



## Trans people and blood donation

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Societal awareness of trans people and their needs as both blood donors and transfusion recipients has increased over the last few years. Trans is an evolving and diverse umbrella term for people whose gender identity (the intrinsic experience of being a man, woman, neither, both, or anywhere along the gender spectrum) differs from what is usually assumed and experienced based on the sex assigned to them at birth; definitions of some current terminology developed by one of us (AD) are shown in Table 1. The terminology used to communicate is very important to creating a culture of safety, dignity, and respect for all involved. It is important to remember that people may describe their gender identities and experiences in very diverse ways.<sup>1-3</sup> This may be because they may be uncomfortable or unfamiliar with certain terms, and terminology is changing rapidly in this area.

There is a paucity of Canadian population data regarding the number of trans people; US data suggest that 0.6% of Americans identify as trans.<sup>3,4</sup> Additionally, 35% of respondents from a large US survey of transgender people identified as nonbinary or genderqueer.<sup>3,4</sup> Although societal changes as well as political and legal reforms in the US and Canada have contributed to more openness toward trans people, a great deal of discrimination still occurs. Sources of overt and covert discrimination in health and social service settings include a deficit of knowledge of cultural competence principles in caring for trans people, lack of exposure to trans patients, and struggles to update processes and forms that are currently binary or cisnormative (designed for cisgender people, thus knowingly or unknowingly excluding trans people).<sup>3,5-8</sup>

Blood centers are faced with their own challenges in adapting policies, procedures, and blood establishment computer systems (BECSs) to be able to properly screen trans donors.<sup>9,10</sup> Educational sessions at AABB annual meetings, an AABB eCast, and an article in the *AABB News*, all since 2017, show the growing interest in this topic.<sup>11,12</sup>

In this review, we aim to discuss blood donation by trans people, including donor screening, eligibility criteria, and current standards and regulations. We outline our current approach at Canadian Blood Services (CBS), which illustrates many of the difficult issues but also some successes in screening trans donors. We hope that this review will highlight areas that require further study and optimization to ensure that trans people feel welcome at donor centers, while maintaining donor and recipient safety. We have

included some basic background information about blood center functioning to enhance understanding for readers outside of the transfusion medicine community.

### PRACTICAL ISSUES IN DONOR SCREENING

All blood centers register first-time donors in their BECS, requiring donors to provide their name, preferred salutation (Mr., Ms., etc.), and contact information. Donors are also asked to select “male” or “female,” and this sex/gender designation (which may represent sex and/or gender depending on donor center policies and donor interpretation) is included in the donor’s electronic file. As shown in a survey of US and Canadian blood centers, the majority of BECS in use do not permit other sex/gender designations.<sup>12</sup> Donors are required to produce identification, almost all of which will include a designation as “male” or “female,” and which is often, but not always, based on sex assigned at birth. In some jurisdictions, people may change the sex/gender designation on forms of identification such as health cards and driver’s licenses; this may include self-identification as gender fluid or gender X, moving away from a binary system. In some cases, these kinds of legal changes have occurred at state or provincial rather than national levels.<sup>13-15</sup> In Canada, several provinces, including Ontario, New Brunswick, and British Columbia, allow people to self-identify as gender X or nonbinary on their driver’s license or change

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**ABBREVIATIONS:** BECSs = blood establishment computer systems; CBS = Canadian Blood Services; EBV = estimated blood volume; MSM = men who have sex with men; TRALI = transfusion-related acute lung injury.

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**TABLE 1. Overview of terminology relevant to trans people**

