

# COVID-19: Access to adequate and safe blood during a pandemic

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Coronavirus pandemic: Until recently, most of us probably had never heard of the word 'pandemic'. This word comes from the Greek word *pandēmos* ( *pan* 'all' + *dēmos* 'people'). In the beginning of 2020, none of us could have imagined the sudden emergence of a pathogen to which the human race has little or no immunity and for it to have pushed the entire world on the brink of a social and economic uncertainty.

Historically speaking, the 20th Century was marked by three major influenza pandemics involving substantial mortality – 'Spanish flu' of 1918–1919, 'Asian flu' of 1957–1958 and 'Hong Kong flu' of 1968–1969. More recently, in 2003, we saw the emergence of the deadly SARS in Asia which fortunately did not evolve into a pandemic.

Having said that, the magnitude of socio-economic impact of SARS did leave behind several lessons for public health management and planning. One such lesson learnt was the importance of contingency planning for access and availability of safe blood and ensuring unhindered operation of blood transfusion services during the times of a pandemic.

Influenza viruses generally spread through the respiratory route and there is no documented report of its transmission through blood or blood components. However, experience from the most recent SARS outbreak suggests that such public health emergencies have significant impact on blood supplies as a result of reduced blood donation. Take for example, the case of Singapore during the peak of the SARS epidemic. As per published reports and case studies, there was a 60% drop in voluntary blood donation owing to various reasons. Donors were reluctant to go to blood donation centres for fear of being infected. Most organizations were discouraged from organizing blood drives to prevent community transmission of the disease and lastly, restrictions imposed on movement of people within the city deterred donors from going out to donate. As per estimates, up to 30–40% of the population may be infected during the peak of an influenza pandemic which could lead to a donor loss of 10–30%. This coupled with removal of potential donors as a result of risk reduction measures, only adds to the burden of shortage. In Singapore's case, close to 4% potential donors were deferred for this reason during the SARS epidemic.

The current situation in India is no different. In many parts of the country, hospitals and blood banks are reeling under the pressure of severe shortage of blood supply. And no, absence of elective surgery and non-urgent clinical interventions which have been deferred, doesn't not really change much for us, because blood shortage and inconsistency remain a larger ongoing issue for India. The World Health Organisation (WHO) estimates that blood donation by 1% of the population is generally the minimum to meet a nation's most basic need for blood. In India's case, as per the official data of 2016-17, there was a shortage of 1.9 million units (or 15%) vis-à-vis the WHO norm.

The situation has become particularly worrisome owing to COVID-19 lockdown because of the all the reasons cited above. It is no surprise that in this dire situation, many political leaders across States such as Maharashtra, Odisha, West Bengal among others, have jumped into action to mobilize blood donation. The WHO has also warned last week about the risk of reduction in blood-donors before, during and after COVID-19, recommending that blood-services prepare a response to mitigate potential blood-shortage. In fact, recently, the National Blood Transfusion Council (NBTC) has released recommendations to blood banks and donor

organizers across India to maintain protocols related to COVID-19 to ensure safety of all the people involved in blood transfusion services and blood adequacy in such times.

However, the lessons from Singapore and other Asian countries who dealt with acute blood shortage during SARS, clearly highlights the need for scenario-based planning to maintain a safe and adequate blood supply during a pandemic. It is crucial for blood services to remain fully functional to ensure blood sufficiency for post-partum hemorrhage, emergency surgeries, cancer treatment and hereditary disorders like thalassemia and hemophilia.

In times like these, there is a need for continuous assessment of blood and blood components inventory; enhanced effort to recruit more donors and communicating effectively with existing donors to dispel myths and apprehensions around blood donation; ensuring minimal to no disruption in production and distribution of blood equipment and products; and efficient sharing of products between blood-bank services. It is important that the measures taken to protect the integrity of the blood supply should be effectively coordinated with all stakeholders across the Centre and States.

Besides its impact on social welfare and economy, such pandemics cause enormous collateral damage to health systems. In these uncertain times, as the healthcare capacity is shifted towards the need to provide basic healthcare support, it is imperative not to forget that blood remains foundational to any modern healthcare system. Therefore, there is a compelling need for India to think long-term and prioritize the issue of adequacy, safety and sustainability of blood.

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