REPORT ON HIV/AIDS IN ONTARIO

2003

Robert S. Remis, MD, MPH, University of Toronto
Carol Swantee, BSc, HIV Laboratory
Kirsten Rottensten, MD, MHSc, FRCPC, Public Health Division
Lorraine Schiedel, RN, BScN, Public Health Division
Maraki Fikre Merid, BSc, University of Toronto

DECEMBER 2004

FOREWORD

The preparation of this report would not have been possible without the partnership of staff at the HIV Laboratory, AIDS Bureau, Public Health Division, Ontario Ministry of Health and Long-Term Care and the persons and organizations listed in the acknowledgments.

The work on which this report is based was made possible by funding from the AIDS Bureau of the Ontario Ministry of Health and Long-Term Care which allowed researchers at the Ontario HIV Epidemiologic Monitoring Unit (Dr. Robert Remis and Maraki Fikre Merid) at the University of Toronto to dedicate their time to monitor the HIV/AIDS epidemic in Ontario.

We intend to continue producing an updated HIV/AIDS surveillance report each year. The report is disseminated to public health units, community groups involved in HIV prevention and in the care of those affected by HIV/AIDS and to HIV researchers. We hope this report will continue to serve as an important resource for these groups, as well as for others, including the media, students, persons in other provinces and countries, etc. We continue to appreciate your critical comments and suggestions for future reports.

This report is available on our web site (*www.phs.utoronto.ca/ohemu*) as are updated quarterly summaries of HIV diagnostic data produced as soon as possible after the end of each quarter.

December 2004

ACKNOWLEDGMENTS

This report was made possible through the commitment and cooperation of the following persons, to whom we owe our sincere gratitude:

Mr. Frank McGee, Coordinator, AIDS Bureau, Ontario Ministry of Health and Long-Term Care for providing core funding;

Staff of the Public Health Division and in particular, Angie Fazzone and of the Public Health Units who transmit AIDS data to the Ministry of Health and Long-Term Care and the attending physicians who report AIDS cases;

Dr. Susan King, Hospital for Sick Children, Toronto, for providing perinatal data collected by the Ontario region of the Canadian Pediatric AIDS Research Group;

Elaine Whittingham who helped to develop the methodology for adjustment of HIV diagnoses and supported the production of previous reports;

Carol Major, formerly of the HIV Laboratory, who provided valued guidance and advice in the analysis of the HIV diagnostic database and the conception and implementation of the Laboratory Enhancement Study;

Dena Schanzer and Dr. Ping Yan of the Centre for Infectious Disease Prevention and Control, Health Canada, for providing estimates of reporting delays in Ontario used to adjust AIDS incidence;

Paul Lee of Central East Health Information Partnership for providing Ontario population data by public health unit;

Lisa Santangelo, Laboratory Enhancement Study, HIV Laboratory, Laboratories Branch, Ontario Ministry of Health and Long-Term Care; and

Aida Rita Santiago, Department of Public Health Sciences, University of Toronto, for help in preparing the report.

EXECUTIVE SUMMARY

In this seventh annual HIV/AIDS Ontario Surveillance Report, we have updated the information extracted from the constituent data sources including HIV serodiagnostic data, AIDS cases reports and surveillance on HIV-infected mothers and infants. We have also updated the estimates derived from the HIV statistical model to December 2003. The present report includes results that reflect a number of areas of particular interest and concern. Our findings clearly indicate that the HIV epidemic in Ontario has not yet stabilized.

To date, 24,734 HIV infections have been diagnosed in Ontario. About 1,000 HIV infections were newly diagnosed annually in the late 1990s; this increased about 35% from 2000 to 2003. Overall, 3,243 or 13.7% of diagnoses were among women. However, the proportion of HIV diagnoses comprised by women increased from less than 5% following the introduction of HIV testing to 20% in the late 1990s and, in 2003, to 29%. The proportion of HIV diagnoses comprised by MSM gradually decreased from 90% during the 17 years from 1985 to 2001 to about 45% in the last three years. The proportion comprised by persons from HIV-endemic countries continued to increase; modeled HIV prevalence in this group increased the most of any exposure category in the past five years, 86% with an average annual increase of 13%. The relative increase among persons from HIV-endemic countries has received some attention in recent years; we produced a situation report in 1999 which was recently updated to 2002. The second most dramatic increase in modeled HIV prevalence has been among other persons infected through heterosexual contact. Overall, we estimate an increase of 64% over the previous five years, with an annual increase of 10%. The causes for this latter increase remain to be elucidated. We are currently conducting an enhanced surveillance study in Toronto and Ottawa among this group to better understand the causes for this increase.

7,514 AIDS cases have been reported in Ontario since the beginning of the HIV epidemic. The number of reported AIDS cases decreased dramatically in recent years since a peak of 724 cases in 1993, although the low numbers in the last three years are likely somewhat underestimated due to delayed reporting. After adjustment for delays, AIDS incidence has increased since its adjusted low point of 152 in 2000 to 294 in 2003. MSM accounted for 70% of AIDS cases reported to date, though the proportion has decreased since the beginning of the epidemic. Until 1994, greater than 70% of AIDS cases were among MSM but in 2002 and 2003 the proportion was 37%, the lowest ever. Though overall 7% of reported AIDS cases overall were among women, in 2003 women comprised 24% of AIDS cases. The lower proportion of women among AIDS cases than among HIV diagnoses is likely related to the time from HIV infection to progress to AIDS.

With respect to mother-infant HIV transmission, 496 HIV-infected women who delivered in Canada have been identified to date, to whom 118 HIV-infected infants were born. Overall, the majority of the infected infants were born to mothers who were born in HIV-endemic countries. 52 HIV-infected infants born in Ontario since July 1994 have been identified to date, indicating that prenatal HIV testing and the use of antiretroviral prophylaxis was not widespread following the release of the results of the ACTG 076 trial. Since January 1999, 21 HIV-infected infants born in Ontario have been reported to date, of which five were born in 2002 and 2003.

According to our model, we estimate that 31,197 persons in Ontario have been infected with HIV

to date; 7,087 persons have died, leaving 23,563 persons living with HIV. HIV prevalence in Ontario has continued to increase year over year since the beginning of the epidemic. In the past five years, HIV prevalence increased 36%, approximately 6% annually. This is in part related to the continued and, in some cases, increased HIV incidence as well as decreased mortality due to the introduction of HAART in 1996. Similarly to last year, we analyzed the data using the HIV statistical model for each exposure category and for each sex separately and have presented the results in tabular and graphic format. Three groups with significant increases in HIV prevalence are particularly concerning: persons from HIV-endemic countries and other persons infected through heterosexual transmission and MSM. Among persons from HIV-endemic countries, HIV prevalence increased 86% since 1998, for an average annual increase of 13%. HIV prevalence among other persons infected by heterosexual contact increased 64% over the past five years (average annual increase 10%). These two groups, both related to heterosexual transmission, now account for 27% of HIV infected-persons in Ontario. In comparison, in 1998, these groups comprised 21% of estimated HIV infections. Finally, for MSM, HIV prevalence increased 29% since 1998, with an average annual increase of 5%. MSM remain the group most affected by the HIV epidemic in Ontario, constituting 61% of HIV-infected persons in Ontario.

We also examined once again this year the estimated proportion of HIV-infected persons who have been diagnosed. Overall, we estimate that 63% of infected persons in Ontario know their serodiagnosis. Among HIV-infected persons from HIV-endemic countries, we estimate that only 48% have been diagnosed and among those infected by heterosexual transmission, 51% have been diagnosed. Clearly, the large number of infected but yet undiagnosed persons represents a significant public health challenge.

In summary, our results show that further research, including prevention research, is needed to clarify the reasons for the observed instability and to develop and maintain effective programs for both primary and secondary HIV prevention.

2003 HIGHLIGHTS

- Overall, 23,563 HIV-infected persons are living in Ontario as of 2003
- Most affected groups by exposure category: MSM 14,370, persons from HIV-endemic regions 3,011, others infected by heterosexual transmission 3,311 and injection drug users 1,959
- Increase in HIV prevalence since 1998 among persons from HIV-endemic regions of 86% and among others infected by heterosexual transmission 64%
- 29% of new HIV diagnoses in 2003 were among women, the highest proportion ever
- Only an estimated 63% of HIV-infected persons in Ontario have been diagnosed

TABLE OF CONTENTS

LIST OF TABLES

1. HIV serodiagnoses

5. HIV statistical model

LIST OF FIGURES

1. INTRODUCTION

This report summarizes the HIV/AIDS epidemic in Ontario as of December 2003 using several indicators. It includes data on HIV diagnoses from Ontario's voluntary HIV testing system, data on reported AIDS cases obtained through the Ontario AIDS reporting system, mother-infant HIV infection from the Canadian Pediatric AIDS Research Group and data on HIV-related mortality from the Ontario Vital Statistics Division and Statistics Canada. Finally, we present estimates of HIV infection in Ontario based on statistical modeling.

This report was produced by the Ontario HIV Epidemiologic Monitoring Unit, established to enhance the monitoring of the HIV/AIDS epidemics in Ontario. The unit began operation in January 1997 initiated by the AIDS Bureau, Ontario Ministry of Health and Long-Term care, in collaboration with the Department of Public Health Sciences, University of Toronto. The current report is the seventh in a series of monographs to review and summarize what is known to date about the patterns of HIV transmission and infection in Ontario.

2. METHODS

Population estimates by year, sex and public health unit were obtained from the Central East Health Information Partnership and Statistics Canada for the calculation of annual incidence and mortality rates. The actual or interpolated population for the year of interest were used to calculate the annual incidence. Cumulative incidence rates were calculated using the 1996 population from census data *<1>* as the denominator.

Where appropriate, statistical testing was carried out using the chi-square or Fisher's exact test to compare proportions and the chi-square to test for trends over time (Epi Info v. 6.04b, 1997, Centers for Disease Control and Prevention, Atlanta, USA and World Health Organization, Geneva, Switzerland).

2.1 HIV serodiagnoses

2.1.1 Data sources

HIV serodiagnostic data were obtained from the HIV Laboratory, Central Public Health Laboratory (CPHL) of the Ontario Ministry of Health and Long-Term Care for the years 1985 to 2003.

Almost all HIV diagnostic testing in the Province of Ontario is performed through the Public Health Laboratory System, Ontario Ministry of Health and Long-Term Care. However, HIV testing is carried out by other laboratories for the purposes of establishing eligibility for life insurance, obtaining visas for international travel and screening organ and tissue donors. Ontario blood donors are tested at the Canadian Blood Services. Finally, Ontario residents may be tested in other provinces; persons may have either tested elsewhere before establishing residence in Ontario or traveled out of province to have an HIV test.

In Ontario, persons requesting a test from their physician or at any one of the specialized clinics established for this purpose (anonymous testing sites) are tested at no charge. Specimens are transported to the Public Health Laboratory system for HIV testing. Specimens are first tested by

enzyme immunoassay (EIA) and, if repeatedly reactive, by supplemental and confirmatory testing, including Western blot. Only rarely does this testing algorithm not provide a definitive result. In such cases, follow-up testing (e.g. repeat serology, polymerase chain reaction [PCR], p24 antigen) involving the collection of additional blood specimens is required. Since 1992, over 200,000 HIV tests have been conducted annually and less than 0.5% have been indeterminate. In recent years, fewer than 10 tests per year remain indeterminate. For the purpose of the analysis, specimens are classified as: negative or indeterminate, seroconverter (positive after a negative test or "window-period" positive), first-time positive or repeat positive.

2.1.2 Data analysis

To the extent possible, subsequent HIV-positive tests from the same person were eliminated to avoid duplicate counting. This was carried out by: (1) removal of HIV-positive tests from persons who indicated that they had a previous positive test whenever possible, and (2) matching HIV-positive tests to earlier HIV-positive tests in the database (using identifying information, e.g., names, initials, dates of birth, clinic where HIV test was carried out, etc.).

We calculated the number and proportion of first-time HIV diagnoses according to sex, age at time of first HIV-positive test (under 1, 1-14, 15-19, 20-29, 30-39, 40-49, 50-59 and 60+), exposure category and year of diagnosis. Analyses were carried out according to major health regions; however, these were modified to better reflect the heterogeneity of the epidemic in Ontario and highlight the differences between the larger urban centers and other parts of the province. The following regional categories were used: Northern, Ottawa, Eastern other than Ottawa (Eastern Other), Toronto, Central East other than Toronto (Central East Other), Central West and Southwest. The mean age at diagnosis was also calculated. We used 1996 population estimates by health region obtained through Statistics Canada to calculate and map rates of HIV infection. Annual population estimates were used to calculate rates of HIV testing according to health region from 1992 to 2003.

To estimate the true distribution of cases by exposure category and region, we reassigned cases with missing data for several analyses. Cases with unknown sex or region of residence were allocated to these categories based on the distribution among cases observed in the Laboratory Enhancement Study begun in October 1999 <*2*> and from the Ontario HIV Laboratory Project study carried out in 1995-96 <*3*>. This methodology was further refined by taking into account cases that were reallocated into a different exposure category based on information collected by the Laboratory Enhancement Study. Further details of the methodology are included in Appendix A.

To indicate multiple risk factors where more than one was reported, we present first-time HIV diagnoses according to single and multiple sources of exposure.

We calculated "HIV-positivity rates" for cases diagnosed from 1992 to 2003, since data on negative tests have only been collected since 1992. To calculate these rates, persons receiving an HIV test for the first time were included in the numerator and HIV tests conducted in the same calendar year, excluding repeat tests, were included in the denominator. To minimize instability where numbers were small, moving averages were used to calculate and graph HIV-positivity rates by health region and year of diagnosis within each major exposure category.

2.1.3 Classification by exposure category

Where more than one exposure (i.e., presumed route of HIV infection) was indicated for a patient, the case was classified according to a mutually exclusive hierarchy which assigns the case to the risk category most likely to represent the source of HIV infection, as follows:

- Men who have sex with men (MSM)
- MSM and injection drug use (IDU)
- IDU
- Perinatal transmission
- Blood product recipient prior to November 1985
- Blood transfusion recipient prior to November 1985
- Origin/residence in an HIV-endemic area
- Heterosexual transmission
    - High-risk heterosexual
    - Low-risk heterosexual
- Unknown (not indicated)

The high risk category among heterosexual transmissions includes those with a history of sexual contact with a person known to be HIV-infected or with someone at high risk of HIV infection (e.g., bisexual male [women only], IDU, clotting factor recipient, person from an HIV-endemic region). The low risk category includes all other persons who have had sex with persons of the opposite sex, none of whom were known to be HIV-infected or at increased risk of being HIV-infected.

In the design of the lab requisition, blood product recipients were meant to indicate persons who received fractionated blood products. Blood transfusion, on the other hand, was meant to indicate persons who received whole blood or components of fresh blood. However, it later became evident that some physicians prescribing tests used the blood product category to indicate the receipt of blood components. Since more detailed data about these cases were not available, we were not able to reclassify them.

2.2 AIDS incidence

2.2.1 Data source

Data on AIDS cases diagnosed to December 31, 2003 and reported to April, 2004 were obtained from the Public Health Branch, Ontario Ministry of Health and Long-Term Care.

AIDS cases in Ontario are reported to local public health units and forwarded to the Public Health Branch. Reporting of AIDS cases was initiated informally in 1982 and expanded into the official surveillance system (the Ontario AIDS Surveillance Program [OASP]) when AIDS became reportable in August 1983. Currently, AIDS data is managed through the Ministry's Reportable Disease Information System (RDIS) implemented in 1990. This system provides for the organization of data on reportable diseases at the local health unit level and for electronic transfer to the Ministry of Health and Long-Term Care. All reported cases, including those ascertained retrospectively (i.e., prior to the institution of official reporting), were included in our analyses.

AIDS cases in Ontario are classified according to criteria used for epidemiologic surveillance as

recommended by the Laboratory Centre for Disease Control <*4*>. The Laboratory Centre for Disease Control defines a case of AIDS as a person who has an illness characterized by the following: (1) one or more of the specified indicator diseases, and (2) either a positive test for HIV infection or absence of specified causes of underlying immunodeficiency. From 1983 to 1987, approximately 20 indicator conditions, including opportunistic infections and malignancies, were used. In 1987, the list was expanded to include two syndromes (HIV wasting and HIV encephalopathy) and "presumptive diagnoses" for several of the indicator conditions <*4,5*>. Finally, in 1993, three new indicator conditions were added, namely, pulmonary tuberculosis, cervical cancer (in women), and recurrent bacterial pneumonia <*6,7*>.

2.2.2 Data analysis

Cumulative incidence rates (1981 to 2003) were calculated using the 1996 population as denominator.

The number of AIDS cases and cumulative incidence rate per 100,000 were calculated according to sex, age at AIDS diagnosis (under 15, five-year age categories from 15 to 59, and 60+), exposure category, health region (Northern, Ottawa, Eastern Other, Toronto, Central East Other, Central West and Southwest) (see Section 2.1.2) and year of AIDS diagnosis. In addition, we calculated the mean age at diagnosis. The date of diagnosis was defined as the date of the earliest AIDS-defining illness, if available, or the reported date of diagnosis otherwise.

We carried out analyses of trends by sex and exposure category using five mutually exclusive time intervals selected to maximize homogeneity within each interval and display trends most effectively.

2.2.3 Classification by exposure category

Exposure categories were defined according to Appendices C1-3 of the Guidelines for the Surveillance of AIDS in Canada <*8*>. Where more than one exposure category was given, a hierarchy was used to determine the most likely source of infection for final classification (see Appendix A). This was carried out based on the patterns of HIV incidence and prevalence in Ontario. The underlying principle was that, for persons with multiple exposures, we assumed that the most likely source of infection was that associated with the highest HIV incidence and prevalence.

We analyzed HIV and AIDS cases according to single and multiple sources of exposure to evaluate combinations of exposure categories which are not reflected in the hierarchical exposure classification. In this analysis, persons who received clotting factors prior to November 1985 or with unknown date were grouped and classified as clotting factor recipients. Persons who received a blood transfusion prior to November 1985 were considered as transfusion recipients.

Those who received clotting factor or a transfusion after November 1985 or received a transfusion of unknown date were attributed to the "no identified risk" (NIR) category. In this analysis, therefore, the numbers in the clotting factor, heterosexual other and transfusion categories do not necessarily reflect those in the hierarchical classification tables.

2.2.4 Adjustment for reporting delays

Due to delays between the date of diagnosis and date of report to Public Health Branch, the actual number of AIDS cases is likely to be underestimated, particularly in the most recent years. Therefore, delay adjustments were carried out for each major exposure category to present a more accurate picture of the annual number of diagnosed cases for the HIV statistical model (see Section 2.4 below). These adjustments were carried out using weights for AIDS cases in Ontario kindly provided by Health Canada for data to December 2001 <*9*>.

Dates of report for AIDS cases were available from the Public Health Branch only from the inception of RDIS (i.e., from 1990). Therefore, the reporting delay analysis was carried out using dates of report provided by Health Canada (HC) for AIDS cases reported from January 1, 1983 to December 31, 1990. In addition, the HC date of report was used for cases reported between January 1, 1991 and December 31, 1996 in which the HC date of report was earlier than the Ontario date of report. The RDIS date of report was used for the remaining AIDS cases with dates of report between January 1, 1991 and December 31, 2003. An adjustment factor of -2 months was applied to HC dates of report when they were used, based on the median difference in RDIS and HC dates of report among cases with both dates.

The following cases were excluded from the calculation of reporting delay adjustments: (1) cases in which the date of report was earlier than the date of diagnosis; (2) cases diagnosed prior to January 1, 1997 but reported in 1997; and (3) cases in the NIR and occupational exposure categories. The adjustment factors were applied to all AIDS cases in each of the exposure categories with the most cases (i.e. MSM, MSM-IDU, IDU, HIV-endemic, other heterosexual).

2.3 HIV infection due to mother-infant transmission

2.3.1 Data source

Data were obtained from the Canadian Pediatric AIDS Research Group (CPARG), Ontario region, for infants born to HIV-infected mothers from 1984 to 2003. The Ontario region of CPARG is coordinated by Dr. Susan King at the Hospital for Sick Children in Toronto. This work was initiated in 1992 to collect information on children born to HIV-infected mothers and receiving specialized care at four hospitals in Ontario. Data is collected by staff at each participating institution from medical charts. The following hospitals have contributed cases to date: Hospital for Sick Children, Toronto; Children's Hospital in Eastern Ontario, Ottawa; McMaster University Medical Centre, Hamilton; and St. Joseph's Health Centre, London.

Solicitation for new cases and an update on the clinical status of previously reported cases is carried out once a year, usually in December or January. The database is maintained using spreadsheet software (Microsoft Excel). Information is collected on date of birth and sex of the infant, country of birth of the mother, risk factor for HIV infection in the mother, whether the mother received zidovudine prophylaxis during pregnancy and the clinical status of the infant (confirmed infected, confirmed not infected, pending/unknown/lost to follow-up). Pending cases are, for the most part, infants for whom a final decision on infection status cannot yet be made on the basis of laboratory analysis, including HIV antibody tests, polymerase chain reaction (PCR) and viral culture.

2.3.2 Data analysis

The number and proportion of children born to HIV-infected mothers was calculated according to: (1) the year of birth and clinical status of the infant; (2) location of the institution (hospital) and exposure category; and (3) the year of birth of the infant and the presumed source of exposure of the mother among HIV-infected infants.

2.4 HIV-related mortality

2.4.1 Data source

Data on HIV-related deaths (ICD-9 codes 042, 043 or 044) occurring from 1987 to 1999 was obtained from the Ontario Vital Statistics office of the Registrar-General and data on HIV-related deaths (ICD-10 codes B20-24)occurring in the year 2000 was obtained from Statistics Canada.

2.4.2 Data analysis

We examined the distribution of HIV-related deaths according to sex, year of death and age group for cases from 1987 to 2000. We also calculated sex-specific annual mortality rates per 100,000.

We examined the distribution of deaths according to country of birth (HIV-endemic and non-HIV-endemic) for cases from 1997 to 1999. Countries in sub-Saharan Africa and the Caribbean were considered to be HIV-endemic for the purpose of these analyses.

2.5 Ontario HIV model

We wished to estimate with the greatest precision possible the incidence, cumulative incidence and prevalence of HIV infection and AIDS from 1977 to 2003. We also wished to assess annual and cumulative deaths due to HIV. To accomplish this, we used data from a variety of sources, including (with source) HIV serodiagnoses (Central Public Health Laboratory), AIDS incidence (Ontario AIDS Surveillance Program), AIDS mortality (Vital Statistics, Registrar-General) and HIV infections among women who delivered a live infant (CPARG). Data from the Laboratory Enhancement study and other studies where available were also used.

The detailed methodology used to derive the estimates is beyond the scope of the present report. However, further details are available upon request. A brief summary of the methodology used is described in the methods section as well as in previous reports. In essence, we derived estimates of HIV incidence, AIDS incidence and HIV-related mortality to fit available data on serodiagnosis, seroprevalence studies (limited data), reported AIDS cases and data on HIV-related mortality.

Initial estimates for HIV incidence, AIDS incidence and HIV-related deaths were entered into a spreadsheet and the values of the above indicators were progressively refined in an iterative fashion so as to be consistent with the collected data, taking into account the direction and strength of biases. The initial results were compared to results from techniques used elsewhere (e.g. back-calculation) to verify the credibility of the estimates. Further details concerning the techniques used are included in the first Ontario HIV/AIDS surveillance report <*10*> as well as in Appendix B.

3. RESULTS

3.1 HIV diagnoses

3.1.1 Number of diagnoses

As seen in **Table 1.1**, 24,734 HIV diagnoses were made in Ontario from October 1985 to December 2003. The sex was unknown for 1,073, or 4.4%, of diagnoses. Overall, the number of first-time diagnoses increased steeply from 1986 to a peak in 1990, from about 1,400 to 2,100 diagnoses, and then gradually decreased since. The number of new HIV diagnoses was relatively stable from 900 to 1,000 for the five years from 1997 to 2001. However, in 2002, the number of diagnoses increased to 1,233 (an increase of 27.62% over the average of the previous five years). The increase was maintained in 2003 with 1,217 cases.

The proportion of diagnoses comprised by females dramatically increased, from 1.8% in 1985 to 28.9% in 2003. The increasing trend in the proportion of females (examined over three aggregate periods) was statistically significant ($p<10^{-6}$).

Figure 1.1 displays the trends in the number of HIV diagnoses from 1985 to 2003 by sex. The figure shows that, among males, the number of first-time HIV diagnoses rose to a peak of just over 1,800 in 1990 and then decreased since. In 1997-2001, approximately 700 infections were diagnosed annually. In 2002, the number of HIV diagnoses in males increased substantially and was maintained in 2003. For females, there was a gradual increase in the number of HIV diagnoses from 1985 to 1994. From 1994 to 2000, about 180-220 new diagnoses were made each year. However, in 2002 and 2003, 325 and 346 females, respectively, were diagnosed with HIV infection. In 2003, the number and proportion of HIV diagnoses among females was the highest ever.

Table 1.2 shows the unadjusted distribution of HIV diagnoses by exposure category and sex from 1985 to 2003. Among males, 77.5% were men who have sex with men (MSM), with the second most important group being injection drug users (IDUs) at 6.4%. Among females, three groups predominated, namely low-risk heterosexual at 28.3%, high-risk heterosexual at 23.2% and IDU at 17.5%. Thus, 62.8% of diagnoses among females were attributable to heterosexual transmission (including high- and low-risk heterosexual and HIV-endemic).

Table 1.3 is similar to Table 1.2 but shows HIV diagnoses adjusted for unknown sex and exposure category. In this analysis, the proportion assigned to the HIV-endemic exposure category was substantially higher for both sexes, 8.2% for males and 32.9% for females. Inversely, the proportion assigned to the low-risk heterosexual category decreased from 8.1% to 5.3%. The proportion of HIV diagnoses in females assigned to the three categories reflecting heterosexual transmission was 69.3%.

Table 1.3a shows adjusted HIV diagnoses in 2003 by exposure category, adjusting for cases with unknown sex and unknown exposure category. Among males, MSM accounted for 63.3%, persons from HIV-endemic countries 11.5% and low-risk heterosexual 10.1%. Compared to previous years, the proportion of cases attributed to MSM and MSM-IDU decreased whereas cases attributed to HIV-endemic, high-risk and low-risk heterosexual increased. For females, the three risk categories related to heterosexual transmission accounted for 85.8% of cases, women from HIV-endemic countries 21.8%, low-risk heterosexual 16.8% and high risk heterosexual 3.1%. Compared to earlier diagnoses, cases among females from HIV-endemic countries increased and IDUs decreased.

Table 1.4 displays the unadjusted data of HIV diagnoses by exposure category and year of HIV diagnosis. As seen in the second column from the right, the exposure category could not be determined for 12,655, or 51.1%, of diagnoses (proportions not shown). The proportion without data allowing the assignment of exposure category has not changed substantially in recent years.

Table 1.5 shows the number and proportion of HIV diagnoses by year of diagnosis adjusted for unknown exposure category. We note interesting trends in the number and proportion of exposure categories. In the early years, MSM comprised the vast majority of HIV diagnoses, accounting for 80-90% of diagnoses from 1985 to 1989. This proportion decreased almost every year until 1998. From 1998 to 2003, about 45 to 50% of HIV diagnoses were among MSM.

IDUs comprised 0.5% of persons diagnosed in 1985 and the proportion gradually increased subsequently. This was highest in the period 1994 to 1999 when it varied from 11 to 15%. From 2000 until 2003, a decreasing proportion of new HIV diagnoses were among IDUs and was 6.3% in 2003. The proportion comprised by IDUs in the years 2000-03 was significantly lower than in the period 1994-99 ($p<10^{-6}$).

HIV diagnoses attributed to persons from an HIV-endemic country steadily increased over the years from less than 10% from 1985 to 1995, 10 to 15% from 1996 to 2000 and an average of 20% in the most recent three years.

A similar increasing trend was observed among low-risk heterosexual exposure category from less than 1% from 1985 to 1990, 1 to 9% from 1991 to 1997 and greater than 10% since 1997, a high of 16.8% in 2003.

Figure 1.2 graphically shows the relative proportion of HIV diagnoses by exposure category and two-year period of diagnosis from 1985 to 2003. This illustrates the gradual decrease in the relative importance of diagnoses among MSM and MSM-IDU and the relative increase in importance of HIV diagnoses among the HIV-endemic and low-risk heterosexual categories. The proportion assigned to IDUs increased monotonically from 1985-86 until 1999-2000 and then decreased in the latest two-year period. Though relatively stable over the last 10 years, the proportions and numbers of HIV diagnoses among high-risk heterosexuals were greater in 1994 through 2003 than earlier.

Table 1.5a shows the same analysis as in Table 1.5 but limited to males. Among males, MSM comprised almost all (>85%) HIV diagnoses until 1991 and then gradually decreased since. IDUs, on the other hand, accounted for a gradually increasing proportion of HIV diagnoses, being less than 2% for the first three years of HIV testing and gradually climbing, with rates of approximately 7% to 13% since 1992. In the most recent two years, the proportion of males in the IDU category was about one third lower than in 2000-01 ($p=0.002$). Not surprisingly, HIV infections acquired from clotting factors and blood transfusion accounted each for 2-3% in the first few years of the epidemic but less than 1% since 1995 for blood transfusion and since 1991 for clotting factors.

Men from HIV-endemic countries accounted for a gradually increasing proportion of HIV diagnoses, from less than 2% until 1990 to 5-7% in 1993-2000, with a dramatic increase to 11-12% in 2001 through 2003.

Cases in both heterosexual risk categories also accounted for a gradually increasing proportion of HIV diagnoses. This was more dramatic for low-risk heterosexuals which comprised 1% or less of HIV diagnoses from 1985 through 1991 and increased steadily to a high of 10.7% in 2003. For high-risk heterosexuals, the pattern was somewhat less dramatic, accounting for less than 1% of cases until 1992 and about 2% of cases since 1997.

Table 1.5b shows the relative proportion of adjusted HIV diagnoses by exposure category among females from 1985 to 2003. As with males, cases associated with clotting factors and blood transfusion decreased markedly since the beginning of the HIV epidemic. Cases attributed to injection drug use have varied somewhat but were generally from 17-25% of cases from 1987 to 1999 but decreased to 14% in 2000 and from 6-8% since.

In contrast, the proportion of women from HIV-endemic countries was initially low and increased steeply from 1985 to 1990, attaining a plateau of 23-32% from 1990 to 1999. They accounted for an average of 43% of cases in the most recent four years. This increase was statistically significant ($p<10^{-6}$). Low-risk heterosexual women accounted for less than 10% of cases until 1994 but gradually increased, attaining 32% in 2003.

Table 1.6 shows the distribution of age group at time of diagnosis and sex among persons diagnosed from 1985 to 2003. For both males and females, the vast majority of diagnoses were among young adults aged 20 to 49 years (89% for men and 80% for women). The mean and median ages were higher in men (35.0 and 34.0 years) than in women (30.0 and 30.0 years).

Table 1.7 presents the age distribution among HIV diagnoses from 1985 to 2003 for each exposure category. The mean ages at HIV diagnosis for the MSM, MSM-IDU, HIV-endemic and heterosexual exposure categories varied from 31 to 35 years of age. Persons infected by clotting factors were somewhat younger whereas those infected by blood transfusion were older.

Table 1.8 shows the trends in age at HIV diagnosis by exposure category among males. Among MSM, the mean increased slightly, from about 33-34 years in 1985-88 to 36-38 years in 1998-2003. A slightly more dramatic increase in age was observed among IDUs, from 25-30 years in 1985-90 to 36-39 years in 1997-2003. Note that the mean age at HIV diagnosis is a function of both the age at HIV infection and the time since HIV infection and is, therefore, not easily interpretable.

Table 1.9 shows similar data to that in Table 1.8 for women. For IDUs, the mean age at HIV diagnosis increased from 26-31 years in 1986-94 to 31-36 years in 1995-2003. Interestingly, there appeared to be no substantial change in age at HIV diagnosis among women from HIV-endemic countries, suggesting a complex pattern reflecting possibly more recent HIV infection or decreasing age at infection. The mean age at diagnosis for women in the high-risk and low-risk heterosexual exposure categories did not appear to increase over time.

Table 1.10 shows the distribution of HIV diagnoses from 1985 to 2003 by individual risk factors. This is in contrast to the previous tables presented in this report where cases were classified by exposure category using a mutually exclusive hierarchy of risk factors. Interestingly, of the 8,495 MSM, a substantial proportion (18.2%) were bisexual. This is a potentially important route of sexual transmission of HIV to women. Though the number of MSM from HIV-endemic countries appeared low (36 in all), other data suggests that the reporting of origin in an HIV-endemic country is likely incomplete in the HIV diagnostic database. Only 10 of the 938 IDUs were

reported to be from an HIV-endemic country.

Table 1.11 presents the unadjusted HIV diagnoses by exposure category and health region in Ontario from 1985 to 2003. 1,182 cases (4.8%) were missing information on health region. Detailed comments on the regional differences in the distribution of exposure categories are included in the discussion of Table 1.13 below which presents the adjusted analysis.

Table 1.11a shows a similar analysis to Table 1.11 but showing row instead of column percent. This analysis permits an examination of the relative proportion of each exposure category diagnosed in each health region. Overall, 66.6% of HIV infections were diagnosed in Toronto and 11.3% in Ottawa. For MSM, the vast majority (77.9%) of HIV diagnoses were in Toronto. The next highest was in Ottawa, accounting for 8.7%. For IDUs, HIV diagnoses were more evenly distributed, being highest in Toronto (34.6%) and Ottawa (25.1%) and 8-11% for the Eastern Other, Northern and Central West regions. Not surprisingly, the majority of HIV diagnoses among persons from HIV-endemic countries were in Toronto (56.8%) and Ottawa (24.1%); other regions accounted for 5.9% (Central West),5.7% (Central East Other) and 4.1% (Southwest). For the two heterosexual contact categories, Toronto accounted for 52.4% of diagnoses, followed by Ottawa (14.1%), Central East Other (9.3%), Central West (8.6%) and Southwest (8.3%) regions.

Table 1.12 shows the same analyses as Table 1.11 for 2003. Detailed comments on the regional differences in the distribution of exposure categories are included in the discussion of Table 1.14 below which presents the adjusted analysis.

Table 1.13 presents a similar analysis to Table 1.11 adjusted for unknown exposure category. The distribution of exposure categories differed markedly between health regions. In Toronto, for example, 74.9% of HIV diagnoses were among MSM, compared to 36-47% for Central West, Ottawa, Northern and Eastern Other regions. Proportions of MSM were higher in the Central East Other (53.2%) and Southwest regions (64.7%), approaching that of Toronto. The proportion comprised by IDUs also varied by region, with a low of 4.6% and 4.2% in Southwest and Toronto, respectively, to 33.5% in the Eastern Other region and 34.3% in the Northern region. The proportion of persons infected through heterosexual contact also varied, from a low of 7-9% in Toronto and Ottawa, 10-12% in the Eastern Other and Southwest, 14-15% in the Central West and Northern region and 17.2% in the Central East Other region

Table 1.13a and **Table 1.13b** show adjusted data for males and females, respectively. Again, Toronto comprised the majority of HIV diagnoses in Ontario, with 68.6% of cases for males and 52.9% for females. Cumulative rates were substantially higher (6.4-fold for Ontario as a whole) in males than females. The rate of HIV diagnoses in Toronto was twice as high as in Ottawa for males, whereas, for females, the rate in Ottawa was slightly higher than that in Toronto.

Table 1.14 is similar to Table 1.13 showing adjusted data for 2003. Similarly to cumulative HIV diagnoses, 63% of the HIV diagnoses in 2003 were in Toronto. Again, MSM exposure category comprised a substantial proportion, at 55.1%, of HIV diagnoses in the Toronto region followed by Southwest at 41.0% of cases. Interestingly, the proportion attributed to the low-risk heterosexuals in all regions was substantially higher in 2003 compared to the overall HIV diagnoses from 1985 to 2003. Low-risk heterosexual cases comprised 16.8% of cases in 2003 compared to 5.3% for cases diagnosed from 1985 to 2003. Similar increases in the proportion of low-risk heterosexual cases was observed in each health region, with the highest increase in the Southwest region at 33.6% in 2003 compared to 5.2% from 1985 to 2003.

Table 1.14a and **Table 1.14b** show adjusted data among males and females, respectively, for 2003. Similarly to that observed from 1985 to 2003, HIV diagnosis rates among males was 2.5-fold higher than among females in 2003. Similar increases in the proportion of cases among low-risk heterosexual cases were observed, from 16.4% to 31.9% for females and 3.5% to 10.7% for males.

Table 1.15 shows the HIV diagnoses and rate per 100,000 population for 1985 to 2003 by public health unit and sex. Rates were highest in Toronto, at 637.4 per 100,000, high-intermediate in Ottawa (359.1) and London (274.1) and low-intermediate in Kingston (194.2), Hamilton (133.5), Windsor and Wellington-Dufferin (116.5). Rates were 13 to 79 per 100,000 in the other public health units.

The ratio of HIV diagnosis rate among males compared to that of females varied markedly by public health unit. The ratio was highest in the Kent-Chatham and North Bay public health units with 17.5 and 11.4 respectively, compared to a low of 1.9 and 2.1 in Porcupine and Algoma public health units, respectively.

Table 1.16 shows the number and proportion of HIV diagnoses by year of test and type of identifier. No specimens were tested anonymously prior to 1992 because anonymous testing programs were implemented in that year. Since 1992, only a very small proportion of tests (0.2%) did not have the type of identifier indicated. Overall, the proportion of HIV tests with nominal identifiers has steadily increased while the diagnoses with coded identifiers has decreased. In 2003, 70.7% of HIV-positive tests were nominal, 19.9% coded and 9.2% were anonymous.

Table 1.17 and **Table 1.18** show analyses similar to that in Table 1.16 but among males and females, respectively. Among males, the pattern was similar to that seen for both sexes together with the proportion nominal steadily increasing over the years to 66% in 2003. In 2003, 24% of tests were coded and 11% were anonymous. The pattern among females, shown in **Table 1.18**, was somewhat different. Since 1992, a higher proportion of HIV-positive tests among women compared to proportions among men were nominal (71.1% compared to 53.2%). Conversely, 22.9% were coded compared to 35.9% for males. Finally, the overall proportion of anonymous HIV-positive tests among females was 6.1%, compared to 10.9% among males.

3.1.2 Rate of HIV diagnoses

In a second stage of analysis, we examined the number of HIV diagnoses as a proportion of tests by exposure category for each year from 1992 to 2003.

As seen in **Table 1.19**, 61.5% of HIV tests had missing information on exposure category. Since adjusted data is of greater interest, the discussion of trends will be limited to the adjusted data (see Table 1.20 below).

Table 1.20 presents the positive tests, all tests and HIV positivity rates by exposure category from 1992 to 2003; cases with unknown exposure category were reassigned using our adjustment procedure as described above.

Overall, excluding the perinatal category (which, in many ways, is distinct from the other categories), the positivity rates were highest among MSM-IDUs (3.7%) and MSM (3.2%). The third highest category was persons from HIV-endemic regions at 2.2%. Overall, the rate for IDUs was 0.66%.

For MSM, HIV positivity rates decreased over time from 1992 to 1996 but have been relatively stable since; the rate was 4.9% in 1993 and 2.2% in 2003. The positivity rates among IDUs was lower in 2000 and later compared to previously. The interpretation of these rates is complex since they are a function of both patterns of HIV infection and diagnosis, both of which may differ across exposure categories and change over time.

Table 1.21 displays the unadjusted HIV positivity rates by exposure category and health region for the period 1992 to 2003. Since adjusted data is of greater interest, the discussion of trends in HIV positivity will be limited to the adjusted data (see next table).

Table 1.22 shows HIV positivity rates for the period 1992-2003 with data adjusted for unknown exposure category. Rates were highest among MSM-IDUs at 3.7% for Ontario and varied regionally, from the highest in Ottawa and Toronto with 8.2% and 5.9%, respectively, to a low of 1.1% in the Central East Other region. The rate among MSM was 3.2% for Ontario but varied from 1.0% in the Central East Other to 4.4% in Toronto. For IDUs, the highest positivity rates were in Ottawa, with a rate of 1.9%, higher than the 0.71% in Toronto. The HIV-endemic category was also highest in Ottawa with a rate of 8.8% followed by 2.6% in Toronto. There were relatively minor regional differences in the positivity rate in the high-risk and low-risk heterosexual categories, with the overall rate being 0.25% and 0.06% respectively.

Figure 1.3 graphically presents first-time HIV positivity rates among MSM by health region from 1992 to 2003. Though the trends over time are difficult to discern, in part due to small numbers and changes in HIV testing patterns, the positivity rate decreased among MSM in most regions. This was most dramatic for the Southwest and Toronto regions and to a lesser degree for the Central West region. The rates were highest in the Toronto and Southwest regions in 1992 but decreased about 50% in the five-year period from 1992 to 1997 for Toronto and four-year period from 1992 to 1996 for the Southwest region. Since 1997, rates were relatively stable among MSM in Toronto at about 3.0 to 3.75% but have further decreased in Southwest from 3.0% in 1997 to 1.4% in 2003. The rate among MSM in Northern region appeared to have increased to about 2% in 2003 compared to about 1% in 1998.

Figure 1.4 shows a similar graph for IDUs during the same twelve-year period. Rates were generally highest in the Ottawa region (from 1.1% to 2.8%) but showed no increasing or decreasing trend. In the Toronto region, the rates were intermediate and appeared to be decreasing. In 1996, a markedly increased rate was observed in the Northern region. Rates generally appeared to have increased in that region from 1992 to 1999, decreased in 2000 and 2001and have gone up in the most recent years to reach the same rate as Ottawa at 1.8% in 2003. A similar isolated peak was observed in the Eastern Other region in 1994 but rates were maintained generally intermediate low throughout the rest of the years. In the three other regions, the rates were lower and no obvious increasing or decreasing trend was observed over the twelve-year period.

Table 1.23 presents similar data to Table 1.22 stratified by sex. HIV positivity rates among females were higher than among males for the HIV-endemic and high-risk heterosexual categories and lower for low risk heterosexuals. The rate among male and female IDUs was similar with 0.67% 0.65% respectively. For the HIV-endemic category, the positivity rate was 2.0% in males compared to 2.4% in females and 0.17% for high-risk heterosexually acquired HIV among males compared to 0.31% among females. These results must be interpreted with caution due to incomplete data for persons born in HIV-endemic countries testing for HIV.

Table 1.24 shows the unadjusted HIV positivity rates by exposure category and health region for 2003. Since adjusted data is of greater interest, the discussion of HIV positivity in 2003 will be limited to the adjusted data (please see next table).

Table 1.25 shows the results of the adjusted analysis for 2003. The Ontario rate was highest among MSM-IDU with 5.4% with Ottawa highest at 10.0% followed by Central East Other and Toronto at 8.1% and 8.0% respectively. The rate was second highest among persons from HIV-endemic countries at 2.5%, highest in Ottawa at 11.8% and lowest in the Northern region with no positive HIV tests. The rate of 2.2% was for MSM, highest in Toronto at 3.5% and lowest in Central East Other at 0.35%. The rate was 0.37% for IDUs in Ontario, highest in Ottawa and Northern regions at 1.4% and lowest in Central East Other at 0.05%. The overall positivity rate for the high-risk heterosexual category was 0.20% and was highest in Toronto at 0.50% and lowest in the Northern region at 0.0%.

Table 1.26 displays similar data to Table 1.25 stratified by sex. Rates among MSM decreased for males in 2003 compared to previously but has increased among MSM-IDUs (3.7% cumulative from 1992 to 2003 and 5.4% in 2003). Rates among IDUs in 2003 also decreased compared to the cumulative rate from 1992 to 2003 for both males and females. HIV positivity rates for high-risk and low-risk heterosexual categories slightly increased for both males and females compared to the cumulative rates from 1992 to 2003. However, rates among persons from HIV-endemic countries decreased slightly for males but increased for females. The male:female rate ratio was 5.3 during the twelve-year period overall but 3.2 in 2003 alone.

3.1.3 HIV tests

Table 1.27 presents the number of HIV tests by year of test and sex from 1992 to 2003. The total number of tests in Ontario increased from 218,000 in 1992 to 250,000 to 262,000 in 1993 to 1995 and then again to 262,000 to 287,000 in 1996 to 2001. There was a substantial increase (28%) in the number of tests carried out in 2002 compared to the previous six years (336,753 in 2002), likely related, at least in part, to the prenatal HIV screening programs and the HIV testing of immigration applicants beginning in January 2002. The increase in the number of tests was moderate from 2002 to 2003 with an increase of only 3%.

Sex was not indicated in 3.9% of the tests. The number of HIV tests carried out among females increased by 8% and by 48% among males. This was likely due to increased testing through the prenatal HIV screening program.

