

# *Nondisclosure Prosecutions and HIV Prevention: Results From an Ottawa-Based Gay Men's Sex Survey*

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In 1998, the Supreme Court of Canada ruled that people living with HIV had a legal obligation to disclose their serostatus prior to the onset of activities that posed a “significant risk” for HIV transmission. As part of this ruling, the [Supreme Court \(1998\)](#) indicated that nondisclosure prosecutions would not undermine HIV-prevention efforts. This ruling, however, was made without any research on the effect of the law on HIV prevention.

Accordingly, because the number of nondisclosure prosecutions is increasing in Canada ([Mykhalovskiy, 2011](#)), self-identifying gay, bisexual, and other men who have sex with men (MSM) in Ottawa were given self-administered surveys about their sexual practices and sexually transmitted infection (STI) and HIV testing practices. In total, 441 surveys were collected to help better tailor sexual health services for gay, bisexual, and other MSM in this region. In this paper, we present results detailing the relationships between perceptions about nondisclosure prosecutions and STI/HIV testing practices. We also provide comparisons of the self-reported sexual practices of the survey respondents. While this paper presents and discusses data that are Canada-specific, nondisclosure prosecutions are common in the United States as well ([American Civil Liberties Union, 2008](#)).

## Theoretical Principles of HIV Prevention

The World Health Organization ([WHO, 2007](#)) has recommended targeted HIV testing and prevention initiatives when HIV incidence or prevalence are concentrated in specific populations. This contrasts with recommendations for routine HIV testing among the general population during a generalized epidemic ([WHO, 2007](#)). Numerically, the [WHO \(2007\)](#) considers an HIV epidemic to be concentrated when “HIV prevalence is consistently greater than 5% in at least one defined subpopulation but is less than 1% in pregnant women in urban areas,” and generalized when there is an “HIV prevalence consistently greater than 1% in pregnant women” (p. 21).

As per the [WHO \(2007\)](#) figures, HIV in Canada and the United States is concentrated: Certain groups are burdened, while HIV prevalence in the general population is less than 1% ([Centers for Disease Control and Prevention \[CDC\], 2010](#); [Public Health Agency of Canada \[PHAC\], 2009](#)). Consequently, the following groups, in order of priority, should be targeted for prevention: (a) individuals, both HIV-infected and

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uninfected, who engage in practices that permit HIV transmission with serodiscordant partners, (b) sexually active uninfected individuals who belong to the groups most affected by HIV transmission (e.g., MSM), (c) sexually active HIV-uninfected individuals who have sex in groups that have factors that facilitate HIV transmission (e.g., high rates of concurrent sex partners, or high averages of different sexual partners), and (d) all others. This hierarchy is based on the fact that HIV transmission requires contact that permits HIV transmission from infected to uninfected individuals and because networks with high seroprevalence rates are more likely to result in sexual contact between serodiscordant partners. An important caveat regarding serodiscordant partners is that 26% (in Canada) and 25% (in the United States) of people who are living with HIV do not know their serostatus and are likely involved in upwards of 70% of new HIV transmissions (CDC, 2010; Marks, Crepaz, Senterfitt, & Janssen, 2005; PHAC, 2009). This signals that, in most serodiscordant partnerships wherein HIV transmission may occur, the person who is HIV infected is unaware of being so; it is often not the individuals who have been diagnosed with HIV who are recklessly exposing their sexual partners to HIV.

## Methods

The survey contained five parts; see Table 1 for a list of variables. It had been used in three previous studies of bathhouses, circuit parties, and swingers (O'Byrne & Watts, 2011; O'Byrne, 2010; O'Byrne, Holmes, & Woodend, 2008). In addition, the survey was piloted with three groups of men before distribution began. Questions were refined based on the pilot feedback (e.g., the questions about serostatus discussions were changed from a *yes/no* answer to a Likert item). The survey was available in French and English. Ethics approval was obtained from the Research Ethics Board at the University of Ottawa.

