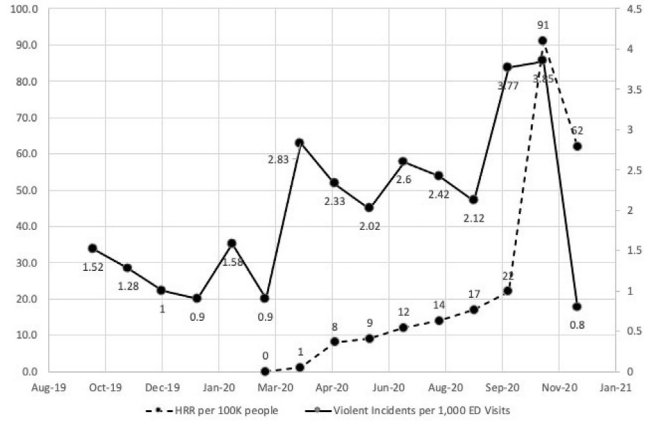
Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

reported/perceived violence may be attributable to staff prioritizing other personal safety concerns throughout the pandemic. This positive association could be due to significant fear and stress experienced by the general public, or worsening substance abuse or mental health state during the pandemic.

Figure 1: Incidence of violence per 1,000 patients ED volume compared to average monthly HRR rate (r = 0.24)



70 Can 8-Point Lung Utrasound Be Used as a Risk Stratification Tool in Patients Under Investigation for COVID-19

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Background: Point of care lung ultrasound (LUS) has become an integral part in the clinical care and evaluation of patients presenting with respiratory complaints in the setting of COVID-19 infection. Since the start of the COVID-19 pandemic, LUS has been used not only to help identify possible COVID-19 infection, but also to help prognosticate and risk stratify patients with known, or highly suspicious for, COVID-19 infection 24.

Study Objective: To determine if point-of-care LUS can be used to risk stratify patients presenting under suspicion of COVID-19 infection.

Methods: 118 patients were scanned using 8-point LUS score method looking at 4 lung fields on each side in order to evaluate the diagnostic and prognostic value of LUS in COVID-19 patients. Scores were assigned to each field based on presence of B-lines, pleural abnormalities, and subpleural consolidations. All lung ultrasounds were performed in the emergency department on persons under investigation (PUI) for COVID-19 respiratory infections.

Result: There is a clear trend of increasing mean total LUS score with increasing severity of illness. The increasing severity was defined in ascending order as patients discharged, admitted to floor, admitted to ICU, and death in hospital. The mean total LUS score for each was: discharged (5.18 ±1.47 [95% CI 3.71-6.65]), admitted to floor (9.82 ± 1.57 [95% CI 8.25-11.4]), admitted to ICU (10.83 ± 1.99 [95% CI 8.84-12.8]), and death in hospital (13.14 ± 4.64 [95% CI 8.5-17.8]). One of the deaths was a patient with a means total LUS score of 3 who was placed on comfort care and then terminally extubated in the setting of metastatic lung disease. If this patient is removed, the mean LUS score associated with death in hospital is 14.83 ± 3.83 [95% CI 11-18.7]. Overall, patient's that tested positive for COVID-19 had a higher mean LUS score (8.71 ± 1.3 [95% CI 7.41-10) than those that tested negative (7.24 ± 1.86 [95% CI 5.38-9.1). A SpO2 greater than or equal to 90% was associated with a lower average LUS score (7.76 ± 1.24 [95% CI 6.52-9), than an SpO2 less than 90% (12.24 ± 2.24 [95% CI 10-14.5). Patient's requiring high flow nasal cannula, non-invasive positive pressure ventilation, or intubation had a mean LUS score of 12.75 ± 2.05 [95% CI 10.7-14.8], while those who only required nasal cannula or no supplemental oxygen had mean LUS score of 8.76 ± 1.5 [95% CI 7.26-10.3].

Conclusion: Our results show that by using an 8 zone lung ultrasound protocol not only are we able to identify those patients more likely to test positive for COVID, but also to risk stratify those patients under suspicion of a COVID infection.

71 Implementation of an Ed-Based COVID-19 Vaccine Program

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Study Objectives: Vaccinating eligible high-risk patients, against the COVID-19 virus is a public health priority. The Veterans Health Administration serves as the nation's largest safety-net health system, serving a population with both a high level of medical comorbidities and socioeconomic factors that can create barriers to care. To expand access to vaccines beyond the regularly scheduled vaccine clinic hours, an ED-based COVID-19 vaccine program was developed. at our facility.

Methods: The setting is a 27,000 visit Veterans Health Administration ED that is also an ACEP Level 1 Geriatric ED. The existing vaccine program used the Pfizer vaccine, with appointments scheduled through a vaccine clinic that operated 7 days a week. With the approval of the single dose Janssen vaccine, to expand our outreach and vaccinate more patients, an ED-based vaccination program was developed. At triage, the triage nurse reviewed the charts of all stable (ESI 3-5) patients to determine if they had already received at least one dose of vaccine, or were scheduled to receive a dose of vaccine in the outpatient clinic. If not, then a flag would be placed on the tracking board to alert the provider seeing the patient that they were a candidate for the single-dose Janssen vaccine. The provider would then screen for contraindications and obtain consent for the vaccine. Only patients who were checking into the ED for another complaint were screened; the ED was not advertised as an alternative site for vaccine-only visits.