- **Transgender** or **trans** is an umbrella term used to describe people whose gender identities and/or gender expressions are not what is typically expected for the sex and gender to which they were assigned at birth. It should always be used as an adjective (as in “trans people”) and never as a noun (do not call people “transgenders”) and never as a verb (do not say that someone transgendered).
- **Sex** refers to a person’s status as male, female, or intersex based on biologic and physiologic characteristics. Sexes are usually assigned at birth based on simple visual inspection of the genitals of a newborn baby.
- **Gender** refers to a person’s status as a man or boy, woman or girl, transgender person, nonbinary person, and may also include Two-Spirit persons (see below for a definition of Two-Spirit persons). Genders are usually assigned at birth on the assumption that people born with male genitals will be boys and that people born with female genitals will be girls.
- **Gender identity** refers to a person’s deeply felt intrinsic sense of their own gender.
- **Gender expression** refers to how a person enacts gender in their everyday life. There are many reasons why a person may not feel that it is safe to express their gender identity in certain circumstances. Thus, a person’s gender expression may or may not be a good representation of their gender identity.
- **Social gender** is the gender in which a person lives their everyday life. A person’s social gender may or may not express their gender identity. Similarly, it may or may not match what would typically be expected on the basis of their sex or gender assigned at birth.
- **Cisgender** refers to people whose current sex and gender identities match the ones they were assigned at birth.
- **The gender binary** refers to the idea that there are two and only two genders, men and women, and the expectation that everyone has to be one or the other.
- **Nonbinary gender identities** are adopted by people who reject the idea of the gender binary. They may identify as partially a man and partially a woman or identify as sometimes a man and sometimes a woman or identify as some gender other than a man or a woman, or as not having a gender at all. They most commonly use the pronouns they/them/their instead of he/him/his or she/her/hers. Some nonbinary people consider themselves to be trans or transgender; some do not because they consider transgender to be part of the gender binary. The shorthand NB (pronounced “enby”) is sometimes used as a descriptor for nonbinary people.
- **Two-Spirit** is an English-language term adopted by North American indigenous peoples to communicate a broad range of identities used in indigenous communities. Each indigenous language has its own specific terms and nuanced cultural meanings. Two-Spirit can encompass any kind of gender identity or sexual orientation other than cisgender and heterosexual. Some people identify only as Two-Spirit. Some people identify as Two-Spirit and lesbian, or gay, or bisexual, or trans, or nonbinary. Only indigenous people should call themselves Two-Spirit.
- **Gender nonconformity** refers to the extent to which a person’s gender identity or gender expression differs from what is typically expected for people assigned to a particular sex or gender at birth.
- **Transition** refers to procedures that people use to change from living as the gender they were assigned at birth to living as a gender that better matches their gender identity. People may transition only socially by using methods such as changing their name, clothing and accessories, hairstyles, and/or the ways that they move and speak. Prosthetics, hairpieces/wigs, and/or chest binders may also be used. Transitioning may also involve using hormones and/or surgeries to alter a person’s physical body.
- **Transfeminine** refers to anyone who was assigned male at birth and does not identify as a man. Transfeminine people may identify as trans women, as nonbinary, as Two-Spirit, or another currently less common identity.
- **Transgender women or trans women** are individuals who were assigned male at birth but who have gender identities as women. They may or may not have undergone any transition. **MTF or male-to-female** is an older term that is falling out of use.
- **Transmasculine** refers to anyone who was assigned female at birth and does not identify as a woman. Transmasculine people may identify as trans men, as nonbinary, as Two-Spirit, or another currently less common identity.
- **Transgender Men or trans men** are individuals who were assigned female at birth but who have gender identities as men. They may or may not have undergone any transition. **FTM or female-to-male** is an older term that is falling out of use.

their designation from male to female or from female to male.<sup>14</sup> In 2017, federal legislation was passed to amend the Canadian Human Rights Act and the Criminal Code to add gender identity and gender expression to the list of prohibited grounds of discrimination and extend protection against hate propaganda based on gender identity or expression.<sup>15</sup> California’s Gender Recognition Act (California Senate Bill 179), adopted in January 2019, allows people to self-identify as gender X, nonbinary on state-issued documents.<sup>10,13</sup>

When electronic donor questionnaires are used, the BECS will determine which questionnaire to present to the donor, based on their designation as male or female in the system. In the United States and Canada, most questions on the questionnaires are identical; however, several questions differ according to female or male designation in the BECS. The “female” questionnaire will contain an additional question about recent pregnancy; there may also be a question about ever being pregnant, including miscarriages and abortions, to reduce recipient transfusion-related acute

lung injury (TRALI) risk (see below). Risk questions about sexual partners will differ, with donors designated as females asked about sex with a male who has had sex with a male, while donors designated as males will be asked about sex with a male. In addition to the questionnaire, the designation of male or female on registration may affect other donor eligibility criteria and blood component processing algorithms, shown in Table 2.

To our knowledge, no blood centers are routinely using a two-step intake process that asks about the sex assigned to the donor at birth and their current gender.<sup>11,12</sup> This approach has been recommended to improve both demographic survey data and health care provided to trans people.<sup>16,17</sup> Commonly used BECSs, such as eProgesa, provide only a binary male/female choice. This field is currently not customizable by the blood center and would require the software vendor to make more choices available. However, blood center policies may change in the future, particularly if software systems allow more customization.

**TABLE 2. Screening, eligibility, and processing steps differing in donors registered as male vs. female**

<p>Donor questionnaire TRALI</p> <ul style="list-style-type: none"> <li>• History of recent pregnancy (females)</li> <li>• History of any pregnancy, miscarriage, or abortion (females)</li> </ul> <p>Donor questionnaire TTIs</p> <ul style="list-style-type: none"> <li>• Sex with a male partner in a defined time period (males)</li> <li>• Sex with a male partner who had sex with another male in a defined time period (females)</li> </ul> <p>Eligibility criteria to protect donor health</p> <ul style="list-style-type: none"> <li>• EBV calculation to determine eligibility for younger donors (different height and weight tables)</li> <li>• Minimum Hb 125 g/L (females), 130 g/L (males)</li> <li>• Minimum interdonation interval may be longer for females</li> <li>• Ferritin testing, different cutoff values, and deferral periods</li> </ul> <p>Component production and testing</p> <ul style="list-style-type: none"> <li>• Transfusable plasma, plateletpheresis – deferral or testing of female donors with a history of pregnancy for HLA antibodies</li> <li>• Programming of apheresis collection based on male/female designation</li> <li>• Use of plasma from female whole blood and apheresis donors for fractionation rather than transfusion</li> <li>• Suspension of buffy coat platelet pools in plasma from male donors</li> </ul> <p>EBV = estimated blood volume; HLA = human leukocyte antigen; TRALI = transfusion associated acute lung injury; TTI = transfusion transmissible infections.</p>
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Observation of a donor’s gender expression is not generally considered to be a reliable method of sex/gender identification. Staff may determine that a donor is trans in several ways at different times in the screening process: donors may self-identify on registration, or the donor’s name, chosen salutation, and/or designation as male or female on their identification card may have changed since previous donations. In blood centers where donors may self-register and complete their donor health questionnaire at home, these disclosures or discordances may be found on review of the questionnaire at the donor center. Donor answers to screening questions may also elicit health information, such as surgeries or hormone use related to their affirmed gender, particularly if the blood center questionnaire includes broad questions about being under a physician’s care or taking any medication, as is the case in Canada. Note that quality audits performed to detect data entry errors in donor health questionnaires that demonstrate discordances in salutation, name, and male or female designation in the BECS should be interpreted keeping in mind the possibility of trans donors.

