

can be prepared for but not avoided. Health organizations and government agencies across the world must develop a disaster readiness mindset so that even though COVID-19 is mutating<sup>9</sup> and the looming possibility of future pandemics is constant,<sup>10</sup> the damage of these disasters can become better predicted, prevented, and controlled.

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# Coronavirus disease 2019 (COVID-19) era hospital infection controls reduce other serious infections and must be continued after the COVID-19 tragedy is resolved

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*To the Editor*—I read with great interest your 3 recent papers by Wong *et al*<sup>1</sup> Ponce-Alonso *et al*<sup>2</sup>, and Wee *et al*,<sup>3</sup> who report that coronavirus disease 2019 (COVID-19)–era infection control bundles are associated in significant decreases in many nosocomial viral and bacterial infection rates such as influenza, respiratory syncytial virus, adenovirus, and *Clostridium difficile*. The Ponce-Alonso Spanish study reported a decrease of 69% in hospital-acquired *Clostridium difficile* infection rates following implementation of a hospital infection control bundle: incidence density was 8.54 per 10,000 patients day before and 2.68 per 100,000 days after the COVID-19 infection control bundle ( $P = .000257^2$ ).

Other studies have also reported that COVID-19–era infection controls such as hand washing, masking and gowning, better hospital cleaning, and isolation of COVID-19 patients can significantly reduce rates of many bacterial and viral infections. A study in a 1,785-bed Singapore hospital reported that the use of COVID-19–related infection control bundles was associated with significantly reduced rates of many hospital-acquired infections, including nosocomial respiratory infections (incidence rate, 0.08; 95% CI, 0.05–0.13), nosocomial MRSA (IR, 0.54; 95% CI, 0.46–0.64), and central-line bloodstream infections (IR, 0.24; 95% CI,

0.07–0.57).<sup>4</sup> A California study involving 37,033 hospital patient days reported that following implementation of a COVID-19 infection control bundle, rates of many multidrug-resistant pathogens decreased significantly including a 41% decrease in methicillin-resistant *Staphylococcus aureus* (MRSA), a 21% decrease in (extended-spectrum  $\beta$ -lactamase bacteria (ESBL), and an 80% decrease in vancomycin-resistant enterococci (VRE).<sup>5</sup>

Better hospital infection control bundles can also reduce rates of common nosocomial fungal infections,<sup>6</sup> although I am not aware of any current studies that have reported on lower rates of *Aspergillus* or *Candida* in the COVID-19 era. Such studies of COVID-19–era nosocomial *Aspergillus* and *Candida* rates might yield useful data on how to prevent common life-threatening fungal infections.

Clearly, enhanced infection control procedures need to be followed long after the COVID-19 tragedy has resolved.<sup>7</sup> I hope that *Infection Control and Hospital Epidemiology* will continue to publish more good papers on COVID-19–era infection control.

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# The other ‘C’: Hospital-acquired *Clostridioides difficile* infection during the coronavirus disease 2019 (COVID-19) pandemic

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*To the Editor*—We read with interest the recent article by LeRose *et al.*<sup>1</sup> on the impact of coronavirus disease 2019 (COVID-19) on healthcare-associated infection. In contrast to their observations of increased central-line-associated infection and blood-culture contamination rates during the first wave of the COVID-19 pandemic, we observed a decrease in hospital-acquired *Clostridioides difficile* infection (HA-CDI) within our institution over this time, compared with the same period in previous years.

CDI is the leading cause of hospital-acquired infectious diarrhea. Risk factors include older age, comorbidities, and most notably, broad-spectrum antibiotic use.<sup>2</sup> High bed occupancy in acute-care hospitals correlates with an increased incidence of healthcare-associated CDI (HA-CDI).<sup>3</sup> The COVID-19 pandemic has caused significant changes within the healthcare system worldwide. In hospitals, the cessation of elective procedures in early March combined with an overall reduction in emergency presentations for non-COVID-19-related illnesses led to a reduction in hospital occupancy rates from March to May 2020.<sup>4</sup> Concern has been expressed that COVID-19 may impact CDI rates, especially in the elderly.<sup>5</sup> Older people with comorbidities are disproportionately affected by COVID-19.<sup>6</sup> Concurrent broad-spectrum antimicrobials to treat bacterial co-infection and super-infections in COVID-19 may also increase the risk of CDI.<sup>7</sup> Conversely, the increased focus on infection prevention and control may prevent cross transmission of *C. difficile*.

We hypothesized that the infection prevention and control measures implemented in our institution to prevent COVID-19

transmission would also influence HA-CDI. These measures included a hospital-wide transmission-based-precautions educational program, increased focus on hand hygiene compliance and audit, social distancing, and reduced ward occupancy.

Our institution is an adult tertiary-care referral center with >800 beds and 136 single rooms (77% with en suite facilities) and 12 airborne isolation rooms. Most accommodation is multi-occupancy; comprising 6-, 4- or 2-bed rooms and shared bathroom. We defined the first COVID-19 wave in our institution as March 1 to May 31, 2020. The first positive inpatient with COVID-19 was admitted on March 10, 2020. Daily on-site SARS-CoV-2 real-time polymerase chain reaction (PCR) testing commenced on March 16 for patients with suspected COVID-19 and for all admitted patients on April 19.<sup>8</sup> Daily onsite *C. difficile* laboratory testing continued without interruption during the first COVID-19 wave. This involves a 2-step protocol: testing for *C. difficile* toxin B gene *tcdB* by PCR and if positive, testing for *C. difficile* toxin. Positive results are reported by telephone daily by the clinical microbiologist, who also discusses relevance and recommended management plans. Patients are isolated with contact precautions, and on discharge, hydrogen peroxide decontamination of the area is performed prior to new patient admission.

Data on newly acquired HA-CDI from March 1 to May 31 were collected and compared to the same periods in 2018 and 2019. CDI data were extracted from the hospital CDI database. This database comprises CDI data, which are collected and validated prospectively, with assignment of CDI case type as outlined in national guidelines.<sup>9</sup> Patient demographics and biochemical markers were collected from the patient administration systems. Hospital antimicrobial consumption and hand hygiene audit data for the same periods were also collected. One-way ANOVA using Prism software (GraphPad, San Diego, CA) was employed to determine whether there was a statistically significant difference between

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