

Special report:

**Ethnicity analysis in the Lambda Survey of
men who have sex with men, Ontario 2007**

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Introduction

M-Track is an ongoing second generation surveillance system conducted at sentinel sites of men who have sex with men (MSM) across Canada. It is the most recent in a series of studies, including the National Men's Survey (1991), the Winnipeg Men's Survey (1995) and the Ontario Men's Survey (2002), targeting men who have sex with men (MSM). The Ontario component of M-Track (*Lambda*) was first conducted in Toronto and Ottawa in 2007.

The *Lambda* study was a venue-based cross-sectional survey that consisted of a questionnaire and collection of biologic samples (dried blood spots) to measure HIV, HCV and syphilis prevalence. *Lambda* used tests designed to detect recent infection to assess HIV incidence among MSM. *Lambda* sought to collect information about risk behaviours associated with HIV/STI infection and general issues relevant to sexual health and sexual behaviour among MSM. Community members and service providers were integral throughout the study from development and implementation to interpretation and translation of knowledge into action.

This report presents a supplement analysis of ethnicity among participants in Lambda survey 2007.

1. Methods

Overall, 2,438 participants took part in the *Lambda* survey and 1,104 (45.3%) of these participants provided a dried blood spot (DBS). The Ottawa site recruited 506 participants, of whom 304 (60.1%) provided a DBS. 1,932 participants were recruited from the Toronto site and 41.4% of these participants provided a DBS. For a detailed description of the methods used in the Lambda Survey 2007, please refer to the "Technical Report: Lambda survey: M-Track Ontario second generation surveillance".

Ethnicity information was collected in the Lambda Survey in text responses. The 19 individual ethnicity variables were recoded according to the Statistics Canada 2006 Census ethnic origins classification index. Some participants indicated that he belonged to more than one ethnic group. In such a case, the final classification of participant's ethnicity was decided according to the following hierarchy:

Latin American > Caribbean > Africa > North America > European

South Asian > North America > European

Southeast Asian > North America > European

Arab/West Asian > North America > European

Aboriginal > North America > European

Oceania > North America > European

North America > European

If two or more ethnic groups from Aboriginal, South Asian, Southeast Asian, Arab/West Asian, and Latin American/Caribbean/Africa, then set ethnic group to 'Multi-ethnic'

The new ethnicity variable included 11 ethnic groups: European, North American, Aboriginal, African, Caribbean, Latin American, Arab/West, South Asian, Southeast Asian, Oceania and multi-ethnic. Due to the small number of participants in some ethnic groups, we aggregated several ethnic groups together for the purpose of this analysis. Before doing this, we examined for heterogeneity in the subgroups within each proposed aggregated ethnic group; no significant difference was observed

with respect to age distribution, education, income, language first spoken, HIV prevalence and HIV testing history. The final classification of ethnicity in this report included: European/North American, Aboriginal, African/Caribbean, Latin American, South/Southeast Asian and multi-ethnic/other.

Since there were no variables in the questionnaire that reported directly delayed condom application during receptive anal sex with an HIV-positive or unknown status partner or unprotected receptive anal sex with a casual partner or HIV-positive or unknown status regular partner, we developed algorithms to define these two new variables, which were derived from seven and 11 other variables included in the questionnaire, respectively. For a detailed description of the logic used, please see the Appendix.

2. Results

Table 1 indicates the ethnicity of Lambda participants. The majority of participants in both Toronto and Ottawa self-identified as being of European or North American descent. In Ottawa, a significantly higher proportion of participants were of European or North American descent, while the proportion of participants who were of African/Caribbean, Latin American or South/Southeast Asian descent was significantly higher in Toronto than in Ottawa.

Table 2 shows the proportion of participants recruited from each venue type by ethnicity and site. A greater proportion of participants from Toronto were recruited from bars and bathhouses than were recruited from these venue types in Ottawa (46.0% vs. 37.7%, $p=0.001$; 10.8% vs. 3.6%, $p<0.0001$, respectively). A greater proportion of Ottawa participants were recruited from associations than in Toronto (30.3% vs. 14.0%, $p<0.0001$), with a significant difference among those of European/North American descent ($p<0.0001$) and borderline differences among those of Aboriginal and African/Caribbean descent ($p=0.075$, $p=0.052$, respectively). In Toronto, Latin American MSM were more likely to be recruited from associations compared to European/North American MSM and South/Southeast Asian MSM (31.4% vs. ~13%, all $p<0.01$). African/Caribbean MSM were more likely to be recruited from events compared to European/North American, Aboriginal and Latin American MSM (33.7% vs. 4-23%, all $p<0.05$).

Table 3 shows the age distribution of Lambda participants by ethnicity. For each ethnicity category, there was no significant difference in age between participants from Toronto and Ottawa. In Toronto, participants of European/North American or Aboriginal descent were significantly older than other participants who reported ancestries outside Europe/North America or Aboriginal. In Ottawa, the same trend was evident, but not significant, perhaps due to small sample sizes.

The distribution of educational level attained of Lambda participants by ethnicity is shown in

Table 4. In Toronto, the proportion of participants who did not obtain a college/university degree or higher was significant greater among those with South/Southeast Asian heritage than those in Ottawa (33.8% vs. 12.0%, $p=0.047$). No difference was found in other ethnic categories with respect to study site. Participants of Aboriginal descent had significantly less education than those with European/North American descent and those with South/Southeast Asian heritage at both sites (all $p < 0.05$). The proportion of participants who did not obtain a college/university degree or higher among MSM of Aboriginal descent was 52.5% in Toronto and 61.9% in Ottawa, while it was 36.3% and 34.0% among Toronto and Ottawa MSM with European/North American descent, respectively.

Table 5 shows income distribution of Lambda participants by ethnicity. There was no difference in income between Toronto and Ottawa for any ethnic group. In Toronto, 80.4% of Latin American MSM earned less than \$50,000 in the previous year compared to 64.1% of South/Southeast Asian men and 54.4% of European/North American MSM. These differences were statistically significant ($p=0.04$ and $p=0.0004$, respectively). No difference in income across ethnic groups in Ottawa was observed.

Table 6 indicates the language first spoken by Lambda participants by ethnicity. There were significant differences among ethnic groups as well as between study sites. Toronto European/North American men were more likely to report English or a language other than English or French as their first language than Ottawa participants, while 28.7% of European/North American men in Ottawa reported French as their first spoken language compared to only 9.6% in Toronto. For Aboriginal MSM, 14.3% in Toronto and 40.0% in Ottawa reported French as their first language. Not surprisingly, South/Southeast Asian and Latin American men were more likely to report a language other than English or French as their first language than other ethnic groups. Notably, only 11.5% of Latin American men in Toronto reported English as their first spoken language compared to 60.0% of Latin American men in Ottawa; however, this difference was not statistically significant but there were only five Latin American participants in Ottawa.

Table 7 presents the number of subjects who provided and did not provide a DBS sample and the observed HIV prevalence among those who provided a sample by ethnicity. Overall, a higher proportion of participants in Ottawa than in Toronto provided a DBS for HIV testing (60.1% vs. 40.9%, $p<0.0001$). Among Toronto participants, the proportion of participants who provides a DBS sample varied significantly by ethnicity ($p<0.0001$), with the lowest being among South/Southeast Asian men (25.6%) and the highest among Aboriginal (50.5%) participants. No significant differences were observed across ethnic groups in Ottawa.

With respect to HIV prevalence, among Toronto participants, HIV prevalence varied significantly by ethnicity, with the highest observed among Aboriginal (39.2%) and Latin American (36.4%) and the lowest among South/Southeast Asian (9.6%) participants ($p=0.008$). In all other ethnic groups, HIV prevalence varied from 17.1% to 23.5%. All Among Ottawa participants, HIV prevalence was generally much lower than in Toronto but we observed no significant differences in HIV prevalence between participants by ethnic group.

Table 8 shows HIV prevalence by recruitment venue type and ethnicity. HIV prevalence varied by recruitment venue and ethnicity. In Toronto, overall HIV prevalence among those recruited from associations was significantly higher than among those from other venues together (42.4% (95%CI 32.7-52.2%) vs. 18.4% (95%CI 14.5-22.3%, $p<0.0001$). HIV prevalence (41.7%) among those of European/North American men recruited from associations was significantly higher compared to

those recruited from bars (21.3%), events (17.2%), bathhouse (23.1%) and other venues (14.6%). For Aboriginal men in Toronto, HIV prevalence (85.7%) among those recruited from associations were significantly higher than those recruited from bars (14.3%) and events (12.5%). Six (66.7%) of nine Latin American men recruited from associations were HIV-positive.

In Ottawa, overall HIV prevalence among those recruited from bars and associations was higher than among those from other venue types (16.3% (95% CI 10.9-21.7%) vs. 6.5% (95% CI 1.9-11.2%), $p=0.023$). This difference was statistically significant specifically among MSM of European/North American descent (14.2% (8.3-20.1%) vs. 3.9% (0.0-8.2%), $p=0.03$).

Participants recruited from associations had a higher HIV prevalence, which may have biased the overall prevalence among Lambda participants. We carried out two additional analyses to further this issue.

Table 8a shows the recruitment venue-standardized HIV prevalence for each ethnic group by study site, using the proportion of recruitment venue in both sites as the standard. After adjustment for recruitment venue, overall HIV prevalence (24.7%) was slightly higher than the crude prevalence (23.8%) in Toronto, as it was for each ethnic group. In Ottawa, overall HIV prevalence was slightly lower (10.7% vs. 11.8%), as it was for Aboriginal men (5.8% vs. 7.1%). HIV prevalence among South/Southeast Asian men in Ottawa was slightly higher (11.7% vs. 8.3%).

Table 8b shows a similar analysis as Table 8 but excluding subjects recruited in associations. Overall, HIV prevalence was lower in both sites (19.4% vs. 23.8% in Toronto and 10.0% vs. 11.8% in Ottawa), as well as in specific ethnic groups. There was no longer a statistically significant difference in HIV prevalence across ethnic groups in Toronto. HIV prevalence among Latin American men was markedly reduced, from 36.4% to 15.4% after exclusion of subjects recruited from associations. This was similar among Aboriginal men, where HIV prevalence decreased from 39.2% to 21.6%, although it was still the highest of any ethnic group.

Table 9 indicates HIV prevalence by age and ethnicity. (We do not report HIV prevalence for some ethnic groups by age due to denominators of five or less since the observed proportion is not a valid reflection of true prevalence.) Observed HIV prevalence varied by age and ethnicity. In Toronto, HIV prevalence among European/North American MSM increased from 9.1% among participants less than 30 years old to 16.7% among 30-39 years old, 28.4% among 40-49 years old, reaching a peak of 31.0% among 50-59 year old participants and decreasing in the 60+ age group (19.0%). This pattern is similar to that seen among Toronto participants as a whole.

As seen in Table 10, among those with sufficient data, we observed higher HIV prevalence among European/North American MSM who had completed high school or less than those with a higher level of education in both Toronto and Ottawa (33.7% vs. 21.3%, $p=0.02$ in Toronto, 20.7% vs. 8.0%, $p=0.04$ in Ottawa, respectively). The same trend was found among Aboriginal MSM in Toronto (56.3% vs. 36.4%), although the difference was not statistically significant.

Table 11 displays HIV prevalence by income and ethnicity. HIV prevalence among European/North American MSM in both Toronto and Ottawa and among Aboriginal men in Toronto appeared to decrease with increasing personal income. In Toronto, HIV prevalence was 33.8% among European/North American MSM reporting an income less than \$40,000, 16.7% among those reporting an income from \$40,000 to \$69,999 and 11.9% among those with equal or more than

\$70,000 ($p < 0.0001$). HIV prevalence was 17.0%, 4.3% and 3.4%, respectively, among European/North American MSM in Ottawa ($p < 0.01$) and was 56.0%, 27.8% and 12.5%, respectively, among Aboriginal MSM in Toronto ($p < 0.05$). Within the same lower income category (less than \$40,000) in Toronto, Aboriginal (56.0%) and Latin American (54.5%) MSM had higher HIV prevalence than other ethnic groups: European/North American men (33.8%, $p < 0.05$ when compared to Aboriginal men), South/Southeast Asian men (14.3%, all $p < 0.01$) and African/Caribbean men (11.8%, all $p < 0.05$).

