

Figure 1. Timeline of nosocomial COVID-19 outbreak including Symptom Onset, Positive Test Results, Sequencing Results, and Time on Units with Exposures. Exposure defined as any self-reported contact with COVID-19 positive patient, > 15 minutes with an unmasked COVID-19 positive HCW, or HCWs assigned to the same patient during the same shift based on nursing assignments.

Admitted	
ICU Days	
Negative Test	O
Symptomatic	S
Positive Test	A
Exposure	A
Not Sequenced	NS
Inhealthcare Worker	HCW

4 patients had severe liver disease, including 2 with liver transplants. All HCWs and half of the patients had received 2 doses of mRNA vaccine, albeit >5 months from their second vaccination. Whole-genome sequencing confirmed patients 1–6 and HCWs 1–3 had related transmission of COVID-19. However, infections in HCWs 4–6, who worked in a transplant-related office setting without patient contact, were due to 2 separate introductions of SARS-CoV-2 unrelated to the hospital outbreak. Sequencing could not be performed on HCWs 7–11 due to low viral concentration in the original specimens or unavailable specimen. The SARS-CoV-2 δ (delta) variant (B.1.617.2) was identified in all sequenced samples. HCWs 8–10 were asymptomatic and had had contact with each other and had been involved with an intubation without proper PPE for SARS-CoV-2 on patient 6. HCW 8 had had contact with all 6 patients and HCW 9 had had contact with 5 patients. A clear index case could not be identified; however, we suspect that the index case was either visitor 1, who tested positive during patient 2’s admission, or an asymptomatic healthcare worker (HCWs 8–10). **Conclusions:** We identified a nosocomial outbreak of the SARS-CoV-2 δ (delta) variant in a solid-organ transplant unit including patients, a visitor, and vaccinated healthcare workers with multiple introductions of the virus. Further transmission was not detected after enhanced infection control measures were introduced, including universal masking and eye protection, closing patient doors, and enforcement of visitor masking policy. We describe the difficulties tracing SARS-CoV-2 transmission in the hospital setting, even with advanced sequencing techniques. This outbreak highlights the importance of booster vaccination and strict infection control practices, especially in the setting of the δ (delta) variant.

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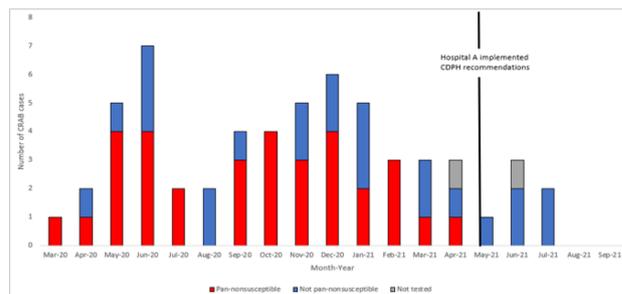
Subject Category: Outbreaks

Outbreak investigation of CRAB at an acute-care hospital ICU during the COVID-19 pandemic—Chicago, Illinois, March 2020–September 2021

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Background: Carbapenem-resistant *Acinetobacter baumannii* (CRAB) is primarily associated with hospital-acquired infections and is an urgent public health threat due to its ability to contaminate the environment and cause severe disease. In 2019, Illinois began pilot surveillance for CRAB requiring select laboratories to submit specimens for molecular characterization. On July 17, 2020, the Chicago Department of Public Health (CDPH) was notified of an increase in CRAB infections in a 20-bed ICU at an acute-care hospital in Chicago (hospital A) during the initial COVID-19 surge. We summarize the outbreak investigation findings and infection control recommendations. **Methods:** Clinical cultures were

Figure 1. Carbapenem-resistant *Acinetobacter baumannii* cases at Hospital A by susceptibility during March 18, 2020–September 30, 2021



collected from patients in hospital A, and CRAB-positive isolates were sent to the Wisconsin State Laboratory of Hygiene for mechanism of resistance and antibiotic susceptibility testing. On-site assessments and remote follow-ups were conducted by CDPH infection preventionists to evaluate infection control practices including environmental cleaning, hand hygiene compliance, and use of personal protective equipment (PPE). The Illinois Department of Public Health and CDPH summarized the testing results, facilitated a containment response, and provided recommendations for infection control. **Results:** From March 18, 2020, to September 30, 2021, 56 patients with CRAB infections were identified from hospital A, and 33 (59%) of these cases were pan-nonsusceptible. Most specimen sources were sputum (n = 30, 54%), followed by blood (n = 13, 23%), urine (n = 6, 11%) and other (n = 7, 13%). Among isolates with mechanism testing (n = 54), 45 (83%) were positive for OXA-24/40 and 9 (17%) were positive for OXA-23. Of the CRAB-positive patients, 28 (50%) were previously positive for SARS-CoV-2. To date, 25 of these patients (45%) have been discharged and 31 (55%) have died. Two onsite visits and 7 remote-assistance sessions were conducted as part of the investigation. In response to increased COVID-19 hospitalizations, hospital A moved to crisis-capacity PPE use and encountered staffing shortages, which led to compromised infection control measures. Cleaning agents (Quat disinfectant cleaner) were also found to be ineffective against CRAB and required long contact times. **Conclusions:** In response to the CRAB outbreak at hospital A, CDPH recommended that the hospital stop crisis-capacity protocols for PPE, conduct admission screening and point-prevalence testing for CRAB, implement a hand hygiene campaign, and use an EPA-registered List K product for environmental cleaning. These recommendations were implemented in May 2021, and no CRAB cases have been reported since July 2021. To reduce CRAB transmission during the pandemic, facility leadership must commit resources to educate staff on effective infection control practices including conventional use of PPE, appropriate cleaning agents, and improved hand hygiene.

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Subject Category: Patient Safety

Racial disparities in rate of central-line-associated bloodstream infections and catheter-associated urinary tract infections

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Background: Racial and ethnic disparities in healthcare access, medical treatment, and outcomes have been extensively reported. However, the impact of racial and ethnic differences in patient safety, including healthcare-associated infections, has not been well described. **Methods:** We performed a retrospective review analyzing prospectively collected data on central-line-associated bloodstream infection (CLABSI) and