

Context and social perceptions of blood donation in donors found positive for human immunodeficiency virus in France

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BACKGROUND: In France, information collected during postdonation interviews showed that a majority of human immunodeficiency virus (HIV)-infected donors were not eligible to donate as per donor selection criteria. In the interest of blood safety, this study aimed to explore the mechanisms of noncompliance with blood donor selection criteria, notably the permanent deferral of men who have sex with men (MSM).

STUDY DESIGN AND METHODS: Semistructured individual interviews were conducted with 32 blood donors found positive for HIV between mid-2011 and 2014. Topics such as the experience and motivations for donating blood, understanding of selection criteria, sexual risk management, and opinions on donor selection were discussed. Transcripts were analyzed inductively.

RESULTS: More than 50% of study participants were noncompliant with donor selection criteria. Reasons for nondisclosure of risk factors in the predonation questionnaire or the predonation interview included stigma, test-seeking motivations, symbolic attachment to blood donation, and context of donation. Compliance to donor criteria was seen as secondary by donors who reaped personal benefits from the symbolism of their donation. Donors lacked self-reflexivity in their assessment of risky sexual behavior. The “window period” and the underlying epidemiologic arguments for donor selection criteria were poorly understood. Nearly all participants disapproved of the permanent ban on blood donations from MSM.

CONCLUSION: This study demonstrated the need for more communication on the epidemiologic basis for donor selection criteria and on the window period to facilitate donor compliance. These findings have already advanced improvements to predonation documents, in a larger context of 2016 donor selection criteria revision.

Blood safety is safeguarded by two main measures: the selection of blood donors and biologic testing of donated blood samples. The former screens blood donation candidates who present risk factors for blood-borne pathogens: it includes the predonation questionnaire (PDQ) and predonation interview (PDI) with a medical physician during which questions on transfusion-transmitted infectious risks (sexual, travel, injecting drugs, medical procedures) are asked as part of blood donor selection (see deferral criteria for viral infection transmission in Appendix S1, available as supporting information in the online version of this paper).¹ The

ABBREVIATIONS: CTSA = Centre de Transfusion Sanguine des Armées; EFS = Etablissement Français du Sang; MSM = men who have sex with men; PDI(s) = predonation interview(s); PDQ = predonation questionnaire.

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latter ensures that infected blood products will be excluded from therapeutic use, provided that donors are not in the biologic negative early phase of the infection (the window period). As such, donors' understanding of selection criteria and the window period in the PDQ is crucial for them to disclose risk behavior and ultimately for blood safety.

In France, all donors are unpaid volunteers who donate blood anonymously for a community supply. Each year, approximately 1.7 million people donate blood, representing 3.9% of the general population aged 18 to 70 years. Half of them are men and 20% are first-time donors. HIV prevalence (0.54 per 10,000 first-time donors) in blood donors is approximately 70 times lower compared to the general population (38 per 10 000) and HIV incidence 17 times lower (1.01 per 100,000 donor-years vs. 17 per 100,000 person-years).^{2,3} This difference is due to rigorous blood donor selection and a high HIV status awareness. Of the 6000 people diagnosed with HIV in France in 2015, 43% were men who have sex with men (MSM).⁴ Despite the permanent deferral of MSM from blood donation until June 2016 in France, a similar proportion of MSM was observed in blood donors found to be HIV positive (44% between 2011 and 2015).⁵

Information collected during post-donation interviews showed that a majority of HIV-infected donors were repeat donors and not eligible to donate, as per donor selection criteria. Quantitative studies have also shown that the residual risk for transfusion-transmitted disease is highest for HIV (one in 3.0 million donations for HIV over the 2012-2014 period, compared to one in 6.4 million for hepatitis B virus [HBV] and one in 33 million for hepatitis C virus [HCV]).² Hence, it seemed essential to investigate why these donors were not deferred during the selection process, in the aim of minimizing the risk of HIV transmission by transfusion and understanding donor noncompliance. This knowledge has guided the revision of French donor selection criteria. Namely, the permanent deferral of MSM has been controversial for several years, and the French Health Ministry held meetings in 2015 with all stakeholders to modify this criterion, which resulted in reducing the deferral to 12 months in July 2016.^{5,6}

Through qualitative analysis, this study aimed to explore motivations to donate blood and mechanisms of noncompliance with blood donor criteria, to assess the understanding of these criteria—particularly the permanent deferral of MSM—and to provide recommendations on donor selection (PDQ/PDI) to improve compliance and ultimately blood safety.