Table 1.28 shows data similar to Table 1.27 with the number of tests adjusted for unknown sex and also presents rates. Among males, there was little change from 1992 to 2001 with testing rates of 20-23 per 1,000; however, the rate increased to 24.9 in 2002 and 25.2 in 2003. Higher testing rates were generally observed for women and similarly to rates among males, the highest testing rates were observed in 2002 and 2003, with 30.8 and 31.3 per 1,000, respectively.

Table 1.29 shows the unadjusted number and proportion of HIV tests by exposure category by year from 1992 to 2003**.**

Table 1.30 displays the same data as Table 1.29 adjusted for unknown exposure category. The majority (60.6%) of HIV tests during this period were among low-risk heterosexuals. They accounted for about 49% of tests in 1992 through 1994 and gradually increased to 68% in 2002 and 2003. The next highest number of HIV tests overall were among high-risk heterosexuals (7.9%) followed closely by MSM (7.5%) and IDUs (7.0%).

Table 1.31 shows the unadjusted number and proportion of HIV tests by age group and exposure category. The age distribution of tests overall somewhat mirrors the proportions of HIV-positive tests: the majority (62%) were carried out among persons aged 20 to 39 years. Interestingly, the proportion of those in the high risk and low risk heterosexual categories 15-19 years old was 14.5% and 11.9%, respectively, substantially larger than the proportion in this age group being tested in any of the other exposure categories (4-6%). 7.4% of the cases had unknown age group of HIV testing.

Table 1.32 shows the number of HIV tests by year and health region from 1992 to 2003. Toronto accounted for the largest number of HIV tests, representing 36 to 43% of tests in Ontario over the twelve-year period. The second largest group was Central East Other, with overall 16.0% of tests and an increasing trend, from 14% in 1992 to 18% in 2003. The lowest number of HIV tests was in the Northern region (5.4% overall) followed by Eastern Other (6.6% overall).

Table 1.33 shows HIV testing rates among the population. Rates were highest in Toronto and Ottawa at, respectively, 39.8 and 37.9 per 1,000 and substantially lower in the five other regions, varying from about 14 to 21 per 1,000. All regions showed a general increasing trend in testing rates from 1992 to a peak in 1998 or 1999, followed by a plateau until 2001 and then an increase in 2002 and 2003.

Table 1.34 shows the number and proportion of HIV tests from 1992 to 2003 by type of identifier indicated on the test requisition i.e. nominal, coded or anonymous. The proportion tested nominally increased substantially, from 70.7% in 1992 to 88.8% in 2003. Conversely, the proportion testing coded decreased, from 19.6% in 1992 to 8.4% in 2003. The proportion undergoing anonymous HIV testing represented approximately 4% of tests overall but gradually decreased, from 4.4% in 1992 to 2.8% in 2003.

Table 1.35 displays a similar analysis to Table 1.34 by sex. The proportion of nominal tests was slightly lower for males than females (79.3% and 83.5%, respectively) whereas the proportion of coded tests was higher in males compared to females (15.4% versus 13.4%). The proportion accounted for by anonymous testing was 5.0% among males and 2.9% among females; the proportion undergoing anonymous testing decreased over time for both males and females.

3.2 Reported AIDS cases

Table 2.1 presents the reported AIDS cases by year of diagnosis from 1981 to 2003. Overall, 7,514 cases diagnosed to end-2003 have been reported in Ontario to April 2004. The annual number of cases increased gradually over the mid-to late 1980s and early 1990s to a maximum of 724 in 1993. Since then, the annual number of AIDS cases diagnosed decreased, especially markedly since1995, representing a decrease of 84%.

The far column on the right shows the annual number of AIDS cases adjusted for reporting delay as indicated in Methods Section 2.2.4. Taking into account reporting delay, AIDS incidence appeared to reach its lowest level in 2000, increased in 2001 and the decreased slightly in 2002. In 2003, the most recent year, AIDS incidence appeared to increase 70% over the previous year with 294 cases reported compared to 173 in 2002.

The proportion of AIDS cases among females has gradually increased, from 1.8% in 1985 to 23.5% in 2003. The decrease in AIDS incidence since the mid-1990s likely reflects the impact of highly active antiretroviral therapies, including protease inhibitors, introduced in 1996.

Table 2.2 shows the distribution of reported AIDS cases by exposure category and sex. The majority of cases were among MSM, representing 70.0% of cases overall and 75.5% of cases among men. Those infected through heterosexual contact accounted for 8.2% overall but 37.0% of AIDS cases among women. Similarly, cases among persons from HIV-endemic countries accounted for 5.5% overall but 28.3% of AIDS cases among women.

Table 2.3 displays AIDS cases by exposure category and year of AIDS diagnosis from 1981 to 2003. MSM constituted 80-85% of AIDS cases diagnosed to 1988, when the proportion decreased in almost every year, to 37% in the two most recent years.

IDUs constituted only a small proportion (less than 4%) of AIDS cases until 1991, gradually increasing to a first-time high of 12.1% of cases in 2000 and then decreasing slightly since. The proportion of cases in the HIV-endemic category increased gradually, from less than 3% until 1990 to more than 10% beginning in 1996 to a high of 26.1% in 2003. The heterosexual category also increased gradually, from less than 10% until 1994 to 21.8% in 2003. Cases related to clotting factors increased to a peak of 2.4% in 1991 and have decreased both proportionately and

in absolute numbers. From 1998 to 2003, clotting factor related cases constituted less than 1% of AIDS cases.

Table 2.3a shows the distribution of AIDS cases among males by exposure category from 1981 to 2003. The proportion constituted by MSM was greater than 80% until 1991, 72-78% from 1992 to 1995 and decreased gradually to a low of 45.9% in 2002. In 2003, the proportion slightly increased to 48.4%. Increases in the proportion of AIDS cases among men from HIV-endemic countries and men infected through heterosexual transmission mirrored somewhat the pattern observed for all cases as noted above. Substantial increases in the proportion of AIDS cases of these two categories were observed in the past few years; men from HIV-endemic countries constituted almost 20% of cases in 2002 and 2003 compared to less than 2% for all years until 1994. Slightly less dramatically, heterosexually infected men represented 16 to 18% of cases in 2001 through 2003 compared to less than 5% until 1989.

The situation among women, shown in **Table 2.3b**, is noteworthy. 37.0% of female AIDS cases were related to heterosexual transmission; the proportion was somewhat unstable, varying from 20 to 50% since 1985 when AIDS began to appear in women. However, the proportion was higher (39.4%) in 1981 to 1998 compared to 28.8% from 1999 to 2003; this increase was statistically significant ($p=0.04$). Cases among women from HIV-endemic countries represented 28.3% of cases overall and varied in the range of 20% to 40% from 1992 to 1998. From 1999 to 2003, 47.2% cases in women were from HIV-endemic countries compared to 22.8% in 1981 to 1998; this increase was statistically significant (10^{-6}). IDU accounted for 14.1% of cases among females compared to 3.7% for males. However, the proportion varied markedly from year to year without any increasing or decreasing trend.

Figure 2.1 presents the number of AIDS cases for both sexes adjusted for reporting delay by year of diagnosis and exposure category from 1981 to 2003. Interestingly, AIDS incidence appears to have increased since 2001 and especially in 2003 for the first time in many years for three exposure categories: MSM, heterosexual and HIV-endemic (but not for IDU).

Table 2.4 shows the number and cumulative rate per 100,000 of reported AIDS cases by age group and sex from 1981 to 2003. The overall rate was 13.0 times greater for males than for females. Rates were highest among males in the 30 to 44 year age categories and for females in the 25 to 34 age categories.

Table 2.5 shows similar data to Table 2.4 for 2003 alone. Though the numbers reported were small, a similar age distribution and rate of AIDS cases was observed.

Table 2.6 presents the number and proportion of AIDS cases by exposure category and age group. Age differed by exposure category. For those infected through clotting factors, cases were younger at AIDS diagnosis (39.1% younger than 30 years of age compared to 17.3% for all other exposure categories; $p<10^{-6}$). Those infected through blood transfusion were, on the other hand, somewhat older (45.5% were 50 years of age or older compared to 11.6% of cases in other exposure categories; $p<10^{-6}$). For most of the other exposure categories, AIDS was diagnosed mostly among persons aged 30 to 44 years.

Table 2.7 shows the mean age at AIDS diagnosis by year of diagnosis and exposure category among males from 1981 to 2003. For MSM, the age at AIDS diagnosis increased moderately over the last 20 years, from about 37 years in the first few years to about 43 years in the last four years.

For MSM-IDU, the overall mean age at AIDS diagnosis was 35 years and remained stable over the years; the older age of cases diagnosed from 1999 to 2001 were probably due to the smaller number of cases (three to four in each year). The mean overall age for IDUs was 36 years; the age at AIDS diagnosis gradually increased since the mid-1980s when cases were in the range of 30 years to the early 40s for the most recent four years.

Table 2.8, similarly to Table 2.7, presents the age at AIDS diagnosis among women. Female IDUs were three years younger than male IDUs (33 versus 36 years of age). Similarly, women from HIV-endemic countries were 36 years of age at time of AIDS diagnosis compared to 38 years among males. Female heterosexual AIDS cases were also younger than males; 37 compared to 42 years. Age generally increased for the IDU, HIV-endemic and heterosexual categories.

Table 2.9 shows AIDS cases by exposure category and health region from 1981 to 2003. In Toronto, MSM constituted 77.8% of cases and, in the Southwest region, 64.5% of cases; in the Northern, Central East Other and Eastern Other regions, MSM comprised less than 55% of cases. Overall, Toronto AIDS cases accounted for 60.7% of cases in Ontario, Central East Other 9.0%, Central West 8.7% and Ottawa 8.3%. In Central East Other, Central West and Southwest, the heterosexual category constituted 11-19% of cases and represented the second highest proportion after MSM. IDU was the second highest exposure category in proportion in the Eastern Other (16.5%) and Northern regions (12.9%). In Ottawa, HIV-endemic cases represented the second highest category with 11.9% of AIDS cases.

Table 2.10 shows a similar analysis to Table 2.9 for 2003. Of the 119 diagnosed in 2003, 37.0% were among MSM, 26.1% among persons from HIV-endemic regions and 21.8% in the heterosexual category. The interpretation of this analysis is limited by the small numbers of AIDS cases diagnosed in this year and reported to date.

Table 2.11 shows the single and multiple exposures among Ontario AIDS cases since the beginning of the epidemic. Interestingly, 968 (17.3%) of the 5,586 AIDS cases among MSM also reported sex with women (bisexual exposure). Also of note is that, of the 76 MSM who were also from HIV-endemic countries, 30 (39.5%) were also bisexual. MSM from HIV-endemic countries were at 2.3-fold more likely to be bisexual compared to other MSM (39.5% versus 15.1%, $p<10^{-6}$).

MSM-IDU also reported higher rates of sex with women than MSM alone; 93 (29.8%) of 312 MSM-IDU versus 864 (16.4%) of 5,274 MSM reported sex with women ($p<10^{-6}$).

Table 2.12 presents reported AIDS cases by health region and year of diagnosis. Overall, most (60.7%) cases were from Toronto, with about 8-9% of cases each from Central East Other, Central West, Ottawa, and Southwest regions. However, the proportion of Ontario cases reported from Toronto decreased slightly since 1997, from an average of 62.1% of cases diagnosed until 1996 to 55.2% from 1997 to 2003. The proportion of Ontario cases increased correspondingly in three health regions, namely Central East Other, Ottawa and Northern. Number and proportion of AIDS cases have significantly increased in the 2003 for the Central West region (2.5 fold

increase) and conversely decreased in the Ottawa region (from 14.6% in 2002 to 2.5% in 2003) to reach a low in Ottawa since 1984.

Table 2.13 shows the number of AIDS cases and cumulative incidence rates per 100,000 population by heath region and sex from 1981 to 2003. Not surprisingly, the rates were highest in Toronto at 185.1 per 100,000, intermediate in Ottawa with a rate of 83.4 and lowest in the other five regions, from 22 to 40. Rates among males were markedly higher than among females, with overall rates 13-fold higher. Cases among females represented 7.3% of reported AIDS cases to date; however, female AIDS cases represented 13.5% of cases in Central East Other and 11.7% of cases in Eastern Other region.

Table 2.14 presents AIDS cases and rates by public health unit and sex. A marked variation in AIDS incidence rates was observed between public health units, varying from 9.1 per 100,000 in Algoma and 10.6 in Haliburton unit to 185.1 per 100,000 in Toronto. Between these two extremes were several public health units with intermediate rates including Ottawa (83.4 per 100,000), Middlesex-London (58.7) and Windsor-Essex (55.9).

3.3 Mother-infant HIV transmission

Table 3.1a presents the number of HIV-infected mothers identified through the Canadian Pediatric AIDS Research Group (CPARG) by the infant's HIV infection status and year of birth from 1984 to 2003. In all, 545 HIV-infected women were identified; 157 infants born to these women were confirmed to be HIV-infected, 348 were not infected and, for 40 infants, the infection status was pending or unknown. The annual number of HIV-infected women generally increased from 1984 to 1994, was relatively stables from 1995 to 2000 (except for an anomalously low number in 1997) and increased again in the most recent three years (2001-2003), with annual numbers varying from 49 to 62. This is despite likely delays in reporting of cases in recent years, especially for mothers with an HIV-infected infant.

The reported number of HIV-infected children increased from 5 in 1984 to 18 in 1992 and after 1994 gradually decreased to 3 in 2002 and 2 in 2003. Reporting delays are likely to be especially important in this group in the most recent years.

Table 3.1b shows data similar to Table 3.1a for cases in which the infant was born in Canada (we assumed for this analysis that, in addition to the 476 infants reported to have been born in Canada, the 20 infants for whom the country of birth was missing were also born in Canada). 496 such children were identified, of whom 118 were confirmed to be infected with HIV. A similar pattern to the previous table was observed, with an increase in the number of mothers and a trend to decreasing HIV-infected infants.

Table 3.2a shows the distribution of cases for all HIV-infected mothers by geographic region of the treating institution and the mother's exposure category for 1984 to 2003. Overall, 53.5% of HIV-infected women were from HIV-endemic countries, 29.8% others were infected by heterosexual transmission and 15.5% were IDUs. 60.2% of cases were reported from the Hospital for Sick Children in Toronto and 27.2% from the Children's Hospital of Eastern Ontario in Ottawa, accounting for 87.3% of Ontario cases. Compared to Toronto and Ottawa, the proportion of mothers born in HIV-endemic countries and IDUs was lower and the proportion of other women infected heterosexually higher in the other geographic regions. This difference was statistically

significant ($p<0.01$) for mothers born in HIV-endemic countries and those infected heterosexually but not for those having injected drugs ($p=0.24$, NS).

Table 3.2b shows the distribution of the 496 cases as in Table 3.2a but limited to cases in which the infant was born in Canada. Similar distributions of geographic region and mother's exposure category as for all cases was observed.

Table 3.3a shows all 157 infants who were confirmed to be HIV-infected by geographic region of the treating institution and the mother's exposure category for 1984 to 2003. 65.1% were born to mothers from HIV-endemic countries and 26.2% to other mothers infected heterosexually. These two exposure categories accounted for 91.3% of HIV-infected infants. The distribution by geographic region of the treating institution was approximately the same as that for the mothers, with 63.7% of cases reported from Toronto.

Table 3.3b shows a similar analysis as Table 3.3a for the 118 infants born in Canada confirmed to be HIV-infected. 55.4% were born to mothers from HIV-endemic countries and 33.9% to other mothers infected by heterosexual transmission. These two exposure categories accounted for 89.3% of HIV-infected infants. The distribution by geographic region of treating institution was approximately the same as that for all HIV-infected infants, with 65.3% of cases reported from Toronto.

Table 3.4a presents the trend in the distribution of exposure category over the 20-year study period for all HIV-infected infants. The proportion of infants infected by mothers who were IDUs was generally low over this period, representing 6.6% of cases overall. The proportion of women from HIV-endemic countries was higher in the period 1984-87, decreased in 1988-89 and then gradually increased from 56.3% in 1990-91 to 81.8% in 1996-97; the proportion decreased thereafter but reached a all-time high of 100% in 2002-03. The proportion of HIV-positive infants of other women infected through heterosexual transmission varied considerably from period to period varying from 20 to 40%, with no apparent time trend.

Table 3.4b presents the trends in exposure categories by period over the 20-year study period for children born in Canada. The number of children infected by mothers who were IDUs was generally low over this period and represented 8.0% of the cases. The trend in the proportion of women from HIV-endemic countries was similar to the trend observed for all cases. Of note, all cases in 2002-03 were born in Canada and all from mothers from HIV-endemic countries. The proportion of HIV-positive infants of other women infected heterosexually varied considerably from period to period, with no apparent trend over time.

Table 3.5 shows an analysis of mother-infant pairs for infants born in Canada from July 1994 to December 2003 by exposure category of the mother (this period was selected to examine the impact of the results of the ACTG 076 trial).

Overall, mothers from HIV-endemic countries constituted nearly half (52.9%) of the cases born in Canada. During this period, 27.0% were other women infected heterosexually and 15.3% were IDUs. HIV-infected infants born to women from HIV-endemic countries constituted a high proportion (65.4% [34/52]) of infants with known infection status compared to 26.9% (14/52) for women infected through heterosexual contact and 5.8% (3/52) for IDUs.

The proportion of women who received therapy did not vary significantly by exposure category

(analysis not shown) and constituted 77.9% of cases for whom therapy status was known.

Four of the 286 (1.4%) who received therapy during this period became infected compared to 36 of the 61 (59.0%) who did not receive treatment ($p<10^{-6}$). Not all of the four women who gave birth to an HIV-infected infant despite therapy received the full regimen of therapy which likely explains, at least in part, these transmissions.

Table 3.6 shows the data for the same 9.5-year period after the release of the ACTG 076 trial results by the HIV infection status of the infant, whether or not therapy was received and by year of the infant's birth. Women for whom therapy status was unknown were excluded from this analysis. Overall, 82.4% of women received therapy. The proportion of women who received therapy increased over time. From July 1994 to 1995, about 50% of cases received therapy. From 1996 to 1999, the proportion receiving therapy increased to about 80%. In 2002 and 2003, 98% of women received therapy. Delays in reporting cases not diagnosed during pregnancy might explain, in part, the increase in recent years.

3.4 HIV-related mortality

Table 4.1 presents the number and rate of HIV-related deaths by year of death and sex from 1987 to 2000. Overall, HIV-related deaths and mortality rate (per 100,000) increased from 1987 to 1995 and declined dramatically from the peak of 6.3 per 100,000 in 1995 to 1.5 in 2000. A continued decreasing trend was observed among females but, among males, the number and rate of HIV-related deaths increased by 42% in 2000. Overall, mortality decreased 76% from 1995 to 2000; the decrease was 78% in males and 49% in females. The ratio of mortality rate among males compared to females decreased markedly over the period examined, from 20-30 fold in 1987 to 1995 to 5-10 fold in 1997 through 2000.

Table 4.2 shows the number and proportion of HIV-related deaths by age group at the time of death and sex for the years from 1997 to 1999. Approximately 70% of HIV-deaths were among persons aged 31 to 50 years for both males and females and overall**.**

Table 4.3 shows the number and proportion of HIV-related deaths by age group at death and sex in 2000. 73% of the deaths among males and 65% of deaths among females occurred among persons aged 30 to 49 years. This is similar to the pattern observed in previous years

Table 4.4 presents the number and proportion of HIV-related deaths by health region and sex for the years 1997 to 1999. Note that the division of the geographic regions is different from that used elsewhere in this report. The Toronto region, however, is the same as for the other analyses.

Of deaths in the past three years, 45% occurred among residents of Toronto in comparison to 64% for HIV diagnoses and 61% for AIDS cases. This could be due to at least two reasons: 1) persons in the terminal stage of HIV infection born in rural Ontario and had moved to Toronto may return to the region of their birth at the later stage of their disease or 2) the lower proportion of deaths observed in Toronto compared to AIDS cases and HIV diagnoses than AIDS cases may be due to the fact that by persons living in the region surrounding Toronto seek HIV testing and medical care in Toronto. In contrast to deaths, HIV diagnoses and AIDS cases are classified by

the location of the physician not the patient's residence.

Table 4.5 shows HIV-related deaths by year of death, sex and region of birth (HIV-endemic versus non HIV-endemic). In all, 350 persons from HIV-endemic countries died from 1987 to 1999, representing 6.8% of HIV-related deaths. 24.1% of deaths among females were among persons from HIV-endemic countries compared to 5.8% of deaths among males. Overall, though the number of deaths among persons from HIV-endemic countries appears to have decreased in recent years, the proportion of total deaths increased steadily since 1991.

Table 4.6 presents the number and proportion of HIV-related deaths by year of death among persons from HIV-endemic region (Caribbean versus sub-Saharan Africa) and from non HIV-endemic regions. 71% of deaths due to HIV in persons from HIV-endemic countries were among persons from the Caribbean; there is no clear increasing or decreasing trend in the proportion of deaths among persons from the Caribbean.

3.5 HIV statistical model

As in previous years, we updated our estimates of HIV incidence, prevalence, HIV diagnoses, AIDS incidence and prevalence as well as HIV-related mortality for each year from 1977 to 2003 for each exposure category (i.e. MSM, MSM-IDU, IDUs, HIV-endemic, heterosexual, clotting factor and blood transfusion recipients). As for last year, we produced sex-specific estimates for each exposure category. Model outputs for Ontario as a whole as well as for the major exposure categories (MSM, MSM-IDU, IDU, HIV-endemic and heterosexual) are included in the present report. Sex-specific incidence and prevalence data for each of the five exposure categories mentioned above are presented as figures. More detailed outputs are available from the authors on request.

Table 5.1 shows the summary results of the HIV model including all exposure categories. We estimated that 31,197 persons in Ontario have been infected since the HIV epidemic began in the late 1970s. As of December 2003, 8,102 persons have died (including 7,087 from HIV-related causes [shown in table] and 1,015 from other causes), leaving 23,563 persons living with HIV infection. An estimated 14,916 or 63% of those living with HIV have been diagnosed. Due to the sustained and, in some groups, increasing rate of HIV infection and the decreased mortality related to HAART, HIV prevalence in Ontario began to increase sharply in 1997. In the five-year period from 1998 to 2003, HIV prevalence increased 36% for an average annual increase of 6.3%.

Table 5.1a displays the results of the model for MSM. As of December 2003, 14,370 persons were living with HIV infection (5,738 persons died, 5,350 from HIV-related causes), representing 61% of the persons living with HIV infection in Ontario. Of those, 9,887 (69%) have been diagnosed. According to our model, HIV incidence in 2003 was 686 compared to 927 in 2002, a decrease of 35%. In the last five years, HIV prevalence increased 29%, for an average annual increase of 5.3%.

Table 5.1b presents the model results for the MSM-IDU exposure category. In all, 1,203 MSM-IDU have been infected with HIV. As of December 2003, 703 persons were thought to be alive, representing 3.0% of the total in Ontario. HIV incidence increased in 2003 from 34 in 2002 to 53

in 2003 (56% increase) whereas mortality appear to have decreased since 1999, explaining the increase in HIV prevalence during the last five years but more so in the most recent year. In the past five years, prevalence increased 23%, with an average annual increase of 4.2%. The proportion diagnosed was stable at around 60%.

Table 5.1c displays the modeled results for IDU. We estimate that 2,597 IDUs have ever been infected with HIV. As of December 2003, 638 persons died, 326 from HIV-related causes, leaving 1,959 living with HIV infection. HIV-infected IDU represented 8.3% of persons with HIV infection living in Ontario. HIV prevalence increased 8% over the past five years, for an average annual increase of 1.5%. The proportions of persons living with HIV infection diagnosed appeared to increase gradually over the years, from 53% in 1995 to 67% in 2003.

Table 5.1d displays the model results for persons from HIV-endemic countries. We estimated 3,385 persons from HIV-endemic countries were ever infected with HIV. Of these, 3,011 were thought to be alive as of December 2003, representing 12.8% of those in Ontario; only 48% have been diagnosed. HIV incidence as well as prevalence has steadily increased in this population: an estimated 208 new HIV infections occurred in 1996 increasing to 331 new infections annually in 2003. Please note some of these infections were among people arriving in Canada and some to HIV infections acquired following their arrival in Canada. HIV prevalence increased an average of 13.2% annually for an increase of 86% over the last five years. The HIV-endemic group had the highest increase in HIV prevalence of any exposure category.

Table 5.1e presents the results for the heterosexual exposure category. The model estimated that 3,737 persons were ever infected heterosexually (other than those from HIV-endemic countries), of whom 3,311 were living with HIV as of December 2003; this represented 14.1% of persons living with HIV in Ontario. HIV incidence continued to increase in this group, from 242 in 1998 to 316 in 2003 (an increase of 31%). Similar to the HIV-endemic category, the proportion of persons living with HIV diagnosed was 51% in 2003. HIV prevalence also increased dramatically in this category in the past five years, with an average annual increase of 10.4% and a cumulative increase of 64%. This increase was the second highest after persons from HIV-endemic countries.

Figure 5.1 shows the modeled trends in HIV prevalence and incidence in MSM in Ontario from 1977 to 2003. HIV prevalence followed three phases, a sharp increase from 1977 to 1987, a lower rate of increase from 1988 to 1996 and a relatively steep increase during the last seven years. HIV incidence increased dramatically from 1977 reaching a peak in 1984 and then decreased to about 750 infections per year from 1988 to 1993. After a decrease in 1994 to 1996, it has gradually increased from 1997 to 2003 with considerable year-to-year variation.

Figure 5.2 shows similar trends in HIV prevalence and incidence for the MSM-IDU category as for MSM.

Figure 5.3 shows sex-specific HIV incidence trends among IDUs from 1977 to 2003. Incidence trends were similar in both sexes with a steep increase from 1991 through 1994 then a relative decrease since. Nevertheless, incidence appeared to increase in 1998 and, to a lesser extent, again in 2003.

Figure 5.4 shows sex-specific HIV prevalence trends among IDUs from 1977 to 2003. The number of prevalent infections showed a regular increase for both sexes since 1991 though the slope was steeper for men.

Figure 5.5 displays sex-specific trends for HIV incidence of cases from HIV-endemic countries. This figure shows steep increases that are similar in the two sexes. Incidence numbers showed a steep increase in the years 1988 through1993 and then 1998 through 2001.

Figure 5.6 displays sex-specific trends for HIV prevalence of cases from HIV-endemic countries. This figure shows steep increases that are similar in the two sexes.

Figure 5.7 shows sex-specific incidence trends among cases infected through heterosexual contact. Incidence increased more steeply from 1984 through 1994 and after a decrease in 1996 has steadily increased though with a more gentle slope.

Figure 5.8 shows sex-specific prevalence trends among cases infected through heterosexual contact. HIV prevalence showed a regular increasing trend over the years.

Table 5.2 shows the distribution of HIV diagnoses as a proportion of HIV-infected persons living as of December 2003 by sex and exposure category. The vast majority of persons infected through clotting factors and blood transfusion have been diagnosed. As noted above, 58-69% of HIV-infected MSM, MSM-IDU and IDU have been diagnosed. In contrast, only 48% and 51% of persons from HIV-infected countries and other persons infected heterosexually, respectively, have been diagnosed. The proportion diagnosed is lower (33% and 44%) among males in these two categories.

According to our analyses, MSM and persons infected heterosexually comprised 71% of those still undiagnosed, 52% and 19%, respectively. Persons from HIV-endemic countries represented 18% of cases undiagnosed overall. Among females, persons infected through heterosexual contact represented 63% of cases undiagnosed.

Table 5.3a indicates the modeled prevalence of HIV infection in Ontario by health region and exposure category as of December 2003. Overall, 14,550 or 62% of infections were among residents of Toronto, 14% in Ottawa, 7% each in Central East Other and Central West regions, 5% for the Southwest, 3% in the Eastern Other and 2% in Northern regions. MSM accounted for 61% of HIV-infected persons in Ontario, followed by 14% for persons infected through heterosexual contact, 13% for persons from HIV-endemic countries and 8% for injection drug users.

Table 5.3b shows the geographic distribution of modeled HIV prevalence by sex, health region and exposure category. 85% of HIV-infected persons were male and 15% female. The distribution among women was somewhat different than that of men, with a higher proportion of infections among women being outside of Toronto; 51% of infected women versus 36% of infected men lived outside Toronto ($p<10^{-6}$). Central East Other, Southwest and Central West each constituted about 7-8% of HIV infections among females, followed by 5% in each of the Eastern Other and Northern regions.

Table 5.4 shows the modeled estimates of HIV incidence in absolute numbers by sex, region and exposure category.

Overall, we estimate that 1,470 new HIV infections occurred in Ontario in 2003, 1,165 (79%) of them among men and 305 (21%) among women. By exposure category, about 47% of new HIV infections were among MSM, 22% among those from HIV-endemic countries, 21% in others

infected heterosexually and 5% injection drug users. We believe essentially no HIV infections were transmitted by clotting factors or through blood transfusions. 62% of new HIV infections occurred in Toronto (65% in males and 52% in females).

Given the limited observational data on incidence in Ontario, these estimates must be considered as hypotheses only.

4. DISCUSSION

This report presents an overview of the situation with respect to the HIV epidemic in Ontario using data from multiple sources. Overall, 31,197 persons in Ontario are estimated to have ever been infected with HIV as of December 2003 and, of those, 23,563 are living with the HIV infection; approximately 63% were diagnosed. Based on our model, HIV prevalence appears to continue to increase, with an overall increase of 36% in the five years since 1998 for an average annual increase of 6.3%. As of December 2003, 24,734 HIV infections were diagnosed and 7,514 AIDS cases reported. The number of HIV diagnoses increased 21% in 2002 from the previous year and this increase was sustained in 2003; since 2000, annual HIV diagnoses have increased 30%. The proportion of diagnoses made among females continues to increase and constituted 29% of diagnoses made in 2003. Persons from HIV-endemic countries and others infected by heterosexual transmission constituted a large and growing proportion of the HIV epidemic in Ontario. Though these two groups constituted each about 14% of persons currently living in Ontario (compared to 61% for MSM), the overall increase in HIV prevalence in the five years since 1998 was highest among persons from HIV-endemic countries (86%) and second highest among persons infected heterosexually (64%). Toronto remains the region most affected by the epidemic, followed with Ottawa where the trends in incidence in MSM are of concern.

Several factors must be taken into consideration in interpreting the results of this report. Imprecision may be introduced using the results of the Laboratory Enhancement Study (LES) to assign and reassign exposure categories to HIV-positive and HIV-negative diagnoses for which the risk factors were initially unknown or which were initially misclassified. Weights were aggregated across health regions and over the duration of the LES study when patterns were homogenous; however, when proportions varied by region or time, this was taken into account. We are confident of the methodology used (please see Appendix A), the small number of respondents in the LES for some exposure categories could result in a certain degree of imprecision. As well, we used data from 1995 <3> and since 1999 and applied over the previous years; this involved several assumptions which may not have always held.

Reported AIDS cases are subject to reporting delays and under-reporting; this was probably more frequent in the most recent years. As in previous years, we corrected for reported delays using weighting factors provided to us by Health Canada. Figure 2.1 presents the results of this adjustment by exposure category, which indicates an increase in AIDS incidence among MSM, IDU and HIV-endemic exposure categories.

The results from the HIV model are also subject to several methodologic limitations due to the sources that were used that are subject to imprecision**.** Missing data on patient identifiers in the HIV diagnostic database could result in duplicate reports and inflate the number of HIV diagnoses. Data on HIV testing history collected through the LES study were extremely useful to estimate the extent of duplicate reporting and correct for it. Estimates of HIV incidence relied heavily on the detuned assay as well as on the results the analysis of repeat testers which in turn have their limitations. This year, we adjusted the detuned assay results for testing bias which overestimated the true incidence <11>. Persons who become infected or with high-risk behaviour may present for testing sooner. Also, and this is not taken into account in the adjustments, persons who test may not be representative of the entire population at risk.

Additional data on trends in HIV-related mortality was only available for 2000 by gender and age. Data on region of residence and country of birth were not available for 2000. In 2000, the International Classification of Diseases was revised and, as a result, the new ICD10 coding

system used resulted in an estimated 14% increase in the number of deaths compared to deaths reported under the ICD9 coding <12>. Nevertheless, HIV-related deaths seem to have ceased to diminish and even suggest a slight increase in 2000 after several years of dramatic decrease. Mortality data will be presented in a subsequent surveillance report when they are available.

In 2003, 1,217 HIV infections were newly diagnosed. As noted above, diagnoses increased 30% over the relatively stable number of HIV diagnoses made in the late 1990s, an increase in absolute numbers of 280 cases. The increase in HIV diagnoses was most apparent among the HIV-endemic, heterosexual and MSM exposure categories. The low-risk heterosexual category increased 115 cases or 230%, the HIV-endemic category increased 122 for an increase of 85% and finally MSM increased 76 cases or 16% since 2000.

As indicated above, the proportion of new diagnoses in women increased constantly since testing began, from about 2% in early years of testing and attaining close to 30% in the most recent year. Most of the increase could have been accounted for by women in the HIV-endemic and heterosexual categories. The heterosexual category as a group as noted above has also increased for both men and women and is a subject of growing concern. Although homosexual men still account for the majority of infected persons in Ontario, persons infected heterosexually accounted for the second fastest growing group (please see below).

During this period of time, several factors, artefactual in nature, may account for some of the increase in number of positive specimens observed. First, in January 2002, Citizenship and Immigration Canada began requiring that immigrants be screened for HIV including those who already arrived in Canada. An analysis of the data for reason of testing revealed that from 1998 to 2001, from three to eight HIV positive persons were identified for visa purposes. This increased to 120 in 2002 and 136 in 2003. Thus, testing of visa applicants could have accounted for 40% of the increase in HIV-positive specimens observed. During this period of time, the uptake of HIV testing during pregnancy also increased. An analysis of data from the Prenatal Testing Program, in fact, revealed a modest increase in the number of HIV-infected women identified from 2000 to 2003, accounting for an excess of approximately 20-30 new HIV positive women identified through the program. This could account for a further 10% of the increase in HIV diagnoses observed over the four-year period.

In examining the increase in HIV diagnoses from 2000 through 2003, the following health regions experienced significant increases though not necessarily with the same pattern as overall diagnoses: Ottawa, Toronto and Central West. Not surprisingly, increases in Toronto accounted for an excess of almost 200 cases thus accounting for about two thirds of the overall excess observed.

We will now review the epidemiologic situation with regard to each of the major exposure categories.

Men who have sex with men comprise 61% of persons living with HIV in Ontario as of December 2003, 14,370 MSM were infected with HIV of whom 69% were diagnosed. There were 16% more HIV diagnoses in 2003 compared to 2000. This was specially apparent in Toronto and Central West regions. Overall, according to our model, we estimate that HIV prevalence among MSM is 15%; however, this varies by region: Toronto 19%, Ottawa 18% and Ontario Other 8%. The prevalence of HIV infection increased 29% over the five year period from 1998 to 2003 representing an annual increase of 5%. In 2003, we estimate that there were 690 new infections. HIV incidence was overall 0.9% but somewhat higher in Toronto and Ottawa compared to other

regions in Ontario. The situation in Ottawa was particularly concerning since in this region, according to the data from the detuned assay, incidence appeared to be increasing fairly sharply since 1999. Some of the increase in HIV positive diagnoses among MSM could be accounted for by increased testing. Increased testing did increase during this period of time and especially among high risk men who may also have been at high risk for syphilis, which in fact, simulated increased testing in this population. We believe that overall, HIV incidence is relatively stable in Ontario but at an unacceptably high rate. In Ottawa HIV incidence is unstable and increasing.

The situation with regard to IDUs is reassuring. In December 2003, we estimate there were 1,960 IDUs infected with HIV, representing 8% of HIV infections in Ontario overall. 67% of infections are estimated to have been diagnosed. New HIV diagnoses are relatively stable overall though some modest increases have been observed in the Southwest and Northern regions. Overall, we estimate that HIV prevalence is 5% but it is an estimated 15% among IDUs in Ottawa. HIV prevalence increased 8% from 1998 to 2003 with an average annual increase of 1.5%. We estimate that there are 80 new infections in 2003 representing an incidence rate of 0.2%. Injection drug users are probably the only group at high risk for HIV in Ontario that appeared to be relatively stable with regard to HIV transmission. The results are reassuring for IDU though it is critical that prevention programs continue in this group.

The situation with regard to persons from HIV-endemic countries is not as reassuring. Overall, we estimate that 3,011 persons from endemic regions were infected with HIV as of December 2003, constituting 13% of Ontario infections. Only 48% of HIV-infected persons in this category were diagnosed. The overall HIV prevalence was estimated to be 0.8% but this varied markedly by country of origin. Most of the infected persons in this category resided in Toronto, representing 75% of cases in Ottawa which represented 15% of cases. HIV prevalence in this category increased the most rapidly of all these imported categories with prevalence increasing 86% from 1998 to 2003 with an average annual increase of 13%. New HIV infections increased from 160 in 1999 to 280 in 2002. Some of this increase may be accounted for by increased testing related to the new immigration rules, as noted above. We estimate that there were 330 new HIV-infected persons in 2003 representing both imported and locally transmitted infections. We have no direct evidence of HIV incidence in this population because many of these persons are infected with non-B strains for which the detuned assay is not valid.

Other persons infected heterosexually represent a group of particular concern with respect to the epidemiologic situation in Ontario. 3,311 persons infected heterosexually were living in Ontario as of December 2003 representing 14% of infected persons in Ontario of whom 51% were estimated to have been diagnosed. During the five-year period from 1998 to 2003, HIV prevalence in this population increased 64% representing a mean annual increase of 10%. From 2000 to 2004, the number of HIV diagnoses increased by 82% and increases occurred in most regions but were especially in Central West, Southwest and Toronto. We estimated that there were 320 new HIV infections in 2003.

In summary, the HIV epidemic in Ontario is not yet under control. The use of multiple data sources, especially the LES continues to provide critical insights into the evolving HIV epidemic. Continued collection of such data will allow us to obtain better estimates of the extent and trend of HIV infection in Ontario. Studies of the determinants and patterns of HIV infection should be carried to help develop more effective HIV prevention programs. Persons infected through heterosexual contact and persons from an HIV-endemic country are the two most unstable groups in the Ontario HIV epidemic and targeted research to understand the patterns of infection among these groups are critical. We are currently (December 2004) undertaking an enhanced surveillance study in Toronto and Ottawa to further examine the reasons for the apparent increase among persons heterosexually infected. Similarly, a study trying to understand behavioural factors and patterns of HIV testing among persons from selected countries in Africa and the Carribean in Toronto is currently underway and will provide useful insight as to reasons of increasing HIV infection among this group.

REFERENCES

1. Statistics Canada. CANSIM (Canadian Socio-economic Information Management System) database, 1996: http://www.datacentre.cahss.utoronto.ca:5680/cansim.

2. Remis RS, Major C, Swantee C, Palmer R, Fikre M, Whittingham E. Enhancing laboratory-based HIV surveillance in Ontario, 1999 to 2002. Report to Ontario HIV Treatment Network and Centre for Infectious Diseases Prevention and Control, Health Canada, September 2003.

3. Major C, Palmer R, Degazio T, Brown D, Galli R, Calzavara L, Fearon M. The Ontario HIV Laboratory Project: Final Report. Study carried out under contract for Health Canada, February 1997.

4. Health Canada. Revision of the CDC surveillance case definition for Acquired Immunodeficiency Syndrome. *Canada Diseases Weekly Report* 1987; 13: 169-76.

5. CDC. Council of State and Territorial Epidemiologist; AIDS Program, Center for Infectious Diseases. Revision of the CDC surveillance case definition for Acquired Immunodeficiency Syndrome. *Morb Mortal Wkly Rep* 1987; 36(1S): 3-14S.

6. Castro KG, Ward JW, Slutsker L, Buehler JW, Jaffe HW, Berkelman RL. 1993 revised classification system for HIV infection and expanded surveillance case definition for AIDS among adolescents and adults. *Morb Mortal Wkly Rep* 1992; 41(RR-17): 1-17.

7. Health Canada. Revision of the surveillance case definition for AIDS in Canada. *Canada Communicable Disease Report* 1993; 19: 116-17.

8. Remis RS. Guidelines for the surveillance of AIDS in Canada. Division of HIV/AIDS Epidemiology, Bureau of Communicable Disease Epidemiology, Laboratory Centre for Disease Control (LCDC), Health Protection Branch, Health Canada, Ottawa, 1995.

9. Yan P, Schanzer D, Centre for Infectious Disease Prevention and Control, Population and Public Health Branch, Health Canada. Personal communication, June 2002.

10. Remis RS, Major C, Bangura H, Wallace E and Vermeulen M. Report on the HIV/AIDS epidemic in Ontario, 1981-1996. Ontario Ministry of Health, July 1998.

11. Remis RS, Palmer RWH, Raboud JM. Bias in estimates of HIV incidence based on the detuned assay. Presentation of the STARHS Satellite meeting, Bangkok, Thailand, July 11, 2004.

12. Selik RM, Anderson RN, McKenna MT, Rosenberg HM. Increase in deaths caused by HIV infection due to changes in rules for selecting underlying cause of death. *JAIDS* 2003;32:62-69.

PREVIOUS ONTARIO HIV/AIDS SURVEILLANCE REPORTS

Remis RS, Major C, Bangura H, Wallace E and Vermeulen M. Report on the HIV/AIDS epidemic in Ontario, 1981-1996. Ontario Ministry of Health, July 1998.

Remis RS, Major C, Wallace E, Schiedel L and Whittingham EP. Report on HIV/AIDS in Ontario, 1997-1998. Ontario Ministry of Health and Long Term Care, November 1999.

Remis RS, Major C, Wallace E, Schiedel L, Whittingham EP. Report on HIV/AIDS in Ontario, 1999. Ontario Ministry of Health and Long Term Care, November 2000.

Remis RS, Major C, Wallace E, Schiedel L, Whittingham EP. Report on HIV/AIDS in Ontario, 2000. Ontario Ministry of Health and Long Term Care, December 2001.

Remis RS, Swantee C, Major C, Wallace E, Schiedel L, Merid MF. Report on HIV/AIDS in Ontario, 2001. Ontario Ministry of Health and Long Term Care, November 2002.

Remis RS, Swantee C, Rottensten K, Schiedel L, Merid MF. Report on HIV/AIDS in Ontario, 2002. Ontario Ministry of Health and Long Term Care, November 2003.

OTHER RELEVANT PUBLICATIONS AND PRESENTATIONS

Remis RS, Palmer RWH. The epidemiology of transfusion-associated HIV infection in Canada, 1978-85. Laboratory Centre for Disease Control, Health Canada, Ottawa, September 30, 1994.

Remis RS, Millson M, Major C. The HIV epidemic among injection drug users in Ontario: The situation in 1997. Department of Public Health Sciences, University of Toronto, July 1997.

Remis RS, Strathdee SA, Millson M, Leclerc L, Degani N, Palmer RWH, Taylor C, Bruneau J, Hogg RS, Routledge R. Consortium to characterize injection drug users in Montreal, Toronto and Vancouver, Canada. March 31, 1998.

Remis RS, Whittingham EP. The HIV/AIDS epidemic among persons from HIV-endemic countries in Ontario, 1981-98: Situation report. Department of Public Health Sciences, University of Toronto, November 1999.

Calzavara L, Burchell A, Major C, Remis RS, Corey P, Myers T, Wallace E, Millson M and the Polaris Study Team. Increasing incidence among MSM repeat testers in Ontario, Canada, 1992-1999. XIII International AIDS Conference, Durban, South Africa, July 2000 (Abstract ThOrC718).

Remis RS, Major C, Calzavara L, Myers T, Burchell A, Whittingham EP. The HIV epidemic among men who have sex with other men: The situation in Ontario in the year 2000 [Technical report]. Department of Public Health Sciences, University of Toronto, November 2000.

Remis RS. The epidemiology of HIV infection among women in Ontario. In Stewart DE, Cheung AM, Ferris LE, Hyman I, Cohen MM, Williams JI, (eds). Ontario Women's Health Status Report. Ontario Women's Health Council, Toronto, Ontario 2003: 37-46.

APPENDIX A
EXPOSURE CATEGORY ADJUSTMENTS

Methodology used to adjust for unknown region, unknown sex, known and unknown exposure category among first-time HIV-positive diagnoses, 1985 to 2002 is described.

Adjustments were completed using five main steps; similar steps were carried out for each modified health region then added together to obtain provincial totals. Calculations were completed using Lotus 1-2-3 Release 9 for Windows.

Step 1: Distribute diagnoses among males, females, unknown sex with unknown region among the males, females, unknown sex in the seven health regions in accordance with the proportion among the known.

i) Obtain the distribution of HIV-positives for each region, including unknown region, by sex for each year and exposure category

ii) Assign HIV-positives in males, females, unknown sex in Unknown region to the seven health regions in accordance with the distribution among the known.

