remedial measures.

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(A139) Profile of Likely Needs in a Disaster Alternate Site Care in Honolulu, Hawaii

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Background: In the US, a system has been developed to provide disaster sheltering for persons with special needs in what are now termed alternate care sites (ACS). As in many other developed countries, as the population ages, the rates of people with chronic diseases that require complex health care management in the home setting has increased. The aim of this study was to identify the key chronic diseases, conditions, and therapies that should be planned for in ACS operations.

Methods: A convenience sample ($n = 402$) of senior citizens (≥ 65) who resided in Honolulu, Hawaii were interviewed and completed a 15-item survey that asked about demographics, existing health conditions, activities of daily living abilities (ADL), and requirements for ongoing care.

Results: The mean age was 68 years; 56% were female. The most common health issues included: hypertension (53.4%), heart disease (24.6%), diabetes mellitus (23.3%), and asthma (15.1%); while 11% ($n = 47$) reported they required daily physical assistance ADLs, including: getting up from a chair (15.1%), walking (8.1%), taking medications (8.1%), dressing (5.2%), and toileting (4.2%). Of these 47 people, most (81%) had someone who would help them in a disaster shelter, while nine (19% of the total who required assistance) had no one to help them. On average, of the respondents who reported they took medication daily, 14% had less than a seven-day supply of medication for their chronic disease.