**DETERMINATION OF ELIGIBILITY**

**Individual medical inquiries versus standardized criteria**

Blood center policies and donor criteria are usually detailed in standard work instructions and a donor criteria manual, allowing donor screening personnel to screen donors in a standardized way, consistent with approved eligibility

requirements. In North America, donor screening staff are trained on procedures, but may not have a health care professional background. Nurses may be available on the donation site, while a physician may be available by phone for consultation but is rarely present onsite. Conditions not included in the criteria manual or that require further information that the donor is unable to provide at the time of donation are often handled using a medical inquiry process, where the donor is temporarily deferred, and information is sent to a blood center physician to determine eligibility. The physician may need to call back the donor or, on occasion, with the donor’s consent, obtain information from the donor’s physician to determine eligibility.

Eligibility for donation for trans people may be determined using a medical inquiry process, standard criteria, or a combination of both. The medical inquiry process allows the physician to obtain more information and perform a more individualized risk assessment. For example, a trans man can be asked about a history of pregnancy, while this information would not be obtained if such donors routinely were presented with the “male” questionnaire. People across the gender spectrum represent a very diverse group. When categorization of sexual risk behavior is difficult, it can be done in a more nuanced way in an individual risk assessment. Finally, an individual conversation with the donor may offer a better forum for discussion about the reasons for trans donor policies than would be possible in a busy donor center.

There are also disadvantages to using a medical inquiry process. All trans people will be temporarily deferred at least once from donation and are more likely to be offended and less likely to return. If more information is needed, additional donor communication may be required, which can be viewed as intrusive and might further dissuade the donor from returning. Since each physician may differ in their approach, eligibility determinations will be variable, and the workload in performing individual assessments may become considerable as the number of donors needing to be assessed increases.

An alternative approach is to develop standard work instructions and include criteria specific to trans donors in the donor criteria manual. In some jurisdictions, such as Canada, the approach and eligibility criteria must be approved by the regulator prior to implementation. Although there might be some instances where a medical inquiry would still be necessary, staff would be able to determine eligibility for most trans donors. This standardized screening approach is aligned with most other donor screening situations. Many trans people will be eligible and able to donate. Deferrals are explained to the donor at the donor center. Data can be compiled and an assessment made of the strengths and weaknesses of the approach, leading to increased knowledge and further refinements. Disadvantages include difficulty in determining risk categories for a very diverse donor population and loss of the ability to make an individual risk assessment.

In summary, there are strengths and weaknesses to either approach to screening trans donors. An individual approach may be more feasible at smaller donor centers, while a larger center with more frequent trans donors may require a more standardized approach covering most screening scenarios. In either case, work instructions are needed regarding practical steps in donor screening, and staff awareness and cultural competency training are important in equipping staff to interact with trans donors in a respectful way. Enhanced cultural competence allows for an improved donor experience, favoring donor retention.

### Determination of criteria related to donor health risks

There are variable criteria to protect the health of donors designated as male or female in the BECS. The different acceptable parameters may be programmed into the BECS, so that a donor designated as female, for example, may have a different minimal time to next donation (interdonation interval) compared to a donor designated as male. Variable criteria include different hemoglobin (Hb) cutoff levels, due to physiologic differences in normal Hb levels in males and females. Female donors have lower initial iron stores (ferritin levels) and drop their ferritin levels more rapidly with donation; possible eligibility criteria related to these differences include different minimum interdonation intervals and different algorithms for ferritin testing and deferral based on ferritin results.<sup>18</sup> Donors who are not on hormonal therapy will have Hb and ferritin levels similar to other donors with the same sex assigned at birth. However, testosterone use will tend to increase Hb levels in trans men, while estrogen will decrease levels in trans women.<sup>19</sup> Blood centers may adopt a pragmatic approach to determining policies for Hb cutoff in trans donors. For example, the simplest policy may be to use the usual Hb cutoff for females for donors designated as female in the BECS and the usual cutoff for donors designated as male regardless of hormonal status. The same is true regarding the minimum interdonation interval and ferritin testing and deferral algorithms, which may be calculated by the BECS based on donors' designation as male or female in the system.

Alternatively, the most stringent criteria can be used, for example, a typical male Hb cutoff of 130 g/L for all trans donors. In theory, this would provide greater safety for donors. However, until recently, the Hb cutoff was 125 g/L for males and females in North America, and only 1% to 2% of designated male donors have an Hb level between 125 and 130 g/L.<sup>18</sup> Introduction of a more stringent cutoff, unrelated to the donor's designation as male or female in the BECS, may introduce increased complexity and result in unnecessary deferrals for some trans donors, while having a very small overall impact on donor safety.