Example:

In 1991, Unknown region, exposure category NIR, there were 172 diagnoses in males, 13 in females and 19 in unknown sex. That same year in Toronto, exposure category NIR, 547 cases were among males, 60 among females and 84 among unknown sex. Provincial totals for 1991, exposure category NIR, were 1,058 diagnoses among males, 125 among females and 124 in unknown sex. To allocate the appropriate number of cases by sex with unknown region to Toronto, the formula was;

$$\#\text{ Toronto, NIR} + \#\text{ Unk region, NIR} \times \frac{\#\text{ Toronto, NIR}}{(\#\text{ Ontario NIR} - \#\text{ Unk region, NIR})}$$

For males, the calculation was;

$547 + 172 \times [\,547 / (1{,}058 - 172)\,] = 653.2$

which was the ‘adjusted' number of HIV-positives among Toronto males in the exposure category NIR in 1991.

Similarly, the adjusted positives among females, Toronto, exposure category NIR was;

$60 + 13 \times [\,60 / (125 - 13)\,] = 67.0$

APPENDIX A (CONTINUED)
EXPOSURE CATEGORY ADJUSTMENTS

and for unknown sex;

84 + 19 x [84 / (124 - 19)] = 99.2

the adjusted number of HIV-positives among unknown sex, Toronto, NIR in 1991

This procedure was repeated by sex (males, females, unknown), year (1985, 1986, etc. to 2002) and exposure category (MSM, MSM-IDU, etc. Other, NIR) and in this manner, HIV-positive diagnoses in Unknown region were distributed among the seven health regions. Subsequent steps were completed within each of the seven modified health regions.

Step 2: Distribute diagnoses in unknown sex between males and females in accordance with the proportion among the known.

After allocating HIV-positives in Unknown region among males, females, unknown sex in each of the seven regions (Step 1), HIV-positives in unknown sex within each region were allocated to males or females within that region.

Example:

In 1991 in Toronto, there were 99.2 HIV-positives with unknown sex in exposure category NIR (calculated in Step 1). These were allocated to the adjusted number of males or females in 1991, exposure NIR which had already been adjusted for unknown region. For Toronto men, we used the following formula:

males + # unknown sex x [# males / (# males + # females)]

Therefore, the number of HIV-positives among Toronto males in 1991, exposure NIR, adjusted for unknown sex was:

653.2 + 99.2 x [653.2 / (653.2 + 67.0)] = 743.2

and among females:

67.0 + 99.2 x [67.0 / (653.2 + 67.0)]= 76.2

In this manner, the total number of HIV-positives in Toronto in 1991, exposure category NIR, that is, 653.2 males + 67.0 females + 99.2 unknown sex = 819.4 were adjusted to 743.2 males + 76.2 females = 819.4 HIV positives. This procedure was repeated for each year, each exposure category and each of the seven health regions.

APPENDIX A (CONTINUED)
EXPOSURE CATEGORY ADJUSTMENTS

Step 3: Reallocate diagnoses in each exposure category according to new distribution by the Laboratory enhancement study (LES).

Step 3.1 For each exposure category and sex, calculate the LES adjustment factors.

Regions for which reallocation among exposure categories are similar are aggregated. HIV-positive male cases are aggregated into group 1 (Toronto, Central East Other, Southwest and Central West) and group 2 (Ottawa, Northern and Eastern Other). Female HIV-positives into group1 (Northern, Central West and Southwest) and group2 (Eastern Other, Central East Other, Toronto and Ottawa). Male HIV-negatives in group 1 (Toronto, Central East Other, Southwest, Central West and Northern) and group 2 (Eastern Other and Ottawa)**.** All regions of the female HIV-negatives are grouped together.

So seven adjustment factors specific to those aggregations are calculated.

Step 3.2 For each sex, each exposure category and each year from 1985 to 2002, calculate the number of cases that are going to be taken away from that exposure category.

Example:
Among Toronto males in 1985, there were 114.1 HIV-positives in the MSM category (calculated in Step 2). The LES adjustment factor for the MSM category for that region is 1.4%. Therefore, the number of cases that will be reallocated from that category will be:

114.1 *1.4% = 1.54 cases

Step 3.3 For each sex, each exposure category and each year, calculate the number of cases that will be reallocated to that exposure category.

Example:
Among Toronto males in 1985 ,there were 114.1 cases in MSM, 3.0 in MSM-IDU and 105.7 in NIR (Step 2). In Step 3.1, we calculated that only 1.4% of MSM cases in Step 2 will be reallocated to the MSM-IDU category. Therefore, the number of cases that will be reallocated to the MSM-IDU category was:

(114.1* 1.4%)+(3.0* 0%)+ (105.7 * 0%) = 1.54 cases

Step 3.4 For each sex, each exposure category and each year, calculate the final reallocated number of cases.

APPENDIX A (CONTINUED)
EXPOSURE CATEGORY ADJUSTMENTS

Example:
The MSM category in Toronto males in 1985 has 114.1 cases (step 2), 1.54 cases will be reallocated to another category (Step3.2) and none will be reallocated to MSM itself (Step 3.3). Therefore, the total number after reallocation will be:

114.1 - 1.54 + 0 = 112.5 cases

Step 4: Allocate HIV-positives among exposure category NIR to known exposure categories.

Step 4.1 For each exposure category, for each sex (males, females) within each year, calculate the proportion of HIV-positives which had that exposure that year.

Example:
Among Toronto males in 1991, there were 1.1 HIV-positives with exposure low-risk heterosexual (low-risk hetero), 743.2 positives with exposure NIR (calculated in Step 3) and a total of 1,122.8 positives that year. Therefore, the proportion of HIV-positives in exposure low-risk hetero was:

1.1 / (1,122.8 - 743.2) x 100% = 0.29%

For Toronto females in 1991, there were 1.4 positives with exposure low-risk hetero, 76.2 positives with exposure NIR (Step 3) and a total of 89.7 positives that year. The proportion of positives in exposure low-risk hetero was:

1.4 / (89.7 - 76.2) x 100% = 10.4%

Step 4.2 For each exposure category, for each sex, list the Lab enhancement study (LES) adjustment factors. These factors were specific to males and females for the regions of Toronto, Ottawa and Other. Thus, LES adjustment factors which were calculated for Other were applied to Northern, Central East Other, Eastern Other, Southwest and Central West regions. LES adjustment factors were 0.0% for exposures of Clotting factor and Perinatal.

Step 4.3 For each exposure, each sex, for the years 1999 and 2002 only, calculate the average of the proportion among the known (Step 4.1).

Example:
In Toronto males in 1999, the proportion of HIV-positives with exposure MSM was 78.6% and in 2000, was 79.1%, and 75.8% in 2002, giving an average proportion for the three years of 77.8%.

APPENDIX A (CONTINUED)
EXPOSURE CATEGORY ADJUSTMENTS

Step 4.4 For each year for each sex and each exposure category, calculate the "scaled-back" proportion of HIV-positives in that exposure category that year using the formula:

proportion among the known x (LES adjustment factor / average proportion in 1999-2002)
component 1 *component 2* *component 3*

Component 1 of the formula takes into account the fact that the proportion of HIV-positives by exposure category has shifted over time, for example, early in the epidemic, most HIV-positives were in the exposure category of MSM but new diagnoses in this group has declined over time. *Component 2* takes into account the inappropriateness of applying in isolation the LES adjustment factors, based on data collected in 1999 and 2002, to HIV-positives diagnosed 10 to 15 years earlier. Component 3 of the formula incorporates data on HIV-positives which may or may not have contributed to the LES adjustment factors (study questionnaire was not returned).

Example:
In Toronto males in 1985, the proportion of HIV-positives among MSM was 96.1% (proportion among the known as calculated in Step 4.1), the LES adjustment factor for Toronto males, MSM was 55.2% (Step 4.2) and the average proportion among the known for 1999 to 2002 was 77.8% (Step 4.3). Using the formula in Step 4.4, the scaled-back adjustment factor for 1985 was:

96.1% x (55.2% / 77.8%) = 68.2%

This step was repeated for each year, each sex and each exposure category. In the event that the LES adjustment factor was 0.0%, we used the proportion among the known, unless the exposure category was Clotting factor or Perinatal, in which cases the adjustment factor remained 0.0% (no HIV-positives from NIR were to be assigned to these two categories).

Step 4.5 The scaled-back adjustment factors for each exposure category within each year were then standardized to sum to 1.0 since the sum of the proportions calculated in Step 4.4 in each exposure category in each year did not necessarily add to 100%.

Example:

In 1985 in Toronto, the sum of the scaled-back proportions calculated in Step 4.4 for males was 68.2%. The proportions in each exposure category were "normalized to 1.0" by dividing the proportion in that exposure category by the sum of the proportions that year. For MSM in Toronto males that year, the calculation was;

68.2% / 71.9% = 94.8%

APPENDIX A (CONTINUED)
EXPOSURE CATEGORY ADJUSTMENTS

The process was repeated for each exposure category for each sex for each year and in this manner, final adjustment factors were generated for the health region.

Step 5: Calculate the final number of diagnoses, adjusted for unknown region, sex, known and unknown exposure, for each year for each sex in each exposure category.

To calculate the adjusted number of diagnoses for males or females for a given exposure category in a given year, the final adjustment factor calculated in Step 4.5 was multiplied by the number of HIV-positive with unknown exposure that year and added to the HIV-positive tests with known exposure.

Example:

In Toronto males in 1985, exposure category MSM, the final adjustment factor was 94.8% (Step 4.5), there were 112.5 HIV-positives among MSM that year (adjusted for unknown region, unknown sex and reallocated exposure category) and 105.7 HIV-positives in exposure NIR. Therefore, the adjusted number of HIV-positives among Toronto males in 1985 was:

112.5 + 94.8% x 105.7 = 212.7 HIV-positives

This calculation was repeated for each exposure category for each year for HIV-positives among males and females. Ontario totals for each sex by year and exposure category (as seen in Table 1.5), were obtained by summation across the regions.

The same methodology was used to assign HIV-negative diagnoses of unknown region, unknown sex and unknown exposure category for each year 1992 to 2002 to the seven health regions. Regionally adjusted HIV-negative tests per exposure category were summed to provide provincial totals. HIV positivity rates for each modified health region by year of diagnosis (1992, 1993, etc., 2002) and exposure category were calculated using adjusted figures such that the number of HIV tests (adjusted) was the sum of HIV-positives + HIV-negative diagnoses adjusted as described above.

APPENDIX B
METHODOLOGY, ONTARIO HIV MODEL

Our approach to this modelling exercise was to obtain the best possible estimates of the extent and distribution of HIV infection in Ontario using several independent data sources. In particular, we were interested in estimating the fundamental epidemiologic indicators, including incidence, cumulative incidence and prevalence of HIV infection, HIV diagnoses and AIDS from 1978 to December 2002. We also assessed annual and cumulative deaths due to AIDS and, for the first time for most groups, mortality due to other causes over the same period. This year, all modelling was carried out specifically for each exposure category and, in a second stage, interpolated for males and females separately. The Ontario estimates were derived by summing across exposure categories. The model for persons from HIV-endemic countries relied heavily on specific analyses carried out using a different modelling approach carried out in 1999 <*1*>.

There are a number of additional refinements introduced this year. For the first time, for estimates of incidence, we relied heavily on data from the laboratory enhancement study, in particular, the results of the detuned assay <*2*> and analyses of HIV incidence among repeat testers <*3*>. For this purpose, we also attempted to take into account substantial selection biases associated with HIV testing patterns <*4*>.

To estimate the number of HIV diagnoses, we first adjusted for possible duplicates and then assigned exposure categories for those with missing risk factor information based on the results of the Laboratory Enhancement Study, as outlined in Appendix A. This year, in addition we also took into account the small proportion of cases that were reassigned from their initial exposure category using additional information collected in the supplementary questionnaire. In addition, a proportion of HIV diagnoses among males initially classified as acquired though transfusion and heterosexual contact were reclassified as MSM based on the results of an independent HIV transfusion model <*5*> and a small validation study carried out in Toronto earlier this year <*6*>.

Initial estimates related to HIV infection, AIDS incidence and AIDS-associated deaths were entered in a spreadsheet (Lotus 1-2-3, Version 4.0) and indicators estimated based on the following formulas:

a. Annual HIV incidence in the current and preceding years was summed to estimate cumulative HIV incidence to the end of each year;
b. Similarly, annual AIDS incidence in the current and preceding years was summed to determine to cumulative AIDS incidence at the end of each year;
c. Annual AIDS mortality in the current and preceding years sums to cumulative mortality at the end of each year;
d. HIV prevalence was derived by subtracting cumulative mortality from cumulative HIV incidence;
e. Cumulative AIDS incidence less cumulative mortality yielded AIDS prevalence;
f. The number of HIV-infected persons diagnosed was derived from HIV test data from the Ontario HIV serodiagnostic laboratory.

APPENDIX B (CONTINUED)
METHODOLOGY, ONTARIO HIV MODEL

The specific derivation for each of the parameters used in the models in shown on Table 1.

Table 1

Parameter	Derivation
Annual HIV incidence	Literature review Detuned assay results Incidence among repeat testers Adjusted to fit cumulative HIV incidence
Cumulative HIV incidence	Previous HIV models based on extrapolations and interpolations back-calculations, Quebec and Canada Cumulative HIV diagnoses and estimates of proportion of infections diagnosed
HIV prevalence	Cumulative HIV incidence less cumulative AIDS mortality Component model
HIV diagnosis	HIV diagnoses from HIV Laboratory adjusted for duplicate results
Cumulative HIV diagnoses	Sum of HIV diagnoses from 1978 to current year
AIDS incidence	Reported cases from the Ontario AIDS Surveillance Program, with adjustments for reporting delays (provided by CIDPC, Health Canada) and under reporting
Cumulative AIDS incidence	Sum of annual AIDS incidence
AIDS prevalence	Cumulative AIDS incidence less AIDS mortality
Annual AIDS deaths	Data from the Office of the Registrar General, corrected for under ascertainment Survival following AIDS
Cumulative AIDS mortality	Sum of annual AIDS deaths

References

1. Remis RS, Whittingham EP. The HIV/AIDS epidemic among persons from HIV-endemic countries in Ontario, 1981-98: Situation report. 62 pp. Department of Public Health Sciences, University of Toronto, November 1999.

2. Remis RS, Major C, Swantee C, Fearon M, Wallace E, Whittingham E. Trends in HIV incidence in Ontario based on the STARHS assay: Update to July 2002. *11th Annual Conference of the Canadian Association for HIV/AIDS Research*, Winnipeg, Manitoba, April 25-28, 2002. *Can J Infect Dis* 2002; 13(Supp A):66A (Abstract 372P).

3. Calzavara L, Burchell AN, Major C**,** Remis RS, Corey P, Myers T, Millson P, Wallace E and the Polaris Study Team. Increases in HIV incidence among MSM undergoing repeat diagnostic testing in Ontario, Canada. *AIDS* 2002; 16:1655-61.

4. Remis RS, Palmer RWH, Raboud J. Estimates of HIV incidence based on detuned assay results may be strongly biased: Evidence from a simulation study. *14th International Conference on AIDS*, Barcelona, Spain, July 7-12, 2002 (Abstract MoPeC3457).

5. Remis RS, Palmer RWH. The epidemiology of transfusion-associated HIV infection in Canada, 1978-85. 67 pp. Laboratory Centre for Disease Control, Ottawa, September 1994.

6. Remis RS, Fikre M, Ackery J. Report on the review of case reports among residents of Toronto classified in the heterosexual transmission category - Phase I. Unpublished report, Department of Public Health Sciences, University of Toronto.

TABLES

Legend

MSM	Men who have sex with men
IDU	Injection drug use(r)
MSM_IDU	Men who have sex with men and use injection drugs
Clotting factor	Clotting factor recipient
Blood product	Blood product recipient
HIV_endemic	HIV-endemic country of origin
Transfusion	Transfusion recipient
Occupational	Occupational exposure
Perinatal	Perinatal exposure
LR hetero	Low risk heterosexual
HR hetero	High risk heterosexual
Heterosexual	Heterosexual (other) transmission
NIR	No identified risk
Unk	Unknown exposure

Table 1.1 Number of HIV diagnoses by year of diagnosis and sex Ontario, 1985 to 2003

Year of diagnosis	Males	Females		Unknown	Total
	Number	Number	% female[1]	Number	Number
1985	326	6	1.8%	3	335
1986	1,287	27	2.1%	51	1,365
1987	1,464	37	2.5%	49	1,550
1988	1,333	91	6.4%	30	1,454
1989	1,543	113	6.8%	54	1,710
1990	1,832	166	8.3%	94	2,092
1991	1,550	163	9.5%	126	1,839
1992	1,541	164	9.6%	118	1,823
1993	1,254	175	12.2%	71	1,500
1994	1,064	219	17.1%	62	1,345
1995	1,080	221	17.0%	59	1,360
1996	830	187	18.4%	61	1,078
1997	711	186	20.7%	64	961
1998	745	183	19.7%	67	995
1999	709	178	20.1%	35	922
2000	686	203	22.8%	49	938
2001	733	253	25.7%	31	1,017
2002	878	325	27.0%	30	1,233
2003	852	346	28.9%	19	1,217
Total	20,418	3,243	13.7%	1,073	24,734

1 Row percent of cases with known sex

Data source: HIV Laboratory, Laboratories Branch, Ontario Ministry of Health and Long-term Care

Table 1.2 Number and proportion[1] of HIV diagnoses by exposure category and sex, Ontario, 1985 to 2003

Exposure category	Males		Females		Unknown	Total	
	Number	%	Number	%	Number	Number	%
MSM	8,240	77.5%	0	0.0%	0	8,240	68.2%
MSM-IDU	257	2.4%	0	0.0%	0	257	2.1%
IDU	680	6.4%	240	17.5%	28	948	7.8%
Clotting factor	249	2.3%	30	2.2%	20	299	2.5%
Transfusion	109	1.0%	81	5.9%	8	198	1.6%
HIV-endemic	223	2.1%	155	11.3%	12	390	3.2%
HR hetero	86	0.81%	319	23.2%	0	405	3.4%
LR hetero	592	5.6%	389	28.3%	0	981	8.1%
Perinatal[2]	171	1.6%	155	11.3%	6	332	2.7%
Other[3]	23	0.22%	6	0.44%	0	29	0.24%
Unknown	9,788		1,868		999	12,655	
Total	20,418	100.0%	3,243	100.0%	1,073	24,734	100.0%

1 Column percent of cases with known source of exposure
2 Includes infants with maternal HIV antibodies who are not infected
3 Includes needlestick, acupuncture, tattoo, etc.

Data source: HIV Laboratory, Laboratories Branch, Ontario Ministry of Health and Long-term Care

Table 1.3 Number and proportion[1] of HIV diagnoses (adjusted[2]) by exposure category and sex, Ontario, 1985 to 2003

	Males		Females		Total	
Exposure category	**Number**	**%**	**Number**	**%**	**Number**	**%**
MSM	16,382	76.8%	0	0.0%	16,382	66.2%
MSM-IDU	973	4.6%	0	0.0%	973	3.9%
IDU	1,410	6.6%	600	17.6%	2,010	8.1%
Clotting factor	271	1.3%	37	1.1%	307	1.2%
Transfusion	212	1.0%	182	5.3%	394	1.6%
HIV-endemic	901	4.2%	1,120	32.9%	2,021	8.2%
HR hetero	180	0.84%	683	20.0%	863	3.5%
LR hetero	755	3.5%	559	16.4%	1,314	5.3%
Perinatal[3]	175	0.82%	164	4.8%	339	1.4%
Other[4]	67	0.31%	64	1.9%	131	0.53%
Total	21,325	100.0%	3,409	100.0%	24,734	100.0%

1 Column percent
2 Unknown sex assigned according to the distribution of those with known sex; unknown exposure category assigned according to proportion among the known and results of the Lab Enhancement Study (see text for more details), thus, totals may differ due to rounding
3 Includes infants with maternal HIV antibodies who are not infected
4 Includes needlestick, acupuncture, tattoo, etc.

Source of data: HIV Laboratory, Laboratories Branch, Ontario Ministry of Health and Long-Term Care

Table 1.3a Number and proportion[1] of HIV diagnoses (adjusted[2]) by exposure category and sex, Ontario, 2003

Exposure category	Males		Females		Total	
	Number	%	Number	%	Number	%
MSM	547	63.3%	0	0.0%	547	45.0%
MSM-IDU	23	2.6%	0	0.0%	23	1.9%
IDU	54	6.3%	23	6.4%	77	6.3%
Clotting factor	2	0.26%	0	0.0%	2	0.19%
Transfusion	1	0.10%	11	3.1%	12	0.98%
HIV-endemic	99	11.5%	166	47.2%	266	21.8%
HR hetero	15	1.7%	24	6.7%	38	3.1%
LR hetero	92	10.7%	113	31.9%	205	16.8%
Perinatal[3]	17	2.0%	11	3.1%	28	2.3%
Other[4]	14	1.6%	6	1.6%	19	1.6%
Total	864	100.0%	353	100.0%	1,194	100.0%

1 Column percent
2 Unknown sex assigned according to the distribution of those with known sex; unknown exposure category assigned according to proportion among the known and results of the LES (see text for more details), thus, totals may differ due to rounding
3 Includes infants with maternal HIV antibodies who are not infected
4 Includes needlestick, acupuncture, tattoo, etc.

Source of data: HIV Laboratory, Laboratories Branch, Ontario Ministry of Health and Long-Term Care

Table 1.4 Number and proportion[1] of HIV diagnoses by year of diagnosis and exposure category Ontario, 1985 to 2003

	MSM		MSM-IDU		IDU		Clotting factor		Transfusion		HIV-endemic		HR hetero		LR hetero		Perinatal[2]		Other[3]		Unk	Total
Year	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	No.
1985	166	88.3%	5	2.7%	1	0.53%	10	5.3%	5	2.7%	0	0.0%	1	0.53%	0	0.0%	0	0.0%	0	0.00%	147	335
1986	470	87.9%	11	2.1%	10	1.9%	28	5.2%	9	1.7%	4	0.75%	2	0.37%	0	0.0%	0	0.0%	1	0.19%	830	1,365
1987	856	86.5%	18	1.8%	17	1.7%	47	4.7%	31	3.1%	9	0.91%	3	0.30%	7	0.71%	2	0.20%	0	0.00%	560	1,550
1988	777	79.8%	21	2.2%	42	4.3%	50	5.1%	34	3.5%	18	1.8%	18	1.8%	5	0.51%	9	0.92%	0	0.00%	480	777
1989	893	81.8%	25	2.3%	60	5.5%	35	3.2%	20	1.8%	16	1.5%	24	2.2%	12	1.1%	7	0.64%	0	0.00%	618	1,710
1990	831	78.5%	18	1.7%	71	6.7%	46	4.3%	7	0.66%	23	2.2%	35	3.3%	7	0.66%	20	1.9%	1	0.09%	1,033	2,092
1991	430	80.4%	7	1.3%	37	6.9%	16	3.0%	1	0.19%	14	2.6%	15	2.8%	7	1.3%	8	1.5%	0	0.00%	1,304	1,839
1992	571	72.2%	20	2.5%	83	10.5%	15	1.9%	10	1.3%	23	2.9%	25	3.2%	37	4.7%	7	0.88%	0	0.00%	1,032	1,823
1993	454	63.8%	26	3.7%	59	8.3%	16	2.2%	14	2.0%	18	2.5%	42	5.9%	67	9.4%	16	2.2%	0	0.00%	788	1,500
1994	346	56.4%	18	2.9%	88	14.4%	6	1.0%	12	2.0%	13	2.1%	30	4.9%	64	10.4%	33	5.4%	3	0.49%	732	1,345
1995	359	57.3%	19	3.0%	75	12.0%	10	1.6%	9	1.4%	19	3.0%	29	4.6%	79	12.6%	25	4.0%	2	0.32%	734	1,360
1996	311	55.0%	12	2.1%	71	12.6%	6	1.1%	7	1.2%	26	4.6%	25	4.4%	70	12.4%	34	6.0%	3	0.53%	513	1,078
1997	246	54.4%	9	2.0%	55	12.2%	5	1.1%	8	1.8%	12	2.7%	33	7.3%	73	16.2%	10	2.2%	1	0.22%	509	961
1998	236	52.3%	10	2.2%	57	12.6%	2	0.44%	7	1.6%	19	4.2%	19	4.2%	74	16.4%	24	5.3%	3	0.67%	544	995
1999	239	52.3%	8	1.8%	69	15.1%	1	0.22%	5	1.1%	17	3.7%	22	4.8%	79	17.3%	15	3.3%	2	0.44%	465	922
2000	251	53.1%	13	2.7%	42	8.9%	2	0.42%	9	1.9%	30	6.3%	19	4.0%	76	16.1%	30	6.3%	1	0.21%	465	938
2001	222	48.1%	8	1.7%	36	7.8%	2	0.43%	4	0.87%	36	7.8%	24	5.2%	97	21.0%	30	6.5%	3	0.65%	555	1,017
2002	316	54.2%	4	0.69%	39	6.7%	0	0.0%	3	0.51%	47	8.1%	25	4.3%	110	18.9%	34	5.8%	5	0.86%	650	1,233
2003	266	51.1%	5	0.96%	36	6.9%	2	0.38%	3	0.58%	46	8.8%	14	2.7%	117	22.5%	28	5.4%	4	0.77%	696	1,217
Total	8,240	68.2%	257	2.1%	948	7.8%	299	2.5%	198	1.6%	390	3.2%	405	3.4%	981	8.1%	332	2.7%	29	0.24%	12,655	24,734

1 Row percent of cases with known exposure category
2 Includes infants with maternal antibodies who are not infected
3 Includes needlestick, acupuncture, tattoo, etc.

Source of data: HIV Laboratory, Laboratories Branch, Ontario Ministry of Health and Long-Term Care

Table 1.5 Number and proportion[1] of HIV diagnoses (adjusted[2]) by year of diagnosis and exposure category Ontario, 1985 to 2003

	MSM		MSM-IDU		IDU		Clotting factor		Transfusion		HIV-endemic		HR hetero		LR hetero		Perinatal[3]		Other[4]		Total
Year	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.
1985	299	89.2%	14	4.1%	2	0.48%	14	4.2%	6	1.8%	0	0.11%	1	0.19%	0	0.00%	0	0.00%	0	0.00%	335
1986	1,203	88.1%	57	4.2%	26	1.9%	29	2.1%	26	1.9%	16	1.2%	4	0.32%	0	0.00%	0	0.00%	3	0.21%	1,365
1987	1,324	85.4%	57	3.7%	29	1.9%	47	3.0%	50	3.2%	25	1.6%	8	0.53%	7	0.48%	2	0.13%	0	0.01%	1,550
1988	1,159	79.7%	57	3.9%	62	4.3%	50	3.4%	48	3.3%	41	2.8%	23	1.6%	5	0.31%	9	0.62%	0	0.03%	1,454
1989	1,372	80.3%	69	4.0%	96	5.6%	34	2.0%	33	1.9%	47	2.8%	39	2.3%	12	0.67%	7	0.41%	0	0.02%	1,709
1990	1,649	78.8%	79	3.8%	137	6.5%	46	2.2%	13	0.6%	76	3.6%	60	2.9%	10	0.49%	20	1.0%	2	0.12%	2,092
1991	1,435	78.0%	69	3.8%	128	7.0%	16	0.87%	4	0.20%	96	5.2%	60	3.3%	22	1.2%	8	0.44%	1	0.05%	1,839
1992	1,283	70.4%	86	4.7%	184	10.1%	15	0.83%	25	1.4%	107	5.9%	64	3.5%	50	2.7%	7	0.40%	2	0.12%	1,823
1993	960	64.0%	80	5.3%	120	8.0%	18	1.2%	28	1.9%	112	7.5%	80	5.3%	79	5.2%	20	1.3%	3	0.23%	1,501
1994	735	54.7%	74	5.5%	195	14.5%	6	0.46%	29	2.1%	113	8.4%	66	4.9%	80	6.0%	33	2.5%	13	0.99%	1,345
1995	798	58.7%	67	4.9%	150	11.0%	10	0.76%	19	1.4%	119	8.7%	66	4.9%	98	7.2%	25	1.8%	8	0.58%	1,360
1996	605	56.1%	44	4.1%	138	12.8%	6	0.56%	14	1.3%	108	10.0%	44	4.1%	77	7.1%	34	3.2%	9	0.85%	1,078
1997	516	53.7%	35	3.7%	122	12.7%	5	0.54%	17	1.8%	103	10.7%	62	6.4%	82	8.6%	11	1.1%	8	0.87%	961
1998	493	49.6%	46	4.6%	138	13.9%	2	0.21%	21	2.2%	112	11.3%	47	4.8%	99	10.0%	25	2.5%	10	0.98%	994
1999	458	49.6%	31	3.3%	141	15.3%	1	0.13%	13	1.4%	106	11.5%	47	5.1%	99	10.8%	16	1.7%	11	1.2%	923
2000	471	50.3%	37	4.0%	95	10.2%	2	0.24%	18	1.9%	144	15.4%	43	4.6%	90	9.6%	30	3.2%	7	0.74%	938
2001	469	46.1%	28	2.8%	90	8.8%	2	0.21%	11	1.1%	194	19.1%	54	5.3%	122	12.0%	30	2.9%	15	1.5%	1,017
2002	605	49.1%	20	1.6%	81	6.6%	0	0.02%	7	0.54%	236	19.2%	56	4.5%	176	14.3%	34	2.8%	17	1.3%	1,233
2003	547	45.0%	23	1.9%	77	6.3%	2	0.19%	12	0.98%	266	21.8%	38	3.1%	205	16.8%	28	2.3%	19	1.6%	1,217
Total	16,382	66.2%	973	3.9%	2,010	8.1%	307	1.2%	394	1.6%	2,021	8.2%	863	3.5%	1,314	5.3%	339	1.4%	131	0.5%	24,734

1 Row percent
2 According to the proportion of known exposure that year and results of the LES (see text for more details), thus, totals may differ due to rounding
3 Includes infants with maternal antibodies who are not infected
4 Includes needlestick, acupuncture, tattoo, etc.

Source of data: HIV Laboratory, Laboratories Branch, Ontario Ministry of Health and Long-Term Care

Table 1.5a Number and proportion[1] of HIV diagnoses (adjusted[2]) among males by year of diagnosis and exposure category Ontario, 1985 to 2003

	MSM		MSM-IDU		IDU		Clotting factor		Transfusion		HIV-endemic		HR hetero		LR hetero		Perinatal[3]		Other[4]		Total
Year	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**
1985	299	90.8%	14	4.1%	2	0.49%	10	3.0%	5	1.5%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	329
1986	1,203	90.0%	57	4.3%	15	1.1%	27	2.0%	18	1.3%	14	1.0%	0	0.0%	0	0.0%	0	0.0%	3	0.21%	1,337
1987	1,324	87.6%	57	3.8%	19	1.3%	46	3.0%	39	2.6%	19	1.3%	0	0.03%	4	0.29%	1	0.07%	0	0.0%	1,511
1988	1,159	85.1%	57	4.2%	39	2.9%	50	3.7%	29	2.1%	22	1.6%	0	0.02%	1	0.11%	4	0.29%	0	0.01%	1,361
1989	1,372	86.2%	69	4.3%	72	4.5%	31	1.9%	15	1.0%	24	1.5%	2	0.10%	5	0.31%	2	0.13%	0	0.0%	1,591
1990	1,649	85.9%	79	4.1%	99	5.1%	44	2.3%	6	0.30%	22	1.2%	0	0.01%	5	0.26%	12	0.63%	2	0.12%	1,918
1991	1,435	86.3%	69	4.2%	85	5.1%	13	0.78%	0	0.0%	43	2.6%	2	0.15%	10	0.57%	6	0.36%	0	0.0%	1,662
1992	1,283	78.0%	86	5.2%	145	8.8%	10	0.61%	12	0.76%	59	3.6%	8	0.50%	38	2.3%	3	0.18%	1	0.05%	1,645
1993	960	73.0%	80	6.1%	85	6.5%	10	0.78%	19	1.4%	69	5.3%	19	1.4%	65	4.9%	7	0.53%	1	0.10%	1,316
1994	735	66.0%	74	6.7%	137	12.3%	4	0.36%	19	1.7%	46	4.1%	16	1.4%	59	5.3%	19	1.7%	6	0.54%	1,115
1995	798	70.7%	67	5.9%	101	9.0%	4	0.38%	12	1.1%	55	4.8%	15	1.3%	65	5.8%	9	0.77%	3	0.24%	1,129
1996	605	68.9%	44	5.0%	91	10.3%	6	0.69%	4	0.51%	48	5.5%	10	1.2%	51	5.8%	15	1.7%	3	0.39%	877
1997	516	67.7%	35	4.6%	82	10.8%	5	0.64%	6	0.8%	47	6.2%	15	1.9%	47	6.2%	4	0.53%	4	0.53%	762
1998	493	61.9%	46	5.8%	104	13.1%	2	0.26%	3	0.37%	48	6.1%	18	2.2%	61	7.7%	14	1.8%	6	0.80%	796
1999	458	62.1%	31	4.1%	94	12.8%	1	0.16%	7	0.99%	54	7.4%	16	2.1%	63	8.6%	8	1.0%	5	0.68%	737
2000	471	65.3%	37	5.2%	64	8.9%	2	0.31%	9	1.3%	49	6.8%	14	2.0%	54	7.4%	17	2.3%	3	0.48%	722
2001	469	62.1%	28	3.8%	68	9.1%	2	0.28%	5	0.71%	88	11.6%	15	1.9%	56	7.4%	18	2.4%	5	0.71%	755
2002	605	67.4%	20	2.2%	53	5.9%	0	0.02%	1	0.10%	95	10.6%	16	1.7%	78	8.7%	20	2.2%	9	1.1%	898
2003	547	63.3%	23	2.6%	54	6.3%	2	0.26%	1	0.10%	99	11.5%	15	1.7%	92	10.7%	17	2.0%	14	1.6%	864
Total	16,382	76.8%	973	4.6%	1,410	6.6%	271	1.3%	212	1.0%	901	4.2%	180	0.84%	755	3.5%	175	0.82%	67	0.31%	21,325

1 Row percent
2 Adjusted for unknown region, sex and exposure (see text for more details), thus, totals may differ due to rounding
3 Includes infants with maternal antibodies who are not infected
4 Includes needlestick, acupuncture, tattoo, etc.

Source of data: HIV Laboratory, Laboratories Branch, Ontario Ministry of Health and Long-Term Care

Table 1.5b Number and proportion[1] of HIV diagnoses (adjusted[2]) among females by year of diagnosis and exposure category Ontario, 1985 to 2003

	IDU		Clotting factor		Transfusion		HIV-endemic		HR hetero		LR hetero		Perinatal[3]		Other[4]		Total
Year	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.
1985	0	0.0%	4	66.7%	1	16.7%	0	5.9%	1	10.7%	0	0.0%	0	0.0%	0	0.0%	6
1986	11	38.4%	2	7.1%	8	30.1%	2	8.8%	4	15.7%	0	0.0%	0	0.0%	0	0.0%	28
1987	9	23.9%	1	2.6%	11	27.9%	6	15.4%	8	19.6%	3	7.7%	1	2.5%	0	0.34%	39
1988	23	24.7%	0	0.0%	19	21.0%	19	20.7%	23	24.6%	3	3.3%	5	5.4%	0	0.33%	93
1989	24	20.7%	3	2.6%	17	14.8%	23	19.7%	38	32.1%	7	5.6%	5	4.3%	0	0.24%	118
1990	38	22.0%	2	1.3%	7	4.0%	53	30.6%	60	34.3%	5	3.0%	8	4.6%	0	0.09%	174
1991	44	24.7%	3	1.7%	4	2.0%	53	30.2%	58	32.9%	12	6.9%	2	1.1%	1	0.43%	177
1992	38	21.6%	5	2.8%	13	7.2%	48	26.9%	56	31.6%	12	6.8%	4	2.4%	1	0.79%	178
1993	35	19.0%	8	4.2%	10	5.2%	43	23.1%	61	33.1%	14	7.3%	13	6.9%	2	1.1%	185
1994	58	25.2%	2	0.94%	10	4.2%	67	29.3%	50	21.8%	21	9.2%	14	6.2%	7	3.1%	230
1995	49	21.0%	6	2.6%	6	2.8%	64	27.7%	52	22.3%	33	14.2%	16	7.1%	5	2.3%	231
1996	47	23.4%	0	0.0%	10	4.8%	60	29.9%	33	16.6%	26	13.1%	19	9.4%	6	2.8%	201
1997	39	19.8%	0	0.18%	11	5.5%	55	27.9%	47	23.5%	35	17.5%	7	3.4%	4	2.2%	199
1998	34	17.1%	0	0.0%	18	9.3%	64	32.1%	30	14.9%	38	19.2%	11	5.6%	3	1.7%	198
1999	47	25.0%	0	0.0%	6	3.0%	52	27.9%	31	16.9%	36	19.5%	8	4.3%	6	3.4%	186
2000	31	14.4%	0	0.0%	8	3.8%	95	44.0%	29	13.2%	37	16.9%	13	6.1%	3	1.6%	216
2001	21	8.2%	0	0.0%	6	2.3%	107	40.7%	39	15.0%	66	25.3%	12	4.6%	10	3.8%	262
2002	28	8.4%	0	0.0%	6	1.7%	141	42.0%	41	12.1%	98	29.3%	14	4.3%	7	2.1%	335
2003	23	6.4%	0	0.0%	11	3.1%	166	47.2%	24	6.7%	113	31.9%	11	3.1%	6	1.6%	353
Total	600	17.6%	37	1.1%	182	5.3%	1,120	32.9%	683	20.0%	559	16.4%	164	4.8%	64	1.9%	3,409

1 Row percent
2 Adjusted for unknown region, sex and exposure (see text for more details), thus, totals may differ due to rounding
3 Includes infants with maternal antibodies who are not infected
4 Includes needlestick, acupuncture, tattoo, etc.

Source of data: HIV Laboratory, Laboratories Branch, Ontario Ministry of Health and Long-Term Care

Table 1.6 Number and proportion[1] of HIV diagnoses by age group at diagnosis and sex, Ontario, 1985 to 2003

	Males		Females		Unknown		Total	
Age group	**Number**	**%**	**Number**	**%**	**Number**	**%**	**Number**	**%**
< 1	284	1.5%	252	8.1%	8	1.3%	544	2.4%
1-14	120	0.64%	64	2.1%	7	1.2%	191	0.85%
15-19	183	1.0%	102	3.3%	3	0.50%	288	1.3%
20-24	1,385	7.4%	377	12.1%	40	6.6%	1,802	8.0%
25-29	3,377	18.1%	608	19.5%	112	18.5%	4,097	18.3%
30-34	4,219	22.6%	674	21.7%	130	21.5%	5,023	22.4%
35-39	3,667	19.6%	440	14.1%	130	21.5%	4,237	18.9%
40-44	2,544	13.6%	250	8.0%	87	14.4%	2,881	12.9%
45-49	1,396	7.5%	150	4.8%	36	6.0%	1,582	7.1%
50-54	732	3.9%	69	2.2%	19	3.1%	820	3.7%
55-59	417	2.2%	53	1.7%	14	2.3%	484	2.2%
60+	372	2.0%	71	2.3%	19	3.1%	462	2.1%
Unknown	1,722		133		468		2,323	
Total	20,418	100.0%	3,243	100.0%	1,073	100.0%	24,734	100.0%
Mean age	35.0		30.0		35.4		34.3	
Median age	34		30		35		34	

1 Column percent of cases with known age at diagnosis

Source of data: HIV Laboratory, Laboratories Branch, Ontario Ministry of Health and Long-Term Care

Table 1.7 Number and proportion[1] of HIV diagnoses by age group at diagnosis and exposure category Ontario, 1985 to 2003

Age group	MSM		MSM-IDU		IDU		Clotting factor		Transfusion		HIV-endemic		HR hetero		LR hetero		Perinatal[2]		Other[3]		Unknown	Total
	No.	%	No	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	No.
< 1	2	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	0.27%	0	0.0%	0	0.0%	274	87.0%	0	0.0%	267	544
1-14	1	0.0%	0	0.0%	0	0.0%	54	19.9%	7	4.0%	2	0.55%	0	0.0%	1	0.10%	41	13.0%	0	0.0%	85	191
15-19	64	0.84%	5	2.1%	15	1.7%	30	11.0%	5	2.9%	8	2.2%	17	4.4%	26	2.7%	0	0.0%	0	0.0%	118	288
20-24	620	8.1%	42	17.6%	102	11.3%	38	14.0%	8	4.6%	33	9.0%	52	13.5%	90	9.4%	0	0.0%	1	3.4%	816	1,802
25-29	1,528	20.0%	57	23.8%	175	19.5%	34	12.5%	22	12.7%	69	18.9%	62	16.1%	163	17.0%	0	0.0%	4	13.8%	1,983	4,097
30-34	1,852	24.3%	62	25.9%	227	25.3%	34	12.5%	22	12.7%	100	27.3%	108	28.1%	243	25.4%	0	0.0%	7	24.1%	2,368	5,023
35-39	1,511	19.8%	43	18.0%	210	23.4%	17	6.2%	22	12.7%	62	16.9%	45	11.7%	170	17.7%	0	0.0%	5	17.2%	2,152	4,237
40-44	1,024	13.4%	15	6.3%	107	11.9%	10	3.7%	24	13.9%	36	9.8%	43	11.2%	127	13.3%	0	0.0%	4	13.8%	1,491	2,881
45-49	519	6.8%	10	4.2%	44	4.9%	17	6.2%	12	6.9%	29	7.9%	26	6.8%	76	7.9%	0	0.0%	5	17.2%	844	1,582
50-54	261	3.4%	2	0.84%	14	1.6%	9	3.3%	12	6.9%	15	4.1%	17	4.4%	25	2.6%	0	0.0%	1	3.4%	464	820
55-59	140	1.8%	1	0.42%	3	0.33%	15	5.5%	13	7.5%	6	1.6%	6	1.6%	24	2.5%	0	0.0%	2	6.9%	274	484
60+	105	1.4%	2	0.84%	2	0.22%	14	5.1%	26	15.0%	5	1.4%	8	2.1%	13	1.4%	0	0.0%	0	0.0%	287	462
Unknown	613		18		49		27		25		24		21		23		17		0		1,506	2,323
Total	8,240	100%	257	100%	948	100%	299	100%	198	100%	390	100%	405	100%	981	100%	332	100%	29	100%	12,655	24,734
Mean	34.8		31.1		33.0		29.1		41.0		34.0		33.6		34.6		0.48		39.9		35.4	
Median	34		30		32		26		39		32		32		33		0		39		34	

1 Column percent of cases with known age at diagnosis
2 Includes infants with maternal antibodies who are not infected
3 Includes needlestick, acupuncture, tattoo, etc.

