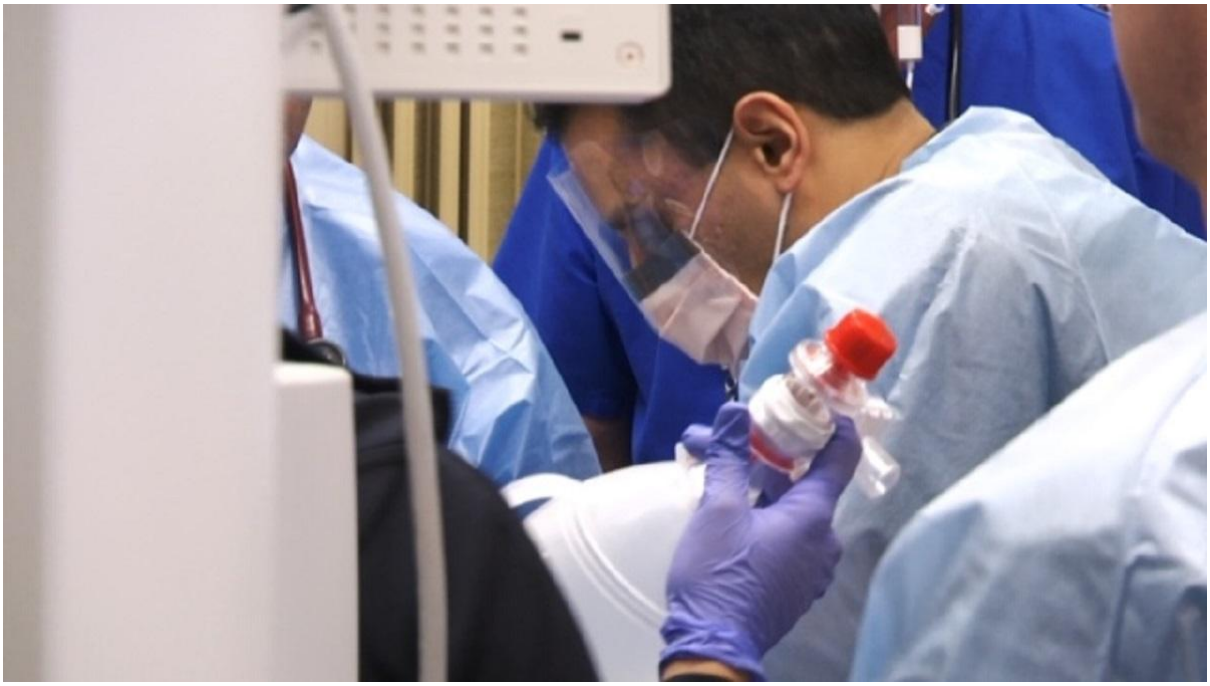
Dr. Sudip Bose: Ethics, Coronavirus, and the Triage Decision: Who Gets the Ventilator?



This is a guest blog post authored by Dr. Sudip Bose, Leading Emergency Physician, Media Health Correspondent, and Former Army Physician.

The shortage of ventilators is forcing hospitals to make excruciatingly difficult decisions about who lives and who dies in areas hardest hit by the coronavirus.

Hospitals in New York City are facing the same grim reality that doctors in northern Italy have confronted for several weeks – continuing ventilation for patients who are unlikely to survive means denying ventilators to patients who still have a chance of beating the virus.

As the coronavirus spreads across the nation, it's a near certainty that more and more hospitals will run short of ventilators and will have to – and I hate to use this word – triage available resources.

I'm an emergency room doctor in Odessa, TX, a medium sized city in a metropolitan area of about 250,000 people. Like our counterparts in much larger cities, we're preparing for an influx of coronavirus cases and the strong possibility that we will have to remove lifesaving care away from some patients in favor of others.

We're figuring out how to expand bed capacity, segregate coronavirus patients to minimize contagion, and draft doctors from other specialties to treat coronavirus sufferers. But by far, our number one concern is not having enough ventilators.

Severely ill coronavirus patients often require two to three weeks of mechanical ventilation and then a very slow weaning process before they can breathe normally. If we're overrun by patients, we simply won't have enough ventilator capacity.

U.S. hospitals have about 162,000 ventilators. There's an additional 12,700 in the federal strategic stockpile and perhaps another 2,000 at the Defense Department. With Center for Disease Control estimating that coronavirus hospitalizations could range from 2.4 million to 21 million people, the potential ventilator shortfall is frightening.

Ethical Choices

As a physician in the Iraq War, I often confronted battlefield situations with multiple casualties. Medical training prescribed my response: first, focus on those who were wounded most severely and required immediate care to survive and, second, treat those who were badly hurt and in great pain, but were not in danger of dying.

