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.

Conclusion: Given comparable findings in the presence and distribution of abnormalities between POCUS and chest CT, POCUS may be a viable alternative to chest CT for diagnosis and risk stratification in patients with suspected COVID-19.

153 Do Hydroxychloroquine, Disease-Modifying Antirheumatic Agents or Steroids, Serve to Prevent COVID-19 Infection?

Keyes D, Haidous A, Lake C, Stipek K, McHugh L/St Joseph Mercy Health System, Ann Arbor, MI; University of Michigan-Dearborn, Dearborn, MI; St Mary Mercy Hospital, Livonia, MI

Study Objectives: Emergency physicians and other specialists are in critical need of medicinal agents to prevent SARS-COVID-2 (COVID-19) infection. International attention has been given to hydroxychloroquine (HCQ), in particular, and other antirheumatologic agents for this purpose. Several very commonly used medications work to block the cascade of chemotactic influences and macrophage activation, but definitive prevention of ARDS is inconclusive. Agents proposed include TNF blocking agents, leukotriene antagonists and steroids. It may be possible to block infection, pneumonia and ARDS with prior use of these agents. The objective of this study is to compare attack rates of COVID-19 among patients who were already taking common rheumatologic agents prior to the COVID epidemic in the study region and those not taking these agents.

Methods: A retrospective cohort design Data was used across multiple hospitals in MI. 990 patients with lupus (SLE) or rheumatoid arthritis (RA) and a COVID-19 test (whether negative or positive) were included. Agents chosen for analysis included HCQ, infliximab, adalimumab, montelukast and steroids. Unadjusted differences between treatment groups with chi-square or Fisher Exact tests were used. Use of all agents other than HCQ and montelukast were combined as one group for comparative analysis. Adjusted treatment effects were estimated using logistic regression. Predictive covariates for the latter included demographics and Charlson comorbidities. Influenza testing was also evaluated.

Results: After dropping N = 30 patients with no data on pre-COVID prescriptions, a sample size of N = 960 patients with an existing diagnosis of rheumatoid arthritis (RA) or systemic lupus erythematosus (SLE) were analyzed. Of these patients, N = 214 patients had an active HCQ prescription at admission and N = 82 patients had a positive COVID-19 test result. None of the unadjusted or adjusted outcomes were statistically different between the "pretreatment" groups (on-agent or off-agent) for HCQ for other rheumatological agents tested as a group, or for steroids.

Conclusion: In a retrospective observational study, there was no evidence of benefit for the prophylactic use of hydroxychloroquine, several representative rheumatologic agents or steroids for the prevention of infection with COVID-19.

154 Virtual Telemedicine Training for Emergency Medicine Residents during the COVID-19 Pandemic

McNally K, Elahi N, Slome M, Ganti L, Lebowitz D, Macintosh T/UCF, Orlando, FL

Study Objectives: With the dawn of the COVID-19 pandemic and the need for enhanced social distancing measures, telemedicine has become an integral part of emergency medicine. Medical schools have started to integrate telemedicine training into their curricula, but there are few reports of telemedicine training in GME programs. The primary objective of this study was to examine current emergency medicine resident knowledge of telemedicine, expose residents to standardized telemedicine patients virtually, and analyze the effectiveness of telemedicine training on completing a successful encounter.

Methods: Seventeen emergency medicine residents first underwent a virtual standardized telemedicine encounter using the Zoom^{TM} application without prior training in telemedicine. Standardized patients were queried on resident success during this untrained encounter using a survey with aspects of a successful encounter. The following session with sixteen of those 17 residents, involved a lecture by a telemedicine physician with years of experience on the fundamentals of a successful encounter, as well as pre-reading materials on the topic. After this intervention, sixteen residents underwent a repeat virtual encounter, with standardized patients responding to the same questions as the pre-training. Residents also underwent a post-survey on their experiences.

