Opinion

What You Should Know Before You Need a Ventilator

It breaks my heart that patients who will get sick enough to need them won't know what desperate situations they face.

By Kathryn Dreger
Dr. Dreger is a doctor of internal medicine in Northern Virginia and a clinical assistant professor of medicine at Georgetown University.

- April 4, 2020

A ventilator at the New York City Emergency Management Warehouse before being shipped out for distribution.Credit...Caitlin Ochs/Reuters

Day by day, as the number of Covid-19 deaths soar, we see more clearly that many of us will not survive this storm.

In the most serious cases, breathing becomes so labored that ventilators have to be used to keep patients alive. That there may not be enough of these machines is horrifying and infuriating.

But even if there were, it breaks my heart that Americans who get sick enough to need them won't know what desperate situations they face, nor will they understand what ventilators can do to help, and what they can never fix.

As hard as the facts may be, knowledge will make us less afraid.

Let me begin simply. When we take a breath, we pull air through our windpipe, the trachea. This pipe then branches in two, then again into smaller and smaller pipes finally ending in tiny tubes less than a millimeter across called bronchioles. At the very end of each are clusters of microscopic sacs called alveoli.

The lining of each sac is so thin that air floats through them into the red blood cells. These millions of alveoli are so soft, so gentle, that a healthy lung has almost no substance. Touching it feels like reaching into a bowl of whipped cream.

Covid-19 changes all that.

It causes a gummy yellow fluid, called exudate, to fill the air sacs, stopping the free flow of oxygen. If only a few air sacs are filled, the rest of the lung takes over. When more and more alveoli are filled, the lung texture changes, beginning to feel more like a marshmallow than whipped cream.

This terrible disease is called acute respiratory distress syndrome. Covid-19 can cause an incredibly lethal form of this, in which oxygen levels plunge and breathing becomes impossible without a ventilator.

Specially trained health care workers insert a 10-inch-long tube connected to a ventilator through the mouth and into the windpipe. The ventilator delivers more oxygen into the lungs at pressure high enough to open up the stiffened lungs.

It's called life support for a reason; it buys us time. Ventilators keep oxygen going to the brain, the heart and the kidneys. All while we hope the infection will ease, and the lungs will begin to improve.

These machines can't fix the terrible damage the virus is causing, and if the virus erupts, the lungs will get even stiffer, as hard as a stale marshmallow.

"I feel like I'm trying to ventilate bricks instead of lungs," one intensive care unit doctor who has been treating Covid-19 patients told me.

The heart begins to struggle, begins to fail. Blood pressure readings plummet, a condition called shock. For some, the kidneys fail completely, which means a dialysis machine is also needed to survive.

Doctors are left with impossible choices. Too much oxygen poisons the air sacs, worsening the lung damage, but too little damages the brain and kidneys. Too much air pressure damages the lung, but too little means the oxygen can't get in. Doctors try to optimize, to tweak.

Nobody can tolerate being ventilated like this without sedation. Covid-19 patients are put into a medically induced coma before being placed on a ventilator. They do not suffer, but they cannot talk to us and they cannot tell us how much of this care they want.

Eventually, all the efforts of health care workers may not be enough, and the body begins to collapse. No matter how loved, how vital or how needed a person is, even the most modern technology isn't always enough. Death, while typically painless, is no less final.

Even among the Covid-19 patients who are ventilated and then discharged from the intensive care unit, some have died within days from heart damage.

Even before Covid-19, for those lucky enough to leave the hospital alive after suffering acute respiratory distress syndrome, recovery can take months or years. The amount of sedation needed for Covid 19 patients can cause profound complications, damaging muscles and nerves, making it hard for those who survive to walk, move or even think as well as they did before they became ill. Many spend most of their recovery time in a rehabilitation center, and older patients often never go home. They live out their days bed bound, at higher risk of recurrent infections, bed sores and trips back to the hospital.

All this does not mean we shouldn't use ventilators to try to save people. It just means we have to ask ourselves some serious questions: What do I value about my life? If I will die if I am not put in a medical coma and placed on a ventilator, do I want that life support? If I do choose to be placed on a ventilator, how far do I want to go? Do I want to continue on the machine if my kidneys shut down? Do I want tubes feeding me so I can stay on the ventilator for weeks?

Right now, all over the country, patients and their families are being asked to make these difficult decisions at a moment's notice, while they are on the verge of dying, breathless and terrified.

If patients get worse after being put on a ventilator, critical care doctors are having to ask their family members what they want done. Covid-19 is too contagious to have these conversations in person, so they are being done over the phone. It is yet another heartbreaking reality of dying during a pandemic. Patients cannot tell us what they want. Family members aren't able to be with patients and may not know what they would want.

No one can make these choices for us, and no one will know what choices we would make unless we tell them. If you don't want to be put in a coma and placed on life support, please let your family know. Appoint the person you want to make decisions for you and let your doctor know your wishes. The truth is we are facing a disaster. Let's not use up precious resources on someone who doesn't want them. We will still care for you to the end, but we won't put you on a machine if you don't want to be on it.

If the person you love is on a ventilator right now, find out exactly how bad his or her lungs are. The doctors will tell you the truth. And the truth, no matter how painful, eases fear. The understanding that comes with it helps us make the best choices for the ones we love.

The New York Times Opinion section