Source of data: HIV Laboratory, Laboratories Branch, Ontario Ministry of Health and Long-Term Care

Table 1.8 Mean age at HIV diagnosis by year of diagnosis and selected exposure category, males Ontario, 1985 to 2003

	MSM		MSM-IDU		IDU		Clotting factor		Transfusion		HIV-endemic		HR hetero		LR hetero	
Year	n	Mean	n	Mean	n	Mean	n	Mean	n	Mean	n	Mean	n	Mean	n	Mean
1985	105	33.1	5	25.8	1	28.0	6	25.7	4	34.5	0	--	0	--	0	--
1986	426	34.1	11	27.0	6	25.3	25	21.4	3	40.3	2	42.0	0	--	0	--
1987	760	33.8	18	30.6	11	30.7	39	24.7	21	50.1	9	41.3	0	--	4	28.0
1988	706	33.8	17	27.4	23	30.5	45	20.3	15	30.2	10	32.5	0	--	2	27.5
1989	789	34.6	22	28.4	41	29.9	25	28.6	9	39.7	9	35.9	1	39.0	5	38.0
1990	781	34.5	14	29.2	45	30.4	39	34.2	3	35.0	7	37.3	0	--	3	34.3
1991	385	34.7	7	27.9	22	30.7	13	28.4	0	--	7	32.6	1	50.0	3	29.3
1992	545	34.8	17	31.2	59	30.8	8	27.1	5	35.4	12	35.1	3	39.0	26	32.0
1993	431	35.4	26	31.5	39	31.2	9	39.0	8	36.1	12	38.0	6	36.3	47	35.5
1994	336	34.5	17	32.5	65	34.9	3	43.3	7	47.3	6	29.3	8	38.1	41	35.4
1995	350	34.5	19	35.0	50	33.8	4	56.2	5	42.8	9	38.7	5	38.0	49	34.4
1996	294	35.8	12	34.7	45	33.2	5	24.6	2	43.0	14	30.1	6	29.3	44	35.8
1997	234	35.4	9	30.9	37	37.3	3	40.7	3	31.7	9	35.7	8	33.5	34	37.1
1998	222	37.4	9	34.8	42	39.2	2	37.5	1	38.0	10	35.3	7	34.4	46	37.1
1999	229	36.5	8	34.2	44	36.4	1	42.0	3	36.3	10	40.3	8	34.2	49	38.0
2000	242	36.6	11	34.7	30	38.9	2	28.5	5	41.0	12	35.0	8	39.8	46	39.0
2001	215	37.6	8	31.9	30	35.9	2	36.5	1	64.0	22	36.6	8	36.4	45	36.5
2002	312	36.7	4	45.8	27	36.1	0	--	0	--	27	36.1	8	38.2	63	35.6
2003	265	37.0	5	34.2	27	39.1	2	44.0	0	--	24	35.8	6	34.3	70	37.1

Source of data: HIV Laboratory, Laboratories Branch, Ontario Ministry of Health and Long-Term Care

Table 1.9 Mean age at HIV diagnosis by year of diagnosis and selected exposure category, females, Ontario, 1985 to 2003

	IDU		Clotting factor		Transfusion		HIV-endemic		HR hetero		LR hetero	
Year	n	Mean	n	Mean	n	Mean	n	Mean	n	Mean	n	Mean
1985	105	33.1	5	25.8	1	28.0	6	25.7	4	34.5	0	--
1986	426	34.1	11	27.0	6	25.3	25	21.4	3	40.3	2	42.0
1987	760	33.8	18	30.6	11	30.7	39	24.7	21	50.1	9	41.3
1988	706	33.8	17	27.4	23	30.5	45	20.3	15	30.2	10	32.5
1989	789	34.6	22	28.4	41	29.9	25	28.6	9	39.7	9	35.9
1990	781	34.5	14	29.2	45	30.4	39	34.2	3	35.0	7	37.3
1991	385	34.7	7	27.9	22	30.7	13	28.4	0	--	7	32.6
1992	545	34.8	17	31.2	59	30.8	8	27.1	5	35.4	12	35.1
1993	431	35.4	26	31.5	39	31.2	9	39.0	8	36.1	12	38.0
1994	336	34.5	17	32.5	65	34.9	3	43.3	7	47.3	6	29.3
1995	350	34.5	19	35.0	50	33.8	4	56.2	5	42.8	9	38.7
1996	294	35.8	12	34.7	45	33.2	5	24.6	2	43.0	14	30.1
1997	234	35.4	9	30.9	37	37.3	3	40.7	3	31.7	9	35.7
1998	222	37.4	9	34.8	42	39.2	2	37.5	1	38.0	10	35.3
1999	229	36.5	8	34.2	44	36.4	1	42.0	3	36.3	10	40.3
2000	242	36.6	11	34.7	30	38.9	2	28.5	5	41.0	12	35.0
2001	215	37.6	8	31.9	30	35.9	2	36.5	1	64.0	22	36.6
2002	312	36.7	4	45.8	27	36.1	0	--	0	--	27	36.1
2003	265	37.0	5	34.2	27	39.1	2	44.0	0	--	24	35.8

Source of data: HIV Laboratory, Laboratories Branch, Ontario Ministry of Health and Long-Term Care

Table 1.10 Single and multiple sources of exposure among HIV diagnoses, Ontario, 1985 to 2003

	Number	%[1]
Men who have sex with men (MSM)	6,598	53.3
MSM/IDU	139	1.1
MSM/IDU/HIV-endemic	4	0.03
MSM/IDU/HIV-endemic/bisexual	1	0.01
MSM/IDU/bisexual	102	0.82
MSM/IDU/transfusion	4	0.03
MSM/blood product	10	0.08
MSM/HIV-endemic	17	0.14
MSM/HIV-endemic/bisexual	14	0.11
MSM/bisexual	1,551	12.5
MSM/transfusion	21	0.17
MSM and others	34	0.27
SUB-TOTAL	8,495	68.6
IDU	518	4.2
IDU/HIV-endemic	3	0.02
IDU/HIV-endemic/heterosexual	7	0.06
IDU/heterosexual	368	3.0
IDU and others	42	0.34
SUB-TOTAL	938	7.6
Blood product	223	1.8
Blood product/transfusion	15	0.12
Blood product and others	60	0.48
SUB-TOTAL	298	2.4
HIV-endemic	199	1.6
HIV-endemic/heterosexual	178	1.4
HIV-endemic and others	17	0.14
SUB-TOTAL	394	3.2
Heterosexual	1,707	13.8
Heterosexual/transfusion	26	0.21
SUB-TOTAL	1,733	14.0
Transfusion	157	1.3
Transfusion/perinatal	1	0.01
SUB-TOTAL	158	1.3
Perinatal[2]	339	2.7
Occupational	28	0.23
Unknown	12,351	
GRAND TOTAL	24,734	

1 Percent of cases with known source of exposure
2 Includes infants with maternal antibodies who are not infected

Source of data: HIV Laboratory, Laboratories Branch, Ontario Ministry of Health and Long-Term Care

Table 1.11 Number and proportion[1] of HIV diagnoses by exposure category and health region Ontario, 1985 to 2003

Exposure category	Northern		Ottawa		Eastern Other		Toronto		Central East Other		Central West		Southwest		Unknown[2]		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
MSM	86	32.6%	700	52.4%	131	40.2%	6,242	78.4%	195	43.9%	261	46.9%	398	57.7%	227	45.0%	8,240	68.2%
MSM-IDU	5	1.9%	34	2.5%	7	2.1%	151	1.9%	13	2.9%	9	1.6%	18	2.6%	20	4.0%	257	2.1%
IDU	87	33.0%	213	15.9%	96	29.4%	294	3.7%	47	10.6%	71	12.8%	41	5.9%	99	19.6%	948	7.8%
Clotting factor	17	6.4%	23	1.7%	22	6.7%	121	1.5%	9	2.0%	19	3.4%	64	9.3%	24	4.8%	299	2.5%
Transfusion	3	1.1%	27	2.0%	9	2.8%	83	1.0%	24	5.4%	20	3.6%	22	3.2%	10	2.0%	198	1.6%
HIV-endemic	7	2.7%	89	6.7%	6	1.8%	210	2.6%	21	4.7%	22	4.0%	15	2.2%	20	4.0%	390	3.2%
HR hetero	17	6.4%	44	3.3%	16	4.9%	181	2.3%	31	7.0%	44	7.9%	44	6.4%	28	5.6%	405	3.4%
LR hetero	30	11.4%	139	10.4%	32	9.8%	500	6.3%	90	20.3%	68	12.2%	64	9.3%	58	11.5%	981	8.1%
Perinatal[3]	12	4.5%	63	4.7%	6	1.8%	169	2.1%	10	2.3%	40	7.2%	21	3.0%	11	2.2%	332	2.7%
Other[4]	0	0.0%	5	0.37%	1	0.31%	7	0.09%	4	0.90%	2	0.36%	3	0.43%	7	1.4%	29	0.24%
Unknown	194		1,331		287		7,738		639		789		999		678		12,655	
Total	458	100.0%	2,668	100.0%	613	100.0%	15,696	100.0%	1,083	100.0%	1,345	100.0%	1,689	100.0%	1,182	100.0%	24,734	100.0%

1 Column percent of cases with known exposure category
2 Includes out of province
3 Includes infants with maternal antibodies who are not infected
4 Includes needlestick, acupuncture, tattoo, etc.

Source of data: HIV Laboratory, Laboratories Branch, Ontario Ministry of Health and Long-Term Care

Table 1.11a Number and proportion[1] of HIV diagnoses by exposure category and health region Ontario, 1985 to 2003

Exposure category	Northern		Ottawa		Eastern Other		Toronto		Central East Other		Central West		Southwest		Unk.[2]	Total
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	No.
MSM	86	1.1%	700	8.7%	131	1.6%	6,242	77.9%	195	2.4%	261	3.3%	398	5.0%	227	8,240
MSM-IDU	5	2.1%	34	14.3%	7	3.0%	151	63.7%	13	5.5%	9	3.8%	18	7.6%	20	257
IDU	87	10.2%	213	25.1%	96	11.3%	294	34.6%	47	5.5%	71	8.4%	41	4.8%	99	948
Clotting factor	17	6.2%	23	8.4%	22	8.0%	121	44.0%	9	3.3%	19	6.9%	64	23.3%	24	299
Transfusion	3	1.6%	27	14.4%	9	4.8%	83	44.1%	24	12.8%	20	10.6%	22	11.7%	10	198
HIV-endemic	7	1.9%	89	24.1%	6	1.6%	210	56.8%	21	5.7%	22	5.9%	15	4.1%	20	390
HR hetero	17	4.5%	44	11.7%	16	4.2%	181	48.0%	31	8.2%	44	11.7%	44	11.7%	28	405
LR hetero	30	3.3%	139	15.1%	32	3.5%	500	54.2%	90	9.8%	68	7.4%	64	6.9%	58	981
Perinatal[3]	12	3.7%	63	19.6%	6	1.9%	169	52.6%	10	3.1%	40	12.5%	21	6.5%	11	332
Other[4]	0	0.0%	5	22.7%	1	4.5%	7	31.8%	4	18.2%	2	9.1%	3	13.6%	7	29
Unknown	194	1.6%	1,331	11.1%	287	2.4%	7,738	64.6%	639	5.3%	789	6.6%	999	8.3%	678	12,655
Total	458	1.9%	2,668	11.3%	613	2.6%	15,696	66.6%	1,083	4.6%	1,345	5.7%	1,689	7.2%	1,182	24,734

1 Row percent of cases with known region
2 Includes out of province
3 Includes infants with maternal antibodies who are not infected
4 Includes needlestick, acupuncture, tattoo, etc.

Source of data: HIV Laboratory, Laboratories Branch, Ontario Ministry of Health and Long-Term Care

Table 1.12 Number and proportion[1] of HIV diagnoses by exposure category and health region Ontario, 2003

Exposure category	Northern		Ottawa		Eastern		Other		Toronto		Central East		Other		Central West		Southwest		Unknown[2]		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
MSM	4	25.0%	24	36.9%	7	38.9%	213	66.6%	4	12.1%	8	16.3%	6	31.6%	0	0.0%	266	51.1%				
MSM-IDU	0	0.0%	2	3.1%	0	0.0%	2	0.6%	1	3.0%	0	0.0%	0	0.0%	0	0.0%	5	0.96%				
IDU	6	37.5%	10	15.4%	7	38.9%	8	2.5%	2	6.1%	2	4.1%	1	5.3%	0	0.0%	36	6.9%				
Clotting factor	1	6.2%	1	1.54%	0	0.0%	0	0.0%	0	0.00%	0	0.0%	0	0.0%	0	0.0%	2	0.38%				
Transfusion	0	0.0%	0	0.0%	0	0.0%	1	0.31%	1	3.0%	1	2.0%	0	0.0%	0	0.0%	3	0.58%				
HIV-endemic	0	0.0%	6	9.2%	0	0.0%	27	8.4%	7	21.2%	5	10.2%	0	0.0%	1	100.0%	46	8.8%				
HR hetero	0	0.0%	1	1.5%	0	0.0%	7	2.2%	3	9.1%	3	6.1%	0	0.0%	0	0.0%	14	2.7%				
LR hetero	4	25.0%	13	20.0%	4	22.2%	57	17.8%	14	42.4%	18	36.7%	7	36.8%	0	0.0%	117	22.5%				
Perinatal[3]	1	6.2%	8	12.3%	0	0.0%	4	1.2%	0	0.0%	11	22.4%	4	21.1%	0	0.0%	28	5.4%				
Other[4]	0	0.0%	0	0.0%	0	0.0%	1	0.31%	1	3.0%	1	2.0%	1	5.3%	0	0.0%	4	0.77%				
Unknown	11		93		15		441		52		54		27		3		696					
Total	27	100.0%	158	100.0%	33	100.0%	761	100.0%	85	100.0%	103	100.0%	46	100.0%	4	100.0%	1,217	100.0%				

1 Column percent of cases with known source of exposure
2 Includes out of province
3 Includes infants with maternal antibodies who are not infected
4 Includes needlestick, acupuncture, tattoo, etc.

Source of data: HIV Laboratory, Laboratories Branch, Ontario Ministry of Health and Long-Term Care

Table 1.13 Number and proportion[1] of HIV diagnoses (adjusted[2]) by exposure category and health region Ontario, 1985 to 2003

Exposure category	Northern		Ottawa		Eastern Other		Toronto		Central East Other		Central West		Southwest		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
MSM	179	36.8%	1,238	43.9%	232	35.7%	12,293	74.9%	608	53.2%	668	47.2%	1,162	64.7%	16,382	66.2%
MSM-IDU	12	2.4%	163	5.8%	61	9.4%	530	3.2%	51	4.4%	101	7.1%	55	3.1%	973	3.9%
IDU	167	34.3%	527	18.7%	218	33.5%	697	4.2%	98	8.6%	220	15.5%	83	4.6%	2,010	8.1%
Clotting factor	22	4.6%	28	0.99%	24	3.6%	133	0.81%	10	0.88%	21	1.5%	68	3.8%	307	1.2%
Transfusion	6	1.2%	64	2.3%	16	2.4%	169	1.0%	55	4.8%	46	3.2%	39	2.2%	394	1.6%
HIV-endemic	13	2.6%	451	16.0%	20	3.0%	1,203	7.3%	105	9.2%	93	6.6%	137	7.6%	2,021	8.2%
HR hetero	30	6.1%	101	3.6%	32	5.0%	388	2.4%	93	8.2%	98	6.9%	122	6.8%	863	3.5%
LR hetero	43	8.8%	145	5.1%	35	5.3%	789	4.8%	103	9.0%	106	7.5%	94	5.2%	1,314	5.3%
Perinatal[3]	15	3.1%	65	2.3%	10	1.6%	176	1.1%	10	0.90%	41	2.9%	21	1.2%	339	1.4%
Other[4]	0	0.0%	36.04	1.3%	3	0.42%	46	0.28%	9	0.78%	23	1.6%	15	0.82%	131	0.53%
Total	486	100.0%	2,818	100.0%	651	100.0%	16,424	100.0%	1,142	100.0%	1,416	100.0%	1,796	100.0%	24,734	100.0%
Cumulative rate per 100,000	53.6		379.3		83.3		667.0		43.9		66.8		120.9		222.8	

1 Column percent
2 According to the proportion of known region, known exposure and results of the LES (see text for more details), thus, totals may differ due to rounding
3 Includes infants with maternal antibodies who are not infected
4 Includes needlestick, acupuncture, tattoo, etc.

Source of data: HIV Laboratory, Laboratories Branch, Ontario Ministry of Health and Long-Term Care; Statistics Canada (1996 census)

Table 1.13a Number and proportion[1] of HIV diagnoses (adjusted[2]) among males by exposure category and health region, Ontario, 1985 to 2003

Exposure category	Northern		Ottawa		Eastern		Other		Toronto		Central East		Other		Central West		Southwest		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
MSM	179	48.6%	1,238	55.8%	232	42.5%	12,293	84.1%	608	68.6%	668	58.2%	1,162	75.6%	16,382	76.8%				
MSM-IDU	12	3.2%	163	7.4%	61	11.2%	530	3.6%	51	5.7%	101	8.8%	55	3.6%	273	4.6%				
IDU	107	29.1%	385	17.4%	177	32.4%	457	3.1%	44	4.9%	173	15.1%	66	4.3%	1,410	6.6%				
Clotting factor	19	5.3%	23	1.0%	22	3.9%	116	0.79%	7	0.8%	17	1.5%	66	4.3%	271	1.3%				
Transfusion	0	0.0%	24	1.1%	12	2.2%	89	0.61%	32	3.6%	32	2.8%	23	1.5%	212	1.0%				
HIV-endemic	7	1.8%	205	9.3%	12	2.1%	502	3.4%	54	6.1%	50	4.3%	72	4.7%	901	4.2%				
HR hetero	10	2.7%	31	1.4%	5	0.9%	91	0.62%	20	2.2%	10	0.91%	13	0.84%	180	0.84%				
LR hetero	29	7.9%	102	4.6%	19	3.5%	424	2.9%	55	6.2%	63	5.5%	63	4.1%	755	3.5%				
Perinatal[3]	5	1.4%	32	1.4%	4	0.77%	94	0.64%	7	0.78%	24	2.1%	9	0.59%	175	0.82%				
Other[4]	0	0.0%	14	0.61%	3	0.50%	24	0.16%	9	1.0%	10	0.90%	7	0.48%	67	0.31%				
Total	369	100.0%	2,217	100.0%	547	100.0%	14,619	100.0%	886	100.0%	1,149	100.0%	1,538	100.0%	21,325	100.0%				
Cumulative rate per 100,000	81.3		607.7		141.4		1223.3		68.5		109.9		210.2		389.8					

1 Column percent
2 According to the proportion of known region, known exposure and results of the LES (see text for more details), thus, totals may differ due to rounding
3 Includes infants with maternal antibodies who are not infected
4 Includes needlestick, acupuncture, tattoo, etc.

Source of data: HIV Laboratory, Laboratories Branch, Ontario Ministry of Health and Long-Term Care; Statistics Canada (1996 census)

Table 1.13b Number and proportion[1] of HIV diagnoses (adjusted[2]) among females by exposure category and health region, Ontario, 1985 to 2003

Exposure category	Northern		Ottawa		Eastern Other		Toronto		Central East Other		Central West		Southwest		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
MSM	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
MSM-IDU	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
IDU	60	50.5%	142	23.6%	40	39.1%	241	13.3%	54	21.3%	47	17.5%	17	6.4%	600	17.6%
Clotting factor	3	2.5%	5	0.8%	2	1.9%	18	1.0%	3	1.0%	4	1.5%	2	0.8%	37	1.1%
Transfusion	6	4.8%	40	6.7%	4	3.7%	80	4.4%	23	9.0%	14	5.2%	16	6.1%	182	5.3%
HIV-endemic	6	5.0%	246	40.8%	8	7.9%	702	38.9%	51	20.0%	43	16.1%	65	25.0%	1,120	32.9%
HR hetero	20	16.6%	70	11.7%	27	26.3%	297	16.4%	74	28.8%	87	32.6%	109	42.1%	683	20.0%
LR hetero	14	11.8%	43	7.1%	16	15.1%	365	20.2%	48	18.7%	43	16.2%	31	12.0%	559	16.4%
Perinatal[3]	10	8.6%	33	5.6%	6	6.0%	82	4.5%	3	1.3%	17	6.3%	12	4.8%	164	4.8%
Other[4]	0	0.0%	22	3.7%	0	0.0%	22	1.2%	0	0.0%	12	4.6%	7	2.8%	64	1.9%
Total	118	100.0%	601	100.0%	103	100.0%	1,805	100.0%	256	100.0%	267	100.0%	258	100.0%	3,409	100.0%
Cumulative rate per 100,000	25.9		159.0		26.3		142.4		19.6		24.9		34.2		60.5	

1 Column percent
2 According to the proportion of known region, known exposure and results of the LES (see text for more details), thus, totals may differ due to rounding
3 Includes infants with maternal antibodies who are not infected
4 Includes needlestick, acupuncture, tattoo, etc.

Source of data: HIV Laboratory, Laboratories Branch, Ontario Ministry of Health and Long-Term Care; Statistics Canada (1996 census)

Table 1.14 Number and proportion[1] of HIV diagnoses (adjusted[2]) by exposure category and health region Ontario, 2003

Exposure category	Northern		Ottawa		Eastern Other		Toronto		Central East Other		Central West		Southwest		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
MSM	8	31.3%	53	33.5%	11	34.0%	420	55.1%	20	23.7%	15	14.2%	19	41.0%	547	45.0%
MSM-IDU	0	0.0%	5	3.42%	2	5.4%	11	1.4%	3	3.3%	2	1.5%	0	0.61%	23	1.9%
IDU	11	41.9%	22	13.9%	15	46.8%	18	2.3%	4	5.3%	4	3.5%	2	3.6%	77	6.3%
Clotting factor	1	3.7%	1	0.81%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	2	0.19%
Transfusion	0	0.0%	0	0.0%	0	0.0%	3	0.37%	3	4.1%	5	5.12%	0	0.83%	12	0.98%
HIV-endemic	0	0.0%	41	25.8%	1	1.9%	174	22.9%	25	28.8%	22	21.6%	3	5.8%	266	21.8%
HR hetero	0	0.0%	3	2.0%	0	0.0%	20	2.7%	9	10.8%	5	4.5%	1	1.5%	38	3.1%
LR hetero	5	19.4%	24	15.1%	4	11.9%	108	14.1%	19	21.9%	30	28.8%	15	33.6%	205	16.8%
Perinatal[3]	1	3.7%	8	5.0%	0	0.0%	4	0.52%	0	0.0%	11	10.6%	4	8.7%	28	2.3%
Other[4]	0	0.0%	1	0.37%	0	0.0%	4	0.59%	2	2.1%	10	10.2%	2	4.32%	19	1.6%
Total	27	100.0%	159	100.0%	33	100.0%	763	100.0%	85	100.0%	103	100.0%	46	100.0%	1,217	100.0%
Cumulative rate per 100,000	3.1		19.3		4.1		29.2		2.6		4.4		3.0		9.9	

1 Column percent
2 According to the proportion of known region, known exposure and results of the LES (see text for more details), thus, totals may differ due to rounding
3 Includes infants with maternal antibodies who are not infected
4 Includes needlestick, acupuncture, tattoo, etc.

Source of data: HIV Laboratory, Laboratories Branch, Ontario Ministry of Health and Long-Term Care; Statistics Canada (1999 population estimates)

Table 1.14a Number and proportion[1] of HIV diagnoses (adjusted[2]) among males by exposure category and health region Ontario, 2003

Exposure category	Northern		Ottawa		Eastern Other		Toronto		Central East Other		Central West		Southwest		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
MSM	8	36.7%	53	49.2%	11	46.9%	420	75.4%	20	34.5%	15	24.5%	19	57.2%	546	63.3%
MSM-IDU	0	0.0%	5	5.0%	2	7.4%	11	2.0%	3	4.81%	2	2.6%	0	0.86%	23	2.6%
IDU	10	44.8%	13	12.5%	9	38.7%	14	2.6%	4	6.7%	1	1.6%	2	5.1%	54	6.3%
Clotting factor	1	4.34%	1	1.2%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	2	0.26%
Transfusion	0	0.0%	0	0.0%	0	0.0%	1	0.09%	0	0.0%	0	0.0%	0	1.2%	1	0.10%
HIV-endemic	0	0.0%	13	12.2%	0	0.0%	55	9.9%	14	23.2%	14	24.1%	3	8.0%	99	11.5%
HR hetero	0	0.0%	3	3.0%	0	0.0%	8	1.4%	2	3.8%	0	0.82%	1	2.1%	15	1.7%
LR hetero	3	14.1%	13	11.7%	2	7.0%	43	7.8%	14	24.0%	13	21.4%	4	13.4%	92	10.7%
Perinatal[3]	0	0.0%	5	4.6%	0	0.0%	1	0.18%	0	0.0%	9	15.0%	2	6.1%	17	2.0%
Other[4]	0	0.0%	1	0.55%	0	0.0%	3	0.58%	2	3.0%	6	10.1%	2	6.0%	14	1.6%
Total	23	100.0%	108	100.0%	24	100.0%	557	100.0%	59	100.0%	60	100.0%	33	100.0%	864	100.0%
Cumulative rate per 100,000	5.4		26.6		6.0		43.7		3.7		5.2		4.3		14.3	

1 Column percent
2 According to the proportion of known region, known exposure and results of the LES (see text for more details), thus, totals may differ due to rounding
3 Includes infants with maternal antibodies who are not infected
4 Includes needlestick, acupuncture, tattoo, etc.

Source of data: HIV Laboratory, Laboratories Branch, Ontario Ministry of Health and Long-Term Care; Statistics Canada (2001 population estimates)

Table 1.14b Number and proportion[1] of HIV diagnoses (adjusted[2]) among females by exposure category and health region Ontario, 2003

Exposure category	Northern		Ottawa		Eastern Other		Toronto		Central East Other		Central West		Southwest		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
MSM	0	0.0%		0.0%	0	0.0%		0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
MSM-IDU	0	0.0%		0.0%	0	0.0%		0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
IDU	1	25.0%	9	16.9%	6	68.1%	3	1.7%	1	2.2%	3	6.3%	0	0.0%	23	6.4%
Clotting factor	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Transfusion	0	0.0%	0	0.0%	0	0.0%	2	1.1%	3	13.1%	5	12.2%	0	0.0%	11	3.1%
HIV-endemic	0	0.0%	28	54.7%	1	7.1%	119	57.9%	11	40.9%	8	18.1%	0	0.0%	166	47.2%
HR hetero	0	0.0%	0	0.0%	0	0.0%	12	6.0%	7	26.2%	4	9.5%	0	0.0%	24	6.7%
LR hetero	2	50.0%	11	22.4%	2	24.7%	64	31.3%	5	17.5%	17	39.0%	11	84.7%	113	31.9%
Perinatal[3]	1	25.0%	3	5.9%	0	0.0%	3	1.5%	0	0.0%	2	4.6%	2	15.3%	11	3.1%
Other[4]	0	0.0%	0	0.0%	0	0.0%	1	0.60%	0	0.0%	4	10.3%	0	0.0%	6	1.6%
Total	4	100.0%	51	100.0%	9	100.0%	206	100.0%	27	100.0%	43	100.0%	13	100.0%	353	100.0%
Cumulative rate per 100,000	0.9		12.1		2.2		15.4		1.6		3.7		1.7		5.7	

1 Column percent
2 According to the proportion of known region, known exposure and results of the LES (see text for more details), thus, totals may differ due to rounding
3 Includes infants with maternal antibodies who are not infected
4 Includes needlestick, acupuncture, tattoo, etc.

Source of data: HIV Laboratory, Laboratories Branch, Ontario Ministry of Health and Long-Term Care; Statistics Canada (2001 population estimates)

Table 1.15 Number of HIV diagnoses and rate (per 100,000) by public health unit and sex, Ontario, 1985 to 2003

	Males		Females		Unknown	Total	
Public health unit	**Number**	**Rate**	**Number**	**Rate**	**Number**	**Number**	**Rate**
Algoma	25	38.4	12	18.1	4	41	31.2
Muskoka	29	62.5	7	15.0	1	37	39.8
North Bay	44	102.9	4	9.0	1	49	56.3
Northwestern	24	51.9	8	17.8	4	36	39.4
Porcupine	10	20.6	5	10.6	4	19	19.8
Sudbury	115	111.5	36	34.5	13	164	79.0
Thunder Bay	77	94.3	29	35.7	1	107	65.7
Timiskaming	4	20.7	1	5.1	0	5	12.9
Northern	***328***		***102***		***28***	***458***	
Ottawa	***2,042***	***559.7***	***535***	***141.5***	***91***	***2,668***	***359.1***
Eastern Ontario	113	118.7	22	22.8	7	142	74.1
Hastings-Prince Edward	39	53.1	7	9.3	0	46	30.9
Kingston-Frontenac	263	292.8	47	51.7	41	351	194.2
Leeds-Grenville	46	58.1	8	9.8	0	54	33.7
Renfrew	16	32.4	4	8.0	0	20	20.2
Eastern Other	***477***		***88***		***48***	***613***	
Toronto	***13,377***	***1119.3***	***1599***	***126.6***	***720***	***15,696***	***637.4***
Durham	128	54.5	30	12.6	7	165	34.9
Haliburton	24	28.5	5	5.9	1	30	17.7
Peel	455	103.5	134	30.3	18	607	68.8
Peterborough	43	69.9	13	19.9	1	57	45.0
Simcoe	33	19.6	10	5.8	9	52	15.3
York Region	131	43.1	37	12.0	4	172	28.1
Central East Other	***814***		***229***		***40***	***1,083***	
Brant	30	49.5	11	17.5	0	41	33.2
Haldimand	13	24.5	6	11.3	1	20	18.8
Halton	136	78.4	19	10.7	1	156	44.5
Hamilton-Wentworth	497	210.2	119	48.5	27	643	133.5
Niagara	166	81.8	40	18.9	13	219	52.8
Waterloo	108	52.1	26	12.3	2	136	32.5
Wellington-Dufferin	102	91.4	25	22.3	3	130	116.5
Central West	***1,052***		***246***		***47***	***1,345***	
Bruce Grey-Owen Sound	31	39.6	3	3.8	0	34	21.5
Elgin-St Thomas	14	34.8	6	14.6	0	20	24.6
Huron	9	29.3	2	6.4	1	12	19.4
Kent-Chatham	34	61.3	2	3.5	0	36	32.0
Lambton	16	24.3	4	5.9	1	21	15.8
Middlesex-London	913	463.1	163	79.0	30	1,106	274.1
Oxford	13	26.3	3	5.9	0	16	16.0
Perth	21	57.2	2	5.3	0	23	31.0
Windsor-Essex	351	197.1	51	27.8	19	421	116.5
Southwest	***1,402***		***236***		***51***	***1,689***	
unknown	**926**		**208**		**48**		
TOTAL	**20,418**		**3,243**		**1,073**	**24,734**	

Total includes 926 cases among males, 208 among females,48 unknown sex for whom public health unit was not stated

Source of data: HIV Laboratory, Laboratories Branch, Ontario Ministry of Health and Long-Term Care;
Statistics Canada (1996 census)

Table 1.16 Number and proportion[1] of HIV diagnoses by year of test and type of identifier, Ontario, 1985 to 2003

	Nominal		Coded		Anonymous		Unknown		Total
Year	Number	%	Number	%	Number	%	Number	%	Number
1985	277	82.7%	57	17.0%	0	0.0%	1	0.30%	335
1986	742	54.4%	623	45.6%	0	0.0%	0	0.0%	1,365
1987	803	51.8%	747	48.2%	0	0.0%	0	0.0%	1,550
1988	643	44.2%	809	55.6%	0	0.0%	2	0.14%	1,454
1989	672	39.3%	1,034	60.5%	0	0.0%	4	0.23%	1,710
1990	762	36.4%	1,312	62.7%	0	0.0%	18	0.86%	2,092
1991	405	22.0%	673	36.6%	0	0.0%	761	41.4%	1,839
1992	849	46.6%	770	42.2%	204	11.2%	0	0.0%	1,823
1993	740	49.3%	627	41.8%	133	8.9%	0	0.0%	1,500
1994	721	53.6%	529	39.3%	95	7.1%	0	0.0%	1,345
1995	668	49.1%	570	41.9%	122	9.0%	0	0.0%	1,360
1996	561	52.0%	411	38.1%	105	9.7%	1	0.09%	1,078
1997	501	52.1%	358	37.3%	101	10.5%	1	0.10%	961
1998	572	57.5%	327	32.9%	92	9.2%	4	0.40%	995
1999	522	56.6%	305	33.1%	94	10.2%	1	0.11%	922
2000	567	60.4%	259	27.6%	105	11.2%	7	0.75%	938
2001	640	62.9%	260	25.6%	108	10.6%	9	0.88%	1,017
2002	816	66.2%	308	25.0%	108	8.8%	1	0.08%	1,233
2003	861	70.7%	242	19.9%	112	9.2%	2	0.16%	1,217
Total	12,322	49.8%	10,221	41.3%	1,379	5.6%	812	3.3%	24,734

1 Row percent
2 Total includes 1,003 HIV-positives among unknown sex, of whom 290 tested nominally, 627 coded, 12 anonymously and 74 unknown

Source of data: HIV Laboratory, Laboratories Branch, Ontario Ministry of Health and Long-Term Care

Table 1.17 Number and proportion[1] of HIV diagnoses among males by year of test and type of identifier, Ontario, 1985 to 2003

	Nominal		Coded		Anonymous		Unknown		Total
Year	Number	%	Number	%	Number	%	Number	%	Number
1985	269	82.5%	56	17.2%	0	0.0%	1	0.31%	326
1986	722	56.1%	565	43.9%	0	0.0%	0	0.0%	1,287
1987	767	52.4%	697	47.6%	0	0.0%	0	0.0%	1,464
1988	575	43.1%	756	56.7%	0	0.0%	2	0.15%	1,333
1989	593	38.4%	946	61.3%	0	0.0%	4	0.26%	1,543
1990	673	36.7%	1,144	62.4%	0	0.0%	15	0.82%	1,832
1991	320	20.6%	589	38.0%	0	0.0%	641	41.4%	1,550
1992	697	45.2%	651	42.2%	193	12.5%	0	0.0%	1,541
1993	607	48.4%	523	41.7%	124	9.9%	0	0.0%	1,254
1994	556	52.3%	422	39.7%	86	8.1%	0	0.0%	1,064
1995	518	48.0%	454	42.0%	108	10.0%	0	0.0%	1,080
1996	425	51.2%	315	38.0%	89	10.7%	1	0.12%	830
1997	356	50.1%	267	37.6%	87	12.2%	1	0.14%	711
1998	424	56.9%	242	32.5%	79	10.6%	0	0.0%	745
1999	385	54.3%	249	35.1%	75	10.6%	0	0.0%	709
2000	401	58.5%	195	28.4%	90	13.1%	0	0.0%	686
2001	437	59.6%	207	28.2%	89	12.1%	0	0.0%	733
2002	532	60.6%	255	29.0%	91	10.4%	0	0.0%	878
2003	559	65.6%	200	23.5%	93	10.9%	0	0.0%	852
Total	9,816	48.1%	8,733	42.8%	1,204	5.9%	665	3.3%	20,418

1 Row percent

Source of data: HIV Laboratory, Laboratories Branch, Ontario Ministry of Health and Long-Term Care

Table 1.18 Number and proportion[1] of HIV diagnoses among females by year of test and type of identifier, Ontario, 1985 to 2003

	Nominal		Coded		Anonymous		Unknown		Total
Year	Number	%	Number	%	Number	%	Number	%	Number
1985	5	83.3%	1	16.7%	0	0.0%	0	0.0%	6
1986	20	74.1%	7	25.9%	0	0.0%	0	0.0%	27
1987	28	75.7%	9	24.3%	0	0.0%	0	0.0%	37
1988	66	72.5%	25	27.5%	0	0.0%	0	0.0%	91
1989	73	64.6%	40	35.4%	0	0.0%	0	0.0%	113
1990	79	47.6%	86	51.8%	0	0.0%	1	0.60%	166
1991	58	35.6%	45	27.6%	0	0.0%	60	36.8%	163
1992	104	63.4%	51	31.1%	9	5.5%	0	0.0%	164
1993	97	55.4%	70	40.0%	8	4.6%	0	0.0%	175
1994	136	62.1%	74	33.8%	9	4.1%	0	0.0%	219
1995	132	59.7%	77	34.8%	12	5.4%	0	0.0%	221
1996	111	59.4%	61	32.6%	15	8.0%	0	0.0%	187
1997	122	65.6%	52	28.0%	12	6.5%	0	0.0%	186
1998	125	68.3%	46	25.1%	12	6.6%	0	0.0%	183
1999	122	68.5%	39	21.9%	17	9.6%	0	0.0%	178
2000	157	77.3%	32	15.8%	14	6.9%	0	0.0%	203
2001	197	77.9%	37	14.6%	19	7.5%	0	0.0%	253
2002	276	84.9%	35	10.8%	14	4.3%	0	0.0%	325
2003	297	85.8%	30	8.7%	19	5.5%	0	0.0%	346
Total	2,205	68.0%	817	25.2%	160	4.9%	61	1.9%	3,243

1 Row percent

Source of data: HIV Laboratory, Laboratories Branch, Ontario Ministry of Health and Long-Term Care

Table 1.19 Number of HIV-positive tests (p), number tested (n)[1] and HIV positivity rates (%) by exposure category and year of HIV diagnosis, Ontario, 1992 to 2003[2]

Exposure category	Year of diagnosis																	
	1993			1994			1995			1996			1997			1998		
	p	n	%	p	n	%	p	n	%	p	n	%	p	n	%	p	n	%
MSM	454	8,524	5.3%	346	8,245	4.2%	359	8,946	4.0%	311	9,040	3.4%	246	8,629	2.9%	236	8,282	2.8%
MSM-IDU	26	464	5.6%	18	446	4.0%	19	441	4.3%	12	462	2.6%	9	427	2.1%	10	439	2.3%
IDU	59	6,343	0.93%	88	5,608	1.6%	75	6,128	1.2%	71	6,456	1.1%	55	6,289	0.87%	57	6,707	0.85%
Clotting factor	16	10,284	0.16%	6	9,967	0.06%	10	5,462	0.18%	6	3,615	0.17%	5	1,770	0.28%	2	1,514	0.13%
Transfusion	14	14,831	0.09%	12	17,198	0.07%	9	8,662	0.10%	7	5,233	0.13%	8	2,794	0.29%	7	2,940	0.24%
HIV-endemic	18	938	1.9%	13	865	1.5%	19	929	2.0%	26	948	2.7%	12	811	1.5%	19	929	2.0%
HR hetero	42	7,745	0.54%	30	7,180	0.42%	29	8,473	0.34%	25	9,663	0.26%	33	7,848	0.42%	19	7,158	0.27%
LR hetero	67	56,401	0.12%	64	55,977	0.11%	79	66,233	0.12%	70	76,350	0.09%	73	73,615	0.10%	74	76,280	0.10%
Perinatal[3]	16	76	21.1%	33	138	23.9%	25	133	18.8%	34	140	24.3%	10	63	15.9%	24	72	33.3%
Other[4]	0	782	0.0%	3	1,031	0.29%	2	4,525	0.04%	3	6,628	0.05%	1	6,199	0.02%	3	7,221	0.04%
Unknown	788	155,434	0.51%	732	143,716	0.51%	734	143,138	0.51%	513	161,157	0.32%	509	160,383	0.32%	544	175,618	0.31%
Total	1,500	261,822	0.57%	1,345	250,371	0.54%	1,360	253,070	0.54%	1,078	279,692	0.39%	961	268,828	0.36%	995	287,160	0.35%

	1999			2000			2001			2002			2003			TOTAL		
	p	n	%	p	n	%	p	n	%	p	n	%	p	n	%	p	n	%
MSM	239	8,076	3.0%	251	8,297	3.0%	222	8,569	2.6%	316	9,247	3.4%	266	9,155	2.9%	3,817	103,358	3.7%
MSM-IDU	8	480	1.7%	13	494	2.6%	8	438	1.8%	4	400	1.0%	5	381	1.3%	152	5,207	2.9%
IDU	69	6,434	1.1%	42	6,209	0.68%	36	6,052	0.59%	39	5,712	0.68%	36	5,473	0.66%	710	73,269	1.0%
Clotting factor	1	858	0.12%	2	585	0.34%	2	509	0.39%	0	492	0.0%	2	404	0.50%	67	39,192	0.17%
Transfusion	5	2,626	0.19%	9	1,727	0.52%	4	1,579	0.25%	3	1,461	0.21%	3	1,193	0.25%	91	62,061	0.15%
HIV-endemic	17	964	1.8%	30	1,060	2.8%	36	1,130	3.2%	47	1,228	3.8%	46	1,253	3.7%	306	12,102	2.5%
HR hetero	22	5,815	0.38%	19	5,186	0.37%	24	4,849	0.49%	25	4,638	0.54%	14	4,173	0.34%	307	79,228	0.39%
LR hetero	79	76,543	0.10%	76	73,267	0.10%	97	75,889	0.13%	110	80,460	0.14%	117	78,345	0.15%	943	826,882	0.11%
Perinatal[3]	15	69	21.7%	30	109	27.5%	30	88	34.1%	34	110	30.9%	28	68	41.2%	286	1,124	25.4%
Other[4]	2	9,079	0.02%	1	9,487	0.01%	3	10,396	0.03%	5	11,464	0.04%	4	10,773	0.04%	27	78,201	0.03%
Unknown	465	167,538	0.28%	465	155,829	0.30%	555	170,002	0.33%	650	221,541	0.29%	696	235,415	0.30%	7,683	2,042,058	0.38%
Total	922	278,482	0.33%	938	262,250	0.36%	1,017	279,501	0.36%	1,233	336,753	0.37%	1,217	346,633	0.35%	14,389	3,322,682	0.43%

1 Persons identified as having had more than one test within the same year are counted only once
2 Only data from 1993 to 2003 are shown due to lack of space but total reflects numbers from 1992 to 2003
Includes infants with maternal antibodies who are not infected
3 Includes needlestick, acupuncture, tattoo, etc.
Source of data: HIV Laboratory, Laboratories Branch, Ontario Ministry of Health and Long-Term Care

Table 1.20 Number of HIV-positive tests (p), number tested (n)[1] and HIV positivity rates (%) (adjusted[2]) by exposure category and year of HIV diagnosis, Ontario, 1992 to 2003[3]

Exposure category	Year of diagnosis																	
	1993			1994			1995			1996			1997			1998		
	p	n	%	p	n	%	p	n	%	p	n	%	p	n	%	p	n	%
MSM	960	19,584	4.9%	735	18,250	4.0%	798	19,617	4.1%	605	20,567	2.9%	516	20,113	2.6%	493	19,180	2.6%
MSM-IDU	80	1,377	5.8%	74	1,282	5.8%	67	1,304	5.1%	44	1,377	3.2%	35	1,331	2.6%	46	1,499	3.1%
IDU	120	18,363	0.66%	195	15,887	1.2%	150	17,476	0.86%	138	19,577	0.70%	122	19,360	0.63%	138	20,717	0.67%
Clotting factor	18	26,702	0.07%	6	24,295	0.03%	10	12,611	0.08%	6	8,732	0.07%	5	4,786	0.11%	2	4,302	0.05%
Transfusion	28	31,477	0.09%	29	34,205	0.08%	19	18,093	0.10%	14	12,242	0.12%	17	7,193	0.24%	21	7,413	0.29%
HIV-endemic	112	5,173	2.2%	113	4,608	2.5%	119	4,739	2.5%	108	5,171	2.1%	103	5,441	1.9%	112	6,536	1.7%
HR hetero	80	22,864	0.35%	66	20,877	0.32%	66	23,674	0.28%	44	27,675	0.16%	62	24,375	0.25%	47	23,874	0.20%
LR hetero	79	129,388	0.06%	80	123,815	0.06%	98	141,257	0.07%	77	165,033	0.05%	82	167,361	0.05%	99	182,050	0.05%
Perinatal[4]	20	178	11.2%	33	312	10.7%	25	291	8.6%	34	320	10.6%	11	156	6.9%	25	175	14.3%
Other[5]	3	6,715	0.05%	13	6,840	0.19%	8	14,007	0.06%	9	18,999	0.05%	8	18,712	0.04%	10	21,413	0.05%
Total	1,501	261,823	0.57%	1,345	250,371	0.54%	1,360	253,070	0.54%	1,078	279,692	0.39%	961	268,828	0.36%	994	287,159	0.35%
	1999			2000			2001			2002			2003			TOTAL		
	p	n	%	p	n	%	p	n	%	p	n	%	p	n	%	p	n	%
MSM	458	18,238	2.5%	471	18,987	2.5%	469	20,320	2.3%	605	24,348	2.5%	547	25,075	2.2%	7,941	247,972	3.2%
MSM-IDU	31	1,802	1.7%	37	1,830	2.0%	28	1,578	28.3	20	456	20.2	23	427	22.9	571	15,577	3.7%
IDU	141	19,293	0.73%	95	19,019	0.50%	90	19,279	0.47%	81	19,997	0.41%	77	20,608	0.37%	1,530	231,061	0.66%
Clotting factor	1	2,469	0.05%	2	1,618	0.14%	2	1,437	0.15%	0	1,347	0.02%	2	1,237	0.18%	71	103,425	0.07%
Transfusion	13	6,826	0.19%	18	4,622	0.38%	11	4,536	0.25%	7	4,948	0.14%	12	4,639	0.26%	214	142,115	0.15%
HIV-endemic	106	6,663	1.6%	144	6,789	2.1%	194	7,308	2.7%	236	9,706	2.4%	266	10,631	2.5%	1,720	79,681	2.2%
HR hetero	47	20,099	0.23%	43	18,588	0.23%	54	18,679	0.29%	56	19,357	0.29%	38	19,002	0.20%	667	262,110	0.25%
LR hetero	99	178,425	0.06%	90	165,494	0.05%	122	177,838	0.07%	176	228,786	0.08%	205	237,535	0.09%	1,259	2,012,686	0.06%
Perinatal[4]	16	165	9.5%	30	260	11.5%	30	201	14.9%	34	210	16.2%	28	115	24.2%	293	2,582	11.3%
Other[5]	11	24,502	0.05%	7	25,043	0.03%	15	28,326	0.05%	17	27,597	0.06%	19	27,363	0.07%	124	225,474	0.05%
Total	923	278,483	0.33%	938	262,250	0.36%	1,017	279,501	0.36%	1,233	336,753	0.37%	1,217	346,633	0.35%	14,389	3,322,682	0.43%

1 Persons identified as having had more than one test within the same year are counted only once
2 According to the proportion of known exposure that year and results of the LES (see text for more details), thus, totals may differ due to rounding
3 Only data from 1993 to 2003 are shown due to lack of space but total reflects numbers from 1992 to 2003
4 Includes infants with maternal antibodies who are not infected
5 Includes needlestick, acupuncture, tattoo, etc.
Source of data: HIV Laboratory, Laboratories Branch, Ontario Ministry of Health and Long-Term Care

Table 1.21 Number of HIV-positive tests (p), number tested (n)[1] and HIV positivity rates (%) by exposure category and health region, Ontario, 1992 to 2003

Exposure category	Region																											
	Northern			Ottawa			Eastern Other			Toronto			Central East Other			Central West			Southwest			Unknown			Total		
TOTAL[2]	**p**	**n**	**%**	**p**	**n**	**%**	**p**	**n**	**%**	**p**	**n**	**%**	**p**	**n**	**%**	**p**	**n**	**%**	**p**	**n**	**%**	**p**	**n**	**%**	**p**	**n**	**%**
MSM	50	2,742	1.8%	348	14,241	2.4%	70	3,055	2.3%	2,852	54,773	5.2%	97	5,085	1.9%	142	6,373	2.2%	149	6,436	2.3%	109	10,653	1.0%	3,817	103,358	3.7%
MSM-IDU	5	284	1.8%	26	464	5.6%	5	574	0.9%	80	1,329	6.0%	9	463	1.9%	6	564	1.1%	11	442	2.5%	10	1,087	0.92%	152	5,207	2.9%
IDU	78	6,343	1.2%	187	6,808	2.7%	77	9,623	0.80%	182	14,540	1.3%	35	6,868	0.51%	53	9,168	0.58%	29	6,690	0.43%	69	13,229	0.52%	710	73,269	1.0%
Clotting factor	5	3,565	0.14%	6	5,036	0.12%	2	3,056	0.07%	32	9,451	0.34%	4	6,011	0.07%	6	4,949	0.12%	3	3,598	0.08%	9	3,526	0.26%	67	39,192	0.17%
Transfusion	2	5,928	0.03%	13	5,377	0.24%	4	5,400	0.07%	39	12,659	0.31%	12	10,908	0.11%	9	9,379	0.10%	5	7,370	0.07%	7	5,040	0.14%	91	62,061	0.15%
HIV-endemic	6	567	1.1%	52	2,395	2.2%	6	650	0.92%	178	4,395	4.1%	19	1,196	1.6%	18	1,131	1.6%	10	837	1.2%	17	931	1.8%	306	12,102	2.5%
HR hetero	16	8,137	0.20%	34	6,597	0.52%	13	5,528	0.24%	135	17,771	0.76%	25	10,646	0.23%	40	11,252	0.36%	21	8,433	0.25%	23	10,864	0.21%	307	79,228	0.39%
LR hetero	29	52,256	0.06%	136	112,030	0.12%	32	55,746	0.06%	482	219,371	0.22%	84	124,194	0.07%	65	95,046	0.07%	64	92,187	0.07%	51	76,052	0.07%	943	826,882	0.11%
Perinatal[3]	12	85	14.1%	57	162	35.2%	6	57	10.5%	138	426	32.4%	8	96	8.3%	37	152	24.3%	17	74	23.0%	11	72	15.3%	286	1,124	25.4%
Other[4]	0	8,043	0.0%	5	7,048	0.07%	1	7,403	0.01%	7	18,821	0.04%	4	9,371	0.04%	2	10,094	0.02%	3	12,708	0.02%	5	4,713	0.11%	27	78,201	0.03%
Unknown	141	78,378	0.18%	962	186,239	0.52%	211	109,564	0.19%	4,426	835,370	0.53%	450	314,193	0.14%	503	218,364	0.23%	620	160,743	0.39%	370	139,207	0.27%	7,683	2,042,058	0.38%
Total	344	166,328	0.21%	1,826	346,397	0.53%	427	200,656	0.21%	8,551	1,188,906	0.72%	747	489,031	0.15%	881	366,472	0.24%	932	299,518	0.31%	681	265,374	0.26%	14,389	3,322,682	0.43%

1 Persons identified as having had more than one test within the same year are counted only once
2 Total includes 595 HIV-positive tests (p) and 103,720 tests (n) of unknown sex, which represent 5.4% and 4.4% of the totals, respectively
3 Perinatal exposure includes infants with maternal antibodies who are not infected
4 Other exposure Includes needlestick, acupuncture, tattoo, etc.

