

Effect of the COVID-19 Pandemic on Blood Donations and Transfusions in Nigeria – A Multi-Facility Study of 34 Tertiary Hospitals

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ABSTRACT

Background: The coronavirus disease 2019 (COVID-19) pandemic affected blood supplies globally. Mobile blood drive campaigns halted, and voluntary blood donations reduced, challenging available blood supplies. Furthermore, fears of virus transmission led to deferrals of elective surgeries and non-urgent clinical procedures with noticeable declines in blood donations and transfusions. **Aims:** We aimed to assess the effect of the COVID-19 pandemic on the number of blood donations and transfusions across the country by blood product type across various hospital departments. **Materials and Methods:** A retrospective descriptive study was conducted to determine the impact of the COVID-19 pandemic on blood services in 34 tertiary hospitals in Nigeria, comparing January to July 2019 (pre-COVID-19) to January to July 2020 (peri-COVID-19). Data were collected from the country's web-based software District Health Information System, Version 2 (DHIS2). **Results:** A 17.1% decline in numbers of blood donations was observed over the study period, especially in April 2020 (44.3%), a 21.7% decline in numbers of blood transfusions, especially in April 2020 (44.3%). The largest declines in transfusion were noted in surgery department for fresh frozen plasma (80.1%) [$p = 0.012$] and accident and emergency department transfusion of platelets (78.3%) [$p = 0.005$]. The least decline of statistical significance was observed in internal medicine transfusions of whole blood (19.6%) [$p = 0.011$]. **Conclusions:** The COVID-19 pandemic significantly affected the numbers of blood donations and transfusions in Nigeria. Strengthening blood services to provide various blood components and secure safe blood supplies during public health emergencies is therefore critical.

KEYWORDS: Blood collection, blood components, donors, transfusion medicine (in general)

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