MATERIALS AND METHODS

Participants were recruited among donors who donated at either of the two authorized blood transfusion

establishments in France, the Etablissement Français du Sang (EFS-French Blood Agency) and the Centre de Transfusion Sanguine des Armées (CTSA-French Military Blood Center), and whose donations were screened HIV positive in metropolitan France between mid-2011 and 2014. During this 3.5-year period, more than 10 million donations were collected in metropolitan France: 9,955,000 donations to the EFS and 63,600 to the CTSA, among which 91 were HIV positive (88 from the EFS and three from the CTSA). We sent HIV-positive donors a letter, informing them that they would be contacted about this study. They received a phone call from an EFS/CTSA medical physician who explained the goals of this study and conditions of anonymity and requested either oral consent to participate or reasons for refusal. Seventy-five of the 91 eligible donors in this population were contacted (72 from EFS and three from CTSA). Forty were willing to participate, eight of whom we did not interview because the expected number of interviews set at 30 had been reached. The remaining 35 were unreachable ($n = 6$), were unwilling to participate ($n = 16$), or did not answer ($n = 13$). The list of participants willing to participate was then communicated to our interviewer who scheduled meetings with donors. In sum, 32 donors were interviewed: 30 from the EFS (42% of the 72 EFS donors contacted) and two of the three CTSA donors contacted.

The 32 interviews were conducted by a social science study engineer between November 2014 and August 2015, in 22 cities across France. The guide for the semistructured interviews included the following topics: the determinants of and motivations for blood donation (social or personal significance, altruism), circumstances of the last blood donation, content of the PDQ and PDI, knowledge and understanding of donor selection criteria and the window period, sexual activity (number and sex of partners) and identity (self-identification as heterosexual, bisexual, or gay), at-risk practices and sexual risk management (such as condom use and HIV testing in volunteer health centers), and opinion on donor selection criteria. Interviews were conducted in a semidirective manner, so as to address all the topics while respecting the personal dynamic of each interview. Interviews lasted from 45 minutes to 2 hours; they were recorded and fully transcribed. All interview guides and study procedures were approved by French ethics committees (CCTIRS and CNIL).

Transcripts were imported into a qualitative analysis software (Nvivo10) and analyzed with an inductive method.⁷ Interview excerpts were numbered to preserve anonymity.

RESULTS

Our sample of 32 participants represented 35.2% of the 91 donors found to be HIV positive between mid-2011 and 2014 in metropolitan France. Participants and

TABLE 1. Comparison of study participants and nonparticipants among donors found to be HIV positive between mid-2011 and 2014 in metropolitan France*

| Blood donor characteristics | Participant† | Nonparticipant‡ | p value |
|--------------------------------------|--------------|-----------------|---------|
| Total | 32 | 59 | |
| Donor status | | | 0.18 |
| First-time donors | 7 (21.9) | 21 (35.6) | |
| Repeat donors | 25 (78.1) | 38 (64.4) | |
| Sex | | | 0.25 |
| Female | 10 (31.3) | 12 (20.3) | |
| Male | 22 (68.8) | 47 (79.7) | |
| Age (years) at time of HIV+ donation | | | 0.75 |
| Mean | 33.3 | 34.2 | |
| Minimum | 18 | 18 | |
| Maximum | 60 | 64 | |
| Geographic origin§ | | | 0.06 |
| Metropolitan France | 28 (87.5) | 41 (69.5) | |
| Europe (outside France) | 1 (3.1) | 1 (1.7) | |
| Sub-Saharan Africa | 0 (0.0) | 8 (13.6) | |
| North Africa | 3 (9.4) | 3 (5.1) | |
| French overseas territories | 0 (0.0) | 4 (6.8) | |
| Other | 0 (0.0) | 2 (3.4) | |
| Area of residence | | | 0.40 |
| Paris region | 12 (37.5) | 17 (28.8) | |
| Other regions | 20 (62.5) | 42 (71.2) | |
| Probable mode of HIV contamination | | | 0.20 |
| Male-male sex | 13 (40.6) | 21 (35.6) | |
| Male-female sex | 17 (53.1) | 26 (44.1) | |
| Unknown | 2 (6.3) | 12 (20.3) | |

* Data are reported as number (%).
† Characteristics obtained during the interview.
‡ Characteristics obtained during the postdonation medical consultation.
§ Comparison was made according to: Metropolitan France/not Metropolitan France.