Source of data: HIV Laboratory, Laboratories Branch, Ontario Ministry of Health and Long-Term Care

Table 1.22 Number of HIV-positive tests (p), number tested (n)[1] and HIV positivity rates (%) (adjusted[2]) by exposure category and health region, Ontario, 1992 to 2003

Exposure category	Region																							
	Northern			Ottawa			Eastern Other			Toronto			Central East Other			Central West			Southwest			Total		
TOTAL	**p**	**n**	**%**	**p**	**n**	**%**	**p**	**n**	**%**	**p**	**n**	**%**	**p**	**n**	**%**	**p**	**n**	**%**	**p**	**n**	**%**	**p**	**n**	**%**
MSM	97	8,714	1.1%	649	23,770	2.7%	126	8,863	1.4%	5,802	131,888	4.4%	352	35,113	1.0%	359	24,434	1.5%	554	15,191	3.6%	7,941	247,972	3.2%
MSM-IDU	12	622	1.9%	106	1,289	8.2%	37	2,857	1.3%	283	4,779	5.9%	36	3,327	1.1%	63	1,640	3.9%	34	1,064	3.2%	571	15,577	3.7%
IDU	152	14,227	1.1%	466	24,350	1.9%	181	26,769	0.68%	439	61,609	0.71%	70	61,447	0.11%	162	23,998	0.68%	60	18,662	0.32%	1,530	231,061	0.66%
Clotting factor	6	8,092	0.08%	8	10,638	0.08%	3	4,789	0.06%	39	33,075	0.12%	5	24,765	0.02%	6	13,195	0.05%	4	8,871	0.04%	71	103,425	0.07%
Transfusion	4	6,809	0.06%	32	13,438	0.24%	9	11,607	0.08%	97	32,700	0.30%	34	39,854	0.08%	25	18,359	0.13%	14	19,349	0.07%	214	142,115	0.15%
HIV-endemic	9	2,800	0.33%	347	3,958	8.8%	20	1,539	1.3%	1,046	40,529	2.6%	98	15,867	0.62%	77	9,195	0.84%	123	5,794	2.1%	1,720	79,681	2.2%
HR hetero	28	19,994	0.14%	83	21,716	0.38%	28	16,065	0.18%	301	71,814	0.42%	77	82,055	0.09%	77	28,714	0.27%	73	21,752	0.33%	667	262,110	0.25%
LR hetero	42	103,085	0.04%	143	245,976	0.06%	35	121,793	0.03%	751	847,392	0.09%	97	230,833	0.04%	97	254,248	0.04%	94	209,359	0.05%	1,259	2,012,686	0.06%
Perinatal[3]	15	160	9.6%	59	277	21.3%	10	96	10.9%	145	1,106	13.1%	8	465	1.8%	38	339	11.1%	17	139	12.5%	293	2,582	11.3%
Other[4]	0	18,096	0.0%	35	35,326	0.10%	2	25,289	0.01%	43	60,711	0.07%	8	33,773	0.02%	21	25,054	0.09%	14	27,225	0.05%	124	225,474	0.05%
Total	365	182,597	0.20%	1,929	380,739	0.51%	452	219,666	0.21%	8,946	1,285,601	0.70%	785	527,498	0.15%	926	399,177	0.23%	986	327,405	0.30%	14,389	3,322,682	0.43%

1 Persons who undergo more than one test within the same year have been counted only once
2 According to the proportion of known region and results of the LES (see text for more details), thus, totals may differ due to rounding
3 Includes infants with maternal antibodies who are not infected
4 Includes needlestick, acupuncture, tattoo, etc.

Source of data: HIV Laboratory, Laboratories Branch, Ontario Ministry of Health and Long-Term Care

Table 1.23 Number of HIV-positive tests (p), number tested (n)[1] and HIV positivity rates (%) (adjusted[2]) by exposure category sex and health region, Ontario, 1992 to 2003

Exposure	Northern			Ottawa			Eastern Other			Toronto			Central East Other			Central West			Southwest			Total		
MALES	**p**	**n**	**%**	**p**	**n**	**%**	**p**	**n**	**%**	**p**	**n**	**%**	**p**	**n**	**%**	**p**	**n**	**%**	**p**	**n**	**%**	**p**	**n**	**%**
MSM	97	8,714	1.1%	649	23,770	2.7%	126	8,863	1.4%	5,802	131,888	4.4%	352	35,113	1.0%	359	24,434	1.5%	554	15,191	3.6%	7,941	247,972	3.2%
MSM-IDU	12	622	1.9%	106	1,289	8.2%	37.1	2,857	1.3%	283	4,779	5.9%	36	3,327	1.1%	63	1,640	3.9%	34	1,064	3.2%	571	15,577	3.7%
IDU	97	6,984	1.4%	343	13,077	2.6%	154	19,559	0.79%	287	40,118	0.72%	33	53,376	0.06%	120	16,026	0.75%	44	12,468	0.35%	1,079	161,608	0.67%
Clotting factor	4	2,914	0.14%	6.47	3,614	0.18%	2	2,732	0.07%	27	14,342	0.18%	3	14,299	0.02%	4	5,024	0.08%	4	3,466	0.10%	50	46,391	0.11%
Transfusion	0	2,573	0.0%	7.77	9,631	0.08%	6.46	7,845	0.08%	37	8,908	0.42%	19	23,244	0.08%	17	4,825	0.35%	12	8,065	0.15%	100	65,089	0.15%
HIV-endemic	3	1,560	0.22%	145	2,418	6.0%	11.6	1,250	0.92%	444	19,839	2.2%	50	8,033	0.62%	40	3,890	1.0%	64	1,779	3.6%	757	38,769	2.0%
HR hetero	10	3,288	0.31%	29.7	5,705	0.52%	5.04	5,126	0.10%	87	18,284	0.48%	20	56,144	0.03%	10	8,195	0.13%	13	5,883	0.22%	175	102,624	0.17%
LR hetero	29	45,556	0.06%	100	100,167	0.10%	19.1	41,020	0.05%	408	350,853	0.12%	54	54	100.0%	55	99,326	0.06%	63	74,275	0.09%	730	711,251	0.10%
Perinatal[3]	5	69	7.4%	28.6	144	19.9%	4.23	71	6.0%	76	622	12.2%	7	343	2.0%	22	177	12.5%	7	56	12.6%	150	1,481	10.1%
Other[4]	0	3,124	0.0%	12.6	7,542	0.17%	2.08	7,865	0.03%	22	29,124	0.08%	8	17,227	0.05%	10	11,016	0.09%	7	11,990	0.06%	62	87,887	0.07%
Total	258	75,402	0.34%	1,429	167,356	0.85%	368	97,185	0.38%	7,474	618,757	1.2%	583	211,159	0.28%	700	174,553	0.40%	802	134,237	0.60%	11,615	1,478,649	0.79%
FEMALES	**p**	**n**	**%**	**p**	**n**	**%**	**p**	**n**	**%**	**p**	**n**	**%**	**p**	**n**	**%**	**p**	**n**	**%**	**p**	**n**	**%**	**p**	**n**	**%**
IDU	55	7,243	0.75%	123	11,273	1.1%	27	7,210	0.37%	152	21,491	0.71%	36	8,071	0.45%	43	7,972	0.53%	15	6,194	0.25%	451	69,453	0.65%
Clotting factor	2	5,178	0.04%	2	7,025	0.03%	1	2,057	0.05%	13	18,733	0.07%	2	10,466	0.02%	2	8,171	0.03%	0	5,405	0.0%	21	57,035	0.04%
Transfusion	4	4,237	0.09%	24.7	3,808	0.65%	2	3,762	0.06%	60	23,792	0.25%	14	16,610	0.09%	8	13,534	0.09%	2	11,284	0.01%	114	77,026	0.15%
HIV-endemic	6	1,240	0.46%	201	1,540	13.1%	8	289	2.8%	603	20,690	2.9%	48	7,834	0.61%	37	5,305	0.28%	59	4,015	1.5%	962	40,913	2.4%
HR hetero	18	16,706	0.11%	53.3	16,011	0.33%	23	10,939	0.21%	214	53,530	0.40%	58	25,911	0.22%	67	20,519	1.3%	60	15,869	0.38%	492	159,486	0.31%
LR hetero	13	57,529	0.02%	42.8	145,809	0.03%	16	80,773	0.02%	342	496,539	0.07%	42	230,778	0.02%	42	154,922	0.21%	31	135,084	0.02%	529	1,301,435	0.04%
Perinatal[3]	10	91	11.2%	30.4	133	22.9%	6	26	24.4%	69	484	14.2%	1	123	1.1%	16	162	0.0%	10	83	12.4%	143	1,101	13.0%
Other[4]	0	14,972	0.0%	22.3	27,785	0.08%	0	17,425	0.0%	20	31,586	0.06%	0	16,546	0.0%	12	14,038	7.3%	7	15,235	0.05%	62	137,586	0.05%
Total	107	107,195	0.10%	500	213,383	0.23%	84	122,480	0.07%	1,472	666,845	0.22%	202	316,338	0.06%	226	224,624	0.10%	184	193,168	0.10%	2,324	1,844,034	0.15%

1 Persons identified as having had more than one test within the same year are counted only once
2 According to the proportion of known region and results of the LES (see text for more details), thus, totals may differ due to rounding
3 Includes infants with maternal antibodies who are not infected
4 Includes needlestick, acupuncture, tattoo, etc.

Source of data: HIV Laboratory, Laboratories Branch, Ontario Ministry of Health and Long-Term Care

Table 1.24 Number of HIV-positive tests (p), number tested (n)[1] and HIV positivity rates (%) by exposure category and health region, Ontario, 2003

Exposure category	Region								
			Eastern		Central	Central			

Table 1.24 Number of HIV-positive tests (p), number tested (n)[1] and HIV positivity rates (%) by exposure category and health region, Ontario, 2003

	Northern			Ottawa			Other			Toronto			East Other			West			Southwest			Unknown			Total		
TOTAL[2]	**p**	**n**	**%**	**p**	**n**	**%**	**p**	**n**	**%**	**p**	**n**	**%**	**p**	**n**	**%**	**p**	**n**	**%**	**p**	**n**	**%**	**p**	**n**	**%**	**p**	**n**	**%**
MSM	4	251	1.6%	24	1,330	1.8%	7	315	2.2%	213	5,459	3.9%	4	504	0.8%	8	654	1.2%	6	621	1.0%	0	21	0.0%	266	9,155	2.9%
MSM-IDU	0	19	0.0%	2	23	8.7%	0	74	0.0%	2	129	1.6%	1	33	3.0%	0	55	0.0%	0	47	0.0%	0	1	0.0%	5	381	1.3%
IDU	6	604	0.99%	10	432	2.3%	7	969	0.72%	8	1,098	0.73%	2	645	0.31%	2	924	0.22%	1	760	0.13%	0	41	0.0%	36	5,473	0.66%
Clotting factor	1	48	2.1%	1	32	3.1%	0	22	0.0%	0	151	0.0%	0	68	0.0%	0	49	0.0%	0	32	0.0%	0	2	0.0%	2	404	0.50%
Transfusion	0	132	0.0%	0	93	0.0%	0	104	0.0%	1	374	0.27%	1	186	0.54%	1	149	0.67%	0	143	0.0%	0	12	0.0%	3	1,193	0.25%
HIV-endemic	0	68	0.0%	6	212	2.8%	0	50	0.0%	27	507	5.3%	7	185	3.8%	5	138	3.6%	0	85	0.0%	1	8	12.5%	46	1,253	3.7%
HR hetero	0	528	0.0%	1	299	0.33%	0	309	0.0%	7	1,077	0.65%	3	632	0.47%	3	698	0.43%	0	506	0.0%	0	124	0.0%	14	4,173	0.34%
LR hetero	4	4,929	0.08%	13	9,715	0.13%	4	5,689	0.07%	57	24,148	0.24%	14	12,859	0.11%	18	10,592	0.17%	7	9,772	0.07%	0	641	0.0%	117	78,345	0.15%
Perinatal[2]	1	4	25.0%	8	12	66.7%	0	4	0.0%	4	18	22.2%	0	3	0.0%	11	17	64.7%	4	10	40.0%	0	0	0.0%	28	68	41.2%
Other[3]	0	1,101	0.0%	0	1,147	0.0%	0	1,046	0.0%	1	2,844	0.04%	1	1,388	0.07%	1	1,628	0.06%	1	1,603	0.06%	0	16	0.0%	4	10,773	0.04%
Unknown	11	6,914	0.16%	93	20,914	0.44%	15	9,742	0.15%	441	110,998	0.40%	52	44,824	0.12%	54	25,546	0.21%	27	15,076	0.18%	3	1,401	0.21%	696	235,415	0.30%
Total	27	14,598	0.18%	158	34,209	0.46%	33	18,324	0.18%	761	146,803	0.52%	85	61,327	0.14%	103	40,450	0.25%	46	28,655	0.16%	4	2,267	0.18%	1,217	346,633	0.35%

1 Persons who undergo more than one test within the same year have been counted only once
2 Includes infants with maternal antibodies who are not infected
3 Total includes 31 HIV-positive tests (p) and 12500 tests (n) of unknown sex, which represent 3.0% and 4.5% of the totals, respectively

Source of data: HIV Laboratory, Laboratories Branch, Ontario Ministry of Health and Long-Term Care

Table 1.25 Number of HIV-positive tests (p), number tested (n)[1] and HIV positivity rates (%) (adjusted[2]) by health region Ontario, 2003

Exposure category	Region																							
	Northern			Ottawa			Eastern Other			Toronto			Central East Other			Central West			Southwest			Total		
TOTAL	**p**	**n**	**%**	**p**	**n**	**%**	**p**	**n**	**%**	**p**	**n**	**%**	**p**	**n**	**%**	**p**	**n**	**%**	**p**	**n**	**%**	**p**	**n**	**%**
MSM	8	625	1.4%	53	2,222	2.4%	11	579	1.9%	420	12,092	3.5%	20	5,825	0.35%	15	2,420	0.61%	19	1,313	1.4%	547	25,075	2.2%
MSM-IDU	0	19	0.0%	5	54	10.0%	2	76	2.3%	11	138	8.0%	3	35	8.1%	2	57	2.7%	0	47	0.60%	23	427	5.4%
IDU	11	829	1.4%	22	1,551	1.4%	15	2,276	0.68%	18	3,399	0.53%	4	8,557	0.05%	4	2,210	0.17%	2	1,787	0.09%	77	20,608	0.37%
Clotting factor	1	67	1.5%	1	80	1.6%	0	22	0.0%	0	396	0.0%	0	472	0.0%	0	132	0.0%	0	68	0.0%	2	1,237	0.18%
Transfusion	0	149	0.0%	0	308	0.0%	0	268	0.0%	3	1,562	0.18%	3	1,482	0.24%	5	404	1.3%	0	466	0.08%	12	4,639	0.26%
HIV-endemic	0	241	0.0%	41	348	11.8%	1	115	0.56%	174	5,986	2.9%	25	2,287	1.1%	22	1,115	2.0%	3	539	0.49%	266	10,631	2.5%
HR hetero	0	883	0.0%	3	1,145	0.28%	0	801	0.0%	20	4,348	0.5%	9	8,572	0.11%	5	1,986	0.23%	1	1,266	0.06%	38	19,002	0.20%
LR hetero	5	10,109	0.05%	24	25,178	0.10%	4	11,523	0.03%	108	111,533	0.10%	19	30,156	0.06%	30	28,820	0.10%	15	20,216	0.08%	205	237,535	0.09%
Perinatal[3]	1	4	25.0%	8	18	45.0%	0	4	0.0%	4	40	9.9%	0	6	0.0%	11	27	40.6%	4	17	24.2%	28	115	24.2%
Other[4]	0	1,778	0.0%	1	3,533	0.02%	0	2,787	0.0%	4	8,236	0.05%	2	4,340	0.04%	10	3,554	0.30%	2	3,134	0.06%	19	27,363	0.07%
Total	27	14,705	0.18%	159	34,435	0.46%	33	18,451	0.18%	763	147,730	0.52%	85	61,732	0.14%	103	40,726	0.25%	46	28,853	0.16%	1,217	346,633	0.35%

1 Persons who undergo more than one test within the same year have been counted only once
2 According to the proportion of known region and results of the LES (see text for more details), thus, totals may differ due to rounding
3 Includes infants with maternal antibodies who are not infected
4 Includes needlestick, acupuncture, tattoo, etc.

Source of data: HIV Laboratory, Laboratories Branch, Ontario Ministry of Health and Long-Term Care

Table 1.26 Number of HIV-positive tests (p), number tested (n)[1] and HIV positivity rates (%) (adjusted[2]) by sex, exposure category and health region, Ontario, 2003

Exposure	Northern			Ottawa			Eastern Other			Toronto			Central East Other			Central West			Southwest			Total		
MALES	**p**	**n**	**%**	**p**	**n**	**%**	**p**	**n**	**%**	**p**	**n**	**%**	**p**	**n**	**%**	**p**	**n**	**%**	**p**	**n**	**%**	**p**	**n**	**%**
MSM	8	625	1.4%	53	2,222	2.4%	11	579	1.9%	420	12,092	3.5%	20	5,825	0.35%	15	2,420	0.61%	19	1,313	1.4%	547	25,075	2.2%
MSM-IDU	0	19	0.0%	5	54	10.0%	2	76	2.3%	11	138	8.0%	3	35	8.1%	2	57	2.70%	0	47	0.60%	23	427	5.4%
IDU	10	437	2.4%	13	836	1.6%	9	1,668	0.56%	14	1,608	0.90%	4	7,742	0.05%	1	1,405	0.07%	2	1,234	0.14%	54	14,929	0.36%
Clotting factor	1	25	4.0%	1	46	2.8%	0	5	0.0%	0	81	0.0%	0	324	0.0%	0	58	0.0%	0	40	0.0%	2	579	0.39%
Transfusion	0	71	0.0%	0	247	0.0%	0	213	0.0%	1	470	0.11%	0	1,040	0.0%	0	79	0.0%	0	260	0.15%	1	2,379	0.04%
HIV-endemic	0	207	0.0%	13	206	6.4%	0	96	0.0%	55	3,161	1.7%	14	1,172	1.2%	14	406	3.6%	3	170	1.6%	99	5,417	1.8%
HR hetero	0	162	0.0%	3	337	0.96%	0	340	0.0%	8	364	2.2%	2	6,616	0.03%	0	637	0.08%	1	470	0.15%	15	8,926	0.16%
LR hetero	3	4,423	0.07%	13	9,268	0.14%	2	4,871	0.0%	43	46,880	0.09%	14	14	100.0%	13	10,957	0.12%	4	7,592	0.06%	92	84,005	0.11%
Perinatal[3]	0	3	0.0%	5	12	41.8%	0	2	0.0%	1	9	11.7%	0	2	0.0%	9	17	53.3%	2	6	31.3%	17	51	33.5%
Other[4]	0	421	0.0%	1	1,393	0.04%	0	867	0.0%	3	3,262	0.10%	2	1,886	0.09%	6	1,488	0.41%	2	1,410	0.14%	14	10,728	0.13%
Total	23	6,393	0.36%	108	14,622	0.74%	24	8,717	0.28%	557	68,064	0.82%	59	24,655	0.24%	60	17,524	0.34%	33	12,543	0.26%	864	152,517	0.57%
FEMALES	**p**	**n**	**%**	**p**	**n**	**%**	**p**	**n**	**%**	**p**	**n**	**%**	**p**	**n**	**%**	**p**	**n**	**%**	**p**	**n**	**%**	**p**	**n**	**%**
IDU	1	392	0.26%	9	715	1.2%	6	608	1.0%	3	1,791	0.19%	1	815	0.07%	3	806	0.34%	0	552	0.0%	23	5,679	0.40%
Clotting factor	0	42	0.0%	0	34	0.0%	0	17	0.0%	0	315	0.0%	0	148	0.0%	0	74	0.0%	0	28	0.0%	0	658	0.0%
Transfusion	0	79	0.0%	0	61	0.0%	0	56	0.0%	2	1,092	0.21%	3	442	0.79%	5	325	1.6%	0	206	0.0%	11	2,260	0.49%
HIV-endemic	0	34	0.0%	28	141	19.6%	1	20	3.2%	119	2,825	4.2%	11	1,116	1.0%	8	710	1.1%	0	369	0.0%	166	5,214	3.2%
HR hetero	0	721	0.0%	0	807	0.0%	0	461	0.0%	12	3,984	0.31%	7	1,957	0.36%	4	1,349	0.31%	0	796	0.0%	24	10,076	0.23%
LR hetero	2	5,687	0.04%	11	15,910	0.07%	2	6,651	0.03%	64	64,653	0.10%	5	30,142	0.02%	17	17,863	0.09%	11	12,624	0.09%	113	153,530	0.07%
Perinatal[3]	1	1	100.0%	3	6	51.6%	0	2	0.0%	3	32	9.5%	0	4	0.0%	2	10	19.6%	2	10	19.7%	11	65	17.0%
Other[4]	0	1,357	0.0%	0	2,140	0.0%	0	1,919	0.0%	1	4,974	0.0%	0	2,454	0.0%	4	2,066	0.22%	0	1,724	0.0%	6	16,635	0.03%
Total	4	8,312	0.05%	51	19,813	0.26%	9	9,734	0.09%	206	79,666	0.26%	27	37,077	0.07%	43.3	23,202	0.19%	13	16,311	0.08%	353	194,116	0.18%

1 Persons identified as having had more than one test within the same year are counted only once
2 According to the proportion of known region and results of the LES (see text for more details), thus, totals may differ due to rounding
3 Includes infants with maternal antibodies who are not infected
4 Includes needlestick, acupuncture, tattoo, etc.

Source of data: HIV Laboratory, Laboratories Branch, Ontario Ministry of Health and Long-Term Care

Table 1.27 Number of HIV tests by year of test and sex Ontario, 1992 to 2003

Year of diagnosis	Males	Females		Unknown	Total
	Number	Number	% female[1]	Number	Number
1992	100,705	104,904	51.0%	12,511	218,120
1993	119,049	132,392	52.7%	10,381	261,822
1994	111,549	127,913	53.4%	10,909	250,371
1995	113,702	130,618	53.5%	8,750	253,070
1996	120,486	148,927	55.3%	10,279	279,692
1997	112,738	145,753	56.4%	10,337	268,828
1998	112,541	162,346	59.1%	12,273	287,160
1999	110,172	154,926	58.4%	13,384	278,482
2000	110,412	140,302	56.0%	11,536	262,250
2001	117,397	150,303	56.1%	11,801	279,501
2002	144,382	182,487	55.8%	9,884	336,753
2003	148,781	188,878	55.9%	8,974	346,633
Total	1,421,914	1,769,749	55.4%	131,019	3,322,682

1 Percent of cases with known sex

Source of data: HIV Laboratory, Laboratories Branch, Ontario Ministry of Health and Long-Term Care

Table 1.28 Number of HIV tests (adjusted)[1] by year of test and testing rate (per 1,000), Ontario, 1992 to 2003

Year of HIV test	Males		Females		Total	
	Number	Rate	Number	Rate	Number	Rate
1992	106,790	20.5	111,330	20.8	218,120	20.6
1993	123,938	23.5	137,885	25.5	261,823	24.5
1994	116,586	21.8	133,785	24.4	250,371	23.1
1995	117,731	21.8	135,339	24.3	253,070	23.1
1996	125,036	22.9	154,656	27.5	279,692	25.2
1997	117,155	21.1	151,673	26.6	268,828	23.9
1998	117,351	20.9	169,808	29.4	287,159	25.2
1999	115,423	20.3	163,060	27.9	278,483	24.2
2000	115,272	20.0	146,978	24.9	262,250	22.5
2001	122,313	20.3	157,188	25.4	279,501	22.9
2002	148,535	24.9	188,218	30.8	336,753	27.8
2003	152,517	25.2	194,116	31.3	346,633	28.3
Total	1,478,649		1,844,034		3,322,682	

1 According to the proportion of known sex that year and results of the LES (see text for more details), thus, totals may differ due to rounding

Source of data: HIV Laboratory, Laboratories Branch, Ontario Ministry of Health and Long-Term Care; Statistics Canada (population estimates)

Table 1.29 Number and proportion[1] of HIV tests by exposure category and year of test, Ontario, 1992 to 2003

Exposure category	Year of diagnosis													
	1992		1993		1994		1995		1996		1997		1998	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
MSM	8,348	12.7%	8,524	8.0%	8,245	7.7%	8,946	8.1%	9,040	7.6%	8,629	8.0%	8,282	7.4%
MSM-IDU	335	0.51%	464	0.44%	446	0.42%	441	0.40%	462	0.39%	427	0.39%	439	0.39%
IDU	5,858	8.9%	6,343	6.0%	5,608	5.3%	6,128	5.6%	6,456	5.4%	6,289	5.8%	6,707	6.0%
Clotting factor	3,732	5.7%	10,284	9.7%	9,967	9.3%	5,462	5.0%	3,615	3.1%	1,770	1.6%	1,514	1.4%
Transfusion	1,817	2.8%	14,831	13.9%	17,198	16.1%	8,662	7.9%	5,233	4.4%	2,794	2.6%	2,940	2.6%
HIV-endemic	1,047	1.6%	938	0.88%	865	0.81%	929	0.85%	948	0.80%	811	0.75%	929	0.83%
HR hetero	6,500	9.9%	7,745	7.3%	7,180	6.7%	8,473	7.7%	9,663	8.2%	7,848	7.2%	7,158	6.4%
LR hetero	37,522	57.0%	56,401	53.0%	55,977	52.5%	66,233	60.2%	76,350	64.4%	73,615	67.9%	76,280	68.4%
Perinatal[2]	58	0.09%	76	0.07%	138	0.13%	133	0.12%	140	0.12%	63	0.06%	72	0.06%
Other[3]	616	0.94%	782	0.74%	1,031	0.97%	4,525	4.1%	6,628	5.6%	6,199	5.7%	7,221	6.5%
Unknown	152,287		155,434		143,716		143,138		161,157		160,383		175,618	
Total	218,120	100.0%	261,822	100.0%	250,371	100.0%	253,070	100.0%	279,692	100.0%	268,828	100.0%	287,160	100.0%

	1999		2000		2001		2002		2003		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
MSM	8,076	7.3%	8,297	7.8%	8,569	7.8%	9,247	8.0%	9,155	8.2%	103,358	8.1%
MSM-IDU	480	0.43%	494	0.46%	438	0.40%	400	0.35%	381	0.34%	5,207	0.41%
IDU	6,434	5.8%	6,209	5.8%	6,052	5.5%	5,712	5.0%	5,473	4.9%	73,269	5.7%
Clotting factor	858	0.77%	585	0.55%	509	0.46%	492	0.43%	404	0.36%	39,192	3.1%
Transfusion	2,626	2.4%	1,727	1.6%	1,579	1.4%	1,461	1.3%	1,193	1.1%	62,061	4.8%
HIV-endemic	964	0.87%	1,060	1.0%	1,130	1.0%	1,228	1.1%	1,253	1.1%	12,102	0.95%
HR hetero	5,815	5.2%	5,186	4.9%	4,849	4.4%	4,638	4.0%	4,173	3.8%	79,228	6.2%
LR hetero	76,543	69.0%	73,267	68.8%	75,889	69.3%	80,460	69.8%	78,345	70.4%	826,882	64.6%
Perinatal[2]	69	0.06%	109	0.10%	88	0.08%	110	0.10%	68	0.06%	1,124	0.09%
Other[3]	9,079	8.2%	9,487	8.9%	10,396	9.5%	11,464	10.0%	10,773	9.7%	78,201	6.1%
Unknown	167,538		155,829		170,002		221,541		235,415		2,042,058	
Total	278,482	100.0%	262,250	100.0%	279,501	100.0%	336,753	100.00%	346,633	100.00%	3,322,682	100.0%

1 Column percent of cases with known source of exposure
2 Includes infants with maternal antibodies who are not infected
3 Includes needlestick, acupuncture, tattoo, etc.
Source of data: HIV Laboratory, Laboratories Branch, Ontario Ministry of Health and Long-Term Care

Table 1.30 Number and proportion[1] of HIV tests (adjusted[2]) by exposure category and year of test, Ontario, 1992 to 2003[3]

Exposure category	1993		1994		1995		1996		1997		1998		1999		2000		2001		2002		2003		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	
MSM	19,584	7.5%	18,250	7.3%	19,617	7.8%	20,567	7.4%	20,113	7.5%	19,180	6.7%	18,238	6.5%	18,987	7.2%	20,320	7.3%	24,348	7.2%	25,075	7.2%	247,972	7.
MSM-IDU	1,377	0.53%	1,282	0.51%	1,304	0.52%	1,377	0.49%	1,331	0.50%	1,499	0.52%	1,802	0.65%	1,830	0.70%	1,578	0.56%	456	0.14%	427	0.12%	15,577	0.4
IDU	18,363	7.0%	15,887	6.3%	17,476	6.9%	19,577	7.0%	19,360	7.2%	20,717	7.2%	19,293	6.9%	19,019	7.3%	19,279	6.9%	19,997	5.9%	20,608	5.9%	231,061	7.
Clotting facto	26,702	10.2%	24,295	9.7%	12,611	5.0%	8,732	3.1%	4,786	1.8%	4,302	1.5%	2,469	0.89%	1,618	0.62%	1,437	0.51%	1,347	0.40%	1,237	0.36%	103,425	3.
Transfusion	31,477	12.0%	34,205	13.7%	18,093	7.1%	12,242	4.4%	7,193	2.7%	7,413	2.6%	6,826	2.5%	4,622	1.8%	4,536	1.6%	4,948	1.5%	4,639	1.3%	142,115	4.
HIV-endemic	5,173	2.0%	4,608	1.8%	4,739	1.9%	5,171	1.8%	5,441	2.0%	6,536	2.3%	6,663	2.4%	6,789	2.6%	7,308	2.6%	9,706	2.9%	10,631	3.1%	79,681	2.
HR hetero	22,864	8.7%	20,877	8.3%	23,674	9.4%	27,675	9.9%	24,375	9.1%	23,874	8.3%	20,099	7.2%	18,588	7.1%	18,679	6.7%	19,357	5.7%	19,002	5.5%	262,110	7.
LR hetero	129,388	49.4%	123,815	49.5%	141,257	55.8%	165,033	59.0%	167,361	62.3%	182,050	63.4%	178,425	64.1%	165,494	63.1%	177,838	63.6%	228,786	67.9%	237,535	68.5%	2,012,686	60.
Perinatal[4]	178	0.07%	312	0.12%	291	0.11%	320	0.11%	156	0.06%	175	0.06%	165	0.06%	260	0.10%	201	0.07%	210	0.06%	115	0.03%	2,582	0.0
Other[5]	6,715	2.6%	6,840	2.7%	14,007	5.5%	18,999	6.8%	18,712	7.0%	21,413	7.5%	24,502	8.8%	25,043	9.5%	28,326	10.1%	27,597	8.2%	27,363	7.9%	225,474	6.
Total	261,823	100.0%	250,371	100.0%	253,070	100.0%	279,692	100.0%	268,828	100.0%	287,159	100.0%	278,483	100.0%	262,250	100.0%	279,501	100.0%	336,753	100.0%	346,633	100.0%	3,322,682	100.

1 Column percent
2 According to the proportion of known region that year and results of the LES (see text for more details), thus, totals may differ due to rounding
3 Data not shown for 1992 but total includes 1992
4 Includes infants with maternal antibodies who are not infected
5 Includes needlestick, acupuncture, tattoo, etc.

Source of data: HIV Laboratory, Laboratories Branch, Ontario Ministry of Health and Long-Term Care

Table 1.31 Number and proportion[1] of HIV tests by age group and exposure category, Ontario, 1992 to 2003

Age group	MSM		MSM-IDU		IDU		Clotting factor		Transf.		HIV-endemic		HR hetero		LR hetero		Perinatal[2]		Other[3]		Unk.	Total
	No.	%	No	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	No.
<1	32	0.03%	1	0.02%	30	0.04%	60	0.16%	29	0.05%	43	0.37%	26	0.03%	272	0.03%	429	40.5%	113	0.15%	10,430	11,465
1-14	293	0.29%	6	0.12%	389	0.55%	3,258	8.7%	3,747	6.2%	239	2.1%	711	0.92%	3,872	0.48%	631	59.5%	758	1.0%	29,878	43,782
15-19	4,216	4.2%	261	5.1%	4,496	6.3%	1,500	4.0%	2,311	3.8%	757	6.5%	11,214	14.5%	96,374	11.9%	0	0.0%	1,162	1.6%	139,531	261,822
20-24	13,230	13.2%	723	14.2%	8,983	12.6%	1,585	4.2%	2,800	4.6%	1,965	16.9%	16,005	20.7%	202,436	25.0%	0	0.0%	4,749	6.5%	301,582	554,058
25-29	17,844	17.8%	1,038	20.3%	11,641	16.3%	2,112	5.6%	3,342	5.5%	2,365	20.3%	13,627	17.6%	159,431	19.7%	0	0.0%	8,504	11.6%	342,243	562,147
30-34	19,717	19.7%	1,065	20.9%	14,630	20.5%	3,262	8.7%	5,047	8.4%	1,943	16.7%	11,776	15.2%	123,540	15.3%	0	0.0%	9,970	13.6%	342,601	533,551
35-39	16,144	16.1%	898	17.6%	13,940	19.5%	4,115	11.0%	6,768	11.2%	1,512	13.0%	9,560	12.4%	89,394	11.0%	0	0.0%	10,263	14.0%	266,039	418,633
40-44	10,754	10.8%	587	11.5%	9,679	13.6%	4,331	11.5%	6,480	10.7%	1,021	8.8%	6,627	8.6%	57,753	7.1%	0	0.0%	10,109	13.8%	174,136	281,477
45-49	7,459	7.5%	317	6.2%	4,918	6.9%	3,463	9.2%	5,810	9.6%	693	6.0%	3,871	5.0%	35,683	4.4%	0	0.0%	9,222	12.6%	114,602	186,038
50-54	4,827	4.8%	136	2.7%	1,683	2.4%	2,686	7.2%	4,683	7.8%	450	3.9%	2,023	2.6%	19,387	2.4%	0	0.0%	7,169	9.8%	74,219	117,263
55-59	2,748	2.7%	45	0.88%	499	0.70%	2,553	6.8%	4,215	7.0%	257	2.2%	879	1.1%	10,107	1.2%	0	0.0%	4,172	5.7%	48,808	74,283
60+	2,768	2.8%	25	0.49%	425	0.60%	8,605	22.9%	15,048	25.0%	388	3.3%	975	1.3%	11,000	1.4%	0	0.0%	6,956	9.5%	101,271	147,461
Unk	3,326		105		1,956		1,662		1,781		469		1,934		17,633		64		5,054		96,718	130,702
Total	103,358	100.0%	5,207	100.0%	73,269	100.0%	39,192	100.0%	62,061	100.0%	12,102	100.0%	79,228	0.9996	826,882	100.0%	1,124	100.0%	78,201	100.0%	2,042,058	3,322,682

1 Column percent of cases with known age
2 Includes infants with maternal antibodies who are not infected
3 Includes needlestick, acupuncture, tattoo, etc.

