

# **Risk of HIV did not change with expanding eligibility criteria for gay, bisexual and other men who have sex with men**

## **What is this research about?**

With a constant focus on maintaining a safe and adequate supply, Canadian Blood Services is committed to making blood donation as inclusive as possible. Currently, men can donate blood if it has been more than three months since their last sexual contact with a man. This is the latest in a series of progressively shorter time-based deferrals: from an indefinite deferral introduced in the mid-1980s, to a 5-year deferral (2013), a 12-month deferral (2016), and now a 3-month deferral (2019). These eligibility changes have been supported by significant advances over the past three decades including better testing for transfusion-transmissible infections, the introduction of information technology systems to safely manage blood inventory and a better understanding of behaviours that expose individuals to new infections. Before and after the implementation of each change in the eligibility criteria, the safety of the blood supply and donors' observance of eligibility criteria were evaluated. Each evaluation indicated that the risk of HIV remained very low. This study looked at trends by assessing the residual risk of HIV and donor survey results between 2010 and 2021, a period encompassing all three eligibility criteria changes.

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**IN BRIEF: No increase in the residual risk of HIV was observed with progressively shorter time-based deferrals for sexually active men who have sex with men.**

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## **What did the researchers do?**

The researchers examined HIV testing data to assess HIV incidence and prevalence from 2010 to 2021. The residual risk of HIV — that is, the remaining risk of infection per million donations — was calculated using modelling that included HIV incidence rate and the testing window period (the timeframe when a newly acquired infection may not be reliably detected with testing). The researchers also conducted four anonymous online surveys of Canadian Blood Services' donors before and after implementation of new eligibility criteria. Each survey was sent to more than 18,000 donors, and response rates varied between 33.5 per cent and 49.7 per cent. The surveys gathered information on possible exposures to HIV (e.g.: intravenous drug use or sex with someone who has HIV) to understand whether donors were observing the eligibility criteria in place when they donated. The first three surveys included donors registered as male. The latest survey (2020/2021 – two years after the implementation of the 3-month deferral), included donors registered as male and female and also gathered data on donors' attitudes toward being asked sexual behaviour-based screening questions.

## What did the researchers find?

- Residual risk of HIV remained low and stable over the 10-year period, which encompassed 10.2 million donations and three progressively shorter time-based deferrals. The current residual risk of HIV is 0.05 (confidence interval: 0.001-0.371) per million donations.
- HIV-positive incident cases were extremely rare (4 in the time examined after the implementation of the 3-month deferral period). Neither HIV incidence nor prevalence changed with the incremental changes to the eligibility criteria.
- Gay, bisexual and other men who have sex with men (gbMSM) who donated blood did not report engaging in other behaviours that would lead to acquisition of a new HIV or other transfusion-transmissible infection.
- The number of gbMSM who are eligible to donate has increased with increasingly shorter time-based deferrals.
- Donor discomfort in being asked questions about their sexual activities and sexual partners was generally low.

## How can you use this research?

The findings show that with changes in eligibility criteria that affect gbMSM, HIV prevalence, incidence and residual risk in the blood system did not change and remained low. Surveys indicated that donors are aware and observant of donor eligibility criteria. Canadian Blood Services made a submission to Health Canada, our regulator, in December 2021 to move to sexual behaviour-based screening for all donors and blood collection types, regardless of donors' gender or sexual orientation. Such a change would represent the latest step to make blood donation more inclusive, without compromising the safety of blood products or the adequacy of supply. The results presented in this study provide important supporting evidence integral to evaluating safety when considering this change to eligibility criteria.

This **Research Unit** is derived from the following publication(s): Caffrey N, Goldman M, Osmond L, *et al.*: HIV incidence and compliance with deferral criteria over three progressively shorter time deferrals for men who have sex with men in Canada. *Transfusion* 2022. DOI: [10.1111/trf.16753](https://doi.org/10.1111/trf.16753).

**About the research team:** This research was led by **Dr. Sheila O'Brien**, associate director of epidemiology and surveillance at Canadian Blood Services and included members of Canadian Blood Services donation policy and studies group: **Dr. Niamh Caffrey** (senior research associate and lead author), **Dr. Mindy Goldman** (medical director, donation policy and studies group), **Dr. Lori Osmond** (research associate), **Dr. Qi-Long Yi** (senior biostatistician), and **Dr. Wenli Fan** (research associate).

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**Keywords:** donor, donation, eligibility criteria, MSM, men who have sex with men, safety, screening, sexual behaviour-based screening, transfusion transmitted infection

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