In Table 12, we observe that 88.2% of participants in both Toronto and Ottawa have been tested for HIV at least once, with variation observed across ethnic groups. South/Southeast Asian men had the lowest rate of previous HIV testing at both sites. The differences in HIV testing between South/Southeast Asian participants and European/North American or Aboriginal participants were statistically significant in Toronto.

Table 13 presents the age distribution of HIV testing history by ethnicity. Not surprisingly, lower rates of HIV testing were found among participants who were less than 30 years old, regardless of ethnicity and study site.

Table 14 presents the serologic result of HIV testing reported by participants. Overall, self-reported HIV prevalence among those with a known HIV result was 17.6% in Toronto and 12.8% in Ottawa. The self-reported HIV prevalence varied considerably by ethnicity, particularly in Toronto, with the highest observed among Aboriginal (27.6%) and Latin American (28.6%) and the lowest among South/Southeast Asian (6.4%) participants. The difference in self-reported HIV prevalence across ethnic groups in Toronto was statistically significant ($p = 0.0001$).

Table 15 presents the reported HIV testing results and HIV serologic results in the study among participants who provided DBS by ethnicity. Overall, we observed a high degree of agreement between reported HIV test result and the DBS results. Among those who were HIV-positive by DBS, 4.0% of MSM in Toronto and 23.3% in Ottawa did not know they were HIV-positive. By ethnicity and site, 16.8% (20/119) of European/North American MSM in Toronto, 25.0% (5/20) of European/North American MSM in Ottawa, and 50.0% (3/6) of Africa/Caribbean MSM in Toronto did not know they were HIV-positive.

Eleven European/North American MSM in Toronto and three in Ottawa and two African/Caribbean MSM in Toronto were known to be HIV-negative at their last test and are likely seroconverters.

Few HIV-seronegative participants (0.83% in Toronto and 0.48% in Ottawa) reported being HIV-positive at their latest HIV test before the survey.

Table 16 presents the distribution of the number of casual partners during the previous six months among Lambda participants by ethnicity. More than three-quarters of participants had at least one casual sexual partners during the previous six months regardless of ethnicity and study site, except the multi-ethnic/other group in Ottawa (56%). In Toronto, about 25-30% of MSM had at least 10 casual partners, except African/Caribbean MSM at 14.1%.

Table 17 presents the distribution of the number of regular sex partners during the previous six months among Lambda participants by ethnicity. In Toronto, 50.0% of Aboriginal MSM, 42.2% of Latin American MSM, 40.8% of African/Caribbean MSM, 38.6% of South/Southeast Asian MSM

and 34.0% of European/North American MSM had more than one regular sexual partner. The difference across ethnic groups in Toronto was statistically significant ($p=0.049$). In Ottawa, 75.0% of Latin American MSM, 43.8% of Aboriginal MSM, 42.9% of African/Caribbean MSM, 30.7% of European/North American MSM and 26.1% of South/Southeast Asian MSM had more than one regular sexual partner. However, the difference in Ottawa was not statistically significant.

Table 18 presents the proportion of delayed condom application during receptive anal sex with HIV-positive or unknown HIV status partners among participants with self-reported HIV-negative or unknown HIV status by ethnicity. 1,492 (77.2%) Toronto participants and 417 (82.4%) Ottawa participants reported being HIV-negative or with unknown HIV status. Among those with data indicating delayed condom application during receptive anal sex with HIV-positive or unknown status partner, overall, 8.1% of Toronto participants and 9.9% of Ottawa participants had delayed condom application during receptive anal sex with an HIV-positive or unknown status partner, with some variation among ethnic groups, with MSM from Latin America having higher rates. However, none of the differences in the proportion delaying condom application by ethnic group were statistically significant, even when aggregated across homogeneous sub-groups.

Table 19 presents the proportion of participants self-reported as HIV-negative or HIV status unknown who reported unprotected receptive anal sex with a casual partner or an HIV-positive or unknown HIV status regular partner by ethnicity. 1,097(73.5%) Toronto participants and 326(78.2%) Ottawa participants with self-reported HIV negative or unknown HIV status had information on unprotected receptive anal sex with a casual partner or HIV-positive regular partner or unknown HIV status regular partner. Among them, overall, 19.0% of Toronto participants and 16.6% of Ottawa participants reported unprotected receptive anal sex with a casual partner or HIV-positive regular partner or unknown HIV status regular partner. In Toronto, 25.0% of Latin American MSM, 24.1% of Aboriginal men, 23.8% of South/Southeast Asian men, 17.7% of European/North American men and 13.6% of African/Caribbean MSM had unprotected receptive anal sex with a casual partner or HIV-positive regular partner or unknown HIV status regular partner during the previous six months. In Ottawa, 17.2% of European/North American men and 10.0% of Aboriginal men had unprotected receptive anal sex with a casual partner or HIV-positive regular partner or unknown HIV status regular partner during the previous six months. None of 17 South/Southeast Asian MSM in Ottawa had unprotected receptive anal sex with a casual partner or HIV-positive regular partner or unknown HIV status regular partner during the previous six months. However, the differences in the proportion with unprotected receptive anal sex by ethnic group were not statistically significant, even when aggregated into groups with high versus low rates.

Table 20 indicates injection drug use by type of drug and ethnicity. Overall, 3.9% (71/1,839) and 2.5% (12/ 481) of participants in Toronto and Ottawa, respectively, reported injection drug use in the previous 6 months. Excluding steroids, 7.1% of Toronto participants (131) and 5.4% of Ottawa participants (26) reported a lifetime history of injection drug use. In Toronto, more European/North American MSM (10.8%) and Aboriginal men (13.2%) reported a history of injection drug use than African/Caribbean MSM (4.0%, all $p<0.05$) and South/Southeast Asian MSM (6.2%, $p=0.06-0.07$). In Ottawa, 7.3% of European/North American MSM, 10.0% of Aboriginal MSM and 11.1% of African/Caribbean MSM reported a history of injection drug use. No Latin American or South/Southeast Asian MSM reported a history of injection drug use.

Table 21 shows HIV prevalence by history of injection drug use (ever) and ethnicity. Overall, HIV prevalence was markedly higher in both Toronto and Ottawa participants with a history of injection

drug use. In Toronto, HIV prevalence among those reporting a history of injection drug use was 1.8-fold higher than those without injection drug use (51.8% (95% CI 42.5-61.0%) vs. 18.7% (95% CI 15.6-21.7%), $p < 0.0001$). In Ottawa, HIV prevalence among those reporting a history of injection drug use was 5.3-fold higher than those who did not (45.8% (95% CI 25.9-65.8%) vs. 7.3% (95% CI 4.1-10.5%), $p < 0.0001$). Similar differences were observed in each ethnic group, although the differences were not statistically significant due to small numbers observed in several ethnic groups, except European/North American MSM. For European/North American MSM, HIV prevalence among those reporting a history of injection drug use was 2-fold higher than those without injection drug use in Toronto (54.7% (95% CI 43.4-65.9%) vs. 18.3% (95% CI 14.7-21.9%), $p < 0.0001$) and 4.4-fold higher in Ottawa (36.8% (95% CI 15.2-58.5%) vs. 6.8% (95% CI 3.4-10.3%), $p < 0.001$).

3. Discussion

The Ontario MSM community is ethnoculturally diverse. To ensure that *Lambda* captured this diversity, community representatives were involved throughout the study and recruitment was conducted at venues targeted to different ethnocultural groups. To collect information on ethnocultural background and self-identification, the questionnaire asked participants about which ethnocultural group they most strongly identified with as well as the ethno-cultural origins of their ancestors. The *Lambda* sample differed from the general population (as indicated by the 2006 census) in several ways. Approximately 30% of Toronto participants and 15% of Ottawa participants reported ancestry outside of North America and Europe. Likewise, approximately 30% of Toronto participants and 15% of Ottawa participants reported that they were born outside of Canada. However, the majority of *Lambda* participants were born in Western industrialized countries and reported British, French or European ancestry, making these regions and ethnic groups over-represented in the survey relative to their representation in the general population. In the 2006 census, men with European/North American origin comprised 62.9% of male population in Toronto and 82.4% in Ottawa <1>.

The proportion of participants reporting that they were born in Asia or were of Asian descent was significantly lower than that in the general population (11.6% vs. 24.0% in Toronto and 5.4% vs. 6.6% in Ottawa, respectively). However, the proportion of Aboriginal participants was significantly greater than the proportion of Aboriginal men in the general population (5.8% vs. 0.9% in Toronto and 4.6% vs. 2.4% in Ottawa, respectively). In the past, ethnicity was ascertained by querying participants about their racial origin making comparison with previous studies difficult. However, approximately 25% of Toronto respondents in the 2002 Ontario Men's Survey (OMS) <2> were from an ethnic or racial minority suggesting an increase in the ethnic diversity of the *Lambda* sample as compared to the OMS. A special analysis on ethnicity using surveillance data also found that the proportion of Caucasian cases among reported AIDS cases among MSM in Ontario decreased from 95.7% in 1981-84 to 72.5% in 2000-04, while the proportion of Blacks, Asians, Latin Americans increased. Similar results were found in HIV diagnoses among MSM in Toronto <3>.

This report revealed ethnic-differences in several attributes among *Lambda* participants. MSM of European/North American or Aboriginal descent were older than other groups. Aboriginal MSM were less educated than those with European/North American descent and those with South/Southeast Asian heritage. Latin American MSM reported lower income than those with European/North American descent and those with South/Southeast Asian heritage. Fewer South/Southeast Asian MSM provided a dry blood spot. HIV prevalence varied significantly by

ethnicity in Toronto, with the highest among Aboriginal and Latin American and the lowest among South/Southeast Asian participants.

In our study, we found higher HIV prevalence among participants recruited from associations. Some of these associations may have provided services or organized events that might have selectively served HIV-positive men. It would be useful to examine more closely the programs of the participating associations to determine whether this was the case. To take into consideration a possible bias introduced by this factor, we analyzed HIV prevalence after standardizing for venue type and after excluding subjects recruited from associations.

In our study, we asked questions about injecting drugs and examined HIV prevalence as a function of injection drug use. Almost 10% of subjects reported a history of drug injection. Furthermore, HIV prevalence was over 3-fold greater for those who had ever injected drugs compared to those who had never injected drugs. Similar differentially high HIV prevalence in injection drug users was observed in all ethnic groups except South/Southeast Asian men. It is likely that most HIV-infected men who injected drugs were infected by this route, given the high risk associated with this practice. Thus, at least 20% of the HIV infections among this MSM population are due to injection. Given the high rate of drug injection among MSM, the issue of injection in this population should receive particular attention with respect to primary prevention.

This report also found that a certain number of MSM engaged in high risk sexual behaviours. Approximately 8-9% of participants with self-reported HIV-negative or unknown HIV status reported having had delayed condom application during receptive anal sex with HIV-positive or unknown HIV status partner and nearly one-fifth had unprotected receptive anal sex with a casual partner or HIV-positive regular partner or unknown HIV status regular partner. Variations in these two indicators of risky sexual behaviour were observed according to ethnic group though none of these differences attained statistical significance. The results in this report suggest that implementation and development of HIV prevention programs need to take into consideration ethnic-culture diversity among MSM.

References

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Appendix: Algorithm for defining two high risk sexual behaviour variables

Since there was no direct variables that describe delayed condom application during receptive anal sex with HIV-positive partner or delayed condom application during receptive anal sex with HIV unknown status partner, we developed an algorithm to define a new variable, which was derived from seven other variables asked in the original questionnaire (Q19-number of male sex partners (general), Q25-anal sex with at least one man, Q25b-unprotected anal sex with at least one man, Q25b1-unprotected anal sex with HIV+ partner, Q25b3-unprotected anal sex with unknown HIV status partner and Q27b – delayed condom application during receptive anal sex). Participants were classified as ‘Yes’ for delayed condom application during receptive anal sex with HIV-positive partner or unknown HIV status partner if they reported having delayed condom application during receptive anal sex and either they had unprotected anal sex with HIV-positive partner or they had unprotected anal sex with unknown HIV status partner. Participants were classified as ‘No’ for delayed condom application during receptive anal sex with HIV-positive partner or unknown HIV status partner if they had neither sex partner, nor anal sex with a man, nor unprotected anal sex with at least one man, nor unprotected anal sex with HIV-positive partner and no unprotected anal sex with unknown HIV status partner nor delayed condom application during receptive anal sex. The rest of participants were assigned as ‘Unknown’.

