

Blood donation behaviour and attitudes towards the 12-month deferral policy among gay and bisexual men in New Zealand

Koson Tony Sriamporn¹  | Peter Saxton¹ | Nathan Consedine² |
Mohamed Hammoud³ | Garrett Prestage³

¹School of Population Health, University of Auckland, Auckland, New Zealand

²School of Medicine, University of Auckland, Auckland, New Zealand

³Kirby Institute, University of New South Wales, Sydney, New South Wales, Australia

Correspondence

Koson Tony Sriamporn, School of Population Health, University of Auckland, Grafton Campus, Auckland 1023, New Zealand.
Email: tony.sriamporn@auckland.ac.nz

Funding information

Australian Research Council, Grant/Award Number: RG132750; New Zealand AIDS Foundation Fellowship; New Zealand Mental Health Foundation

Abstract

Background and Objectives: Gay and bisexual men (GBM) are deferred from donating blood in many countries. Perceptions by GBM that blood donor deferral policies are unjustifiably discriminatory, especially due to advances in HIV prevention, could contribute to non-compliance and need to be understood. We explore blood donation interest and history among GBM and attitudes towards donor deferral policies for the first time in New Zealand (NZ).

Materials and Methods: Data from a cross-sectional online survey of GBM in NZ were examined. We constructed three groups: (1) never donated blood and not interested; (2) never donated but expressed interest; and (3) previously donated blood. We tested these for association with demographic and behavioural variables, as well as attitudes towards blood donation policy.

Results: A total of 607 GBM were eligible for the study, of whom 32.9% reported having donated blood previously, 44.3% had never donated blood but expressed interest and 22.7% expressed no interest in donating. Among previous donors, a third (8.6% of the total sample) reported non-compliance with the deferral policy. Most participants found the 12-month deferral policy to be too strict (81.8%), unfair (75.4%) and homophobic (68.8%).

Conclusion: We estimate that, for the first time in NZ, almost 10% of the sample did not report compliance with the 12-month deferral policy for men who have sex with men (MSM). Negative attitudes towards the deferral policy were common and could potentially increase the risk to the blood supply if compliance reduces. Further work is needed to inform a deferral policy that is accepted by GBM while maintaining the safety of NZ's blood supply.

Keywords

attitudes, blood donation, blood safety, deferral policy, donors, men who have sex with men

Highlights

- Blood donation behaviour, compliance, interest and attitudes among gay and bisexual men in New Zealand were similar to existing studies in other populations.

This is an open access article under the terms of the [Creative Commons Attribution-NonCommercial](https://creativecommons.org/licenses/by-nc/4.0/) License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited and is not used for commercial purposes.

© 2022 The Authors. *Vox Sanguinis* published by John Wiley & Sons Ltd on behalf of International Society of Blood Transfusion.

- Although negative attitudes were widespread, two-thirds of our sample complied with policy by not donating blood.
- Perceived injustices may contribute to non-compliance; ongoing efforts are needed to make the policy more inclusive while maintaining the safety of the blood supply.

INTRODUCTION

It remains a global challenge to formulate a blood donor deferral policy that maintains a safe blood supply while simultaneously minimizing bias on groups affected by the policy. In response to the growing pandemic of acquired immunodeficiency syndrome (AIDS) in the early 1980s, many countries restricted blood donations from groups at higher risk, including men who have sex with men (MSM). This precautionary approach to donation was necessary, at the time, to protect transfusion recipients against blood-borne transfusion transmissible infections (TTI) in the absence of testing that could detect the human immunodeficiency virus (HIV). However, these deferral policies have remained in place even as HIV testing technology has improved. MSM have criticized the policies as unnecessarily discriminatory, advocating that they be reduced or removed entirely.

The effectiveness of deferral policies in maintaining the safety, and the perceived safety of the blood supply, is determined by the level of non-compliance (i.e., donating despite being ineligible under deferral criteria). Although all types of donated blood are tested, there is a small but not zero chance that a non-compliant individual with an unrecognized incident TTI will donate, the infection will not be detected, and the blood will subsequently be transfused [1]. Additionally, for various reasons donors may withhold information about high-risk behaviours that would preclude donation. For example, in an interview with 272 Dutch repeat donors with confirmed TTI, 76 donors admitted to not complying with the deferral policy, mostly because of male-to-male sexual contact [2]. Non-compliance creates avoidable risks to the blood supply and to blood recipients [3–5]; these reasons should be explored in each policy setting.

Studies into MSM donor attitudes provide insight into why non-compliance might occur. In previous studies, MSM who donated blood in spite of being ineligible cited the unfairness of the exclusion as a reason to not self-defer [4, 6]. Other data suggest that non-compliant individuals did not want to disclose MSM behaviour at the point of donation [7, 8] and that they viewed their sexual behaviours as low-risk for HIV [1, 4]. Similarly, most of an Australian sample of MSM regarded that country's 12-month deferral policy to be 'unfair', 'homophobic' and 'too strict' given that most MSM adopted effective HIV prevention strategies [9]. Because of the cultural and behavioural differences across countries, MSM's negative attitudes towards the blood donor policy should be understood within each country's policy setting.