nonparticipants were comparable in terms of donor type (first-time/repeat), sex, age, geographical origin, area of residence, and mode of HIV contamination (Table 1). All female participants ($n = 10$) declared being contaminated through female–male sexual contact: two had multiple sexual partners; two had a partner from sub-Saharan Africa (with one partner who himself had multiple partners); two had an HIV-positive stable partner; for one, her partner was a MSM; and for three, the partner’s risk was not known (although two had new sexual partners when they donated). Among male participants ($n = 22$), 13 declared having been contaminated through male–male sexual contact, of whom two self-declared as bisexual. Seven men declared being contaminated through male–female sexual contact: one had multiple sexual partners, one had a partner from sub-Saharan Africa, four had an HIV-positive stable partner, and for one, the partner’s risk was not known. Finally, two men suspected that they were contaminated through accidental blood exposure at their workplace in the medical field; however, they were unsure.

Discussion during interviews reported that 17 (53%) participants were noncompliant with donor selection criteria at the time of their last donation while 14 were compliant. Among the 17 noncompliant donors, 13 were MSM, one donor knowingly had an HIV+ partner, one donor had two sexual partners, one donor knowingly had a partner who himself had multiple sexual partners, and one donor had a new sexual partner (less than 4 months). The 14 donors that qualify as compliant did not present any excluding risk factors when they last donated: they were either in a stable relationship for more than 4 months or had not had any sexual partners in the past 4 months. For one donor, we were unable to determine during the study interview if he had been compliant or not during his last donation.

Communication on donor selection at the blood drive

Interviews with donors revealed shortcomings in the communication to donation candidates of donor selection criteria. Three key documents for donor selection and information structure the blood donation procedure in France: the predonation information document, the PDQ, and the postdonation information document. All donors in our study remembered filling out the PDQ, but many claimed that they did not receive the predonation document. Although it is presented as a questionnaire, the PDQ also contains valuable information on the donation process and important warnings, notably against using blood donation for HIV screening. Because it is presented as such, one donor said he did not read the questionnaire, but simply answered the questions. “No, we go directly to the questions! I think everyone mechanically opens it and answers the questions, because when we first sign up they tell you ‘don’t forget to fill out the questionnaire.’ So we fill out the questionnaire. But [don’t] read . . .” (Interview 22).

Repeat donors expressed their frustration with the PDQ, because of its length and redundancy. Many declared that they did not read the PDQ and simply checked every “no” box, as opposed to first-time donors who were more careful with their reading and answering. Moreover, a few repeat donors appealed for a shorter questionnaire, for repeat donors only. Relatedly, preference for one-on-one discussions with medical staff was expressed. Donors enjoy exchanging with the medical professionals at blood drives and have questions about selection criteria. Some of them could feel more comfortable discussing high risk practices orally, rather than on paper, thus facilitating compliance. “I think it’s more difficult to lie to a person than on a piece of paper. And once we lied on paper and go in front of the person, we won’t, well it’s difficult to go back on what you wrote and say ‘no maybe I should not have checked that box’” (Interview 4).

Interviews with donors showed that there were gaps in participants' awareness and understanding of donor selection criteria. A majority of donors had no knowledge of the epidemiologic arguments that undergird donor criteria and that justify the deferral of donation candidates simply because of their risk factors, even if they are HIV negative. Even for the few who did grasp this notion, deferral from blood donation was a source of frustration for donors who felt healthy. "I understand that we can't accept everyone. Even if he isn't carrying any sort of disease, I can understand he will be excluded because there is still an important risk. I understand the notion of risk and the notion of risk exposure. However, as I see it, they aren't all justified" (Interview 14). Additionally, the "window period" was understood by only six donors in our sample, of whom five had learned it during an HIV screening in a laboratory or in their postdonation interview. No donor had understood the link between the window period, the questions in the PDQ on recent sexual practices, and temporary deferrals after risk exposure. Several donors suggested that the PDI start with the doctor explaining the window period so that donors understand better why they are questioned on their recent sexual activity.

Organizational and practical issues with the context of the blood drive were brought up in all interviews, most notably that of confidentiality for the PDQ and PDI. Blood drives at permanent sites offer more comfort and privacy for potential donors to freely discuss private matters than do mobile blood drives. Specifically, four donors declared that the lack of confidentiality had prevented them from sharing information that would have resulted in their deferral during their PDI. These four donated at mobile blood drives in small towns, in companies, or on their military bases, settings where anonymity and privacy are difficult to ensure because of the presence of peers. "So there I think that I lied. But let me tell you why, however. While in small towns there is a proximity, which is very good, there are also things you will not say" (Interview 32). Additionally, three donors reported feeling judged by their doctor during the PDI, and many more brought up the discomfort of discussing their sexuality with a doctor.