Results: From initiation of the program on March 16, 2021, until the pause on use of the Janssen vaccine on April 13, a total of 27 patients received the vaccine. A total of 37 patients were screened as eligible for the vaccine. For those not receiving the vaccine, 6 had documentation of a reason; 1 had a contraindication, and 5 refused the vaccine. 4/27 were female (14.8%); female patients comprise 7% of our ED volume. The average age of the female patients was 37 (range, 24-55). 23/27 (85.2%) were male; their average age was 57 (range, 39-69). 15/27 (55.5%) patients resided in an urban area. 6/27 (22%) lived in areas classified as rural. 8/27 patients (30%) were Black, 3/27 (11%) were latino, and 16/27 (59%) were white. There were no documented allergic reactions or other immediate adverse events reported for any of the ED-vaccinated patients.

Conclusion: We report preliminary results for an ED-based COVID vaccine program using the single-dose J&J/Janssen vaccine. Female patients represented a higher percentage of those receiving the vaccine than represented by their percentage of our total ED visits. Further research needs to be done into those who refuse the vaccine, as well as interventions to reduce the number of missed opportunities (patients who were flagged on the tracking board but did not receive further screening for vaccine eligibility by the ED provider). Adverse events were not reported in our cohort.

72 Perceptions of the COVID-19 Vaccine Amongst Health Care Workers in a Southeast Michigan Hospital: A Cross-Sectional Survey

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Study Objectives: The new coronavirus that emerged in Wuhan, China was declared a global pandemic in March 2020 sparking a worldwide effort to find a vaccine that could effectively prevent continued spread of the virus. The Gallup's tracking poll findings from 9/16/2020 to 9/29/2020 showed that 63% of Americans would be agreeable to being vaccinated if an FDA-approved vaccine were available to them at no cost. A survey conducted in France from March to July 2020 to determine COVID-19 vaccine acceptance specifically amongst health care workers (HCW) revealed that 75% of their HCWs intended to be vaccinated. Our literature search however did not yield studies assessing the acceptability of a COVID-19 vaccine amongst HCWs, specifically in the United States. The aim of this study was to determine COVID-19 vaccination rates amongst HCWs within a single hospital, any differences between HCWs acceptability of the vaccine, and which factors were most important in their decision-making.

Methods: A prospective cross-sectional study of HCWs at Ascension Macomb-Oakland Hospital was conducted in February 2021 – March 2021 soon after vaccines became available at the hospital. A SurveyMonkey was mass-distributed by email to HCWs including doctors, nurses, administrators, pharmacists, technicians,

and secretaries. Any HCW that was over the age of 18 years of age was eligible to participate. A series of 15 questions were asked in a multiple choice and scale format.

Result: A total of 574 out of the ~2900 HCWs completed the survey. Of these, 487 (84.8%) either accepted or intended to get vaccinated within the next 3 months. 62 (10.8%) would decline the vaccine over the next 3 months and 25 (4.4%) remained undecided. The mean age of respondents was 45. The majority of surveys were completed by females (75.7%). The mean age of HCWs willing to accept the vaccine was greater compared to those who declined the vaccine (40 years of age vs 46 years of age). There was a higher proportion of Democrats willing to accept the vaccine than those who declined the vaccine (27% vs 9.8%). The most important factors for those that decided to take the vaccine were protection of their own health; protection of health of patients, family, or friends; and trust in the science. The most important factors in those that either declined or were undecided about the vaccine were concern for safety profile and side effects of vaccine, uncertainty regarding the effectiveness of the vaccine, and the accelerated development of the vaccine.

Conclusions: As one of the nation's hotspots for the highest rates of positive COVID-19 cases and deaths, a survey to assess acceptability of a COVID-19 vaccine showed that a majority of HCWs had either taken or planned to take the vaccine. HCWs background in science and the proximity and frequency in which they work with COVID-19+ patients were felt to account for the difference in vaccination rates between the general public and HCWs.

