

Study seeks to optimize comfort for patients removed from ventilators at end of life

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A paper recently published online in the journal *Chest* reports on a study of the palliative ventilator withdrawal (PVW) procedure performed in intensive care units (ICU) at end of life. The study's goal was to determine the level of distress patients experience and identify treatments that could bring relief. Findings show that up to one-third of PVW patients experience an episode of rapid breathing called tachypnea as a marker of distress, and administration of opiates before PVW could help with symptom control. Corey Fehnel, M.D., M.P.H., a palliative care researcher in the Hinda and Arthur Marcus Institute for Aging Research at Hebrew SeniorLife, and Assistant Professor of Neurology at Harvard Medical School, is lead author on the paper.

On average, nearly one in five Americans will die in an ICU each year, and many of these deaths occur after the decision has been made to extubate and move from curative- to comfort-focused care. Although numerous professional societies and [patient groups](#) have advocated for improved management of ventilated ICU patients transitioning to palliative care, the process of PVW and the discomfort that patients experience has remained understudied. As a result, the practice varies widely across ICUs, and little is known about the indicators of patient distress and how to better control symptoms.

Monitoring symptoms of distress among hospitalized COVID-19 patients at end of life presents even more of a challenge. COVID-19 patients who are intubated on [mechanical ventilation](#) require providers to observe special aerosolized droplet isolation precautions. They must

wear N95 masks, face shields, hats, gowns, and run HEPA filters in the room when opening the "circuit" to the ventilator or performing procedures, including extubation. These precautions make it difficult for critically ill patients to use non-verbal cues as a means of communication with their care providers.

In addition, patients are physically isolated with similar patients, and providers try to limit the number of times they enter the patient's room to prevent transmission of the virus. But most importantly, families are not allowed in the hospital to be with these patients during extubation, and they are an important part of easing patient distress and assuring patient comfort at end of life. Taken all together, the combined effect is a perfect storm of barriers to effective symptom assessment for these patients.

"We fervently hope that all patients will be comfortable at end of life in the ICU but unfortunately some people experience discomfort, and we identified one tactic to alleviate that distress," said Dr. Fehnel. "The results of this study, which point to administration of opiates before PVW and in anticipation of [distress](#), could help with symptom control and can be readily applied to COVID-19 and all critically ill patients during this time of great need."

More information: Corey R. Fehnel et al, Incidence and risk model development for severe tachypnea following terminal extubation, *Chest* (2020). [DOI: 10.1016/j.chest.2020.04.027](https://doi.org/10.1016/j.chest.2020.04.027)

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