No direct variables described unprotected receptive anal sex with a casual partner or HIV-positive regular partner or unknown HIV status regular partner, we developed an algorithm to define a new variable, which was derived from 11 other variables asked in the original questionnaire (Q29-number of casual partner, Q31-receptive anal sex with a casual partner, Q31a-condom use during receptive anal sex with a casual partner, Q32a-unprotected anal sex with a casual partner, Q33-number of regular partners, Q34-sex with a regular HIV-positive partner, Q36-receptive anal sex with a regular HIV-positive partner, Q36a-condom use during receptive anal sex with a regular HIV-positive partner, Q37-sex with a unknown HIV status regular partner, Q39-receptive anal sex with a unknown HIV status regular partner, Q39a-condom use during receptive anal sex with a unknown HIV status regular partner). Participants were classified as ‘Yes’ for unprotected receptive anal sex with a casual partner or HIV-positive regular partner or unknown HIV status regular partner if they reported “Never” or “Rarely” or “Sometimes” or “Most of the time” or “Almost every time” about condom use during receptive anal sex either with a casual partner or with a regular HIV-positive partner or with a unknown HIV status partner. Participants were classified as ‘No’ for unprotected receptive anal sex with a casual partner or HIV-positive regular partner or unknown HIV status regular partner if they had neither casual sex partner, nor receptive anal sex with a casual partner nor unprotected anal sex with a casual partner or used condom “All the time” during receptive anal sex with a casual partner and if they had neither regular partner, nor sex with a regular HIV-positive partner and with a unknown HIV status partner, nor receptive anal sex with a regular HIV-positive partner and with a unknown HIV status partner, or used condom “All the time” during receptive anal sex with a regular HIV-positive partner and with a unknown HIV status partner. The rest of participants were assigned as ‘Unknown’.

Table 1 Ethnicity of Lambda participants

Ethnicity	Toronto		Ottawa		Both sites	
	N	%	N	%	N	%
European/North American	1,224	69.8	378	82.2	1,602	72.4
Aboriginal	101	5.8	21	4.6	122	5.5
African/Caribbean	100	5.7	9	2.0	109	4.9
Latin American	56	3.2	5	1.1	61	2.8
South/Southeast Asian	203	11.6	25	5.4	228	10.3
Multi-ethnic/other*	69	3.9	22	4.8	91	4.1
Total excluding unknown	1,753	100.0	460	100.0	2,213	100.0
Unknown	179		46		225	
Total	1,932		506		2,438	

* Including Multi-ethnic, Oceania and Arab/West Asian

Table 2 Venue type of Lambda participants recruited by ethnicity

Venue type	European / North American	Aboriginal	African / Caribbean	Latin American	South / Southeast Asian	Multi-ethnic / other	Unknown	Total
Toronto								
Total number	1,224	101	100	56	203	69	179	1,932
Unknown	71	8	5	5	14	5	30	138
	%*	%	%	%	%	%	%	%
Bar	47.5	46.2	35.8	45.1	40.2	34.4	53.7	46.0
Coffee shop	0.4	0.0	0.0	0.0	0.5	0.0	0.0	0.3
Bathhouse	9.5	11.8	7.4	15.7	15.3	17.2	11.4	10.8
Event	22.9	19.4	33.7	3.9	29.1	20.3	19.5	23.0
Association	13.4	19.4	17.9	31.4	13.2	17.2	6.7	14.0
Fixed site (Office)	1.0	1.1	1.1	0.0	0.0	3.1	3.4	1.1
Church	4.8	1.1	4.2	3.9	1.1	6.3	4.0	4.1
Other	0.5	1.1	0.0	0.0	0.5	1.6	1.3	0.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Ottawa								
Total number	378	21	9	5	25	22	46	506
Unknown	24	1	1	1	0	0	1	28
	%*	%	%	%	%	%	%	%
Bar	38.7	40.0	12.5	25.0	12.0	45.5	44.4	37.7
Coffee shop	2.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5
Bathhouse	2.5	0.0	12.5	0.0	20.0	4.5	2.2	3.6
Event	22.6	15.0	25.0	50.0	24.0	22.7	24.4	22.8
Association	31.1	40.0	50.0	25.0	16.0	27.3	26.7	30.3
Fixed site (Office)	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Church	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other	2.8	5.0	0.0	0.0	28.0	0.0	2.2	4.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Both sites								
Total number	1,602	122	109	61	228	91	225	2,438
Unknown	95	9	6	6	14	5	31	166
	%*	%	%	%	%	%	%	%
Bar	45.5	45.1	34.0	43.6	36.9	37.2	51.5	44.3
Coffee shop	0.8	0.0	0.0	0.0	0.5	0.0	0.0	0.6
Bathhouse	7.9	9.7	7.8	14.5	15.9	14.0	9.3	9.2
Event	22.8	18.6	33.0	7.3	28.5	20.9	20.6	23.0
Association	17.5	23.0	20.4	30.9	13.6	19.8	11.3	17.4
Fixed site (Office)	0.8	0.9	1.0	0.0	0.0	2.3	2.6	0.9
Church	3.6	0.9	3.9	3.6	0.9	4.7	3.1	3.3
Other	1.1	1.8	0.0	0.0	3.7	1.2	1.5	1.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

* Proportion among those with known venue type

Table 3 Age distribution of Lambda participants by ethnicity

A. Toronto

Age group	European/ North American	Aboriginal	African/ Caribbean	Latin American	South/ Southeast Asian	Multi- ethnic/ other	Unknown	Total
Total number	1,224	101	100	56	203	69	179	1,932
Unknown	90	4	6	8	20	6	134	268
	%*	%	%	%	%	%	%	%
<19	0.9	1.0	0.0	0.0	2.7	1.6	2.2	1.1
20-24	6.0	4.1	12.8	10.4	18.0	12.7	22.2	8.4
25-29	9.9	7.2	23.4	14.6	14.2	17.5	11.1	11.4
30-34	10.4	14.4	16.0	22.9	23.0	23.8	6.7	13.1
35-39	13.2	20.6	19.1	27.1	13.1	7.9	15.6	14.2
40-44	18.5	17.5	11.7	16.7	18.0	20.6	17.8	18.0
45-49	16.3	15.5	10.6	4.2	9.8	9.5	20.0	14.7
50-54	9.3	10.3	2.1	2.1	0.0	4.8	2.2	7.3
55-59	6.3	4.1	4.3	2.1	1.1	0.0	0.0	5.0
60-64	4.8	3.1	0.0	0.0	0.0	1.6	0.0	3.5
65+	4.4	2.1	0.0	0.0	0.0	0.0	2.2	3.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Mean age	42.3	40.8	34.6	34.8	33.3	35.1	35.9	
95% CI	41.6-43.0	38.8-42.8	32.7-36.4	32.6-37.0	32.1-34.5	2.8-37.4	32.7-39.0	

* Proportion among those with known age

B. Ottawa

Age group	European/ North American	Aboriginal	African/ Caribbean	Latin American	South/ Southeast Asian	Multi- ethnic/ other	Unknown	Total
Total number	378	21	9	5	25	22	46	506
Unknown	29	1	0	0	0	0	32	62
	%*	%	%	%	%	%	%	%
<19	2.3	0.0	11.1	0.0	0.0	4.5	0.0	2.3
20-24	12.0	25.0	0.0	20.0	4.0	22.7	14.3	12.6
25-29	10.6	5.0	22.2	60.0	8.0	18.2	7.1	11.3
30-34	9.5	10.0	0.0	0.0	28.0	13.6	14.3	10.6
35-39	9.7	20.0	22.2	20.0	36.0	4.5	7.1	11.7
40-44	17.8	0.0	33.3	0.0	12.0	13.6	21.4	16.7
45-49	14.6	20.0	11.1	0.0	12.0	13.6	21.4	14.6
50-54	8.3	10.0	0.0	0.0	0.0	0.0	7.1	7.2
55-59	4.9	0.0	0.0	0.0	0.0	0.0	7.1	4.1
60-64	5.7	10.0	0.0	0.0	0.0	9.1	0.0	5.4
65+	4.6	0.0	0.0	0.0	0.0	0.0	0.0	3.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Mean age	40.8	38.4	35.6	28.6	35.9	34.1	38.8	
95% CI	39.4-42.2	32.7-44.1	29.5-41.6	22.8-34.4	33.7-38.2	28.8-39.4	33.3-44.3	

* Proportion among those with known age

C. Both sites

Age group	European/ North American	Aboriginal	African/ Caribbean	Latin American	South/ Southeast Asian	Multi- ethnic/ other	Unknown	Total
Total number	1,602	122	109	61	228	91	225	2,438
Unknown	119	5	6	8	20	6	166	330
	%*	%	%	%	%	%	%	%
<19	1.2	0.8	1.0	0.0	2.4	2.4	1.7	1.3
20-24	7.4	7.7	11.7	11.3	16.3	15.3	20.3	9.3
25-29	10.0	6.8	23.3	18.9	13.5	17.6	10.2	11.4
30-34	10.2	13.7	14.6	20.8	23.6	21.2	8.5	12.6
35-39	12.4	20.5	19.4	26.4	15.9	7.1	13.6	13.7
40-44	18.3	14.5	13.6	15.1	17.3	18.8	18.6	17.7
45-49	15.9	16.2	10.7	3.8	10.1	10.6	20.3	14.7
50-54	9.0	10.3	1.9	1.9	0.0	3.5	3.4	7.3
55-59	6.0	3.4	3.9	1.9	1.0	0.0	1.7	4.8
60-64	5.0	4.3	0.0	0.0	0.0	3.5	0.0	3.9
65+	4.5	1.7	0.0	0.0	0.0	0.0	1.7	3.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Mean age	41.9	40.4	34.7	34.2	33.6	34.8	36.6	
95% CI	41.3-42.6	38.5-42.3	32.9-36.4	32.1-36.3	32.5-34.8	32.7-37.0	33.8-39.3	

* Proportion among those with known age

Table 4 Educational level attained by Lambda participants by ethnicity

Education	European/ North American	Aboriginal	African/ Caribbean	Latin American	South/ Southeast Asian	Multi- ethnic/ other	Unknown	Total
Toronto								
Total number	1,224	101	100	56	203	69	179	1,932
Unknown	10	0	1	2	5	1	120	139
	%*	%	%	%	%	%	%	%
Elementary/primary school	0.3	2.0	0.0	0.0	1.0	1.5	1.7	0.6
Some secondary/high school	6.1	10.9	3.0	1.9	1.5	2.9	13.6	5.7
Completed secondary/high school	8.9	13.9	9.1	7.4	7.6	8.8	22.0	9.4
Some college or university	21.0	25.7	33.3	25.9	23.7	20.6	22.0	22.4
Completed college or university	41.9	30.7	41.4	50.0	38.4	44.1	28.8	40.8
Some graduate education	6.5	5.0	4.0	3.7	9.1	5.9	5.1	6.4
Completed graduate education	15.2	11.9	9.1	11.1	18.7	16.2	6.8	14.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Ottawa								
Total number	378	21	9	5	25	22	46	506
Unknown	5	0	0	0	0	0	28	33
	%*	%	%	%	%	%	%	%
Elementary/primary school	0.0	0.0	0.0	0.0	0.0	4.5	0.0	0.2
Some secondary/high school	4.3	0.0	11.1	0.0	0.0	4.5	33.3	5.1
Completed secondary/high school	8.0	19.0	11.1	0.0	4.0	4.5	11.1	8.2
Some college or university	21.7	42.9	11.1	20.0	8.0	13.6	22.2	21.4
Completed college or university	43.7	23.8	33.3	20.0	56.0	50.0	11.1	42.1
Some graduate education	6.2	4.8	11.1	0.0	4.0	9.1	16.7	6.6
Completed graduate education	16.1	9.5	22.2	60.0	28.0	13.6	5.6	16.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Both sites								
Total number	1,602	122	109	61	228	91	225	2,438
Unknown	15	0	1	2	5	1	148	172
	%*	%	%	%	%	%	%	%
Elementary/primary school	0.3	1.6	0.0	0.0	0.9	2.2	1.3	0.5
Some secondary/high school	5.7	9.0	3.7	1.7	1.3	3.3	18.2	5.6
Completed secondary/high school	8.7	14.8	9.3	6.8	7.2	7.8	19.5	9.2
Some college or university	21.2	28.7	31.5	25.4	22.0	18.9	22.1	22.2
Completed college or university	42.3	29.5	40.7	47.5	40.4	45.6	24.7	41.0
Some graduate education	6.4	4.9	4.6	3.4	8.5	6.7	7.8	6.4
Completed graduate education	15.4	11.5	10.2	15.3	19.7	15.6	6.5	15.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

