Table 2. Clinical characteristics of one site cohort

Clinical characteristics (%)	Positive SARS-CoV-2 Result (N=21)	Negative SARS-CoV-2 Result (N=452)
Contact Exposure*	85.7%	15.1%
More than 1 symptom	61.9%	67.7%
Fever or Cough or Loss of Taste or Smell	52.4%	62.8%
Runny Nose or Nasal Congestion	47.6%	58.6%
Fever	42.9%	33.0%
Cough	23.8%	40.7%**
Fatigue	38.1%	23.2%
Sore Throat	33.3%	19.5%
Headache	19.0%	13.0%**
Eye redness or discharge	14.3%	3.1%**
Diarrhea	9.5%	13.1%
Chills	4.8%	6.6%**
Loss of taste or smell	4.8%	1.8%**
Muscle Aches	4.8%	6.7%**
Nausea or Vomiting	4.8%	8.4%
Abdominal Pain	4.8%	10.7%**
Rash	0.0%	4.3%**
Shortness of Breath	0.0%	0.9%
Runny Nose or Nasal Congestion Only	9.5%	10.8%

* Chi-square test p < 0.05
**N < 452 due to use of a non-updated symptom screener form

nose presented in 10.8% of SARS-CoV-2–negative versus 9.5% of SARS-CoV-2–positive children. All children with isolated diarrhea (n = 5), isolated headache (n = 3), and isolated rash (n = 2) tested negative. Preliminary symptom data based on 176 children from a second site showed that 9.9% of symptomatic children had a positive test result. **Conclusions:** Runny nose or nasal congestion was the most frequently reported symptom in all children tested for SARS-CoV-2. However, isolated runny nose or nasal congestion identified 2 cases of COVID-19 in our cohort. Eye redness or discharge may be an important symptom to screen for COVID-19 in children. Further research with a larger number of positive cases is needed to make conclusions about improving efficiency and efficacy of symptom screeners for COVID-19 in children.

Funding: No
Disclosures: None

Antimicrobial Stewardship & Healthcare Epidemiology 2021;1(Suppl. S1):s55–s56
doi:10.1017/ash.2021.107

Presentation Type:
Poster Presentation
Subject Category: COVID-19

Characteristics of Inpatients with False-Negative SARS-CoV-2 PCR Test Results

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Background: At our institution, the concern for false-negative nasopharyngeal testing for SARS-CoV-2 at the onset of illness led to a general policy of retesting inpatients at 48 hours. For such patients, 2 negative SARS-CoV-2 PCR test results were required prior to discontinuation of COVID-19 control precautions. To assess the utility of routine repeat testing We analyzed patients presenting to our hospital who initially tested negative for SARS-CoV-2 but were found to be positive on repeated testing. **Methods:** All inpatients with symptoms concerning for COVID-19 were tested via nasopharyngeal sample for SARS-CoV-2 by PCR on admission. Patients with continued symptoms and no alternative diagnosis were retested 48 hours later. Testing was performed using either the Roche cobas SARS-CoV-2 RT-PCR assay or the Cepheid Xpert Xpress SARS-CoV-2 test. Between March 17, 2020, and May 10, 2020, we retrospectively analyzed data from patients with false-negative SARS-CoV-2 PCR test results who were subsequently confirmed positive 48 hours later. We evaluated demographic information, days since symptom onset, symptomatology, chest imaging, vital sign trends, and the overall clinical course of each patient. **Results:** During the study period, 14,683 tests were performed, almost half (n = 7,124) were performed through the ED and in the inpatient setting. Of 2,283 patients who tested positive for SARS-CoV-2, only 19 (0.01%) initially tested negative. Patients with initial false-negative test results presented with symptoms that ranged from fever and dyspnea to fatigue and vomiting. Notably, few patients presented "early" in their disease (median, 6 days; range, 0–10 days). However, patients with initial false-negative PCR test results did seem to have consistent imaging findings, specifically bilateral bibasilar ground glass opacities on chest radiograph or computed tomography scan. **Conclusions:** Among inpatients with COVID-19, we found a very low rate of initial false-negative SARS-CoV-2 PCR test results, which were not consistently related to premature testing. We also identified common radiographic findings among patients with initially false-negative test results, which could be useful in triaging patients who may merit retesting. Based on these data, we revised our existing clearance criteria to allow for single-test removal of COVID-19 precautions. Evaluating subsequent reduction in unnecessary testing is difficult given changing community prevalence, increased census, and increased opening to elective procedures. However, given the significant percentage of ED and inpatient testing, removal of repeated testing has likely resulted in a reduction of several thousand unnecessary COVID-19 tests monthly.

