

For immediate release

Researchers Warn That Contaminated Reusable Bronchoscopes Could Cause Secondary Infections and Higher Mortality Rates in COVID-19 Patients

As the coronavirus pandemic continues to spread, researchers have flagged a new potential threat: Patients and healthcare staff may be at risk of infection from contaminated bronchoscopes, the devices used to look inside patients' lungs. They warn that these devices, which are also used to obtain samples and wash out patients' lungs, could spread other microbes that may cause secondary infections.

The authors shared these views in a [newly released manuscript](#). The paper was published on April 2 in a special coronavirus edition of the journal *Infection Control & Hospital Epidemiology*.

Exposure to COVID-19 or other pathogens

It is not clear how often COVID-19 patients are receiving bronchoscopies. But it is not uncommon for patients with severe lung ailments to have this procedure, either for diagnosis or as part of their treatment.

"It is possible that contaminated bronchoscopes could infect COVID-19 patients with other infectious diseases," said Cori L. Ofstead, MSPH, one of the authors. *"It's also possible that contaminated devices could expose health care workers to the virus when they are cleaning and disinfecting them between patients. Given what we've learned about the overall level of bronchoscope contamination, we urgently need to know whether healthcare personnel are getting exposed to the virus or other pathogens on bronchoscopes due to the lack of PPE and other supplies."*

A possible solution

The authors note that sterile, disposable bronchoscopes would "substantially reduce the risks" to patients and hospital staff, and also point out that disposable devices are recommended by the American Association for Bronchology and Interventional Pulmonology. In addition, many tests for COVID-19 result in false negatives, while a bronchoscopy is the most accurate way to confirm that a patient has the virus, Ofstead states.

Ofstead and her colleagues, however, report that single-use bronchoscopes are not available everywhere, and also may not be effective for some bronchoscopy uses.

"This study adds to the mounting evidence that single-use bronchoscopes would be a better option for protecting patients and hospital staff from infection," said Juan Jose Gonzalez, CEO of Ambu A/S, a medical device maker that has pioneered single-use bronchoscopes.

Based on previous research

The manuscript was authored by Ofstead, Krystina M. Hopkins, MPH, Matthew J. Binnicker, PhD, and Gregory A. Poland, MD. Ofstead is an epidemiologist with 25 years of research experience. She has conducted studies of the risks associated with bronchoscope contamination. The results of her studies have been cited in guidelines published by the Centers for Disease Control and Prevention, The Joint Commission, and the Infectious Diseases Society of America. Poland is the director of the Vaccine Research Group at the Mayo Clinic and an expert in vaccine-preventable infections including pandemic influenza and coronaviruses.

The manuscript, which was independently funded, bases its views on the authors' previous research on bronchoscope contamination and vaccine-preventable infections. A 2018 study, which was peer-reviewed and published in [Chest Journal](#), looked at bronchoscope use at three U.S. hospitals and discovered microbial and fungal growth on 58% percent of the devices.

The manuscript notes that clinicians have reported that some COVID-19 patients are also suffering from other bacterial and fungal lung infections, and that patients with multiple infections tend to fare significantly worse. The fact that such

patients are especially vulnerable makes it even more important to ensure that bronchoscopes are not spreading such co-infections to COVID-19 patients, the authors say.

Reprocessing effectiveness

Currently, most bronchoscopes are reusable, and are cleaned and disinfected after each procedure. Ofstead and her colleagues argue that cleaning and disinfection are difficult to do properly and are often done incorrectly even under normal circumstances.

The authors acknowledge that reprocessing effectiveness has not been evaluated in epidemic settings and research is needed to confirm that COVID-19, influenza viruses, and other pathogens are eliminated in these settings.

“No patient should suffer from preventable nosocomial infections due to bronchoscopy,” Ofstead said. “Using bronchoscopes that have physical defects and harbor viruses, bacteria, or fungi puts vulnerable patients at risk and could have adverse effects on public health. Institutions are obligated to protect both patients and reprocessing personnel and ensure bronchoscope reprocessing practices adhere to guidelines and manufacturer instructions.”

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