Contemporary blood donor deferral policies for MSM vary globally, as agencies attempt to reflect modern HIV testing methods, local HIV epidemiology and contemporary HIV prevention practices while allowing MSM to fairly participate in blood donation. Despite the current ability of proprietary laboratory-based nucleic acid testing to

reliably detect an incident HIV infection acquired after 2 weeks [10], a few countries still indefinitely exclude MSM from donating blood [11]. Other countries, like New Zealand (NZ), use time-based deferrals since prospective donors' reported last episode of oral or anal intercourse between men, ranging from 10 years to 3 months [11]. Recently, the United Kingdom adopted one of the least restrictive policies for MSM, where gender-neutral behavioural risk assessments are undertaken [12].

Little is known about donation attitudes in NZ. Like many countries, NZ has progressively reduced the time-based deferral for MSM, following evidence that such reductions would not increase the risk to recipients. In 2014, the NZ Blood Service (NZBS) convened an independent expert review of the deferral criteria based on sexual behaviours [13], resulting in a policy liberalization for MSM (a reduction from the 5-year deferral period to a 12-month deferral). The review considered but did not recommend removing oral sex (which carries a zero to the negligible risk of HIV transmission) as grounds for MSM deferral. It did, however, recommend that research be conducted among MSM to explore attitudes towards NZ's 12-month deferral policy to gain insight into likely compliance [13]. In the intervening years, the NZBS policy has continued to garner negative attention from MSM [13, 14], but despite this, no relevant research is available.

Our paper addresses this evidence gap by descriptively characterizing the past behaviours (including possible compliance), attitudes and intentions of NZ MSM regarding NZBS's 12-month blood donor deferral policy (spanning from 2015 to 2020) in a large national cross-sectional sample.

MATERIALS AND METHODS

Design

The Following Lives Undergoing Change (Flux) NZ Study is a confidential, online, national, cross-sectional survey that was adapted from the Australian Flux Study in partnership with the Kirby Institute at the University of New South Wales. Participants were recruited between December 2018 and February 2019 through social media, gay mobile applications, community organizations and in person at a community fair day in Auckland. To be eligible, participants had to be at least 16 years old, have had sex with another man in the last 6 months or identify as gay, bisexual or non-heterosexual. Consent was obtained before being sent a link to a questionnaire that was hosted online. No monetary compensation was offered for participation. The study was approved by the University of Auckland Human Participant Ethics Committee (#020977).

Participants

During the study period, people living with HIV or who have ever injected non-prescription drugs were permanently deferred from donating blood in NZ and were therefore excluded from analyses. Participants were also excluded if they did not provide a response to the question 'Have you previously donated blood?' To note, when referencing behaviour and policy, we refer to the population as MSM. However, when discussing the impact on the community, we refer to gay, bisexual and other MSM Gay and bisexual men (GBM).

Measures

Items included basic demographics and questions regarding their sexual identity, self-reported HIV status and pre-exposure prophylaxis use. Age was simplified into three categories, under 30, between 31 and 45, and over 45. Education was measured as a binary variable: those with and those without a University degree. Participants were able to report multiple ethnicities as per standard NZ Census practices; these responses were recoded into six single levels according to the following hierarchical order [15]: Māori, Pacific, Asian, Middle Eastern, Latin American or African, Other, then NZ European.

MSM self-reported risk and testing behaviours in the last 6 months relevant to the recent UK FAIR blood recommendations [16]; these responses were dichotomised (yes/no). MSM also reported recent HIV and sexually transmitted infection (STI) testing behaviour and any STI diagnoses in the last 6 months.

Questions surrounding attitudes and intentions towards blood donation and deferral policies were taken from the Australian FLUX Study [9] with no further adaptations for the NZ setting. At the time, both the NZ and Australian deferral for MSM were set at 12 months. Participants were asked to rate how much they agreed with eight

statements on a 6-point Likert scale (1 = strongly disagree to 6 = strongly agree). Participants were also asked about their awareness of the blood donor deferral policy, and previous donors were asked, 'did you have anal or oral sex with another man 12-months prior to donating' to measure compliance.

