

SHEA Spring 2021 Abstracts

Presentation Type:

Oral Presentation - Top Oral Award

Subject Category: COVID-19

Impact of a Black Physician Panel Discussion on Coronavirus Disease 2019 (COVID-19) Health Education

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Background: Coronavirus disease 19 (COVID-19) has infected >26 million Americans with >400,000 deaths. Both Pfizer and Moderna vaccines against severe acute respiratory coronavirus 2 (SARS-CoV-2) have demonstrated 95% efficacy; yet there has been growing vaccination hesitancy, especially within communities of color. To achieve herd immunity and quell the spread of SARS-CoV-2, several strategies need to be deployed. This community-based demonstration project highlights the impact of a panel of black physicians' ability to increase vaccination intent within a social media campaign targeted toward a black audience, namely a live question-and-answer (Q&A) event on SARS-CoV-2 vaccines. **Methods:** The social media campaign included a flyer featuring the headshots and titles of 11 black physicians. The flyer showcased a live Q&A event via Zoom video conference software. Attendees were requested to preregister with their name, e-mail address, and country of origin. **Results:** The live Q&A event was attended by 251 viewers. Geographic distribution was predominantly within the United States (~88%), but a few attendees were from the United Kingdom (~11%) and Canada (<1%), Puerto Rico (<1%), and Paraguay (<1%). One hundred twenty eight questions and comments were received from attendees. Audience questions were categorized, with predominant topics as follows: Vaccine Safety, Medical Mistrust, Vaccine Safety in Pregnancy, Vaccine Efficacy, and Vaccine Development. The top five poll results revealed: 31% of audience members were not planning to vaccinate or were not sure about vaccination, but after the event are now planning to vaccinate; 93% believed their knowledge of the COVID-19 vaccines had increased; 95% believed it was important that the information was presented by Black health experts; 90% reported that they trusted the information presented; and 96% rated the session as "good or excellent". **Conclusion:** Our social media project is an example of one strategy healthcare professionals can utilize to positively influence local and global communities in the mitigation of the COVID-19 pandemic. Results of this project evaluation showed that viewers responded favorably, reporting increases in vaccine acceptance and knowledge. Most respondents also affirmed the importance of having black experts involved in communicating this information. COVID-19 has disproportionately affected black communities as a result of health inequities and institutionalized racism.¹ The event amplifies the importance of utilizing social-media-based interventions and increasing black healthcare representation to aid infection control. 1. Jones C. Why Racism, Not Race, Is a Risk Factor for Dying of COVID-19. *Scientific American* June 12, 2020.

Funding: No

Disclosures: None

Antimicrobial Stewardship & Healthcare Epidemiology 2021;1(Suppl. S1):s1

doi:10.1017/ash.2021.2

Presentation Type:

Oral Presentation - Top Oral Award

Subject Category: COVID-19

Coronavirus Disease 2019 (COVID-19) Admission Screening at a Tertiary-Care Center, Iowa 2020

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William Etienne; Angie Dains; Mary Kukla; Emily Ward; Bradley Ford; Michael Edmond; Melanie Wellington; Daniel Diekema and Jorge Salinas

Background: Hospitalized patients may unknowingly carry severe acute respiratory coronavirus virus 2 (SARS-CoV-2), even if they are admitted for other reasons. Because SARS-CoV-2 may remain positive by reverse-transcriptase polymerase chain reaction (RT-PCR) for months after infection, patients with a positive result may not necessarily be infectious. We aimed to determine the frequency of SARS-CoV-2 infections in patients admitted for reasons unrelated to coronavirus disease 2019 (COVID-19). **Methods:** The University of Iowa Hospitals and Clinics is an 811-bed tertiary-care center. We use a nasopharyngeal SARS-CoV-2 RT-PCR to screen admitted patients without signs or symptoms compatible with COVID-19. Patients with positive tests undergo a repeat test to assess cycle threshold (Ct) value kinetics. We reviewed records for patients with positive RT-PCR screening admitted during July–October 2020. We used a combination of history, serologies, and RT-PCR Ct values to assess and qualify likelihood of infectiousness: (1) likely infectious, if Ct values were <29, or (2) likely not infectious, if 1 or both samples had Cts <30 with or without a positive SARS-CoV-2 antinucleocapsid IgG/IgM test or history of a positive result in the past 90 days. Contact tracing was only conducted for patients likely to be infectious. We describe the isolation duration and contact tracing data. **Results:** In total, 6,447 patients were tested on hospital admission for any reason (persons under investigation or admitted for reasons other than COVID-19). Of these, 240 (4%) had positive results, but 65 (27%) of these were admitted for reasons other than COVID-19. In total, 55 patients had Ct values available and were included in this analysis. The median age was 56 years (range, 0–91), 28 (51%) were male, and 12 (5%) were children. The most frequent admission syndromes were neurological (36%), gastrointestinal (16%), and trauma (16%). Our assessment revealed 23 likely infections (42%; 14 definite, 9 possible) and 32 cases likely not infectious (58%). The mean Ct for patients who were likely infectious was 22; it was 34 for patients who were likely not infectious. Mean duration of in-hospital isolation was 6 days for those who were likely infectious and 2 days for those who were likely not infectious. We detected 8 individuals (1 healthcare worker and 7 patients) who were exposed to a likely infectious patient. **Conclusions:** SARS-CoV-2 infection in patients hospitalized for other reasons was infrequent. An assessment of the likelihood of infectiousness including history, RT-PCR Cts, and serology may help prioritize patients in need of isolation and contact investigations.