The individual dimension of donating blood

The majority of our sample demonstrated a strong commitment to blood donation, with 25 repeat donors and seven first-time donors, as well as professional and personal sensitization: 15 donors had peers who donate blood, seven had a health-related profession, and two were in the military. For at least eight participants who donated their blood very regularly throughout their life (multiple times a year, every year), we noticed that they had come to draw symbolic compensation from their gesture. In the form of a positive feeling about a good

performance, these donors received satisfaction from donating. Moreover, for some, the social aspect of donating was important as a means of forging social bonds. "It was about feeling useful. [...] It did not take much time, every time the nurses were really nice; usually I went with different friends each time, so we had a good time" (Interview 9). Given the constructed symbolism surrounding the donation gesture, some participants did not mind being noncompliant to donate, and, in extension, to maintain this habit and resulting personal satisfaction. Indeed, some participants declared they did not disclose information during PDIs because they feared it would prevent them from donating. "Had I said the truth, I think I wouldn't have gone on to the next step" (Interview 6). When participants considered their own donation as the prime goal of their action (as opposed to collecting safe blood), they were less prone to comply with donor selection criteria.

When first asked why they donated blood, all participants responded with altruistic motives, such as "saving lives," "contributing," "helping," or "doing a good deed"; some mentioned social motivations, such as "civic duties" or "family commitment." However, as the interviews progressed, more than half of participants (18 of 32; 56%) declared that their blood donations allowed them to monitor their HIV status. "They have my blood, I'm not going to do an additional blood test to know if the blood I gave to them is clean, because they do it themselves" (Interview 7). These 18 test-seeking donors differentiated using blood donations to monitor their HIV status as a secondary motive, which they said they did, and using blood donation after risk exposure to find out their HIV status, which none said they did.

Through questions on their suspected mode of contamination, we observed how donors assessed their own level of risk taking. Some trivialized risk taking, believing that all people inevitably take risks, which resulted in perceiving HIV as a fatality (a mere question of chance or probability), entirely dissociated from the risky behavior that provokes it. Others expressed a feeling of immunity toward HIV. Although they knew of the disease, they did not feel that it could affect them, as opposed to "others." "I thought it was only for others, not for me. As they say, it always happens there, never here" (Interview 18).

In donor interviews, participants gauged their own level of riskiness based on an individual mentally constructed imaginary of what an "at-risk" person or group is like. Such at-risk persons or groups were typically imagined—and both stigmatized and perceived as stigmatized—based on their lifestyles, age, or preconceptions. For example, the following donor shared her dumbfoundedness when she discovered that she was HIV positive, although she had kept what she considered to be a healthy lifestyle. "Myself, I know that I'm clean. I don't smoke, I don't drink, I don't do drugs, so there. I'm telling

you I do sports, I eat vegetables, fruits, I'm careful about what I eat, I know I have a healthy body! That's why it was all the more painful, because I'm careful about my health and body" (Interview 18). It is notable that she does not associate her infection with her occasional unprotected sexual encounters, which is rooted in the confusion, which other donors made, between risk taking and blood safety/health.

Blood donation and MSM

Among participants, 13 men declared having sexual relations with other men during our interviews. Some of the men who self-identified as gay said they remained uncomfortable disclosing their sexual orientation in certain social settings. Half of the participants, including MSM, declared that they were not aware of the permanent ban on blood donations from MSM when they last donated. The 13 MSM in our study declared they did not discuss their sexual activity in the PDI either because the setting was insufficiently confidential or because donating blood had high symbolic value to them and the desire to donate took priority over compliance. No MSM donor declared having donated blood as an act of protest against donor criteria.

Almost all (27 of 32) participants disapproved of the permanent ban on blood donations from MSM. Of the five that did not disapprove (two females and three males), only one was a MSM and he identified as bisexual. From a moral and social standpoint, participants rejected the association it draws between "gay" or "MSM" and "HIV," essentially treating homosexuality as a disease. Pragmatically, participants did not understand the link between MSM and blood safety. Most rejected the criterion's restrictive mindset, based on stereotypes and generalizations of "gay sexual behavior." Disapproval of a 1-year deferral period, as is now in place in France, the United States, and the United Kingdom, was equivalent. Furthermore, one donor felt that the criterion was harmful psychologically, as an unjustified exclusion and stigmatization: "This is frightening. Someone who is starting to understand that he's gay, who comes to donate blood, they explain to him that 'maybe you're gay, you're not allowed to donate your blood.' It gives the impression that we're necessarily going to be sick at some point because we're gay. So it's frightening" (Interview 24).

