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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 evaluated 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; 6.0%); 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 (54; 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=0.5; 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 Intervention

| 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 | 22.9 (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 (3.4-4.8) |
| Drug Information | 108 | 2.5 (2.1-2.9) |
| Formulary Adherence and Therapeutic Interchanges | 90 | 2.1 (1.7-2.6) |
| Total | 4313 | 100% |

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

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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 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, 35.5% 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<0.001). Hospitalized were 1112 (60.1%) positive patients with mean age of 67.7, 42.4% female, acute 2.49 (1-5, worst), and worst racial disparity: 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 (52.3%). Age (p<0.001), race (p<0.001), co-morbidities (p=0.003), and race (p<0.001) were all significantly associated with mortality. On logistic regression, age (OR=1.04; p<0.001), sex (OR=0.647; p=0.008), and co-morbidity (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.