Results: Standardized patients evaluated 17 emergency residents before telemedicine training, and 16 of those 17 residents after telemedicine training with a 13-question survey focused on aspects of a successful telemedicine interview. Statistically significant differences were noted on aspects of the encounter related to telemedicine when analyzing pre- and post-training data and using a Z test for proportions: obtaining informed consent (0% vs. 61%, p = 0.00012), asking about privacy in the patient's environment (6% vs. 87%, p <0.00001), verifying name and/or date of birth (29% vs. 94%, p =0.00014). Aspects of the encounter that did not have statistically significant results on pre- and post-test surveys included: resident introducing themselves (94% vs. 100%, p =.31732), asking focused questions about medical condition (100% vs. 100% p = 1), closing the encounter by explaining care plan (94% vs. 94%, p = 1). Fourteen residents responded to a post-training survey with 92.8% of respondents stating that they "strongly agree" that the telemedicine training was helpful to their education. Only 28.6% of respondents stated that they "strongly agree" that they understood how to do a virtual physical exam.

Conclusion: Overall, emergency medicine residents had significant improvement on aspects of an encounter with a standardized patient that were unique to telemedicine after undergoing training from an expert in the field. Residents scored well both before and after training on aspects of the encounter not pertaining specifically to telemedicine, suggesting good clinical overlap between virtual and in-person environments. Residents uniformly felt the training was helpful to their education. Participants did feel less confident with the ability to do a virtual physical exam, which could possibly be ameliorated with more practice in this environment. Many EM residencies are undergoing virtual didactics and because of this, similar training could easily be utilized across the country. This training could prove to be essential in the future because of the global health crisis of the COVID-19 pandemic.

155 Using Point-of-Care Ultrasound to Predict Clinical Outcomes in Patients With COVID-19

Shokoohi H, Chahardoli M, Loesche MA, Sabbaghan Kermani S, Schulwolf S, Abdollahzade Manqoutaei S, Tofighi R, Yadegari S, Duggan N/Massachusetts General Hospital, Boston, MA; Iran University of Medical Sciences, Tehran, Islamic Republic of Iran

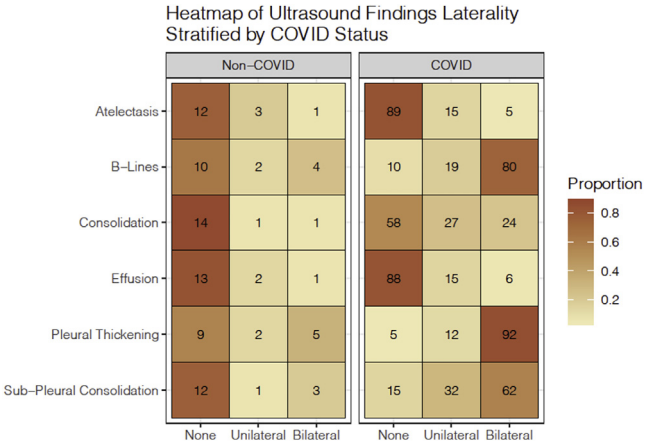
Study Objectives: Point-of-care ultrasound (POCUS) may be used as a valuable tool for risk stratification of patients with COVID-19 as its characteristic POCUS findings have recently been described. In the present study, we aim to define the prognostic value of cardiopulmonary POCUS in patients with COVID-19. Here, we correlate POCUS findings with patient-centered outcomes such as need for intubation, intensive care unit (ICU) admission, and mortality.

Methods: 125 patients presenting to an urban ED in Tehran, Iran with symptoms concerning for COVID-19 were prospectively enrolled between March 8 and April 4, 2020. Participants underwent pulmonary POCUS following a 12-zone PLUS-Co protocol, and cardiac POCUS using a standardized 4-view protocol. ED physicians performed scans and provided real-time scan interpretations, images were reassessed by a second, blinded reviewer for quality control and inter-rater reliability. For pulmonary POCUS, each lung zone was individually assessed for pleural line irregularities, alveolar interstitial syndrome (eg, B-lines), and subpleural consolidations (SCs), then scored using a 4-point measure. Zone scores were aggregated to generate a cumulative lung involvement score per patient. Cardiac POCUS was assessed for ejection fraction, right ventricular function, pericardial effusion and inferior vena cava collapsibility. Clinical course and outcome variables were collected via retrospective chart review. Descriptive statistics were performed to evaluate the distribution and frequency of positive POCUS findings and their correlation with patient outcomes including ICU admission, mechanical ventilation, inpatient length of stay, and mortality.