Estimated blood volume (EBV) is slightly lower in females compared to males of the same height and weight. Therefore,

use of the EBV chart for designated male donors to screen a trans man may slightly overestimate the donor's EBV. Use of testosterone might also alter the accuracy of EBV calculation, as it increases muscle mass and decreases less vascularized adipose tissue, resulting in an increased EBV. Again, use of the donor's male/female designation in the BECS may be the most pragmatic approach. Alternatives would be to use the more stringent criteria (EBV chart for female donors) or to decide eligibility on a case-by-case basis. A similar issue may arise in programming apheresis collections.

### Assessment of HIV risk category

There are limited data about transmissible disease risks, particularly HIV, among trans Canadians. Trans people are not included as a separate category in the annual epidemiologic surveillance reports from the Public Health Agency of Canada on the incidence and prevalence of HIV in the Canadian population.<sup>20</sup> In a survey of over 400 trans people in Ontario, Canada (Trans PULSE Project), participants reported a wide range of sexual behaviors; 19% of trans women and 7% of trans men had at least one high-risk sexual behavior, as determined by the investigators in the year before the study.<sup>21,22</sup> Self-reporting of HIV prevalence was 10 times the estimated baseline prevalence for Ontario; however, only 46% of participants stated that they had ever been tested for HIV, and many others were unsure of their HIV status. Given these limitations, the authors felt that estimating actual HIV prevalence was not possible. A large national study led by the same investigator is currently under way and will provide more data on HIV risks among trans Canadians.

In a systematic review and meta-analysis by Becasen et al.<sup>23</sup> of 88 US studies published from 2006 to 2017, the HIV prevalence estimate was 14.1% in trans women and 3.2% in trans men. Trans women had the highest rate of newly identified HIV infections (2.7%) in individuals undergoing testing at CDC sites.<sup>24</sup> In the 2015 US Transgender Survey, 1.4% of respondents stated that they were HIV positive, nearly five times the rate of the US population (0.3%). Self-reported rates varied widely between groups with different gender identities, from 3.4% in trans women to 0.3% in trans men.<sup>3,25</sup> Data from this survey provide an incomplete picture of HIV prevalence, since HIV status was self-reported, and 46% of respondents had never been tested for HIV or were unaware of their HIV status.<sup>3,25</sup> Internationally, a meta-analysis of 25 studies from 14 countries focused on trans women reported an overall HIV prevalence of 14.7% in trans women who had not engaged in sex work.<sup>26</sup>

These studies are problematic in terms of developing eligibility policy for trans donors. As with studies of men who have sex with men (MSM), because of the recruitment venues and the focus of public health on harm reduction, there is likely overrepresentation of higher-risk individuals. Many of the study participants would be deferred from donation based on other criteria, such as accepting money

or drugs for sex, or injection drug use. For example, in the studies included in the meta-analysis by Becasen et al.,<sup>23</sup> from 1.2 to 82% of respondents had participated in sex work, while 0.7% to 40.5% had used injection drugs. The ideal study would focus on individuals who were likely to meet other donor eligibility criteria, with no history of injection drug use or accepting money or drugs for sex. Additionally, studies do not provide specific risk data for people who self-identify as nonbinary or gender fluid. Recognizing these limitations, studies indicate that trans people are at higher risk of HIV, with trans women with a male sex partner being at highest risk.<sup>23-27</sup>

### REGULATORY STANDARDS AND CURRENT PRACTICE

In the United States, the revised recommendations for reducing the risk of HIV transmission by blood and blood products, issued by the US Food and Drug Administration (FDA) in December 2015, state that “in the context of the donor history questionnaire, FDA recommends that male or female gender be taken to be self-identified and self-reported.”<sup>28</sup> No guidance is provided for screening donors who do not self-identify as male or female. Before 2015, FDA guidance had required donors to answer screening questions based on sex assigned at birth. However, unlike the recommended changes in MSM deferral policy, the guidance document does not provide any background information or supporting data for this policy change for trans people, nor does it address nonbinary donors.

The AABB Donor History Task Force surveyed US and Canadian blood centers regarding their policies in 2016 and 2017. The survey was sent to members of America’s Blood Centers, the American Red Cross, AABB member hospital collection facilities, and CBS and Héma-Québec. Results were presented in an AABB eCast.<sup>12</sup> In 2016, 58.5% of 65 participating blood centers allowed trans people to donate, and an additional 25% did so “under specific circumstances,” such as a medical inquiry. In 2017, 83% of 40 participants allowed trans people to donate, with another 10% doing so under specified circumstances. Almost all participants reported they were able to change the donor’s gender in their BECS; 97% only had male/female gender options, while 3% had possible gender selections beyond the male/female binary available. Several different approaches were being used by centers to assess sexual risk behaviors, summarized in Table 3, with no one approach in use by the majority of respondents. Similarly, different approaches were being used to address TRALI risk, with no one predominant strategy.

There are no regulatory standards specifically addressing eligibility of trans people in Canada. Currently, Héma-Québec performs individual risk assessments of donors, while CBS has adopted standardized criteria, approved by the regulator, Health Canada, outlined below.