Funding: No
Disclosures: None

Antimicrobial Stewardship & Healthcare Epidemiology 2021;1(Suppl. S1):s56
doi:10.1017/ash.2021.108

Presentation Type:
Poster Presentation
Subject Category: COVID-19

COVID-19 Outbreak in an Acute-Care Hospital: Lessons Learned

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Background: We describe the infection prevention investigation of a cluster of 15 healthcare workers (HCWs) and 7 patients in a single non–COVID-19 unit of an acute-care hospital in September 2020. **Methods:** The infection prevention team was notified of 13 SARS-CoV-2–positive, symptomatic HCWs in an acute-care non–COVID-19 unit in 1 week (August 30, 2020, to September 3, 2020). In the same week, 2 patients who had been on the unit were diagnosed with nosocomial COVID-19. An epidemiologic investigation identified the exposure period to be between August 19, 2020, and September 3, 2020. The following immediate containment measures were implemented: closing the unit to new admissions, restricting float staff, moving existing patients to private rooms, mandatory masking of patients, and mandatory respirator and eye protection on unit entry for all HCWs. Exposed unit staff were tested immediately and then every 4 days until September 18, 2020. Likewise, exposed patients, including those discharged, were notified and offered testing. Hospital-wide HCW surveillance testing was conducted. Enhanced environmental control measures were conducted, including terminal cleaning and ultraviolet C (UV-C) disinfection of common areas and patient rooms and a thorough investigation of airflow. Detailed staff interviews were performed to identify causes of transmission. Multiple town hall meetings were held for staff education and updates. **Results:** In total, 108 total patients were deemed exposed: 33 were inpatients and 75 had been discharged. Testing identified 5 additional patient cases among 57 patients who received testing; 51 chose to self-monitor for symptoms. Staff testing identified 2 additional cases. Thus, 15 HCWs and 7 patients were linked in this cluster. The containment measures successfully ended staff transmission as of September 5, 2020. The last patient case was detected on September 10, 2020. Secondary cases were noted in 6 HCW families. We identified staff

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https://doi.org/10.1017/ash.2021.109 Published online by Cambridge University Press

presenteeism, complacency, and socialization in break rooms and outside work as major causes of transmission. Suboptimal compliance with universal eye protection and hand hygiene (67%) were contributing factors. We determined by contact tracing and temporality that the outbreak could have stemmed from nursing home patient(s) through floating HCWs to staff on the affected unit. Directionality of transmission was from staff to patients in this cluster. **Conclusions:** Many facets of pandemic fatigue were apparent in this outbreak, namely, inability of HCWs to adhere to changing PPE guidance, presenteeism pressures due to workforce needs, and socialization with peers due to a false sense of security conferred by biweekly surveillance testing. Ongoing PPE education, repeated reinforcement, as well as engagement in staff wellness are crucial to combatting pandemic fatigue, conserving our workforce, and preventing future outbreaks.
Funding: No
Disclosures: None

Antimicrobial Stewardship & Healthcare Epidemiology 2021;1(Suppl. S1):s56–s57
doi:10.1017/ash.2021.109

Presentation Type:
Poster Presentation
Subject Category: COVID-19
Antimicrobial Stewardship-Driven Monoclonal Antibody Treatment Program for COVID-19 Patients in the Bronx, New York
Yi Guo; Victor Chen; Lauren Allen; Kelsie Cowman; Una Hopkins; Carol Sheridan; Edwin A Torres; Patricia Davis; Susan Sakalian; Frank Sosnowski; Priya Nori; Liise-anne Pirofski; Adam Haviland; James Rossi and Hongkai (Jack) Bao

Background: In November 2020, bamlanivimab received emergency use authorization (EUA) to treat patients with early, mild-to-moderate COVID-19 who are at high risk of progression. Montefiore Medical Center serves an economically underserved community of >1.4 million residents in the Bronx, New York. Montefiore's antimicrobial stewardship team (AST) developed a multidisciplinary treatment pathway for patients meeting EUA criteria: (1) outpatients and hospital associates and (2) acute-care patients (EDs or inpatient). **Methods:** The Montefiore AST established a centralized process for screening high-risk COVID-19 patients 7 days a week. Referrals were sent by e-mail from occupational health, primary care practices, specialty practices, emergency departments, and urgent care centers. Patients were screened in real time and were treated in the ED or a newly established infusion center within 24 hours. After infusion, all patients received phone calls from nurses and had an infectious diseases televisit. Demographics, clinical symptoms, subsequent ED visit or hospital admission, and timing from infusion to ED or hospitalization were obtained from the electronic health record. **Results:** In total, 281 high-risk patients (median age, 62 years; 57% female) received bamlanivimab at the infusion center or in the acute-care setting between December 2, 2020, and January 27, 2021 (Table 1). The number of treated patients increased weekly (Figure 1). Also, 62% were Hispanic or black, and 96% met EUA criteria. Furthermore, 51 (18%) were referred from occupational health, 205 (73%) were referred from the community, and 25 (9%) were inpatients (https://www.fda.gov/media/143605/download). All patients were successfully infused without adverse reactions. In addition, 23 patients (8.2%) were hospitalized and 6 (2.1%) visited EDs within 30 days of treatment. The average number of days between symptom onset and infusion was 4.9. The median age of admitted versus nonadmitted patients was 68 years versus 61.5 years (P = .07). **Conclusions:** An AST-coordinated bamlanivimab treatment program successfully treated multiple high-risk COVID-19 patients and potentially reduced hospitalizations. However, the effort, personnel, and resources required are significant. Dedicated hospital investment is necessary for maximal success.