Results: COVID-19-positive patients demonstrated higher bilateral lung involvement scores than COVID-19-negative patients overall ($p<.001$, $r^2= .667$), with significantly increased B-lines (p adj= .000000804), pulmonary consolidations (p adj= .0304), pleural thickening (p adj= .000000742), and SCs (p adj= .000000500). Increased B-lines were most pronounced in the AS, AX, and PLAPS distributions (p adj= .0086, .0012, .0024 respectively), whereas pleural thickening was noted in all lung regions (AS, AI, PS, PI, AX, PLAPS; p adj= .0182, .0014, .0375, .0328, .0003, 0), and subpleural consolidation were most prominent in AS, AX, and PLAPS (p adj= .0312, .0398, .0324). In performing regression analysis no single positive POCUS finding was significantly correlated with patient outcomes inducing mortality, and need for intubation, nor was lung involvement score as a whole.

Conclusion: In patients with COVID-19, regionalized POCUS findings and aggregate lung involvement scores were not predictive of patient outcomes including mortality. Despite this, cardiopulmonary POCUS may still provide valuable diagnostic and risk stratification data in patients with suspected COVID-19.

Further investigation of the clinical applications of a cardiopulmonary POCUS disease profile in COVID-19 is needed.



156 Use of a Risk Index to Predict Falls and Opioid Adverse Events in Opioid Naive Older Adults

Sheikh S, Brailsford J, James D, Holden D, Anton S, Hendry P, Fillingim R, Fernandez R, Cavallari L/University of Florida College of Medicine Jacksonville, Jacksonville, FL; University of Florida College of Medicine Jacksonville, Jacksonville, FL; University of Florida College of Medicine Gainesville, Gainesville, FL; University of Florida College of Dentistry, Gainesville, FL; University of Florida College of Pharmacy, Gainesville, FL

Study Objectives: Older adults initiated on opioids are at increased risk for falls and opioid adverse events. The Risk Index for Overdose or Serious Opioid-induced Respiratory Depression (CIP-RIOSORD) is a validated tool that calculates a patient's probability of an opioid OD within the next six months. Our objective was to gather preliminary data to determine if the CIP-RIOSORD tool could predict falls and or opioid adverse events within 30 days in opioid-naive older adults discharged with a prescription opioid from the emergency department (ED).

Methods: This was a pilot prospective observational study of opioid naïve ED patients age > 50 discharged to home from the ED with an opioid prescription for acute pain. Sociodemographic, clinical, and medication data were collected at enrollment. The Timed Up and Go (TUG) Test assessed fall risk at the time of enrollment. Health literacy was measured using Rapid Estimate of Adult Literacy in Medicine-Short Form. Patients completed telephone follow-ups at day 3 (+/- 1), 7 (+/- 1), 14 (+/- 2), and 30 (+/- 2) post ED visit to assess medication use and incidence of patient reported falls and opioid adverse events. Every third patient completed day 3 follow-up in-person to re-assess medication compliance and fall risk. Falls were defined using the Hopkins Falls Grading Scale. Opioid adverse events were defined as patient-reported low blood pressure, increased sleepiness/sedation, slow/decreased responsiveness, or decreased breathing. A CIP-RIOSORD risk class was calculated for each patient. Descriptive statistics were performed using Fisher's Exact and Wilcoxon's Rank Sum Tests. Pearson's chi–squared tests and logistic regression models were performed to assess for correlations and to identify preliminary predictive factors.

Results: A total of 44 patients were enrolled. The average age was 60, 52% (22) were male, 60% (25) African American, 58% (25) had a health literacy level of < 8^{th} grade; and 40% (17) reported a fall history. Over half (53%) used > 3 home medications and 33% reported often taking medications in a manner not prescribed/uncertainty with how to take their medications. Most (59%) met fall risk criteria on the TUG Test. Thirteen patients reported 20 near-falls and 11 reported 12 opioid adverse events within the 30 days post-ED visit. Nearly 54% (7) of patients reporting a fall had a previous history of falling; 54% (7) were also a fall risk on the TUG test. Distribution of RIOSORD risk class was as follows: risk class 1 (1.9% average predicted probability of OD)- 5 patients; class 2 (4.8% probability)- 3 patients; class 3 (6.8% probability)- 3 patients; class 4 (15.1% probability)- 3 patients; class 5 (29.8% probability)- 4 patients; class 6 (55.1% probability)- 2 patients; class 7 (83.4% probability)- 2 patients. No significant correlations were identified between RIOSORD risk class, patient demographics, and incidences of falls and or opioid adverse events.

