Table 2. Description of 3,140 COVID 19 Infections in Employees from 3/2020 to 4/2021

Variable	N (%)
Age	
18-25	405 (13.0)
26-35	1054 (33.8)
36-45	625 (20.0)
46-55	579 (18.6)
56-65	397 (12.7)
65+	59 (1.9)
Initial Symptoms*	
Congestion or Runny Nose	810 (25.8)
Headache	709 (22.6)
Cough	654 (20.8)
Muscle or Body Aches	533 (17.0)
Sore Throat	441 (14.0)
Fatigue	378 (12.0)
Fever or Chills	289 (9.2)
Other**	149 (4.7)
New Loss of Taste or Smell	139 (4.4)
Nausea or Vomiting	97(3.1)
Shortness of Breath or Difficulty Breathing	74 (2.4)
Diarrhea	57 (1.8)
Asymptomatic	269 (8.6)
Worked during infectious window	2538 (80.8)
Worked during pre-symptomatic window***	1397 (44.5)
Worked with symptoms	1141 (36.3)
Quarantined prior to symptom onset	219 (7.0)
Tested negative followed by a positive test	63 (2.0)
Severe disease	70 (2.2)
Reinfection	21 (0.7)
Attribution	
Community	1646 (52.4)
Unknown, likely community	129 (4.1)
Unknown	1057 (33.7)
Workplace	308 (9.8)
Workplace-patient	81 (2.6)
Workplace-employee	222 (7.1)
Workplace-visitor	5 (0.2)

*Initial symptoms included all symptoms that the employee reported on the first day of symptom onset, therefore making the denominator greater than 3,140 symptoms.

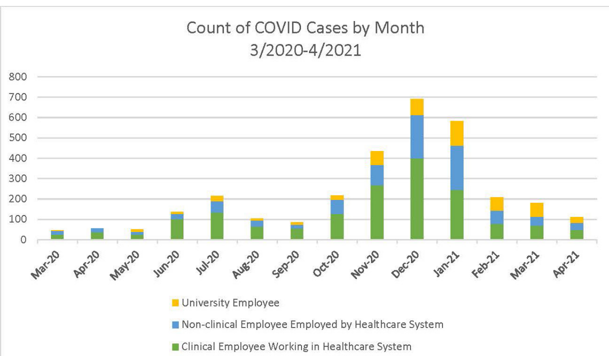
**Examples of "Other" symptoms include loss of appetite, night sweats, abdominal pain, dizziness

***Defined as 2 calendar days prior to the onset of symptoms

Methods. We prospectively tracked and traced COVID-19 infections among employees across our health system and university. Each employee with a confirmed positive test and 3 presumed positive cases were interviewed with a standard contact tracing template that included descriptive variables such as high-risk behaviors and contacts, dates worked while infectious, and initial symptoms. Using this information, the most likely location of infection acquisition was adjudicated (Table 1). We compared behavior frequency between community and unknown, likely community and community and unknown cases using descriptive statistics.

Table 3. Risk Factors for Community, Likely Community, and Unknown Cases

Risk Factor	Community N=1646	Unknown, Likely Community N=129	Unknown N=1057
Travel within 14 days	385 (23.4)	36 (27.9)	213 (20.2)
Masked gatherings (eg, church)	937 (56.9)	73 (56.6)	543 (51.4)
Unmasked gatherings/activities	745 (45.3)	61 (37.4)	395 (37.4)



Number of SARS-CoV-2 cases among employees between 3/2020 and 4/2021 by month and stratified according to clinical employee working in the healthcare system, non-clinical employee employed by the healthcare system, and university employee

Results. From 3/2020 to 4/2021 we identified 3,140 COVID-19 infections in 3,119 employees out of a total of 34,562 employees (9.0%) (Figure 1). Of those 3,119 employees 1,685 (54.0%) were clinical employees working in the health system, 916 (29.4%) were non-clinical employees working in the health system, and 518 (16.6%) were university employees. Descriptive characteristics for the COVID-19 infections and adjudications are outlined in Table 2. Severe disease among employees was significantly less frequent compared to patients in the health system (15.3% vs 2.2%, p< 0.01). The frequency of travel within 14 days, masked gatherings and unmasked gatherings/activities was not significantly different between the community and unknown, likely community groups or the community and unknown groups (Table 3).