* Proportion among those with known level of education

Table 5 Income distribution of Lambda participants by ethnicity

A. Toronto

Income	European / North American	Aboriginal	African / Caribbean	Latin American	South / Southeast Asian	Multi-ethnic / other	Unknown	Total
Total number	1,224	101	100	56	203	69	179	1,932
Unknown	30	1	6	5	5	1	123	171
	%*	%	%	%	%	%	%	%
None	0.9	1.0	6.4	9.8	6.6	4.4	17.9	2.8
\$1 - \$9,999	4.7	11.0	8.5	11.8	10.1	8.8	5.4	6.2
\$10,000 - \$19,999	10.7	17.0	12.8	11.8	7.1	20.6	8.9	11.1
\$20,000 - \$29,999	10.6	8.0	7.4	13.7	14.6	5.9	17.9	10.9
\$30,000 - \$39,999	14.4	15.0	14.9	11.8	13.6	16.2	12.5	14.3
\$40,000 - \$49,999	13.0	12.0	19.1	21.6	12.1	14.7	7.1	13.3
\$50,000 - \$59,999	10.4	10.0	8.5	3.9	11.6	10.3	3.6	10.0
\$60,000 - \$69,999	9.8	9.0	7.4	7.8	6.6	1.5	10.7	8.9
\$70,000 - \$79,999	7.1	6.0	4.3	2.0	4.5	1.5	3.6	6.1
\$80,000 - \$89,000	6.1	4.0	3.2	3.9	4.5	5.9	5.4	5.6
\$90,000 - \$99,000	2.3	2.0	0.0	0.0	2.0	0.0	0.0	1.9
\$100,000 or more	10.0	5.0	7.4	2.0	6.6	10.3	7.1	8.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

* Proportion among those with known income

B. Ottawa

Income	European / North American	Aboriginal	African / Caribbean	Latin American	South / Southeast Asian	Multi-ethnic / other	Unknown	Total
Total number	378	21	9	5	25	22	46	506
Unknown	12	1	0	0	0	0	30	43
	%*	%	%	%	%	%	%	%
None	0.8	0.0	0.0	20.0	12.0	0.0	0.0	1.5
\$1 - \$9,999	8.2	10.0	11.1	0.0	4.0	9.1	6.3	8.0
\$10,000 - \$19,999	10.4	20.0	11.1	0.0	12.0	9.1	37.5	11.7
\$20,000 - \$29,999	11.7	10.0	11.1	20.0	4.0	13.6	0.0	11.0
\$30,000 - \$39,999	10.1	5.0	22.2	0.0	12.0	13.6	18.8	10.6
\$40,000 - \$49,999	9.0	20.0	0.0	20.0	16.0	9.1	12.5	9.9
\$50,000 - \$59,999	11.7	20.0	0.0	40.0	8.0	9.1	12.5	11.9
\$60,000 - \$69,999	9.8	0.0	11.1	0.0	4.0	13.6	6.3	9.1
\$70,000 - \$79,999	9.0	5.0	11.1	0.0	20.0	4.5	6.3	9.1
\$80,000 - \$89,000	5.5	5.0	11.1	0.0	8.0	9.1	0.0	5.6
\$90,000 - \$99,000	3.6	0.0	0.0	0.0	0.0	0.0	0.0	2.8
\$100,000 or more	10.1	5.0	11.1	0.0	0.0	9.1	0.0	8.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

* Proportion among those with known income

C. Both sites

Income	European / North American	Aboriginal	African / Caribbean	Latin America n	South / Southeast Asian	Multi- ethnic / other	Unknown	Total
Total number	1,602	122	109	61	228	91	225	2,438
Unknown	42	2	6	5	5	1	153	214
	%*	%	%	%	%	%	%	%
None	0.9	0.8	5.8	10.7	7.2	3.3	13.9	2.5
\$1 - \$9,999	5.5	10.8	8.7	10.7	9.4	8.9	5.6	6.6
\$10,000 - \$19,999	10.6	17.5	12.6	10.7	7.6	17.8	15.3	11.2
\$20,000 - \$29,999	10.9	8.3	7.8	14.3	13.5	7.8	13.9	10.9
\$30,000 - \$39,999	13.4	13.3	15.5	10.7	13.5	15.6	13.9	13.5
\$40,000 - \$49,999	12.1	13.3	17.5	21.4	12.6	13.3	8.3	12.6
\$50,000 - \$59,999	10.7	11.7	7.8	7.1	11.2	10.0	5.6	10.4
\$60,000 - \$69,999	9.8	7.5	7.8	7.1	6.3	4.4	9.7	8.9
\$70,000 - \$79,999	7.6	5.8	4.9	1.8	6.3	2.2	4.2	6.7
\$80,000 - \$89,000	6.0	4.2	3.9	3.6	4.9	6.7	4.2	5.6
\$90,000 - \$99,000	2.6	1.7	0.0	0.0	1.8	0.0	0.0	2.1
\$100,000 or more	10.0	5.0	7.8	1.8	5.8	10.0	5.6	8.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

* Proportion among those with known income

Table 6 Language first spoken by Lambda participants by ethnicity

Language	European / North American	Aboriginal	African / Caribbean	Latin American	South / Southeast Asian	Multi-ethnic / other	Unknown	Total
Toronto								
Total number	1,224	101	100	56	203	69	179	1,932
Unknown	62	3	4	4	15	6	124	218
	%*	%	%	%	%	%	%	%
English	80.2	76.5	80.2	11.5	50.0	52.4	58.2	72.9
French	9.6	14.3	6.3	3.8	2.7	4.8	10.9	8.6
Other	8.5	3.1	7.3	76.9	35.6	31.7	21.8	14.5
Multiple languages	1.6	6.1	6.3	7.7	11.7	11.1	9.1	4.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Ottawa								
Total number	378	21	9	5	25	22	46	506
Unknown	22	1	0	0	0	0	30	53
	%*	%	%	%	%	%	%	%
English	66.3	50.0	66.7	60.0	48.0	50.0	50.0	63.1
French	28.7	40.0	11.1	0.0	4.0	18.2	37.5	26.9
Other	3.1	5.0	22.2	40.0	40.0	31.8	6.3	7.5
Multiple languages	2.0	5.0	0.0	0.0	8.0	0.0	6.3	2.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Both sites								
Total number	1,602	122	109	61	228	91	225	2,438
Unknown	84	4	4	4	15	6	154	271
	%*	%	%	%	%	%	%	%
English	76.9	72.0	79.0	15.8	49.8	51.8	56.3	70.8
French	14.1	18.6	6.7	3.5	2.8	8.2	16.9	12.5
Other	7.2	3.4	8.6	73.7	36.2	31.8	18.3	13.0
Multiple languages	1.7	5.9	5.7	7.0	11.3	8.2	8.5	3.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

* Proportion among those with known language

Table 7 Proportion of HIV tests and prevalence among Lambda participants who provided DBS by ethnicity

Ethnicity	Not tested	HIV test					Total
		HIV tested	% tested	HIV-positive	HIV prevalence		
					%	95% CI	
Toronto							
European/North American	696	528	43.1	124	23.5	19.9-27.1	1,224
Aboriginal	50	51	50.5	20	39.2	25.8-52.6	101
African/Caribbean	65	35	35.0	6	17.1	4.7-29.6	100
Latin American	34	22	39.3	8	36.4	16.3-56.5	56
South/Southeast Asian	151	52	25.6	5	9.6	1.6-17.6	203
Multi-ethnic/Other	42	27	39.1	8	29.6	12.4-46.9	69
Total excluding unknown	1,038	715	40.8	171	23.9	20.8-27.0	1,753
Unknown	103	76	42.5	17	22.4	13.0-31.7	179
Total	1,141	791	40.9	188	23.8	20.8-26.7	1,932
Ottawa							
European/North American	150	228	60.3	22	9.6	0.0-13.5	378
Aboriginal	7	14	66.7	1	7.1	0.0-20.6	21
African/Caribbean	4	5	55.6	1	--	--	9
Latin American	3	2	40.0	0	--	--	5
South/Southeast Asian	13	12	48.0	1	8.3	0.0-24.0	25
Multi-ethnic/Other	8	14	63.6	1	7.1	0.0-20.6	22
Total excluding unknown	185	275	59.8	26	9.5	6.0-12.9	460
Unknown	17	29	63.0	10	34.5	17.2-51.8	46
Total	202	304	60.1	36	11.8	8.2-15.5	506
Both sites							
European/North American	846	756	47.2	146	19.3	16.5-22.1	1,602
Aboriginal	57	65	53.3	21	32.3	20.9-43.7	122
African/Caribbean	69	40	36.7	7	17.5	5.7-29.3	109
Latin American	37	24	39.3	8	33.3	14.5-52.2	61
South/Southeast Asian	164	64	28.1	6	9.4	2.2-16.5	228
Multi-ethnic/Other	50	41	45.1	9	22.0	9.3-34.6	91
Total excluding unknown	1,223	990	44.7	197	19.9	17.4-22.4	2,213
Unknown	120	105	46.7	27	25.7	17.4-34.1	225
Total	1,343	1,095	44.9	224	20.5	18.1-22.8	2,438

-- Insufficient number

Note: HIV prevalence should be interpreted cautiously, due to relative small sample size in some groups.

Table 8 Number tested and proportion HIV-positive among Lambda participants by recruitment venue type and ethnicity

Venue	European / North American		Aboriginal		African / Caribbean		Latin American		South / Southeast Asian		Multi-ethnic / other		Unknown		Total	
	Tested	%	Tested	%	Tested	%	Tested	%	Tested	%	Tested	%	Tested	%	Tested	%
Toronto																
Bar	188	21.3	21	14.3	7	14.3	5	--	15	13.3	6	16.7	29	20.7	271	19.6
Bathhouse	39	23.1	5	--	4	--	3	--	4	--	3	--	3	--	61	26.2
Event	116	17.2	8	12.5	9	11.1	1	--	12	8.3	2	--	9	44.4	157	17.8
Association	96	41.7	14	85.7	9	22.2	9	66.7	13	7.7	6	33.3	5	--	152	42.1
Others*	48	14.6	2	--	2	--	2	--	3	--	7	28.6	7	14.3	71	16.9
Total excluding unknown	487	23.8	50	40.0	31	19.4	20	35.0	47	10.6	24	29.2	53	22.6	712	24.3
Unknown	41	19.5	1	--	4	--	2	--	5	--	3	--	23	21.7	79	19.0
Total	528	23.5	51	39.2	35	17.1	22	36.4	52	9.6	27	29.6	76	22.4	791	23.8
Ottawa																
Bar	62	17.7	6	0.0	1	--	0	--	0	--	5	--	11	18.2	85	16.5
Bathhouse	6	0.0	0	--	1	--	0	--	4	--	0	--	0	--	11	0.0
Event	56	3.6	2	--	2	--	0	--	5	--	4	--	9	44.4	78	7.7
Association	72	11.1	5	--	1	--	1	--	2	--	5	--	7	57.1	93	16.1
Other*	15	6.7	1	--	0	--	0	--	1	--	0	--	1	--	18	5.6
Total excluding unknown	211	10.4	14	7.1	5	--	1	--	12	8.3	14	7.1	28	35.7	285	12.6
Unknown	17	0.0	0	--	0	--	1	--	0	--	0	--	1	--	19	0.0
Total	228	9.6	14	7.1	5	--	2	--	12	8.3	14	7.1	29	34.5	304	11.8
Both sites																
Bar	250	20.4	27	11.1	8	12.5	5	--	15	13.3	11	18.2	40	20.0	356	18.8
Bathhouse	45	20.0	5	--	5	--	3	--	8	12.5	3	--	3	--	72	22.2
Event	172	12.8	10	10.0	11	9.1	1	--	17	5.9	6	16.7	18	44.4	235	14.5
Association	168	28.6	19	68.4	10	30.0	10	60.0	15	13.3	11	18.2	12	41.7	245	32.2
Other*	63	12.7	3	--	2	--	2	--	4	--	7	28.6	8	12.5	89	14.6
Total excluding unknown	698	19.8	64	32.8	36	19.4	21	33.3	59	10.2	38	21.1	81	27.2	997	21.0
Unknown	58	13.8	1	--	4	--	3	--	5	--	3	--	24	20.8	98	15.3
Total	756	19.3	65	32.3	40	17.5	24	33.3	64	9.4	41	22.0	105	25.7	1,095	20.5

-- Insufficient numbers

* Including coffee shop, fixed-site, church and other

Note: HIV prevalence should be interpreted cautiously, due to relative small sample size in some groups.