Conclusion: Our preliminary data does not support significant correlations between RIOSORD risk class and incidence of falls or opioid adverse events within 30 days of ED discharge in opioid naïve older adults. We found over-half of patients reporting a fall were a fall risk when discharged with a prescription opioid. A larger study population is needed to confirm our findings and to determine if improved ED screening is needed when discharging older adults with prescription opioids.

157 Initial Outcomes of Universal HIV and HCV Screening in a High Volume Academic Emergency Department

Hsu DG, Taelman K, Calow N, Manns C, Newbold-Thompson C, Nevel A, Roumpf S/IU Health Methodist Hospital, Indianapolis, IN

Study Objectives: The Center for Disease Controls and Prevention (CDC) recommends routine HIV screening for all Americans aged 13-64 at least once in their lifetime and more often if they are higher risk. In 2020, the CDC released a new guideline recommending that HCV screening be done at least once in a lifetime for all adults aged ≥18 years. To facilitate compliance with these guidelines, the Frontlines of Communities in the United States (FOCUS) was established. This is a public health initiative that aims to decrease the stigma associated with viral testing and diagnosis and link HIV and HCV screening with care. In this study at an urban academic medical center emergency department (ED) we evaluated the effectiveness of a FOCUS intervention in 1) identifying new HIV and HCV cases and 2) linking positive screens to care.

Methods: A one-year retrospective chart review was conducted in 2018 for patients in the ED with positive HIV or HCV screening test. The number of positive tests was recorded as was linkage to care (represented by follow up attendance). Based on this gap analysis, the FOCUS program was designed and implemented by a multi-disciplinary group in February 2020. This program consisted primarily of intake RN screening for eligibility, and standing orders protocols for HIV/HCV lab testing. Data was collected through 5/31/20. Primary metrics included total number of patients tested in the ED with intervention group, number of positive HIV and HCV screening and confirmed tests during intervention and control, and numbers of acute HIV and HCV diagnoses with intervention.

Results: In the pre-intervention control group (2018), 7 screened positive HIV patients were identified. All were confirmed positive with HIV PCR testing. Of these, 6 attended a first visit (intake) and 5 continued to follow up at one year. In 2018, 13 patients screened positive HCV Ab. 7 patients had positive confirmatory HCV PCR testing. 3 patients attended intake, the other 4 were lost to follow up. In the intervention arm after FOCUS implementation from 2/24/20 through 5/31/20, 920 of 8339 (11%) eligible patients underwent testing. 907 (11%) patients underwent HIV testing: 4 screened positive and 2 were confirmed positive and attended intake. 895 (11%) underwent HCV testing: 83 screened positive and 34 were confirmed positive. 32 were contacted and given follow up with a specialist or primary care doctor, 1 was lost to follow up, and 1 was already in treatment.

Conclusion: The FOCUS has significantly increased the number of identified HIV and HCV patients in comparison to the retrospective control group. The greatest impact was found in the higher prevalence HCV group. In just over three months of intervention, 4.86 times as many confirmed HCV positive patient were identified than all of 2018 combined. We anticipate these numbers to grow exponentially as we add tools (such as EMR automation) to help drive our testing-to-eligibility ratio past the current state (11%).

158 Emergency Department Patients Presenting With Spontaneous Pneumomediastinum: A Retrospective Observational Cohort Study

Grass E, Nguyen K, Mueller KL, Naunheim R/Barnes Jewish Hospital, St Louis, MO; Washington University, St Louis, MO

Study Objectives: Spontaneous pneumomediastinum, (SPM) the presence of air or other gas in the mediastinum that was not caused by blunt trauma, penetrating trauma, or iatrogenic injury, is often benign and self-limited. Primary outcomes were 30-day mortality, repeat ED visit in 30 days, or need for an invasive procedure. The variables we studied were admission for observation, antibiotics, use of supplemental oxygen, obtaining a swallow study, presence of pre-existing asthma, COPD, heart disease, primary lung disease, or use of an inhaled substance. We hypothesized that patients with SPM would have no difference in the described primary outcomes.