of school mode. Adjusted absolute differences in COVID-19 cases in counties with hybrid and traditional school opening modes relative to fully remote learning models are presented in Figure 2. In the Northeast and Midwest regions of the country, COVID-19 case rates were not statistically different between different school modes. However, in the South and West regions, there was a statistically significant increase in cases per week among counties that opened in an in-person relative to remote learning model, ranging from 17.1 (95% CI: 0.3-33.8) to 24.4 (95% CI: 7.3-41.5) in the South and from 19.0 (95% CI: 8.8-29.3) to 109.2 (95% CI: 50.4-168.0) in the West. There was no impact of school opening mode on COVID-19-related deaths.

Figure 1. Map with distribution of counties and school opening mode across the United States

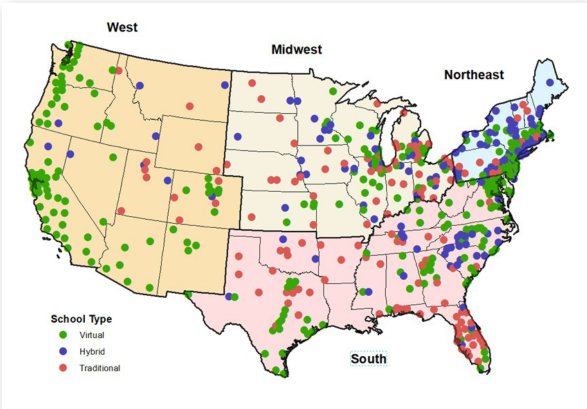
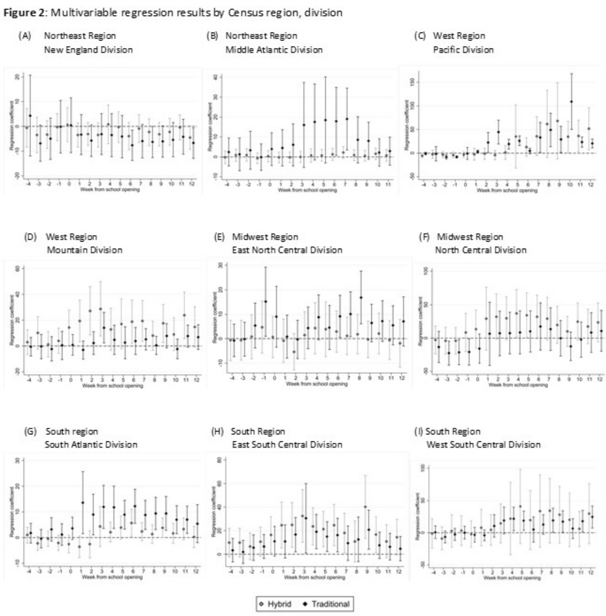


Figure 2. Impact of school opening mode on subsequent cases of SARS-CoV-2, stratified by region.



Conclusion. Impact of school mode on community case-rates of SARS-CoV-2 varied across the US. In some areas of the country, traditional school mode was associated with increases in case rates relative to virtual while there were no differences in other regions.

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

398. Multicenter Evaluation of Outcomes of SARS-CoV-2 Positive Patients Treated at Rural vs Urban Hospitals in the United States

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

Background. The SARS-CoV-2 pandemic has revealed socioeconomic and healthcare inequities in the US. With approximately 20% of the population living in rural areas, there are limitations to healthcare access due to economic constraints, geographical distances, and provider shortages. There is limited data evaluating outcomes associated with SARS-CoV-2 positive patients treated at rural vs. urban hospitals. The aim of the study was to evaluate characteristics and outcomes of SARS-CoV-2 positive patients treated at rural vs. urban hospitals in the US.

Methods. This was a multicenter, retrospective cohort analysis of adult (≥ 18 years) hospitalized patients from 241 US acute care facilities with >1 day inpatient admission with a discharge or death between 3/6/20-5/15/21 (BD Insights Research Database [Becton, Dickinson & Company, Franklin Lakes, NJ]), which includes both small and large hospitals in rural and urban areas. SARS-CoV-2 infection was identified by a positive PCR or antigen during or < 7 days prior to hospital admission. Descriptive statistics were completed. *P* value of ≤0.05 was considered statistically significant.

