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.

183 Evaluation of Increase in Thromboembolism During the COVID-19 Pandemic

Lord SL, Willet K, Lyden E, Barksdale A/University of Nebraska Medical Center, Omaha, Nebraska, US

Study Objectives: COVID-19 has been associated with a prothrombotic state suggesting an increased prevalence in thromboembolic events such as pulmonary embolus (PE) and deep venous thrombosis (DVT). Other risk factors of thromboembolic events include prolonged sedentary states which theoretically increased during mandatory stay at home orders during the height of the pandemic. There is little data to compare whether this also increased the rate of overall thromboembolic events in both COVID positive and negative patients during this time. The primary objective was to compare the prevalence of thromboembolic events in those diagnosed with COVID-19 within the previous 6 months of the event versus those without a COVID-19 diagnosis. Secondarily, we assessed the prevalence of thromboembolic (PE/DVT) events during the peak of the COVID-19 pandemic from February 2020 to February 2021 in comparison to the year prior, January 2019 to January 2020.

Methods: This was a retrospective chart review at a single academic medical center, with approximately 64,000 annual ED visits prior to the COVID-19 pandemic. All patients who presented to the ED and diagnosed with a DVT or PE between January 2019 to February 2021 were included. Confirmed COVID-19 infection was equated to positive PCR test in the medical record. Counts and percentages were used to describe patient characteristics; mean and standard deviation (SD) was used to describe age. The chi-square test was used to look at the association of blood clot status and time period. Fisher's exact test was used to look at associations between patient characteristics and COVID-19 period, groups (ie Clot within 6 months of COVID-19 vs. Clot with no history of COVID-19). The independent t-test was used to compare age between the Covid period groups. P-value < 0.05 was considered statistically significant.

Results: There were 64,477 ED patients pre-pandemic (January 2019-January 2020), and 51,890 during the pandemic period (February 2020-February 2021). A total of 2405 patients had a thromboembolic event over the study period, with 1055 occurring in the pre-pandemic phase and 1350 during (1.6% vs 2.6%). There was a statistically significant association between those with a blood clot and positive COVID versus those who were negative (8.6% vs 2.4%, $P<0001$). In addition, there were significant associations of thromboembolic events and COVID amongst the Latino population ($p = 0.02$) and male sex ($p = 0.04$).

Conclusions: This data suggests a statistically significant association between COVID-19 and risk of a thromboembolic event within 6 months of that diagnosis.

No, authors do not have interests to disclose

EMF

184 Implementation of a Novel Fluid Resuscitation Device for the Care of Sepsis Patients: Processes and Perceptions in the Out-of-Hospital Setting

Cyr J, Turcios H, Patel M, Brice J, Malcolm J-T, Williams J, Cabanas J/University of North Carolina, Chapel Hill, North Carolina, US

Study Objective: Early fluid infusion is a key performance metric in the care of sepsis patients, yet this benchmark is often unmet. Emergency Medical Services (EMS) transports one-third of sepsis patients, presenting an opportunity for increased achievement of fluid goals. To enhance sepsis care, one large urban EMS system (~120,000 EMS responses/year) introduced a novel rapid fluid infusion device, LifeFlow® Plus, to its sepsis protocol (~700 patients/year). The study objective is to assess the implementation of this device in EMS fluid administration for out-of-hospital sepsis care.

Methods: Prior to device implementation in January 2022, the EMS system utilized a series of strategies to prepare EMS clinicians for successful device integration into out-of-hospital sepsis care. To assess the success of these implementation strategies and device utilization, an emergent qualitative research design relying on analysis of internal trainings and documentation, pre-implementation survey collection, and active- implementation in-depth interviews will be used. First, ongoing document analysis will assess changes relevant to device adoption in protocol, procedure, and clinician continuing education. The document analysis process collects recorded lectures, protocols, and internal communications from pre-implementation, preparation, and post-implementation phases (Aug 2021- Sept 2022). These data are used in the development of surveys and in-depth interviews. Second, surveys were used to assess early perceptions of system-wide implementation. EMS clinicians were eligible to partake in a survey between Oct-Dec 2021 after completing both asynchronous didactic and in-person skills sepsis training between. The survey response rate was 38% (n=143/376). Members of leadership involved in device integration, education development, or education delivery were eligible to complete a pre- implementation survey between Dec 2021-Jan 2022 (response rate=50%; n=11/22). Finally, in-depth interviews will be conducted between May-Aug 2022. Up to 40 EMS clinicians and leadership members will be interviewed on perceived adoption, acceptability, appropriateness, fidelity, and sustainability of device use in the out-of-hospital setting.

Results: The majority of EMS clinicians believed they could accurately identify (97%; n=127) and adequately care (95%; n=123) for sepsis patients. Additionally, the majority of EMS clinicians intended to use the device in the future (89%; n=116), believed using the device during care was feasible (80%; n=105), and believed the device improved fluid delivery compared to previous methods (74%; n=96). Leadership were confident in EMS clinicians' ability to accurately identify (91%; n=10) and adequately care for (100%; n=11) sepsis patients. Though 100% (n=11) of leadership perceived the device as a superior method of fluid delivery, 27% (n=3) did not feel using the device made care delivery easier. EMS clinician interviews will provide qualitative data on experience with sepsis care management and device utilization. Leadership interviews will focus on implementation process experiences and expectations.

Conclusions: These findings will highlight system-wide preparation for a novel rapid infusion device implementation, EMS clinician utilization of this device, and frame the quantitative evaluation of device effectiveness. Lessons learned will be drawn for future EMS device and protocol implementations.

No, authors do not have interests to disclose

185 Identification of At-Risk Patients in a Statewide EMS "Naloxone Leave Behind" Program

Naumann J, Benson J, Lamberson M, Hunt S, Moran W, Wolfson D/University of Vermont Larner College of Medicine, Burlington, Vermont, US

Study Objectives: Naloxone Leave Behind (NLB) programs are an effective intervention Emergency Medical Services (EMS) can utilize to expand access to naloxone and reduce opioid overdose deaths in high-risk patients with opioid use disorder (OUD). Identification of "At-Risk" persons, patients who experience an opioid-related overdose or have indicators of OUD, is critical for successful program implementation. While many EMS systems have implemented NLB programs, few have reported on program success or areas for improvement. We assessed the ability of practitioners in a statewide EMS program to 1) identify patients "At-Risk" for OUD, and 2) distribute NLB kits to "At-Risk" patients.

Study Design: This was a cross-sectional observational study of EMS encounters during the first year (October 1, 2020-September 30, 2021) of a statewide NLB program. EMS practitioners were trained using online modules to identify "At-Risk" patients and instructed to document these findings in a NLB protocol specific section of the patient care report. Criteria EMS used to identify "At-Risk" patients included patient confirmation of drug use, concern expressed by family or others on scene, presence of drug paraphernalia, or clinical signs and symptoms. EMS records were abstracted from the Statewide Incident Reporting Electronic Network (SIREN). All EMS responses to 911 calls were analyzed. Patients dead on scene were excluded. Patients were post-hoc considered "At-Risk" if EMS documented risk via the NLB protocol or if the patient met protocol considerations. Considerations included: receiving out-of-hospital naloxone, working diagnosis or chief complaint mentioned opioids, or EMS documented signs of drug use or paraphernalia or use of the overdose protocol.