**TABLE 3. Summary of responses, AABB survey on trans donor policies, 2017 N = 35\*<sup>12</sup>**

Questions	n	%
Trans masculine, donor questionnaire		
• Allow donors to self-designate and screen accordingly <sup>†</sup>	15	43
• Donors identified in birth sex	9	26
• Donors asked male and female questions <sup>†</sup>	5	14
• Other	6	17
Trans feminine, donor questionnaire		
• Allow donors to self-designate and screen accordingly	15	43
• Donors identified in birth sex <sup>†</sup>	11	31
• Donors asked male and female questions <sup>†</sup>	7	20
• Other	2	6
TRALI risk, trans masculine donors		
• Ask all donors about history of pregnancy	11	32
• Ask all trans donors male and female questions	5	14
• Screen in birth sex, therefore ask about pregnancy	7	20
• Do not ask about pregnancy	7	20
• Other	5	14

BECS = blood establishment computer system; MSM = men who have sex with men; TRALI = transfusion-related acute lung injury.

\* Five other respondents do not allow trans individuals to donate because they are unable to change donor gender in the BECS (n = 4) or concern over TRALI risk (n = 1)

† Donors with a male sexual partner would be considered MSM and deferred by these criteria (MSM in past 12 months at the time of the survey in the United States and Canada)

Council of Europe Directives state that people with high-risk behavior should be deferred but do not define high-risk populations. The directives do not provide specific guidance for trans people.<sup>29</sup> In the United Kingdom, National Health Service Blood and Transplant criteria state, “A careful and sympathetic consideration of sexual risk factors needs to be undertaken.”<sup>30</sup> A trans woman can donate, provided there was no previous history of high-risk sexual activity. Presumably, this assessment would usually require an individual medical inquiry. No guidance is given about trans men’s eligibility to donate. The Australian Red Cross Blood Service (Australian Red Cross Lifeblood) defers all trans donors for 12 months if they have had sex with a male (male donors are asked about sex with another male in the past 12 months, with a 12-month deferral after last sexual contact); there is a considerable amount of information on their Web site explaining blood center policies, including the limitation of the choice of either male or female in the

BECS.<sup>31</sup> Other blood centers, such as the CBS and American Red Cross, also have information about trans people and blood donation on their Web sites.<sup>32,33</sup>

## CBS'S EXPERIENCE

### Development of standard criteria

Our own experience with screening trans donors illustrates many of the difficulties discussed above. Until 2016, CBS used the medical inquiry process to screen trans donors. As the number of known trans donors increased from a handful to over 50 donors annually, there was clearly a need for more standardization to avoid inconsistent criteria and screening practices. The situation became more emergent in 2016, with the introduction of a self-administered electronic donor questionnaire. Before this, the same paper questionnaire was completed by all donors and included questions (identified in parentheses) to be answered by female- and male-designated donors only. When using the paper questionnaire, the CBS physician could request that both (male/female) questions were asked of trans donors. However, using the electronic questionnaires, the questions asked are automatically selected based on the donor's designation as male or female in the BECS. Screening staff therefore needed instructions on how trans people should be treated to allow them to register as donors and handle all the practical issues arising in registration and screening. Relevant procedures and criteria had to be submitted for approval by the regulator, Health Canada, before implementation.

Determining evidence-based criteria that could be operationalized in our system was a challenge, as described above, in part due to lack of high-quality, relevant epidemiologic data in Canada. However, it was clear from available studies in Canada and internationally that trans women with male sex partners were a high-risk group for HIV; there were limited data regarding trans men. Donors identified as male in our BECS are asked "in the past 3 months have you had sex with a male" and deferred for 3 months after their last sexual encounter. Donors identified as female are asked "in the past 3 months have you had sex with a male who has had sex with another male in the past 12 months" and deferred for 3 months after their last sexual encounter. Trans women would therefore only be presented with the question about sex with a male partner if they were identified as male (their sex assigned at birth) in our BECS. Given these constraints, we decided that most trans donors would be screened in the sex assigned to them at birth, leading to deferral of trans women donors in the highest-HIV-risk group. People who identify as nonbinary, gender X, or gender fluid are also screened in their birth sex.

We wanted to be able to screen at least some trans donors in their affirmed gender. As a first step, we decided that donors who had completed genital gender-affirming surgery would be screened in their surgically affirmed

gender. We reasoned that the high-risk questions in the donors' surgically affirmed gender would be more fitting to determine the sexual partner risk category. The criteria were approved by the regulator and implemented within weeks of introduction of the electronic questionnaire. Initially, there was a 12-month deferral period after surgery, which has now been reduced to 3 months. Since the longest deferral for high-risk sexual behavior is currently 3 months, this avoids having to assess donor sexual risk before genital gender-affirming surgery. Donor Hb and EBV eligibility criteria are based on the donor's current designation as male or female in the BECS.

In November 2016, we added a code to our BECS for all donors identified as trans, to guide component production and reduce TRALI risk. Whole blood donations of people with this code are processed in the same way as a donation from a donor designated as female in our BECS. We do not ask female whole blood donors about a history of pregnancy; rather, all donations from female donors are treated as having a possible higher risk of TRALI, with plasma sent for fractionation rather than transfusion, and not used to suspend a buffy coat platelet pool.

