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Dear Editor:

In Iran, before the coronavirus disease 2019 (COVID-19) pandemic, approximately 1,000 organ transplants were performed annually, while 25,000 patients remained on the waiting list and roughly 1,000 people on this waiting list died each year. In the United States, Europe, and other countries, there is also a shortage of transplant donors, and high mortality rates occur due to long waits on the transplant list [1].

Since the outbreak of the COVID-19 pandemic, activities related to organ procurement and transplantation have been declining worldwide [2]. In Iran, the number of brain-dead donors in 2020 was 645, reflecting a decrease compared to the years before the COVID-19 pandemic (in 2019, before the pandemic, the number of donors was 1,078) [3].

During the pandemic in Iran, there were many challenges, including the closure of transplant and organ procurement wards in many hospitals of Iran, the admission of large numbers of patients with COVID-19, a lack of equipment, the deployment of trained members of procurement

Organ procurement and transplantation during the COVID-19 pandemic in Iran

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and transplant teams to care for COVID-19 patients to compensate for staff shortages, the risk of transmission of COVID-19 infection to patients who had received a transplant or donated an organ, traffic restriction policies, lack of timely allocation of funds, foreign sanctions and insufficient support, inappropriate cases of brain death because of COVID-19 infection, restrictions on gathering family members to obtain family consent for donation, the need for extra time to perform diagnostic testing of COVID-19 for donors and organ recipients, and the prolongation of confirmation time and its impact on organ quality. Another problem was the risk of more members of the procurement team being infected with COVID-19, because in many cases, members of this team are required to travel to other areas outside their city to identify patients with brain death, obtain consent, and provide care and transfer to the organ procurement and donation department.

The following strategies have been taken to address these challenges in organ procurement and donation units in Iran: (1) We retrained the transplantation and donation team and they participated in national specialized training courses. (2) We coordinated with the laboratory units to respond to COVID-19 tests of organ recipients in less than

3 hours. (3) Informed consent was obtained from first-degree relatives of the brain-dead donors instead of all family members in order to prevent the gathering of all family members and reduce the risk of infection. (4) Due to the use of organ procurement and donation units to admit and care for patients with COVID-19, many organ procurement and donation units were transferred to an alternative hospital. (5) Instead of in-person identification of brain death cases, we used telephone follow-up in order to reduce unnecessary referrals and reduce the risk of COVID-19 infection. (6) All patients on the transplant waiting list were vaccinated with high priority. (7) We administered booster vaccinations and periodically provided free screening tests to identify COVID-19 infections in the organ transplant workforce. In the future, similar strategies may be straightforward to implement in other countries.

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Conflict of Interest

No potential conflict of interest relevant to this article was reported.

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REFERENCES

1. Loupy A, Aubert O, Reese PP, Bastien O, Bayer F, Jacquelin C. Organ procurement and transplantation during the COVID-19 pandemic. *Lancet* 2020;395:e95-6.
2. Aubert O, Yoo D, Zielinski D, Cozzi E, Cardillo M, Dürr M, et al. COVID-19 pandemic and worldwide organ transplantation: a population-based study. *Lancet Public Health* 2021;6:e709-19.
3. Iranian Society of Organ Donation. Organ donation statistics 2020 [Internet]. Tehran: Iranian Society of Organ Donation; 2020 [cited 2022 Mar 20]. Available from: <https://ehdacenter.ir/archive/article/2759553/%D8%A2%D9%85%D8%A7%D8%B1>.