Analysis

Data were analysed using IBM SPSS Statistics 27 (IBM Corp). Participants were stratified into three discrete blood donation status groups: (1) Never donated blood and not interested, (2) never donated but expressed interest, and (3) previously donated blood. All categorical variables were described using basic frequencies and proportions, then a test for independence between donation status groups was assessed using Pearson's χ^2 test for independence and *p*-values were reported for significant differences in proportions. Four blood donation attitudinal and four intention items were split into two categories, and responses 1–3 were recoded as 'agree' and 4–6 were recoded as 'disagree' to describe the overall response proportion. Further, we used a series of one-way analyses of variance tests to investigate significant differences between blood donation status groups in their responses to the attitudinal and intention items, and post hoc comparisons were conducted for each significant model. Type I errors of 5% with Bonferroni corrections were used for all analyses.

RESULTS

Figure 1 shows the flow chart of the 836 MSM who completed the FLUX questionnaire into the final sample of 607 MSM. Two-thirds of this sample (67.5%) had not donated blood before. Among those who had never donated, 64.7% expressed interest in donating blood in the

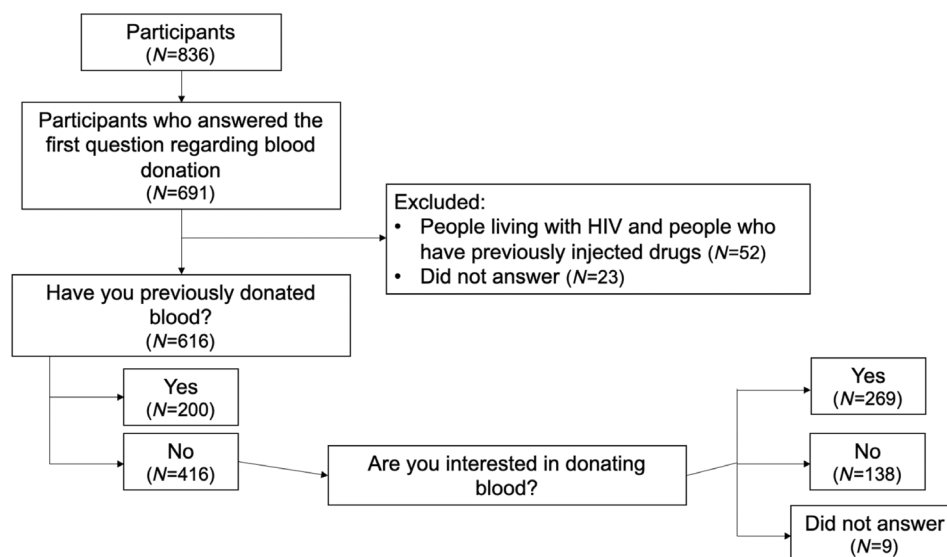


FIGURE 1 Participant flow diagram

TABLE 1 Sample characteristics, history of blood donation and interest in donation

Variables	Never donated, not interested (%)	Never donated, interested (%)	Previously donated (%)	Total sample (%)	χ^2 (df), p-value
	138 (22.7)	269 (44.3)	200 (32.9)	607 (100)	
Age					
<30	57 (41.3)	153 (56.9) ^a	88 (44.0)	298 (49.1)	23.05 (4), <0.001
31–45	39 (28.3)	82 (30.5)	61 (30.5)	182 (30.0)	
45<	42 (30.4)	34 (12.6) ^a	51 (25.5)	127 (20.9)	
Education					
No University degree	58 (42.0)	155 (57.6) ^a	89 (44.5)	302 (49.8)	12.16 (2), 0.002
University degree	80 (58.0)	114 (42.4) ^a	111 (55.5)	305 (50.2)	
Employment					
Employed full-time	83 (60.1)	155 (58.1)	136 (68.3)	374 (61.9)	12.39 (6), 0.054
Employed part-time	15 (10.9)	28 (10.5)	14 (7.0)	57 (9.4)	
Student	20 (14.5)	61 (22.8)	34 (17.1)	115 (19.0)	
Other	20 (14.5)	23 (8.6)	15 (7.5)	58 (9.6)	
Ethnicity					
NZ European	105 (76.1)	207 (77.0)	151 (76.3)	463 (76.5)	11.81 (10), 0.298
Maori	14 (10.1)	26 (9.7)	22 (11.1)	62 (10.2)	
Pacific	0 (0.0)	8 (3.0)	9 (4.5)	17 (2.8)	
Asian	14 (10.1)	16 (5.9)	10 (5.1)	40 (6.6)	
MELAA	4 (2.9)	6 (2.2)	3 (1.5)	13 (2.1)	
Other	1 (0.7)	6 (2.2)	3 (1.5)	10 (1.7)	
HIV status					
HIV positive	<i>Excluded</i>				
HIV Neg, PrEP	29 (21.0)	51 (19.0)	39 (19.5)	119 (19.6)	5.17 (4), 0.271
HIV Neg, no PrEP	84 (60.9)	159 (59.1)	133 (66.5)	376 (61.6)	
Never tested/unknown	25 (18.1)	59 (21.9)	28 (14.0)	112 (18.5)	
Identity					
Gay	107 (77.5)	214 (79.6)	155 (77.5)	476 (78.4)	0.37 (2), 0.832
Bisexual/others	31 (22.5)	55 (20.4)	45 (22.5)	131 (21.6)	

Note: Some cells may not equal 100% due to missing data.

