

When ventilators aren't enough

May 5 2020, by Ellen Goldbaum



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Ventilators may be among the best-known types of lifesaving medical equipment that the sickest COVID-19 patients need. But for a small number within that critically ill population, even ventilators are not enough. Those patients, about 10% of COVID-19 patients in intensive care units, will require life support machines that temporarily function as

their heart and lungs.

Omar Alibrahim, MD, clinical associate professor in the Department of Pediatrics in the Jacobs School of Medicine and Biomedical Sciences at the University at Buffalo, an expert in this level of care, is a co-author on the international COVID-19 guidelines for patients who will need to go on life support machines during their course of treatment.

Those [guidelines](#) were published recently by the Extracorporeal Life Support Organization, which establishes global standards for this level of critical care; they were also published in the Journal of the American Society of Artificial Internal Organs.

As chief of the Division of Critical Care in the Department of Pediatrics at the Jacobs School, Alibrahim is responsible for life support equipment, also known as Extracorporeal Membrane Oxygenation (ECMO). He is medical director of the [intensive care unit](#) of the John R. Oishei Children's Hospital of Buffalo, and its national award-winning ECMO program; he also is a physician with UBMD Pediatrics.

"These machines act as the heart and lungs of these patients," explained Alibrahim. He was involved with developing some of the criteria for the COVID-19 guidelines for ECMO, especially how pediatric intensive care units can work with and support adult needs for life support [machines](#), while also serving the needs of pediatric patients.

"The focus of my input to the COVID-19 guidelines was to determine how to strike a balance between being helpful and collaborative to support what is needed for adult patients, while also not depriving our pediatric patients," he said. "The goal was to give clear guidelines for the best way to organize ECMO resources, locally, regionally and nationally.

"Sometimes a ventilator is not enough," Alibrahim explained. "As their

hearts and lungs weaken, some of these patients will need more support in order to survive. That is when ECMO initiation comes in."

Provided by University at Buffalo

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