Donors did not understand the basis for MSM criteria. In terms of blood safety, they did not understand why deferral criteria were different for MSM and non-MSM given that the window period is identical for all. They expressed a desire for criteria based on sexual behavior, identical for all donors. Donors also urged for criteria that do not "paint everybody with the same brush" (Interview 14) and that differentiate the level of risk based on risky

sexual behavior within the MSM population (as is the case for all other donors).

DISCUSSION

The following key findings were drawn from our study. First, more than 50% of study participants were noncompliant with donor selection criteria and reasons for risk factor nondisclosure in the PDQ or during the PDI were explored. Second, there was a lack of self-reflexivity in donors' assessment of their own risky sexual behavior. Third, donors did not understand the window period and they were unaware of the underlying epidemiologic arguments for donor criteria, rejecting the logic that produces categories to which groups are confined and reduced as "at risk." Fourth, if donating blood constitutes a strong symbolic gesture from which one reaps a personal benefit, then compliance to donor criteria is considered secondary. Furthermore, utilitarian reward systems including test-seeking behavior were also discussed, with, for mostly repeat donors, HIV-status surveillance remaining an ulterior motive to blood donation.

To our knowledge, this study is the first to apply a qualitative method to the analysis of social perceptions and motivations of blood donation and within a population of donors found positive for HIV. Nevertheless, some quantitative and semiquantitative studies have been conducted on positive blood donors to explore motivations of blood donations and reasons of risk-factor nondisclosure.⁸⁻¹¹ Qualitative research has focused more on target groups such as MSM blood donors,¹² MSM,^{13,14} the general blood donor population,^{15,16} or in the general population.^{15,17} Subjects of analysis have included blood donor criteria (namely, the MSM criteria),^{12,13,18} donor perceptions and motivations,^{8,14,15} as well as comprehension of the PDQ.^{16,17} Nevertheless, some of our findings are consistent with previous studies, such as limited understanding of the window period,¹³ and altruistic motives as the primary motivation for blood donation.⁸ Moreover, in accordance with our finding that donors conflate and confuse the safety of one's blood (or health) and risk taking, a qualitative study assessed understanding of the American PDQ in the general population and found that all questions were understood, by MSM and non-MSM alike, "as asking the same thing: that is, 'is my blood safe to donate?'"¹⁷ Finally, our results suggest the possibility of test seeking behavior by some donors, as previously shown by many studies.^{10,11,19-22}

Concerning opinion of donors on selection criteria, findings widely vary in reported support for the permanent deferral of MSM: Hughes and colleagues¹² reported 38 of 39 MSM participants wishing to modify it to a shorter or more high-risk-based deferral (United States), Grenfell and colleagues¹³ reported 40% of a general population sample seeing it as inflexible and excessive

(United Kingdom), Vahidnia and coworkers⁸ reported 90% of participants that did not think blood donor screening policies were unfair. Moreover, Grenfell and colleagues¹³ and Custer and colleagues¹⁸ found that at least half of the participants saw a 1-year deferral as more acceptable, whereas our participants dismissed a 1-year deferral as equally unacceptable. Overall, opinions on deferral criteria depend on study methods and characteristics of participants.

There are multiple explanations for our sample's high rate of risk factor nondisclosure during donor selection. A first factor may be the stigmatization of LGBT (lesbian, gay, bisexual, and transgender) people. In 2012 and 2013, the opposition against the legalization of same-sex marriage in the French public debate increased the visibility of LGBT stigmatization.²³ Given this context, it is possible that stigma and risk-factor nondisclosure are correlated with a fear of discrimination in response to disclosure of same-sex sexual activity preventing free and open discussion during PDIs. This possible correlation between stigma and nondisclosure can also be considered for other sexual behaviors associated with risks, such as having multiple sexual partners, as was spontaneously shared with at least two of our study's participants. Because being an LGBT person still remains counter to social norms in many settings, it is possible that social desirability bias (i.e., bias in favor of social norms) discouraged donors from discussing their sexual practices during the PDI or even our interviews.²⁴ Second, some form of test seeking was discussed by half of participants, although not explicitly because of social desirability biases but rather as a secondary or subordinate motive for donating. Further, test seeking has been associated with risk-factor nondisclosure.^{20,21} Lefrère and coworkers^{10,11} had observed a proportion similar to ours of test seekers in a population of HIV-positive donors in two French studies from 1992 and 1996, wherein 54 and 50%, respectively, "admitted having donated their blood to determine their HIV status." Third, although studies show that test seeking is typically higher in first-time donors,¹⁹ our results suggest that the attachment to blood donation that grows for repeat donors may encourage them to not disclose risk factors so that they can get their blood drawn to both fulfill a duty that they are personally attached to (blood donation) and monitor their HIV status (test seeking). Finally, the results of this study, like those of previous studies,²⁵ demonstrate that the characteristics of the environment in which the PDQ and PDI are administered also impact risk-factor disclosure, such as confidentiality or presence of peers.

