Methods. With institutional review board approval, we recruited ER nurses who were assigned to COVID-19 isolation zone with more than 6 months’ ER work experience. After their demographic information were collected through a questionnaire, their nursing practices and practice time during their 1 shift (day or evening) were recorded. Patients admitted during each month was calculated by dividing the number of patients admitted during each month by the number of patients admitted during that month in the LTCF. For each month, the number of patients admitted were serially tested for SARS-CoV-2 PCR testing. Multiple testing platforms were used (Roche Cobas 6800, Thermo Scientific® King Fisher and Cepheid GeneXpert™) because of the high volume of samples. Tests were classified as admission, day 5, and day 10 if they were done on days 0 to 3, 5, or 10 respectively. Patients positive for SARS-CoV-2 on admission were excluded from the analyses. The diagnostic yield of serial testing for patients admitted during each month was calculated by dividing the number of patients testing positive on day 5 or day 10 by the total number of patients who underwent serial testing during that month.

Results. There were 2945 admissions of 5 days or more and 1777 admissions of 10 days or more. Of these, 1509 patients and 841 patients respectively were serially tested for SARS-CoV-2 as recommended for a compliance rate of 51% at day 5 and 47% at day 10. Ten (0.7%) and 12 (1.4%) patients tested positive on days 5 and 10 respectively. The diagnostic yield of serial testing was highest for patients admitted in January 2021 at 2.2%, when the average daily incidence of COVID-19 was highest in Montreal (see Figure).

The diagnostic yield of serial testing for each month, compared to the average daily COVID-19 incidence rate in Montreal, Quebec, Canada.

Conclusion. The diagnostic yield of serial SARS-CoV-2 testing in hospitalized patients is low when the overall community incidence is low. However, diagnostic yield of serial testing increases when community incidence of COVID-19 is higher and should be considered in this situation.

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417. COVID-19 Aerostudy: Evaluation of SARS-CoV-2 Virus in the Air of Patients Hospitalized with COVID-19

Edward Hamza, MD, MPH; Margaret Seisma, PHD; Lorraine Conroy, PHD; Alfredo J. Lena Lora, MD; Eric Wenzler, PharmD BCPS BCIDP AAHPHP; Scott Borgetti, MD; Benjamin Ladner, MD; Tracy Cable, MD; ashley Dahlquist, n/a; Nahed Isham, PhD MD; Steven Fisher, MD; Taha Ali, MD; Dagmar Sweeney, n/a; Susan C. Blesdale, MD, UIC School of Public Health, Chicago, Illinois; University of Illinois at Chicago, Chicago, Illinois; University of Illinois Hospital, Chicago, Illinois; University of Illinois at Chicago, Chicago, Illinois; University of Illinois at Chicago, Chicago, Illinois; University of Illinois Hospital, Chicago, Illinois; University of Illinois Hospital, Chicago, Illinois; University of Illinois Hospital, Chicago, Illinois; University of Illinois Hospital, Chicago, Illinois; University of Illinois Hospital, Chicago, Illinois; University of Illinois Hospital, Chicago, Illinois; University of Illinois Hospital, Chicago, Illinois; University of Illinois Hospital, Chicago, Illinois; University of Illinois Hospital, Chicago, Illinois; University of Illinois Hospital, Chicago, Illinois; University of Illinois Hospital, Chicago, Illinois; University of Illinois Hospital, Chicago, Illinois

Background. Nasopharyngeal swabs collected from patients for SARS-CoV-2 PCR testing. Multiple testing platforms were used (Roche Cobas 6800, Thermo Scientific™ King Fisher and Cepheid GeneXpert™) because of the high volume of samples. Tests were classified as admission, day 5, and day 10 if they were done on days 0 to 3, 5, or 10 respectively. Patients positive for SARS-CoV-2 on admission were excluded from the analyses. The diagnostic yield of serial testing for patients admitted during each month was calculated by dividing the number of patients testing positive on day 5 or day 10 by the total number of patients who underwent serial testing during that month.

Results. There were 2945 admissions of 5 days or more and 1777 admissions of 10 days or more. Of these, 1509 patients and 841 patients respectively were serially tested for SARS-CoV-2 as recommended for a compliance rate of 51% at day 5 and 47% at day 10. Ten (0.7%) and 12 (1.4%) patients tested positive on days 5 and 10 respectively. The diagnostic yield of serial testing was highest for patients admitted in January 2021 at 2.2%, when the average daily incidence of COVID-19 was highest in Montreal (see Figure).