

Abstracts of Oral Presentations-WADEM Congress on Disaster and Emergency Medicine 2019

AGED CARE AND DISABILITY

Dallas Mega Shelter Onsite Medical Operations Supporting Evacuee Functional Independence and Family Unit Integrity During Response to Hurricane Harvey

Prof. Raymond E. Swienton, Dr. Kelly R. Klein, Dr. E. Liang Liu, Dr. Lindsay A. Flax, Prof. Raymond L. Fowler
University of Texas Southwestern, Dallas, United States

Introduction: In the United States, over 50% of people have at least one chronic medical condition, access, or functional limitation. In 2017 during Hurricane Harvey, the establishment of a comprehensive multidisciplinary onsite medical clinic provided health and medical services to over 3,800 evacuees at the Dallas Mega Shelter, providing large-scale general population sheltering support to all evacuees and prioritizing family unit integrity by meeting physical, sensory, and cognitive limitations, and chronic medical conditions. The effectiveness of the Dallas Mega Shelter onsite medical operations supporting this aim is reviewed.

Aim: To utilize onsite health and medical resources to meet access and functional needs of evacuees seeking general population mass sheltering in Dallas, Texas during Hurricane Harvey.

Methods: Observational.

Results: Over 3,800 evacuees were evaluated for functional needs support services (FNSS) resulting in over 2,500 evacuee patient encounters during 21 continuous days of onsite health and medical clinic operations.¹ A comprehensive array of services were available at no cost to the evacuees and were in accordance with the Federal Emergency Management Association (FEMA) published Guidance on Planning for Integration of Functional Needs Support Service in General Population Shelters.² The goal to maintain nearly all evacuees choosing to stay in the Mega Shelter was achieved. The challenges, limitations, and risks identified are reviewed.

Discussion: FNSS guidelines require all persons, regardless of limitations, when evacuated from home be provided all services necessary to allow them to remain in general population sheltering.² This prioritization of personal choice, functional independence, and family integrity for those with comprehensive FNSS requirements presented notable challenges, including public health and safety risks impacting the wellbeing of others. Meeting these expectations must be balanced with maintaining shelter integrity.

References

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Development of an Evacuation Exercise for Residential Aged Care Facilities Using the Emergo Train System (ETS)

Mr. Karl Cronan, Ms. Linda Winn
NSW Ambulance, Eveleigh, Australia

Introduction: Events such as the Sydney Quakers Hill Nursing Home fire highlighted the great need for robust evacuation plans for Residential Aged Care Facilities (RACFs). However, plans alone are not sufficient and routine exercises are necessary to test the capability of a facility's emergency plan. Current methods of exercising facility evacuations, such as live drills, are limited and only test isolated elements of the evacuation process, which fall drastically short of being able to simulate the real-time resources and procedures required to perform a large scale evacuation of a RACF.

Aim: To develop an exercise tool that assists Residential Aged Care Facilities (RACF) to evaluate their evacuation procedures using quantifiable data, based on real-time and providing minimal disruption to existing residents.

Methods: Utilizing the existing ETS framework, an aged care resident patient bank was developed by NSW Health Emergency Management Unit, including:

- A bank of 200 residents from data sourced from the Australian Institute of Health and Welfare.
- Layout for the resident gubers and Summary Care Plans.
- Resources and equipment routinely used in RACFs.
- Real-world testing of the prototype in exercises across NSW, Australia
- Mortality and morbidity data to measure outcomes.
- Validation of the exercise tool nationally and internationally.

Results: A bank of residents was developed to test evacuation systems and processes, in a scalable, realistic simulation based on patient outcomes. This will result in improved planning and process, empowerment of RACFs, better patient outcomes, and increased resilience and preparedness.

Discussion: A significant investment of data, time, and effort has gone into producing this resident bank for use in RACF evacuation exercises across NSW Australia. A presentation delivered at the ETS World Congress in the Netherlands (2018), by NSW Health Emergency Management Unit,

showcased the relevance and suitability of this tool across the world.

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Mortality in Nursing Home Evacuations in the United States from 1995–2017

Dr. Sharon Mace¹, Mr. Daniel Caicedo²,
Miss. Aishwarya Sharma²

1. Cleveland Clinic Lerner College of Medicine at Case Western Reserve University, Cleveland, United States
2. Ohio University Heritage College of Osteopathic Medicine, Warrensville Heights, United States

Introduction: There are an estimated 15,600 nursing homes with a total of 1.4 million residents in the United States. The number of residents will continue to increase due to the aging population, and the associated morbidities will make it difficult to evacuate them safely.

Aim: This study is the first of its kind to provide an analysis of the number of nursing home deaths caused by external and internal events following evacuations.

Methods: Information from the databases Lexis Nexis and PubMed were compiled and limited to news articles from

1995–2017. The gathered information included the reason for evacuation, injuries, deaths, and locations within the United States.

Results: From 1995 to 2017, there was a total of 51 evacuations and 141 deaths in nursing homes. 27 (53%) evacuations were due to external events which resulted in a combined 121 (86%) deaths, and 24 (47%) evacuations were due to internal events which resulted in a combined 20 (14%) deaths. Hurricanes were responsible for the majority of deaths during evacuations, followed by fires and floods. The number of evacuations and deaths increased the greatest between 2005 to 2008.

Discussion: External events have the greatest impact on loss of life. Internal disasters are about equal in the number of incidents, however, external events have a much greater mortality rate. Exact numbers on injuries, morbidity, and mortality are difficult to ascertain, but it appears to be related to natural disasters. In view of the increasing likelihood of natural disasters related to global warming, a drastic improvement of standard evacuation procedures of long-term nursing homes is critical to decreasing mortality of nursing home residents. There also needs to be a nationally standardized method of reporting evacuations in order to better analyze data on nursing homes.

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