Although rapid diagnostic tests are available in France at volunteer testing centers and through community-based testing services, it is possible that some blood donors prefer to rely on their donations to test their blood because of the perceived stigma associated with attending a volunteer testing center.¹⁹ We propose that there be more

communication to the public on the unsuitability of blood donation for HIV testing and suggest that donor candidates be reminded of this before each blood donation.

Arguably, in the context of the blood drive, donors are provided insufficient opportunities to adapt and correct their assessment of their own risk taking. In one study with HIV-, human T-lymphotropic virus-, HCV-, or HBV-infected donors, noncompliance was explained by 66.4% as "not realizing having engaged in at-risk behavior,"⁹ and seronegative MSM donors justified their noncompliance with "self-categorization as low risk."^{13,26} One approach to improving compliance with the donor screening process consists of improving communication with candidate donors by ensuring an effective delivery of predonation educational material, doing so interactively, and repeating important information in different forms, among others.²⁷ Unfortunately, while increased awareness and understanding of selection criteria may alter how potential donors interpret and approach blood donation, it is unlikely it will allow us to predict their behavior or practices. As such, although improving predonation documents and communication is important and necessary, large-scale sexual education campaigns must be undertaken to break the taboo and foster open and free speech relative to sexuality and sexual behavior (risk taking specifically) regardless of sexual orientation.

A major finding of our research addresses the lack of understanding and awareness of the scientific and epidemiologic reasoning behind blood donor criteria and the window period. Peretti-Watel²⁸ argues, in an essay on the study of risk behavior and epidemiologic paradigms, that an epidemiologic logic based on risk factors (that are stated more than understood) tends to create and produce categories of at-risk groups. Because these risk categories are poorly understood, Peretti-Watel claims any prevention interventions based on them may fail, by promoting a posture of "acting without understanding." Accordingly, some donors' refusal to be locked into risk categories leads them to elaborate resistance strategies (e.g., noncompliance) to effectively disavow these categories. The gap in interpretation of these risk categories was apparent in some donors' view that their blood donation constituted an opportunity for HIV screening, giving them access to diagnosis and care. From this point of view, testing positive through a blood donation is interpreted as a testimony of blood agencies' security methods. However, an HIV-positive blood donation is seen by blood agencies as a failure of donor screening, before blood sample testing.

As Steiner²⁹ notes in his sociologic analysis of blood markets, the emergence of AIDS in the 1980s constituted a shift in the approach to blood donor selection, which suddenly had to inquire on typically private matters relating to one's "social identity and no longer only on their individual medical history." This new approach, he argues, amounts to doubting the value of the donation and, in

turn, the donor her/himself. “More generally, the fact of suspecting the voluntary blood donor brutally challenges the positive image” of the gesture that donors cultivate. The ideologic divide between the donor’s emotional act and the economic principles of security and efficiency of blood agencies was manifest in some donors’ appropriation of the selection process and disregard for donor criteria. This divide also takes form in these parties’ interpretation of a deferral, which donors see as an unthinkable failure of one’s altruistic gesture, but blood agencies read as a precautionary and successful distancing of risk. In this case, seeking to donate blood should be recognized as the key altruistic and valuable gesture, regardless of whether it results in blood being drawn.

One of the strengths of our study is the high participation level. Among the 75 donors found to be HIV positive who have been contacted, only 16 refused to participate (due to lack of time, sensitivity of the matter, or mistrust). Furthermore, there was no significant difference between participants and nonparticipants for the main donor characteristics (sex, donor status, age, geographic origin, area of residence) and probable modes of contamination. However, this study has some limitations. Since some of the topics that were discussed with participants relate to socially stigmatized behaviors and the data are declarative, the impact of social desirability bias must be considered. Additionally, we did not systematically collect information on participants’ socioeconomic characteristics, which may have revealed participation bias or significant trends.

