Refusing blood transfusions from COVID-19-vaccinated donors: are we repeating history?

Blood transfusion is among the most frequently performed medical procedures in the USA,[1] yet the history of this life-saving practice is mired in controversy, beginning with the barring of African-Americans from donating blood.[2–4] Following criticism of this policy, the American Red Cross (ARC) instead began segregating and labelling blood such that the product could be easily identifiable as being from an African-American blood donor.[2–5] The ARC anticipated that recipients would refuse blood transfusions from African-American donors, as their blood was deemed infectious and the medium through which diseases such as sickle cell anaemia were transmitted, despite a consensus that this disease is genetic.[5,6] Even after the official de-segregation of the nation's blood supply, several states passed legislation requiring hospitals and physicians to inform blood transfusion recipients of the blood donor's race.[3,7]

To encourage blood donation during the mid-twentieth century, a controversial advertisement by the US National Blood Program depicted blood moving from white women to white men.[3] This ensured that gender, race, and sexuality would not influence the transfusion process and assuaged recipients' fears of receiving blood from a same-sex donor or a donor with a different sexual orientation.[3] In the 1980s, the AIDS pandemic resulted in laws prohibiting specific populations from donating blood,[8] as many considered this to be a disease exclusive to members of the lesbian, gay, bisexual, transgender, and queer (LGBTQ) community. Several of these laws have only recently begun to change, despite the blood supply in the USA being completely voluntary, anonymous, and safer than it has ever been.

Although major improvements in blood donation and transfusion have been accomplished, individual and societal views of blood transfusion remain controversial in the USA. As physicians, we are involved in consenting patients who might require blood transfusion as part of their medical care. This consent process involves safe and effective communication, the provision of factual, evidence-based information, and a clear explanation of the risks, benefits, and alternatives, including the right to blood refusal. This refusal of blood can lead to a delicate bioethics debate, as individuals may refuse blood for any number of reasons, including those based on personal religious or moral beliefs. These discussions and therapeutic dilemmas have contributed to advancements in bloodless surgery, patient blood management, and evidence-based transfusion guidelines. However, as history has illustrated, a subset of individuals representing a specific patient population may refuse blood based on misconceptions and misinformation, or even overt bigotry, prejudice, or discrimination.

Unfortunately, in the USA we have recently begun to encounter patients refusing blood based solely on the COVID-19 vaccination status or COVID-19 infection history of the blood donor. These patients have adamantly demanded that physicians disclose details of the donor from whom they may potentially receive blood, including whether the donor received a COVID-19 vaccine. These same patients, some of whom are likely to imminently require blood, have refused to consent to transfusion unless they can be assured that the blood donor did not receive a COVID-19 vaccine, regardless of the risk of morbidity and mortality. Prevailing thought processes among this population include concerns of becoming infected with COVID-19 or developing long-term effects from the vaccine itself via the blood transfusion, beliefs that the vaccine is a device created for genetic modification by those with ulterior motives, or that people who choose to receive a vaccine are in some way inferior.[9–13] While these ideologies appear to be most prevalent in North America, particularly in the USA, they are not isolated to a single hospital or specific geographic region of the country, as physicians from multiple institutions across the USA have been approached by patients directly, or consulted by other physicians questioning how to best address these concerns. These occurrences have become an issue to such extent that the AABB (formerly the American Association of Blood Banks)[14] and Canadian Blood Services[15] have issued guidance on how to address circumstances in which patients requiring blood transfusion request blood from unvaccinated donors. This underscores the magnitude of this alarming trend of misinformation regarding COVID-19 vaccination and blood safety, influenced by intentionally misleading or blatantly false discussions, particularly on social media, e.g. Fig 1. This inaccurate information may harm patients in need of blood, but who refuse it based on false beliefs or conspicuous prejudice. Despite this, the US Food and Drug Administration (FDA) and many of the largest blood donor organizations in the USA, including the ARC, New York Blood Center, and OneBlood, have not published easily accessible information refuting this false information.

