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.



Run Chart



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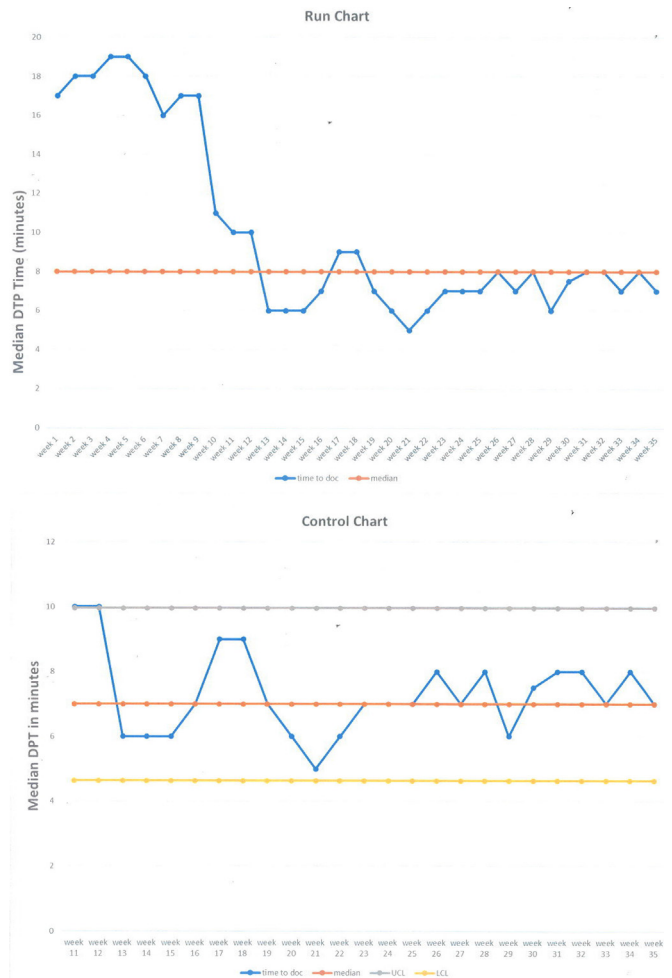
## 74 Trends Of Diabetic Ketoacidosis During COVID-19 Pandemic In Large Urban Public Emergency Department

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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

of 14,324 visits (0.14%) were coded as DKA, while in December 2020, 37 out of 10,942 visits (0.34%) were coded DKA. In December 2020, 11 DKA cases were COVID-19 positive and 26 were COVID-19 negative. When excluding the 11 cases of DKA with positive COVID-19 tests, the rate of DKA in 12/2020 would be 0.24%.

Conclusions: We found the incidence rate ratio of DKA in 2020 increased compared to 2019, with an almost doubling of DKA rates in the month of December, the peak months of our pandemic surge. Our findings suggest a correlation between COVID-19 positivity and DKA, but is limited by small numbers at a single site. There is also limited data to suggest secondary factors may also play a role in increased rates. When removing COVID positive DKA cases in December 2020, the prevalence that month continued to 0.10% higher than in December 2019. While small numbers prevent firm conclusions, it is possible factors outside of COVID infection are attributing to higher rates. Various studies have shown reduced access to care for conditions managed in ambulatory settings during the COVID pandemic. Given this, decreased access to care for medication refill and titration may also be contributing to the rise in DKA rates. As more data becomes available, further research is required to establish the role of access to care versus inflammation from COVID-19 infection in triggering DKA.



Figure 1: DKA rates by year and COVID test status
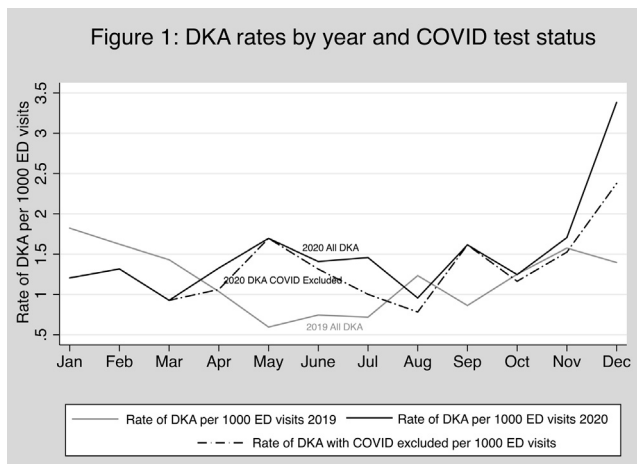
## 75 Reliability of Nurse-Perfromed Lung Ultrasonography of Suspected COVID-19 Patients at the Emergency Department Traige a Single-Center Study

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Study Objectives: Point-of-care lung ultrasound is now considered a valuable tool in the emergency department (ED) to evaluate patients with respiratory complaints. It is very reliable in detecting artifacts associated with alveolar-interstitial syndrome - a common feature seen in patients with pneumonia, pulmonary edema and more recently, COVID-19. The aim of this study was to determine the reliability of ED nurses to interpret point-of-care lung ultrasound artifacts suggestive of COVID-19 respiratory disease at the triage.