Our study, based on interviews of HIV-positive blood donors, has had and should continue to have an impact on public policy related to blood donation selection criteria. In 2015, the French Health Ministry worked collaboratively with all stakeholders on new donor criteria. Based on HIV risk analysis of French blood donors³⁰ and data from foreign countries that implemented a 1-year deferral^{31,32} and show no increased risk, the new donor criteria in 2016 authorize blood donations from men who abstained from sexual contact with other men in the 12 months preceding their donation. Moreover, criteria for apheresis quarantined plasma donations are now the same for MSM and all other donors (i.e., no more than one sexual partner in the past 4 months).⁵ The criteria should continue to evolve as upcoming data on MSM donors emerge. The epidemiologic logic also prevailed in the evolution of other criteria to a 12-month deferral for high-risk sexual contacts (sex in exchange for drugs or money, injection-drug-using partner, positive serology partner, MSM partner). The PDQ was updated so as to be more comprehensible and explanatory of the foundation for different sorts of questionings and the window period. An “I don’t know” box has been added after each question to encourage donors to discuss doubts on certain questions, thus facilitating dialogue during the PDI. Moreover,

training for personnel in charge of the PDI has been reinforced. Finally, at the end of the new questionnaire, donors are thanked for attending the blood drive, regardless of if they were able to donate.

In conclusion, this qualitative study of HIV-positive blood donors has and should continue to have an impact on blood donor screening methods. Our results showed the need for more effective information and communication to donors on the epidemiologic basis for donor criteria as well as the crucial notion of the window period and its relevance with compliance. In support of these recommendations, Grenfell¹³ had found that “Clear and transparent communication of the rationale for deferral was considered essential by participants in the qualitative research, both to facilitate compliance and to reassure excluded groups that the criterion was founded on evidence rather than prejudice.” In continuation, a large-scale quantitative study on blood donors will be launched in 2017 in France and will allow us to evaluate the impact of the new blood donor criteria and of the efforts toward better donor information on donor compliance.

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CONFLICT OF INTEREST

The authors have disclosed no conflicts of interest.

REFERENCES

1. Ministère de la santé et des sports. Arrêté du 12 janvier 2009 fixant les critères de sélection des donneurs de sang JORF n°0015.
2. Santé publique France. Donneurs de sang. Analyses de risque des agents transmissibles par le sang [Internet]. Saint-Maurice: Santé publique France; 2012-2014 [cited 2017 Jun 06]. Available from: <http://invs.santepubliquefrance.fr/Dossiers-thematiques/Maladies-infectieuses/VIH-sida-IST/-Donneurs-de-sang/Analyses-de-risque-des-agents-transmissibles-par-le-sang>
3. Le Vu S, Le Strat Y, Barin F, et al. Population-based HIV-1 incidence in France, 2003-08: a modelling analysis. *Lancet Infect Dis* 2010;10:682-7.

