

Table 1. Characteristics of CLC Residents Screened for SARS-CoV-2, Stratified by Test Result and Clinical Symptoms

Characteristics	All (n = 9052)	Positive SARS-CoV-2 Test			Negative SARS-CoV-2 Test (n = 8325)
		Symptomatic COVID-19 Infection (n = 467)	Pre-symptomatic COVID-19 Infection (n = 88)	Asymptomatic COVID-19 Infection (n = 172)	
Male sex, No. (%) ^a	8701 (96%)	458 (98%)	85 (97%)	167 (97%)	7991 (96%)
Age, mean (± SD) ^a	74.6 (± 10.7)	75.6 (± 10.5)	76.4 (± 10.5)	75.3 (± 11.4)	74.5 (± 10.7)
Race					
White	6327 (70%)	283 (61%)	59 (67%)	119 (69%)	5866 (70%)
Black	2025 (22%)	152 (33%)	24 (27%)	39 (23%)	1810 (22%)
Other ^b	700 (8%)	32 (7%)	5 (5%)	14 (8%)	649 (8%)
Ethnicity					
non-Latino	5347 (91%)	419 (92%)	90 (95%)	161 (92%)	4677 (91%)
Latino	279 (5%)	30 (7%)	2 (2%)	8 (5%)	239 (5%)
Other ^c	226 (4%)	7 (2%)	3 (3%)	6 (3%)	210 (4%)
Charlson Comorbidity Index, mean (± SD) ^a	5.3 (± 3.4)	5.2 (± 3.4)	3.5 (± 2.1)	4.0 (± 2.8)	5.4 (± 3.4)

^aAll values written as No. (%) unless otherwise indicated

^bSD, standard deviation

^cFor Race includes American Indian, Alaska Native, Asian, Native Hawaiian or Pacific Islander and unknown; for Ethnicity includes unknown.

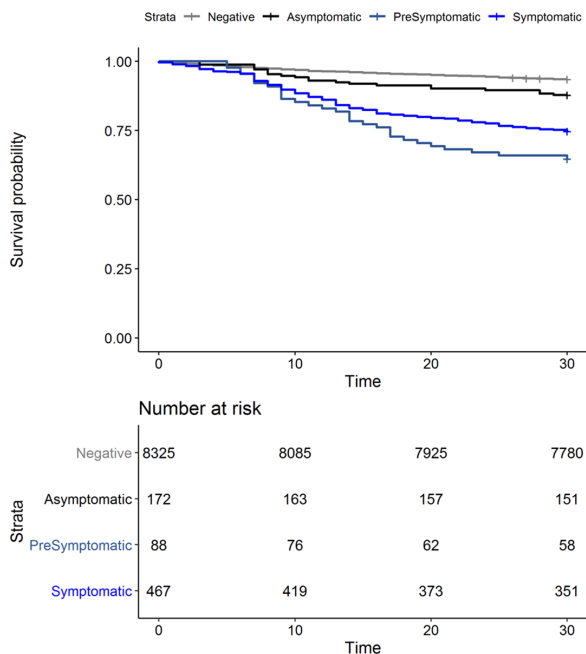


Figure 1.

asymptomatic SARS-CoV-2 infections. **Methods:** We conducted a national retrospective cohort study of CLC residents tested for COVID-19 between March 1 and July 31, 2020, based on data compiled through the VA COVID-19 shared data resource. Among those with a positive SARS-CoV-2 test, residents were considered symptomatic if they had experienced COVID-19 symptoms in the 30 days prior to the test. Residents were considered presymptomatic if they did not experience symptoms in the 30 days prior to testing and developed a fever (>38°C) or required supplemental oxygen within 14 and 60 days, respectively, following the test. Residents were considered asymptomatic in the absence of these pre- and posttest symptoms. **Results:** From March 1 to July 31, 2020, of 9,052 CLC residents screened for COVID-19, 8,325 (92%) tested negative (Table 1). Among 727 residents with positive tests, 467 (64%) were symptomatic, 88 (12%) were presymptomatic, and 172 (24%) remained asymptomatic. We observed significant differences in the racial makeup of these disease groups. Among CLC residents who were symptomatic or presymptomatic, 176 (32%) of 555 were black compared to 39 (23%) of 172 who were asymptomatic and 1,810 (22%) of 8,325 who tested negative for SAR-CoV-2. All-cause 30-day mortality rates for symptomatic and

presymptomatic residents were 25% and 34%, respectively, which exceeded the all-cause 30-day mortality of asymptomatic residents (12%) and residents with a negative test (6%) (Figure 1). **Conclusions:** More than one-third of CLC residents with COVID-19 were asymptomatic at the time of testing. This finding highlights the importance of vigilant infection prevention and control measures. Our finding that mortality among presymptomatic residents exceeded that of symptomatic residents raises consideration for enhancing supportive care measures, such as supplemental oxygen and mitigation of inflammatory reactions, as a means to reduce mortality among nursing home residents with presymptomatic SARS-CoV-2 infections.