Source of data: HIV Laboratory, Laboratories Branch, Ontario Ministry of Health and Long-Term Care

Table 1.32 Number and proportion[1] of HIV tests by year of test and health region, Ontario,1992 to 2003

	Northern		Ottawa		Eastern Other		Toronto		Central East Other		Central West		Southwest		Unk.[2]	Total
Year	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	No.
1992	10,299	5.5%	23,641	12.6%	10,593	5.7%	74,482	39.8%	26,258	14.0%	22,754	12.2%	18,905	10.1%	31,188	218,120
1993	13,031	5.8%	27,097	12.1%	14,385	6.4%	82,402	36.9%	32,728	14.6%	29,055	13.0%	24,882	11.1%	38,242	261,822
1994	12,204	5.7%	27,463	12.8%	13,884	6.5%	81,412	38.0%	31,959	14.9%	27,661	12.9%	19,605	9.2%	36,183	250,371
1995	12,369	6.0%	27,372	13.2%	16,722	8.1%	74,806	36.1%	28,603	13.8%	25,595	12.3%	21,994	10.6%	45,609	253,070
1996	13,285	6.0%	26,782	12.1%	17,387	7.8%	82,394	37.1%	33,292	15.0%	26,042	11.7%	22,999	10.4%	57,511	279,692
1997	14,150	6.2%	27,025	11.9%	15,651	6.9%	84,620	37.2%	33,878	14.9%	26,859	11.8%	25,233	11.1%	41,412	268,828
1998	17,519	6.2%	29,176	10.3%	20,304	7.2%	107,762	38.1%	45,852	16.2%	32,129	11.4%	30,219	10.7%	4,199	287,160
1999	15,632	5.7%	30,507	11.0%	19,367	7.0%	105,182	38.1%	45,399	16.4%	32,378	11.7%	27,842	10.1%	2,175	278,482
2000	13,909	5.3%	28,724	11.0%	17,812	6.8%	99,361	38.2%	44,109	17.0%	30,821	11.9%	25,356	9.7%	2,158	262,250
2001	14,730	5.3%	30,524	11.0%	17,612	6.3%	106,690	38.5%	48,196	17.4%	33,760	12.2%	25,890	9.3%	2,099	279,501
2002	14,602	4.4%	33,877	10.1%	18,615	5.6%	142,992	42.8%	57,430	17.2%	38,968	11.7%	27,938	8.4%	2,331	336,753
2003	14,598	4.2%	34,209	9.9%	18,324	5.3%	146,803	42.6%	61,327	17.8%	40,450	11.7%	28,655	8.3%	2,267	346,633
Total	166,328	5.4%	346,397	11.3%	200,656	6.6%	1,188,906	38.9%	489,031	16.0%	366,472	12.0%	299,518	9.8%	265,374	3,322,682

1 Row percent of cases with known region of residence
2 Includes out of province

Source of data: HIV Laboratory, Laboratories Branch, Ontario Ministry of Health and Long-Term Care

Table 1.33 Number of HIV tests and rate per 1,000 by year of test and health region, Ontario, 1992 to 2003

	Northern		Ottawa		Eastern Other		Toronto		Central East Other		Central West		Southwest		Total[1]	
Year	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
1992	10,299	11.4	23,641	33.2	10,593	13.9	74,482	31.6	26,258	11.2	22,754	11.2	18,905	13.1	186,932	17.7
1993	13,031	14.4	27,097	37.4	14,385	18.6	82,402	34.9	32,728	13.6	29,055	14.2	24,882	17.1	223,580	20.9
1994	12,204	13.4	27,463	37.6	13,884	17.8	81,412	34.0	31,959	12.9	27,661	13.4	19,605	13.4	214,188	19.8
1995	12,369	13.6	27,372	37.1	16,722	21.3	74,806	30.8	28,603	11.3	25,595	12.2	21,994	14.9	207,461	18.9
1996	13,285	14.7	26,782	36.0	17,387	22.0	82,394	33.5	33,292	12.8	26,042	12.3	22,999	15.5	222,181	20.0
1997	14,150	15.7	27,025	36.1	15,651	19.7	84,620	34.0	33,878	12.7	26,859	12.5	25,233	16.9	227,416	20.2
1998	17,519	19.5	29,176	38.5	20,304	25.6	107,762	43.0	45,852	16.6	32,129	14.8	30,219	20.1	282,961	24.9
1999	15,632	17.5	30,507	39.7	19,367	24.3	105,182	41.7	45,399	16.0	32,378	14.8	27,842	18.4	276,307	24.0
2000	13,909	15.7	28,724	36.9	17,812	22.3	99,361	39.1	44,109	15.1	30,821	13.9	25,356	16.7	260,092	22.3
2001	14,730	11.3	30,524	39.0	17,612	21.9	106,690	41.4	48,196	16.1	33,760	15.0	25,890	17.0	277,402	23.3
2002	14,602	16.8	33,877	41.5	18,615	23.0	142,992	54.7	57,430	18.3	38,968	16.9	27,938	18.0	334,422	27.6
2003	14,598	16.9	34,209	41.5	18,324	22.5	146,803	56.2	61,327	18.9	40,450	17.4	28,655	18.3	344,366	28.1
Total	166,328	15.5	346,397	37.9	200,656	21.1	1,188,906	39.8	489,031	14.9	366,472	14.1	299,518	16.6	3,057,308	22.4

1 Cases with known region of residence only

Source of data: HIV Laboratory, Laboratories Branch, Ontario Ministry of Health and Long-Term Care; Statistics Canada (population estimates)

Table 1.34 Number and proportion[1] of HIV tests by year of test and type of identifier, Ontario, 1992 to 2003

	Nominal		Coded		Anonymous		Unknown		Total
Year	Number	%	Number	%	Number	%	Number	%	Number
1992	154,265	70.7%	42,672	19.6%	9,683	4.4%	11,500	5.3%	218,120
1993	199,191	76.1%	52,235	20.0%	10,379	4.0%	17	0.01%	261,822
1994	192,847	77.0%	48,597	19.4%	8,909	3.6%	18	0.01%	250,371
1995	190,568	75.3%	51,103	20.2%	11,305	4.5%	94	0.04%	253,070
1996	213,277	76.3%	53,387	19.1%	12,854	4.6%	174	0.06%	279,692
1997	208,860	77.7%	48,054	17.9%	11,459	4.3%	455	0.17%	268,828
1998	230,337	80.2%	45,136	15.7%	11,457	4.0%	230	0.08%	287,160
1999	228,452	82.0%	40,000	14.4%	9,942	3.6%	88	0.03%	278,482
2000	217,418	82.9%	35,074	13.4%	9,676	3.7%	82	0.03%	262,250
2001	236,268	84.5%	33,394	11.9%	9,664	3.5%	175	0.06%	279,501
2002	295,463	87.7%	31,287	9.3%	9,830	2.9%	173	0.05%	336,753
2003	307,866	88.8%	29,040	8.4%	9,672	2.8%	55	0.02%	346,633
Total	2,674,812	80.5%	509,979	15.3%	124,830	3.8%	13,061	0.39%	3,322,682

1 Row percent
2 Includes unknown sex, of whom 54,397 tested nominally, 44,052 coded, 1,867 anonymously and 3,404 unknown

Source of data: HIV Laboratory, Laboratories Branch, Ontario Ministry of Health and Long-Term Care

Table 1.35 Number and proportion[1] of HIV tests by sex, year of test and type of identifier, Ontario, 1992 to 2003

Year	Nominal		Coded		Anonymous		Unknown		Total
Males	**Number**	**%**	**Number**	**%**	**Number**	**%**	**Number**	**%**	**Number**
1992	71,132	70.6%	19,719	19.6%	5,731	5.7%	4,123	4.1%	100,705
1993	89,959	75.6%	23,140	19.4%	5,945	5.0%	5	0.0%	119,049
1994	84,872	76.1%	21,588	19.4%	5,082	4.6%	7	0.01%	111,549
1995	84,726	74.5%	22,546	19.8%	6,412	5.6%	18	0.02%	113,702
1996	90,926	75.5%	22,506	18.7%	7,001	5.8%	53	0.04%	120,486
1997	86,232	76.5%	20,046	17.8%	6,334	5.6%	126	0.11%	112,738
1998	88,173	78.3%	18,033	16.0%	6,262	5.6%	73	0.06%	112,541
1999	88,510	80.3%	15,954	14.5%	5,675	5.2%	33	0.03%	110,172
2000	90,533	82.0%	14,251	12.9%	5,617	5.1%	11	0.01%	110,412
2001	97,649	83.2%	14,099	12.0%	5,602	4.8%	47	0.04%	117,397
2002	124,739	86.4%	13,649	9.5%	5,930	4.1%	64	0.04%	144,382
2003	129,864	87.3%	13,045	8.8%	5,863	3.9%	9	0.01%	148,781
Total	1,127,315	79.3%	218,576	15.4%	71,454	5.0%	4,569	0.32%	1,421,914
Females									
1992	77,607	74.0%	18,909	18.0%	3,910	3.7%	4,478	4.3%	104,904
1993	104,311	78.8%	23,672	17.9%	4,404	3.3%	5	0.00%	132,392
1994	102,032	79.8%	22,060	17.2%	3,819	3.0%	2	0.00%	127,913
1995	101,988	78.1%	23,852	18.3%	4,747	3.6%	31	0.02%	130,618
1996	117,075	78.6%	26,150	17.6%	5,633	3.8%	69	0.05%	148,927
1997	117,738	80.8%	23,003	15.8%	4,863	3.3%	149	0.10%	145,753
1998	135,651	83.6%	21,841	13.5%	4,747	2.9%	107	0.07%	162,346
1999	132,026	85.2%	18,979	12.3%	3,875	2.5%	46	0.03%	154,926
2000	120,380	85.8%	16,150	11.5%	3,755	2.7%	17	0.01%	140,302
2001	131,443	87.5%	15,106	10.1%	3,698	2.5%	56	0.04%	150,303
2002	164,629	90.2%	14,170	7.8%	3,606	2.0%	82	0.04%	182,487
2003	172,238	91.2%	13,135	7.0%	3,483	1.8%	22	0.01%	188,878
Total	1,477,118	83.5%	237,027	13.4%	50,540	2.9%	5,064	0.29%	1,769,749

1 Row percent
Source of data: HIV Laboratory, Laboratories Branch, Ontario Ministry of Health and Long-Term Care

Table 2.1 Number of AIDS cases by year of diagnosis and sex Ontario, 1981 to 2003

Year of diagnosis	Males	Females		Total	Total (adjusted[2])
	Number	Number	% female[1]	Number	Number
1981	1	1	50.0%	2	2
1982	7	0	0.0%	7	7
1983	18	0	0.0%	18	18
1984	59	0	0.0%	59	59
1985	165	3	1.8%	168	168
1986	281	6	2.1%	287	287
1987	430	18	4.0%	448	448
1988	457	20	4.2%	477	477
1989	526	25	4.5%	551	551
1990	618	32	4.9%	650	650
1991	555	39	6.6%	594	606
1992	676	38	5.3%	714	732
1993	683	41	5.7%	724	746
1994	578	45	7.2%	623	645
1995	562	46	7.6%	608	635
1996	361	46	11.3%	407	430
1997	227	27	10.6%	254	272
1998	173	39	18.4%	212	232
1999	153	27	15.0%	180	200
2000	115	17	12.9%	132	152
2001	129	28	17.8%	157	192
2002	98	25	20.3%	123	173
2003	91	28	23.5%	119	294
Total	6,963	551	7.3%	7,514	7,977

1 Row percent
2 Number of AIDS cases adjusted for reporting delays

Source of data: Ontario AIDS Surveillance Program, Public Health Branch, Ontario Ministry of Health and Long-Term Care (cases reported to April 2004)

Table 2.2 Number and proportion[1] of AIDS cases by exposure category and sex, Ontario, 1981 to 2003

Exposure category	Males		Females		Total	
	No.	%	No.	%	No.	%
MSM	5,258	75.5%	0	0.0%	5,258	70.0%
MSM-IDU	299	4.3%	0	0.0%	299	4.0%
IDU	258	3.7%	78	14.2%	336	4.5%
HIV-endemic	260	3.7%	156	28.3%	416	5.5%
Heterosexual	414	5.9%	204	37.0%	618	8.2%
Clotting factor	100	1.4%	10	1.8%	110	1.5%
Transfusion	94	1.3%	49	8.9%	143	1.9%
Perinatal	26	0.37%	29	5.3%	55	0.73%
Occupational	6	0.09%	1	0.18%	7	0.09%
NIR	248	3.6%	24	4.4%	272	3.6%
Total	6,963	100.0%	551	100.0%	7,514	100.0%

1 Column percent
Source of data: Ontario AIDS Surveillance Program, Public Health Branch, Ontario Ministry of Health and Long-Term Care (cases reported to April 2004)

Table 2.3 Number and proportion[1] of AIDS cases by exposure category and year of AIDS diagnosis, Ontario,1981 to 2003

Year of Diagnosis	MSM		MSM-IDU		IDU		HIV-endemic		Hetero		Clot factor		Transfusion		Perinatal		Occupational		NIR		Total
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.
1981	1	50.0%	0	0.0%	0	0.0%	1	50.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	2
1982	7	100.0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	7
1983	13	72.2%	2	11.1%	0	0.0%	1	5.6%	0	0.0%	1	5.6%	0	0.0%	0	0.0%	0	0.0%	1	5.6%	18
1984	48	81.4%	4	6.8%	0	0.0%	1	1.7%	3	5.1%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	3	5.1%	59
1985	143	85.1%	5	3.0%	1	0.60%	4	2.4%	3	1.8%	3	1.8%	5	3.0%	0	0.0%	0	0.0%	4	2.4%	168
1986	240	83.6%	9	3.1%	3	1.0%	7	2.4%	3	1.0%	4	1.4%	12	4.2%	0	0.0%	0	0.0%	9	3.1%	287
1987	360	80.4%	21	4.7%	10	2.2%	7	1.6%	13	2.9%	7	1.6%	21	4.7%	1	0.22%	0	0.0%	8	1.8%	448
1988	382	80.1%	19	4.0%	7	1.5%	6	1.3%	21	4.4%	6	1.3%	22	4.6%	4	0.84%	1	0.21%	9	1.9%	477
1989	427	77.5%	21	3.8%	21	3.8%	12	2.2%	33	6.0%	5	0.91%	14	2.5%	2	0.36%	1	0.18%	15	2.7%	551
1990	496	76.3%	21	3.2%	16	2.5%	18	2.8%	51	7.8%	14	2.2%	9	1.4%	2	0.31%	0	0.0%	23	3.5%	650
1991	445	74.9%	20	3.4%	21	3.5%	19	3.2%	37	6.2%	14	2.4%	8	1.3%	4	0.67%	0	0.0%	26	4.4%	594
1992	510	71.4%	31	4.3%	35	4.9%	27	3.8%	55	7.7%	16	2.2%	13	1.8%	5	0.70%	0	0.0%	22	3.1%	714
1993	518	71.5%	33	4.6%	29	4.0%	24	3.3%	64	8.8%	11	1.5%	7	0.97%	6	0.83%	1	0.14%	31	4.3%	724
1994	451	72.4%	34	5.5%	25	4.0%	22	3.5%	49	7.9%	7	1.1%	5	0.80%	6	0.96%	0	0.00%	24	3.9%	623
1995	406	66.8%	31	5.1%	32	5.3%	27	4.4%	65	10.7%	11	1.8%	9	1.5%	7	1.2%	0	0.0%	20	3.3%	608
1996	243	59.7%	19	4.7%	32	7.9%	46	11.3%	43	10.6%	3	0.74%	4	1.0%	3	0.74%	1	0.25%	13	3.2%	407
1997	148	58.3%	7	2.8%	18	7.1%	26	10.2%	30	11.8%	5	2.0%	5	2.0%	3	1.2%	1	0.39%	11	4.3%	254
1998	112	52.8%	7	3.3%	19	9.0%	32	15.1%	28	13.2%	1	0.47%	1	0.47%	3	1.4%	0	0.0%	9	4.2%	212
1999	93	51.7%	4	2.2%	16	8.9%	26	14.4%	22	12.2%	0	0.0%	3	1.67%	1	0.56%	0	0.0%	15	8.3%	180
2000	60	45.5%	4	3.0%	16	12.1%	18	13.6%	23	17.4%	1	0.76%	2	1.5%	3	2.3%	0	0.0%	5	3.8%	132
2001	66	42.0%	4	2.5%	12	7.6%	30	19.1%	29	18.5%	1	0.64%	2	1.3%	1	0.64%	2	1.3%	10	6.4%	157
2002	45	36.6%	3	2.4%	13	10.6%	31	25.2%	20	16.3%	0	0.0%	0	0.0%	3	2.4%	0	0.0%	8	6.5%	123
2003	44	37.0%	0	0.0%	10	8.4%	31	26.1%	26	21.8%	0	0.0%	1	0.84%	1	0.84%	0	0.0%	6	5.0%	119
Total	5,258	70.0%	299	4.0%	336	4.5%	416	5.5%	618	8.2%	110	1.5%	143	1.9%	55	0.73%	7	0.09%	272	3.6%	7,514

1 Row percent

Source of data: Ontario AIDS Surveillance Program, Public Health Branch, Ontario Ministry of Health and Long-Term Care (cases reported to April 2004)

Table 2.3a Number and proportion[1] of AIDS cases among males by exposure category and year of AIDS diagnosis Ontario, 1981 to 2003

Year of AIDS Diagnosis	MSM		MSM-IDU		IDU		HIV-endemic		Hetero		Clot factor		Transfusion		Perinatal		Occupational		NIR		Total
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.
1981	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1
1982	7	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	7
1983	13	72.2%	2	11.1	0	0.0%	1	5.6%	0	0.0%	1	5.6%	0	0.0%	0	0.0%	0	0.0%	1	5.6%	18
1984	48	81.4%	4	6.8%	0	0.0%	1	1.7%	3	5.1%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	3	5.1%	59
1985	143	86.7%	5	3.0%	1	0.61%	3	1.8%	2	1.2%	3	1.8%	4	2.4%	0	0.0%	0	0.0%	4	2.4%	165
1986	240	85.4%	9	3.2%	2	0.71%	6	2.1%	2	0.7%	3	1.1%	11	3.9%	0	0.0%	0	0.0%	8	2.8%	281
1987	360	83.7%	21	4.9%	9	2.1%	4	0.93%	9	2.1%	6	1.4%	13	3.0%	0	0.0%	0	0.0%	8	1.9%	430
1988	382	83.6%	19	4.2%	4	0.88%	5	1.1%	15	3.3%	6	1.3%	15	3.3%	3	0.66%	0	0.0%	8	1.8%	457
1989	427	81.2%	21	4.0%	18	3.4%	8	1.5%	23	4.4%	4	0.76%	8	1.5%	1	0.19%	1	0.19%	15	2.9%	526
1990	496	80.3%	21	3.4%	13	2.1%	12	1.9%	35	5.7%	14	2.3%	4	0.65%	0	0.0%	0	0.0%	23	3.7%	618
1991	445	80.2%	20	3.6%	16	2.9%	12	2.2%	20	3.6%	12	2.2%	4	0.72%	2	0.36%	0	0.0%	24	4.3%	555
1992	510	75.4%	31	4.6%	27	4.0%	18	2.7%	40	5.9%	15	2.2%	11	1.6%	3	0.44%	0	0.0%	21	3.1%	676
1993	518	75.8%	33	4.8%	24	3.5%	16	2.3%	44	6.4%	11	1.6%	4	0.59%	3	0.44%	1	0.15%	29	4.2%	683
1994	451	78.0%	34	5.9%	20	3.5%	13	2.2%	29	5.0%	5	0.87%	4	0.69%	2	0.35%	0	0.0%	20	3.5%	578
1995	406	72.2%	31	5.5%	25	4.4%	19	3.4%	44	7.8%	11	2.0%	4	0.71%	3	0.53%	0	0.0%	19	3.4%	562
1996	243	67.3%	19	5.3%	23	6.4%	28	7.8%	27	7.5%	3	0.83%	3	0.83%	3	0.83%	1	0.28%	11	3.0%	361
1997	148	65.2%	7	3.1%	14	6.2%	17	7.5%	20	8.8%	3	1.3%	3	1.3%	3	1.3%	1	0.44%	11	4.8%	227
1998	112	64.7%	7	4.0%	8	4.6%	20	11.6%	17	9.8%	1	0.58%	1	0.58%	0	0.0%	0	0.0%	7	4.0%	173
1999	93	60.8%	4	2.6%	12	7.8%	13	8.5%	17	11.1	0	0.0%	1	0.65%	0	0.0%	0	0.0%	13	8.5%	153
2000	60	52.2%	4	3.5%	13	11.3%	14	12.2%	15	13.0	1	0.87%	2	1.7%	1	0.87%	0	0.0%	5	4.3%	115
2001	66	51.2%	4	3.1%	12	9.3%	14	10.9%	21	16.3	1	0.78%	1	0.8%	0	0.0%	2	1.6%	8	6.2%	129
2002	45	45.9%	3	3.1%	9	9.2%	18	18.4%	15	15.3	0	0.0%	0	0.0%	2	2.0%	0	0.0%	6	6.1%	98
2003	44	48.4%	0	0.0%	8	8.8%	18	19.8%	16	17.6	0	0.0%	1	1.1%	0	0.0%	0	0.0%	4	4.4%	91
Total	5,25	75.5%	299	4.3%	258	3.7%	260	3.7%	414	5.9%	100	1.4%	94	1.3%	26	0.37%	6	0.09%	248	3.6%	6,963

1 Row percent

Source of data: Ontario AIDS Surveillance Program, Public Health Branch, Ontario Ministry of Health and Long-Term Care (cases reported to April 2004)

Table 2.3b Number and proportion[1] of AIDS cases among females by exposure category and year of AIDS diagnosis Ontario, 1981 to 2003

Year of AIDS diagnosis	IDU		HIV-endemic		Heterosexual		Clotting Factor		Transfusion		Perinatal		Occupational		NIR		Total
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.
1981	0	0.0%	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1
1982	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
1983	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
1984	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
1985	0	0.0%	1	33.3%	1	33.3%	0	0.0%	1	33.3%	0	0.0%	0	0.0%	0	0.0%	3
1986	1	16.7%	1	16.7%	1	16.7%	1	16.7%	1	16.7%	0	0.0%	0	0.0%	1	16.7%	6
1987	1	5.6%	3	16.7%	4	22.2%	1	5.6%	8	44.4%	1	5.6%	0	0.0%	0	0.0%	18
1988	3	15.0%	1	5.0%	6	30.0%	0	0.0%	7	35.0%	1	5.0%	1	5.0%	1	5.0%	20
1989	3	12.0%	4	16.0%	10	40.0%	1	4.0%	6	24.0%	1	4.0%	0	0.0%	0	0.0%	25
1990	3	9.4%	6	18.8%	16	50.0%	0	0.0%	5	15.6%	2	6.2%	0	0.0%	0	0.0%	32
1991	5	12.8%	7	17.9%	17	43.6%	2	5.1%	4	10.3%	2	5.1%	0	0.0%	2	5.1%	39
1992	8	21.1%	9	23.7%	15	39.5%	1	2.6%	2	5.3%	2	5.3%	0	0.0%	1	2.6%	38
1993	5	12.2%	8	19.5%	20	48.8%	0	0.0%	3	7.3%	3	7.3%	0	0.0%	2	4.9%	41
1994	5	11.1%	9	20.0%	20	44.4%	2	4.44%	1	2.2%	4	8.9%	0	0.0%	4	8.9%	45
1995	7	15.2%	8	17.4%	21	45.7%	0	0.0%	5	10.9%	4	8.7%	0	0.0%	1	2.2%	46
1996	9	19.6%	18	39.1%	16	34.8%	0	0.0%	1	2.2%	0	0.0%	0	0.0%	2	4.3%	46
1997	4	14.8%	9	33.3%	10	37.0%	2	7.4%	2	7.4%	0	0.0%	0	0.0%	0	0.0%	27
1998	11	28.2%	12	30.8%	11	28.2%	0	0.0%	0	0.0%	3	7.7%	0	0.0%	2	5.1%	39
1999	4	14.8%	13	48.1%	5	18.5%	0	0.0%	2	7.4%	1	3.7%	0	0.0%	2	7.4%	27
2000	3	17.6%	4	23.5%	8	47.1%	0	0.0%	0	0.0%	2	11.8%	0	0.0%	0	0.0%	17
2001	0	0.0%	16	57.1%	8	28.6%	0	0.0%	1	3.6%	1	3.6%	0	0.0%	2	7.1%	28
2002	4	16.0%	13	52.0%	5	20.0%	0	0.0%	0	0.0%	1	4.0%	0	0.0%	2	8.0%	25
2003	2	7.1%	13	46.4%	10	35.7%	0	0.0%	0	0.0%	1	3.6%	0	0.0%	2	7.1%	28
Total	78	14.2%	156	28.3%	204	37.0%	10	1.8%	49	8.9%	29	5.3%	1	0.2%	24	4.4%	551

1 Row percent
Source of data: Ontario AIDS Surveillance Program, Public Health Branch, Ontario Ministry of Health and Long-Term Care (cases reported to April 2004)

Table 2.4 Number of AIDS cases and cumulative incidence rate (per 100,000) by age at diagnosis and sex, Ontario, 1981 to 2003

Age group (years)	Males		Females		Total	
	Number	Rate	Number	Rate	Number	Rate
< 15	42	1.9	35	1.6	77	3.4
15-19	15	4.0	5	1.4	20	2.8
20-24	209	55.3	28	7.6	237	31.7
25-29	884	214.5	105	25.3	989	119.7
30-34	1,495	298.6	141	28.5	1,636	164.4
35-39	1,524	314.4	74	15.2	1,598	164.2
40-44	1,170	274.9	74	16.8	1,244	143.8
45-49	770	196.6	24	6.0	794	100.5
50-54	396	131.2	15	4.9	411	67.5
55-59	234	94.7	18	7.1	252	50.3
60+	222	27.8	32	3.1	254	14.0
Unknown	2		0		2	
Total	6,963	127.3	551	9.8	7,514	67.7

Sources of data: Ontario AIDS Surveillance Program, Public Health Branch, Ontario Ministry of Health and Long-Term Care (cases reported to April 2004); Statistics Canada (1996 census)

Table 2.5 Number of AIDS cases and incidence rate per 100,000 by age at AIDS diagnosis and sex, Ontario, 2003

Age group (years)	Males		Females		Total	
	Number	Rate	Number	Rate	Number	Rate
< 15	1	0.0	1	0.04	2	0.09
15-19	0	0.0	0	0.0	0	0.0
20-24	1	0.26	0	0.0	1	0.13
25-29	4	1.0	6	1.4	10	1.2
30-34	15	3.0	6	1.2	21	2.1
35-39	24	5.0	3	0.61	27	2.8
40-44	23	5.4	8	1.8	31	3.6
45-49	12	3.1	3	0.75	15	1.9
50-54	5	1.7	0	0.0	5	0.82
55-59	3	1.2	0	0.0	3	0.60
60+	3	0.38	1	0.10	4	0.22
Total	91	1.7	28	0.50	117	1.1

Sources of data: Ontario AIDS Surveillance Program, Public Health Branch, Ontario Ministry of Health and Long-Term Care (cases reported to April 2004); Statistics Canada (1996 census)

Table 2.6 Number and proportion[1] of AIDS cases by age at diagnosis and exposure category, Ontario 1981 to 2003

Age group (years)	MSM		MSM-IDU		IDU		HIV-endemic		Hetero		Clotting factor		Transfusion		Perinatal		Occupational		NIR		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
< 15	0	0.0%	0	0.0%	0	0.0%	1	0.24%	0	0.0%	6	5.5%	10	7.0%	55	100.0%	0	0.0%	5	1.8%	77	1.0%
15-19	2	0.0%	1	0.33%	3	0.89%	2	0.48%	2	0.32%	6	5.5%	4	2.8%	0	0.0%	0	0.0%	0	0.0%	20	0.27%
20-24	133	2.5%	16	5.4%	20	6.0%	13	3.1%	24	3.9%	16	14.5%	6	4.2%	0	0.0%	0	0.0%	9	3.3%	237	3.2%
25-29	648	12.3%	70	23.4%	56	16.7%	68	16.3%	85	13.8%	15	13.6%	11	7.7%	0	0.0%	0	0.0%	36	13.2%	989	13.2%
30-34	1,153	21.9%	89	29.8%	93	27.7%	112	26.9%	122	19.7%	11	10.0%	15	10.5%	0	0.0%	0	0.0%	41	15.1%	1,636	21.8%
35-39	1,209	23.0%	52	17.4%	75	22.3%	91	21.9%	97	15.7%	13	11.8%	11	7.7%	0	0.0%	2	28.6%	48	17.6%	1,598	21.3%
40-44	924	17.6%	38	12.7%	51	15.2%	62	14.9%	105	17.0%	9	8.2%	13	9.1%	0	0.0%	1	14.3%	41	15.1%	1,244	16.6%
45-49	606	11.5%	19	6.4%	23	6.8%	30	7.2%	67	10.8%	12	10.9%	8	5.6%	0	0.0%	1	14.3%	28	10.3%	794	10.6%
50-54	289	5.5%	9	3.0%	10	3.0%	17	4.1%	41	6.6%	6	5.5%	10	7.0%	0	0.0%	1	14.3%	28	10.3%	411	5.5%
55-59	164	3.1%	3	1.0%	3	0.89%	8	1.9%	38	6.1%	6	5.5%	16	11.2%	0	0.0%	1	14.3%	13	4.8%	252	3.4%
60+	128	2.4%	2	0.67%	2	0.60%	12	2.9%	37	6.0%	10	9.1%	39	27.3%	0	0.0%	1	14.3%	23	8.5%	254	3.4%
Unknown	2	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	2	0.0%
Total	5,258	100.0%	299	100.0%	336	100.0%	416	100.0%	618	100.0%	110	100.0%	143	100.0%	55	100.0%	7	100.0%	272	100.0%	7,514	100.0%

1 Column percent of cases with known age

Source of data: Ontario AIDS Surveillance Program, Public Health Branch, Ontario Ministry of Health and Long-Term Care (cases reported to April 2004)

Table 2.7 Mean age (years) at AIDS diagnosis by year of diagnosis and exposure category, among males, Ontario,1981 to 2003

	MSM		MSM-IDU		IDU		HIV-endemic		Hetero		Clotting factor		Trans.		Occup.		Perinatal		NIR		TOTAL
Year	n	Mean	n	Mean	n	Mean	n	Mean	n	Mean	n	Mean	n	Mean	n	Mean	n	Mean	n	Mean	n
1981	1	42.3	0		0		0		0		0		0		0		0		0		42.3
1982	7	34.3	0		0		0		0		0		0		0		0		0		34.3
1983	13	37.6	2	38.0	0		1	52.9	0		1	24.2	0		0		0		1	28.8	181.5
1984	48	39.5	4	30.7	0		1	34.2	0		0		0		0		0		3	39.8	144.2
1985	143	37.3	5	31.0	1	30.0	3	36.4	2	56.0	0		4	51.7	0		0		4	38.6	281
1986	240	37.5	9	30.5	2	33.5	6	35.2	2	41.8	3	18.0	11	41.5	0		0		8	35.1	273.1
1987	360	38.3	21	35.0	9	36.3	4	39.5	9	39.3	6	34.0	13	61.2	0		0		8	46.3	329.9
1988	382	37.4	19	32.8	4	36.1	5	37.3	15	40.6	6	36.2	15	43.8	0		3	1.6	8	37.2	303
1989	427	37.4	21	34.6	18	29.7	8	38.5	23	41.2	4	25.1	8	44.7	1	41.5	1	3.7	15	33.5	329.9
1990	496	38.5	21	34.4	13	30.4	12	33.4	35	38.9	14	38.1	4	38.1	0		0		23	43.0	294.8
1991	445	39.0	20	33.0	16	33.3	12	37.3	20	41.5	12	43.4	4	42.1	0		2	0.4	24	39.5	309.5
1992	510	38.2	31	35.5	27	35.1	18	36.6	40	40.4	15	35.8	11	40.2	0		3	0.7	21	44.6	307.1
1993	518	39.4	33	34.5	24	34.4	16	38.8	44	43.0	11	36.9	4	40.2	1	51.4	3	0.5	29	40.0	359.1
1994	451	39.6	34	34.9	20	34.8	13	37.3	29	37.6	5	33.1	4	44.3	0		2	3.8	20	43.4	308.8
1995	406	39.6	31	36.8	25	36.4	19	42.2	44	45.0	11	34.3	4	48.8	0		3	0.7	19	39.9	323.7
1996	243	40.1	19	36.8	23	35.9	28	35.9	27	41.3	3	31.4	3	51.0	1	37.6	3	4.2	11	45.2	359.4
1997	148	41.6	7	31.9	14	40.2	17	38.9	20	43.5	3	33.0	3	53.5	1	59.4	3	0.8	11	45.2	388
1998	112	40.8	7	35.1	8	38.2	20	38.0	17	40.7	1	43.9	1	32.5	0		0		7	48.1	317.3
1999	93	41.1	4	45.5	12	36.2	13	42.6	17	48.0	0		1	63.1	0		0		13	44.2	320.7
2000	60	42.0	4	42.1	13	41.5	14	43.5	15	43.5	1		2	47.9	0		1	2.2	5	38.9	301.6
2001	66	42.8	4	36.9	12	45.7	14	37.3	21	44.8	1	23.1	1	33.3	2	42.2	2	2.6	8	45.0	353.7
2002	45	41.5	3	34.1	9	39.9	18	38.4	15	43.8	0		0		0		0		6	46.6	244.3
2003	44	42.1	0		8	40.7	18	36.2	16	41.7	0		1	30.7	0				4	45.3	236.7
Total	5,258	38.9	299	34.9	258	36.1	260	38.2	411	42.0	97	36.2	94	46.2	6	45.7	26	1.7	248	41.7	6,344

Source of data: Ontario AIDS Surveillance Program, Public Health Branch, Ontario Ministry of Health and Long-Term care (cases reported to April 2004)

Table 2.8 Mean age (years) at AIDS diagnosis by year of diagnosis and exposure category, among females, Ontario, 1981 to 2003

	IDU		HIV-endemic		Hetero		Clotting factor		Trans.		Occup.		Perinatal		NIR		TOTAL
Year	n	Mean	n	Mean	n	Mean	n	Mean	n	Mean	n	Mean	n	Mean	n	Mean	n
1981	0		1	52.2	0		0		0		0		0		0		52
1982	0		0		0		0		0		0		0		0		0
1983	0		0		0		0		0		0		0		0		0
1984	0		0		0		0		0		0		0		0		0
1985	0		1	36.7	1	30.1	0		1	53.0	0		0		0		120
1986	1	20.4	1	29.2	1	50.4	1	56.1	1	12.1	0		0		1	28.2	196
1987	1	32.3	3	35.1	4	28.3	1	24.4	8	54.5	0		1	0.2	0		175
1988	3	30.4	1	26.5	6	27.4	0		7	49.7	1	68.0	1	0.3	1	63.7	266
1989	3	31.9	4	34.2	10	37.8	1	30.4	6	46.5	0		1	0.6	0		181
1990	3	33.7	6	34.1	16	36.0	0		5	41.1	0		2	2.3	0		147
1991	5	32.3	7	40.2	17	39.9	2	61.3	4	37.2	0		2	1.1	2	25.7	238
1992	8	31.1	9	32.5	15	5.6	1	75.7	2	33.8	0		2	0.4	1	28.9	208
1993	5	31.0	8	35.0	20	34.0	0		3	43.3	0		3	0.6	2	45.7	190
1994	5	29.4	9	40.0	20	37.3	2	32.8	1	51.7	0		4	3.6	4	29.8	225
1995	7	35.5	8	31.4	21	37.4	0		5	36.9	0		4	2.5	1	0.4	144
1996	9	35.2	18	32.9	16	37.6	0		1	42.1	0		0		2	21.1	169
1997	4	29.6	9	33.8	10	39.1	2	36.8	2	61.1	0		0		0		200
1998	11	33.6	12	40.3	11	38.6	0		0		0		3	1.4	2	38.3	152
1999	4	37.0	13	43.5	5	40.3	0		2	38.7	0		1	0.3	2	25.2	185
2000	3	36.4	4	31.7	8	34.0	0		0		0		2	0.3	0		102
2001	0		16	35.5	8	38.2	0		1	56.4	0		1	0.4	2	56.0	186
2002	4	37.7	13	34.4	5	45.1	0		0		0		1	0.3	2	39.5	157
2003	2	44.5	13	35.0	10	42.0	0		0		0		1	0.3	2	33.6	155
Total	78	33.4	156	35.9	204	37.1	10	44.9	49	45.2	1	68.0	29	1.4	24	33.8	300

Source of data: Ontario AIDS Surveillance Program, Public Health Branch, Ontario Ministry of Health and Long-Term Care (cases reported to April 2004)

Table 2.9 Number and proportion[1] of AIDS cases by exposure category and health region, Ontario, 1981 to 2003

Exposure category	Northern		Ottawa		Eastern Other		Toronto		Central East Other		Central West		Southwest		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
MSM	105	52.0%	376	60.6%	97	47.1%	3,548	77.8%	340	50.0%	411	62.6%	381	64.5%	5,258	70.0%
MSM-IDU	14	6.9%	24	3.9%	11	5.3%	178	3.9%	19	2.8%	23	3.5%	30	5.1%	299	4.0%
IDU	26	12.9%	58	9.4%	34	16.5%	116	2.5%	33	4.9%	40	6.1%	29	4.9%	336	4.5%
HIV-endemic	8	4.0%	74	11.9%	4	1.94%	261	5.7%	33	4.9%	27	4.1%	9	1.5%	416	5.5%
Heterosexual	24	11.9%	36	5.8%	15	7.3%	269	5.9%	128	18.8%	81	12.3%	65	11.0%	618	8.2%
Clotting factor	11	5.4%	6	1.0%	9	4.4%	26	0.57%	25	3.7%	17	2.6%	16	2.7%	110	1.5%
Transfusion	7	3.5%	11	1.8%	11	5.3%	49	1.1%	37	5.4%	17	2.6%	11	1.9%	143	1.9%
Perinatal	1	0.50%	10	1.6%	1	0.49%	30	0.66%	7	1.0%	4	0.6%	2	0.34%	55	0.73%
Occupational	0	0.0%	2	0.32%	0	0.0%	4	0.09%	1	0.1%	0	0.0%	0	0.0%	7	0.09%
NIR	6	3.0%	23	3.7%	24	11.7%	77	1.7%	57	8.4%	37	5.6%	48	8.1%	272	3.6%
Total	202	100.0%	620	100.0%	206	100.0%	4,558	100.0%	680	100.0%	657	100.0%	591	100.0%	7,514	100.0%

1 Column percent

Source of data: Ontario AIDS Surveillance Program, Public Health Branch, Ontario Ministry of Health and Long-Term Care (cases reported to April 2004)

Table 2.10 Number and proportion[1] of AIDS cases by exposure category and health region, Ontario, 2003

	Northern		Ottawa		Eastern Other		Toronto		Central East Other		Central West		Southwest		Total	
Exposure category	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
MSM	1	20.0%	1	33.3%	1	33.3%	32	47.8%	2	13.3%	7	31.8%	0	0.0%	44	37.0%
MSM-IDU	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
IDU	2	40.0%	1	33.3%	0	0.0%	0	0.0%	0	0.0%	4	18.2%	3	75.0%	10	8.4%
HIV-endemic	0	0.0%	0	0.0%	1	33.3%	19	28.4%	5	33.3%	6	27.3%	0	0.0%	31	26.1%
Heterosexual	2	40.0%	1	33.3%	1	33.3%	11	16.4%	7	46.7%	4	18.2%	0	0.0%	26	21.8%
Clotting factor	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Transfusion	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	25.0%	1	0.8%
Perinatal	0	0.0%	0	0.0%	0	0.0%	1	1.5%	0	0.0%	0	0.0%	0	0.0%	1	0.8%
Occupational	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
NIR	0	0.0%	0	0.0%	0	0.0%	4	6.0%	1	6.7%	1	4.5%	0	0.0%	6	5.0%
Total	5	100.0%	3	100.0%	3	100.0%	67	100.0%	15	100.0%	22	100.0%	4	100.0%	119	100.0%

1 Column percent

Source of data: Ontario AIDS Surveillance Program, Public Health Branch, Ontario Ministry of Health and Long-Term Care (cases reported to April 2004)

Table 2.11 Single and multiple sources of exposure among Ontario AIDS cases, 1981 to 2003

	Number	%[1]
MSM	4,251	59.1%
MSM/IDU	197	2.7%
MSM/IDU/bisexual	93	1.3%
MSM/IDU/others	22	0.31%
MSM/clotting factor	8	0.11%
MSM/clotting factor/other	4	0.06%
MSM/HIV-endemic	46	0.64%
MSM/HIV-endemic/bisexual	30	0.42%
MSM/bisexual	692	9.6%
MSM/bisexual/transfusion	24	0.33%
MSM/bisexual/transfusion/occupational	1	0.01%
MSM/bisexual/occupational	6	0.08%
MSM/bisexual/others	18	0.2%
MSM/transfusion	100	1.4%
MSM/occupational	55	0.77%
MSM and others	39	0.54%
SUB-TOTAL (MSM)	5,586	77.7%
IDU	113	1.6%
IDU/HIV-endemic/heterosexual other	8	0.11%
IDU/heterosexual other	200	2.8%
IDU and others	7	0.10%
SUB-TOTAL	328	4.6%
Clotting factor	74	1.0%
Clotting factor/heterosexual other	26	0.36%
Clotting factor/heterosexual other/transfusion	9	0.13%
Clotting factor/heterosexual other/transfusion/occupational	1	0.01%
Clotting factor/transfusion	8	0.11%
SUB-TOTAL	118	1.6%
HIV-endemic	71	0.99%
HIV-endemic/heterosexual other	320	4.4%
HIV-endemic and others	20	0.28%
SUB-TOTAL	411	5.7%
Heterosexual other	567	7.9%
Heterosexual other/transfusion	72	1.0%
Heterosexual other/transfusion/occupational	3	0.04%
Heterosexual/occupational	7	0.10%
SUB-TOTAL	649	9.0%
Transfusion	94	1.3%
Transfusion/occupational	2	0.03%
SUB-TOTAL	96	1.3%
Perinatal	53	0.70%
Occupational	5	0.07%
Unknown	268	
GRAND TOTAL	7,514	100.0%

1 Percent of cases with known source of exposure
Source of data: Ontario AIDS Surveillance Program, Public Health Branch, Ministry of Health and Long-Term Care (cases reported to April 2004)

Table 2.12 Number and proportion[1] of AIDS cases by health region and year of diagnosis, Ontario, 1981 to 2003

Year of diagnosis	Northern		Ottawa		Eastern Other		Toronto		Central East Other		Central West		Southwest		Total
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.
1981	1	50.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	50.0%	2
1982	0	0.0%	0	0.0%	0	0.0%	3	42.9%	0	0.0%	2	28.6%	2	28.6%	7
1983	1	5.6%	2	11.1%	1	5.6%	12	66.7%	0	0.0%	2	11.1%	0	0.0%	18
1984	0	0.0%	1	1.7%	1	1.7%	48	81.4%	2	3.4%	3	5.1%	4	6.8%	59
1985	2	1.2%	15	8.9%	4	2.4%	109	64.9%	13	7.7%	10	6.0%	15	8.9%	168
1986	12	4.2%	17	5.9%	9	3.1%	171	59.6%	32	11.1%	21	7.3%	25	8.7%	287
1987	13	2.9%	36	8.0%	11	2.5%	278	62.1%	45	10.0%	32	7.1%	33	7.4%	448
1988	11	2.3%	32	6.7%	14	2.9%	291	61.0%	57	11.9%	33	6.9%	39	8.2%	477
1989	13	2.4%	38	6.9%	16	2.9%	347	63.0%	45	8.2%	44	8.0%	48	8.7%	551
1990	14	2.2%	45	6.9%	19	2.9%	399	61.4%	62	9.5%	60	9.2%	51	7.8%	650
1991	16	2.7%	59	9.9%	16	2.7%	336	56.6%	51	8.6%	53	8.9%	63	10.6%	594
1992	23	3.2%	44	6.2%	26	3.6%	442	61.9%	51	7.1%	74	10.4%	54	7.6%	714
1993	19	2.6%	42	5.8%	14	1.9%	450	62.2%	76	10.5%	65	9.0%	58	8.0%	724
1994	16	2.6%	52	8.3%	12	1.9%	385	61.8%	57	9.1%	44	7.1%	57	9.1%	623
1995	20	3.3%	49	8.1%	24	3.9%	381	62.7%	40	6.6%	56	9.2%	38	6.2%	608
1996	6	1.5%	40	9.8%	7	1.7%	256	62.9%	30	7.4%	37	9.1%	31	7.6%	407
1997	3	1.2%	31	12.2%	7	2.8%	145	57.1%	22	8.7%	27	10.6%	19	7.5%	254
1998	9	4.2%	34	16.0%	5	2.4%	116	54.7%	16	7.5%	21	9.9%	11	5.2%	212
1999	7	3.9%	23	12.8%	3	1.7%	103	57.2%	13	7.2%	17	9.4%	14	7.8%	180
2000	3	2.3%	21	15.9%	4	3.0%	74	56.1%	15	11.4%	11	8.3%	4	3.0%	132
2001	3	1.9%	18	11.5%	8	5.1%	74	47.1%	25	15.9%	14	8.9%	15	9.6%	157
2002	5	4.1%	18	14.6%	2	1.6%	71	57.7%	13	10.6%	9	7.3%	5	4.1%	123
2003	5	4.2%	3	2.5%	3	2.5%	67	56.3%	15	12.6%	22	18.5%	4	3.4%	119
Total	202	2.7%	620	8.3%	206	2.7%	4,558	60.7%	680	9.0%	657	8.7%	591	7.9%	7,514

1 Row percent

Source of data: Ontario AIDS Surveillance Program, Public Health Branch, Ontario Ministry of Health and Long-Term Care (cases reported to April 2004)

Table 2.13 Number of AIDS cases and rate (per 100,000) by health region and sex Ontario, 1981 to 2003

	Males		Females			Total	
health region	No.	Rate	No.	Rate	% female[1]	No.	Rate
Northern	174	38.4	28	6.2	13.9%	202	22.2
Ottawa	552	151.3	68	18.0	11.0%	620	83.4
Eastern Other	182	47.0	24	6.1	11.7%	206	26.4
Toronto	4,327	362.1	231	18.2	5.1%	4,558	185.1
Central East Other	588	45.5	92	7.0	13.5%	680	26.1
Central West	597	57.1	60	5.6	9.1%	657	31.0
Southwest	543	74.2	48	6.4	8.1%	591	39.8
Ontario	6,963	127.3	551	9.8	7.3%	7,514	67.7

1 Row percent

Sources of data: Ontario AIDS Surveillance Program, Public Health Branch, Ontario Ministry of Health and Long-Term Care (cases reported to April 2004); Statistics Canada (1996 census)

Table 2.14 Number of AIDS cases and rate per 100,000 by public health unit and sex, Ontario, 1981 to 2003

	Males		Females		Total	
Public health unit	**Number**	**Rate**	**Number**	**Rate**	**Number**	**Rate**
Algoma	10	15.4	2	3.0	12	9.1
Muskoka	15	32.3	4	8.6	19	20.4
North Bay	30	70.1	1	2.3	31	35.6
Northwestern	7	15.1	5	11.1	12	13.1
Porcupine	8	16.5	3	6.3	11	11.5
Sudbury	65	63.0	4	3.8	69	33.2
Thunder Bay	31	38.0	8	9.8	39	23.9
Timiskaming	8	41.5	1	5.1	9	23.2
Northern	***174***	***38.4***	***28***	***6.2***	***202***	***22.2***
Ottawa	***552***	***151.3***	***68***	***18.0***	***620***	***83.4***
Eastern Ontario	29	30.5	4	4.1	33	17.2
Hastings-Prince Edward	49	66.8	4	5.3	53	35.6
Kingston-Frontenac	63	70.1	11	12.1	74	40.9
Leeds-Grenville	26	32.8	2	2.5	28	17.5
Renfrew	15	30.3	3	6.0	18	18.1
Eastern Other	***182***	***47.0***	***24***	***6.1***	***206***	***26.4***
Toronto	***4,327***	***362.1***	***231***	***18.2***	***4,558***	***185.1***
Durham	105	44.7	13	5.5	118	25.0
Haliburton	16	19.0	2	2.4	18	10.6
Peel	244	55.5	41	9.3	285	32.3
Peterborough	34	55.3	1	1.5	35	27.6
Simcoe	77	45.7	14	8.2	91	26.8
York Region	112	36.8	21	6.8	133	21.7
Central East Other	***588***	***45.5***	***92***	***7.0***	***680***	***26.1***
Brant	30	49.5	5	8.0	35	28.4
Haldimand	18	34.0	3	5.6	21	19.8
Halton	88	50.8	6	3.4	94	26.8
Hamilton-Wentworth	202	85.4	18	7.3	220	45.7
Niagara	129	63.5	14	6.6	143	34.5
Waterloo	80	38.6	9	4.3	89	21.3
Wellington-Dufferin	50	44.8	5	4.5	55	24.6
Central West	***597***	***57.1***	***60***	***5.6***	***657***	***31.0***
Bruce Grey-Owen Sound	25	31.9	2	2.5	27	17.1
Elgin-St Thomas	9	22.4	4	9.7	13	16.0
Huron	10	32.5	1	3.2	11	17.8
Kent-Chatham	32	57.7	0	0.0	32	28.4
Lambton	22	33.4	6	8.9	28	21.0
Middlesex-London	219	111.1	18	8.7	237	58.7
Oxford	20	40.5	2	4.0	22	22.0
Perth	18	49.0	1	2.7	19	25.6
Windsor-Essex	188	105.6	14	7.6	202	55.9
Southwest	***543***	***74.2***	***48***	***6.4***	***591***	***39.8***
TOTAL	**6,963**	**127.3**	**551**	**9.8**	**7,514**	**67.7**

Sources of data: Ontario AIDS Surveillance Program, Public Health Branch, Ontario Ministry of Health and Long-Term Care (cases reported to April 2004); Statistics Canada (1996 census)

Table 3.1a Number and proportion of children born to HIV-positive mothers by year of birth and status of the child at latest follow-up Ontario, 1984 to 2003 (all cases)

