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# Coronavirus disease-2019 pandemic: Maintaining an adequate and safe supply of blood and blood products

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## Abstract:

The coronavirus disease-2019 (COVID-19) pandemic has influenced all the dimensions of human lives and the functional pattern of the health care establishments as the caseload continues to rise at an alarming speed. Even though, the possibility of transmission of infection through blood is negligible, it is important to take into account that the ongoing pandemic is going to impact the supply of blood and blood products via reduction in the practice of voluntary blood donation, and the entire range of activities pertaining to the blood system. This calls for the need to assess the situation, plan for remedial measures and respond adequately to the existing problem. In conclusion, in the battle against the COVID-19 infection, it is of utmost importance that the supply of blood and its products needs to be continually maintained, and the most effective approach will be to integrate the various elements of the blood system within the public health care delivery system.

## Keywords:

Blood supply, COVID-19 pandemic, World Health Organization

## Introduction

The coronavirus disease-2019 (COVID-19) pandemic has influenced all the dimensions of human lives and the functional pattern of the health-care establishments as the caseload continues to rise at an alarming speed. In-fact, a total of 1,773,084 cases and 111,652 deaths have been attributed to the complications of the disease since the emergence of the outbreak in China.<sup>[1]</sup> It is worth noting that the European region alone accounted for 51.5% of the reported cases and 69.3% of the overall share of deaths with a case fatality rate of 8.5%, which is much higher than the global estimates of 6.3%.<sup>[1]</sup>

## COVID-19 and Blood & its products

Even though, the possibility of transmission of infection through blood is negligible, it is important to take into account that the

ongoing pandemic is going to impact the supply of blood and blood products through reduction in the practice of voluntary blood donation, and in short, the entire range of activities pertaining to the blood system.<sup>[2]</sup> This calls for the need to assess the situation, plan for remedial measures and respond adequately to the existing problem.<sup>[2,3]</sup> However, any decision on this front should be based upon the magnitude of the disease, type of transmission, epidemiological attributes, quality of health system, blood supply sufficiency, and cost-effectiveness of the blood safety strategies in minimizing the morbidity related to COVID-19.<sup>[2-4]</sup>

## Areas to be strengthened

Further, it will be an important step to minimize the potential risk of transmission, and it can be accomplished through educating donors about the disease, deferring the practice of blood donation by the high-risk group people (viz. recovered from the infection, individuals with positive

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history of exposure to a COVID-19 case, or history of travel to an area with community transmission) for 28 days, ensuring quarantine of blood products in regions with widespread transmission, eliciting details about the development of illness in the donor after blood donation and screening blood for the causative organism.<sup>[2-4]</sup> Moreover, the presence of a hemovigilance system can identify the cases transmitted through blood or its products, and thus, it should be made functional in all the collection centers.<sup>[4]</sup>

The next priority is minimizing the risk of exposure to the causative organism to both the employees and the donors, and this can be achieved by enlightening the potential donors about the need for self-deferral if they are feeling unwell or reporting back to the center, if they develop respiratory ailments within 28 days of blood donation.<sup>[4,5]</sup> The safety of the entire process can be significantly enhanced through the adoption of the standard infection prevention and control measures and maintenance of physical distancing.<sup>[5,6]</sup> At the same time, all the employees of the collection center should be instructed to not to come to work if they are not feeling well or have a history of exposure to case of the disease. Further, the authorities should think to ask the staff to come to work on a rotation basis and thus minimize the potential risk of transmission of the infection.<sup>[3,4]</sup>

### **Maintaining blood stock**

As already stated above that there is a definite risk of reduction in the number of donors around the pandemic, it is important that a strict watch should be kept in the stock of blood and its products, so that decision to timely import blood and its products can be taken.<sup>[2,3]</sup> Moreover, all the blood collection centers should also anticipate the requirement of blood for the treatment of COVID-19 patients presenting with severe sepsis and plan accordingly. Furthermore, specific measures such as planning of awareness activities can be done to reduce the myths and anxiety about COVID-19 infection, and the need for maintaining blood supply through

voluntary donors can be emphasized.<sup>[4,6]</sup> In addition, it should be envisaged that even the COVID-19 cases can donate blood 28 days after their complete recovery from the illness. In addition, another priority will be to ensure continuous supply of the logistics and other equipment (such as reagents, screening assays, etc.) required for blood collection and its fragmentation in to different components.<sup>[3-5]</sup>

### **Conclusion**

In conclusion, in the battle against the COVID-19 infection, it is of utmost importance that the supply of blood and its products needs to be continually maintained, and the most effective approach will be to integrate the various elements of the blood system within the public health care delivery system.

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### **Conflicts of interest**

There are no conflicts of interest.

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