Results. Overall, 42 (17.4%) and 199 (82.6%) of hospitals were classified as rural and urban, respectively. A total of 304,073 patients were admitted to a rural hospital with 12,644 (4.2%) SARS-CoV-2 positive. In comparison, a total of 2,844,100 patients were treated at an urban hospital with 132,678 (4.7%) SARS-CoV-2 positive. Patients admitted to rural hospitals were older compared to those treated at an urban hospital (65.2 ± 17.3 vs. 61.5 ± 18.7, *P*=0.001) (Table 1). Patients treated at an urban facility had significantly higher rates of ICU admission, severe sepsis, and mechanical ventilation. ICU length of stay was significantly longer for patients admitted to an urban hospital compared to a rural hospital (8.1 ± 9.9 vs. 6.1 ±7.2 days, *P*=0.001) (Table 2). No difference in mortality was observed.

Table 1. Characteristics of SARS-CoV-2 positive patients treated at rural vs. urban hospitals.

	Rural (n=304,073 total admissions)	Urban (n=2,844,100 total admissions)	*P*
Characteristic			
SARS-CoV-2 positive, n (%)	12,644 (4.2)	132,678 (4.7)	<0.00001
Age, mean ± SD	65.2 ± 17.3	61.5 ± 18.7	0.0001
Male, n (%)	6,347 (50.2)	67,002 (50.5)	0.5224
Prior 90-day admission, n (%)	2,111 (16.7)	18,972 (14.3)	<0.00001
ICU admission, n (%)	2,377 (18.8)	28,322 (21.3)	<0.00001
Sepsis, n (%) (lactic acid > 2.0 mmol/L)	1,912 (15.1)	18,715 (14.1)	0.0017
Severe sepsis, n (%) (lactic acid > 4.0 mmol/L)	548 (28.7)	7,850 (41.9)	<0.00001
Mechanical ventilation, n (%)	531 (4.2)	8,756 (6.6)	<0.00001

Table 2. Outcomes of SARS-CoV-2 patients treated at rural vs. urban hospitals. *Patients with available data.

	Rural (n=304,073 total admissions)	Urban (n=2,844,100 total admissions)	*P*
SARS-CoV-2 positive, n (%)	12,644 (4.2)	132,678 (4.7)	
Outcome			
Hospital length of stay, mean ± SD (days)	8.0 ± 24.4	8.2 ± 14.0	0.1572
ICU LOS, mean ± SD	6.1 ±7.2	8.1 ± 9.9	0.0001
SARS-CoV-2 expired*, n (%)	775/7,521 (10.3)	9,415/87,177 (10.8)	0.1834

* Patients with available data.

Conclusion. In this large multicenter evaluation of hospitalized patients positive for SARS-CoV-2, there were significant differences in patient characteristics. There was no observed difference in mortality. These findings are important in evaluating the pandemic's impact on patients in rural and urban healthcare settings.

Disclosures. **Karri A. Bauer, PharmD**, **Merck & Co., Inc.** (Employee, Shareholder) **Kalvin Yu, MD, BD** (Employee) **Vikas Gupta, PharmD, BCPS, Becton, Dickinson and Company** (Employee, Shareholder) **Laura A. Puzniak, PhD**, **Merck & Co., Inc.** (Employee)

399. Epidemiology of Laboratory-identified Late-onset SARS-CoV-2 Positivity in Two Large, Urban, Acute-Care Hospitals: Implications for Surveillance of Hospital-Acquired COVID-19

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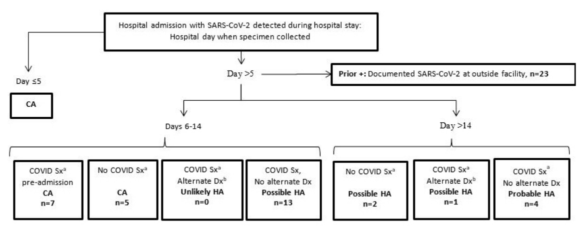
For the CDC Prevention Epicenters Program

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

Background. Laboratory identification (Lab-ID) of late-onset SARS-CoV-2 positive tests during a hospital stay is a potential public health surveillance approach for hospital-acquired COVID-19. However, prolonged RNA fragment shedding and intermittent detection of SARS-CoV-2 virus via PCR testing among infected patients may hamper interpretation of laboratory-identified events. We aimed to describe the epidemiology of late-onset SARS-CoV-2 laboratory events using clinical criteria, to evaluate the feasibility of a Lab-ID approach to detection of nosocomial SARS-COV-2 infection.