Conclusion. The majority of COVID-19 infections were linked to acquisition in the community, and few were attributed to workplace exposures. Employees with unknown sources of COVID-19 participated in higher-risk activities at approximately the same frequency as employees with community sources of COVID-19. The most frequently reported initial symptoms were mild and non-specific and rarely included fever. Despite a comprehensive testing and benefit program, a large proportion of COVID-positive employees worked with symptoms, highlighting ongoing challenges with presenteeism in healthcare.

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

379. Abstract For Comparison of Mandatory vs Non-Mandatory Compliance Rates For SARS-CoV-2 Testing in Grades K-12

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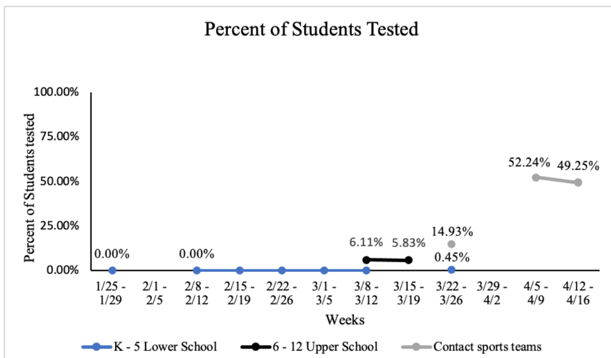
Session: P-16. COVID-19 Epidemiology and Screening

Background. Rapid testing to identify asymptomatically infected students with SARS-CoV-2 in elementary schools has been suggested as a possible method to reduce risk for in person instruction. As of August 3, 2020 (updated on January 25, 2021), California schools who obtained a waiver to conduct in-person instruction are not required to have mandatory testing for asymptomatic students, except for high contact sports which are required to undergo weekly testing. We explored the uptake of voluntary vs mandatory testing in a private waivered school.

Methods. Between the dates January 25, 2021 to April 16, 2021, the K-12 school superintendent sent an email to all parents outlining the voluntary testing program with a link to the on-line sign up and consent form. All students were offered weekly self-collected anterior nares BinaxNOW Rapid Antigen Test. Signed parental consent was required and tests were performed at the school. Students participating in contact sports were required to undergo testing the week a varsity game was played as a condition of participation. Data was gathered from the school administration and de-identified.

Results. K-5 Lower school had a school population of 448 students. Testing was offered on 8 weeks during the period of 2/15-2/19 to 4/5-4/9. 2 students (0.45%) receive screening on the week of 3/22-3/26. The other seven weeks when screening was offered 0 students received screening. 6-12 Upper school had a school population of 360 enrolled students. Testing was offered 3/8-3/12 and 3/15-3/19. The upper school had 22 students (6.11%) receive testing on the week of 3/8-3/12 and 21 students (5.83%) on the week of 3/15-3/19. Contact sports teams had 67 students on their roster. Weekly testing was offered from 3/22-3/26 to 4/12-4/16. Contact sports teams had 10 students (14.93%) receive testing on the week of 3/22-3/26, 33 students (52.24%) on the week of 4/5-4/9, and 32 students (49.25%) on the week of 4/12-4/16.

Figure 1. Percent of students from each campus and sports team screened per week offered.



Conclusion. Voluntary SARS-CoV-2 screening was not a feasible approach for detection of asymptomatically infected individuals due to low uptake, however in the same school, mandatory testing had high uptake and would be a feasible strategy.

Disclosures. **All Authors**: No reported disclosures

380. Environmental Contamination with SARS-CoV-2 in Nursing Homes

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Session: P-16. COVID-19 Epidemiology and Screening

Background. The COVID-19 pandemic has disproportionately affected nursing home (NH) patients, accounting for 5% of all cases and 32% of all COVID-19 deaths nationwide. Little is known about the frequency and persistence of SARS-CoV-2 environmental contamination in NHs. We characterize SARS-CoV-2 contamination in the rooms of COVID-19 patients and common areas in and around COVID-19 units.