73 Reducing Door-to-Provider Time By Creating a Triage Liaison Physician Line in an Urban Emergency Department During the COVID-19 Pandemic

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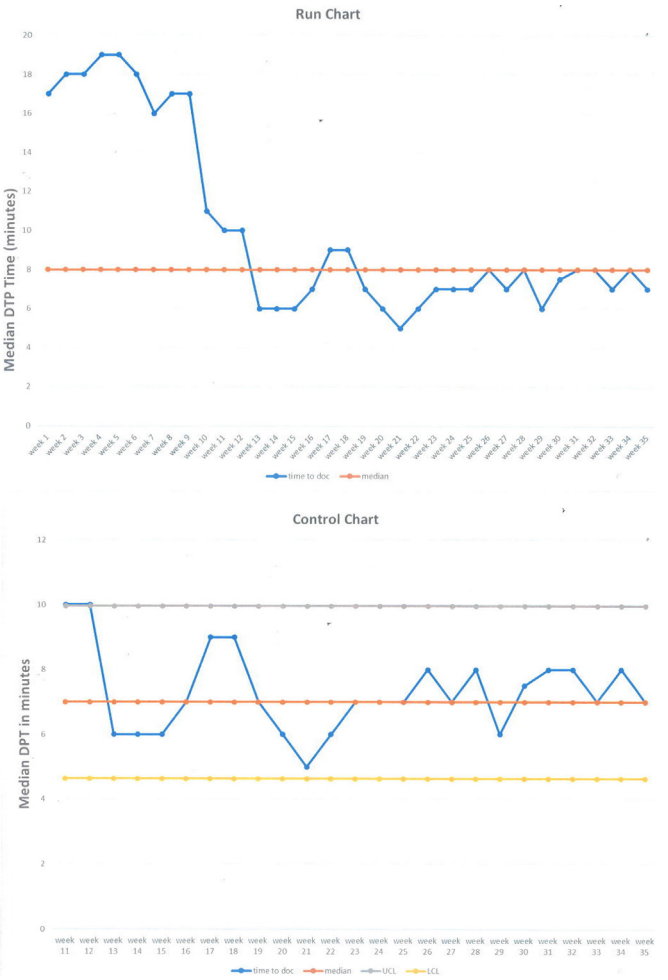
Background: The COVID-19 pandemic has resulted in huge numbers of serious morbidity and mortality that overwhelmed emergency departments (EDs) worldwide. Here in New York City, we experienced a case fatality rate of 12.2% between March 21, 2020 and May 20, 2020. Once the initial wave subsided, we noted that our ED census was unusually low. In order to avoid cutting staff in response to that ominous trend, we explored the reassignment of staff in order to improve our ED operations. We chose the model of triage liaison physician (TLP), an efficient method of improving patient throughput. This would allow us to maintain staff that might otherwise by furloughed or lost permanently.

Study Objectives: We present the results of our departmental performance improvement (PI) initiative, focusing on the metric of door-to-provider time (DPT).

Methods: We obtained IRB approval to analyze data from our ED dashboard. We focused on data from ten weeks before the initiation of the TLP to 24 weeks thereafter. We restricted the data to include only patients who arrived between 10:00 AM and 2:00 AM, as those were the hours where a TLP was on duty. We measured median DTP times and created run charts and control charts to demonstrate how the TPL affected the DTP metric. The control chart was our way of determining if any improvement was a process that could be sustainable.

Results: For the ten-week period prior to the initiation of the TLP, median DPT was 18 minutes. After initiation of the TLP, our median DTP was 7 minutes. This apparent improvement was supported by a run chart that showed the dramatic decrease, and by a control chart that showed the stability of the new TLP process.

Conclusion: Our data suggest that reassigning an attending physician to the role of TPL allows an ED to retain valuable attending physicians while also improving patient safety metrics such as DTP. Future research should focus on other potential benefits of the TLP, such as revenue generated by reducing patients who leave without being seen, earlier detection of sepsis and stroke, and reduced dwell times in the ED.



74 Trends Of Diabetic Ketoacidosis During COVID-19 Pandemic In Large Urban Public Emergency Department

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Study Objectives: Diabetic ketoacidosis (DKA) is a common and serious endocrine emergency. Common triggers for diabetic ketoacidosis include infection, cardiovascular events, drug use, medication non-adherence, and new onset diabetes. Early evidence suggests a correlation between COVID-19 infection and DKA. Based on the limited data, it is unclear at this time if increases in DKA are triggered by acute COVID-19 infection, or secondary factors from the pandemic such as lack of access to care or acute stress. In this study, we examine trends in DKA prevalence among patients at an underserved urban public ED within the context of the COVID-19 pandemic.

Methods: This is a retrospective study using administrative report data of all ED encounters. Cases of DKA, found using top 5 ICD10 ED diagnoses, were identified from 2019 and 2020. COVID-19 infection was pulled from laboratory data and merged to create one data set. Poisson regression was utilized to compare incidence rates of DKA (1) between 2019 and 2020 and (2) among COVID positive and COVID negative patients with DKA for the year of 2020. Yearly trends were examined month by month.

Results: There were 180,158 patient visits in 2019 and 138,012 in 2020. Compared to 2019, incidence rates of DKA increased by 23% in 2020 (95% CI 4% to 42%, p=0.017). Among all those tested for COVID in 2020 (n=25,867), patients with positive COVID-19 tests trended to higher DKA rate (37% higher (95% CI -6% to 81% increase, p=0.098) than patients with negative COVID-19 tests. The increase was most prominent from April 2020 onward, with the largest increase in December 2020, correlating with the COVID surge at our hospital. (Figure 1). In December 2019, 20 out