Table 8a Number tested and HIV-positive among Lambda participants by ethnicity, standardized for recruitment venue type

Venue	European / North American		Aboriginal		African / Caribbean		Latin American		South / Southeast Asian		Multi-ethnic / other		Unknown		Total	
	Adjusted tested	HIV+ number	Adjusted tested	HIV+ number	Adjusted tested	HIV+ number	Adjusted tested	HIV+ number	Adjusted tested	HIV+ number	Adjusted tested	HIV+ number	Adjusted tested	HIV+ number	Adjusted tested	HIV+ number
Toronto																
Bar	175	37	21	3	7	1	5	0	12	2	7	1	29	6	256	50
Bathhouse	31	7	4	2	4	2	3	1	7	2	2	1	2	0	53	14
Event	120	21	8	1	10	1	1	0	14	1	4	2	13	6	169	32
Association	117	49	15	13	9	2	9	6	12	1	7	2	9	2	178	75
Others*	44	6	2	2	2	0	2	0	3	0	5	1	6	1	64	11
Unknown	41	8	1	0	4	0	3	1	4	0	2	1	17	4	71	14
Total	528	128	51	21	35	6	22	8	52	5	27	8	76	18	791	195
Standardized prevalence %		24.3		40.6		17.7		38.2		10.3		30.5		23.8		24.7
Ottawa																
Bar	75	13	6	0	1	0	0	0	3	0	4	1	11	2	100	16
Bathhouse	14	0	1	0	1	0	0	0	2	0	1	0	1	0	19	0
Event	52	2	2	0	1	0	0	0	3	0	2	0	5	2	66	4
Association	51	6	4	1	1	1	1	0	3	1	4	0	3	2	67	11
Other*	19	1	1	0	0	0	0	0	1	0	2	0	2	0	25	1
Unknown	17	0	0	0	1	0	0	0	1	0	1	0	7	0	27	0
Total	228	22	14	1	5	1	2	0	12	1	14	1	29	6	304	32
Standardized prevalence		9.7		5.8		--		--		11.7		5.4		21.1		10.7
Both sites																
Bar	250	51	27	3	8	1	5	0	15	2	11	2	40	8	356	66
Bathhouse	45	7	5	2	5	2	3	1	8	2	3	1	3	0	72	14
Event	172	23	10	1	11	1	1	0	17	1	6	2	18	8	235	36
Association	168	55	19	14	10	3	10	6	15	2	11	2	12	4	245	86
Other*	63	8	3	2	2	0	2	0	4	0	7	1	8	1	89	12
Unknown	58	8	1	0	4	0	3	1	5	0	3	1	24	4	98	14
Total	756	150	65	22	40	7	24	8	64	7	41	9	105	24	1,095	228
Standardized prevalence		19.9		33.1		18.6		35.0		10.5		21.9		23.1		20.8

Table 8b Number tested and proportion HIV-positive among Lambda participants excluding subjects recruited in associations, by recruitment venue type and ethnicity

Venue	European / North American		Aboriginal		African / Caribbean		Latin American		South / Southeast Asian		Multi-ethnic / other		Unknown		Total	
	Tested	%	Tested	%	Tested	%	Tested	%	Tested	%	Tested	%	Tested	%	Tested	%
Toronto																
Bar	188	21.3	21	14.3	7	14.3	5	--	15	13.3	6	16.7	29	20.7	271	19.6
Bathhouse	39	23.1	5	--	4	--	3	--	4	--	3	--	3	--	61	26.2
Event	116	17.2	8	12.5	9	11.1	1	--	12	8.3	2	--	9	44.4	157	17.8
Others*	48	14.6	2	--	2	--	2	--	3	--	7	28.6	7	14.3	71	16.9
Total excluding unknown	391	19.4	36	22.2	22	18.2	11	9.1	34	11.8	18	27.8	48	22.9	560	19.5
Unknown	41	19.5	1	--	4	--	2	--	5	--	3	--	23	21.7	79	19.0
Total	432	19.4	37	21.6	26	15.4	13	15.4	39	10.3	21	28.6	71	22.5	639	19.4
Ottawa																
Bar	62	17.7	6	0.0	1	--	0	--	0		5	--	11	18.2	85	16.5
Bathhouse	6	0.0	0	--	1	--	0	--	4	0.0	0	--	0		11	0.0
Event	56	3.6	2	--	2	--	0	--	5	0.0	4	--	9	44.4	78	7.7
Other*	15	6.7	1	--	0	--	0	--	1	0.0	0	--	1	0.0	18	5.6
Total excluding unknown	139	10.1	9	0.0	4	--	0	--	10	0.0	9	11.1	21	28.6	192	10.9
Unknown	17	0.0	0	--	0	--	1	--	0		0	--	1	0.0	19	0.0
Total	156	9.0	9	0.0	4	--	1	--	10	0.0	9	11.1	22	27.3	211	10.0
Both sites																
Bar	250	20.4	27	11.1	8	12.5	5	--	15	13.3	11	18.2	40	20.0	356	18.8
Bathhouse	45	20.0	5	--	5	--	3	--	8	12.5	3	--	3	--	72	22.2
Event	172	12.8	10	10.0	11	9.1	1	--	17	5.9	6	16.7	18	44.4	235	14.5
Other*	63	12.7	3	--	2	--	2	--	4	0.0	7	28.6	8	12.5	89	14.6
Total excluding unknown	530	17.0	45	17.8	26	15.4	11	9.1	44	9.1	27	22.2	69	24.6	752	17.3
Unknown	58	13.8	1	--	4	--	3	--	5	--	3	--	24	20.8	98	15.3
Total	588	16.7	46	17.4	30	13.3	14	14.3	49	8.2	30	23.3	93	23.7	850	17.1

-- Insufficient numbers

* Including coffee shop, fixed-site, church and other

Note: HIV prevalence should be interpreted cautiously, due to relative small sample size in some groups.

Table 9 HIV prevalence among Lambda participants who provided DBS by age and ethnicity

Age group (years)	European / North American		Aboriginal		African / Caribbean		Latin American		South / Southeast Asian		Multi-ethnic / other		Unknown		Total	
	Tested	%	Tested	%	Tested	%	Tested	%	Tested	%	Tested	%	Tested	%	Tested	%
Toronto																
< 30	66	9.1	3	--	13	15.4	3	--	19	5.3	6	0.0	3	--	113	8.0
30-39	96	16.7	16	31.3	10	10.0	13	38.5	15	0.0	6	33.3	4	--	160	18.1
40-49	204	28.4	21	47.6	6	33.3	3	--	13	15.4	12	41.7	6	50.0	265	30.6
50-59	87	31.0	6	50.0	3	--	2	--	0	--	2	--	0	--	100	32.0
60+	42	19.0	4	--	0	--	0	--	0	--	0	--	0	--	46	21.7
Total excluding unknown	495	23.2	50	40.0	32	15.6	21	33.3	47	6.4	26	30.8	13	23.1	684	23.5
Unknown	33	27.3	1	--	3	--	1	--	5	--	1	--	63	22.2	107	25.2
Total	528	23.5	51	39.2	35	17.1	22	36.4	52	9.6	27	29.6	76	22.4	791	23.8
Ottawa																
< 30	53	0.0	4	--	2	--	2	--	2	--	7	0.0	2	--	72	0.0
30-39	31	12.9	2	--	0	--	0	--	8	0.0	3	--	1	--	45	11.1
40-49	70	15.7	4	--	3	--	0	--	2	--	2	--	4	--	85	18.8
50-59	32	9.4	1	--	0	--	0	--	0	--	0	--	1	--	34	11.8
60+	23	0.0	2	--	0	--	0	--	0	--	2	--	0	--	27	0.0
Total excluding unknown	209	8.6	13	7.7	5	--	2	--	12	8.3	14	7.1	8	37.5	263	9.5
Unknown	19	21.1	1	--	0	--	0	--	0	--	0	--	21	33.3	41	26.8
Total	228	9.6	14	7.1	5	--	2	--	12	8.3	14	7.1	29	34.5	304	11.8
Both sites																
< 30	119	5.0	7	0.0	15	13.3	5	--	21	4.8	13	0.0	5	--	185	4.9
30-39	127	15.7	18	27.8	10	10.0	13	38.5	23	0.0	9	33.3	5	--	205	16.6
40-49	274	25.2	25	44.0	9	33.3	3	--	15	20.0	14	35.7	10	50.0	350	27.7
50-59	119	25.2	7	42.9	3	--	2	--	0	--	2	--	1	--	134	26.9
60+	65	12.3	6	33.3	0	--	0	--	0	--	2	--	0	--	73	13.7
Total excluding unknown	704	18.9	63	33.3	37	16.2	23	30.4	59	6.8	40	22.5	21	28.6	947	19.6
Unknown	52	25.0	2	--	3	--	1	--	5	--	1	--	84	25.0	148	25.7
Total	756	19.3	65	32.3	40	17.5	24	33.3	64	9.4	41	22.0	105	25.7	1,095	20.5

-- Insufficient numbers

Note: HIV prevalence should be interpreted cautiously, due to relative small sample size in some groups.

Table 10 HIV prevalence among Lambda participants who provided DBS by education and ethnicity

Ethnicity	Completed high school or less		Some college/university or above		Unknown		Total	
	Tested	%	Tested	%	Tested	%	Tested	%
Toronto								
European/North American	86	33.7	437	21.3	5	--	528	23.5
Aboriginal	16	56.3	35	31.4	0	--	51	39.2
African/Caribbean	4	--	30	16.7	1	--	35	17.1
Latin American	2	--	20	30.0	0	--	22	36.4
South/Southeast Asian	6	0.0	45	11.1	1	--	52	9.6
Multi-ethnic/other	3	--	23	21.7	1	--	27	29.6
Total excluding unknown	117	36.8	590	21.2	8	37.5	715	23.9
Unknown	4	--	13	15.4	59	20.3	76	22.4
Total	121	38.0	603	21.1	67	22.4	791	23.8
Ottawa								
European/North American	29	20.7	199	8.0	0	--	228	9.6
Aboriginal	2	--	12	0.0	0	--	14	7.1
African/Caribbean	1	--	4	--	0	--	5	--
Latin American	0	--	2	--	0	--	2	--
South/Southeast Asian	1	--	11	9.1	0	--	12	8.3
Multi-ethnic/other	1	--	13	7.7	0	--	14	7.1
Total excluding unknown	34	20.6	241	7.9	0	--	275	9.5
Unknown	5	--	5	--	19	31.6	29	34.5
Total	39	23.1	246	8.5	19	31.6	304	11.8
Both sites								
European/North American	115	30.4	636	17.1	5	--	756	19.3
Aboriginal	18	55.6	47	23.4	0	--	65	32.3
African/Caribbean	5	--	34	17.6	1	--	40	17.5
Latin American	2	--	22	27.3	0	--	24	33.3
South/Southeast Asian	7	0.0	56	10.7	1	--	64	9.4
Multi-ethnic/other	4	--	36	16.7	1	--	41	22.0
Total excluding unknown	151	33.1	831	17.3	8	37.5	990	19.9
Unknown	9	55.6	18	22.2	78	23.1	105	25.7
Total	160	34.4	849	17.4	86	24.4	1,095	20.5

-- Insufficient numbers

Note: HIV prevalence should be interpreted cautiously, due to relative small sample size in some groups.