Over a 5-week period, surveys were distributed at a gay men's STI/HIV testing clinic, two HIV organizations, four gay bars, one bathhouse, and four community events. In total, 441 surveys were collected to form a convenience sample. In each venue, attendees were informed about the study, assured about anonymity, and offered a questionnaire. Those who

**Table 1. Overview of Survey Questions**

Variables	Characteristics
Sociodemographics	<ul style="list-style-type: none"> <li>• Year of birth</li> <li>• Gender</li> <li>• Level of education</li> <li>• Income</li> <li>• Ethnicity</li> </ul>
Sexual practices	<ul style="list-style-type: none"> <li>• Number of sexual partners in previous 2 months</li> <li>• Sex of sex partner(s)</li> <li>• Type of sex (oral, vaginal, anal)</li> <li>• Semen exchange (internal/external)</li> </ul>
History of STI	<ul style="list-style-type: none"> <li>• Previous STI screening</li> <li>• Previous STI diagnoses</li> </ul>
History of HIV	<ul style="list-style-type: none"> <li>• Previous HIV screening</li> <li>• Knowledge of HIV status</li> <li>• Awareness of anonymous HIV testing</li> <li>• Preference of HIV test (anonymous vs. non-anonymous)</li> </ul>
HIV and disclosure	<ul style="list-style-type: none"> <li>• Knowledge of partners' HIV status</li> <li>• Awareness of HIV disclosure laws</li> <li>• Impact of HIV disclosure laws on HIV testing practices</li> </ul>

NOTE: STI = sexually transmitted infection.

agreed to participate were instructed to complete the survey and to deposit it into a locked drop box located at the venue at the time of recruitment. Because the researchers did not open the drop box until they had left an event, the drop box assured participants that the researchers could not immediately know their responses. Survey data were entered into SPSS 19. Sociodemographic indicators underwent descriptive analysis. The participants' self-reported sexual practices, testing behaviors, and perceptions about HIV disclosure were subjected to *t*-test and chi-square analyses to determine relationships between variables. A *p* value of < .05 was used for significance.

## Results

### Sample Characteristics

The majority of participants identified as White, with an average age of  $38.0 \pm 13.07$  years. The majority completed an English survey and were male. More than half of the sample reported a university-level education, and 24.9% reported having

**Table 2. Demographic Characteristics**

Item	Number	Percentage
Age	38.0 ± 13.07	N/A
Salary		
< \$40,000	119	27.0%
\$40,000–\$80,000	184	41.7%
\$80,000–\$130,000	101	22.9%
> \$130,000	26	5.9%
Missing	11	2.5%
Education		
Elementary	3	0.7%
High school	71	16.1%
College	110	24.9%
Bachelor's degree	249	56.5%
Missing	8	1.8%
Ethnicity		
White	362	82.1%
Aboriginal	10	2.3%
Black	11	2.5%
Latin	14	3.2%
Asian	18	4.1%
Other	14	3.2%
Missing	12	2.7%
Language of survey		
English	385	87.3%
French	56	12.7%

completed a college diploma. About 70% of the sample reported incomes lower than \$80,000, and 28.8% more than \$80,000 (see Table 2). Most of the participants reported only having sex with men. About 10% reported being infected with HIV. The reported number of sexual partners in the previous 2 months ranged from 0 to 60, with a mean of 3.55 (see Table 3). When graphed, these figures resembled a power law distribution (see Figure 1). This indicated that standard mean-based comparisons were invalid (O'Byrne, Holmes, & Woodend, 2008).

