Essay provides context to debate over use of mechanical ventilation for COVID-19

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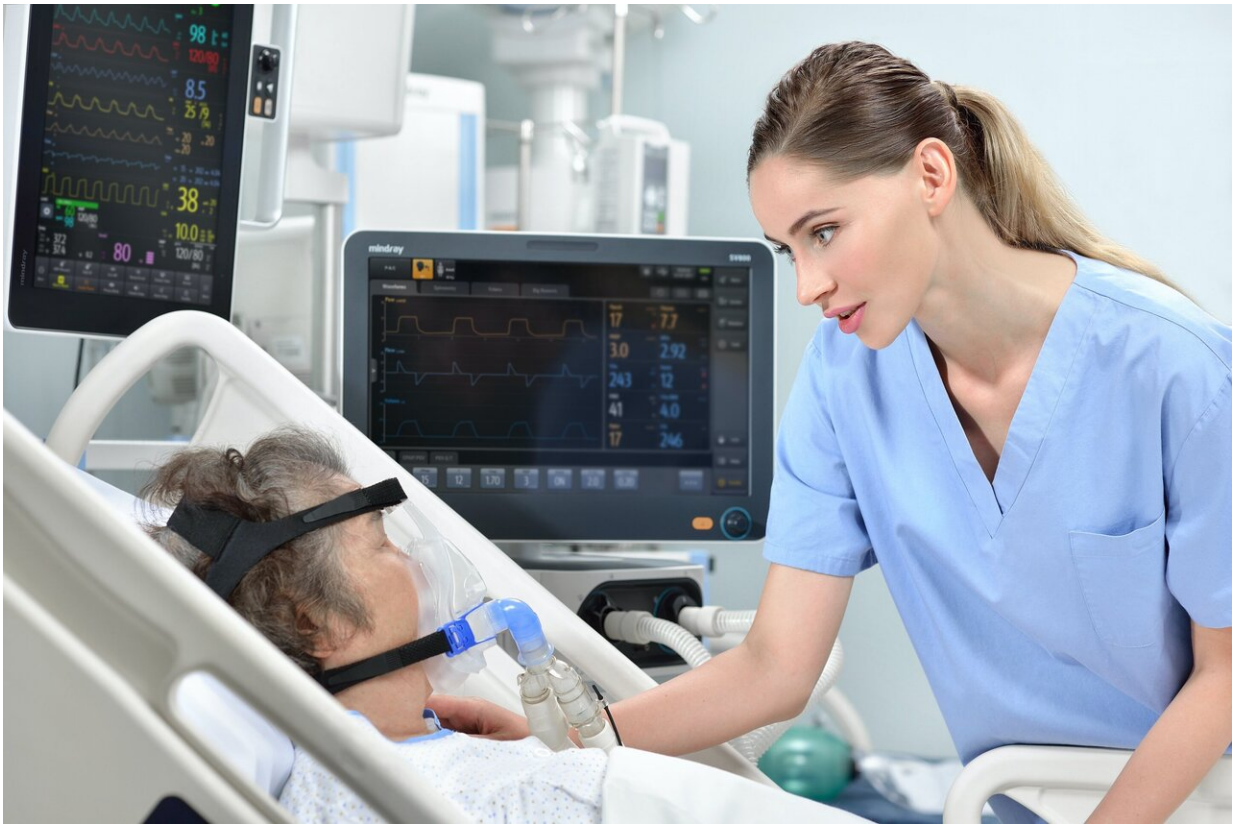

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An essay from Harvard University provides context to the debate over mechanical ventilation for COVID-19 patients. The author argues that the good-faith debate that broke out over acute respiratory distress

syndrome, or ARDS, and Covid-19 at the beginning of the pandemic was the product of increasing dependence on high technologies in the hospital. By learning the history of these technologies, clinicians can understand how diagnoses and treatments came to be, and what unhelpful, questionable, or obsolete assumptions those technologies carry with them. The essay is published in *Annals of Internal Medicine*.

The value of manual positive-pressure ventilation was first noted during the polio epidemic of 1952. This treatment dramatically improved mortality rates and paved the way for widespread use of mechanical ventilators and the expansion of intensive care units over the next decade and beyond. While ventilators aided healing in patients with some conditions, they also contributed to the emergence of ARDS as it is recognized and treated today.

By the 1980s, several researchers began to argue for the existence of a phenomenon known as ventilator-induced lung injury (VILI), which seemed to be an inevitable consequence of the treatment. If the ventilator had brought ARDS into existence, it had done the same for ventilator-induced lung injury. In the early 1990s, the formal definition of ARDS was revised to begin clinical trials of ventilatory strategies to avoid VILI. Of note, the new definition—which emphasized O2 levels—may have encouraged early intubation of COVID-19 patients, despite still having compliant, flexible lungs, likely making ventilation a poor treatment choice.

While historical knowledge does not settle the debate, it may provide valuable clinical context. The author suggests that this awareness might help scientists take a fresh look at this perplexing syndrome and encourage a more open-minded and less defensive discussion.

More information: *Annals of Internal Medicine* (2021). https://www.acpjournals.org/doi/10.7326/M21-0270

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