Table 11 HIV prevalence among Lambda participants who provided DBS by income and ethnicity

Ethnicity	None - \$39,999		\$40,000 - 69,999		\$70,000 or above		Unknown		Total	
	Tested	%	Tested	%	Tested	%	Tested	%	Tested	%
Toronto										
European/North American	234	33.8	162	16.7	126	11.9	6	50.0	528	23.5
Aboriginal	25	56.0	18	27.8	8	12.5	0	--	51	39.2
African/Caribbean	17	11.8	10	40.0	3	--	5	--	35	17.1
Latin American	11	54.5	5	--	4	--	2	--	22	36.4
South/Southeast Asian	28	14.3	16	6.3	6	0.0	2	--	52	9.6
Multi-ethnic/other	18	33.3	6	16.7	3	--	0	--	27	29.6
Total excluding unknown	333	33.3	217	18.4	150	11.3	15	20.0	715	23.9
Unknown	13	30.8	1	--	3	--	59	20.3	76	22.4
Total	346	33.2	218	18.3	153	11.8	74	20.3	791	23.8
Ottawa										
European/North American	94	17.0	70	4.3	59	3.4	5	20.0	228	9.6
Aboriginal	4	--	7	14.3	2	--	1	--	14	7.1
African/Caribbean	3	--	1	--	1	--	0	--	5	--
Latin American	2	--	0	--	0	--	0	--	2	--
South/Southeast Asian	6	0.0	3	--	3	--	0	--	12	8.3
Multi-ethnic/other	7	0.0	4	--	3	--	0	--	14	7.1
Total excluding unknown	116	14.7	85	5.9	68	4.4	6	16.7	275	9.5
Unknown	6	50.0	3	--	0	--	20	30.0	29	34.5
Total	122	16.4	88	6.8	68	4.4	26	26.9	304	11.8
Both sites										
European/North American	328	29.0	232	12.9	185	9.2	11	36.4	756	19.3
Aboriginal	29	48.3	25	24.0	10	10.0	1	--	65	32.3
African/Caribbean	20	15.0	11	36.4	4	--	5	--	40	17.5
Latin American	13	46.2	5	--	4	--	2	--	24	33.3
South/Southeast Asian	34	11.8	19	10.5	9	0.0	2	--	64	9.4
Multi-ethnic/other	25	24.0	10	10.0	6	33.3	0	--	41	22.0
Total excluding unknown	449	28.5	302	14.9	218	9.2	21	19.0	990	19.9
Unknown	19	36.8	4	--	3	--	79	22.8	105	25.7
Total	468	28.8	306	15.0	221	9.5	100	22.0	1,095	20.5

-- Insufficient numbers

Note: HIV prevalence should be interpreted cautiously, due to relative small sample size in some groups.

Table 12 HIV testing history among Lambda participants by ethnicity

Ethnicity	Ever tested			Unknown	Total
	Yes	No	% ever tested		
Toronto					
European/North American	1,030	115	90.0	79	1,224
Aboriginal	91	7	92.9	3	101
African/Caribbean	75	16	82.4	9	100
Latin American	47	6	88.7	3	56
South/Southeast Asian	146	40	78.5	17	203
Multi-ethnic/other	58	6	90.6	5	69
Total excluding unknown	1,447	190	88.4	116	1,753
Unknown	98	18	84.5	63	179
Total	1,545	208	88.1	179	1,932
Ottawa					
European/North American	326	33	90.8	19	378
Aboriginal	16	3	84.2	2	21
African/Caribbean	8	1	88.9	0	9
Latin American	3	1	75.0	1	5
South/Southeast Asian	17	6	73.9	2	25
Multi-ethnic/other	17	4	81.0	1	22
Total excluding unknown	387	48	89.0	25	460
Unknown	26	5	83.9	15	46
Total	413	53	88.6	40	506
Both sites					
European/North American	1,356	148	90.2	98	1,602
Aboriginal	107	10	91.5	5	122
African/Caribbean	83	17	83.0	9	109
Latin American	50	7	87.7	4	61
South/Southeast Asian	163	46	78.0	19	228
Multi-ethnic/other	75	10	88.2	6	91
Total excluding unknown	1,834	238	88.5	141	2,213
Unknown	124	23	84.4	78	225
Total	1,958	261	88.2	219	2,438

Table 13 HIV testing history among Lambda participants by age and ethnicity

Age group (years)	European / North American		Aboriginal		African / Caribbean		Latin American		South / Southeast Asian		Multi-ethnic / other		Unknown		Total	
	N	% tested	N	% tested	N	% tested	N	% tested	N	% tested	N	% tested	N	% tested	N	% tested
Toronto																
< 30	168	82.1	12	75.0	29	72.4	11	81.8	57	64.9	17	88.2	12	91.7	306	78.4
30-39	256	94.9	34	88.2	30	83.3	23	91.3	61	86.9	20	90.0	8	62.5	432	91.4
40-49	371	91.9	30	100.0	21	100.0	9	88.9	48	83.3	19	94.7	15	80.0	513	91.6
50-59	169	92.3	13	100.0	6	83.3	2	100.0	2	100.0	3	66.7	1	100.0	196	91.8
60+	98	82.7	5	100.0	0	--	0	--	0	--	1	100.0	1	100.0	105	83.8
Total excluding unknown	1,062	90.3	94	92.6	86	83.7	45	88.9	168	78.6	60	90.0	37	78.4	1,552	88.5
Unknown	83	85.5	4	100.0	5	60.0	8	87.5	18	77.8	4	100.0	79	87.3	201	85.6
Total	1,145	90.0	98	92.9	91	82.4	53	88.7	186	78.5	64	90.6	116	84.5	1,753	88.1
Ottawa																
< 30	83	81.9	6	66.7	3	66.7	3	66.7	3	33.3	9	77.8	3	100.0	110	79.1
30-39	65	93.8	5	100.0	2	100.0	1	100.0	15	80.0	4	100.0	2	50.0	94	91.5
40-49	105	97.1	3	100.0	4	100.0	0	--	5	80.0	6	83.3	6	83.3	129	95.3
50-59	44	90.9	2	50.0	0	--	0	--	0	--	0	--	2	100.0	48	89.6
60+	34	91.2	2	100.0	0	--	0	--	0	--	2	50.0	0	--	38	89.5
Total excluding unknown	331	91.2	18	83.3	9	88.9	4	75.0	23	73.9	21	81.0	13	84.6	419	89.0
Unknown	28	85.7	1	100.0	0	--	0	--	0	--	0	--	18	83.3	47	85.1
Total	359	90.8	19	84.2	9	88.9	4	75.0	23	73.9	21	81.0	31	83.9	466	88.6
Both sites																
< 30	251	82.1	18	72.2	32	71.9	14	78.6	60	63.3	26	84.6	15	93.3	416	78.6
30-39	321	94.7	39	89.7	32	84.4	24	91.7	76	85.5	24	91.7	10	60.0	526	91.4
40-49	476	93.1	33	100.0	25	100.0	9	88.9	53	83.0	25	92.0	21	81.0	642	92.4
50-59	213	92.0	15	93.3	6	83.3	2	100.0	2	100.0	3	66.7	3	66.7	244	91.4
60+	132	84.8	7	100.0	0	--	0	--	0	--	3	66.7	1	100.0	143	85.3
Total excluding unknown	1,393	90.5	112	91.1	95	84.2	49	87.8	191	78.0	81	87.7	50	80.0	1,971	88.6
Unknown	111	85.6	5	100.0	5	60.0	8	87.5	18	77.8	4	100.0	97	86.6	248	85.5
Total	1,504	90.2	117	91.5	100	83.0	57	87.7	209	78.0	85	88.2	147	84.4	2,219	88.2

Table 14 Latest HIV testing result among Lambda participants by ethnicity

Ethnicity	Ever tested				Never tested	Unknown testing	Total
	HIV negative	HIV positive	% HIV prevalence	Unknown result			
Toronto							
European/North American	810	179	18.1	41	115	79	1,224
Aboriginal	63	24	27.6	4	7	3	101
African/Caribbean	62	9	12.7	4	16	9	100
Latin American	30	12	28.6	5	6	3	56
South/Southeast Asian	132	9	6.4	5	40	17	203
Multi-ethnic/other	44	13	22.8	1	6	5	69
Total excluding unknown	1,141	246	17.7	60	190	116	1,753
Unknown	77	15	16.3	6	18	63	179
Total	1,218	261	17.6	66	208	179	1,932
Ottawa							
European/North American	270	34	11.2	22	33	19	378
Aboriginal	9	4	30.8	3	3	2	21
African/Caribbean	6	2	25.0	0	1	0	9
Latin American	3	0	--	0	1	1	5
South/Southeast Asian	14	2	12.5	1	6	2	25
Multi-ethnic/other	15	1	6.3	1	4	1	22
Total excluding unknown	317	43	11.9	27	48	25	460
Unknown	18	6	25.0	2	5	15	46
Total	335	49	12.8	29	53	40	506
Both sites							
European/North American	1,080	213	16.5	63	148	98	1,602
Aboriginal	72	28	28.0	7	10	5	122
African/Caribbean	68	11	13.9	4	17	9	109
Latin American	33	12	26.7	5	7	4	61
South/Southeast Asian	146	11	7.0	6	46	19	228
Multi-ethnic/other	59	14	19.2	2	10	6	91
Total excluding unknown	1,458	289	16.5	87	238	141	2,213
Unknown	95	21	18.1	8	23	78	225
Total	1,553	310	16.6	95	261	219	2,438

-- Insufficient numbers

Table 15 Reported latest HIV testing results and HIV-sero results among Lambda participants who provided DBS and by ethnicity

Ethnicity	HIV seropositive				HIV seronegative				Kappa
	Total	Unk. testing	Unk. HIV positive ¹	% of unk. HIV positive	Total	Unk ²	Reported HIV positive	% reported HIV positive	
Toronto									
European/North American	124	5	20	16.8	404	59	4	1.2	0.91
Aboriginal	20	2	0	0.0	31	3	0	0.0	1.0
African/Caribbean	6	0	3	50.0	29	9	0	0.0	0.71
Latin American	8	0	0	0.0	14	3	0	0.0	1.0
South/Southeast Asian	5	0	0	0.0	47	8	0	0.0	1.0
Multi-ethnic/Other	8	0	0	0.0	19	2	0	0.0	1.0
Total excluding unknown	171	7	23	14.0	544	84	4	0.9	0.92
Unknown	17	10	1	14.3	59	37	0	0.0	0.90
Total	188	17	24	14.0	603	121	4	0.8	0.92
Ottawa									
European/North American	22	2	5	25.0	206	39	1	0.6	0.87
Aboriginal	1	0	1	100.0	13	6	0	0.0	--
African/Caribbean	1	0	0	0.0	4	1	0	0.0	1.0
Latin American	0	0	0	--	2	1	0	0.0	--
South/Southeast Asian	1	0	0	0.0	11	2	0	0.0	1.0
Multi-ethnic/Other	1	0	0	0.0	13	3	0	0.0	1.0
Total excluding unknown	26	2	6	25.0	249	52	1	0.5	0.89
Unknown	10	4	1	16.7	19	9	0	0.0	1.0
Total	36	6	7	23.3	268	61	1	0.5	0.91
Both sites									
European/North American	146	7	25	18.0	610	98	5	1.0	0.90
Aboriginal	21	2	1	5.3	44	9	0	0.0	1.0
African/Caribbean	7	0	3	42.9	33	10	0	0.0	0.76
Latin American	8	0	0	0.0	16	4	0	0.0	1.0
South/Southeast Asian	6	0	0	0.0	58	10	0	0.0	1.0
Multi-ethnic/Other	9	0	0	0.0	32	5	0	0.0	1.0
Total excluding unknown	197	9	29	15.4	793	136	5	0.7	0.92
Unknown	27	14	2	15.4	78	46	0	0.0	0.94
Total	224	23	31	15.4	871	182	5	0.7	0.92

