

24, 2021. Outreach method 2 (new risk-assessment-based outreach) involved additional data points from April 12, 2021, to December 5, 2022. Data included 17 self-reported items from the NHSN, 3 characteristics regarding facilities' COVID-19 units, and 7 community-level variables derived from county vaccine rates, social vulnerability index (SVI), and COVID-19 community transmission level. The scoring of each data point ranged from 0–10, and outreach was prioritized to facilities with the highest overall scores. Successful referrals (resulting in a site visit) were compared to the SVI and healthcare emergency regional maps to determine whether the new outreach method reached more facilities in vulnerable communities. **Results:** Of 358 outreach attempts, IPRAT had a higher success rate with method 2 (6.9%) compared to method 1 (5.3%) and improved outreach in rural Michigan regions 7 and 8 (15% vs 3%). Site visits in counties with a high SVI rating with method 2 were 14.5% versus 10.6% using method 1. COVID-19 prevention referral success rates were higher (4.4% vs 3.1%) using method 2. **Conclusions:** The risk-assessment-based outreach method showed improvement in overall referral success rates among facilities in rural and higher-SVI counties. These communities tend to experience higher health disparities and poorer health outcomes. Incorporating the more nuanced data variables correlated with at-risk congregate-care settings receiving timelier outreach. The limitations of the study include sample size, period of data collected (2 years), and the complexity of objectively measuring equity.

Disclosures: None

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Presentation Type:

Poster Presentation - Poster Presentation

Subject Category: COVID-19

Universal COVID-19 screening at hospitals in a large Canadian health region

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Background: Hospitals were affected by COVID-19, with significant concern regarding transmission from unidentified cases. Fraser Health, a Canadian regional health authority, implemented universal testing along with screening questions for emergency department (ED) admissions. We sought to determine which factors were associated with SARS-CoV-2–positive test on admission as well as patient outcome, stratified by screening question responses. **Methods:** This retrospective analysis included patients aged ≥ 6 years admitted through 12 hospital EDs between November 1, 2020, and June 30, 2022. Admission, laboratory, and screening data were extracted from electronic health records. Patients who had a first SARS-CoV-2 PCR–positive test in the prior 60 days collected within 48 hours of admission were classified as positive. Covariates included age, geographical region, and SARS-CoV-2 variant era. All questions were modeled using multinomial logistic regression, with components informed through crude analysis in R Studio software. **Results:** There were 88,511 unique eligible admissions, with 7,642 positive tests (8.6%). The positivity rate over the study period ranged from 0.6% to 21.8%, with a mean of 6.5%. Patients meeting screening criteria were 4.7 times (95% CI, 4.43–4.92) as likely to test positive as those who did not. Patients in the SARS-CoV-2 omicron variant era were 3.2 times (95% CI, 2.98–3.47) as likely to test positive as those in the earlier era of the pandemic. Patients later in the pandemic were less likely to be identified by screening questions than those in earlier eras, with patients in the SARS-CoV-2 omicron variant era only 14% (95% CI, 12%–17%) as likely as in the earlier stages of the pandemic to be identified by screening questions. Patients who tested positive were 1.5 (95% CI, 1.37–1.64) times as likely to die as patients who tested negative, whereas patients in later stages of the pandemic were less likely to die overall. **Discussion:** Patients who tested positive on admission were more

likely to meet screening criteria; however, screening missed half of all positive cases. It is not known whether patients who tested positive without meeting screening criteria would have resulted in transmission. **Conclusions:** Due to changes in COVID-19 epidemiology, Fraser Health has discontinued universal admission screening. Although universal testing increased resource needs, more than half of patients who tested positive during the study period would not have been identified based on screening criteria alone, allowing for implementation of precaution measures to prevent possible transmission. Ultimately, the decision to conduct universal testing must be a balance of the resources required, community prevalence, and patient population.