^aSignificant differences from expected cell value ($p < 0.05$ with Bonferroni corrections).

future (44.3% overall), 33.2% were not interested (22.7% overall), and the remaining 2.1% ($N = 9$) participants were excluded from analyses as they did not provide a response.

Table 1 shows the demographic characteristics of participants according to their blood donation status. The mean age was 34.2 years old ($SD = 14.2$). Post hoc comparisons between donation status groups showed a higher proportion of MSM under 30 who were interested in donating but had never done so (56.9%; $p = 0.020$). We also found a lower proportion of MSM aged over 45 years old who were interested in donating compared to the other age groups (12.6%; $p < 0.001$) and a higher proportion of those without a University degree who expressed interest in donating blood in the future (57.6%; $p = 0.003$).

A third of the participants (32.5%) had donated blood. Table 2 summarizes the last time participants donated blood, most (28.5%) during 2015–2020 when deferral was 12 months. Of these previous

TABLE 2 Previous donors' latest donation event stratified by deferral period

Year	NZBS deferral period	Total (%)
Before 1983	N/A ^a	9 (4.5)
1984–1998	N/A ^b	40 (20.0)
1999–2008	10 years	47 (23.5)
2009–2014	5 years	44 (22.0)
2015–2020	12 months	57 (28.5)
<i>Did not answer</i>		3 (1.5)

^aBefore NZ's first AIDS diagnosis in 1983.

^bNo deferral times were set before NZBS was established in 1999. However, MSM were asked to not donate blood. This practice may have varied by regional services.

donors, 53 (8.7% of the sample population) reported having had anal or oral sex with another man within the 12 months before donating blood, 140 had not and the remaining 7 did not answer.

TABLE 3 Risk and testing behaviours in the last 6 months

Variables	Never donated, not interested (%)	Never donated, interested (%)	Previously donated (%)	Total sample (%)	χ^2 (df), p-value
Number of sexual partners					
0	20 (14.5)	36 (13.4)	29 (14.5)	85 (14.0)	0.46 (4), 0.978
1	31 (22.5)	67 (24.9)	46 (23.0)	144 (23.7)	
2+	87 (63.0)	166 (61.7)	125 (62.5)	378 (62.3)	
Exchanged money for sex					
Yes	18 (13.0)	34 (12.7)	19 (9.5)	71 (11.7)	1.45 (2), 0.484
No	120 (87.0)	233 (87.3)	181 (90.5)	534 (88.3)	
Tested for STI					
Yes	81 (58.7)	153 (56.9)	110 (55.0)	344 (56.7)	0.46 (2), 0.794
No	57 (41.3)	116 (43.1)	90 (45.0)	263 (43.3)	
STI diagnosis					
Yes	19 (14.0)	39 (14.5)	25 (12.8)	83 (13.8)	0.29 (2), 0.864
No	117 (86.0)	230 (85.5)	171 (87.2)	518 (86.2)	
Non-injecting recreational drug use					
Yes	70 (50.7)	161 (60.3)	115 (57.8)	364 (57.3)	3.44 (2), 0.179
No	68 (49.3)	106 (39.7)	84 (42.2)	258 (42.7)	

Note: Cells may not add up to N = 607 due to missing data.

