

Study shows best practices protect healthcare workers from COVID-19

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Health systems can protect healthcare workers during the COVID-19 outbreak when best practices for infection control are diligently applied along with lessons learned from recent outbreaks, according to a study

published today in *Infection Control & Hospital Epidemiology*, the journal of the Society for Healthcare Epidemiology of America.

Researchers from Queen Mary Hospital in Hong Kong reported that zero [healthcare workers](#) contracted COVID-19 and no hospital-acquired infections were identified after the first six weeks of the outbreak, even as the health system tested 1,275 suspected cases and treated 42 active confirmed cases of COVID-19. Eleven healthcare workers, out of 413 involved in treating confirmed cases, had unprotected exposure and were quarantined for 14 days. None became ill.

"Appropriate hospital infection control measures can prevent healthcare-associated transmission of the coronavirus," study authors said.

"Vigilance in hand-hygiene practice, wearing of surgical masks in the hospital, and appropriate use of personal protective equipment in [patient care](#), especially when performing aerosol-generating procedures, are the key infection control measures to prevent hospital transmission of the virus."

The researchers also conducted an experiment taking air samples from close to the mouth of a patient with a moderate level of viral load of coronavirus. The virus was not detected in any of the tests, whether the patient was breathing normally, breathing heavily, speaking or coughing, and tests of the objects around the room detected the virus in just one location, on a window bench.

"The descriptive study employed unique environmental and air samples with the results suggesting that environmental transmission may play less of a role than person to person transmission in disease propagation," said Gonzalo Bearman, MD, professor of medicine and chair of the Division of Infectious Disease at Virginia Commonwealth University, who reviewed but was not involved in the study.

When the first reports of a cluster of pneumonia cases came from Wuhan, Hong Kong's 43 [public hospitals](#) stepped up infection control measures by widening screening criteria to include factors like visits to hospitals in mainland China. When the [screening process](#) identified a patient infected with the coronavirus, the patient was immediately isolated in an airborne infection isolation room or, in a few cases, in a ward with at least a meter of space between patients.

Enhanced infection control measures were put in place in each hospital, including training on the use of personal protective equipment, staff forums on [infection control](#), face-to-face education sessions, and regular hand-hygiene compliance assessments. Hospitals also increased the use of personal protective equipment for healthcare workers performing aerosol generating procedures like endotracheal intubation or open suctioning for all patients, not just those with or at risk for COVID-19.

During the first six weeks of the outbreak, the number of locally acquired cases of COVID-19 in Hong Kong increased from 1 of 13 cases confirmed in the first 32 days of surveillance to 27 of 29 cases confirmed from day 33 to 42. Of the locally acquired cases, 28 came from eight family clusters with 11 cases likely transmitted during a gathering for "hot pot," where utensils contaminated with saliva were comingled in shared pots. This family included a 91-year-old woman and a child who both tested positive for the virus but did not display symptoms.

More information: Vincent C.C. Cheng et al, Escalating infection control response to the rapidly evolving epidemiology of the Coronavirus disease 2019 (COVID-19) due to SARS-CoV-2 in Hong Kong, *Infection Control & Hospital Epidemiology* (2020). [DOI: 10.1017/ice.2020.58](https://doi.org/10.1017/ice.2020.58)

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