## RESULTS OF IMPLEMENTATION

The addition of a BECS code enabled us to track demographic and donation data from identified trans donors. Between November 2016 and August 2019, there have been 346 donors with a trans code applied who have given 1038 donations. There have been no transmissible disease-positive donations from trans-code donors to date. Compared to our entire donor base, trans donors are from similar geographic regions but are more likely to be first time donors (31% vs. 23%;  $p < 0.01$ ), and be under age 40 (86% vs. 47%;  $p < 0.01$ ). Sixteen percent of trans donors are aged 17 to 20, and 35.6% are aged 21 to 25; in our general donor base, 5.5% of donors are aged 17 to 20, and 13% are aged 21 to 25 ( $p < 0.001$ , donors donating September 1, 2018, to August 31, 2019). All CBS donors are asked if they have consulted a doctor for a health problem or had surgery in the 6 months before donation, and if they have taken any medication in the 3 days before donation; donors answering affirmatively are asked about the underlying reason for medical consultation or medication use. Table 4 summarizes responses regarding use of hormonal therapy or other medical/surgical care. Overall, 78% of trans donors might have been identified as trans by hormonal use and/or consulting with a physician for trans-related health care.

### Community engagement and cultural competence and sensitivity training

Although adoption of national criteria has allowed successful repeat donations by many trans donors, this has been a far-from-optimal process as experienced by some from the

**TABLE 4. Hormonal therapy or other medical/surgical care at time of index donation, trans donors, November 2016 to August 2019 (N = 346)**

Health information	n (% of trans donors)
Hormones	242 (70)
Estrogens and/or spironolactone	82 (24)
Androgens	160 (46)
Medical care, trans related	125 (36)
Also on hormones	96 (28)
Not on hormones	29 (8)
Hormones and/or medical care	271 (78)

trans communities in Canada. Criticism started with a lack of early engagement with trans communities as an important component in criteria change process. The screening policy focus on gender-affirming surgeries was heavily criticized, as community members felt that this stipulation over-emphasized the role of gender-affirming surgery in the transition process because many trans people choose not to undergo, or have barriers to accessing, surgical affirmation procedures. Dissatisfaction with how trans donors are designated in the BECS, as well as concerns about staff cultural competency, were stridently expressed by these communities. Although there had been some outreach to individual trans people interested in blood donation, there had been no stakeholder consultations focused primarily on trans communities before adoption of the new policies; this was, in part, related to CBS’s perceived organizational need to adopt policies rapidly after switching to an electronic questionnaire.

As a result, CBS has committed to working with members of the community to improve the donor screening process and ensure that all potential donors are treated with respect and dignity. Engagement efforts also created an opportunity for CBS to share information with trans communities about how the blood system is managed and regulated and about how blood and blood products are tested and processed. Blood center medical and scientific personnel explained which patient groups are dependent on blood for survival, and the central role of safety in the development and regulatory approval of blood center policies since the 1980s, when thousands of Canadian recipients of blood and blood products were infected with HIV and hepatitis C virus.

We held two face-to-face meetings that occurred in Vancouver and Toronto. Key recommendations from those trans communities were for clearer and more consistent screening processes, and applying risk-based, gender-neutral screening policies; the summary of these consultations is available on our Web site.<sup>32</sup> One consultation participant noted that “even though CBS still has a lot of work to do, you’re always present and willing to have the tough discussions required to continue to improve your processes. Thanks for that.” Additionally, many expressed strong recommendations for cultural competency training of donor-facing staff and stipulated that trans people should collaborate on this training to capture their lived experiences. As a result, two trans people were hired to codesign two electronic, interactive cultural-competence training modules that were launched as part of our diversity and inclusion strategy; the LGBTQ sensitivity module is mandatory for all staff, and a trans-inclusivity training module is mandatory for donor-facing

**TABLE 5. Tips for having culturally competent discussions<sup>1,7,34</sup>**

Phrases to avoid	Why this is problematic	Say this instead
<ul style="list-style-type: none"> <li>• “Born a man/woman”</li> <li>• “When you were a woman/man”</li> <li>• “Your <i>real</i> name” (when confirming legal name that differs from chosen name) or putting chosen name in quotations</li> <li>• “Sex change” or asking about gender-affirming surgery when you do not need to</li> </ul>	<ul style="list-style-type: none"> <li>• Many trans people do not relate to the sex assigned to them at birth</li> <li>• Implies that chosen names are less valid</li> <li>• Names are an important part of identity</li> <li>• Overemphasizes surgery</li> <li>• Not all trans people have surgery</li> </ul>	<ul style="list-style-type: none"> <li>• “Sex assigned at birth”</li> <li>• “Previously”</li> <li>• “Legal name” if required only for legal purposes. Explain why you are asking</li> <li>• Use name in all discussions. Introduce donor by name to others in the donor center</li> <li>• “Gender-affirming/confirming procedures”</li> </ul>
<b>Key cultural competency principles</b>		
<ul style="list-style-type: none"> <li>• Ask and use pronouns: Sharing your pronouns encourages donors to share theirs. Introduce donors using their pronouns to others in the donor center. Alternatively, simply introduce donors using their name or as “the donor.”</li> <li>• Sexual orientation (who a person is attracted to) and gender (who a person is) are independent of each other.</li> <li>• If you <i>must</i> know about the past/pretransition (medical history or legal name), explain privately why you are asking.</li> <li>• Explain deferrals in gender-neutral language, based on the donor’s anatomy and the anatomy of their partner.</li> <li>• What if you say the wrong thing? Apologize and use the correct terminology/pronoun/name. Make a sincere effort to use the right language moving forward.</li> <li>• Organizational cultural competence includes striving for gender-neutral policies/language/facilities including gender-neutral washrooms and trans symbolism in public places; trained staff, including diverse identities in focus groups, and advertising, as well as continued community engagement.</li> </ul>		

staff. Our goal was to enable a more consistent and standardized approach to cultural competence that reinforces use of proper terminology, increases consideration and sensitivity, and provides tools to staff to feel more at ease in interacting with trans donors as summarized in Table 5.<sup>1,7,34</sup> Anecdotal feedback from staff and donors about this training has been very positive.