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Poster Presentation

Subject Category: COVID-19

Impact of COVID-19 on Volume of Infection Prevention and Control Calls at a Tertiary-Care Center in Iowa, 2018–2020

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Background: The COVID-19 pandemic has affected healthcare systems worldwide, but the impact on infection prevention and control (IPC) programs has not been fully evaluated. We assessed the impact of the COVID-19 pandemic on IPC consultation requests. **Methods:** The University of Iowa Hospitals & Clinics comprises an 811-bed hospital that admits >36,000 patients yearly and >200 outpatient clinics. Questions about IPC can be addressed to the Program of Hospital Epidemiology via e-mail, in person, or through our phone line. We routinely record date and time, call source, reason for the call, and estimated time to resolve questions for all phone line requests. We defined calls during 2018–2019 as the pre-COVID-19 period and calls from January to December 2020 as the COVID-19 period. **Results:** In total, 6,564 calls were recorded from 2018 to 2020. In the pre-COVID-19 period (2018–2019), we received a median of 71 calls per month (range, 50–119). The most frequent call sources were inpatient units (n = 902; 50%), department of public health (n = 357; 20%), laboratory (n = 171; 9%), and outpatient clinics (n = 120; 7%) (Figure 1). The most common call topics were isolation and precautions (n = 606; 42%), outside institutions requests (n = 324; 22%), environmental and construction (n = 148; 10%), and infection exposures (n = 149;

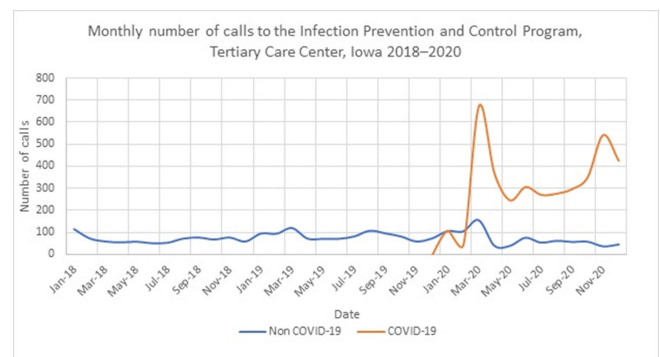


Figure 2.

10%). The most frequent infection-related calls were about tuberculosis (17%), gram-negative organisms (14%), and influenza (9%). During the COVID-19 period, the median monthly call volume increased 500% to 368 per month (range, 149–829). Most (83%) were COVID-19 related. The median monthly number of COVID-19 calls was 302 (range, 45–674). The median monthly number of non-COVID-19 calls decreased to 56 (range, 36–155). The most frequent call sources were inpatient units (57%), outpatient clinics (16%), and the department of public health (5%). Most calls concerned isolation and precautions (50%) and COVID-19 testing (20%). The mean time required to respond to each question was 10 minutes (range, 2–720). The biggest surges in calls during the COVID-19 period were at the beginning of the pandemic (March 2020) and during the hospital peak COVID-19 census (November 2020). **Conclusions:** In addition to supporting a proactive COVID-19 response, our IPC program experienced a 500% increase in consultation requests. Planning for future bioemergencies should include creative strategies to provide additional resources to increase response capacity within IPC programs.

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The Impact of Coronavirus Disease 2019 (COVID-19) Pandemic on Device-Associated Healthcare-Associated Infection

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Background: The impact of the coronavirus disease 2019 (COVID-19) pandemic on healthcare-associated infection (HAI) is not yet known. Diversion of resources from traditional HAI surveillance and prevention efforts toward institutional COVID-19 response, along with decrease in patient contact due to fear or required quarantine or isolation, may have increased HAI rates. In contrast, increased compliance with hand hygiene and personal protective equipment may have decreased HAI rates. **Methods:** We sought to determine the impact of COVID-19 pandemic on healthcare-associated central-line-associated bloodstream infection (CLABSI) and catheter-associated urinary tract infection (CAUTI). CLABSI and CAUTI rates and standardized infection ratios (SIRs) reported to the NHSN from the first quarter of 2015 to the fourth quarter of 2020 were obtained for the entire facility and for the medical intensive care unit (MICU), which was converted during the pandemic to an intensive care unit solely for critically ill patients with COVID-19. Changes in CLABSI and CAUTI rates and SIRs before the pandemic (Q1 2015 to Q4 2019) and during the pandemic (Q1 2020 to Q4 2020) were assessed using an independent-sample *t* test. **Results:** The CLABSI rate was unchanged, with a mean (SD) of 0.64 (± 0.34) CLABSIs per 1,000 central-line days before the pandemic and 0.72 (± 0.22) during the pandemic ($P = .62$) (Figure 1). The SIR remained stable