1. Including self-reported HIV negative, never tested and unknown HIV testing result
2. Including unknown latest HIV testing result, never tested and unknown HIV testing history

Table 16 Number of casual male sex partners during the previous six months among Lambda participants by ethnicity

A. Toronto

	European / North American		Aboriginal		African / Caribbean		Latin American		South / Southeast Asian		Multi-ethnic / other		Unknown		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
No casual partners	232	23.4	12	14.6	17	21.8	5	11.1	27	17.5	9	15.5	23	22.8	325	21.5
Only one	106	10.7	11	13.4	8	10.3	5	11.1	24	15.6	4	6.9	15	14.9	173	11.4
Two to five	294	29.6	30	36.6	26	33.3	11	24.4	49	31.8	19	32.8	33	32.7	462	30.6
Six to nine	100	10.1	7	8.5	13	16.7	9	20.0	14	9.1	10	17.2	7	6.9	160	10.6
10 to 29	157	15.8	10	12.2	7	9.0	9	20.0	26	16.9	12	20.7	15	14.9	236	15.6
>=30	95	9.6	11	13.4	4	5.1	5	11.1	12	7.8	4	6.9	6	5.9	137	9.1
Casual partners reported, but number unknown	9	0.9	1	1.2	3	3.8	1	2.2	2	1.3	0	0.0	2	2.0	18	1.2
Total excluding unknown	993	100.0	82	100.0	78	100.0	45	100.0	154	100.0	58	100.0	101	100.0	1,511	100.0
Unknown	231		19		22		11		49		11		78		421	
Total	1,224		101		100		56		203		69		179		1,932	

B. Ottawa

	European / North American		Aboriginal		African / Caribbean		Latin American		South / Southeast Asian		Multi-ethnic / other		Unknown		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
No casual partners	96	29.7	2	12.5	1	12.5	1	25.0	6	27.3	8	44.4	5	23.8	119	28.9
Only one	51	15.8	2	12.5	0	0.0	1	25.0	1	4.5	1	5.6	1	4.8	57	13.8
Two to five	85	26.3	6	37.5	7	87.5	1	25.0	8	36.4	4	22.2	11	52.4	122	29.6
Six to nine	31	9.6	1	6.3	0	0.0	0	0.0	5	22.7	2	11.1	1	4.8	40	9.7
10 to 29	43	13.3	5	31.3	0	0.0	1	25.0	2	9.1	2	11.1	3	14.3	56	13.6
>=30	13	4.0	0	0.0	0	0.0	0	0.0	0	0.0	1	5.6	0	0.0	14	3.4
Casual partners reported, but number unknown	4	1.2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	4	1.0
Total excluding unknown	323	100.0	16	100.0	8	100.0	4	100.0	22	100.0	18	100.0	21	100.0	412	100.0
Unknown	55		5		1		1		3		4		25		94	
Total	378		21		9		5		25		22		46		506	

C. Both sites

	European / North American		Aboriginal		African / Caribbean		Latin American		South / Southeast Asian		Multi-ethnic / other		Unknown		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
No casual partners	328	24.9	14	14.3	18	20.9	6	12.2	33	18.8	17	22.4	28	23.0	444	23.1
Only one	157	11.9	13	13.3	8	9.3	6	12.2	25	14.2	5	6.6	16	13.1	230	12.0
Two to five	379	28.8	36	36.7	33	38.4	12	24.5	57	32.4	23	30.3	44	36.1	584	30.4
Six to nine	131	10.0	8	8.2	13	15.1	9	18.4	19	10.8	12	15.8	8	6.6	200	10.4
10 to 29	200	15.2	15	15.3	7	8.1	10	20.4	28	15.9	14	18.4	18	14.8	292	15.2
>=30	108	8.2	11	11.2	4	4.7	5	10.2	12	6.8	5	6.6	6	4.9	151	7.9
Casual partners reported, but number unknown	13	1.0	1	1.0	3	3.5	1	2.0	2	1.1	0	0.0	2	1.6	22	1.1
Total excluding unknown	1,316	100.0	98	100.0	86	100.0	49	100.0	176	100.0	76	100.0	122	100.0	1,923	100.0
Unknown	286		24		23		12		52		15		103		515	
Total	1,602		122		109		61		228		91		225		2,438	

Table 17 Number of regular male sex partners during the previous six months among Lambda participants by ethnicity

	European / North American		Aboriginal		African / Caribbean		Latin American		South / Southeast Asian		Multi-ethnic / other		Unknown		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Toronto																
None	174	17.5	6	7.5	7	9.2	7	15.6	27	17.6	12	21.1	19	18.6	252	16.7
Only one	454	45.8	33	41.3	38	50.0	19	42.2	63	41.2	21	36.8	50	49.0	678	45.0
2 to 5	272	27.4	33	41.3	24	31.6	11	24.4	38	24.8	15	26.3	22	21.6	415	27.6
6 or more	65	6.6	7	8.8	7	9.2	8	17.8	21	13.7	8	14.0	9	8.8	125	8.3
Regular partner reported but number unknown	27	2.7	1	1.3	0	0.0	0	0.0	4	2.6	1	1.8	2	2.0	35	2.3
Total excluding unknown	992	100.0	80	100.0	76	100.0	45	100.0	153	100.0	57	100.0	102	100.0	1,505	100.0
Unknown	232		21		24		11		50		12		77		427	
Total	1,224		101		100		56		203		69		179		1,932	
Ottawa																
None	44	13.6	3	18.8	1	14.3	0	0.0	5	21.7	3	17.6	7	31.8	63	15.3
Only one	175	54.2	6	37.5	1	14.3	1	25.0	12	52.2	8	47.1	10	45.5	213	51.7
2 to 5	80	24.8	6	37.5	3	42.9	3	75.0	5	21.7	5	29.4	4	18.2	106	25.7
6 or more	19	5.9	1	6.3	0	0.0	0	0.0	1	4.3	1	5.9	0	0.0	22	5.3
Regular partner reported but number unknown	5	1.5	0	0.0	2	28.6	0	0.0	0	0.0	0	0.0	1	4.5	8	1.9
Total excluding unknown	323	100.0	16	100.0	7	100.0	4	100.0	23	100.0	17	100.0	22	100.0	412	100.0
Unknown	55		5		2		1		2		5		24		94	
Total	378		21		9		5		25		22		46		506	
Both sites																
None	218	16.6	9	9.4	8	9.6	7	14.3	32	18.2	15	20.3	26	21.0	315	16.4
Only one	629	47.8	39	40.6	39	47.0	20	40.8	75	42.6	29	39.2	60	48.4	891	46.5
2 to 5	352	26.8	39	40.6	27	32.5	14	28.6	43	24.4	20	27.0	26	21.0	521	27.2
6 or more	84	6.4	8	8.3	7	8.4	8	16.3	22	12.5	9	12.2	9	7.3	147	7.7
Regular partner reported but number unknown	32	2.4	1	1.0	2	2.4	0	0.0	4	2.3	1	1.4	3	2.4	43	2.2
Total excluding unknown	1,315	100.0	96	100.0	83	100.0	49	100.0	176	100.0	74	100.0	124	100.0	1,917	100.0
Unknown	287		26		26		12		52		17		101		521	
Total	1,602		122		109		61		228		91		225		2,438	

Table 18 Delayed condom application during receptive anal sex with HIV-positive or unknown HIV status partner among participants with self-reported HIV-negative or unknown HIV status by ethnicity

	Total	Unknown	% of delayed condom application*
Toronto			
European/North American	966	115	8.7
Aboriginal	74	6	8.8
African/Caribbean	82	5	2.6
Latin American	41	6	11.4
South/Southeast Asian	177	18	8.2
Multi-ethnic/other	51	3	2.1
Total excluding unknown	1,391	153	8.1
Unknown	101	13	8.0
Total	1,492	166	8.1
Ottawa			
European/North American	325	34	9.3
Aboriginal	15	0	6.7
African/Caribbean	7	2	--
Latin American	4	1	--
South/Southeast Asian	21	3	0.0
Multi-ethnic/other	20	0	10.0
Total excluding unknown	392	40	9.7
Unknown	25	2	13.0
Total	417	42	9.9
Both sites			
European/North American	1,291	149	8.8
Aboriginal	89	6	8.4
African/Caribbean	89	7	6.1
Latin American	45	7	13.2
South/Southeast Asian	198	21	7.3
Multi-ethnic/other	71	3	4.4
Total excluding unknown	1,783	193	8.4
Unknown	126	15	9.0
Total	1,909	208	8.5

* Proportion among those with known information on delayed condom application during receptive anal sex with HIV-positive or unknown status partner

-- Insufficient numbers

Table 19 Unprotected receptive anal sex with a casual partner or HIV-positive regular partner or unknown HIV status regular partner among participants with self-reported HIV-negative or unknown HIV status by ethnicity

	Total	Unknown	% of unprotected receptive anal sex*
Toronto			
European/North American	966	237	17.7
Aboriginal	74	20	24.1
African/Caribbean	82	23	13.6
Latin American	41	9	25.0
South/Southeast Asian	177	55	23.8
Multi-ethnic/other	51	13	21.1
Total excluding unknown	1,391	357	18.9
Unknown	101	38	20.6
Total	1,492	395	19.0
Ottawa			
European/North American	325	64	17.2
Aboriginal	15	5	10.0
African/Caribbean	7	2	--
Latin American	4	1	--
South/Southeast Asian	21	4	0.0
Multi-ethnic/other	20	5	20.0
Total excluding unknown	392	81	16.4
Unknown	25	10	20.0
Total	417	91	16.6
Both sites			
European/North American	1,291	301	17.6
Aboriginal	89	25	21.9
African/Caribbean	89	25	15.6
Latin American	45	10	22.9
South/Southeast Asian	198	59	20.9
Multi-ethnic/other	71	18	20.8
Total excluding unknown	1,783	438	18.3
Unknown	126	48	20.5
Total	1,909	486	18.4

* Proportion among those with known information on unprotected receptive anal sex with a casual partner or HIV-positive regular partner or unknown HIV status regular partner

-- Insufficient numbers

Table 20 Injection drug use reported among Lambda participants by ethnicity

A. Toronto

	European / North American	Aboriginal	African / Caribbean	Latin American	South / Southeast Asian	Multi-ethnic / other	Unknown	Total
Total number	1,224	101	100	56	203	69	179	1,932
Unknown	28	2	0	2	7	1	53	93
	%*	%	%	%	%	%	%	%
Ever injected any drug								
Never	89.2	86.9	96.0	88.9	93.9	82.4	87.3	89.6
Yes, but not in past 6 months	6.7	8.1	3.0	9.3	3.1	10.3	9.5	6.6
Yes, in past 6 months	4.1	5.1	1.0	1.9	3.1	7.4	3.2	3.9
Ever injected any drug (excluding steroids)								
Never	92.6	88.9	99.0	90.7	97.4	85.3	92.1	92.9
Yes, but not in past 6 months	5.1	7.1	1.0	7.4	2.0	8.8	4.8	4.8
Yes, in past 6 months	2.3	4.0	0.0	1.9	0.5	5.9	3.2	2.3
Injected crystal meth								
Never	97.2	96.0	100.0	96.3	100.0	94.1	97.6	97.5
Yes, but not in past 6 months	1.6	4.0	0.0	1.9	0.0	4.4	0.8	1.5
Yes, in past 6 months	1.2	0.0	0.0	1.9	0.0	1.5	1.6	1.0
Injected steroids								
Never	95.5	98.0	97.0	98.1	96.4	94.1	94.4	95.8
Yes, but not in past 6 months	2.5	1.0	2.0	1.9	1.0	1.5	4.8	2.3
Yes, in past 6 months	2.0	1.0	1.0	0.0	2.6	4.4	0.8	1.9
Injected cocaine								
Never	94.7	89.9	99.0	90.7	98.0	88.2	93.7	94.6
Yes, but not in past 6 months	3.8	6.1	1.0	9.3	1.5	7.4	4.8	3.9
Yes, in past 6 months	1.4	4.0	0.0	0.0	0.5	4.4	1.6	1.5
Injected heroin								
Never	98.1	94.9	99.0	100.0	99.0	91.2	99.2	97.9
Yes, but not in past 6 months	1.6	5.1	1.0	0.0	1.0	7.4	0.8	1.8
Yes, in past 6 months	0.3	0.0	0.0	0.0	0.0	1.5	0.0	0.3
Injected other drugs								
Never	99.0	97.0	100.0	100.0	100.0	95.6	99.2	99.0
Yes, but not in past 6 months	0.7	3.0	0.0	0.0	0.0	1.5	0.0	0.7
Yes, in past 6 months	0.2	0.0	0.0	0.0	0.0	2.9	0.8	0.3

