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services. Secondary objectives were to categorize drug therapy recommendations based on therapeutic class of medication, determine the proportion of drug therapy recommendations associated with Institute for Safe Medical Practices (ISMP) high-alert medications, and assess the clinical significance of drug therapy recommendations.

Methods: This was a retrospective chart review conducted in three freestanding emergency departments that are part of a large health system. EM pharmacists provide on-site support at a tertiary care center ED as well as remote clinical coverage for the three FSEDs. Pharmacist interventions for FSED patients documented between 1/1/2017 and 12/31/2018 were eligible for inclusion. All eligible pharmacist documentation was abstracted from the health system EMR (Epic®) for further analysis by trained reviewers. Reviewers excluded documentation related to non-direct patient care, administrative activities, and educational activities and organized interventions into common themes (Table 1). Data was analyzed descriptively and proportions with 95% confidence intervals are reported. A random sample of interventions was reviewed by two independent reviewers using a previously published scale in order to assess clinical significance of interventions (severity of the medication error avoided by pharmacist intervention and the value of the service). A weighted Kappa statistic was calculated to assess inter-rater reliability.

Results: A total of 4313 pharmacist interventions met inclusion criteria. Classification of interventions is summarized in Table 1. Of 1664 drug therapy recommendations, a total of 1424 were linked to a therapeutic class of medications. For these 1424 drug therapy recommendations, the most frequently implicated therapeutic classes were antimicrobial agents (n=732; 51.4%), vaccines (n=168; 11.8%), cardiovascular agents (n=90; 6.3%), and analgesics (n=86; 6%). 11% of recommendations were associated with Institute for Safe Medical Practices (ISMP) high-alert medications. The most common high-alert medication categories were antithrombotic agents (n=51; 32.5%), insulin (34; 21.7%), and opioids (20; 12.7%). In assessing the clinical significance of interventions, 19.2% were rated as significant errors that were intercepted by pharmacists by both reviewers with moderate inter-rater reliability (κ=0.55; SE 0.09). For the value of service assessment, 59% of interventions were rated as significant by both reviewers but inter-rater reliability was only fair (κ=0.22; SE 0.05).

Conclusion: Emergency medicine pharmacists documented several types of interventions with approximately 20% of drug therapy recommendations associated with prevention of significant medication errors. Provision of remote telepharmacy services at freestanding emergency departments may represent a novel approach to help optimize patient care and safety.

Table 1. Classification of Pharmacist Interventions

Type of Intervention	Number	Percent (95% CI†)
Drug Therapy Recommendation	1664	38.6 (37.1-40.0)
Adherence to Hospital Drug Therapy Monitoring Policies	969	22.5 (21.2-23.7)
Telephone Correspondence for ED Culture Callbacks	770	17.9 (16.7-19.0)
Medication Order Clarification	534	12.4 (11.4-13.4)
Allergy / Adverse Drug Reaction Documentation	178	4.1 (3.6-4.8)
Drug Information	108	2.5 (2.1-3)
Formulary Adherence and Therapeutic Interchanges	90	2.1 (1.7-2.6)
Total	**4313**	**100%**

†Indicates 95% confidence interval

39 Emergency Department Visits for Serious and Painful Conditions Markedly Decreased after the Arrival of COVID-19

Mekaeil V, Wiener D, Silverman M, Miller I, Dittus E, Eskin B, Allegra JR/Morristown Medical Center, Morristown, NJ; Westchester Medical Center, Valhalla, NY

Study Objectives: Our syndromic surveillance system of patient chief complaints from 35 emergency departments (EDs) in the New York City area showed a marked rise in respiratory disorders after March 10, 2020 as Covid19 arrived in our region. Shortly thereafter, total emergency department (ED) visits markedly decreased. Our goal was to determine whether ED visits also decreased for serious and painful conditions for which patients in most other circumstances would certainly have sought emergency care.

Methods: We used a retrospective cohort. The setting was EDs of 28 hospitals within 150 miles of New York City. Hospitals were teaching or non-teaching and rural, suburban or urban. Annual ED volumes were from 12,000 to 122,000.