4. Santé publique France. Découvertes de séropositivité VIH et de sida. Point épidémiologique du 23 mars 2017 [Internet]. Saint-Maurice: Santé publique France; 2017 [cited 2017 Jun 06] Available from: <http://invs.santepubliquefrance.fr/Dossiers-thematiques/Maladies-infectieuses/VIH-sida-IST/Infection-a-VIH-et-sida/Actualites/Decouvertes-de-seropositivite-VIH-et-de-sida.-Point-epidemiologique-du-23-mars-2017>.
5. Tiberghien P, Pillonel J, Toujas F, et al. Changes in France's deferral of blood donation by men who have sex with men. *N Engl J Med* 2017;376:1485-6.
6. Ministère des affaires sociales et de la santé. Arrêté du 5 avril 2016 fixant les critères de sélection des donneurs de sang JORF n°0085.
7. Thomas DR. A general inductive approach for qualitative data analysis. *Am J Eval* 2006;27:237-46.
8. Vahidnia F, Stramer SL, Kessler D, et al. Motivations for donating and attitudes toward screening policies in US blood donors with viral infection. *Transfusion* 2016;56:2013-20.
9. Raimondo M, Facco G, Regine V, et al. HIV-positive blood donors unaware of their sexual at-risk behaviours before donation in Italy. *Vox Sang* 2016;110:134-42.
10. Lefrère JJ, Elghouzzi MH, Paquez F, et al. Interviews with anti-HIV-positive individuals detected through the systematic screening of blood donations: consequences on pre-donation medical interview. *Vox Sang* 1992;62:25-8.
11. Lefrère JJ, Elghouzzi MH, Salpetrier J, et al. Interviews of individuals diagnosed as anti-human immunodeficiency virus-positive through the screening of blood donations in the Paris area to 1994: reflections on the selection of blood donors. *Transfusion* 1996;36:124-7.
12. Hughes S, Sheon N, Siedle-Khan B, et al. Saving lives, maintaining safety, and science-based policy: qualitative interview findings from the Blood Donation Rules Opinion Study (Blood DROPS). *Transfusion* 2015;55:2835-41.
13. Grenfell P, Nutland W, McManus S, et al. 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.
14. Liszewski W, Becerril J, Terndrup C, et al. The rates, perceptions, and willingness of men who have sex with men to donate blood. *Transfusion* 2014;54:1733-8.
15. Charbonneau J, Tran NY. The symbolic roots of blood donation. *Transfusion* 2013;53 Suppl 5:172s-9s.
16. O'Brien SE, Osmond L, Choquet K, et al. Donor attention to reading materials. *Vox Sang* 2015;109:336-42.
17. Willson S, Miller K, Seem D, et al. Cognitive evaluation of the AABB uniform donor history questionnaire. *Transfusion* 2016;56:1662-7.
18. Custer B, Sheon N, Siedle-Khan B, et al. Blood donor deferral for men who have sex with men: the Blood Donation Rules Opinion Study (Blood DROPS). *Transfusion* 2015;55:2826-34.
19. Chiavetta J, Ennis M, Gula CA, et al. Test-seeking as motivation in volunteer blood donors. *Transfus Med Rev* 2000;14:205-15.
20. Gonzalez TT, Sabino EC, Murphy EL, et al. Human immunodeficiency virus test-seeking motivation in blood donors, São Paulo, Brazil. *Vox Sang* 2006;90:170-6.
21. Gonzalez T, Sabino E, Sales N, et al. Human immunodeficiency virus test-seeking blood donors in a large blood bank in Sao Paulo, Brazil. *Transfusion* 2010;50:1806-14.
22. Truong HM, Blatyta PF, Santos FM, et al. Blood donor test-seeking motivation and prior HIV testing experiences in São Paulo, Brazil. *AIDS Behav* 2015;19:1574-8.
23. Duvert C, Lacroix X, Schlegel JL, et al. Les controverses du "mariage pour tous." *Esprit* 2012; 82-92.
24. Grimm P. Social desirability bias. Wiley international encyclopedia of marketing. Chichester: Wiley; 2010.
25. Ferreira O, Passos AD. Factors associated with failure of clinical screening among blood donors who have altered serological results in the Centro Regional de Hemoterapia de Ribeirão Preto. *Rev Bras Hematol Hemoter* 2012;34:411-5.
26. Bennett JA. Passing, protesting, and the arts of resistance: infiltrating the ritual space of blood donation. *Q J Speech* 2008;94:23-43.
27. Lucky TT, Seed CR, Waller D, et al. Understanding noncompliance with selective donor deferral criteria for high-risk behaviors in Australian blood donors. *Transfusion* 2014;54:1739-49.
28. Peretti-Watel P. Du recours au paradigme épidémiologique pour l'étude des conduites à risque. *Rev Fr Sociol* 2004;45: 103-32.
29. Steiner P. Don de sang et don d'organes: le marché et les marchandises "fictives." *Rev Fr Sociol* 2001;42:357-74.
30. Pillonel J, Santos A, Lot F, et al. A new evaluation of the risk of transfusion-transmitted HIV prevented by a 12-month deferral before donation for men who has sex with men in France. *Vox Sang* 2015;109:1-379.
31. Seed CR, Kiely P, Law M, et al. No evidence of a significantly increased risk of transfusion-transmitted human immunodeficiency virus infection in Australia subsequent to implementing a 12-month deferral for men who have had sex with men. *Transfusion* 2010;50:2722-30.
32. Safe supplies: reflecting on the population. Annual review from the NHS Blood and Transplant/Public Health England Epidemiology Unit, 2013. London: Public Health England; 2014. ■

SUPPORTING INFORMATION

Additional Supporting Information may be found in the online version of this article at the publisher's website:

Appendix S1. Deferral criteria for viral infection transmission risks in France until July 10, 2016 (extract from the January 12, 2009 decree establishing donor selection criteria).