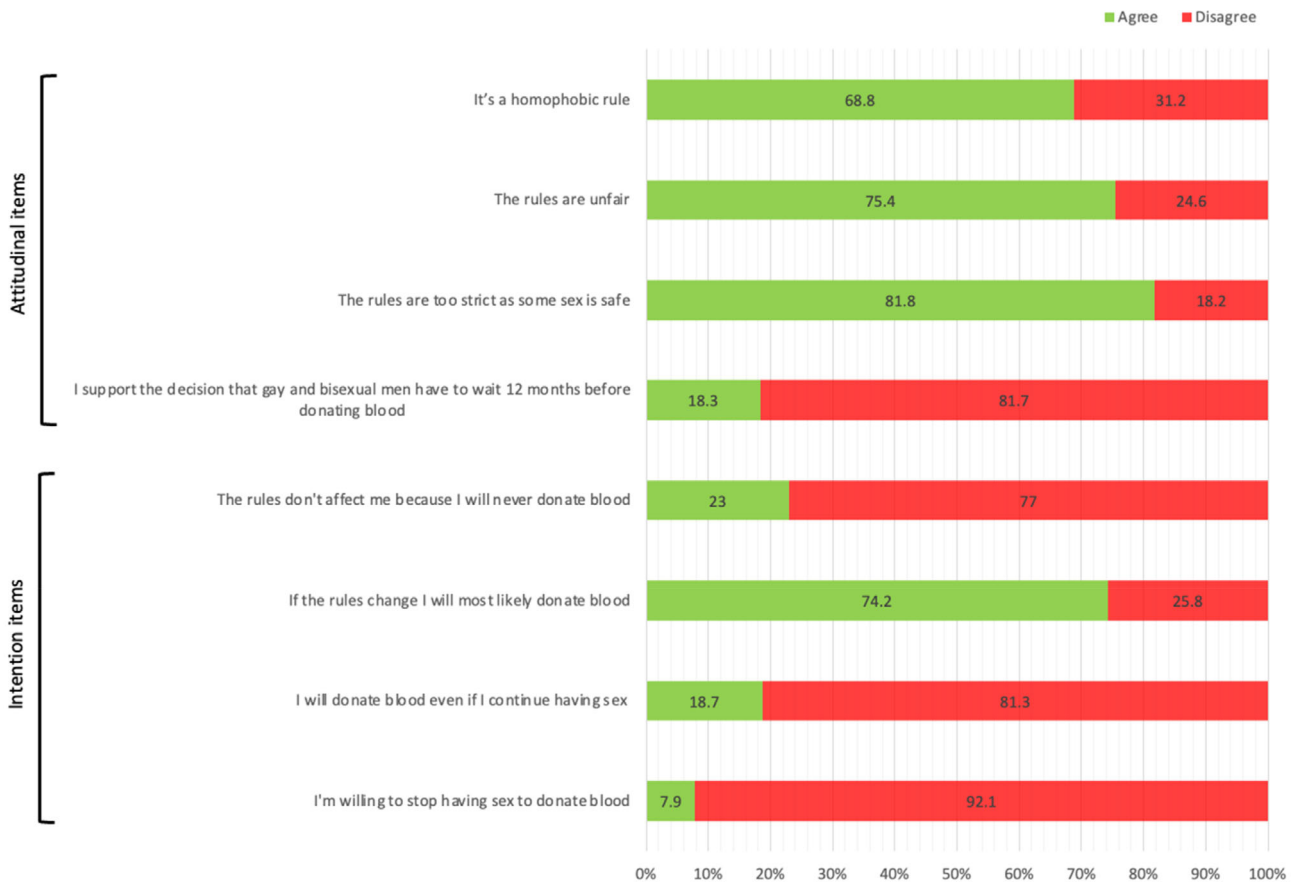


FIGURE 2 Proportion of the total MSM population who agree/disagree

TABLE 4 Mean and SD responses to attitudes towards blood donation policy in 2019

Variables	Never donated, not interested (NN)	Never donated, interested (NI)	Previously donated (PD)	Total sample	F(df), p-value	Post hoc comparisons
Attitudinal items						
<i>It is a homophobic rule.</i>	3.93 (1.8)	4.43 (1.7)	4.06 (1.8)	4.19 (1.8)	4.59 (2597), 0.011	NN < NI*
<i>The rules are unfair.</i>	4.10 (1.7)	4.76 (1.6)	4.43 (1.7)	4.51 (1.7)	7.40 (2595), 0.001	NN < NI*
<i>The rules are too strict as some sex is safe.</i>	4.17 (1.6)	4.85 (1.4)	4.69 (1.5)	4.65 (1.5)	9.21 (2595), <0.001	NN < NI*, PD**
<i>I support the decision that gay and bisexual men have to wait 12 months before donating blood.</i>	2.71 (1.7)	1.84 (1.3)	2.21 (1.6)	2.15 (1.5)	15.47 (2598), <0.001	NN > NI**, PD*; NI < PD*
Intention items						
<i>The rules do not affect me because I will never donate blood.</i>	4.38 (1.5)	1.70 (1.1)	1.77 (1.3)	2.32 (1.7)	217.77 (2588), <0.001	NN > NI**, PD**
<i>If the rules change I will most likely donate blood.</i>	2.51 (1.4)	5.07 (1.3)	4.89 (1.6)	4.44 (1.8)	157.66 (2593), <0.001	NN < NI**, PD**
<i>I will donate blood even if I continue having sex.</i>	1.89 (1.3)	2.22 (1.6)	2.15 (1.6)	2.12 (1.6)	2.10 (2595), 0.123	ns
<i>I am willing to stop having sex to donate blood.</i>	1.45 (0.9)	1.69 (1.2)	1.65 (1.2)	1.62 (1.1)	2.19 (2591), 0.112	ns

Note: Mean (SD). ANOVA with Bonferroni corrections was conducted for mean differences between groups. * $p < 0.05$, ** $p < 0.001$. Measured on a 1–6 Likert scale (1 = strongly disagree, 6 = strongly agree).

Overall, the prevalence of risk and testing behaviours in the past 6 months did not significantly differ between the three blood donation status groups (Table 3).