Currently, there are varying deferral periods for blood donors who received a COVID-19 vaccine,[16] but these

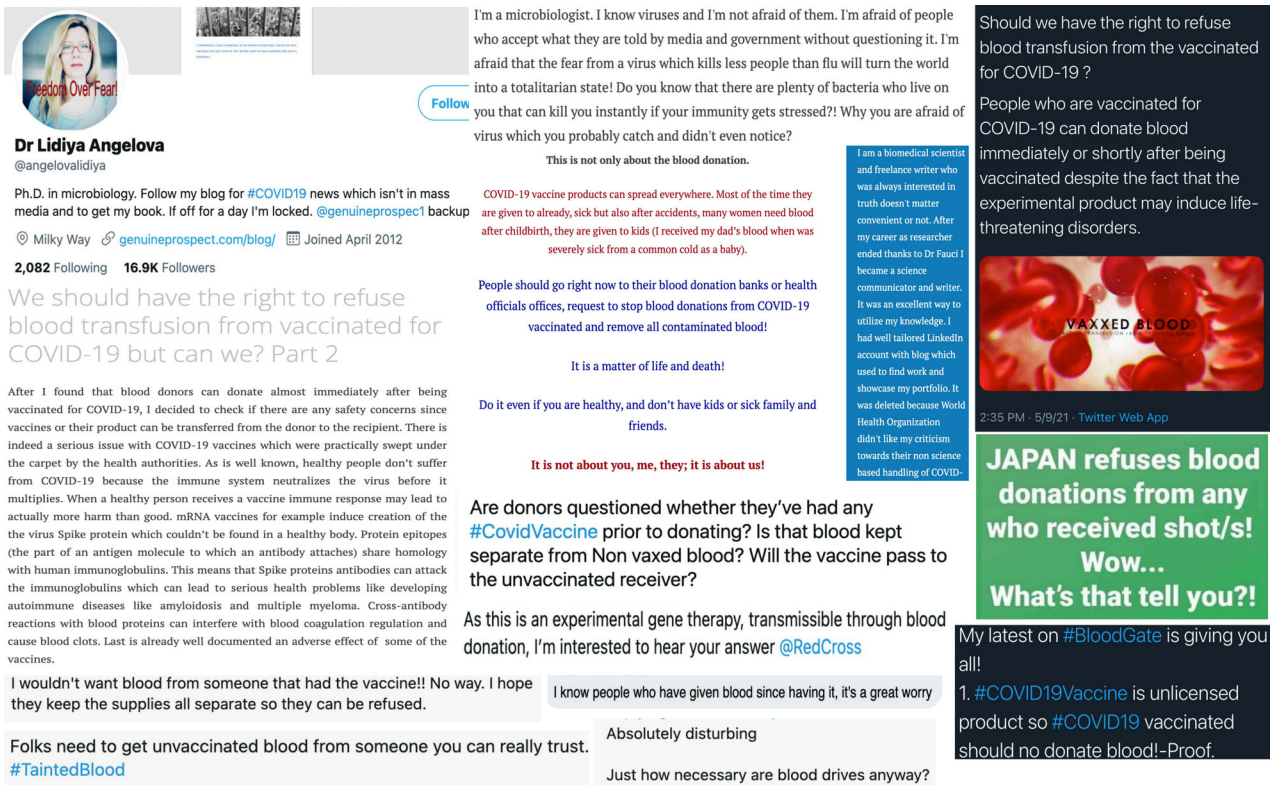

Fig 1. Examples of images, posts, and discussions from social media websites regarding COVID-19 vaccinated blood donors and blood transfusions. [Colour figure can be viewed at wileyonlinelibrary.com]

timeframes are organization- and vaccine-dependent, ranging from no deferral to 28 days (Table I). Despite the variation in deferral policies, there is no evidence that blood donations from COVID-19-vaccinated donors pose any risk to recipients, and blood transfusions from donors who received a COVID-19 vaccination or previously had COVID-19 are not associated with a risk of COVID-19 infection.[14] Therefore, there are no requirements to collect or share the vaccination status of the blood donor, and hospitals are not made aware of or required to inform patients of the vaccination status of the blood donor. Blood product labels contain only the necessary information relevant to appropriate and safe use of the blood product, such as the blood type, and do not report the vaccination status of any donor, nor do they contain information pertaining to race, ethnicity, sexual orientation, or other demographic factors.