The most heartbreaking decisions I had to make was when I encountered unconscious patients who were close to death. With dozens of others who could be saved desperate for medical attention, I had to let go of the dying patients. It was an awful feeling – but it was the right decision.

I'm afraid our hospital teams will be facing similar decisions in the days and weeks ahead as we wrestle with when to remove a ventilator from an elderly patient in critical condition and who appears to have little chance of surviving.

On the battlefield, I made these types of triage decisions on my own. As a civilian doctor, I will be making these decisions in consultation with other physicians as we compare notes on our various patients and – in essence – create a list of patients who are most likely to live and those most likely to die.

Deciding who lives or dies is complex moral calculation. Medical ethicists look to three philosophical approaches to inform their decision-making process:

Utilitarianism: What action will produce the greatest good for the greatest number? To a large degree, this is how I operated on the battlefield -- let the dying go and treat those who I can save. I believe the same approach – putting survivability first -- should guide how we treat coronavirus patients.

Egalitarianism: When there are many people who stand to receive the same benefit from a particular treatment, how do you prioritize? In other words, if you have one ventilator and five people with equal survivability chances, who gets the ventilator? Egalitarianism would suggest you choose randomly – not on the basis, of social standing, wealth, or even who is the best person. An example would be selecting patients alphabetically or by their month of birth.

Social worth: In the situation outlined above, you would choose who gets the ventilator based on some calculation of the patients' contribution to society, age, family status, or other criteria. Obviously, these are subjective decisions and extremely tough calls for everyone concerned. The best we can do is agree on the criteria.

Getting More Ventilators

To reduce the necessity of making these difficult moral decisions, our hospital is scrambling to find more ventilators and to modify other respiratory devices to assist coronavirus patients who struggling for breath. Options include:

Nasal cannula: Used to deliver supplemental oxygen through the nose, this device can help coronavirus patients whose lung efficiency has dropped but who still can breathe on their own.

CPAP machines: Continuous Positive Airway Pressure (CPAP), auto-CPAP, and bilevel positive airway pressure (BiPAP or BPAP) ventilators are used for the treatment of sleep apnea. While precautions must be taken to prevent the release of virus particles into air, the FDA has authorized re-calibrating these machines for coronavirus treatments.

Mechanical ventilator machines: We're exploring how to adjust these machines with tubing that is inserted to treat multiple patients with one device. It's critical that the tubing is long enough to keep a safe distance between patients and that each patient receives sufficient oxygen.

In certain situations, it may be appropriate to recruit family members to assist with a bag valve mask, which is a hand-held device that uses manual pressure on an air bag to help patients breathe. Family members can take turns squeezing the bag of air, essentially functioning as a mechanical ventilator. The bagging device should include a PEEP valve to diminish the risk of lung injury and a detection system that alerts hospital staff if the family member falls asleep.

Backup ventilators: Patients with chronic respiratory issues in nursing homes, hospice, and even in private residences sometimes have more than one ventilator. We're determining if it might be safe to borrow backup machines to assist coronavirus patients.

Animal ventilators: Similarly, we're asking animal hospitals and veterinary schools if we can borrow their ventilators. Typically, the ventilators used for animals are the same as ventilators used for humans.

Institutional Support

We hope that procuring more ventilators and modifying other machines to help patients breathe will save lives. Nonetheless, we strongly suspect we won't have enough equipment for everyone and will be forced to make difficult ethical decisions.

To help doctors with these challenges, some hospitals have appointed triage officers or committees of experienced doctors and ethicists to develop and apply guidelines for care-rationing. By taking these decisions out of the hands of front-line line clinicians, those doctors will be able to concentrate exclusively on patient care.

My experience in the Iraq War is that most people rise to the occasion in life or death situations. The professionals at my hospital and I'm sure at other hospitals in the U.S. will do everything they can to save the most lives possible – even if that requires making some of the hardest decisions of their lives.

A global expert on emergency medicine and mass casualty protocols, Dr. Bose serves as City EMS Medical Director in Odessa, Texas with his current focus on treating patients in the emergency room and helping his city prepare and withstand unprecedented global health events. His medical technology company liveClinic.com is currently launching a no-cost, nation-wide Virtual Field Clinic to combat the COVID-19 pandemic. Prior to his work as Odessa's Medical Director, Dr. Bose served one of the longest military combat tours by a physician since World War II.

To learn more about Dr. Sudip Bose, visit his speaker page, call us at 1-800-Speaker, or chat with a sales representative now.

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