Blood donation

Most (83.8%) of those who had previously donated reported awareness of the blood deferral policy, which was not significantly different to those who had never donated but expressed interested (82.5%) and not interested in donating (77.2%; $F(2) = 2.50$, $p = 0.287$).

Attitudinal items

Figure 2 shows the proportions of MSM who agreed and disagreed with each of the items. A high proportion of our overall sample viewed the rules to be 'unfair' (75.4%) and 'homophobic' (68.8%). Around four in five MSM did not support the 12-month deferral period in place at the time of the study (81.7%) and believed these rules to be 'too strict' as some sexual activities are safe (81.8%). Post hoc tests (Table 4) revealed that interested non-donors were least supportive of the policy ($ps < 0.026$), and consistently held significantly more negative attitudes ($ps < 0.022$) compared to non-interested non-donors. In comparison to other groups, non-donating MSM, who showed no interest in donating, viewed the deferral rules to be the least strict ($ps < 0.008$).

Intention items

Three-quarters (77.0%) of the sample believed that the rules affected them because they will donate blood in the future, with non-interested non-donors indicating that the rules would impact them the least compared to the other two groups ($ps < 0.001$). Overall, 74.2% of all MSM would donate in the future if the rules changed, but post hoc tests showed that the responses were the strongest among interested donors ($p < 0.001$) and previous donors ($p < 0.001$) when compared to non-interested MSM who had never donated. Despite low support for the deferral policy, the majority would not donate blood if they continued to have sex (81.3%). However, most of our sample (92.1%) were not willing to stop having sex with other men in order to donate blood.

DISCUSSION

We show for the first time in NZ that a third of MSM surveyed have donated blood at least once in their lifetime. A third of previous donors, comprising 8.6% of the total sample, reported that they had sex with another man 12 months before donating blood; that is, apparent non-compliance with the deferral policy. Among the non-donors, two-thirds reported interest in donating blood in the future.

Overall, despite high levels of negative attitudes reported across our three donation status groups, two-thirds of the sample did not donate blood and reported compliance with the policy.

A strength of our data is that it was collected from a study that was promoted as research on HIV risk behaviours among MSM, not blood donation. This may have minimized study participation biases and provided a more accurate estimate of MSM's attitudes towards blood donation. The self-reported online survey completion mode may have a limited bias in social desirability responding as blood donation is seen as a desirable act [17] among MSM [18]. Although the Flux NZ study of higher risk MSM samples (half of our sample reported recreational drug use and a tenth exchanged money for sex), their engagement in contemporary HIV prevention and gay social practices means they are of interest to blood donation policymakers.

Limitations include the data being self-reported. We cannot verify previous donations, nor did we follow up with previous donors to request more information about past donations. At the time, the deferral period was set at 12 months for MSM. We could be under-reporting the level of non-compliance due to the phrasing of the question, especially for those who donated before 2014 (when the deferral period was reduced from 5 years to 12 months in NZ), as we only asked about sex between men for up to 12 months before donating. Our participants are a self-selected national online sample, limiting the generalizability of our findings. For example, we had fewer participants who identified as Māori or Asian compared to the 2018 Census.

The prevalence of lifetime MSM donors is consistent with studies conducted in countries with similar donation deferral policies for MSM. For example, 28.5% of MSM in Australia [9] and 23% from San Francisco had previously donated blood [19], but our estimate (32.5%) is lower than the estimate of 45% of MSM in New Orleans and 38.9% in Chicago [20]. Additionally, 44% of our non-donors reported interest in donating blood, but this is in the lower range of 48%–92% [8, 9, 19–21] compared to other countries. The lower proportion in our sample is most likely due to methodological differences, as we only posed the question about interest in donating to those who had not donated before. We expect that there are a number of previous donors who also would be interested in donating blood as previous donations are the best predictor of future donations [22]. Regardless, we have shown for the first time that a high proportion of NZ GBM is interested in, and some have donated blood, in spite of deferral policies, which excluded most GBM.

Although the prevalence of the previous donation is similar to other countries, these findings are concerning as many MSM in NZ would be ineligible to donate. For example, repeat HIV prevention surveys show that most (>90%) NZ GBM report male-to-male sexual contact in the previous 6 months [23]. It is also possible that there are some participants who interpreted a 'blood donation' to be a standard laboratory blood test, as the term was not defined in the questionnaire. We must treat these as preliminary findings until we can support the results with studies that differ in validation methodologies (e.g., longitudinal studies or partnering with the blood service to confirm donations). Nevertheless, these novel findings suggest that there are MSM donating blood despite being potentially ineligible in NZ,

further highlighting the need to address the aspects of NZ's deferral policy that may not be supported by MSM.

