

Measuring the risk among clinicians who intubate patients with COVID-19

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A team at the Perelman School of Medicine at the University of Pennsylvania launched the United States component of a global registry that aims to help protect health care providers who intubate patients with

COVID-19 and better quantify their risk of developing the disease. The intubateCOVID registry—established by a team in the United Kingdom—tracks exposures and outcomes among providers who perform intubations, with the ultimate goal of reducing the transmission of COVID-19 to these providers.

About one percent of patients with COVID-19—a respiratory illness caused by the novel [coronavirus](#), SARS-CoV-2—require mechanical ventilation to help keep their oxygen levels stable. In order to provide that support, [health care providers](#)—such as anesthesiologists, nurse anesthetists, and emergency or critical care physicians—first must place a breathing tube that can then be connected to a ventilator.

"Placing a breathing tube in patients with COVID-19 can pose a high risk to [health care workers](#), as it may expose them to aerosols and droplets from a patient's airways," said Mark Neuman, MD, the Horatio C. Wood Associate Professor of Anesthesiology at Penn and the national lead for intubateCOVID. "In order to inform and best protect clinicians performing these procedures, it's imperative we understand how participating in intubation procedures may be linked to an individual's risk of developing COVID-19."

Early data suggests front-line healthcare workers may have a higher incidence rate of COVID-19 than the general public. However, there's no large-scale data that quantifies whether people who perform specific procedures, like an intubation, have an even higher risk of developing the disease. The registry, which was launched by anesthesiologists at the London-based Guy's and St Thomas' NHS Foundation Trust, not only will help to answer this question, but will also address how specific techniques used or the type of personnel protective equipment (PPE) worn affects one's risk.

The registry is open to physicians and non-physicians who perform

airway management procedures, including certified registered nurse anesthetists and anesthesiologist assistants. Providers are encouraged to record every intubation they perform on patients with confirmed or suspected COVID-19. During each submission, providers can include specific details, such as the airway technique and the PPE used. Then, in the days and weeks following the procedures, participants can add any new symptoms they experience or—in some cases—a diagnosis of COVID-19.

So far, more than 2,000 providers across 500 hospitals worldwide have joined the global registry, with data on more than 1,550 intubations. Penn is the national coordinating center for the United States. In addition to the United States launch, IntubateCOVID has gone live in Australia, New Zealand, Ireland, Sweden, Germany, the Netherlands, South Africa, and Canada. Additional countries expected to launch the coming days and weeks.

"Our goal is to rapidly capture and analyze large-scale data to identify whether these providers are at an elevated risk and, if so, whether the use of specific techniques or PPE helps to reduce that risk," Neuman said.

Provided by Perelman School of Medicine at the University of Pennsylvania

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