LETTER TO THE EDITOR

Training and Delivery of Critical Care Medicine in India: Concerns Revealed by COVID-19 Pandemic

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Sir,

We read with great interest the critical care considerations regarding corona virus disease 19 (COVID-19) in the position statement of the Indian Society of Critical Care Medicine (ISCCM) by Mehta et al. and in the special article published in *Indian Journal of Anaesthesia* by Bajwa et al.[1,2] The COVID-19 pandemic has affected more than 3,000,000 individuals and consumed 210,000 lives, as of end-April.[3] As intensivists, we note with concern the worldwide shortage, including in India, of intensive care delivery, which is required in 3–10% of COVID-19 cases.[1,2] Unfortunately, by burdening an overstretched public healthcare system, this crisis has also brought forth concerns about the training and delivery of critical care medicine (CCM) across India.

Bajwa et al. note, "The financial considerations for current ICU models running in India to meet international standards in terms of quality assurance and workforce are humongous …." Herein, the latter have highlighted the crucial paradigm of a trained intensive care unit (ICU) workforce being as necessary as their apparatus. The latter includes, but is not only limited to, the number of ventilators, a figure on which public thought has remained fixated. While recent estimates suggest India has around 40,000 ventilators, many times the available number is projected to be required by mid-May.[4] However, India has a far fewer number of trained intensivists to utilize ventilators and other technical equipment in order to provide appropriate care for COVID-19 patients.

In this regard, applying the principles of surge capacity would be pertinent. Surge capacity is a framework derived from emergency medicine, having four "S's", namely, stuff, structure, staff, and system.[5] Till now, for COVID-19, administrative action has focused upon stuff and structure, which have included testing kits, personal protective equipment, ventilators, etc. Some thought has also been given to staff, considering the short-term CCM training being imparted in certain hospitals across the country. However, little attention has been paid to system, which includes processes and policies for integrated management. We must urgently develop systems for managing COVID-19 cases across India in a standard-of-care manner, along with systems for handling all such the future crises.

As of 2020, considering the 3-year government-recognized CCM training programs, the country merely has 20 seats of doctorate of medicine and 225 seats of Diplomate of National Board, courses that were started only in 2012 and 2019, respectively.[6] While there are 1- and 2-year courses such as Indian diploma in critical care medicine and postdoctoral certificate course, neither of them is recognized by the Medical Council of India. They are also significantly shorter than the required CCM training in developed countries, such as the 6-year and 5-year training pathways in Australia and the United Kingdom, respectively.[7,8]

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One must consider this in the light of the fact that many seats remain empty in CCM courses, unlike some medical superspecialties, such as cardiology, where students, anecdotally, attempt for years to get in. For a nation of 1.3 billion individuals, we have produced, till now, a grossly insufficient number of intensivists, considering that COVID-19 is estimated to spread to around 55% of the population.[9]

We see the current crisis as an opportunity to highlight the variation in the basic ICU care offered and the subsequent heterogeneity in CCM training nationwide. As an ideal long-term solution, we propose for the accreditation of ICUs across India, for both CCM training programs and healthcare delivery. This should be done jointly by ISCCM and either the National Accreditation Board of Hospitals and Healthcare Providers or some such body. Accreditation standards must include indicators of each of the following three: *upstream* (CCM-trained doctors, nurses, respiratory therapists, facilities available, etc.); *processes* (percentage use of checklist in central line insertion, ventilator bundle, handwashing, etc.); and *downstream* (indicators of morbidity, like incidence of hospital-acquired infections, and of mortality). This will ensure a minimum standard of care and, thereby, standardization of training programs as well.

In the coming days, an explosion of cases is expected in India, which can overwhelm the nation's capacity to provide optimal critical care.[3,9] The near future may see private hospitals joining the fight, whose ICUs remain unaffordable to common man, about which we are deeply concerned. This upsurge of cases, combined with our preexisting healthcare inequity, due to the lack of the manpower and technical shortages discussed herein, may lead to an unheard of crisis. Many individuals may not get the care they truly deserve. Thus, it is time for the ISCCM to pick up the cudgels, once again, for this purpose.

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