

569 Burn Registries State of Affairs: A Scoping Review

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Introduction: Registry science applies observational study designs to interpret large secondary databases. It can be utilized to understand disease and injury, answer research questions, inform regulatory decision making, and engender benchmarking of quality-of-care indicators. Numerous burn registries exist globally, however their contributions to the science of burn epidemiology, care and treatment have not been summarized. The objective of this study is to characterize the available literature on burn registries.

Methods: We conducted a scoping review, having registered the protocol *a priori*. A comprehensive literature search across several databases, including the grey literature, was carried out. Studies of all methodological designs were included provided they utilized, analyzed, and/or critiqued burn registry data. Pilot projects from registries in development were included as well. Studies involving non-burn specific registries or registries from a single burn centre were excluded.

Results: Two hundred and sixty-eight studies were included, encompassing 16 existing burn registries. Although registry science has been used to investigate burn care since 1970, the majority of studies were published after 2007. Most studies utilized the American Burn Association Burn Registry or one of its previous versions (75.7%) and the Burns Registry of Australia and New Zealand (10.4%). Main limitations of existing registries are the inclusion of patients admitted to burn centres only, deficient capture of outpatient and long-term outcome data, and lack of data standardization across registries.

Conclusions: Registries are an invaluable source of data for research, delivery of care planning, and benchmarking of processes and outcomes. Efforts should be made to stimulate other jurisdictions to build and maintain burn registries, to incorporate data linkage from administrative and other secondary databases, and to standardize data collection, in order to maximize the potential of registry science in burn care.

570 Burn-Related Injuries Treated at Two Gulf Coast Hospitals During Following a Category 4 Hurricane

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Introduction: Natural disasters are commonly associated with mass destruction and severe injuries. On August 29th, 2021 a category 4 hurricane made landfall before mandatory evacuations were ordered in a major metropolitan community. The powerful storm challenged disaster management teams and first responders as communities struggled to recover. Our study analyzes the demographics of those injured and the injury patterns treated at our state's only verified burn/trauma center and the adjacent children's hospital in the aftermath of the hurricane.

Methods: A retrospective chart review was performed on patients seeking emergent care following the hurricane. Demographic data was abstracted from the medical records along with injury pattern including age, gender, mechanism of injury, total body surface area (TBSA), surgical interventions, and length of stay. In addition, brief surveys of fire chiefs from the two most impacted regions were performed to assess prehospital challenges.

Results: 41 patients (76% male) presented to our ER with a median age of 44 (7 patients < 12 years of age). 85% of injuries occurred at home while 15% occurred at work. Of the 78% requiring admission, 66% underwent excision and autograft with a mean TBSA of 17% (range 1-80%). Power outages resulted in increased gas generator usage across the region. Most of the burn injuries following the storm were due to generator and cooking accidents (56%). Each fire chief reported up to 91 calls/day due to suspected carbon monoxide poisoning for the two weeks following the storm. A single event resulted in 8 inhalation injuries treated in our ER with one burn ICU admission. The mean hospital length of stay was 1.11 days/%TBSA for those undergoing surgery.

Conclusions: Hurricanes are more common today with many coastal cities at risk for similar natural disasters. Despite our generator safety media outreach efforts prior to the storm, this remains an opportunity for improved injury prevention. Many patients suffered delays in discharge as their homes/nursing facilities suffered structural damages and were without power and water. Disaster planning should account for limited disposition options during severe storms. Our study is the first to describe burn-related injuries from a category 4 storm and our communities' response.