* Proportion among those with known injection drug use

B. Ottawa

	European / North American	Aboriginal	African / Caribbean	Latin American	South / Southeast Asian	Multi-ethnic / other	Unknown	Total
Total number	378	21	9	5	25	22	46	506
Unknown	7	1	0	0	3	0	14	25
	%*	%	%	%	%	%	%	%
Ever injected any drug								
Never	92.7	90.0	88.9	100.0	100.0	100.0	87.5	92.9
Yes, but not in past 6 months	4.9	5.0	11.1	0.0	0.0	0.0	6.3	4.6
Yes, in past 6 months	2.4	5.0	0.0	0.0	0.0	0.0	6.3	2.5
Ever injected any drug (excluding steroids)								
Never	94.6	90.0	88.9	100.0	100.0	100.0	90.6	94.6
Yes, but not in past 6 months	3.2	5.0	11.1	0.0	0.0	0.0	3.1	3.1
Yes, in past 6 months	2.2	5.0	0.0	0.0	0.0	0.0	6.3	2.3
Injected crystal meth								
Never	98.4	95.0	100.0	100.0	100.0	100.0	93.8	98.1
Yes, but not in past 6 months	1.6	5.0	0.0	0.0	0.0	0.0	3.1	1.7
Yes, in past 6 months	0.0	0.0	0.0	0.0	0.0	0.0	3.1	0.2
Injected steroids								
Never	97.6	100.0	88.9	100.0	100.0	100.0	93.8	97.5
Yes, but not in past 6 months	1.9	0.0	11.1	0.0	0.0	0.0	6.3	2.1
Yes, in past 6 months	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Injected cocaine								
Never	96.0	90.0	88.9	100.0	100.0	100.0	90.6	95.6
Yes, but not in past 6 months	2.7	5.0	11.1	0.0	0.0	0.0	3.1	2.7
Yes, in past 6 months	1.3	5.0	0.0	0.0	0.0	0.0	6.3	1.7
Injected heroin								
Never	97.6	100.0	88.9	100.0	100.0	100.0	93.8	97.5
Yes, but not in past 6 months	1.9	0.0	11.1	0.0	0.0	0.0	6.3	2.1
Yes, in past 6 months	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Injected other drugs								
Never	99.5	100.0	100.0	100.0	100.0	100.0	100.0	99.6
Yes, but not in past 6 months	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yes, in past 6 months	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.4

* Proportion among those with known injection drug use

C. Both sites

	European / North American	Aboriginal	African / Caribbean	Latin American	South / Southeast Asian	Multi-ethnic / other	Unknown	Total
Total number	1,602	122	109	61	228	91	225	2,438
Unknown	35	3	0	2	10	1	67	118
	%*	%	%	%	%	%	%	%
Ever injected any drug								
Never	90.0	87.4	95.4	89.8	94.5	86.7	87.3	90.3
Yes, but not in past 6 months	6.3	7.6	3.7	8.5	2.8	7.8	8.9	6.2
Yes, in past 6 months	3.7	5.0	0.9	1.7	2.8	5.6	3.8	3.6
Ever injected any drug (excluding steroids)								
Never	93.0	89.1	98.2	91.5	97.7	88.9	91.8	93.2
Yes, but not in past 6 months	4.7	6.7	1.8	6.8	1.8	6.7	4.4	4.5
Yes, in past 6 months	2.3	4.2	0.0	1.7	0.5	4.4	3.8	2.3
Injected crystal meth								
Never	97.5	95.8	100.0	96.6	100.0	95.6	96.8	97.6
Yes, but not in past 6 months	1.6	4.2	0.0	1.7	0.0	3.3	1.3	1.6
Yes, in past 6 months	0.9	0.0	0.0	1.7	0.0	1.1	1.9	0.8
Injected steroids								
Never	96.0	98.3	96.3	98.3	96.8	95.6	94.3	96.1
Yes, but not in past 6 months	2.4	0.8	2.8	1.7	0.9	1.1	5.1	2.3
Yes, in past 6 months	1.7	0.8	0.9	0.0	2.3	3.3	0.6	1.6
Injected cocaine								
Never	95.0	89.9	98.2	91.5	98.2	91.1	93.0	94.8
Yes, but not in past 6 months	3.6	5.9	1.8	8.5	1.4	5.6	4.4	3.7
Yes, in past 6 months	1.4	4.2	0.0	0.0	0.5	3.3	2.5	1.5
Injected heroin								
Never	98.0	95.8	98.2	100.0	99.1	93.3	98.1	97.8
Yes, but not in past 6 months	1.7	4.2	1.8	0.0	0.9	5.6	1.9	1.9
Yes, in past 6 months	0.4	0.0	0.0	0.0	0.0	1.1	0.0	0.3
Injected other drugs								
Never	99.1	97.5	100.0	100.0	100.0	96.7	99.4	99.1
Yes, but not in past 6 months	0.6	2.5	0.0	0.0	0.0	1.1	0.0	0.6
Yes, in past 6 months	0.3	0.0	0.0	0.0	0.0	2.2	0.6	0.3

* Proportion among those with known injection drug use

Table 21 HIV prevalence among Lambda participants by reported history of injection drug use and ethnicity

A. Toronto

	European / North American		Aboriginal		African / Caribbean		Latin American		South / Southeast Asian		Multi-ethnic / other		Unknown		Total	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Ever injected any drug																
Never	442	18.3	39	30.8	32	15.6	19	26.3	45	11.1	19	21.1	31	16.1	627	18.7
Ever	75	54.7	11	63.6	3	33.3	3	100.0	6	0.0	8	50.0	6	33.3	112	51.8
Ever injected any drug (excluding steroids)																
Never	464	20.5	41	34.1	34	17.6	20	30.0	50	10.0	20	20.0	34	14.7	663	20.4
Ever	53	50.9	9	55.6	1	0.0	2	100.0	1	0.0	7	57.1	3	66.7	76	52.6
Injected crystal meth																
Never	495	21.8	46	37.0	35	17.1	22	36.4	51	9.8	25	24.0	35	17.1	709	22.0
Ever	22	63.6	4	50.0	0	--	0	--	0	--	2	100.0	2	50.0	30	63.3
Injected steroids																
Never	484	21.3	48	35.4	33	15.2	21	33.3	46	10.9	26	30.8	34	20.6	692	22.0
Ever	33	57.6	2	100.0	2	50.0	1	100.0	5	0.0	1	0.0	3	0.0	47	48.9
Injected cocaine																
Never	477	21.8	42	35.7	34	17.6	20	30.0	50	10.0	22	18.2	34	14.7	679	21.4
Ever	40	45.0	8	50.0	1	0.0	2	100.0	1	0.0	5	80.0	3	66.7	60	50.0
Injected heroin																
Never	500	23.4	46	39.1	34	17.6	22	36.4	51	9.8	22	22.7	37	18.9	712	23.3
Ever	17	29.4	4	25.0	1	0.0	0	--	0	--	5	60.0	0	--	27	33.3
Injected other drugs																
Never	508	23.0	47	40.4	35	17.1	22	36.4	51	9.8	25	28.0	37	18.9	725	23.3
Ever	9	55.6	3	0.0	0	--	0	--	0	--	2	50.0	0	--	14	42.9

-- Insufficient number

Note: HIV prevalence should be interpreted cautiously, due to relative small sample size in some groups.

B. Ottawa

	European / North American		Aboriginal		African / Caribbean		Latin American		South / Southeast Asian		Multi-ethnic / other		Unknown		Total	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Ever injected any drug																
Never	205	6.8	12	0.0	5	20.0	2	0.0	10	10.0	14	7.1	12	16.7	260	7.3
Ever	19	36.8	1	100.0	0	--	0	--	0	--	0	--	4	75.0	24	45.8
Ever injected any drug (excluding steroids)																
Never	210	8.1	12	0.0	5	20.0	2	0.0	10	10.0	14	7.1	13	15.4	266	8.3
Ever	14	28.6	1	100.0	0	--	0	--	0	--	0	--	3	100.0	18	44.4
Injected crystal meth																
Never	219	8.7	13	7.7	5	20.0	2	0.0	10	10.0	14	7.1	14	21.4	277	9.4
Ever	5	40.0	0	--	0	--	0	--	0	--	0	--	2	100.0	7	57.1
Injected steroids																
Never	217	7.4	13	7.7	5	20.0	2	0.0	10	10.0	14	7.1	14	28.6	275	8.7
Ever	7	71.4	0	--	0	--	0	--	0	--	0	--	2	50.0	9	66.7
Injected cocaine																
Never	213	8.0	12	0.0	5	20.0	2	0.0	10	10.0	14	7.1	13	15.4	269	8.2
Ever	11	36.4	1	100.0	0	--	0	--	0	--	0	--	3	100.0	15	53.3
Injected heroin																
Never	222	8.6	13	7.7	5	20.0	2	0.0	10	10.0	14	7.1	14	21.4	280	9.3
Ever	2	100.0	0	--	0	--	0	--	0	--	0	--	2	100.0	4	100.0
Injected other drugs																
Never	222	9.5	13	7.7	5	20.0	2	0.0	10	10.0	14	7.1	16	31.3	282	10.6
Ever	2	0.0	0	--	0	--	0	--	0	--	0	--	0	--	2	0.0

-- Insufficient number

Note: HIV prevalence should be interpreted cautiously, due to relative small sample size in some groups.

C. Both sites

	European / North American		Aboriginal		African / Caribbean		Latin American		South / Southeast Asian		Multi-ethnic / other		Unknown		Total	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Ever injected any drug																
Never	647	14.7	51	23.5	37	16.2	21	23.8	55	10.9	33	15.2	43	16.3	887	15.3
Ever	94	51.1	12	66.7	3	33.3	3	100.0	6	0.0	8	50.0	10	50.0	136	50.7
Ever injected any drug (excluding steroids)																
Never	674	16.6	53	26.4	39	17.9	22	27.3	60	10.0	34	14.7	47	14.9	929	16.9
Ever	67	46.3	10	60.0	1	0.0	2	100.0	1	0.0	7	57.1	6	83.3	94	51.1
Injected crystal meth																
Never	714	17.8	59	30.5	40	17.5	24	33.3	61	9.8	39	17.9	49	18.4	986	18.5
Ever	27	59.3	4	50.0	0	--	0	--	0	--	2	100.0	4	75.0	37	62.2
Injected steroids																
Never	701	17.0	61	29.5	38	15.8	23	30.4	56	10.7	40	22.5	48	22.9	967	18.2
Ever	40	60.0	2	100.0	2	50.0	1	100.0	5	0.0	1	0.0	5	20.0	56	51.8
Injected cocaine																
Never	690	17.5	54	27.8	39	17.9	22	27.3	60	10.0	36	13.9	47	14.9	948	17.6
Ever	51	43.1	9	55.6	1	0.0	2	100.0	1	0.0	5	80.0	6	83.3	75	50.7
Injected heroin																
Never	722	18.8	59	32.2	39	17.9	24	33.3	61	9.8	36	16.7	51	19.6	992	19.4
Ever	19	36.8	4	25.0	1	0.0	0	--	0	--	5	60.0	2	100.0	31	41.9
Injected other drugs																
Never	730	18.9	60	33.3	40	17.5	24	33.3	61	9.8	39	20.5	53	22.6	1,007	19.8
Ever	11	45.5	3	0.0	0	--	0	--	0	--	2	50.0	0	--	16	37.5

-- Insufficient number

Note: HIV prevalence should be interpreted cautiously, due to relative small sample size in some groups.