Funding: No

Disclosures: None

Antimicrobial Stewardship & Healthcare Epidemiology 2021;1(Suppl. S1):s1

doi:10.1017/ash.2021.3

Presentation Type:

Oral Presentation - Top Oral Award

Subject Category: Long-Term Care

Infection Hospitalization Trends Among US Home Healthcare Patients, 2013–2018

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Background: Infections are a frequent cause of hospital (re)admissions for older adults receiving home health care (HHC) in the United States. However, previous investigators have likely underestimated the prevalence of infections leading to hospitalization due to limitations of identifying infections using Outcome and Assessment Information Set (OASIS), the standardized assessment tool mandated for all Medicare-certified HHC

agencies. By linking OASIS data with inpatient data from the Medicare Provider Analysis and Review (MedPAR) file, we were able to better quantify infection hospitalization trends and subsequent mortality among HHC patients. **Method:** After stratification (by census region, ownership, and urban or rural location) and random sampling, our data set consisted of 2,258,113 Medicare beneficiaries who received HHC services between January 1, 2013, and December 31, 2018, from 1,481 Medicare-certified HHC agencies. The 60-day HHC episodes were identified in OASIS. Hospital transfers reported in OASIS were linked with corresponding MedPAR records. Our outcomes of interest were (1) hospitalization with infection present on admission (POA); (2) hospitalization with infection as the primary cause; and (3) 30-day mortality following hospitalization with infection as the primary cause. We identified bacterial (including suspected) infections based on *International Classification of Disease, Ninth Revision* (ICD-9) and ICD-10 codes in MedPAR. We classified infections by site: respiratory, urinary tract, skin/soft tissue, intravenous catheter-related, and all (including other or unspecified infection site). We also identified sepsis diagnoses. **Result:** From 2013 through 2018, the percentage of 60-day HHC episodes with 1 or more hospital transfers ranged from 15% to 16%. Approximately half of all HHC patients hospitalized had an infection POA. Over the 6 years studied, infection (any type) was the primary cause of hospitalization in more than a quarter of all transfers (25.86%–27.57%). The percentage of hospitalizations due to sepsis increased from 7.51% in 2013 to 11.49% in 2018, whereas the percentage of hospitalizations due to respiratory, urinary tract, or skin/soft-tissue infections decreased ($p < 0.001$). Thirty-day mortality following a transfer due to infection ranged from 14.14% in 2013 to 14.98% in 2018; mortality rates were highest following transfers caused by sepsis (23.14%–26.51%) and respiratory infections (13.07%–14.27%). **Conclusion:** HHC is an important source of post-acute care for those aging in place. Our findings demonstrate that infections are a persistent problem in HHC and are associated with substantial 30-day mortality, particularly following hospitalizations caused by sepsis, emphasizing the importance of infection prevention in HHC. Effective policies to promote best practices for infection prevention and control in the home environment are needed to mitigate infection risk.