Year of birth	Confirmed HIV-positive				Confirmed HIV-negative		Pending/ unknown[4]	
	No.	%[1]	*DA*[2]	*%*[3]	No.	%[1]	No.	Total
1984	5	100.0	*3*	*60.0*	0	0.0	0	5
1985	3	100.0	*1*	*33.3*	0	0.0	0	3
1986	6	75.0	*4*	*66.7*	2	25.0	0	8
1987	4	57.1	*1*	*25.0*	3	42.9	0	7
1988	8	66.7	*4*	*50.0*	4	33.3	0	12
1989	10	76.9	*2*	*20.0*	3	23.1	1	14
1990	10	45.5	*4*	*40.0*	12	54.5	0	22
1991	9	56.3	*5*	*55.6*	7	43.8	1	17
1992	18	72.0	*2*	*11.1*	7	28.0	0	25
1993	13	44.8	*5*	*38.5*	16	55.2	1	30
1994	18	46.2	*5*	*27.8*	21	53.8	2	41
1995	11	29.7	*1*	*9.1*	26	70.3	0	37
1996	9	28.1	*2*	*22.2*	23	71.9	3	35
1997	2	15.4	*0*	*0.0*	11	84.6	1	14
1998	8	20.0	*1*	*12.5*	32	80.0	2	42
1999	9	25.0	*1*	*11.1*	27	75.0	1	37
2000	2	6.7	*0*	*0.0*	28	93.3	3	33
2001	7	13.5	*0*	*0.0*	45	86.5	0	52
2002	3	6.7	*0*	*0.0*	42	93.3	4	49
2003	2	4.9	*0*	*0.0*	39	95.1	21	62
Total	157	31.1	*41*	*26.1*	348	68.9	40	545

1 Proportion of cases of known infection status
2 Died of AIDS
3 Proportion of AIDS-related deaths among confirmed HIV-positive infants born that year
4 Lost to follow-up: 1(93), 2(96), 1(97), 1(98), 1(99),34(00), 4(02), 3(03)
Died, cause unknown : 1(91), 2(94), 1(96)
HIV status pending: 1(89), 1(98), 18(03)

Source of data: Dr. Susan M. King, Ontario region, Canadian Pediatric AIDS Research Group

Table 3.1b Number and proportion[1] of children born in Canada[2] to HIV-positive mothers by year of birth and status of the child at latest follow-up, Ontario, 1984 to 2003

Year of birth	Confirmed HIV-positive				Confirmed HIV-negative		Pending/ unknown[5]	
	No.	%	*DA*[3]	*%*[4]	No.	%	No.	Total
1984	2	100.0	*2*	*100.0*	0	0.0	0	2
1985	1	100.0	*0*	*0.0*	0	0.0	0	1
1986	5	83.3	*3*	*60.0*	1	16.7	0	6
1987	4	57.1	*1*	*25.0*	3	42.9	0	7
1988	6	60.0	*4*	*66.7*	4	40.0	0	10
1989	10	76.9	*2*	*20.0*	3	23.1	0	13
1990	6	35.3	*2*	*33.3*	11	64.7	0	17
1991	8	53.3	*5*	*62.5*	7	46.7	0	15
1992	11	61.1	*2*	*18.2*	7	38.9	0	18
1993	10	38.5	*5*	*50.0*	16	61.5	1	27
1994a	3	23.1	*1*	*33.3*	10	76.9	0	13
1994b	6	35.3	*3*	*50.0*	11	64.7	2	19
1995	9	25.7	*1*	*11.1*	26	74.3	0	35
1996	8	25.8	*2*	*25.0*	23	74.2	2	33
1997	1	8.3	*0*	*100.0*	11	91.7	1	13
1998	7	17.9	*1*	*14.3*	32	82.1	1	40
1999	9	25.0	*1*	*11.1*	27	75.0	1	37
2000	2	7.1	*0*	*0.0*	26	92.9	2	30
2001	5	10.0	*0*	*0.0*	45	90.0	0	50
2002	3	6.8	*0*	*0.0*	41	93.2	4	48
2003	2	4.9	*0*	*0.0*	39	95.1	21	62
Total	118	25.6	*35*	*29.7*	343	74.4	35	496

1 Proportion of cases of known infection status
2 Assumed that 20 infants with missing birthplace information were also born in Canada.
3 Died of AIDS
4 Proportion of AIDS-related deaths among confirmed HIV-positive infants born that year
5 Lost to follow-up: 1(93), 1(96), 1(97), 1(98), 1(99), 2(00), 4(02), 3(03)
Died, cause unknown: 2(94b), 1(96)
HIV status pending: 18(03)

Source of data: Dr. Susan M. King, Ontario region, Canadian Pediatric AIDS Research Group

Table 3.2a Number and proportion[1] of HIV-infected mothers by geographic region of the reporting health institution and mother's exposure category, Ontario, 1984 to 2003 (all cases)

Geographic region of the treating institution	Exposure category											
	IDU		HIV-endemic		Heterosexual		Transfusion		Unknown	Total		
	No.	%	No.	%	No.	%	No.	%	No.	No.	%[2]	
Toronto	37	12.0	186	60.4	83	26.9	2	0.65	20	328	60.2	
Ottawa	37	25.3	72	49.3	34	23.3	3	2.1	2	148	27.2	
Other	*6*	*9.7*	*18*	*29.0*	*37*	*59.7*	*1*	*1.6*	*7*	*69*	*12.7*	
London	*0*	*0.0*	*4*	*20.0*	*15*	*75.0*	*1*	*5.0*	*2*	*22*	*4.0*	
Hamilton	*5*	*17.2*	*13*	*44.8*	*11*	*37.9*	*0*	*0.0*	*4*	*33*	*6.1*	
Sudbury	*1*	*16.7*	*0*	*0.0*	*5*	*83.3*	*0*	*0.0*	*0*	*6*	*1.1*	
Windsor	*0*	*0.0*	*0*	*0.0*	*5*	*100.0*	*0*	*0.0*	*0*	*5*	*0.92*	
Kingston	*0*	*0.0*	*1*	*50.0*	*1*	*50.0*	*0*	*0.0*	*1*	*3*	*0.55*	
Total	80	15.5	276	53.5	154	29.8	6	1.2	29	545	100.0	

1 Row percent of cases with known exposure category
2 Column percent of Total

Source of data: Dr. Susan M. King, Ontario region, Canadian Pediatric AIDS Research Group

Table 3.2b Number and proportion[1] of HIV-infected mothers giving birth in Canada[2] by geographic region of the reporting health institution and mother's exposure category, Ontario, 1984 to 2003

Geographic region of the treating institution	Exposure category											
	IDU		HIV-endemic		Heterosexual		Transfusion		Unknown	Total		
	No.	%	No.	%	No.	%	No.	%	No.	No.	%[3]	
Toronto	36	12.8	162	57.7	82	29.2	1	0.36	18	299	60.3	
Ottawa	36	28.3	55	43.3	33	26.0	3	2.4	2	129	26.0	
Other	*6*	*9.8*	*17*	*27.9*	*37*	*60.7*	*1*	*1.6*	*7*	*68*	*13.7*	
London	*0*	*0.0*	*4*	*20.0*	*15*	*75.0*	*1*	*5.0*	*2*	*22*	*4.4*	
Hamilton	*5*	*17.9*	*12*	*42.9*	*11*	*39.3*	*0*	*0.0*	*4*	*32*	*6.5*	
Sudbury	*1*	*16.7*	*0*	*0.0*	*5*	*83.3*	*0*	*0.0*	*0*	*6*	*1.2*	
Windsor	*0*	*0.0*	*0*	*0.0*	*5*	*100.0*	*0*	*0.0*	*0*	*5*	*1.0*	
Kingston	*0*	*0.0*	*1*	*50.0*	*1*	*50.0*	*0*	*0.0*	*1*	*3*	*0.60*	
Total	*78*	*16.6*	*234*	*49.8*	*152*	*32.4*	*5*	*1.1*	*27*	*496*	*100.0*	

1 Row percent of cases with known exposure category
2 Assumed that 20 infants with missing birthplace information were also born in Canada.
3 Column percent of Total

Source of data: Dr. Susan M. King, Ontario region, Canadian Pediatric AIDS Research Group

Table 3.3a Number and proportion[1] of infected children born to HIV-positive mothers by geographic region of the reporting health institution and mother's exposure category, Ontario, 1984 to 2003 (all cases)

Geographic region of the treating institution	Exposure category											
	IDU		HIV-endemic		Heterosexual		Transfusion		Unknown	Total		
	No.	%	No.	%	No.	%	No.	%	No.	No.	%[2]
Toronto	8	8.3	65	67.7	23	24.0	0	0.0	4	100	63.7
Ottawa	2	5.4	25	67.6	8	21.6	2	5.4	2	39	24.8
Other	*0*	*0.0*	*7*	*43.8*	*8*	*50.0*	*1*	*6.3*	*2*	*18*	*11.5*
London	*0*	*0.0*	*2*	*28.6*	*4*	*57.1*	*1*	*14.3*	*0*	*7*	*4.5*
Hamilton	*0*	*0.0*	*4*	*57.1*	*3*	*42.6*	*0*	*0.0*	*1*	*8*	*5.1*
Sudbury	*0*	*0.0*	*0*	*0.0*	*0*	*0.0*	*0*	*0.0*	*0*	*0*	*0.0*
Windsor	*0*	*0.0*	*0*	*0.0*	*1*	*100.0*	*0*	*0.0*	*0*	*1*	*0.64*
Kingston	*0*	*0.0*	*1*	*100.0*	*0*	*0.0*	*0*	*0.0*	*1*	*2*	*1.3*
Total	10	5.3	97	65.1	39	26.2	3	2.0	8	157	100.0

1 Row percent of cases with known exposure category
2 Column percent of Total

Source of data: Dr. Susan M. King, Ontario region, Canadian Pediatric AIDS Research Group

Table 3.3b Number and proportion[1] of infected children born in Canada[2] to HIV-positive mothers by geographic region of the reporting health institution and mother's exposure category, Ontario, 1984 to 2003

Geographic region of the treating institution	Exposure category										
	IDU		HIV-endemic		Heterosexual		Transfusion		Unknown	Total	
	No.	%	No.	%	No.	%	No.	%	No.	No.	%[3]
Toronto	7	9.3	46	61.3	22	29.3	0	0.0	2	77	65.3
Ottawa	2	9.1	10	45.5	8	36.4	2	9.1	2	24	20.3
Other	*0*	*0.0*	*6*	*40.0*	*8*	*53.3*	*1*	*6.7*	*2*	*17*	*14.4*
London	*0*	*0.0*	*2*	*28.6*	*4*	*57.1*	*1*	*14.3*	*0*	*7*	*5.9*
Hamilton	*0*	*0.0*	*3*	*50.0*	*3*	*50.0*	*0*	*0.0*	*1*	*7*	*5.9*
Sudbury	*0*	*0.0*	*0*	*0.0*	*0*	*0.0*	*0*	*0.0*	*0*	*0*	*0.0*
Windsor	*0*	*0.0*	*0*	*0.0*	*1*	*100.0*	*0*	*0.0*	*0*	*1*	*0.85*
Kingston	*0*	*0.0*	*1*	*100.0*	*0*	*0.0*	*0*	*0.0*	*1*	*2*	*1.7*
Total	9	8.0	62	55.4	38	33.9	3	2.7	6	118	100.0

1 Row percent of cases with known exposure category
2 Assumed that 20 infants with missing birthplace information were also born in Canada.
3 Column percent of Total

Source of data: Dr. Susan M. King, Ontario region, Canadian Pediatric AIDS Research Group

Table 3.4a Number and proportion[1] of HIV-positive children by period of birth and exposure category of mother Ontario, 1984 to 2003 (all cases)

Period of birth	Exposure category										Total
	IDU		HIV-endemic		Heterosexual		Transfusion		Unknown		
	No.	%	No.	%	No.	%	No.	%	No.		No.
1984-85	0	0.0	6	85.7	0	0.0	1	14.3	1		8
1986-87	1	10.0	6	60.0	3	30.0	0	0.0	0		10
1988-89	3	17.6	5	29.4	8	47.1	1	5.9	1		18
1990-91	0	0.0	9	56.3	6	37.5	1	6.3	3		19
1992-93	1	3.4	20	69.0	8	27.6	0	0.0	2		31
1994-95	3	10.3	22	75.9	4	13.8	0	0.0	0		29
1996-97	0	0.0	9	81.8	2	18.2	0	0.0	0		11
1998-99	1	6.3	9	56.2	6	37.5	0	0.0	1		17
2000-01	1	11.1	6	66.7	2	22.2	0	0.0	0		9
2002-03	0	0.0	5	100.0	0	0.0	0	0.0	0		5
Total	10	6.6	97	64.2	39	25.8	3	2.0	8		157

1 Row percent of cases with known exposure category

Source of data: Dr. Susan M. King, Ontario region, Canadian Pediatric AIDS Research Group

Table 3.4b Number and proportion[1] of HIV-positive children born in Canada[2] by period of birth and exposure category of mother, Ontario, 1984 to 2003

Period of birth	Exposure category										Total
	IDU		HIV-endemic		Heterosexual		Transfusion		Unknown		
	No.	%	No.	%	No.	%	No.	%	No.		No.
1984-85	0	0.0	1	50.0	0	0.0	1	50.0	1		3
1986-87	1	11.1	5	55.6	3	33.3	0	0.0	0		9
1988-89	3	20.0	3	20.0	8	53.3	1	6.7	1		16
1990-91	0	0.0	6	46.2	6	46.2	1	7.7	1		14
1992-93	1	5.3	11	57.9	7	36.8	0	0.0	2		21
1994-95	3	16.7	11	61.1	4	22.2	0	0.0	0		18
1996-97	0	0.0	7	77.8	2	22.2	0	0.0	0		9
1998-99	1	6.7	8	53.3	6	40.0	0	0.0	1		16
2000-01	0	0.0	5	71.4	2	28.6	0	0.0	0		7
2002-03	0	0.0	5	100.0	0	0.0	0	0.0	0		5
Total	9	8.0	62	55.4	38	33.9	3	2.7	6		118

1 Row percent of cases with known exposure category
2 Assumed that 20 infants with missing birthplace information were also born in Canada.

Source of data: Dr. Susan M. King, Ontario region, Canadian Pediatric AIDS Research Group

Table 3.5 Number and proportion[2] of HIV-positive women giving birth in Canada[1] by exposure category, timing of prophylaxis (pregnancy, delivery or to the infant)[3] and confirmed HIV status of infant, Ontario, July 1994 to December 2003

Exposure category	Prophylaxis during pregnancy,delivery or to the newborn	Confirmed HIV status of infant							
		Infected	%	Not infected	%	Unknown	%	Total	%
IDU	No	3	5.8	7	2.5	0	0.0	10	2.7
	Yes	0	0.0	40	14.2	4	11.8	44	12.0
	Unknown	0	0.0	2	0.71	0	0.0	2	0.54
	Sub-total	*3*	*5.8*	*49*	*17.4*	*4*	*11.8*	*56*	*15.3*
HIV-endemic	No	23	44.2	12	4.3	0	0.0	35	9.5
	Yes	1	1.9	129	45.9	15	44.1	145	39.5
	Unknown	10	19.2	2	0.71	1	2.9	13	3.5
	Sub-total	*34*	*65.4*	*143*	*50.9*	*16*	*47.1*	*194*	*52.9*
Heterosexual	No	9	17.3	4	1.4	1	2.9	14	3.8
	Yes	3	5.8	72	25.6	6	17.6	81	22.1
	Unknown	2	3.8	1	0.36	0	0.0	3	0.82
	Sub-total	*14*	*26.9*	*77*	*27.4*	*7*	*20.6*	*99*	*27.0*
Transfusion	No	0	0.0	1	0.36	0	0.0	1	0.27
	Yes	0	0.0	1	0.36	0	0.0	0	0.00
	Sub-total	*0*	*0.0*	*2*	*0.71*	*0*	*0.0*	*1*	*0.27*
Unknown	No	1	1.9	0	0.0	0	0.0	1	0.27
	Yes	0	0.0	10	3.6	5	14.7	15	4.1
	Unknown	0	0.0	0	0.0	2	5.9	2	0.54
	Sub-total	*1*	*1.9*	*10*	*3.6*	*7*	*20.6*	*18*	*4.9*
Total	No	36	69.2	24	8.5	1	2.9	61	16.6
	Yes	4	7.7	252	89.7	30	88.2	286	77.9
	Unknown	12	23.1	5	1.8	3	8.8	20	5.4
	Total	**52**	**100.0**	**281**	**100.0**	**34**	**100.0**	**367**	**100.0**

1 Only cases born in Canada (Assumed that 20 infants with missing birthplace information were also born in Canada)
2 Column percent of cases
3 Prophylaxis during pregnancy only:1 ; delivery only: 0 ; to the newborn only: 15 ; during pregnancy and delivery:29 ; during pregnancy and to the newborn:1 ; during delivery and to the newborn: 0 ; during pregnancy, delivery and to the newborn: 192.
Source of data: Dr. Susan M. King, Ontario region, Canadian Pediatric AIDS Research Group

Table 3.6 Number of HIV-positive women giving birth in Canada[1] by year of delivery, prophylaxis received during pregnancy, delivery or to the infant and confirmed HIV status of infant Ontario, July 1994 to December 2003

Year of delivery	Therapy received					No therapy received					Total[2]			
	Infected	Not infected	Unknown	Total	%[3]	Infected	Not infected	Unknown	Total	%[3]	Infected	Not infected	Unknown	Total
Jul-Dec 1994	1	6	1	8	42.1	5	5	1	11	57.9	6	11	2	19
1995	0	18	0	18	52.9	8	8	0	16	47.1	8	26	0	34
1996	0	19	2	21	84.0	3	1	0	4	16.0	3	20	2	25
1997	0	8	1	9	81.8	0	2	0	2	18.2	0	10	1	11
1998	1	30	0	31	79.5	6	2	0	8	20.5	7	32	0	39
1999	1	24	1	26	72.2	7	3	0	10	27.8	8	27	1	36
2000	0	25	2	27	90.0	2	1	0	3	10.0	2	26	2	30
2001	1	43	0	44	89.9	3	2	0	5	10.2	4	45	0	49
2002	0	41	4	45	97.8	1	0	0	1	21.7	1	41	4	46
2003	0	38	19	57	98.3	1	0	0	1	1.7	1	38	19	58
Total	4	252	30	286	82.4	36	24	1	61	17.6	40	276	31	347

1 Only cases born in Canada (Assumed that 20 infants with missing birthplace information were also born in Canada.).
2 20 cases with unknown treatment were not included:
12 HIV+: 1(95), 5(96), 1(97), 1(99), 1(01), 2(02), 1(03)
5 HIV-: 3(96), 1(97), 1(03)
3 Unknown status: 1(98), 2(03)
3 Row percent of cases that received therapy or not

Source of data: Dr. Susan M. King, Ontario region, Canadian Pediatric AIDS Research Group

Table 4.1 Number of HIV-related deaths and mortality rate per 100,000 by year of death and sex, Ontario, 1987 to 2000

	Males		Females		Total	
Year	**Number**	**Rate**	**Number**	**Rate**	**Number**	**Rate**
1987	204	4.3	10	0.20	214	2.2
1988	245	5.0	8	0.16	253	2.6
1989	314	6.3	15	0.29	329	3.2
1990	359	7.0	15	0.29	374	3.6
1991	471	9.1	21	0.40	492	4.7
1992	554	10.6	27	0.50	581	5.5
1993	599	11.4	24	0.44	623	5.8
1994	563	10.5	40	0.73	603	5.6
1995	653	12.1	37	0.67	690	6.3
1996	446	8.2	29	0.52	475	4.3
1997	202	3.6	26	0.46	228	2.0
1998	146	2.6	23	0.40	169	1.5
1999	108	1.9	22	0.38	130	1.1
2000	158	2.7	20	0.34	178	1.5
Total	4,864	6.5	297	0.39	5,161	3.4

Sources of data: Vital Statistics, Registrar-General, Ontario (deaths reported to 1999); Statistics Canada (population estimates)

Table 4.2 Number of HIV-related deaths and proportion[1] by age at death and sex, Ontario, 1997 to 1999

	Males		Females		Total	
Age group	**No.**	**%**	**No.**	**%**	**No.**	**%**
≤ 10	1	0.22	0	0.00	1	0.19
11-20	0	0.00	1	1.4	1	0.19
21-30	42	9.2	10	14.1	52	9.9
31-40	183	40.1	32	45.1	215	40.8
41-50	144	31.6	18	25.4	162	30.7
51-60	53	11.6	5	7.0	58	11.0
61-70	29	6.4	3	4.2	32	6.1
71-85	4	0.88	2	2.8	6	1.1
Total	456	100.0	71	100.0	527	100.0

1 Column percent of cases

Sources of data: Vital Statistics, Registrar-General, Ontario (deaths reported to 1999)

Table 4.3 Number of HIV-related deaths and proportion[1] by age at death and sex, Ontario, 2000

	Males		Females		Total	
Age group	**No.**	**%**	**No.**	**%**	**No.**	**%**
≤ 9	1	0.63	1	5.0	2	1.1
10-19	1	0.63	0	0.0	1	0.56
20-29	1	0.63	2	10.0	3	1.7
30-39	52	32.9	8	40.0	60	33.7
40-49	63	39.9	5	25.0	68	38.2
50-59	26	16.5	3	15.0	29	16.3
60-69	11	7.0	1	5.0	12	6.7
70-79	3	1.9	0	0.0	3	1.7
Total	158	100.0	20	100.0	178	100.0

1 Column percent of cases

Sources of data: Statistics Canada (deaths reported in 2000)

Table 4.4 Number and proportion[1] of HIV-related deaths by health region and sex, Ontario, 1997 to 1999

	Males		Females		Total	
Health region	**Number**	**%**	**Number**	**%**	**Number**	**%**
Central East	44	9.8	13	19.1	57	11.0
Central South	35	7.8	5	7.4	40	7.7
Central West	42	9.3	8	11.8	50	9.7
East	57	12.7	13	19.1	70	13.5
North	22	4.9	5	7.4	27	5.2
South West	36	8.0	3	4.4	39	7.5
Toronto	214	47.6	21	30.9	235	45.4
Out of province	6		3		9	
Total	456	100	71	100.0	527	100.0

1 Column percent of cases with known health region

Sources of data: Vital Statistics, Registrar-General, Ontario (deaths reported to 1999); Statistics Canada (population estimates)

Table 4.5 Number of HIV-related deaths and proportion[1] of AIDS deaths by year of death, sex and country of birth[2] (HIV-endemic/non HIV-endemic), Ontario, 1987 to 1999

	Males			Females			Total		
	HIV-endemic		Non HIV-endemic	HIV-endemic		Non HIV-endemic	HIV-endemic		Non HIV-endemic
Year	n	%	n	n	%	n	n	%	n
1987	14	6.9	190	4	40.0	6	18	8.4	196
1988	7	2.9	236	1	12.5	7	8	3.2	243
1989	16	5.1	295	4	26.7	11	20	6.1	306
1990	13	3.7	343	4	28.6	10	17	4.6	353
1991	20	4.3	447	4	19.0	17	24	4.9	464
1992	29	5.2	524	5	18.5	22	34	5.9	546
1993	33	5.5	563	5	20.8	19	38	6.1	582
1994	40	7.1	521	4	10.0	36	44	7.3	557
1995	41	6.3	608	8	21.6	29	49	7.1	637
1996	33	7.4	412	9	32.1	19	42	8.9	431
1997	15	7.5	185	4	15.4	22	19	8.4	207
1998	9	6.3	135	14	60.9	9	23	13.8	144
1999	9	8.4	98	5	23.8	16	14	10.9	114
Total	279	5.8	4,557	71	24.1	223	350	6.8	4,780

1 Sex-specific row percent of AIDS-related deaths that year
2 Excludes 33 deaths (30 males and 3 females) for which country of birth was unknown

Source of data: Vital Statistics, Registrar-General, Ontario (deaths reported to 1999)

Table 4.6 Number and proportion[1] of HIV-related deaths by year of death and country of birth (Caribbean, sub-Saharan Africa, non HIV-endemic), Ontario, 1987 to 1999

	Caribbean		Sub-Saharan Africa		Non HIV-endemic[2]		Total
Year	Number	%	Number	%	Number	%	Number
1987	15	7.0	3	1.4	196	91.6	214
1988	5	2.0	3	1.2	245	96.8	253
1989	12	3.6	8	2.4	309	93.9	329
1990	13	3.5	4	1.1	357	95.5	374
1991	22	4.5	2	0.4	468	95.1	492
1992	27	4.0	7	1.2	547	94.1	581
1993	24	3.9	14	2.2	585	93.9	623
1994	33	5.5	11	1.8	559	92.7	603
1995	33	4.8	16	2.3	641	92.9	690
1996	27	5.7	15	3.2	433	91.2	475
1997	15	6.6	4	1.8	209	91.7	228
1998	14	8.3	9	5.3	146	86.4	169
1999	10	7.7	4	3.1	116	89.2	130
Total	250	4.8	100	1.9	4,811	93.2	5,161

1 Row percent
2 Includes 33 deaths for which country of birth was unknown

Sources of data: Vital Statistics, Registrar-General, Ontario (deaths reported to 1999)

Table 5.1 Modeled estimates of incidence, cumulative incidence and prevalence of HIV infection, HIV diagnoses, AIDS incidence and AIDS-related mortality, Ontario, 1977 to 2003

Year	HIV incidence number	HIV cumulative incidence	HIV prevalence	HIV diagnoses	HIV diagnoses cumulative	HIV infected undiagnosed	HIV infected diagnosed	HIV infections diagnosed	HIV diagnoses prevalence	AIDS incidence	AIDS cumulative incidence	AIDS prevalence	HIV-related mortality, annual	HIV-related mortality, cumulative
1977	31	31	31	0	0	31	0.0%	0.0%	0	0	0	0	0	0
1978	94	124	124	0	0	124	0.0%	0.0%	0	0	0	0	0	0
1979	268	392	392	0	0	392	0.0%	0.0%	0	0	0	0	0	0
1980	550	942	942	0	0	942	0.0%	0.0%	0	0	0	0	0	0
1981	753	1,695	1,693	2	2	1,693	0.1%	0.1%	2	2	2	2	1	1
1982	1,179	2,874	2,867	8	10	2,864	0.4%	0.2%	7	8	10	7	3	4
1983	1,524	4,398	4,379	20	30	4,369	0.7%	0.4%	19	20	30	18	8	12
1984	1,955	6,353	6,302	62	92	6,261	1.4%	0.9%	55	62	92	54	25	37
1985	1,510	7,863	7,725	439	531	7,332	6.8%	5.2%	401	184	275	162	76	113
1986	1,186	9,049	8,729	1,246	1,777	7,272	19.6%	16.7%	1,457	312	587	308	167	280
1987	1,073	10,122	9,491	1,414	3,191	6,932	31.5%	27.0%	2,560	491	1,079	505	294	573
1988	1,045	11,168	10,129	1,319	4,510	6,658	40.4%	34.3%	3,472	515	1,594	631	389	963
1989	1,102	12,270	10,766	1,559	6,069	6,201	49.5%	42.4%	4,565	605	2,198	789	446	1,409
1990	1,154	13,424	11,381	1,903	7,972	5,452	59.4%	52.1%	5,929	707	2,905	977	519	1,929
1991	1,193	14,617	12,016	1,684	9,656	4,960	66.1%	58.7%	7,056	644	3,549	1,084	537	2,465
1992	1,376	15,992	12,773	1,672	11,328	4,664	70.8%	63.5%	8,109	785	4,334	1,274	596	3,061
1993	1,506	17,499	13,578	1,367	12,695	4,804	72.5%	64.6%	8,774	784	5,119	1,384	674	3,735
1994	1,486	18,985	14,332	1,201	13,895	5,090	73.2%	64.5%	9,242	686	5,804	1,366	704	4,439
1995	1,269	20,254	14,948	1,229	15,124	5,130	74.7%	65.7%	9,819	674	6,479	1,419	621	5,060
1996	1,079	21,333	15,543	956	16,080	5,253	75.4%	66.2%	10,290	466	6,945	1,434	451	5,511
1997	1,220	22,554	16,392	872	16,952	5,602	75.2%	65.8%	10,791	287	7,232	1,384	336	5,847
1998	1,294	23,848	17,382	887	17,839	6,008	74.8%	65.4%	11,373	248	7,480	1,364	269	6,116
1999	1,485	25,333	18,593	836	18,676	6,658	73.7%	64.2%	11,935	205	7,685	1,332	236	6,352
2000	1,326	26,659	19,679	826	19,502	7,157	73.2%	63.6%	12,522	160	7,845	1,292	201	6,553
2001	1,453	28,112	20,914	895	20,396	4,576	72.6%	63.1%	13,199	197	8,042	1,310	178	6,731
2002	1,622	29,734	22,327	1,088	21,485	4,298	72.3%	63.1%	14,077	180	8,222	1,321	170	6,901
2003	1,463	31,197	23,563	1,065	22,549	4,483	72.3%	63.3%	14,916	311	8,533	1,447	186	7,087

Table 5.1a Modeled estimates of incidence, cumulative incidence and prevalence of HIV infection, HIV diagnoses, AIDS incidence and AIDS-related mortality among MSM, Ontario, 1977 to 2003

Year	HIV incidence number	HIV cumulative incidence	HIV prevalence	HIV diagnoses	HIV diagnoses cumulative	HIV infected undiagnosed	HIV infected diagnosed	HIV infections diagnosed	HIV diagnoses prevalence	AIDS incidence	AIDS cumulative incidence	AIDS prevalence	HIV-related mortality, annual	HIV-related mortality, cumulative
1977	24	24	24	0	0	24	0.0%	0.0%	0	0	0	0	0	0
1978	81	105	105	0	0	105	0.0%	0.0%	0	0	0	0	0	0
1979	245	349	349	0	0	349	0.0%	0.0%	0	0	0	0	0	0
1980	492	841	841	0	0	841	0.0%	0.0%	0	0	0	0	0	0
1981	656	1,497	1,497	1	1	1,496	0.1%	0.1%	1	1	1	1	0	0
1982	987	2,485	2,482	8	9	2,476	0.4%	0.3%	6	8	9	6	2	3
1983	1,233	3,717	3,707	14	23	3,694	0.6%	0.4%	14	14	23	14	7	10
1984	1,638	5,355	5,324	53	77	5,278	1.4%	0.9%	46	53	77	46	21	30
1985	1,216	6,571	6,475	394	470	6,100	7.2%	5.8%	375	159	236	140	65	96
1986	972	7,543	7,304	1,105	1,575	5,967	20.9%	18.3%	1,337	267	502	264	143	239
1987	819	8,361	7,876	1,221	2,797	5,565	33.4%	29.3%	2,312	400	902	417	246	485
1988	747	9,109	8,302	1,067	3,864	5,245	42.4%	36.8%	3,057	424	1,327	520	322	807
1989	765	9,874	8,702	1,259	5,123	4,751	51.9%	45.4%	3,951	484	1,811	638	365	1,172
1990	734	10,608	9,017	1,510	6,633	3,974	62.5%	55.9%	5,042	562	2,373	782	418	1,591
1991	741	11,349	9,330	1,313	7,946	3,402	70.0%	63.5%	5,928	505	2,878	860	427	2,018
1992	725	12,073	9,592	1,177	9,123	2,950	75.6%	69.2%	6,642	581	3,459	977	464	2,482
1993	832	12,906	9,910	883	10,006	2,899	77.5%	70.7%	7,010	593	4,052	1,055	514	2,996
1994	684	13,590	10,058	678	10,684	2,906	78.6%	71.1%	7,152	519	4,570	1,039	536	3,532
1995	561	14,151	10,150	733	11,417	2,734	80.7%	73.1%	7,416	471	5,042	1,040	470	4,001
1996	477	14,628	10,294	554	11,972	2,656	81.8%	74.2%	7,637	285	5,327	993	333	4,334
1997	604	15,231	10,658	474	12,445	2,786	81.7%	73.9%	7,872	176	5,503	930	239	4,574
1998	637	15,868	11,110	452	12,897	2,971	81.3%	73.3%	8,138	136	5,639	881	185	4,759
1999	840	16,709	11,792	421	13,318	3,391	79.7%	71.2%	8,401	115	5,754	838	158	4,917
2000	647	17,355	12,309	434	13,752	3,604	79.2%	70.7%	8,706	77	5,831	785	129	5,046
2001	752	18,107	12,953	431	14,182	3,925	78.3%	69.7%	9,028	90	5,921	767	108	5,154
2002	927	19,034	13,783	554	14,736	4,298	77.4%	68.8%	9,486	70	5,991	741	97	5,251
2003	686	19,720	14,370	501	15,237	4,483	77.3%	68.8%	9,887	121	6,112	763	99	5,350

Table 5.1b Modeled estimates of incidence, cumulative incidence and prevalence of HIV infection, HIV diagnoses, AIDS incidence and AIDS-related mortality among MSM-IDU, Ontario, 1977 to 2003

Year	HIV incidence number	HIV cumulative incidence	HIV prevalence	HIV diagnoses	HIV diagnoses cumulative	HIV infected undiagnosed	HIV infected diagnosed	HIV infections diagnosed	HIV diagnoses prevalence	AIDS incidence	AIDS cumulative incidence	AIDS prevalence	HIV-related mortality, annual	HIV-related mortality, cumulative
1977	2	2	2	0	0	2	0.0%	0.0%	0	0	0	0	0	0
1978	5	7	7	0	0	7	0.0%	0.0%	0	0	0	0	0	0
1979	16	23	23	0	0	23	0.0%	0.0%	0	0	0	0	0	0
1980	32	55	55	0	0	55	0.0%	0.0%	0	0	0	0	0	0
1981	43	98	97	0	0	98	0.0%	0.0%	0	0	0	0	0	0
1982	64	162	159	0	0	162	0.0%	0.0%	0	0	0	0	0	0
1983	78	240	235	3	3	238	1.0%	1.3%	3	3	3	2	1	1
1984	102	343	331	5	8	335	2.2%	1.5%	5	5	8	5	2	3
1985	74	417	397	17	25	392	5.9%	1.1%	4	6	14	7	4	7
1986	59	476	443	53	77	398	16.3%	10.0%	44	11	25	11	7	14
1987	49	525	472	53	130	395	24.8%	16.3%	77	26	51	25	13	27
1988	45	569	491	53	183	387	32.1%	21.2%	104	24	75	30	18	45
1989	46	615	509	63	246	369	40.0%	27.4%	139	27	102	36	21	66
1990	44	659	522	73	319	340	48.4%	34.8%	182	27	129	40	23	89
1991	44	703	536	64	382	321	54.4%	40.3%	216	26	154	44	22	110
1992	45	748	548	79	461	286	61.7%	47.7%	261	40	194	58	26	136
1993	43	790	550	74	535	255	67.7%	53.6%	295	42	236	68	32	168
1994	38	828	542	68	603	225	72.9%	58.6%	318	44	280	75	37	205
1995	33	861	532	62	665	196	77.3%	63.2%	337	40	321	81	35	240
1996	32	892	531	40	705	187	79.0%	64.8%	344	25	346	81	25	265
1997	42	935	547	32	738	197	78.9%	64.0%	350	9	355	73	18	283
1998	46	980	571	42	780	200	79.6%	64.9%	371	10	365	69	14	296
1999	60	1,040	611	28	808	232	77.7%	62.0%	378	6	370	62	12	308
2000	43	1,083	635	34	842	241	77.7%	62.0%	394	6	376	59	10	318
2001	32	1,115	649	26	868	247	77.9%	62.0%	402	6	382	56	8	326
2002	34	1,149	666	19	887	262	77.2%	60.6%	404	5	388	54	7	333
2003	53	1,203	703	21	908	295	75.5%	58.1%	408	0	388	47	7	340

Table 5.1c Modeled estimates of incidence, cumulative incidence and prevalence of HIV infection, HIV diagnoses, AIDS incidence and AIDS-related mortality among IDUs, Ontario, 1977 to 2003

Year	HIV incidence number	HIV cumulative incidence	HIV prevalence	HIV diagnoses	HIV diagnoses cumulative	HIV infected undiagnosed	HIV infected diagnosed	HIV infections diagnosed	HIV diagnoses prevalence	AIDS incidence	AIDS cumulative incidence	AIDS prevalence	HIV-related mortality, annual	HIV-related mortality, cumulative
1977	3	3	3	0	0	3	0.0%	0.0%	0	0	0	0	0	0
1978	3	5	5	0	0	5	0.0%	0.0%	0	0	0	0	0	0
1979	3	8	8	0	0	8	0.0%	0.0%	0	0	0	0	0	0
1980	5	13	13	0	0	13	0.0%	0.0%	0	0	0	0	0	0
1981	5	18	18	0	0	18	0.0%	0.0%	0	0	0	0	0	0
1982	13	32	32	0	0	32	0.0%	0.0%	0	0	0	0	0	0
1983	27	59	59	0	0	59	0.0%	0.0%	0	0	0	0	0	0
1984	41	100	100	0	0	100	0.0%	0.0%	0	0	0	0	0	0
1985	56	155	154	2	2	153	1.6%	0.4%	1	1	1	1	0	0
1986	70	226	220	25	28	198	12.3%	10.1%	22	4	5	3	1	2
1987	86	312	298	28	56	256	17.8%	14.1%	42	13	18	11	5	7
1988	102	414	388	60	116	298	28.0%	23.2%	90	9	26	12	8	14
1989	120	534	491	93	209	325	39.2%	33.8%	166	27	53	27	11	26
1990	137	671	604	133	342	329	51.0%	45.5%	275	20	73	31	17	43
1991	154	825	730	124	466	358	56.6%	50.9%	372	27	100	39	18	61
1992	302	1,126	995	178	644	482	57.2%	51.6%	514	45	145	59	25	86
1993	203	1,330	1,152	117	761	569	57.2%	50.7%	584	37	182	65	32	118
1994	299	1,628	1,401	189	950	678	58.3%	51.6%	722	32	215	64	33	151
1995	188	1,817	1,538	145	1,095	721	60.3%	53.1%	817	42	257	76	30	180
1996	127	1,943	1,618	134	1,229	714	63.2%	55.8%	904	42	299	94	24	204
1997	128	2,072	1,702	118	1,347	725	65.0%	57.4%	977	24	323	98	20	225
1998	162	2,233	1,820	134	1,481	752	66.3%	58.7%	1,068	26	349	106	18	242
1999	75	2,309	1,851	137	1,618	691	70.1%	62.7%	1,160	22	371	111	17	260
2000	79	2,388	1,886	93	1,710	678	71.6%	64.1%	1,209	23	394	118	16	276
2001	78	2,466	1,920	87	1,798	668	72.9%	65.2%	1,252	18	413	121	16	292
2002	55	2,520	1,930	79	1,876	644	74.4%	66.6%	1,286	23	435	128	16	308
2003	76	2,597	1,959	74	1,951	646	75.1%	67.0%	1,313	31	466	141	18	326

Table 5.1d Modeled estimates of incidence, cumulative incidence and prevalence of HIV infection, HIV diagnoses, AIDS incidence and AIDS-related mortality among persons from endemic countries , Ontario, 1977 to 2003

Year	HIV incidence number	HIV cumulative incidence	HIV prevalence	HIV diagnoses	HIV diagnoses cumulative	HIV infected undiagnosed	HIV infected diagnosed	HIV infections diagnosed	HIV diagnoses prevalence	AIDS incidence	AIDS cumulative incidence	AIDS prevalence	HIV-related mortality, annual	HIV-related mortality, cumulative
1977	0	0	0	0	0	0	0.0%	0.0%	0	0	0	0	0	0
1978	0	0	0	0	0	0	0.0%	0.0%	0	0	0	0	0	0
1979	0	0	0	0	0	0	0.0%	0.0%	0	0	0	0	0	0
1980	0	0	0	0	0	0	0.0%	0.0%	0	0	0	0	0	0
1981	7	7	7	1	1	6	19.1%	15.0%	1	1	1	1	0	0
1982	8	15	14	0	1	14	8.8%	3.3%	0	0	1	0	1	1
1983	8	23	22	1	3	20	11.6%	5.6%	1	1	3	1	1	1
1984	18	42	39	1	4	38	9.6%	3.8%	1	1	4	1	1	3
1985	20	62	57	4	8	53	13.5%	6.4%	4	5	9	5	2	5
1986	28	89	80	16	24	65	27.1%	18.4%	15	9	19	9	5	10
1987	60	149	132	24	48	101	32.1%	23.4%	31	9	28	11	7	17
1988	61	210	185	37	85	125	40.4%	32.3%	60	8	36	11	8	25
1989	79	289	255	43	127	161	44.1%	36.6%	93	16	52	18	9	34
1990	114	403	355	65	192	211	47.7%	40.7%	145	24	77	29	13	48
1991	127	530	465	85	278	252	52.4%	45.7%	212	26	103	37	17	65
1992	159	689	601	97	375	314	54.4%	47.8%	287	37	140	52	23	88
1993	198	887	771	104	479	408	54.0%	47.1%	363	33	173	57	28	116
1994	167	1,054	909	99	578	476	54.9%	47.6%	433	30	203	58	29	145
1995	187	1,241	1,069	106	684	557	55.1%	47.9%	512	38	241	69	27	172
1996	208	1,449	1,254	96	780	669	53.8%	46.6%	584	65	305	110	24	196
1997	207	1,656	1,437	92	871	785	52.6%	45.4%	652	37	342	124	23	219
1998	207	1,864	1,622	99	971	893	52.1%	45.0%	730	47	389	148	22	241
1999	247	2,111	1,847	96	1,066	1,045	50.5%	43.4%	802	39	428	163	23	264
2000	291	2,402	2,115	125	1,191	1,211	49.6%	42.8%	905	28	455	169	22	287
2001	321	2,723	2,413	173	1,364	1,358	50.1%	43.7%	1,054	49	504	194	23	310
2002	331	3,054	2,716	208	1,572	1,481	51.5%	45.5%	1,235	58	563	225	28	338
2003	331	3,385	3,011	232	1,805	1,580	53.3%	47.5%	1,431	102	665	291	36	373

Table 5.1e Modeled estimates of incidence, cumulative incidence and prevalence of HIV infection, HIV diagnoses, AIDS incidence and AIDS-related mortality for persons infected through heterosexual contact, Ontario, 1977 to 2003

Year	HIV incidence number	HIV cumulative incidence	HIV prevalence	HIV diagnoses	HIV diagnoses cumulative	HIV infected undiagnosed	HIV infected diagnosed	HIV infections diagnosed	HIV diagnoses prevalence	AIDS incidence	AIDS cumulative incidence	AIDS prevalence	HIV-related mortality, annual	HIV-related mortality, cumulative
1977	3	3	3	0	0	3	0.0%	0.0%	0	0	0	0	0	0
1978	3	5	5	0	0	5	0.0%	0.0%	0	0	0	0	0	0
1979	3	8	8	0	0	8	0.0%	0.0%	0	0	0	0	0	0
1980	5	13	13	0	0	13	0.0%	0.0%	0	0	0	0	0	0
1981	5	19	19	0	0	19	0.0%	0.0%	0	0	0	0	0	0
1982	14	32	32	0	0	32	0.0%	0.0%	0	0	0	0	0	0
1983	14	46	46	0	0	46	0.0%	0.0%	0	0	0	0	0	0
1984	28	74	73	2	2	72	3.1%	2.3%	2	2	2	2	1	1
1985	28	102	100	3	5	97	5.1%	3.0%	3	3	5	3	2	2
1986	58	160	156	5	10	150	6.6%	4.0%	6	3	8	3	2	4
1987	59	219	210	15	25	194	11.6%	7.8%	16	11	19	10	5	9
1988	90	309	291	26	52	258	16.7%	11.5%	34	18	37	19	9	18
1989	93	402	369	48	100	302	24.9%	18.2%	67	29	66	33	15	33
1990	126	528	471	67	167	361	31.6%	23.4%	110	45	111	54	24	57
1991	127	655	568	78	245	410	37.4%	27.9%	159	35	146	59	30	87
1992	146	801	680	109	355	446	44.3%	34.4%	234	48	194	73	34	120
1993	230	1,031	869	153	508	523	49.2%	39.8%	346	57	251	89	41	162
1994	298	1,329	1,122	141	648	681	48.8%	39.3%	441	46	297	89	46	207
1995	300	1,629	1,380	158	807	822	49.5%	40.4%	558	59	356	107	42	249
1996	236	1,865	1,584	116	923	942	49.5%	40.5%	642	40	396	115	32	281
1997	239	2,104	1,798	138	1,061	1,043	50.4%	42.0%	755	28	424	118	25	306
1998	242	2,346	2,018	141	1,202	1,144	51.2%	43.3%	874	27	452	124	22	328
1999	262	2,609	2,261	141	1,343	1,265	51.5%	44.0%	995	20	472	124	20	348
2000	266	2,875	2,508	128	1,472	1,403	51.2%	44.1%	1,105	23	495	129	18	366
2001	271	3,146	2,761	169	1,641	1,505	52.2%	45.5%	1,256	30	526	141	18	385
2002	275	3,421	3,018	223	1,864	1,557	54.5%	48.4%	1,461	24	549	146	19	403
2003	316	3,737	3,311	234	2,098	1,639	56.1%	50.5%	1,672	57	607	181	22	426

Table 5.2 Number and proportion of HIV-infected persons who have been diagnosed in Ontario as of December 2003