Table 2.

Table 1: Patient Summary

	Non-admitted (n=253)	Admitted (n=23)
Female, n (%)	147 (58%)	12 (52%)
Age, median, years	61.5	68
Treated at infusion center, n (%)	110 (43%)	3 (13%)
Days between symptoms and infusion, average	--	4.9
Length of Stay, median	--	3

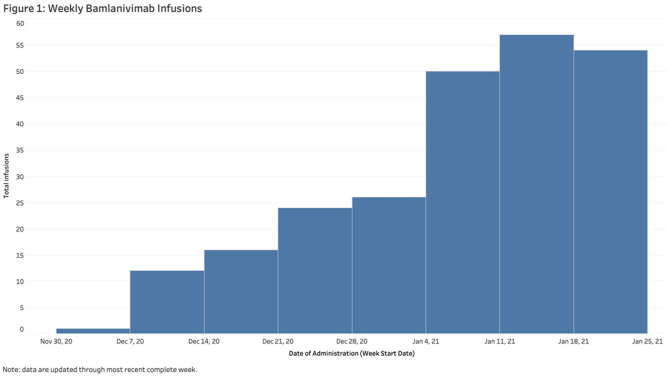

Figure 1.

Funding: No
Disclosures: None

Antimicrobial Stewardship & Healthcare Epidemiology 2021;1(Suppl. S1):s57
doi:10.1017/ash.2021.110

Presentation Type:
Poster Presentation
Subject Category: COVID-19
Predictors of COVID-19 Mortality in Residents of Flint, Michigan: Effect of Age, Gender, Smoking, and Health Plan
Mariam Younas; Danielle Osterholzer; Philip McDonald; Carlos Rios-Bedoya; Ghassan Bachuwa; Sherry Demian; Smit Deliwala; Lalida Kunaprayoon; Harini Lakshman; Thulasi Beere and Uyoyo Omaduvie

Background: Current literature suggests that older age, hypertension, and diabetes mellitus confer a significant increased risk of mortality among patients with COVID-19. The purpose of this study is to further characterize the predictors of mortality in patients with COVID-19 in residents of Flint, Michigan, based on variables such as gender, age, smoking status, health insurance plan, and comorbidities. **Methods:** Hurley Medical Center, is a 443-bed public, nonprofit, teaching medical center located in Flint, Michigan. In total, 289 consecutive adult patients (aged ≥18 years) with confirmed SARS-CoV-2 infection by nasal polymerase chain reaction (PCR), admitted and discharged from our facility from March 2020 through June 2020, were retrospectively analyzed. **Results:** During the 4-month study period, the overall in-hospital case fatality rate (CFR) was 18% (51 of 289), with highest CFR in the age group aged 60–69 years (36%; P = .06). Nonsurvivors tended to be older with mean age of 67 years (95% CI, 61.6–71.8) versus survivors with mean age of 60 years (95% CI, 57.7–62.4). Highest mortality was seen in patients with Medicare or Medicaid as their sole health plan (39%, P = .59). Men comprised 51% (148 of 289) of the cohort with CFR of 21% versus 14% in females. Females tended to be younger with a higher body mass index (BMI) than their male counterparts (mean age of 58 years, mean BMI of 35 in women vs a mean age of 62 and BMI of 29 in men). A higher proportion of deceased were active smokers (51%; P = .02). CFR was highest in patients with hypertension (92%,; P = .15), followed by diabetes (44%; P = .85), chronic kidney disease (CKD) (31%; P = .10), obstructive sleep apnea (OSA) (28%; P = .25), asthma (22%; P = .64), and coronary artery disease (22%; P = .34). It was lowest in patients with end-stage renal disease (3%; P = .69). **Conclusions:** Our study suggests trends towards higher mortality with male sex, hypertension and diabetes, along with other comorbidities. Smoking seems to be a strong predictor of mortality in this cohort. Further studies are needed to ascertain the relationship between possible risk factors with COVID-19 mortality in residents of Flint, Michigan. Describing

https://doi.org/10.1017/ash.2021.109 Published online by Cambridge University Press