Methods. A prospective cohort study was conducted at four NHs in Michigan between October 2020 and January 2021. Clinical research personnel obtained swab specimens from high-touch room surfaces of COVID-19 infected patients, up to three times per patient. Weekly swab specimens from six high-touch surfaces in common areas were also obtained. Demographic and clinical data were collected from patient clinical records. Our primary outcome of interest was the probability of SARS-CoV-2 detection from specific environmental surfaces in COVID-19 patient rooms.

Results. One hundred four patients with COVID-19 were enrolled and followed for 241 visits. Patient characteristics included: 61.5% over the age of 80; 67.3% female; 89.4% non-Hispanic white; 50.1% short-stay. The study population had significant disabilities in activities of daily living (ADL; 81.7% dependent in four or more ADLs) and comorbidities including dementia (55.8%), diabetes (40.4%) and heart failure (32.7) (Table 1). Over the 3-month study period, 2087 swab specimens were collected (1896 COVID-19 patient room surfaces, 191 common area swabs). Figure 1 shows contamination rates at sites proximate and distant to the patient bed. SARS-CoV-2 positivity was 28.4% (538/1896 swabs) on patient room surfaces and 3.7% (7/191 swabs) on common area surfaces. Over the course of follow-up, 89.4% (93/104) of patients had SARS-CoV-2 contamination in their room at least once (Figure 2). Environmental contamination detected on enrollment correlated with contamination of the same site during follow-up. Functional independence increased the odds of proximate contamination.

Table 1. Clinical and Demographic Characteristics of the Study Population Including Short- and Long-stay Patients

Characteristic	Total Population (N=104)	Short-stay patients (N=53)	Long-stay patients (N=51)	p-value
Age				
45-69	12 (11.5)	9 (17.0)	3 (5.9)	0.116[a]
70-79	28 (26.9)	17 (32.1)	11 (21.6)	
80-89	36 (34.6)	16 (30.2)	20 (39.2)	
Age >89	28 (26.9)	11 (20.8)	17 (33.3)	
Male sex	34 (32.7)	21 (39.6)	13 (25.5)	0.147[a]
Race				
Non-Hispanic white	93 (89.4)	50 (94.3)	43 (84.3)	0.125[a]
Non-white or Unknown	11 (10.6)	3 (5.7)	8 (15.7)	0.119[a]
BIMS score, mean (SD)[b]	10.6 (4.8)	10.2 (4.8)	11.2 (4.8)	0.280[c]
Activities of Daily Living[d]				
0 disabilities (Independent in all)	5 (4.8)	2 (3.8)	3 (5.9)	0.611[a]
1-3 disabilities	14 (13.5)	9 (17.0)	5 (9.8)	
4-6 disabilities	85 (81.7)	42 (79.3)	43 (84.3)	
Charlson Comorbidity Index score, median (IQR)	2 (1 – 3.5)	2 (1 – 4)	2 (1- 3)	0.756[c]
Comorbidities				
Dementia	58 (55.8)	21 (39.6)	37 (72.6)	**0.001[a]**
Diabetes	42 (40.4)	24 (45.3)	18 (35.3)	0.324[a]
CHF	34 (32.7)	19 (35.9)	15 (29.4)	0.535[a]
COPD	18 (17.3)	8 (15.7)	10 (18.9)	0.797[a]
In 30D prior to study period:				
Hospitalization *N=103; 1 patient missing data*	25 (24.3)	23/52 (44.2)	2/51 (3.9)	**<0.001[a]**
Antibiotic Use	31 (29.8)	25 (47.2)	6 (11.8)	**<0.001[a]**
Antiviral Use	5 (4.8)	5 (9.4)	0 (-)	0.057[a]
Indwelling Device *N=93; 11 patients missing data*	14 (15.1)	11/42 (26.2)	3/51 (5.9)	**0.008[a]**
Open Wound *N=94; 10 patients missing data*	12 (12.8)	7/44 (15.9)	5/50 (10.0)	0.538[a]
Days from first positive test to enrollment, mean (SD)	6.3 (4.3)	4.2 (3.9)	8.5 (3.7)	**<0.001[c]**
Discharge status:				
Still resides at facility	36 (34.6)	3 (5.7)	33 (64.7)	**<0.001[a]**
Community	32 (30.8)	32 (60.4)	0 (-)	
Acute-care hospital	21 (20.2)	12 (22.6)	9 (17.7)	
Deceased	14 (13.5)	5 (9.4)	9 (17.7)	
Another NH	1 (1.0)	1 (1.9)	0 (-)	
Room contamination on enrollment				
SARS-CoV-2 detected ≤3 feet from patient bed	58 (55.8)	34 (64.2)	24 (47.1)	0.114[a]
SARS-CoV-2 detected > 3 feet from patient bed	65 (62.5)	32 (60.4)	33 (64.7)	0.689[a]