The level of self-reported non-compliance found in our sample is comparable to the United Kingdom. Comparing non-compliance within a general MSM sample, a 2011 UK report found that 10.6% of all MSM (vs. 8.6% in our study) had donated blood during the period with a lifetime ban [6]. When comparing non-compliance within MSM donors, 28.6% non-compliance in our sample is similar to another 2015 UK report, which estimated non-compliance within MSM donors at 30.6% [24]. However, we note that our estimate of non-compliance is lower than 18.3% previously reported in a French study [4], which used an anonymous post-donation design. Although this is likely due to differences in the sampling method (our study did not target confirmed donors), any level of non-compliance among MSM remains a concern for the safety of NZ's blood supply.

Consistent with the literature [9, 25], many MSM in our sample expressed their willingness to donate if the donor criteria changed. The desire to donate was much stronger among those who had previously donated and non-donors who expressed interest. This was expected as the biggest predictor of a future blood donation is having donated previously [26]. Our results are the first to show that there is high interest and willingness in blood donation participation among MSM in NZ. However, it is unlikely that all these individuals will register as a donor in the future, as the willingness to perform a behaviour does not perfectly translate to actual behaviour [27].

Our findings suggest that negative attitudes towards the donor deferral policy are widespread among MSM. Consistent with Clackett and colleagues' study [9], these negative attitudes were reflected among non-donors and especially among non-donors who expressed interest in donating. These results were unsurprising among previous donors, as it is well documented that the perceived unfairness and discrimination is one of several reasons for donating blood among MSM who were confirmed to be non-compliant [4, 6, 24]. One explanation for negative attitudes towards the policy may be due to the ongoing inclusion of oral sex among the deferrable behaviours, despite the general scientific consensus that oral sex poses little to no risk of transmitting HIV [28]. MSM may reasonably believe that oral sex is considered 'safe,' but they remain deferred. Future studies should investigate factors that may determine whether a prospective MSM will comply with the policy (e.g., self-defer) or donate in spite of ineligibility.

In conclusion, our study is the first to report on the attitudes MSM have towards the 12-month blood donor deferral policy in NZ. This adds to the published evidence that some MSM donate blood despite their ineligibility. The findings also indicate that, while there is a significant willingness and interest in donating blood among the community, many MSM did not support and held negative attitudes towards the policy. We suggest that the perceived moral injustice towards the community may contribute to the high levels of non-compliance, and as such, poses an avoidable risk to the blood supply. We recommend continued efforts to widen blood donation opportunities for MSM while keeping the blood supply safe. We also suggest ongoing communication with MSM communities to bridge possible misunderstandings and resentment towards the blood service. Doing so may limit levels of

non-compliance and the impact that may have on the safety of the blood supply.

ACKNOWLEDGEMENTS

We thank the following organizations for their contribution to the project: NZ AIDS Foundation (NZAF), NZ Drug Foundation, Body Positive, Te Whāriki Takapou, NZ Needle Exchange Programme, and Drugs Health and Development Project. We also thank the participants who gave their time to participate in the survey.

K.T.S. conducted the literature review, analysed the data and wrote the first draft. M.H. and G.P. designed the Australian Flux survey. P.S. adapted the study to New Zealand and collected the data. All authors edited the manuscript and approved the final draft. Open access publishing facilitated by The University of Auckland, as part of the Wiley - The University of Auckland agreement via the Council of Australian University Librarians.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