## Findings

Analysis revealed that of the 93.2% of the participants who reported being aware of nondisclosure prosecutions, 13.8% indicated that nondisclosure prosecutions made them afraid to talk to nurses and physicians about their sexual practices. The participants who reported being afraid to talk to nurses and physicians were, on average, 40.7 years of age, versus 37.5 years for those who reported not being afraid ( $p = .055$ ). In addition, 17.0% of those aware

**Table 3. Sexual Indicators**

Item	Number	Percentage
HIV status		
Unsure/uninfected	370	83.9%
Infected	42	9.5%
Missing	29	6.6%
Number of sex partners in previous 2 months		
0	42	9.5%
1	119	27.0%
2–5	154	34.9%
6–10	42	9.5%
11–20	12	2.7%
> 21	5	1.1%
Missing	67	15.2%
Sex of sex partners		
Male	401	90.9%
Male and female	3	0.7%
Missing	37	8.3%

of nondisclosure prosecutions reported that it affected their decisions to undergo HIV testing. The participants who reported that prosecutions affect their decisions to undergo testing were 36.2 years of age, while those who said it had no effect on their testing practices were 39.5 years ( $p = .074$ ).

Variations emerged from chi-square comparisons of the reported sex practices of those who stated that nondisclosure prosecutions *do* versus *do not* make them afraid to talk to nurses and physicians. Those who reported that nondisclosure prosecutions made them afraid were more likely to have engaged in penetrative anal intercourse with unprotected internal ejaculation in the previous 2 months when compared to those who reported not being afraid to talk to nurses and physicians; this finding was statistically significant for people who reported being uninfected or unsure of their HIV status ( $\chi^2 = 5.467, p = .019$ ). See Table 4 for an example of the foregoing crosstabulation; please note that missing responses reduced the number of cases in the crosstabulation calculations. Similar findings emerged for receptive anal intercourse among all participants and among respondents who indicated that they were uninfected or unsure of their HIV status; in both cases, respondents who were afraid indicated significantly higher rates of unprotected sex ( $\chi^2 = 4.285, p = .038$ ;  $\chi^2 = 4.595, p = .032$  respectively). A preference for anonymous testing was also present

