

# Undiagnosed HIV infection among men who have sex with men in Vancouver, Canada

ManCount



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## Background / Objectives

The majority of HIV infections in Canada occur among men who have sex with men (MSM).

The burden of undiagnosed HIV-infection in MSM in Vancouver is unknown.

We examined the prevalence and context of undiagnosed HIV infection among a sample of this population.

## Methods

The ManCount Study is the Vancouver site for M-Track, a Canadian national enhanced HIV surveillance system that uses cross-sectional surveys to monitor HIV and other sexually transmitted or blood borne infections and associated risk behaviours. Participants were recruited from August 1, 2008 to February 28, 2009, through time-location sampling from community venues catering to MSM.

Men aged ≥ 18 years completed a self-administered questionnaire and provided a dried blood spot (DBS) for HIV and other STI testing.

We describe responses from men who were HIV-negative on both self-report and DBS and from men who were HIV-positive by DBS but self-reported as being HIV-negative or unknown sero-status.

Table 1: Awareness of HIV sero-status

| HIV Status Self-Reported | HIV Status DBS N=1138 |                   |             |
|--------------------------|-----------------------|-------------------|-------------|
|                          | Positive (row %)      | Negative (row %)  | TOTALS      |
| Positive                 | 174 (92)              | 16 (8)            | 190         |
| Negative                 | 20 (2.3)              | 822 (98.8)        | 832         |
| I don't know             | 8 (9)                 | 83 (91)           | 91          |
| Missing                  | 4 (27)                | 11 (73)           | 15          |
| <b>Totals</b>            | <b>206 (18.1)</b>     | <b>932 (81.9)</b> | <b>1138</b> |

14% of HIV+ by DBS self-reported as HIV- or unknown

Table 2: HIV prevention strategies among participants who were HIV-negative or unknown by self-report

| Variable   | HIV neg by DBS N (%) | HIV+ by DBS N (%) |
|--|----------------------|-------------------|
| Always have anal sex with condoms  | 261/568 (68.7)       | 13/24 (54)        |
| Always ask your partner's status   | 436/683 (63.8)       | 14/24 (58)        |
| Only having insertive anal intercourse   | 234/671 (34.9)       | 11/26 (42)        |
| Only have unprotected sex with partners with HIV negative men (sero-sorting)                 | 246/686 (35.9)       | 9/23 (39)         |
| Prevent by not permitting partner to ejaculate inside  | 289/672 (43)         | 9/23 (39)         |
| Have unprotected sex only when an HIV + partner has a low viral load or is on HIV medication | 42/655 (6.4)         | 3/23 (13)         |

Note: N varies due to variations in the number of respondents to each question

## Results

1139 participants provided samples for DBS and 959 self-reported their status as HIV-negative or unknown.

Of these, 28 (2.9%) tested HIV-positive which represented 14% of the 206 positive tests in the study (Table 1).

20 of the 28 individuals (71%) had previously been tested for HIV and had undergone a median of 2 HIV tests (IQR 0 – 4 tests) in the previous 2 years.

16 of the 28 had not been tested in the previous 2 years

Reasons stated for not testing included:

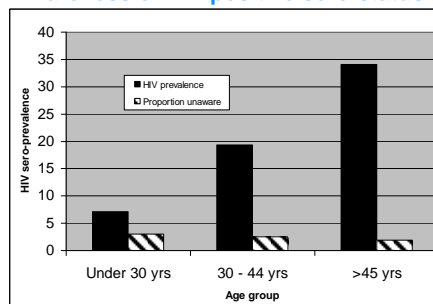
- not wanting to know (n=4)
- being unable to cope with the result (n=4);
- a conviction that they were already HIV-infected (n=4);
- not having the initiative to get tested (n=4)
- concern about the impact on their relationships (n=5).

23 of the 28 (82%) reported using at least one behavioural measure to reduce their risk for HIV infection (Table 2).

20 of the 28 responded to the question regarding HIV risk perception: 10/20 (50%) felt that they were “unlikely” or “very unlikely” to acquire HIV during their lifetime compared to 80% of the total HIV-negative sample in the study.

While the prevalence of HIV was much greater in older age groups, the proportion (and absolute numbers) of undiagnosed infections was greater in younger age groups (Figure 1).

Figure 1: Awareness of HIV positive sero-status by age group



| Total DBS+/ N (%) | 30/422 (7.1%) | 87/451 (19.3%) | 88/258 (34.1%) |
|-------------------|---------------|----------------|----------------|
| Aware             | 16 (57.1%)    | 74 (87.1%)     | 83 (94.3%)     |
| Unaware           | 12 (42.9%)    | 11 (12.9%)     | 5 (5.7%)       |
| No response       | 2             | 2              | 0              |

## Conclusions

Undiagnosed HIV infection accounts for a small, but important proportion of HIV-positive MSM who attend venues catering to gay or bisexual men.

Most men with undiagnosed HIV infection in this study reported previously having tested for HIV.

Strategies to reduce undiagnosed infections need to consider reducing barriers to testing, especially for younger MSM.

Increasing the frequency of testing among MSM may also reduce the burden of undiagnosed infection.

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