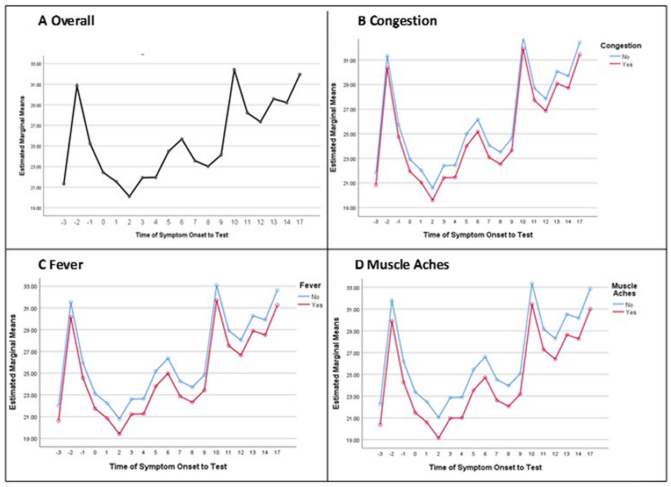
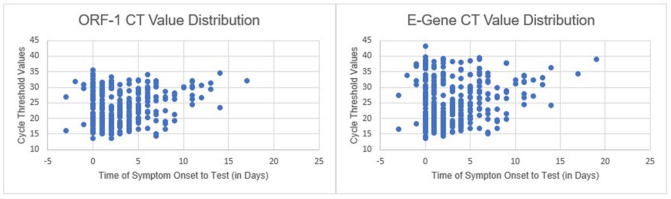
Figure 1. Estimated Marginal Mean CT Values over Time of Symptom Onset to Test



Estimated marginal mean ORF-1 CT values are adjusted for age, sex, time from symptom onset to test, and all individual symptoms.

Figure 2. CT Value Distribution over Time from Symptom Onset to COVID-19 Test



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New COVID-19 Transmission after the First Vaccine Dose at Skilled Nursing Facilities in Nebraska

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Background: The inoculation with SARS-CoV-2 vaccine at long-term care facilities (LTCFs) in Nebraska began on December 28, 2020, as part of the Centers for Disease Control and Prevention (CDC) Pharmacy Partnership for Long-Term Care Program.[1] As of February 5, 2021, 159 skilled nursing facilities (SNFs) had completed their first vaccine clinic, and 7,271 residents and 6,768 staff had received the first dose of the 2-dose series. Surveillance data before vaccination (December 21–27, 2020) and after the first vaccination dose (January 25–31, 2021) indicate that the weekly SARS-CoV-2 positivity rate at SNFs decreased from 1.18% to 0.42% for residents and 0.54% to 0.11% for staff.[2,3,4] In this study, we examined the perceived decrease in new transmission initiated by the first dose of vaccine at SNFs. **Methods:** We analyzed the data with separate logistic regressions for residents and staff. We included 145 SNFs that completed their first vaccine clinic, and we used the Federal and Pharmacy Partnership database for the number of residents and staff that received the first dose of vaccine at the first vaccine clinic. We followed the SNFs for 21 days after the first vaccine clinic from December 28, 2020, through February 5, 2021, for any first-time SARS-CoV-2–positive cases. The National Healthcare Safety Network (NHSN) database was used to collect the information on the number of residents present at the facility on the day of the first vaccine clinic, if available, or days before in the same week as the first vaccine clinic. The staff count for each facility was extracted from Nebraska Licensure for LTCFs. We collected new case information from the state surveillance, the NHSN, and the Test-Nebraska platform. **Results:** The mean resident vaccine coverage was 80% and the median staff vaccine coverage was 43%. We found a reverse association between staff vaccine coverage and new positive staff cases. For each percentage increase in staff vaccine coverage, the odds of having a new staff positive case 7 days and 14 days after the first vaccine clinic decrease by 26% and 48%, respectively. No association between coverage and new resident transmission was detected. Possible confounding exists when infected residents might have tested positive 7–14 days after the first vaccine clinic who were not affected by the vaccine. **Conclusions:** Although we observed the association between lower case count with increased facility-level vaccine coverage, we would need to wait for the administration of the second dose of vaccine before assessing the level of association between coverage and new transmission. Further initiatives are warranted to increase the suboptimal vaccine coverage for staff.

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COVID-19 Conversion after Exposure in a Semiprivate Room at a Tertiary Care Center in Iowa, July–December 2020

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Background: Hospital semiprivate rooms may lead to coronavirus disease 2019 (COVID-19) patient exposures. We investigated the risk of COVID-19 patient-to-patient exposure in semiprivate rooms and the subsequent risk of acquiring COVID-19. **Methods:** The University of Iowa Hospitals & Clinics is an 811-bed tertiary care center. Overall, 16% of patient days are spent in semiprivate rooms. Most patients do not wear masks while in semiprivate rooms. Active COVID-19 surveillance included admission and every 5 days nasopharyngeal SARS-CoV-2 polymerase chain reaction (PCR) testing. We identified inpatients with COVID-19 who were in semiprivate rooms during their infectious periods during July–December 2020. Testing was repeated 24 hours after the first positive test. Cycle threshold (Ct) values of the two tests (average Ct <30), SARS-CoV-2 serology results, clinical assessment, and COVID-19 history were used to determine patient infectiousness. Roommates were considered exposed if in the same semiprivate room with an infectious patient. Exposed patients were notified, quarantined (private room), and follow-up testing was arranged (median seven days). Conversion was defined as having a negative test followed by a subsequent positive within 14 days after exposure. We calculated the risk of exposure: number of infectious patients in semiprivate rooms/number of semiprivate patient-days (hospitalization days in semiprivate rooms). **Results:** There were 16,427 semiprivate patient days during July–December 2020. We identified 43 COVID-19 inpatients who roommates during their infectious periods. Most infectious patients (77%) were male; the median age was 67 years; and 22 (51%) were symptomatic. Most were detected during active surveillance: admission testing (51%) and serial testing (28%). There were 57 exposed roommates. The risk of exposure was 3 of 1,000 semiprivate patient days. In total, 16 roommates (28%) did not complete follow-up testing. Of 41 exposed patients with follow-up data, 8 (20%) converted following their exposure. Median time to conversion was 5 days. The risk of exposure and subsequent conversion was 0.7 of 1,000 semiprivate patient days. Median Ct value of the source patient was 20 for those who converted and 23 for those who did not convert. Median exposure time was 45 hours (range, 3–73) for those who converted and 12 hours (range, 1–75) for those who did not convert. **Conclusions:** The overall risk of exposure in semiprivate rooms was low. The conversion rate was comparable to that reported for household exposures. Lower Ct values and lengthier exposures