Presentation Type:
Poster Presentation
Subject Category: COVID-19
COVID-19 and Ventilator-Associated Event Discordance
Kelly Cawcutt; Mark Rupp and Lauren Musil

Background: The COVID-19 pandemic has challenged healthcare facilities since its discovery in late 2019. Notably, the subsequent COVID-19 pandemic has led to an increase in healthcare-acquired infections such as ventilator associated events (VAEs). Many hospitals in the United States perform surveillance for the NHSN for VAEs by monitoring mechanically ventilated patients for metrics that are generally considered to be objective and preventable and that lead to poor patient outcomes. The VAE definition is met in a stepwise manner. Initially, a ventilator-associated condition (VAC) is met when there an increase in ventilator requirements after a period of stability or improvement. An IVAC is then met when there is evidence of an infectious process such as leukocytosis or fever and a new antimicrobial agent is started. Finally, possible ventilator-associated pneumonia (PVAP) is met when there is evidence of microbial growth or viral detection. Since the beginning of the COVID-19 pandemic, our hospital has seen an increase in VAEs, which is, perhaps, not unexpected during a respiratory illness pandemic. However, the NSHN definitions of VAE, and PVAP in particular, do not account for the novelty and nuances of COVID-19. **Methods:** We performed a chart review of 144 patients who had a VAE reported to the NHSN between March 1 and December 31, 2020. **Results:** Of the 144 patients with a VAE reported to NHSN, 39 were SARS-CoV-2 positive. Of the 39 patients, 4 patients (10.25%) met the NHSN PVAP definition due to a positive SARS-CoV-2 PCR that was collected in the prolonged viral shedding period of their illness (< 90 days). One of the four patients also had a bacterial infection in addition to their subsequent positive COVID-19 result. All these patients were admitted to the hospital with a COVID-19 diagnosis and their initial PCR swab was performed upon admission. **Conclusions:** We believe that the PVAP definition was inappropriately triggered by patients who were decompensating on the ventilator due to a novel respiratory virus that was present on admission. Early in the pandemic, frequent swabbing of these patients was performed to try and understand the duration of viral shedding and to determine when it would be safe to transfer patients from isolation after prolonged hospitalization. The NSHN definition should take into consideration the prolonged viral shedding period of COVID-19 and natural history of the illness, and subsequent COVID-19 testing within 90 days of an initial positive should not require classification as a hospital-acquired PVAP.
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Subject Category: COVID-19
Stewardship of Remdesivir Use in a Rural Community Hospital During the COVID-19 Pandemic
Raghavendra Tirupathi and Melissa Gross

Background: Remdesivir was granted EUA followed by full FDA approval for treatment of hospitalized COVID-19 patients on October 22, 2020, based on the results from the ACTT1 trial. Remdesivir use was initially restricted to infectious disease (ID) physicians in our hospital with prescription needing formal ID consultation until complete approval. Due to increasing case counts in our hospital, a decision was made to allow intensivists and hospitalists the authorization to prescribe remdesivir in a phased manner. In this retrospective study, we assessed the impact of phased-in prescribing on remdesivir utilization and days of therapy of antimicrobials. **Methods:** Remdesivir prescribing was streamlined by real-time institutional guidelines developed by a COVID-19 treatment committee constituting ID and other clinicians. Eligibility for remdesivir included positive SARS-CoV-2 PCR test, severe disease defined as persistent hypoxia (<94% oxygen saturation on room air), requiring supplemental oxygen and/or on mechanical ventilation (MV) for <72 hours, and symptom onset of <10 days. We retrospectively reviewed cohorts of 3 periods during which remdesivir was prescribed. In the first cohort A, between October 23, 2020, and November 12, 2020, remdesivir was restricted to ID physicians with formal ID consultation. Cohort B comprised inpatients between November 13, 2020, and December 6, 2020, when hospitalists and intensivists were allowed to prescribe remdesivir through an EMR order set after prior authorization by an ID physician via curbside or telephonic consultation. Cohort C, from December 7, 2020, to December 26, 2020, comprised inpatients with unrestricted prescribing of remdesivir by hospitalists and intensivists. We also evaluated antibiotic use. **Results:** In cohort A, SARS CoV-2 positivity was 20.3%; 64 inpatients tested positive and 35 patients (54.7%) who met the criteria were prescribed remdesivir after a formal consultation with an ID physician. In cohort B, requiring prior authorization by an ID physician, SARS-CoV-2 positivity rapidly increased to 34%; 193 patients tested positive and 97 patients (50.3%) received remdesivir. In cohort C, during unrestricted access, positivity further increased to 38%; 235 inpatients tested positive and 123 (52.5%) received remdesivir. Remdesivir use remained steady during the 3 phases of gradual de-escalation of restricted prescribing and safe handoff in the context of clear guidelines, as well as ongoing curbside education provided by ID physicians during the second phase. Cohort B demonstrated the best prescribing rates. Antimicrobial prescribing data were also collected during the 3 cohort phases (Figures 1–3). **Conclusions:** Remdesivir is an expensive antiviral with limited utility and maximum benefit in COVID-19 inpatients who are hypoxic but do not require mechanical ventilation. Stewardship of remdesivir with safe, gradual handoff to inpatient can be achieved without overuse.

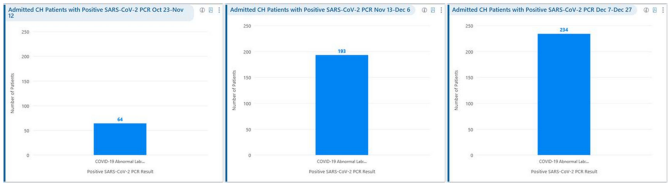

Figure 1.

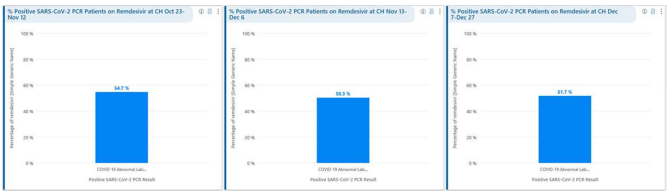

Figure 2.

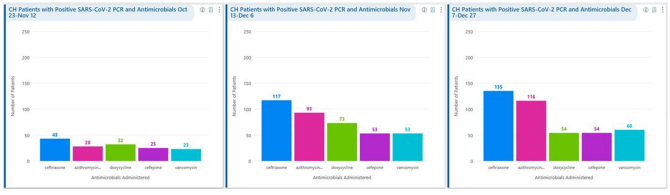

Figure 3.

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Comparing Hospital Healthcare-Associated Infection Incidence During Pre-COVID-19 Pandemic and Pandemic Eras
Andrea Parriott; N. Neely Kazerouni and Erin Epson

Background: Diversion of resources from infection prevention activities, personal protective equipment supply shortages, conservation (extended

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