ADVERSE OUTCOMES OF BLOOD TRANSFUSIONS: MAKING THE CASE FOR TRANSFUSION AVOIDANCE IN MODERN MEDICAL PRACTICE

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Historically, transfusion risks were focused on transmissible diseases, especially hepatitis B and non-A-non-B hepatitis transmission (later identified as hepatitis C), which carried up to a 10% risk in the 1960's and early 1970's, and HIV after its emergence in the 1980's. Although vigilance must be maintained in keeping these transmissible diseases and others (for example, West Nile virus and babesiosis) out of the blood supply, much of the focus has shifted to reducing non-transmissible disease risks, including mistransfusion of ABO incompatible blood, transfusion-related acute lung injury (TRALI), transfusion-associated circulatory overload (TACO), and platelet component bacterial contamination, among others.

Yet, beyond even these recognized risks, transfusions are associated with thromboembolic complications (acute myocardial infarction and stroke), immunomodulatory effects (with increased risk of perioperative infections), and increased length of hospital stay, as evidenced by data from the Western Australia Patient Blood Management Program (PBM). As a result, the World Health Organization (WHO) has urgently called for global implementation of PBM, evidence-based strategies to conserve patients' own blood and reduce the need for blood transfusions, in its October 2021 Policy Brief.

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