

(12.5% vs. 4.2%, vs. 0.4%;  $p < 0.001$ ). The rate of SYX infection following exposure to a fellow HCW (179/3,198; 5.6%) was higher than that following exposure to a patient (81/3,408; 2.4%;  $p < 0.001$ ).

**Conclusion.** Conversion following exposure to COVID-19 in the healthcare setting with appropriate protective equipment was low. Incomplete testing of all exposed individuals was a limitation and our data may under-estimate the true conversion rate. Our findings support our local practice of not quarantining HCWs following non-household exposures. Limiting contact tracing to only high or medium risk exposures may best utilize limited personnel resources.

**Disclosures.** Rebekah W. Mochring, MD, MPH, UpToDate, Inc. (Other Financial or Material Support, Author Royalties)

#### 419. SARS-CoV-2 Environmental Surface Contamination of Healthcare Staff Common Areas

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The CDC Prevention Epicenters Program

**Session:** P-19. COVID-19 Infection Prevention

**Background.** There are limited data regarding SARS-CoV-2 (SC2) environmental contamination in staff areas of healthcare settings. We performed environmental sampling of staff areas in wards where coronavirus disease 19 (COVID-19) patients received care and compared findings to surfaces within COVID-19 patient rooms.

**Methods.** The study was conducted at the Hospital of the University of Pennsylvania (Philadelphia, PA) from 9/15/20-1/26/21. Sampling of 20cm<sup>2</sup> surfaces in staff common areas (breakroom high-touch surfaces comprising tables and microwave/refrigerator handles; bathroom surfaces comprising toilet, sink, and doorknob; and floors), nurse workstations (computer mice and floors), and COVID-19 patient rooms (high-touch surfaces comprising bedrail, computer mice/keyboards, and doorknobs; bathroom surfaces; and floors) was performed using flocked swabs one or more times per week. Specimens underwent RNA extraction and quantitative real-time polymerase chain reaction to detect the SC2 N1 region. Median comparisons were performed using Wilcoxon rank sum test. Trends in odds were evaluated using Score test.

**Results.** Proportions of surface specimens with detectable SC2 RNA are summarized in Table 1. Median copy numbers were lower among staff toilets compared to COVID-19 patient toilets (135.6 vs. 503.8 copies/specimen,  $p=0.02$ ), lower among staff breakroom compared to patient room high-touch surfaces (104.3 vs. 220.3 copies/specimen,  $p=0.007$ ), and similar between staff and patient room samples from sinks and floors. At nurse workstations, SC2 RNA was detected among 22/177 (12.4%) computer mouse and 147/178 (82.6%) floor samples. Odds of SC2 detection increased by study week among common area ( $p < 0.001$ ) and nurse workstation samples ( $p < 0.001$ ) (Figures 1 and 2).

Table 1. SARS-CoV-2 (SC2) RNA detection on staff common area and coronavirus disease 19 (COVID-19) patient room surfaces at the Hospital of the University of Pennsylvania, 9/15/20-1/26/21.

Surface type	Staff common area no. of specimens with detectable SC2 RNA/total no. (%)	COVID-19 patient room no. of specimens with detectable SC2 RNA/total no. (%)
High-touch surface	26/240 (10.8%)	246/760 (32.4%)
Bathroom	14/240 (5.8%)	106/567 (18.7%)
Floor	120/160 (75.0%)	444/574 (77.4%)

Figure 1. Proportion of environmental surface specimens with detectable SARS-CoV-2 RNA from a) staff common areas and b) nurse workstations of inpatient wards where coronavirus disease-19 patients received care at the Hospital of the University of Pennsylvania, 9/15/20-1/26/21.

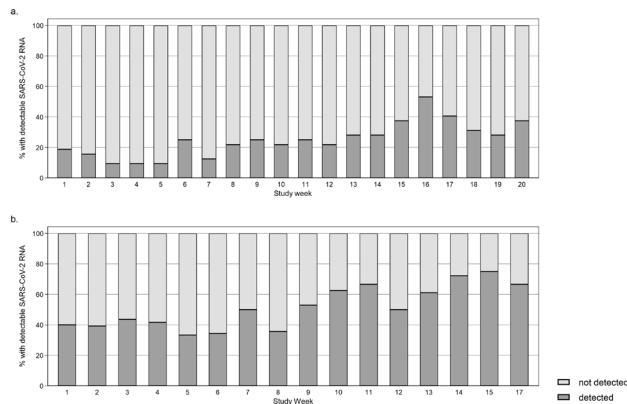
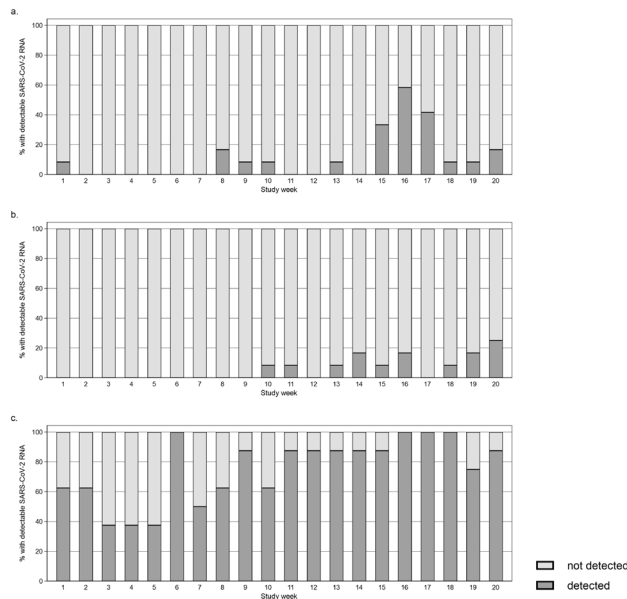


Figure 2. Proportion of environmental surface specimens with detectable SARS-CoV-2 RNA in staff common areas of inpatient wards where coronavirus disease-19 patients received care at the Hospital of the University of Pennsylvania, 9/15/20-1/26/21, by surface type: a) staff breakroom surfaces, b) staff bathroom surfaces, c) staff common area floors.



**Conclusion.** A low prevalence of detectable SC2 RNA was observed among staff area high-touch surfaces; however, the likelihood of detection increased over time. Environmental SC2 RNA detection may reflect primary contamination from infected healthcare workers or secondary contamination from contact with infected patients, though a direct relationship between surface SC2 RNA viral detection and transmission risk has not been established.

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#### 420. Emergency Nurses' Experiences over 1 Year of the COVID-19 Pandemic: A Qualitative Study

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