[a] Significance evaluated using Fisher's exact test
[b] BIMS score evaluates cognitive impairment on a scale of 0-15: 0-7 indicates severe cognitive impairment; 8-12 indicates moderate impairment; 13-15 indicates intact cognitive response. The BIMS score was not collected for 27 (26.2%) study participants (5 short-stay, 22 long-stay) due to non-verbal or severe impairment.
[c] Significance evaluated using Wilcoxon rank-sum test
[d] Activities considered to assess independence include toileting, feeding, dressing, transferring, continence, and bathing

Figure 1. Contamination of Environmental Surfaces Relative to Distance from Patient Bed

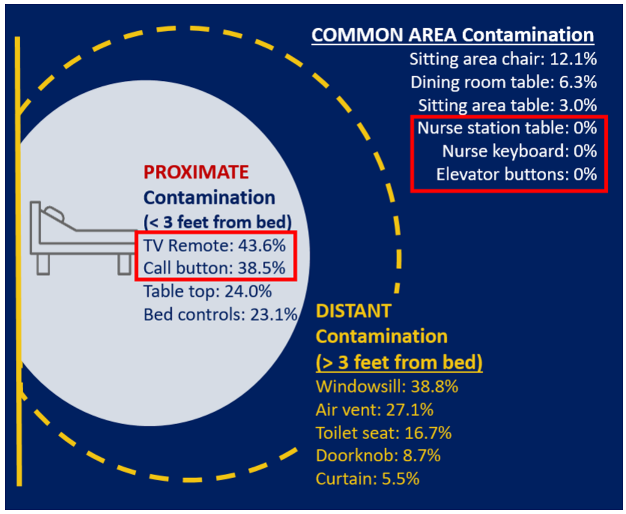
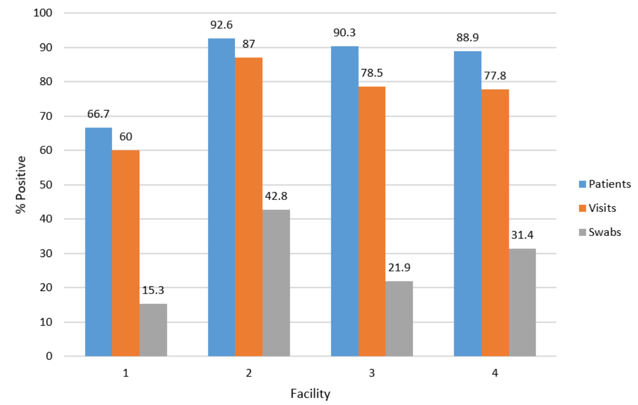


Figure 2. SARS-CoV-2 on Swab Specimens Collected – Patient-level, Visit-level, and Swab-level



Conclusion. We conclude that environmental contamination of surfaces in the rooms of COVID-19 patients is nearly universal and persistent. Patients with greater independence are more likely than fully dependent patients to contaminate their immediate environment.

Disclosures. **All Authors**: No reported disclosures

381. The Importance of Data Accuracy and Transparency for Policymaking During a Public Health Crisis: A Case Study in the State of Iowa

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Session: P-16. COVID-19 Epidemiology and Screening

Background. High-quality data are necessary for decision-making during the SARS-CoV-2 pandemic. Lack of transparency and accuracy in data reporting can erode public confidence, mislead policymakers, and endanger safety. Two major data errors in Iowa impacted critical state- and county-level decision-making.

Methods. The Iowa Department of Public Health (IDPH) publishes daily COVID-19 data. Authors independently tracked daily data from IDPH and other publicly available sources (i.e., county health departments, news media, and social