

Distinct Risk Profiles Of Injection Drug Using Men Who Have Sex With Men In Two Prospective Cohorts In Vancouver

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Objective

- To compare injection drug using men who have sex with men in a prospective cohort of young men who have sex with men (Vanguard); and a cohort of injection drug users (VIDUS).

Methods

The Vanguard Project

The Vanguard Project is a prospective study of HIV incidence and risk behaviours, which began in May 1995. Eligible participants are males between the ages of 18 and 30, living in the Greater Vancouver area, who have not previously tested HIV-positive. The study is open to all men who have sex with men (MSM), regardless of whether they self-identify as gay, bisexual or straight.

Recruitment of participants involved outreach at gay community events, use of print materials (e.g. posters, brochures, condom packages), and recruitment by health care professionals at HIV testing clinics and local physicians' practices. Since May of 1995, over 850 participants have completed confidential, self-administered questionnaires and undergone HIV testing on an annual basis. To date, the questionnaires have elicited information on sociodemographic characteristics, sexual behaviour, substance use and mental health.

Vancouver Injection Drug Users Study (VIDUS)

VIDUS is a prospective cohort study of HIV incidence and risk behaviours, which began in May 1996. Eligible participants are injection drug users of 16 years of age or older, living in the Greater Vancouver area, who have not previously tested HIV-positive.

Over 1,400 injection drug users (IDU) have been enrolled through self-referral and street outreach. At baseline and semi-annually, subjects provided blood samples and completed an interviewer-administered questionnaire. The questionnaire elicited demographic characteristics including age, gender, and place of residence, as well as substance use, sexual behaviour and mental health.

We identified 92 Vanguard participants who had injected drugs in the past year, and 72 male VIDUS participants who had had sex with men in the past six months. Participants enrolled in both cohorts were excluded from analysis. Contingency tables and non-parametric methods were used to compare sociodemographics, substance use and sexual behaviors between the two groups

Results

Compared to IDUs in Vanguard, MSM in VIDUS were older (median: 30 vs. 23 years, $p < 0.001$) and more likely to have graduated from high school (75% vs. 49%, $p = 0.001$).

VIDUS participants were also more likely to have ever been sexually assaulted (54% vs. 37%, $p = 0.040$), to have used dirty needles (56% vs. 39%, $p = 0.040$), injected drugs daily (57% vs. 35%, $p = 0.005$), injected cocaine (90% vs. 65%, $p < 0.001$), and have a higher CES-D depression score (median: 17 vs. 11, $p < 0.001$).

Vanguard IDUs were more likely to have used various drugs in the past year, including marijuana (85% vs. 64%, $p = 0.004$), crack (65% vs. 22%, $p < 0.001$), speed (37% vs. 17%, $p = 0.005$) and acid (50% vs. 18%, $p < 0.001$). They also had a higher sexual risk profile, characterized by unprotected receptive (43% vs. 21%, $p = 0.003$) and insertive anal intercourse (38% vs. 15%, $p = 0.002$) with either regular or casual partners.

Table 1: Comparison of socio-demographic characteristics of injection drug using men who have sex with men.

| | Vanguard (n=92) | Vidus (n=72) | p-value |
|----------------------------------|-----------------|--------------|---------|
| Age | | | |
| Median | 23 | 30 | <0.001 |
| Interquartile Range | 21-27 | 24-35 | |
| Ethnicity | | | |
| White | 67 (77%) | 46 (64%) | 0.172 |
| Native | 15 (17%) | 21 (29%) | |
| Other | 5 (6%) | 5 (7%) | |
| Unstable Housing | | | |
| Yes | 54 (59%) | 49 (69%) | 0.176 |
| No | 38 (41%) | 22 (31%) | |
| High School Education or Greater | | | |
| Yes | 44 (49%) | 54 (75%) | 0.001 |
| No | 46 (51%) | 18 (25%) | |
| Employed | | | |
| Yes | 18 (20%) | 7 (10%) | 0.072 |
| No | 72 (80%) | 68 (90%) | |

Table 2: Comparison of sexual experience for demographic characteristics of injection drug using men who have sex with men.

| | Vanguard (n=92) | Vidus (n=72) | p-value |
|--|-----------------|--------------|---------|
| Paid Sex Lifetime | | | |
| Yes | 75 (82%) | 68 (94%) | 0.014 |
| No | 17 (18%) | 4 (6%) | |
| Paid Sex | | | |
| Yes | 67 (73%) | 45 (63%) | 0.158 |
| No | 25 (27%) | 27 (37%) | |
| Unprotected Receptive Anal Intercourse | | | |
| Yes | 38 (43%) | 15 (21%) | 0.003 |
| No | 50 (57%) | 57 (79%) | |
| Unprotected Insertive Anal Intercourse | | | |
| Yes | 33 (38%) | 11 (15%) | 0.002 |
| No | 55 (62%) | 61 (85%) | |

Table 3: Comparison of substance use for demographic characteristics of injection drug using men who have sex with men

| | Vanguard (n=92) | Vidus (n=72) | p-value |
|--------------------------------------|-----------------|--------------|---------|
| SUBSTANCE USE | | | |
| Injected Drugs on a daily basis | | | |
| Yes | 32 (35%) | 41 (57%) | 0.005 |
| No | 60 (65%) | 31 (43%) | |
| Use a Rig that had already been used | | | |
| Yes | 35 (39%) | 40 (56%) | 0.040 |
| No | 54 (61%) | 32 (44%) | |
| Cocaine | | | |
| Yes | 81 (89%) | 66 (92%) | 0.571 |
| No | 10 (11%) | 6 (8%) | |
| Injected Cocaine | | | |
| Yes | 60 (65%) | 65 (90%) | <0.001 |
| No | 32 (35%) | 7 (10%) | |
| Heroin | | | |
| Yes | 68 (76%) | 50 (69%) | 0.385 |
| No | 22 (24%) | 22 (31%) | |
| Injected Heroin | | | |
| Yes | 46 (50%) | 46 (64%) | 0.075 |
| No | 46 (50%) | 26 (36%) | |
| Marijuana | | | |
| Yes | 77 (85%) | 46 (64%) | 0.002 |
| No | 14 (15%) | 26 (36%) | |
| Crack | | | |
| Yes | 56 (65%) | 16 (22%) | <0.001 |
| No | 30 (35%) | 56 (78%) | |
| Speed | | | |
| Yes | 32 (37%) | 12 (17%) | 0.005 |
| No | 55 (63%) | 60 (83%) | |
| Acid | | | |
| Yes | 44 (50%) | 13 (18%) | <0.001 |
| No | 44 (50%) | 59 (82%) | |

Table 4: Comparison of other characteristics of injection drug using men who have sex with men.

| | Vanguard (n=92) | Vidus (n=72) | p-value |
|------------------------|-----------------|--------------|---------|
| CES-D Depression Score | | | |
| Median | 11 | 17 | <0.001 |
| Interquartile Range | 7-16 | 11-20 | |
| Non-Consensual Sex | | | |
| Yes | 34 (37%) | 38 (54%) | 0.040 |
| No | 1575 (63%) | 33 (46%) | |

Conclusions

Significant differences were found between these two groups of injection drug using men who have sex with men. Those in the IDU cohort were older, better educated, more likely to have been sexually assaulted, shared needles, inject daily and exhibit symptoms of depression. Participants in the MSM cohort were more likely to use a variety of drugs and to have greater sexual risk of HIV transmission.

The distinct risk profiles of these two groups suggest diversity within both the IDU and MSM populations, which should be incorporated into prevention efforts.