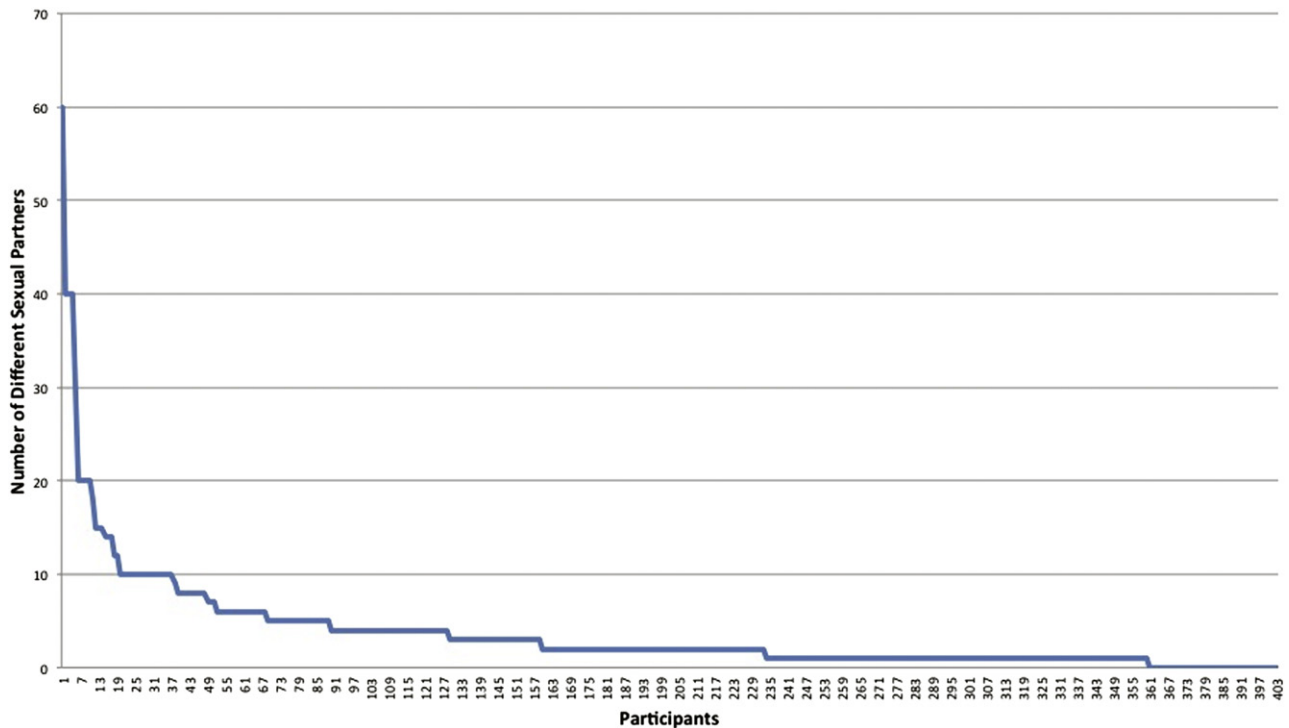


Figure 1. Distribution of self-reported number of sexual partners.

among the uninfected participants who reported being afraid to talk to nurses and doctors ( $\chi^2 = 7.041, p = .030$ ).

Moreover, a higher proportion of respondents who reported being uninfected or unsure of their status and who indicated that nondisclosure prosecutions affected their decision to undergo testing answered that they had never previously undergone STI or HIV testing ( $\chi^2 = 6.136, p = .013; \chi^2 = 12.191,$

$p < .0001$ , respectively). Further, 8.7% of the sample reported no previous STI testing, and 6.3% reported no previous HIV testing. The mean age of participants who reported no STI testing was 43.0 years (compared with 37.1 years for those reporting testing), and the mean age of participants who reported no HIV testing was 33.4 years (compared with 37.8 years for those reporting testing;  $p = .018$  and  $p = .110$ , respectively).

Table 4. Crosstabulation

HIV Status	Survey Question		Penetrative Anal with Unprotected Internal Ejaculation		Total
			No	Yes	
Unsure/negative	Afraid to talk to RN/MD	No	127	77	204
		Yes	9	15	24
	Total		136	92	228
Positive	Afraid to talk to RN/MD	No	7	7	14
		Yes	3	6	9
	Total		10	13	23
Total	Afraid to talk to RN/MD	No	134	84	218
		Yes	12	21	33
	Total		146	105	251

NOTE: RN = registered nurse; MD = medical doctor.

Lastly, each of the following groups reported, on average, a higher number of sex partners in the previous 2 months: (a) individuals who reported being afraid to talk to nurses and physicians (an average of 5.0 partners for those *afraid* vs. 3.5 for those *not afraid*), (b) individuals who indicated that serostatus prosecutions affected their decisions to get tested (an average of 4.4 partners for those *affected* vs. 3.7 for those *unaffected*), and (c) individuals who reported no previous HIV testing (an average of 5.3 partners for those who reported no HIV testing vs. 3.6 for those previously tested). Due to the power law distribution of the reported number of sex partners (see Figure 1), these figures could not be subject to *t* tests.

## Discussion

Our results indicate that, although it is a minority of individuals (17.0% and 13.8%, respectively) who reported that nondisclosure criminal prosecutions either (a) affected their willingness to get tested for HIV, or (b) made them afraid to speak with nurses and physicians about their sexual practices, this small group reported higher rates of unprotected penetrative anal intercourse and internal ejaculation with, on average, a higher number of different sexual partners within the previous 2 months. This same group also reported less STI/HIV testing and a preference for anonymous HIV testing. This finding was striking among participants who reported being uninfected or unsure of their HIV status. In all of these cases, no differences emerged based on the respondents' ages.