CBS continues to engage with trans people and LGBTQ organizations and community groups through community conversations at various meetings and local venues across Canada, such as Pride events and postsecondary school campus meetings.

## FUTURE DIRECTIONS

Blood centers are part of the larger community, and broader societal contextual issues affect us and our ability to relate to donors. It is important to recognize that blood donation occurs in the broader social context of growing recognition of a gender spectrum. Inclusiveness of trans people is a journey. Some of the initial groundwork has now been laid and, in this article, we outlined some of the issues that we have encountered, and some possible next steps. The greatest impediment to facilitating blood donation in a way that is fair and safe for trans and cis donors and recipients alike is the dearth of relevant and specific research. Research areas of high importance include both epidemiologic studies of sexual risk factors in trans communities, and optimal approaches to donor screening questions specific to gender diversity.

There is also a need to determine how to best welcome trans people in, and into, blood donor communities. Surveys should be carried out involving current blood donors so as to better understand the gender spectrum and trans people's willingness to answer alternative questions, such as sex assigned at birth and current gender. Similar studies in the past regarding MSM and donor eligibility indicated that the majority of donors were supportive of alternative methods of risk assessment.<sup>35</sup> Collaboration with trans community members, including academic scholars, is essential for future research trajectories and development of blood center policies. Sensitivity and cultural competency training programs should be part of regular, ongoing staff training and development and require frequent updating in this rapidly evolving area.

More gender-inclusive features are needed in BECS to allow donors to self-identify and be presented with the optimal questionnaire to determine donor safety and infectious and TRALI risk. Determining which features are required, and how more flexibility could be incorporated to allow blood centers to configure the system to meet their needs will require leadership and collaboration between blood centers and information technology vendors, along with input from trans communities. Finally, blood centers should share their successes and challenges in developing policies

to better serve trans people while maintaining donor and recipient safety.

## CONFLICT OF INTEREST

The authors have disclosed no conflicts of interest.

## REFERENCES

1. Egale Canada Human Rights Trust. Glossary of terms. [cited 2019 Dec 17]. Available from: <https://egale.ca/wp-content/uploads/2017/03/Egales-Glossary-of-Terms.pdf>.
2. CDC, Division of HIV/AIDS Prevention. HIV and Transgender people. [cited 2019 Dec 17]. Available from: <https://www.cdc.gov/hiv/pdf/group/gender/transgender/cdc-hiv-transgender-factsheet.pdf>.
3. James SE, Herman JL, Rankin S, Keisling M, Mottet L, Anafi M. The Report of the 2015 U.S. Transgender Survey. Washington DC: National Center for Transgender Equality. [cited 2019 Dec 17]. Available from: <https://www.ustransurvey.org/reports>.
4. Flores AR, Herman JL, Gates GJ, Brown TNT. How many adults identify as transgender in the United States?. The Williams Institute. 2016. [cited 2019 Dec 17]. Available from: <https://williamsinstitute.law.ucla.edu/wp-content/uploads/How-Many-Adults-Identify-as-Transgender-in-the-United-States.pdf>.
5. Bauer GR, Hammond R, Travers R, et al. "I don't think this is theoretical; This is our lives": How erasure impacts health care for transgender people. *J Assoc Nurses AIDS Care* 2009;20: 348-61.
6. Snelgrove JW, Jasudavicius AM, Rowe BW, et al. "Completely out-at-sea" with "two-gender medicine": a qualitative analysis of physician-side barriers to providing healthcare for transgender patients. *BMC Health Serv Res* 2012;12:1-13.
7. Deutsch M. Creating a safe and welcoming clinic environment [Internet]. Centre for Excellence in Transgender Health 2016 [cited 2019 Aug 13]. Available from: <https://transcare.ucsf.edu/guidelines/clinic-environment>.
8. Lane R. Developing inclusive primary care for trans, gender-diverse and nonbinary people. *CMAJ* 2019;191:E61-2.
9. Karp JK, Hall N. I am Cait, and I am a transgender blood donor. *Transfusion* 2017;57:705-8.
10. Woo JS, Pach D, Perez-Alvarez I, et al. Transcending gender: recognizing the impact of gender identity on blood collection. *Transfusion* 2019;59:2481-2.
11. Mostovoy M. Blood centers are beginning to write policy covering transgender donors. AABB.org September 2018 AABB News. [cited 2019 Dec 17]. Available from: <http://www.aabb.org/programs/publications/news/2018/Docs/news1809.pdf#search=Blood%20centers%20are%20beginning%20to%20write%20policy%20covering%20transgender%20donors>.
12. AABB eCast. Transgender Donors: Everything you wanted to know but were afraid to ask! January 2018. Master Program Number: 18EL-301. [cited 2019 Dec 17]. Available from: <http://www.aabb.org/development/elearning/Pages/301.aspx>.