Methods. We evaluated all SARS-CoV-2 RT-PCR positive results recovered from patients at two acute-care hospitals in Chicago, IL, during March 1 — November 30, 2020. Each hospital maintained stringent infection control policies through-out the study period. Through chart review (WT & CS), we categorized all initial SARS-CoV-2 positive tests collected > Hospital Day 5 (defined as 'late-onset' based on the 5-day mean incubation period for COVID-19) into the following clinical categories: Community Acquired; Unlikely Hospital Acquired; Possible Hospital Acquired; and Probable Hospital Acquired. Categorizations were made using hospital day, symptoms, alternative diagnoses, and clinical notes (Figure 1).

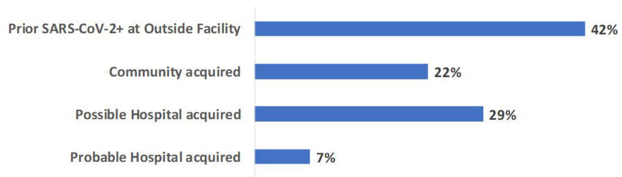
Figure 1. Flowchart for categorization of SARS-CoV-2 positive specimens acquired during an acute-care hospital stay, two hospitals, Chicago, IL.



Abbreviations: CA, Community acquired; Sx, symptoms; Dx, diagnosis; HA, Hospital-acquired.
Day 1 was the day of hospital admission.
[a]COVID symptoms:
a. New or worsening hypoxia accompanied by new symptoms
b. New or worsening dyspnea with pulmonary infiltrates
[b]Alternate Dx = an alternative diagnosis deemed as likely or more likely than COVID.

Results. Of 2,671 SARS-CoV-2-positive patients, most positive tests (n=2,551; 96%) were recovered pre-admit or by Hospital Day 2; first positive tests were uncommon during Hospital Days 6 to 14 (n=40; 1.5%); and rare after Hospital Day 14 (n=15; 0.6%). By chart review, of the 55 late-onset records reviewed, categorizations in descending order were: Prior positive at outside facility (n=23); Possible Hospital Acquired (n=16); Community Acquired (n=12); Probable Hospital Acquired (n=4). Less than half of the late-onset cases were categorized as a possible or probable hospital acquisition (Figure 2).

Figure 2. Categorization of Late-Onset SARS-CoV-2 Cases (N=55)



Conclusion. Hospital-acquired SARS-CoV-2 infection was uncommon. Most late-onset episodes of SARS-CoV-2 were explained by detection at an outside health-care facility or by delayed diagnosis of patients with symptoms at time of presentation. A Lab-ID approach to nosocomial COVID-19 surveillance would potentially misclassify a substantial number of patients.

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

400. Impact of SARS-CoV-2 Test-based Strategy to Reduce Quarantine Days Among Asymptomatic Healthcare Workers After Household Exposure

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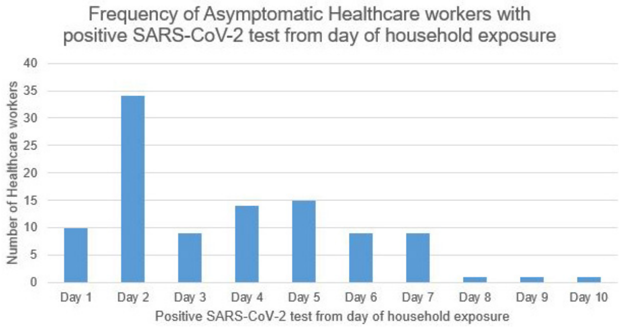
Session: P-16. COVID-19 Epidemiology and Screening

Background. Appropriate staffing is essential to provide safe patient care. During the COVID-19 pandemic, healthcare workers (HCWs) are missing work days due to illness or high-risk exposure (HRE) to an infected person. To avoid staffing shortages, we implemented a SARS-CoV-2 test-based strategy among asymptomatic HCWs after HRE to facilitate early return to work.