From a prevention perspective, our findings indicate that nondisclosure prosecutions could produce unwanted outcomes (e.g., increased HIV transmission). As discussed by O'Byrne (2012), the priority group for enhanced HIV testing and prevention was individuals, both HIV infected/uninfected, who engage in sex practices that permit HIV transmission in serodiscordant partnerships. This group is important because it is exclusively within such partnerships that HIV transmission occurs. As noted by Marks and colleagues (2005), however, upwards of 70% of ongoing HIV transmission likely occurs when the partner who is infected with HIV is unaware of his or her serostatus. Our data problematically indicate that a subset of individuals who could be unaware

of being infected (as a result of their unprotected sex practices with multiple partners and low levels of testing) reported higher rates of both being apprehensive about speaking with nurses and physicians and being deterred from undergoing HIV testing. These results suggest that nondisclosure prosecutions likely undermine HIV prevention efforts and, consequently, exacerbate HIV transmission.

More specifically, the results of our study suggest that nondisclosure prosecutions could negatively affect HIV prevention efforts because such prosecutions conflict with serostatus awareness. This incompatibility is unwanted from an HIV-prevention perspective because, as Pinkerton, Holtgrave, and Galletly (2008), and Pinkerton and Galletly (2007) have argued, serostatus awareness should induce population-level decreases in HIV transmission. This occurs because individuals who are unaware of being infected with HIV neither (a) have any impetus to replace practices that could easily transmit HIV for practices that are less likely to do so—a finding that researchers have consistently and almost exclusively correlated with HIV diagnosis (Marks et al., 2005)—nor (b) have any reason to initiate antiviral therapy—an outcome that is also associated with diminished HIV transmissibility (Granich, Gilks, Dye, DeCock, & Williams, 2009; Hamlyn, Jones, Porter, & Fidler, 2010).

Our study highlights that individuals who reported being the least likely to access testing services, and thus the least likely to become aware of their serostatus, were also the most likely to (a) acquire HIV as a result of their unprotected sexual practices, and (b) continue transmitting HIV because of ongoing unprotected sex and lack of serostatus awareness (Marks et al., 2005). These results emphasize that nondisclosure prosecutions appear to undermine health care-seeking behaviors and HIV diagnosis, including the corresponding behavior changes and antiviral therapy initiation that could follow a diagnosis. Additionally, a lack of health care seeking by individuals whose practices make them susceptible to HIV limits nurses and physicians from preventing HIV transmission in the first place by means of appropriate counseling and harm reduction (Burris, Beletsky, Burleson, Case, & Lazzarini, 2007; Galletly & Pinkerton, 2006).

The outcome of the foregoing sequence is that HIV acquisition takes place, transmission to others ensues,

and no follow-up or treatment occurs for any of the parties involved. Moreover, the preference for anonymous HIV testing means that, if an HIV diagnosis were to occur, there would not be any public health–led follow-up with sexual partners who had been exposed to HIV; that is, with the individuals who had unknowingly engaged in sexual practices that permitted HIV transmission within a serodiscordant sexual partnership. These findings evidently conflict with the [Supreme Court of Canada \(1998\)](#) ruling that nondisclosure prosecutions do not affect health care–seeking behaviors, specifically, or public health practice in general.

The results of our study must be interpreted in light of certain limitations, however. First, the sample was nonrandom, preventing generalization. Second, the study was based on self-reported, not observed, behaviors. Consequently, further studies that examine the uptake of STI/HIV testing (and diagnoses rates) are required. Data from such studies would indicate what people are actually doing. Third, the results presented herein arise from the preliminary analysis of this data set. Ongoing analyses as the number of participants increases must occur. In addition, qualitative interviews should be undertaken to understand the perceptions/attitudes of gay, bisexual, and other MSM about nondisclosure criminal prosecutions and HIV prevention. In combination, these two data sets could shed further light on the relationship between nondisclosure prosecutions and HIV-prevention work.

### Disclosures

The authors report no real or perceived vested interests that relate to this article (including relationships with pharmaceutical companies, biomedical device manufacturers, grantors, or other entities whose products or services are related to topics covered in this manuscript) that could be construed as a conflict of interest.

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