ORCID

Koson Tony Sriamporn  <https://orcid.org/0000-0003-1027-5182>

REFERENCES

1. Seed CR, Lucky TT, Waller D, Wand H, Lee JF, Wroth S, et al. Compliance with the current 12-month deferral for male-to-male sex in Australia. *Vox Sang*. 2014;106:14–22.
2. Slot E, Janssen MP, Marijt-van der Kreek T, Zaaier HL, van de Laar TJ. Two decades of risk factors and transfusion-transmissible infections in Dutch blood donors. *Transfusion*. 2016;56:203–14.
3. O'Brien SF, Osmond L, Fan W, Yi QL, Goldman M. Compliance with time-based deferrals for men who have sex with men. *Transfusion*. 2019;59:916–20.
4. Sauvage C, Charpentier F, Garrabe E, Pelat C, Spinardi R, Danic B, et al. Noncompliance to blood donor selection criteria by men who have sex with men – Complidon 2017, France. *Vox Sang*. 2020;115:628–36.
5. Sauvage C, Spinardi R, Pelat C, Pouget T, Danic B, Woimant G, et al. Noncompliance with blood donor selection criteria – Complidon 2017, France. *Transfusion*. 2020;60:73–83.
6. Grenfell P, Nutland W, McManus S, Datta J, Soldan K, Wellings K. Views and experiences of men who have sex with men on the ban on blood donation: a cross-sectional survey with qualitative interviews. *BMJ*. 2011;343:d5604.
7. Duquesnoy A, Danic B, Santos A, Martinaud C, Woimant G, Laperche S, et al. Context and social perceptions of blood donation in donors found positive for human immunodeficiency virus in France. *Transfusion*. 2017;57:2240–7.
8. Levy I, Olmer L, Livnat Y, Shalhavi R, Hizki O, Shinar E. Attitudes and perceptions among men having sex with men towards a new non-deferral blood donation policy in Israel. *Vox Sang*. 2019;114:310–6.
9. Clackett S, Seed CR, Prestage G, Hammoud MA, Hoad V, Saxton P, et al. Attitudes and willingness to donate blood among gay and bisexual men in Australia. *Transfusion*. 2020;60:965–73.
10. Haire B, Whitford K, Kaldor JM. Blood donor deferral for men who have sex with men: still room to move. *Transfusion*. 2018;58:816–22.
11. Goldman M, Shih AWY, O'Brien SF, Devine D. Donor deferral policies for men who have sex with men: past, present and future. *Vox Sang*. 2018;113:95–103.
12. Makoni M. UK changes LGBT+ blood donation rules, but Africa restriction remains. *Lancet Haematol*. 2021;8:e545.
13. Independent Expert Review Group. Report to the NZ Blood Service: Behavioural Donor Deferral Criteria Review. 2014.
14. RadioLive. Should sexuality be considered for blood donation eligibility?. 2022. Available from: <https://www.magic.co.nz/home/archivedtalk/on-demand/long-lunch/2018/09/should-sexuality-be-considered-in-blood-donations-deferrals-.html>
15. Lachowsky NJ, Saxton PJW, Dickson NP, Hughes AJ, Jones RG, Clark TC, et al. Ethnicity classification systems for public health surveys: experiences from HIV behavioural surveillance among men who have sex with men. *BMC Public Health*. 2020;20:1–13.
16. NHS. Blood donor selection policy: Conclusions from the FAIR group. 2022. Available from: https://nhsbt.dbe.blob.core.windows.net/umbraco-assets-corp/21001/fair_sabto_20201211.pdf
17. Carver A, Chell K, Davison TE, Masser BM. What motivates men to donate blood? A systematic review of the evidence. *Vox Sang*. 2018; 113:205–19.
18. Grace D, Gaspar M, Klassen B, Lessard D, Brennan DJ, Lachowsky NJ, et al. It's in me to give: Canadian gay, bisexual, and queer men's willingness to donate blood if eligible despite feelings of policy discrimination. *Qual Health Res*. 2020;30:2234–47.
19. Belanger GA, McFarland W, Raymond HF, Custer B. If the permanent deferral were lifted would men who have sex with men want to donate blood, and if so, who would be eligible? *Transfusion*. 2013; 53:2729–33.
20. Liszewski W, Becerril J, Terndrup C, West N, Lavin BC, Schieffler D, et al. The rates, perceptions, and willingness of men who have sex with men to donate blood. *Transfusion*. 2014;54:1733–8.
21. Romeijn B, Merz EM, Kok G, de Kort W, van Dongen A. Eligibility and willingness to donate blood in men who have (had) sex with men. *Transfusion*. 2018;58:710–7.
22. Masser BM, White KM, Hyde MK, Terry DJ. The psychology of blood donation: current research and future directions. *Transfus Med Rev*. 2008;22:215–33.
23. Saxton P, Dickson N, Hughes A, Ludlam A. Gay Auckland periodic sex survey (GAPSS) and gay men's online sex survey (GOSS): basic frequency tables 2002–2014. Auckland, New Zealand: University of Auckland; 2014.
24. Davison K, Reynolds CA, Andrews N, Brailsford SB. 'Highlights on donors' nightlives' – findings on sexual behaviours from the UK blood donor survey. *Vox Sang*. 2015;109:1–379.
25. Liszewski W, Terndrup C, Jackson NR, Helland S, Lavin BC. The beliefs and willingness of men who have sex with men to comply with a one-year blood donation deferral policy: a cross-sectional study. *Transfusion*. 2017;57:2234–9.
26. Bednall TC, Bove LL. Donating blood: a meta-analytic review of self-reported motivators and deterrents. *Transfus Med Rev*. 2011;25: 317–34.
27. Sheeran P. Intention-behavior relations: a conceptual and empirical review. *Eur Rev Soc Psychol*. 2002;12:1–36.
28. Barre-Sinoussi F, Abdool Karim SS, Albert J, Bekker LG, Beyrer C, Cahn P, et al. Expert consensus statement on the science of HIV in the context of criminal law. *J Int AIDS Soc*. 2018;21:e25161.

How to cite this article: Sriamporn KT, Saxton P, Consedine N, Hammoud M, Prestage G. Blood donation behaviour and attitudes towards the 12-month deferral policy among gay and bisexual men in New Zealand. *Vox Sang*. 2022; 117:1145–52.