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Inpatient remdesivir versus nirmatrelvir-ritonavir in the progression of COVID-19

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Background: Nirmatrelvir-ritonavir received emergency use authorization (EUA) for the prevention of progression of COVID-19 in December 2021. Most data supporting this authorization are limited to the outpatient setting in unvaccinated patients, and high-quality head-to-head comparisons to other antivirals such as remdesivir are lacking. Patients at high risk of disease progression, such as advanced age, smokers, and those with cardiovascular disease, diabetes, obesity, or cancer continue to be admitted to acute-care settings for various indications, and some are incidentally found to have mild COVID-19. The objective of this project was to compare rates of progression of mild-to-moderate COVID-19 for inpatients treated with remdesivir versus nirmatrelvir-ritonavir. **Methods:** This study was a single-center, retrospective cohort study that included patients aged ≥ 18 years with PCR-confirmed SARS-CoV-2 infection who were initiated on nirmatrelvir-ritonavir within 5 days or remdesivir within 7 days of symptom onset between June 2022 and August 2022. The primary outcome was the worsening of symptoms via the WHO ordinal clinical severity scale for COVID-19. Secondary outcomes included escalation of care or readmission due to COVID-19, discharge prior to treatment completion, and any adverse drug reactions (ADRs). Within our institutional guidelines, prior approval is needed for COVID-19 treatment through collaboration between the primary team and antimicrobial stewards. Nirmatrelvir-ritonavir is the preferred agent for both in- and outpatients unless the patient had drug

Figure 1. Change in Severity Score at End of Therapy

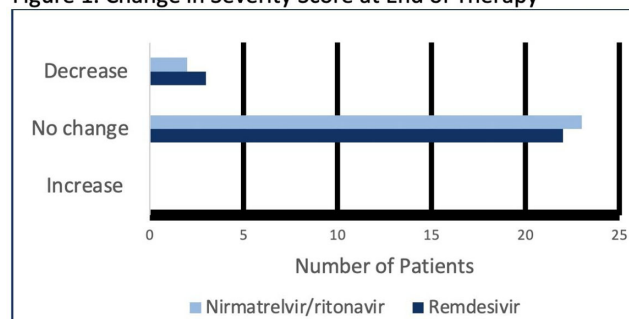
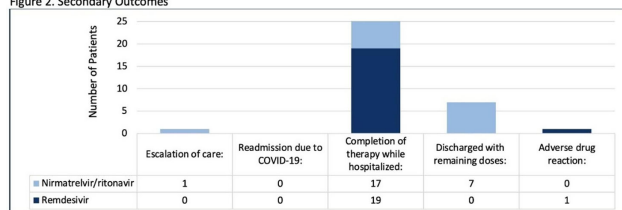


Figure 2. Secondary Outcomes



interactions or lack of enteral access, in which case remdesivir was considered. **Results:** In total, 58 patients were screened and 50 patients were included, 25 patients in each arm. Most were non-Hispanic, white males with at least 1 comorbidity. Compared to the remdesivir arm, the nirmatrelvir-ritonavir arm had more patients with at least a primary COVID-19 vaccine (44% vs 34%). Also, 88% of patients in each arm had a baseline ordinal score of 4, and 12% had a score of 5. Ordinal score changes between the start and end of therapy were similar between groups, and neither had an increase in oxygen requirements (Fig. 1). No readmissions were due to COVID-19, and both medications were well tolerated. Refer to Fig. 2 for secondary outcomes. **Conclusions:** Nirmatrelvir-ritonavir and remdesivir showed similar safety and efficacy in the treatment of hospitalized patients with mild-to-moderate COVID-19. Current evidence-based guidelines and treatment costs favor nirmatrelvir-ritonavir for patients who can receive this drug.

Disclosures: None

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Subject Category: COVID-19

Whether or not the weather matters: A retrospective review assessing the influence of weather on SARS-CoV-2 transmission

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Background: Since the start of the COVID-19 pandemic, many variables have contributed to surges in cases such as the presence of variants, vaccination status, and comorbid medical conditions. However, other factors can be considered including temperature, precipitation, and periods in large congregations. The spike in SARS-CoV-2 infections during the winter has made it seem plausible that transmission may be affected by meteorological factors. A study by Birukov et al demonstrated that a 1° C increase in temperature was associated with a 3.08% reduction in daily new cases and a 1.19% decrease in daily new deaths. We propose that SARS-CoV-2 transmission will decline more rapidly when either precipitation or temperature is higher; thus, in warmer regions with less precipitation daily cases, hospitalizations and deaths will be lower. **Methods:** This is a retrospective study of statewide data in Hartford County, Connecticut, collected from May 2020 to June 2022 assessing percent positivity reported in daily case count, hospitalizations for COVID-19, and deaths from COVID-19 collected from the Connecticut Department of Public Health COVID-19 database. Information on weather conditions, including temperature and precipitation, were collected from the National Weather Service pertaining to Hartford County. Trends in variables related to patient outcomes were compared to weather conditions within the county of Hartford. Moreover, certain periods within the various seasons that typically involve large gatherings and public holidays (eg, New Year's Day,

