
564 **The Impact of COVID-19 on the Provision of Pediatric Burn Care**

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Introduction: The WHO declared the outbreak of COVID-19 a pandemic in the spring of 2020 which led to widespread restrictions on daily life activities as people were instructed to isolate at home. Given that 75 – 85% of pediatric burns occur in the home, it is likely that these measures had an impact on pediatric burn care. Thus, the aim of this study was to investigate the impact of the COVID-19 pandemic on the provision of pediatric burn care at an American Burn Association-verified pediatric burn center.

Methods: Data was retrospectively extracted from all new burn patients aged 0-18 years during a pre-pandemic period (April 2019 – August 2019) and a pandemic period (April 2020 – August 2020). Continuous data was examined using 2 tailed t-tests ($p < 0.05$), while non-continuous data was examined using Pearson chi-squared tests ($p < 0.05$). These analyses were used to analyze burn demographics and examine changes in the delivery of acute and follow-up burn care before and during the pandemic.

Results: During the pre-pandemic period, 213 new burns were identified, compared to 172 new burns during the pandemic period. No clinically significant changes were observed in patient age at presentation ($p = 0.54$), total body surface area of burn ($p = 0.85$), and time to presentation following the injury ($p = 0.24$). Interestingly, a significant increase in friction burns ($p = 0.023$) was observed, which mainly consisted of treadmill burns. During the pandemic, burn operating room utilization remained high and represented approximately 25% of the hospital's total surgical capacity. In addition, there were no significant changes to inpatient and outpatient encounters ($p = 0.56$ and $p = 1.00$) between the two periods thereby highlighting the need for these essential services during the pandemic.

Conclusions: Burn-related service needs remained consistent across the pre-pandemic and pandemic cohorts as demonstrated by the number of new burns as well as the continued provision of burn care. Overall, no clinically significant changes to patient demographics, aside from the increase in friction burns, were observed. Furthermore, the ability to provide all aspects of pediatric burn care at this tertiary pediatric hospital remained consistent across the pre-pandemic and pandemic cohorts. Although this study presents data from the first five months on the pandemic, further analysis of the entire year will be carried out in order to identify additional trends.

565 **Impact of Municipal Ordinances on Firework-Related Injuries**

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Introduction: There is significant heterogeneity in firework-related legislation across the country, with some states outright banning sales, possession, and use. Others restrict the dates and types of fireworks that can be purchased. Municipalities often adopt firework ordinances that apply within their city limits, pushing the sale and use into unincorporated areas or permitting easy access to illegal fireworks for transport into city limits. We seek to understand how effective firework ordinances are at preventing firework injuries. We hypothesize lax municipal ordinances will have a limited effect on firework-related injuries.

Methods: Two time periods where the commercial sale of fireworks is legal were identified, and we reviewed patients presenting during those windows for the acute management of firework-related burns. This corresponds to June 24 – July 11 and December 20 – January 8. Patient demographics and burn outcomes were collected. Socioeconomic status was determined using a standardized scale (0-100) that incorporates Census data, with higher scores reflecting more disadvantaged communities. Legality was determined by a review of municipal ordinances and patient residence.

Results: Thirty-five patients were identified between December 2016 and January 2021. More injuries occurred around July 4th compared to New Year's (54% vs. 46%). The cohort was predominantly men (77%) with an average age of 29 years. Patients most commonly came from suburban areas (34.3%), compared to rural (25.7%), urban (20%), or small towns (17.1%). Alcohol use at the time of injury was reported in 14% of cases. Explosive fireworks (e.g., mortar shells) (63%) were more common than sparklers. Hands were the most frequently injured area (83%), but no amputations, traumatic or surgical, occurred. Eye injuries occurred in 17.1% of patients, but no long-term damage to vision was sustained. Eight patients (23.9%) required inpatient management, and six (17.1%) required operative management. Split thickness skin grafting and local tissue rearrangement were the extent of the operations performed. One patient required neurosurgical intervention after a mortar shell detonated adjacent to their cranium, representing the lone fatality in the cohort. There was no significant difference in the number of legal (18) and illegal (17) firework injuries. Socioeconomic status was not different between legal and illicit groups (46 vs. 54, $p = 0.101$).

Conclusions: A substantial number of patients sustained firework-related injuries in municipalities where fireworks are banned, giving the impression that current ordinances are ineffective. Public health officials and legislatures may consider the more widespread implementation of regulations or increased penalties to combat firework-related injuries.