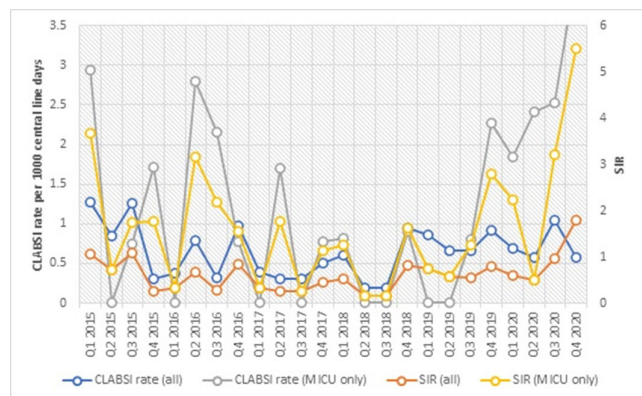


Figure 1.

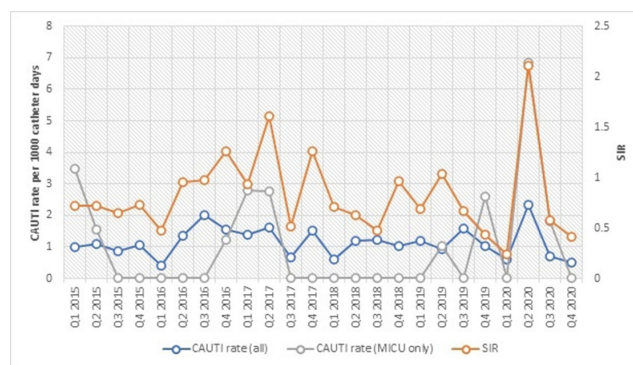


Figure 2.

at 0.54 (± 0.29) before and 0.96 (± 0.59) during the COVID-19 pandemic ($P = .25$). However, CLABSI rate in MICU increased significantly from 0.92 (± 1.00) to 2.75 (± 1.00) ($p < 0.01$), along with SIR from 0.81 \pm 0.89 to 2.53 \pm 1.07 ($p < 0.01$) (Figure 1). CAUTI rate was unchanged with 1.17 \pm 0.38 CAUTI per 1000 catheter days per quarter before, and 1.04 \pm 0.87 during COVID-19 pandemic ($p = 0.64$). CAUTI SIR remained stable at 0.82 \pm 0.31 before and 0.83 \pm 0.86 during COVID-19 pandemic ($p = 0.96$). CAUTI rate in MICU was 0.78 \pm 1.20 before and 2.17 \pm 3.24 after COVID-19 pandemic ($p = 0.45$) (Figure 2). **Conclusions:** Although our institutional CLABSI and CAUTI rates and SIRs remained unchanged, our medical intensive care unit, which housed our critically ill patients with COVID-19, experienced significant increases in CLABSI rate and SIR. This finding is likely multifactorial in the setting of overextended nursing staff, use of prone position, and challenges of infection prevention efforts under isolation precautions.

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The Impact of COVID-19 on Patient Safety: A Survey of Acute-Care Registered Nurses in New Jersey

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Background: As the world grapples with the pandemic of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), it is important to consider the full impact of coronavirus disease 2019 (COVID-19) on healthcare delivery. Evidence from outbreaks of novel H1N1 and Ebola indicates that response to these types of outbreaks requires extraordinary resources, which are diverted from routine infection prevention and control activities. However, little is known about the impact of COVID-19 on adherence to patient safety protocols in hospitals, including infection prevention and control activities. We have described the reports of acute-care registered nurses (RNs) in adhering to patient safety protocols while delivering care to COVID-19 patients. **Methods:** In October 2020, we conducted a cross-sectional electronic survey of all active RNs in the state of New Jersey who provided direct patient care in a New Jersey hospital in an emergency or adult inpatient unit during the onset of the COVID-19 pandemic. **Results:** More than 3,027 RNs participated in the survey, for a 15% response rate based on number of eligible RNs. Moreover, 15% of respondents reported that they tested positive for COVID-19 during the initial peak of COVID-19 in New Jersey (March–June 2020). Most RNs reported that the number of patients they were assigned during the first peak of the pandemic affected their ability to adhere to patient safety protocols (eg, deep-vein thrombosis screening, central-line bundles, pressure ulcer prevention). In open-ended responses, they shared that being understaffed, the extra time it took for donning and doffing of PPE, the lack of access to ancillary staff (ie nursing assistants,