Methods. In July 2020, our institution implemented a SARS-CoV-2 RT-PCR test-based strategy among HCWs within 7 days of HRE. HCWs were defined as any paid or unpaid persons directly or indirectly involved in patient care. HRE was defined as close contact < 6 feet with an infected household member without use of mask and lasting for ≥ 15 minutes. Contact with a patient or coworker was not considered high-risk due to universal masking and eye protection use. HCWs underwent SARS-CoV-2 RT PCR testing of a nasopharyngeal swab at least once (1-2 days post-exposure) or twice (5-7 days post-exposure). HCWs with symptoms at baseline were excluded. HCWs who were asymptomatic during evaluation were considered as truly asymptomatic (TA). Saved work-days (SWD) were calculated based on number of days saved due to testing strategy compared to the Centers for Disease Control and Prevention's recommended 14-day quarantine. HCWs were allowed to return to work within 7 days of HRE if they tested negative, or after completing 10-day isolation period ± improvement in symptoms from symptom onset if they tested positive.

Results. Between 07/01/2020 to 12/31/2020, 450 unique asymptomatic HCWs underwent SARS-CoV-2 testing. Of those, 84% were women and median age was 36 years, 347 tested negative and 103 tested positive. Of those positives, 33% of HCWs tested positive on day 2 after HRE with 141 SWDs (average 2 days/person). Only 37% were TA positives. Of those negatives, 94% were TA SARS-CoV-2 negative with 2620 SWDs (average 7.5 days/person). There were no healthcare outbreaks related to HCWs allowed to return to work following this strategy.



Asymptomatic healthcare workers commonly tested positive for SARS-CoV-2 on day 2 from household exposure compared to other days

Conclusion. Test-based strategy among asymptomatic HCWs with HRE reduced loss of workdays and helped limit staffing shortages. Majority of positive HCWs developed symptoms after positive SARS-CoV-2 testing, which may support allowing most fully vaccinated HCWs with no COVID-like symptoms to continue to work unless symptomatic.

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

401. Natural History of Shedding and Household Transmission of Severe Acute Respiratory Syndrome Coronavirus 2 Using Intensive High-Resolution Sampling

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

Background. In order to mitigate the spread of SARS-CoV-2 and the COVID-19 pandemic, public health officials have recommended self-isolation, self-quarantine of exposed household contacts (HHC), and mask use to limit viral spread within households and communities. While household transmission of SARS-CoV-2 is common, risk factors for HHC transmission are poorly understood.

Methods. In this prospective cohort study, we enrolled 37 households with at least one reverse transcription polymerase chain reaction-confirmed (RT-PCR) COVID-19 index case from March 2020 - March 2021, in order to calculate secondary attack rates (SAR) and define risk factors for secondary infections. Participants were tested daily for SARS-CoV-2 via RT-PCR, using self-collected lower nasal samples. Households were followed until all members tested negative for seven consecutive days. We collected demographics, medical conditions, relationship to index case, and socioeconomic indicators. Subgroup data analysis was conducted and stratified by positivity status.

Results. Of 99 enrolled participants, 37 were index cases and 62 were household contacts (HHC), of whom 25 HHC were infected (40.3%). Secondary attack rate (SAR) was highest among adults caring for a parent (n=4/4, 100%) and parents of index cases (5/10, 50%). Households whose income came from service work had greater risk of transmission compared to households whose primary income was technology (n=5/7; 71.4% vs 3/8; 37.5% respectively). Pediatric contacts were at lower risk of infection when compared to adult contacts (n=5/18, 27.8% vs n=20/44, 45.5% respectively).

Conclusion. This study suggests that household transmission represents a key source of community-based infection of SARS-CoV-2. Allocating resources for education/training regarding prevention among infected individuals and their close contacts will be critical for control of future outbreaks of SARS-CoV-2.

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

402. COVID-19 Infection in Nepal: Epidemiological Analysis from April 2020 to March 2021

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Session: P-17. COVID-19 Global Response/Response in Low Resource Settings

Background. In December 2019, SARS-CoV-2 or coronavirus disease 2019 (COVID-19) emerged from Wuhan, China. A global pandemic quickly unfolded, infecting >137 million people and causing >2.9 million deaths globally as of April 13, 2021. Before April 1, 2020, there were only five confirmed COVID-19 cases in Nepal. Like many countries around the world, the COVID-19 situation quickly escalated in Nepal. The purpose of this study was to determine the trends in COVID-19 cases and deaths in Nepal from April 2020 to March 2021.

Methods. We utilized epidemiological data from daily Situation Reports published by the Ministry of Health and Population (MOHP) of Nepal. Data were