Protection of blood donors and the blood supply is vitally important, and thus donor anonymity must be maintained. To protect donors, donation facilities, and blood banks from liability in the absence of negligence, blood shield statutes have been enacted throughout the USA.[17] Established in the 1950s and 1960s, these laws specify that blood donation and blood products are a service and not a sale, and therefore blood donors cannot be prosecuted and held liable if the blood transfusion results in injury.[17,18] The intention of these legal statues is to preserve the health and welfare of the population by ensuring an adequate supply of blood for all those who may require it,[17] and therefore serve as the legal basis for protection and anonymity of donors. The importance of donor anonymity is recognized by numerous organizations, and is crucial for maintenance of the relationship between volunteer blood donors and blood transfusion services, and to prevent stigma and discrimination of the blood donor. This right to privacy, confidentiality, and anonymity is one of the foundational principles of the medical code of ethics.[19]

The appalling circumstances African-Americans endured relating to the blood supply and segregation during the 20th century in the USA are in no way fully comparable; however, it is impossible to ignore the parallels between this infamous past and the misconceived notions, and sometimes outright prejudice, that individuals are displaying toward those who have been vaccinated for COVID-19 and are willing to donate today. A precedent may be set that is similar to the stigmatization in the early days of blood donation and transfusion if policies that require blood unit labels to include vaccination status are instituted to appease patients refusing blood from certain individuals. Thus, while the current policy expressed by AABB and similar organizations asserts that blood product labels do not necessitate inclusion of donor COVID-19 vaccination status, we suggest that additional actions be taken to ensure that donor vaccination status

Table 1. Recommended blood donation deferral periods.

Organization	Non-live vaccine	Live vaccine	Indeterminate
WHO[24]	• Up to 7 days for well donors • For symptomatic donors, 7 days after symptom resolution • Clinical trial – 28 days after receipt of the experimental vaccine unless the vaccine subsequently is authorized or licensed by the relevant regulatory authority and an alternative policy regarding donor deferral is established by that authority	• 28 days • Clinical trial – 12 months after receipt of the experimental vaccine unless the vaccine subsequently is authorized or licensed by the relevant regulatory authority	• 28 days
US FDA[25]	• No deferral period	• 14 days	• 14 days
AABB[26]	• No deferral period	• 14 days	• 14 days
Canadian Blood Services[15]	• No deferral period		
Joint United Kingdom Blood Transfusion and Tissue Transplantation Services Professional Advisory Committee[27]	• 7 days	• 28 days	
European Centre for Disease Prevention Control[28]	• No deferral period	• 28 days	• 28 days

WHO, World Health Organization; US FDA, United States Food and Drug Administration; AABB, formerly the American Association of Blood Banks.

remain anonymous. We implore hospitals and other medical facilities to adopt policies and protocols to address the concerns of patients who refuse blood on these grounds. The implementation of ethics boards and active engagement of these experts during care of these patients can be beneficial. Furthermore, we believe the prevalence of misinformation requires enhanced awareness of this emerging societal issue and believe that blood donation organizations and the US FDA must publicize and promote guidance refuting the misinformation propagating throughout the USA. Additional measures at the local, state, and national level must be taken to dispel these thought processes and ensure appropriate patient care is provided to all persons, while preventing discrimination and the perpetuation of falsehoods. We are in the midst of an historical event, as the COVID-19 pandemic has resulted in more than 4·2 million deaths and greater than 200 million infections worldwide.[20] However, the impact of this event is not limited to infections or deaths, as COVID-19 misinformation has influenced and polarized politics, government, science, and media,[21–23] and has created the next controversy in a contentious history of blood transfusion.

Jeremy W. Jacobs[1]
Lorin A. Bibb[2]
Bipin N. Savani[3]
Garrett S. Booth[4]

[1]Department of Laboratory Medicine, Yale University School of Medicine, New Haven, [2]Department of Dermatology, University of Connecticut, Farmington, CT, [3]Department of Medicine, Hematology, Stem Cell Transplantation and Cellular Therapy Section, Division of Hematology/Oncology, Vanderbilt University Medical Center and Veterans Affairs Medical Center, Nashville and [4]Department of Pathology, Microbiology and Immunology, Vanderbilt University Medical Center, Nashville, TN, USA.
E-mail: jeremy.jacobs@yale.edu

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