Funding: No

Disclosures: None

Antimicrobial Stewardship & Healthcare Epidemiology 2021;1(Suppl. S1):s1–s2

doi:10.1017/ash.2021.4

Presentation Type:

Oral Presentation - Top Oral Award

Subject Category: Outbreaks

A Cluster of Coronavirus Disease 2019 (COVID-19) Cases on an Inpatient Hospital Unit Involving Multiple Modes of Transmission

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Background: The Ohio State University Wexner Medical Center identified a cluster of coronavirus disease 2019 (COVID-19) cases on an inpatient geriatric stroke care unit involving both patients and staff. The period of suspected severe acute respiratory coronavirus virus 2 (SARS-CoV-2) transmission and exposure on the unit was December 20, 2020, to January 1, 2021, with some patients and staff developing symptoms and testing positive within the 14 days thereafter.

Methods: An epidemiologic investigation was conducted via chart review, staff interviews, and contact tracing to identify potential patient and staff linkages. All staff who worked on the unit were offered testing regardless of the presence of symptoms as well as all patients admitted during the outbreak period. **Results:** In total, 6 patients likely acquired COVID-19 in the hospital (HCA). An additional 6 patients admitted to the unit during the outbreak period subsequently tested positive but had other possible exposures outside the hospital (Fig. 1). One patient failed to undergo COVID-19 testing on admission but tested positive early in the cluster and is suspected to have contributed to patient to employee transmission. Moreover, 32 employees who worked on the unit in some capacity during this period tested positive, many of whom became symptomatic during their shifts. In addition, 18 employees elected for asymptomatic testing with 3 testing positive; these were included in the total. Some staff also identified potential community exposures. Additionally, staff reported an employee who was working while symptomatic with inconsistent mask use (index employee) early in the outbreak period. The index employee likely contributed to employee transmission but had no direct patient contact. Our epidemiologic investigation ultimately identified 12 employees felt to be linked to transmission based on significant, direct patient care provided to the patients within the outbreak period (Fig. 1). In addition, 3 employees had an exposure outside the hospital indicating likely community transmission. **Conclusions:** Transmission was felt to be multidirectional and included employee-to-employee, employee-to-patient, and patient-to-employee

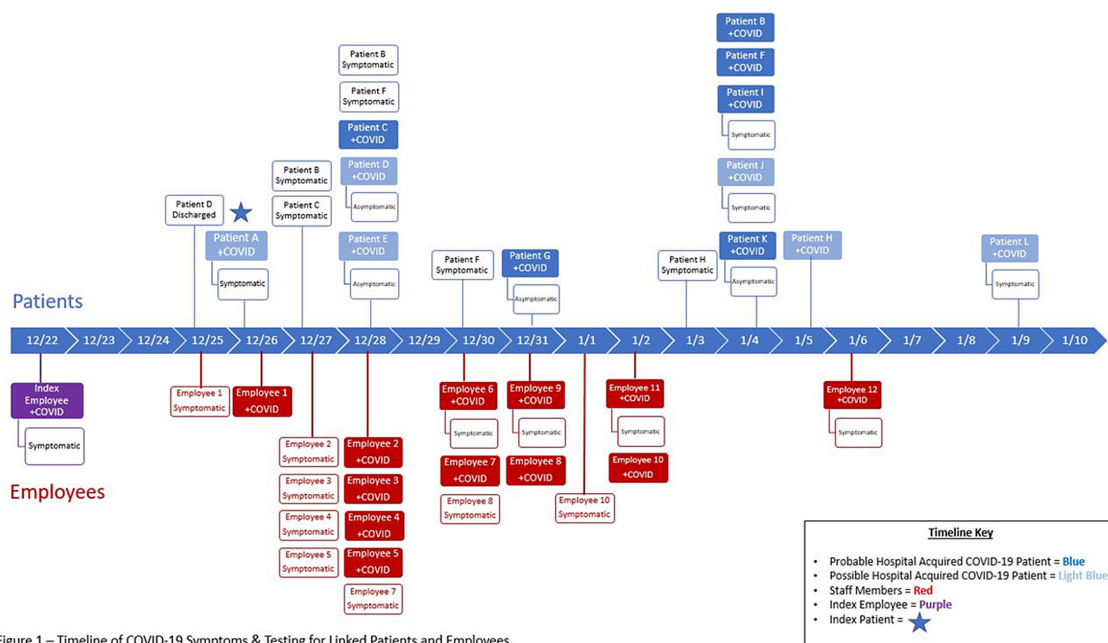


Figure 1 – Timeline of COVID-19 Symptoms & Testing for Linked Patients and Employees