Methods: Our single-center study prospectively evaluated all consecutive patients who were suspected of COVID-19 respiratory disease at the ED of St. Luke's Medical Center-Quezon City. Eligible patients underwent lung ultrasonography conducted by a trained ED nurse. The ultrasound scans were recorded, stored and interpreted by nurses as to the presence or absence of B- lines, C- lines and/or pleural effusion. These scans were then subsequently viewed and interpreted by an emergency medicine (EM) physician and then finally by a senior ED consultant who is an expert on point-of-care ultrasound (POCUS).

Results: A total of 382 patients were included in the study, which generated 3057 lung ultrasound scans for analysis. Nurse agreement in interpreting B-lines with the emergency physician and the POCUS expert were satisfactory yielding Cohen's Kappa score of 0.845 (excellent agreement) and 0.781 (good agreement) respectively. On the other hand, nurse agreement in interpreting C-lines with the emergency physician and the POCUS expert were acceptable at a Kappa of 0.678 (good agreement) and 0.272 (fair agreement), respectively.

Conclusion: Our results suggest that nurses who have been trained in the use of point-of-care lung ultrasound can reliably identify and interpret ultrasound artifacts most notably B- lines. In light of the ongoing COVID-19 pandemic, nurse-performed lung ultrasonography can potentially provide a useful and expedient triage strategy for suspected SARS-CoV-2 patients presenting at the ED.

## 76 Emergency Physician Fathers' Experiences With the COVID-19 Pandemic, A Qualitative Analysis of Free Text Responses

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Study Objectives: The ongoing COVID-19 pandemic has affected frontline health care workers significantly at work and at home, with recent studies suggesting the pandemic negatively affecting physicians in both spheres. Only a few studies have examined the attitudes and conflicts faced by physician fathers, the majority of current practitioners. This work is a subset analysis of responses to qualitative questions on the impact of the COVID-19 pandemic on the lives of emergency physician (EP) fathers.

Methods: A convenience sample of physician fathers was obtained from May 2 to June 16, 2020, via social media and email. The survey contained questions on personal and professional struggles during the start of the pandemic and including several free test questions. Free responses were analyzed and coded. Several themes emerged related to experiences described: (1) self; (2) social; (3) home life; (4) work life; (5) financial; (6) immediate family. Under each main theme were subthemes that provided a more detailed match for each comment.

Results: There were 260 surveys completed by EP fathers from 31 states. 84% were White, 9% Asian, 1% Black, 5% other. 78% were between 30-49 years; 98% reported having a partner. Most fathers had younger children (infants through middle-school aged) living in the household with them at the time of the survey. The three most common themes were "work life" (38%), "immediate family" (20%), and "social" (15%). In "work life" the most common subthemes were "general change in responsibilities" (29%), "decrease in workload/unemployed" (21%), and "concerns/negative feelings towards work" (18%). In "immediate family" both "positive change in family life" (45%) and "negative change in family life" (19%) predominated. Under "social," "missing/lacking social interaction" (49%) and "missed/cancelled events" (33%) were most common. Of note in other themes in "self," the two most common subthemes were "negative mental state" (45%) and "decreased productivity" (12%). In "home life," "change in usual routine/structure/schedule" was the most common (42%) followed by "difficulty caring/assisting children" (28%). The "financial" theme was dominated by the subtheme "financial issues/loss" (94%).

Conclusions: This study examined reported concerns and attitudes of EP fathers during the COVID-19 pandemic. EP fathers reported a variety challenges affecting both their personal and professional lives with positive and negative changes. Further research is needed to better understand how to support EP fathers during future pandemics.

## 77 Racial Disparity in COVID-19 Symptoms

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Study Objectives: COVID-19 first emerged as an unknown respiratory virus in late 2019. Since the onset of the pandemic, the question of racial differences has been at the forefront of prognostic thought in determination of high-risk groups. Limited data is currently available about racial differences in symptoms of COVID-19. This research performed a retrospective data collection of patients in a hospital system in North Louisiana to determine if there was a statistical difference in presenting symptoms based on race.

Methods: A total of 410 unique Medical Record Numbers (MRNs) were identified retrospectively. Data was collected from a mix of rapid and regular PCR nasal swabs collected from 4/1/2020 to 4/30/2020. Data collected included symptoms, race, ethnicity, occupation, sex and age. Symptoms were collected from their chief complaint, HPI, review of systems as well as nursing evaluation. Similar symptoms expressed in different wording were collapsed into larger categories. The rpart algorithm was used to perform association rule mining in both uncollapsed and collapsed data.