

Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active. threat of an active shooter event and gunfire in the ED. In one study concerning hospital-based shootings between 2000-2011, 154 hospital related shootings were identified with 59% occurring inside the hospital and 29% occurring within the ED environment (Kelen et all, 2012). While active shooter incidents are inherently unpredictable by nature, it is still prudent to be as prepared as possible for these scenarios in order to maximize survival rates. The goal of this study is to assess the level of familiarity of emergency department staff with hospital policy and response protocol in regard to a potential active shooter incident (ASI).

Methods: A survey of ED employees including attending physicians, APRN, emergency medicine residents, nurses, and paramedics was distributed using the Qualtrics® platform via an electronic link. The study was approved by our medical school's IRB.

Results: 44% of the respondents were EM residents, 48% were attendings and 8% were nurses. The majority (84%) had worked at their facilities for 1-5 years. Only 4% had participated in n ASI drill in the past year. Personnel who answered NO to: "To your knowledge, is there a hospital-based emergency action plan for which ED employees know to execute in the event of an active shooter incident (ASI)?" were significantly more likely to feel unprepared for an ASI (P<0.0001). Those who did NOT receive training for a hospital-based emergency action plan in any form such as lectures, reading based modules, quizzes, workplace drills, seminars, workshops were also less likely to feel prepared (P=0.0002). Partaking in a drill was significantly associated with feeling less unprepared (P=0.0003). Many participants provided valuable free text format, including the need for formal ASI training, and lack of awareness of the existence of an ASI policy at their hospital.

Conclusion: Most emergency physicians and nurses in our survey sample reported feeling unprepared to handle an active shooter incident in their emergency department. This study underscores the need to implement regular training on ASIs for ED staff.

262 Don't Let the Monitor Fool You: Pulse Check Variation between Shockable and Non-Shockable Rhythms



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Introduction: Out of hospital cardiac arrest (OHCA) is the leading cause of global mortality. Increasing chest compression fraction improves survival. Current American Heart Association (AHA) guidelines recommend maintaining pulse check times to less than 10 seconds in order to increase the compression fraction. To our knowledge, no study has addressed whether pulse check times vary based on the presenting rhythm. Therefore, we aimed to determine if there was a difference in pulse check times between OHCA patients presenting with shockable vs non-shockable rhythms.

Methods: This was a prospective, observational study at an urban academic hospital. Three resuscitation bays were continuously videotaped to capture resuscitations of OHCA patients. Each OHCA resuscitation was analyzed by two independent observers for standardized metrics as well as the presenting cardiac rhythm. A total of 97 patient videos were collected between 2017 and 2019. Of those, 25 presented with a shockable rhythm (22 with ventricular fibrillation, 3 with ventricular tachycardia). We examined the relationship between shockable vs. non-shockable out-of-hospital rhythms and the duration of the first pulse check. We used a t-test to examine the association between the two cohorts.

Results: Results indicate that the mean first pulse check length is 27% greater (11 vs 14 seconds) in the shockable group, compared to the non-shockable group (p < 0.10).

Conclusion: In this prospective, observational study, there was a statistically significant difference in the length of the first pulse check between shockable and non-shockable rhythms. Possible underlying causes may include provider hesitancy to resume compressions with an organized rhythm, self doubt as to palpation of a pulse with an organized rhythm, or not resuming compressions as the defibrillator charges for a shock. Our study serves as an important reminder to keep pulse checks less than 10 seconds no matter the rhythm. Further studies are needed to analyze the reason behind longer pulse checks with shockable rhythms and to troubleshoot the root cause of these delays.

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Utilizing Telemedicine in a Novel Approach to COVID-19 Management and Patient Experience in the Emergency Department

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Study Objectives: The COVID-19 crisis has highlighted telemedicine as a care delivery tool uniquely suited for a disaster pandemic, where the use of audio and video communication can increase connection while decreasing person to person exposure. Our institution rapidly deployed telemedicine as a tool to improve care inside the Emergency Department: existing telemedicine equipment was redeployed and new equipment purchased to increase connectivity between staff, patients, and patient's families, and also to reduce the duration and frequency of situations that could transmit viral illness person to person.

Methods: Sixteen telemedicine carts (7 re-purposed; 9 newly acquired) were utilized in order to conserve PPE and mitigate risk for both patients and providers by decreasing in-person exposures at NewYork-Presbyterian/Weill Cornell Medical Center (NYP/WCMC) and NewYork-Presbyterian/Lower Manhattan Hospital (NYP/ LMH). Carts consisted of a video monitor, speaker, microphone, and either a fixed internet camera or a point-tilt-zoom internet camera. The carts enabled clinical providers and other hospital staff (social work, care management, etc.) to communicate with patients from their workstations by logging into a shared user account via a designated computer, starting a video call, and using a headset. Incoming calls automatically appeared and were answered on the patient's screen, removing the need for patients to physically touch the system or have any knowledge as to how to connect. Carts at NYP/WCMC were allocated specifically for COVID-19 isolation rooms. In our urban community hospital (NYP/LMH), carts remained mobile to allow transport to rooms where COVID-19 patients were located given fewer designated isolation rooms.

Results: This was a dynamic, home-grown initiative. After an initial hands-on encounter with the patient, ED providers and hospital-based teams used the carts to connect with patients to complete interviews and share updates or results without repeated exposure risk and donning of PPE. Admitting teams used the carts to have one team member perform a bedside evaluation while the other team members took part from a distance. With the help of our patient services group, carts were also used for virtual interactions between family members and isolated ED patients. Both patients and their families reported that these video interactions helped to reduce the psychological toll of isolation, which has a major impact on overall patient experience. A limitation of cart use was the need to frequently reboot devices and to alter audio settings for adequate performance.

Conclusion: This initiative increased provider-patient communication and attention to staff safety, improved palliative care and patient support services, lowered PPE consumption, and streamlined clinical workflow. The successful introduction of this program in both academic and urban community hospitals suggests that use of similar devices could be beneficial in a variety of ED settings. In particular, such devices can limit situations that increase the risk for person to person disease transmission and can increase the connection between isolated patients and their care teams and families.

Trends and Characteristics of Fentanyl 264 **Exposures Reported to the US Poison** Centers

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Study Objectives: Overdoses due to synthetic opioids increased by 45% between 2016 and 2017, primarily driven by fentanyl and analogs. Although between 2016 and 2017, more than 5 million prescriptions were dispensed, there is a paucity of nationally representative U.S. fentanyl overdose data. This study aims to examine the national trends in tramadol exposures reported to U.S. poison centers (PCs).

Methods: The National Poison Data System (NPDS) was queried for all fentanyl exposures from 2013 to 2019. We identified and descriptively assessed the relevant demographic and clinical characteristics. Fentanyl reports from acute care hospitals and Emergency Departments (ACHs) were analyzed as a sub-group. Trends in frequencies and rates (per 100,000 human exposures) were analyzed using Poisson regression methods. Percent changes from the first year of the study (2013) were reported with the corresponding 95% confidence intervals (95% CI).