13. Movement Advancement Project. Equality maps: State non-discrimination laws [Internet]. Movement Advancement Project. Boulder, CO; 2018 [cited 2019 Aug 13]. Available from: [http://www.lgbtmap.org/equality-maps/non\\_discrimination\\_laws](http://www.lgbtmap.org/equality-maps/non_discrimination_laws).
14. Change the sex designation on your government IDs, Ontario. [cited 2019 Dec 17] Available from: <https://www.ontario.ca/page/change-sex-designation-your-government-ids>.
15. Bill C-16 (Royal assent) An act to amend the Canadian human rights act and the criminal code 64-65-66 ELIZABETH II Ottawa: First Session, Forty-second Parliament; 2017. [cited 2019 Dec 17] Available from: <https://www.parl.ca/DocumentViewer/en/42-1/bill/C-16/royal-assent>.
16. Mays JA, Greene DN, Metcalf RA, et al. Transfusion support for transgender men of childbearing age. *Transfusion* 2018;58: 823-5.
17. Wylie K, Knudson G, Khan SI, et al. Serving transgender people: clinical care considerations and service delivery models in transgender health. *Lancet* 2016;388:401-11.
18. Spencer BR, Johnson B, Wright DJ, et al. Potential impact on blood availability and donor iron status of changes to donor hemoglobin cut-off and interdonation interval. *Transfusion* 2016;56:1994-2004.
19. Greene DN, McPherson GW, Rongitsch J, et al. Hematology reference intervals for transgender adults on stable hormone therapy. *Clin Chim Acta* 2019;492:84-90.
20. Public Health Agency of Canada. Summary: Estimates of HIV incidence, prevalence and Canada' progress on meeting 90-90-90 HIV targets, 2016. [cited 2019 Dec 17]. Available from: <https://www.canada.ca/en/public-health/services/publications/diseases-conditions/summary-estimates-hiv-incidence-prevalence-canadas-progress-90-90-90.html>.
21. Bauer GR, Travers R, Scanlon K, et al. High heterogeneity of HIV-related sexual risk among transgender people in Ontario, Canada: a province-wide respondent-driven sampling survey. *BMC Public Health* 2012;12:1-12.
22. Bauer GR, Redman N, Bradley K, et al. Sexual health of trans men who are gay, bisexual, or who have sex with men: results from Ontario, Canada. *Int J Transgend* 2013;14:66-74.
23. Becasen JS, Mullins MM, Higa DH, et al. Estimating the prevalence of HIV and sexual behaviors among US transgender population: a systematic review and meta-analysis, 2006-2017. *Am J Public Health* 2019;29:e1-8.
24. Habarta N, Wang G, Mulatu MS, et al. HIV testing by transgender status at CDC-funded sites in the United States, Puerto Rico, and US Virgin Islands, 2009-2011. *Am J Public Health* 2015;105:1917-25.
25. Pitasi MA, Oraka E, Clark H, et al. HIV testing among transgender women and men – 27 states and Guam, 2014-2015. *MMWR Morb Mortal Wkly Rep* 2017;66:883-7.
26. Baral SD, Poteat T, Strömdahl S, et al. Worldwide burden of HIV in transgender women: a systematic review and meta-analysis. *Lancet Infect Dis* 2013;13:214-22.
27. Reisner SL, Murchison GR. A global research synthesis of HIV and STI biobehavioural risks in female-to-male transgender adults. *Glob Public Health* 2016;11:866-87.
28. FDA Guidance Document. Revised Recommendations for Reducing the Risk of Human Immunodeficiency Virus Transmission by Blood and Blood Products. December 2015. [cited 2019 Dec 17]. Available from: <https://www.fda.gov/regulatory-information/search-fda-guidance-documents/revised-recommendations-reducing-risk-human-immunodeficiency-virus-transmission-blood-and-blood>.
29. Council of Europe, Guide to the Preparation use and Quality Assurance of Blood Components [cited 2019 Dec 17]. Available from: [https://www.edqm.eu/sites/default/files/list\\_of\\_contents\\_19th\\_ed-blood-quality.pdf](https://www.edqm.eu/sites/default/files/list_of_contents_19th_ed-blood-quality.pdf).
30. NHSBT donor selection guidelines. [cited 2019 Dec 17]. Available from: <https://www.transfusionguidelines.org/dsg/wb/guidelines/transgender-individuals>.
31. Australian Red Cross lifeblood, lgbtqi + donors. [cited 2019 Dec 17]. Available from: <https://www.donateblood.com.au/lgbtqi-donors>.
32. Can I donate? Trans individuals [Internet]. Ottawa: Canadian Blood Services: 2016. [cited 2016 Aug 19]. Available from: <https://www.blood.ca/en/blood/am-i-eligible/trans-individuals>.
33. American Red Cross Blood Services. Blood donation eligibility, LBGTQ + Donors. [cited 2019 Dec 17]. Available from: <https://www.redcrossblood.org/donate-blood/how-to-donate/eligibility-requirements/lgbtq-donors.html>.
34. GLAAD. Tips for Allies of Transgender People [Internet]. 2013. [cited 2019 Aug 13]. Available from: <https://www.glaad.org/transgender/allies>.
35. Goldman M, Yi QL, Ye X, et al. Donor understanding and attitudes about current and potential deferral criteria for high-risk sexual behavior. *Transfusion* 2011;51:1829-34. 