Our population was consecutive patients seen by ED physicians between January 1 and April 30 in 2019 and 2020. We chose to compare monthly visits in 2020 to 2019 for total visits and visits for serious and painful conditions. We arbitrarily chose some serious and painful conditions: congestive heart failure (CHF), appendicitis, myocardial infarction (MI), transient ischemic attack (TIA), stroke (CVA), renal colic, and back pain. We then chose the visits using ICD-10 codes. We computed the changes in monthly visits from 2019 to 2020. We used chi-square to test for statistical significance. Using the Bonferroni correction for multiple comparisons, we set alpha at 0.002.

Results: The database contained 956,116 visits. In January and February 2020 (corrected for length of February in 2020) there was little change in total visits from 2019 [January + 7%, February +1%]. Total ED visits decreased after COVID-19 appeared in our region. In March and April 2020 compared to March and April 2019, ED visits dropped by 16% and 50% respectively. Compared to 2020, visits for serious conditions also decreased. In March and April, CHF decreased 22% and 66%, respectively. For appendicitis these values were 24 and 33%; for MI, 25% and 41%; for TIA, 36% and 62%; and for CVA, 40% and 46%. We also evaluated the decrease in visits for painful conditions. Renal colic visits decreased by 40% and 46% and back pain visits decreased by 49% and 81%. All p-values for comparisons were statistically significant, $p < 0.0005$.

Conclusion: In March and April 2020, there was a decrease in ED visits after Covid-19 arrived in our area. This was also associated with a marked decrease in visits for both serious as well as painful conditions, suggesting that many patients with these conditions did not seek medical care. We suspect this is due to reluctance to come to the ED because of recommendations for quarantine and fear of being exposed to the virus.

40 Racial Disparity and Covid-19 Outcomes: An Emergency Department Study

Chan SB, Smith-Garcia J, Collier C/Amita Health Resurrection Medical Center, Chicago, IL

Study Objectives: The effects of COVID-19 on racial groups is still emerging, however a recent report from the Centers for Disease Control and Prevention (CDC) suggests that there may be a disproportionate rate of severity of disease presentation in racial and ethnic minority groups. Health differences have been attributed to economic and social conditions that are more prevalent for racial minorities. These conditions can cause isolation from resources necessary to combat the outbreak. We suspect that these factors that may contribute to increased Covid-19 exposures, that lead to a greater rate of infection and increased risk of severe disease in minority groups

Methods: Data collected from three ED, all sites of an emergency medicine residency. Included are patients with SAR-CoV-2 testing done in the ED. Excluded were patients less than 18, pregnancy, and missing data. Race was categorized into White-Caucasian (W), African-American (B), Latinx (L), and others including multi-racial (O). COVID co-morbidities were defined as hypertension, diabetes, chronic obstructive pulmonary disease or asthma, sleep apnea, congestive heart failure, coronary artery disease, end-stage renal disease, diabetic kidney disease, liver disease, venous thrombosis, cancer, HIV, and immune-compromised. 5% of patients' select variables were manually re-abstracted with a Kappa of 100%. Significance (alpha=0.05) was tested using Student-t, ANOVA, and Chi-squared as appropriate. Logistic regression was used to determine the independent effect of race on outcomes.

Results: 5489 cases met inclusion/exclusion criteria. SAR-CoV-2 was detected in 1849 (33.7%). Tested racial diversity was 37.9% W, 20.0% B, 33.5% L, and 8.6% O. There was significant racial disparity in the positivity rate (W: 25.0%, B: 31.9%, L: 43.8%, O: 36.7%; p<.001). Hospitalized were 1112 (60.1%) positive patients with mean age of 67.7, 42.4% female, acuity 2.49 (1-5, 1 worst), and racial diversity W: 36.8%, B: 19.3%, L: 35.9%, O: 8.0%. As of 6-5-2020, there were 265 deaths (23.8%) and 180 placed on ventilators (16.2%) with a combined mortality morbidity (MM) of 359 (32.3%). Age (p<0.001), acuity (p<0.001), co-morbidities (p=0.003), and race (p<0.001) were all significantly associated with mortality. On logistic regression, age (OR=1.049; p<0.001), sex (OR=0.647; p=0.008), and acuity (OR=0.434; P<0.001) were significant predictors of mortality. There were significant mortality differences among races (B v W, OR=0.566; p=0.021, L v W, OR=1.050; p=0.817, O v W, OR=0.866; p=0.630). Significant racial differences were also found for ventilator need (B v W, OR=0.792; p=0.433, L v W, OR=2.24; p=0.001, O v W, OR=1.71; p=0.110). Co-morbidities were not significant when controlled for age and other confounders.