
43 COVID Crisis: A Burn Approach

Jamie Heffernan, MSN, RN, James Gallagher, MD, FACS

New York-Presbyterian/Weill Cornell Medicine, New York, New York

Introduction: The net effect of the COVID-19 pandemic on this northeastern, urban healthcare system during March, April and May 2020 was the redirection of virtually all resources to the care of the affected population. Conversion of the majority of the hospital's assets, including staff and infrastructure, to COVID care created a large reduction in resources for other clinical problems. The burn service was among those few essential disciplines that continued to receive acutely affected individuals during the crisis. The preservation of the burn center's ability to continue its mission within the walls of a COVID hospital is the subject of this review.

Methods: All of the hospital's ICU rooms, including all those on the burn unit, post anesthesia care units, some step-down units, and over 90% of the operating rooms (ORs) converted to COVID care ICUs. These vital actions by hospital administration enabled an increase in ICU beds from 114 to 270. Staff were redeployed to cover the massive influx of critical COVID patients.

Burn inpatients during the transition were categorized by severity and age for disposition consideration. Of the 17 inpatients, 4 pediatric patients discharged home and 1 transferred to our associated children's hospital; 7 adults discharged home, 2 transferred to our associated inpatient psychiatric hospital, 1 to inpatient rehab, and 2 transferred to a neighboring orthopedic hospital converted into an adult acute care hospital.

The commitment to keep the burn center operational for both children and adults was facilitated by protecting the burn ICU hydrotherapy room, a large patient care space in the center of the burn ICU. Children, initially admitted and cared for in the hydrotherapy room until stable, transferred to our network Children's hospital for continued care. Critical adult burns were admitted to the inpatient ICU with the COVID patients, acute burns were housed on the few remaining medical surgical units. Burn care was performed in the patients' rooms to keep the hydrotherapy room "clean".

Results: During the 3-month period described the burn service admitted and cared for 92 adult and 25 pediatric patients while maintaining a full ICU census. Although 3 admitted burn patients were COVID +, no burn patients housed in the ICU became COVID + during their stay.

Conclusions: The commitment to protect the burn hydrotherapy space for burn triage and care from the top level of administration was critical and notable given the widespread conversion of the subspecialty ICUs and most other patient care areas to COVID care units. Strict adherence to infection prevention guidelines and protection of the hydrotherapy room allowed burn patients to receive timely and appropriate care during a pandemic.

44 Examining the Impact of the COVID-19 Pandemic on Participants in a Longitudinal Study of Burn Outcomes

Brian M. Kelter, Jr., BA, Audrey E. Wolfe, MPH, Callie Abouzeid, BA, Nicole S. Gibran, MD, FACS, Radha K. Holavanahalli, Ph.D., Karen J. Kowalske, MD, Pengsheng Ni, Lewis E. Kazis, Doctor of Science (Health Services Research), Colleen M. Ryan, MD FACS, Jeffrey C. Schneider, MD

Spaulding Rehabilitation Hospital, Boston, Massachusetts; Spaulding Rehabilitation Hospital, Boston, Massachusetts; Spaulding Rehabilitation Hospital, Cambridge, Massachusetts; University of Washington, Seattle, Washington; UT Southwestern Medical Center, Dallas, Texas; University of Texas Southwestern Medical Center, Dallas, Texas; Boston University School of Public Health, Boston, Massachusetts; Boston University School of Public Health, Boston, Massachusetts; Massachusetts General Hospital/Harvard/Shriners Hospitals for Children-Boston, Boston, Massachusetts; Spaulding Rehabilitation Hospital/Harvard Medical School, Boston, Massachusetts

Introduction: The COVID-19 pandemic has had widespread effects on healthcare and society at large. There are limited data on the impact of the pandemic on the long-term recovery of the burn survivor. This study aims to compare physical and psychosocial outcomes of the burn survivor population before and during the COVID-19 pandemic.

Methods: Data from the Burn Model System National Database (2015-present) were analyzed. Data were divided into pre- and during-pandemic groups (before and after March 1st, 2020). Outcomes were compared at four cross-sectional time points: 6, 12, 24, and 60 months after burn injury. The following patient reported outcome measures were examined: SF-12 Health Survey, PROMIS-29, Post-Traumatic Growth Indicator, Community Integration Questionnaire, Patient Civilian Checklist, Satisfaction with Life Scale, Burn Specific Health Scale, NeuroQOL Stigma, 4-D Itch, and CAGE Questionnaire (drug/alcohol misuse). Given the cross-sectional design, potential differences in clinical and demographic characteristics were examined for each group at each time point. Adjusted mean outcome scores at each time point were compared between groups using a two stage multi-variable regression model with propensity score matching. For each time point, subjects from each group were matched. The propensity score was calculated using the following matching variables: gender, age, race, ethnicity, etiology, length of stay, and burn size. The mean score difference of outcomes within each matched sample was examined.

Results: Sample sizes varied by time point with a range from 420 at 6 months to 94 at 60 months. The during-COVID group comprised 10% of the total sample size. There were no significant differences in demographic and clinical characteristics between the groups at any time point. There were no significant differences between the groups in adjusted mean outcome scores across the different time points.

Conclusions: This preliminary examination showed no differences in myriad long-term outcomes at multiple time points after injury among burn survivors before and during the start of the COVID-19 pandemic. The results may suggest an element of resilience, however given the sample size and cross-sectional limitations further investigation is required to better understand the impact of COVID-19 on the burn population.