	HIV prevalence	HIV diagnosed	Proportion diagnosed	Number HIV undiagnosed	Proportion Ontario undiagnosed
Both sexes					
MSM	14,370	9,887	68.8%	4,298	52.1%
MSM-IDU	703	408	58.1%	262	3.2%
IDU	1,959	1,313	67.0%	644	7.8%
HIV-endemic	3,011	1,431	47.5%	1,481	18.0%
Heterosexual	3,311	1,672	50.5%	1,557	18.9%
Clotting	156	156	99.5%	3	0.03%
Transfusion	52	48	92.9%	4	0.05%
Total	23,563	14,916	63.3%	8,250	100.0%
Male					
MSM	14,370	9,887	68.8%	4,483	60.5%
MSM-IDU	703	408	58.1%	295	4.0%
IDU	1,331	880	66.1%	451	6.1%
HIV-endemic	1,971	647	32.9%	1,323	17.8%
Heterosexual	1,535	676	44.1%	859	11.6%
Clotting	148	147	99.5%	3	0.04%
Transfusion	33	32	97.0%	1	0.01%
Total	20,090	12,678	63.1%	7,414	100.0%
Female					
IDU	628	433	69.0%	195	15.8%
HIV-endemic	1,041	784	75.3%	257	20.8%
Heterosexual	1,743	962	55.2%	781	63.3%
Clotting	5	5	98.9%	0	0.00%
Transfusion	19	19	99.3%	0	0.01%
Total	3,436	2,203	64.1%	1,233	100.0%

Table 5.3a Modeled HIV prevalence by health region and exposure category, Ontario, December 2003

Health region	MSM	MSM-IDU	IDU	HIV-endemic	Heterosexual	Clotting	Transfusion	Total	Proportion
Toronto	10,000	360	610	1,900	1,560	85	25	14,550	62%
Ottawa	1,450	120	590	580	510	20	10	3,300	14%
Central East,	940	50	120	180	390	10	5	1,690	7.2%
Eastern, other	200	30	210	50	125	5	0	620	2.6%
Central West	930	70	190	130	270	15	5	1,610	6.8%
Southwest	700	30	80	130	300	10	5	1,260	5.3%
Northern	150	40	160	40	160	10	0	560	2.4%
Total	14,370	700	1,960	3,010	3,315	155	50	23,600	100.0%
Proportion	61%	3.0%	8.3%	13%	14%	0.7%	0.2%		

Table 5.3b Modeled HIV prevalence by sex, health region and exposure category Ontario, December 2003

	Health region	MSM	MSM-IDU	IDU	HIV-endemic	Heterosexual	Clotting	Transfusion	Total[1]	Proportion
Males										
	Toronto	10,000	360	400	1,230	760	80	15	12,850	64%
	Ottawa	1,450	120	400	390	250	20	5	2,650	13%
	Central East, other	940	50	80	120	210	10	0	1,410	7.0%
	Eastern, other	200	30	150	30	35	5	0	450	2.2%
	Central West	930	70	150	90	100	15	5	1,360	6.8%
	Southwest	700	30	50	90	110	10	5	1,000	5.0%
	Northern	150	40	100	20	70	10	0	400	1.9%
	Ontario	14,370	700	1,330	1,970	1,535	150	30	20,100	85%
Females										
	Toronto			210	670	800	5	10	1,700	49%
	Ottawa			190	190	260	0	5	650	19%
	Central East, other			40	60	180	0	5	280	8.2%
	Eastern, other			60	20	90	0	0	170	4.9%
	Central West			40	40	170	0	0	250	7.2%
	Southwest			30	40	190	0	0	260	7.5%
	Northern			60	20	90	0	0	170	4.9%
	Ontario			630	1,040	1,780	5	20	3,500	15%

[1] Cells may not add up to tal due to rounding

Table 5.4 Modeled HIV incidence by sex, region and exposure category Ontario, December 2003

		MSM	MSM-IDU	IDU	HIV-endemic	Heterosexual	Clotting	Transfusion	Total	Proportion
Males	Toronto	500	30	20	125	80	0	0	755	65%
	Ottawa	60	10	15	45	25	0	0	155	13%
	Other	130	15	20	45	45	0	0	255	22%
	Ontario	690	55	55	215	150	0	0	1,165	100%
Females	Toronto			10	70	80	0	0	160	52%
	Ottawa			5	25	15	0	0	45	15%
	Other			10	20	70	0	0	100	33%
	Ontario			25	115	165	0	0	305	100%
Both sexes	Toronto	500	30	30	195	160	0	0	915	62%
	Ottawa	60	10	20	70	40	0	0	200	14%
	Other	130	15	30	65	115	0	0	355	24%
	Ontario	690	55	80	330	315	0	0	1,470	100%
	Proportion	47%	4.0%	5.0%	22%	21%	0.0%	0.0%		

Figure 1.1 Number of HIV diagnoses by year of HIV diagnosis and sex, Ontario, 1985 to 2003

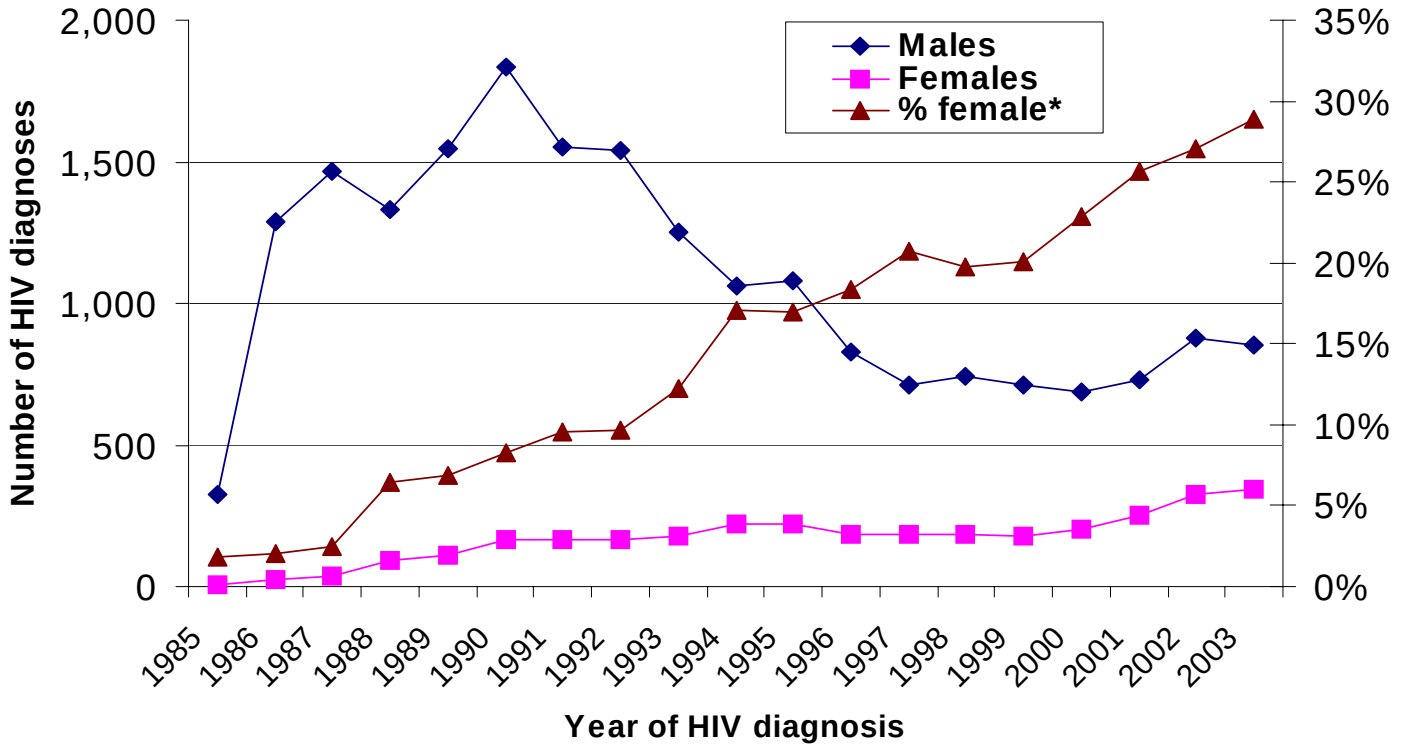


Figure 1.2 Proportion of HIV-diagnoses (adjusted) by period and exposure category, Ontario, 1985 to 2003

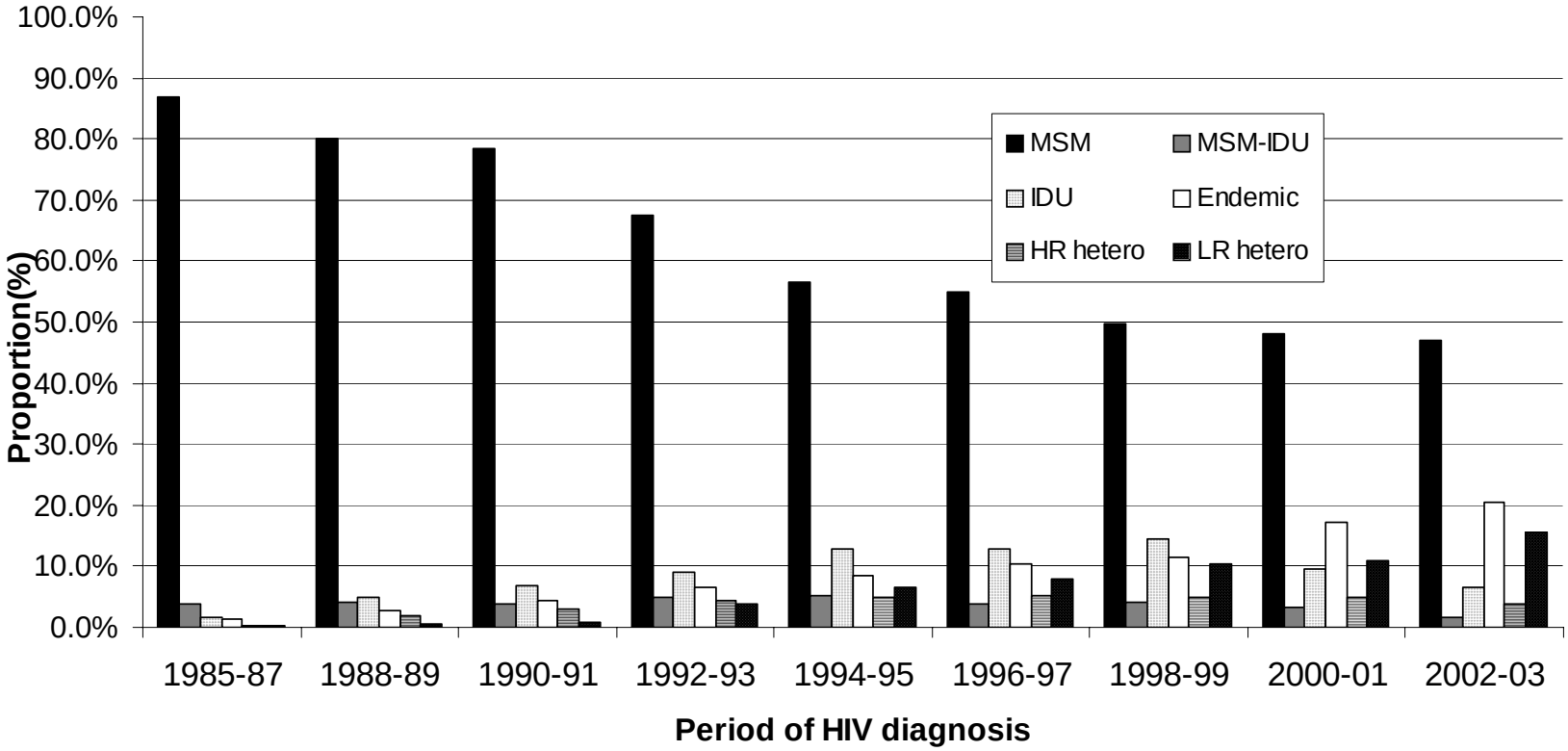


Figure 1.3 First-time HIV positivity rates (adjusted) among MSM by year of HIV diagnosis and health region, Ontario 1992 to 2003

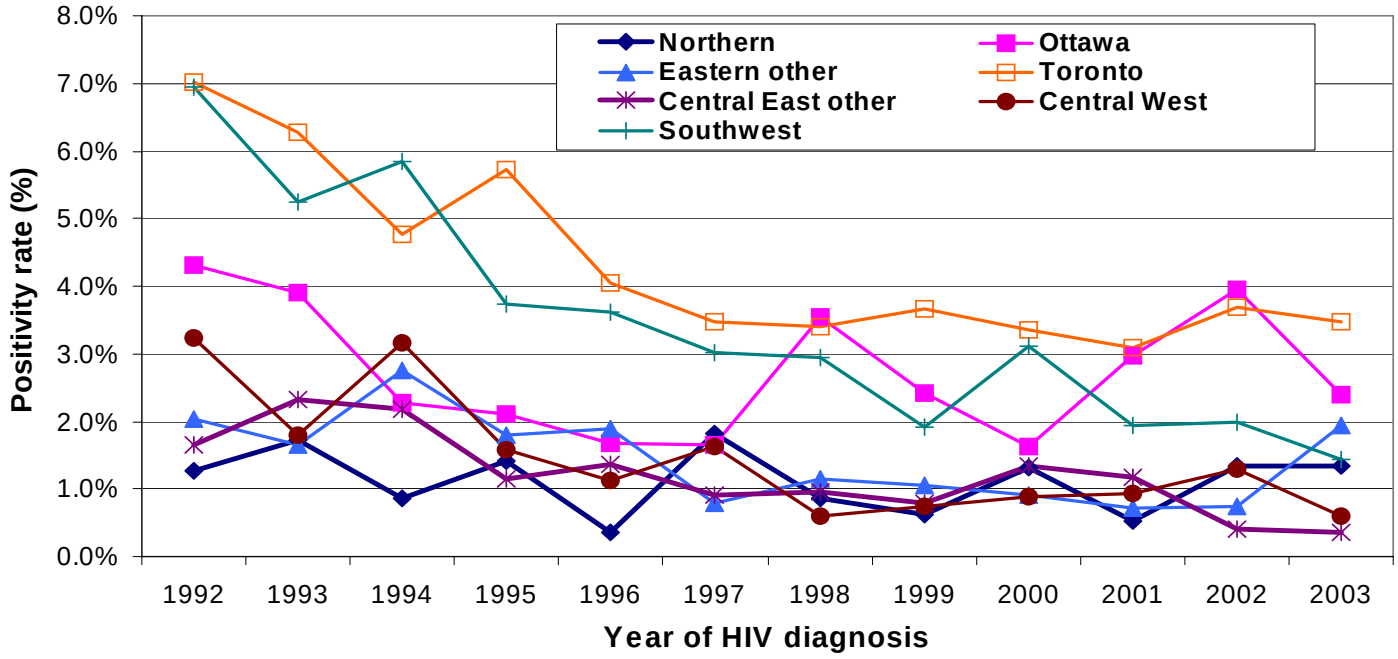


Figure 1.4 First-time HIV positivity rates (adjusted) among IDU by year of HIV diagnosis and health region, Ontario, 1992 to 2003

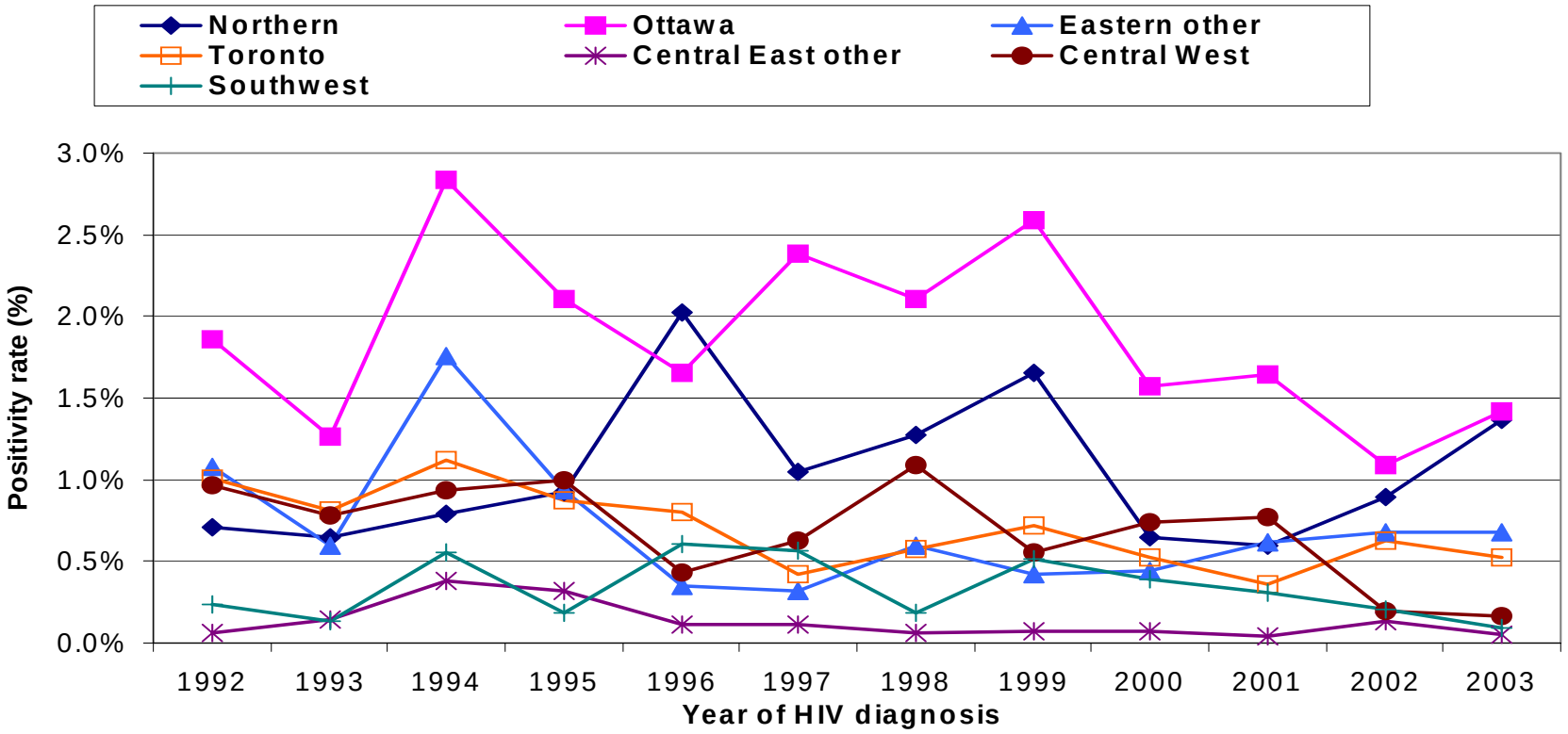


Figure 2.1 Number of reported AIDS cases adjusted for reporting delays by year of AIDS diagnosis and exposure category, Ontario, 1981 to 2003

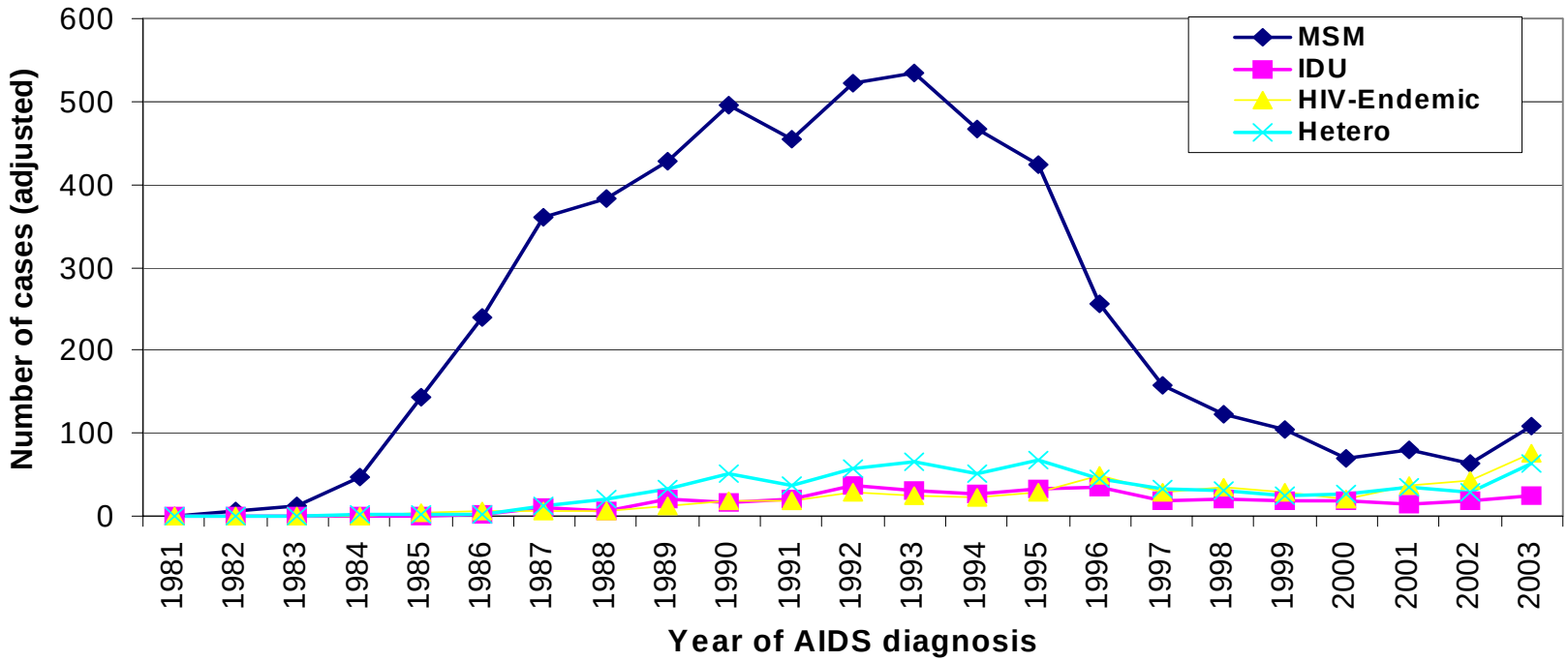


Figure 5.1 Modeled HIV incidence and prevalence among MSM Ontario, 1977 to 2003

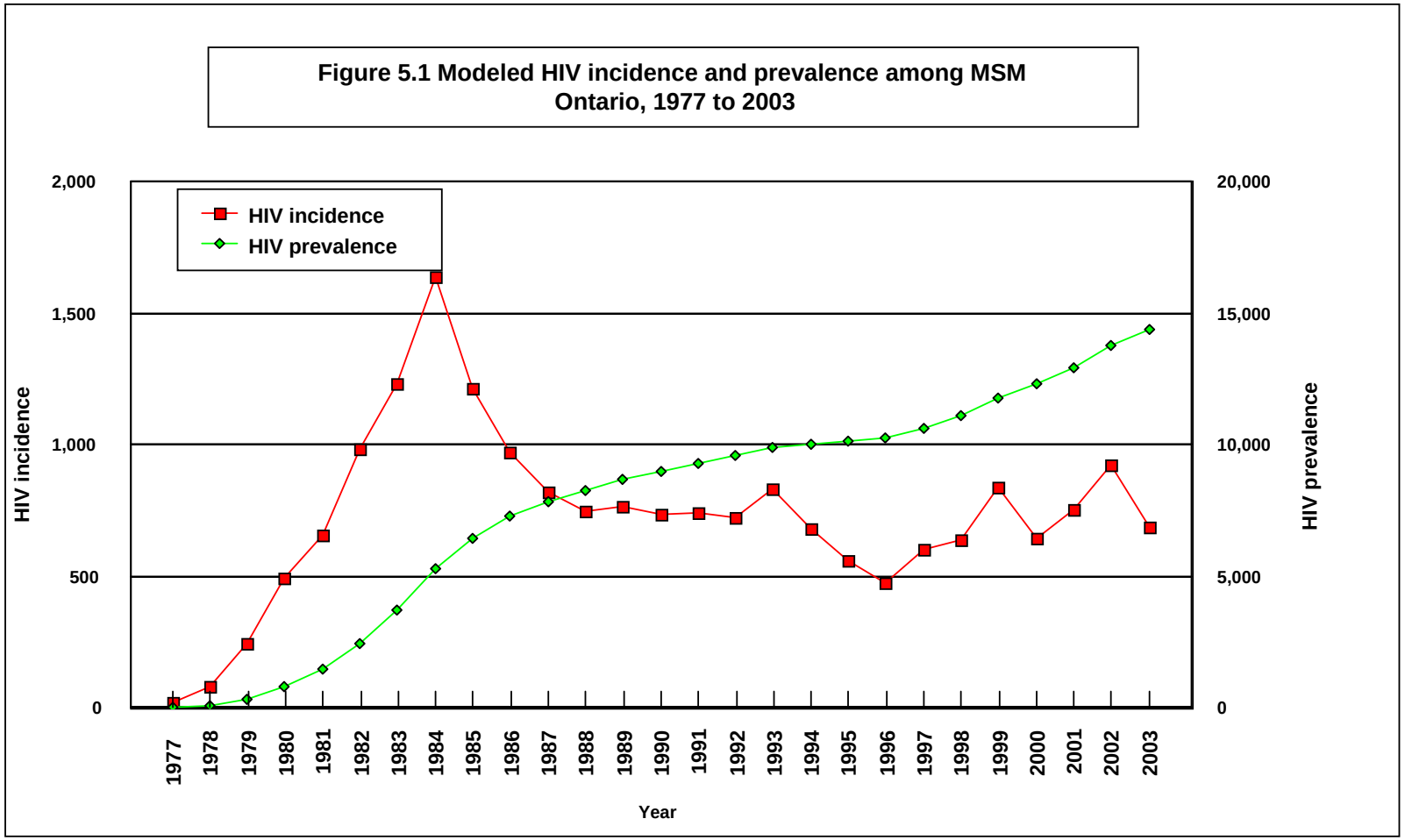


Figure 5.2 Modeled HIV incidence and prevalence among MSM-IDU Ontario, 1977 to 2003

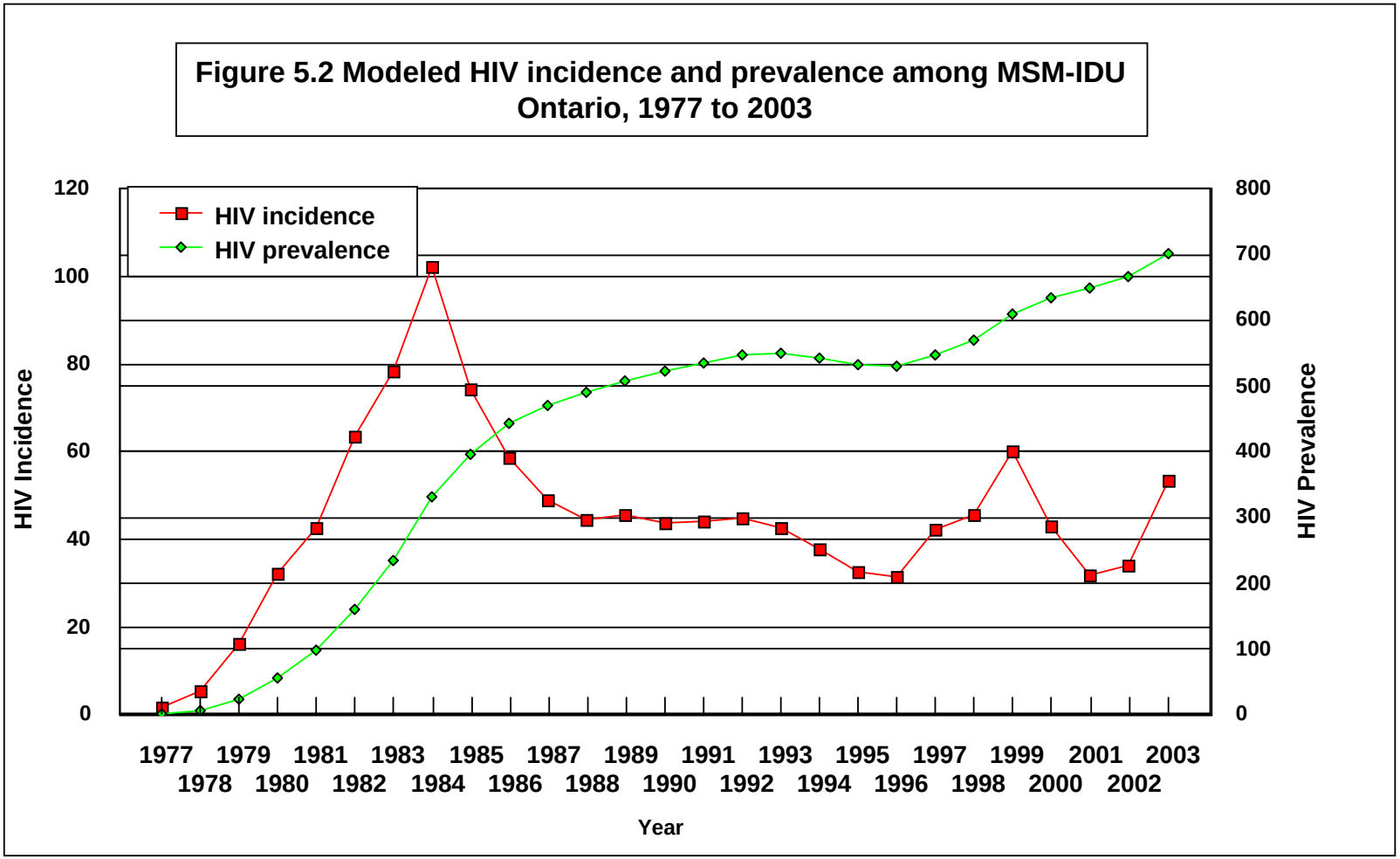
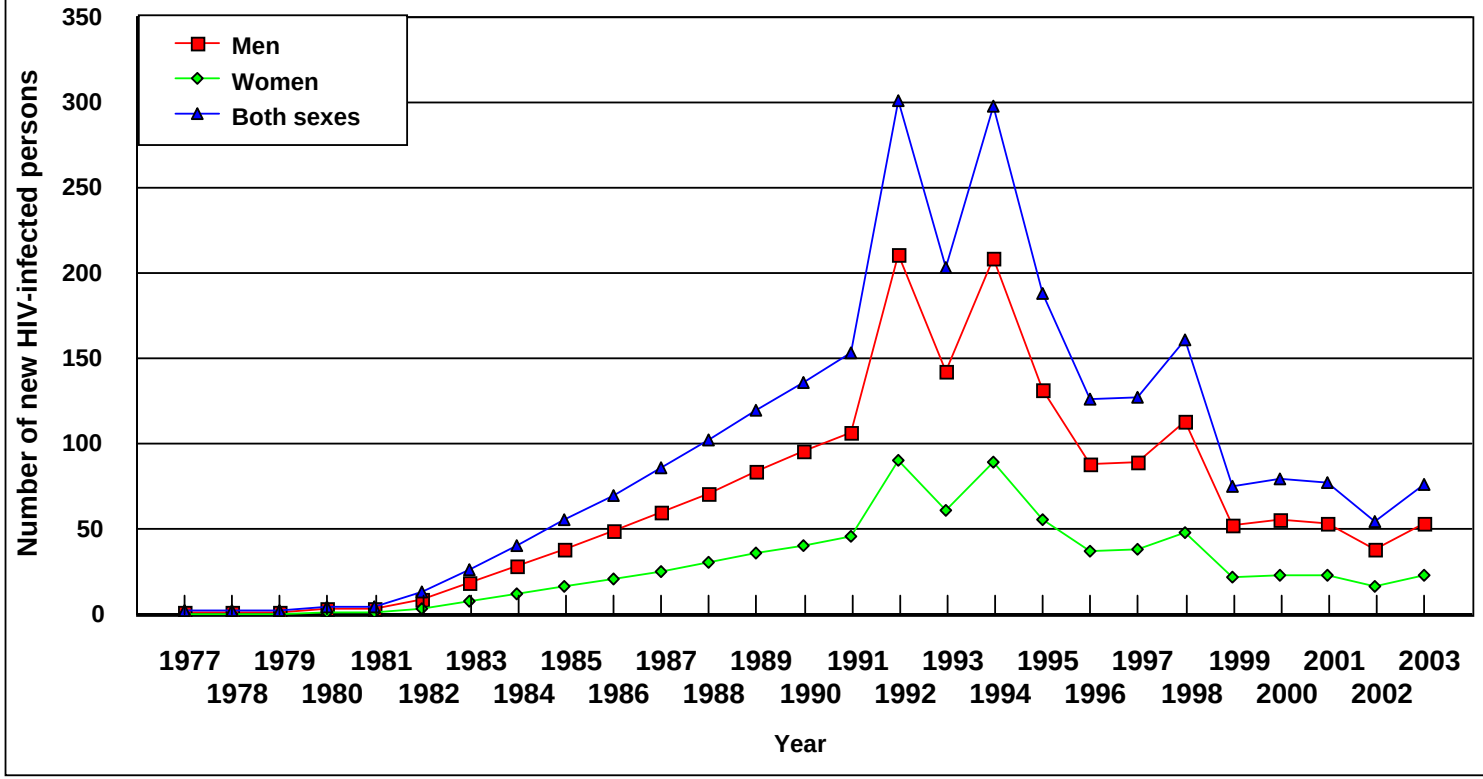


Figure 5.3 Modeled HIV incidence by sex among IDU
Ontario, 1977 to 2003



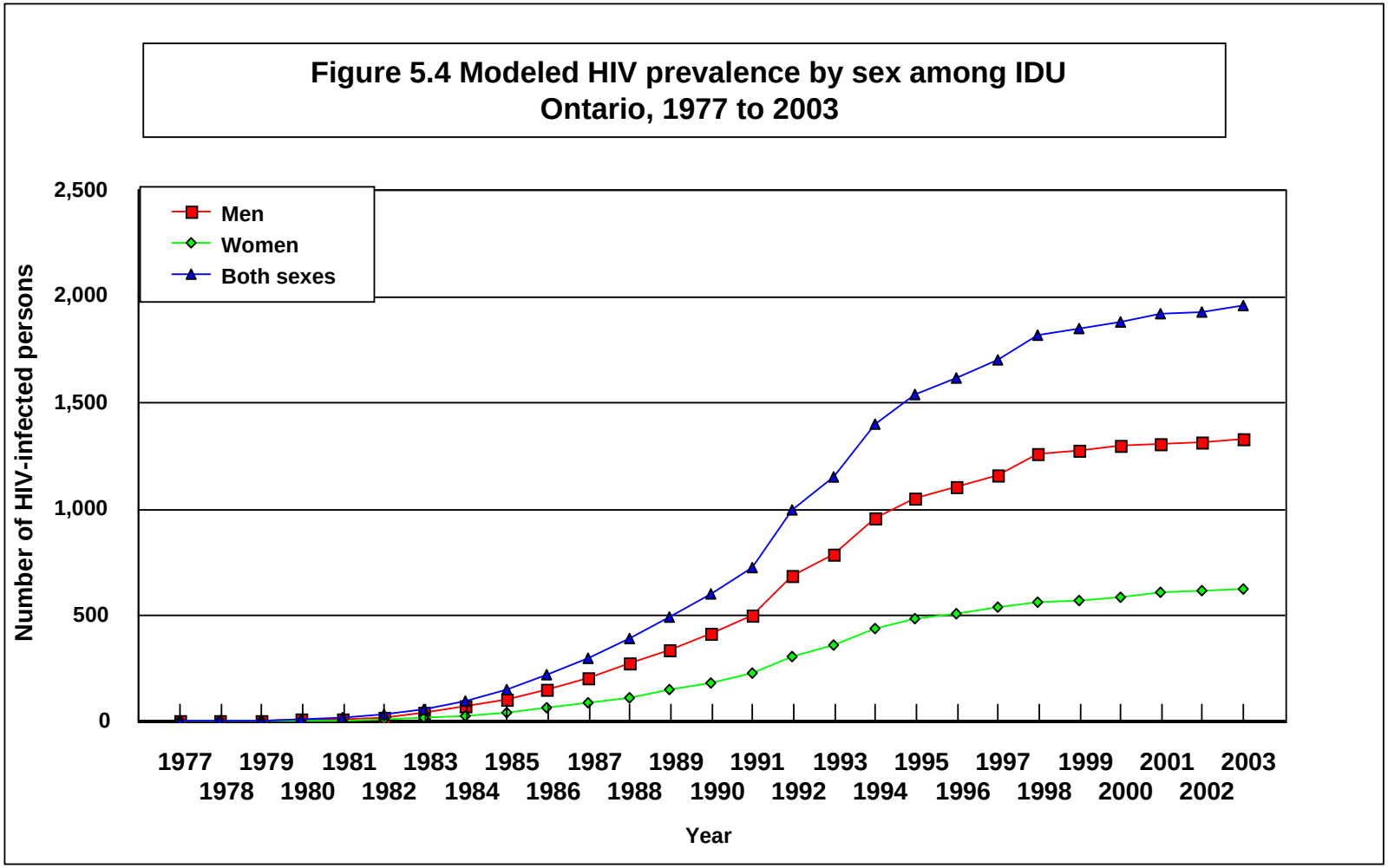


Figure 5.4 Modeled HIV prevalence by sex among IDU
Ontario, 1977 to 2003
Men
Women
Both sexes
Number of HIV-infected persons
2,500
2,000
1,500
1,000
500
0
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
Year

Figure 5.5 Modeled HIV incidence among persons from HIV-endemic countries, by sex, Ontario, 1977 to 2003

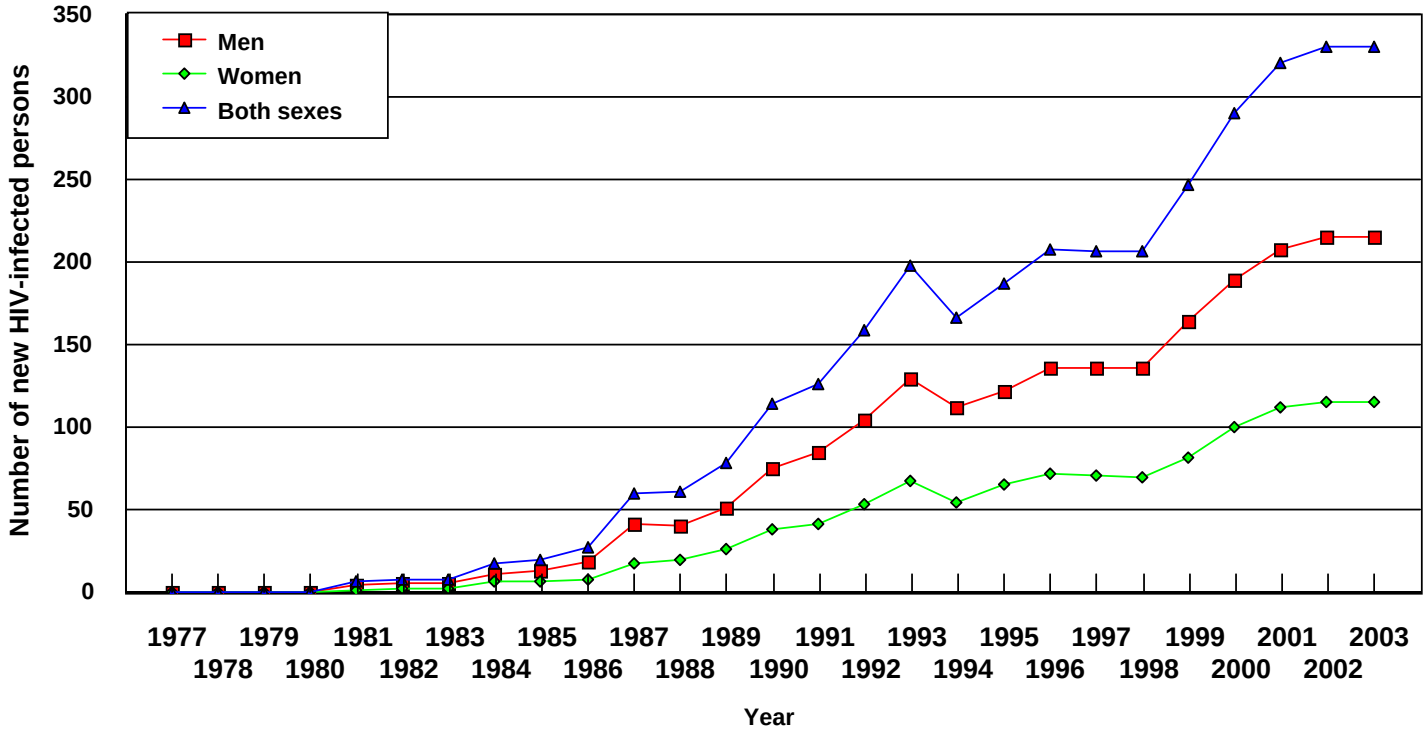


Figure 5.6 Modeled HIV prevalence among persons from HIV-endemic countries, by sex, Ontario, 1977 to 2003

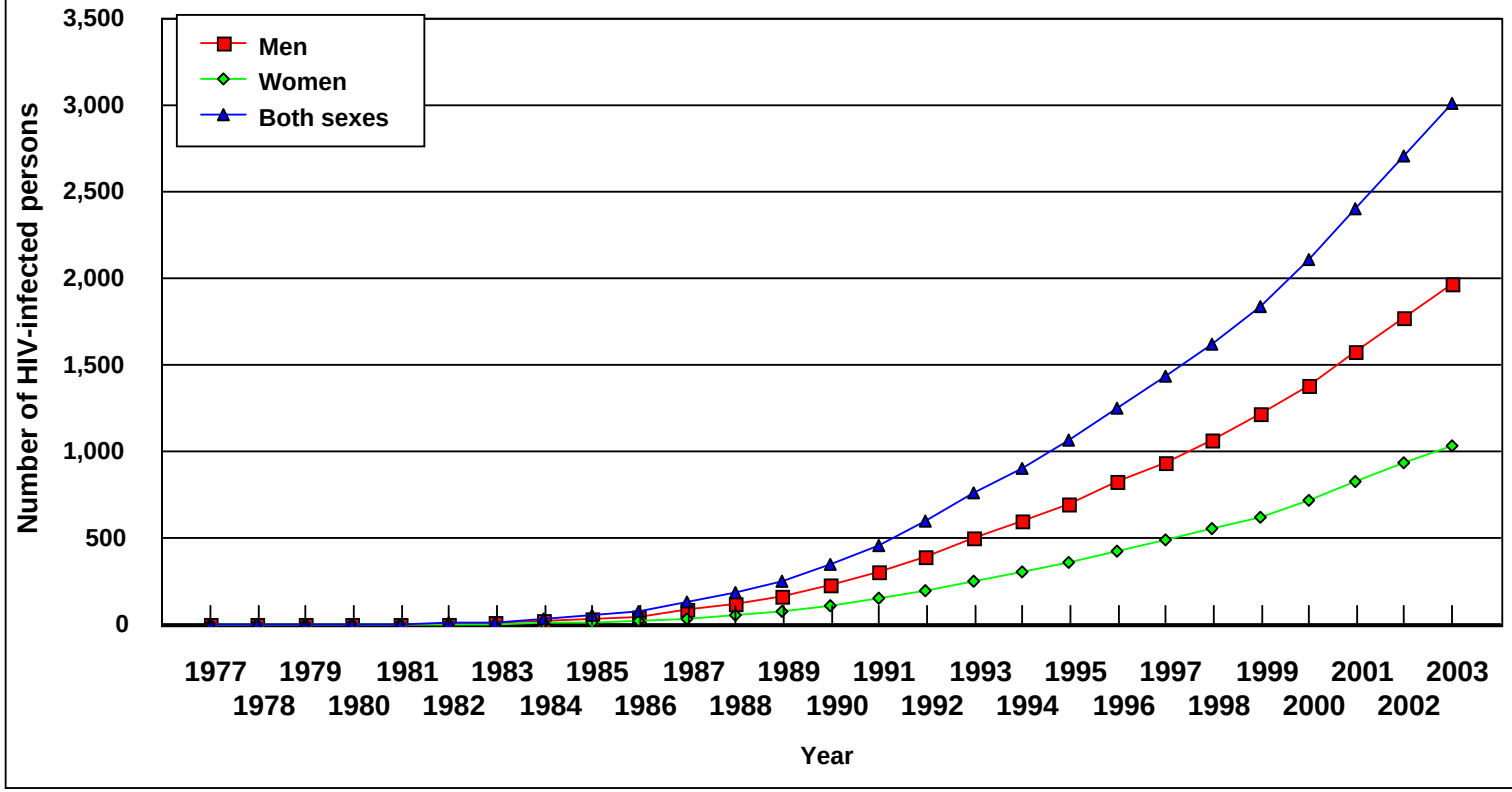


Figure 5.7 Modeled HIV incidence among persons infected through heterosexual contact, by sex, Ontario, 1977 to 2003

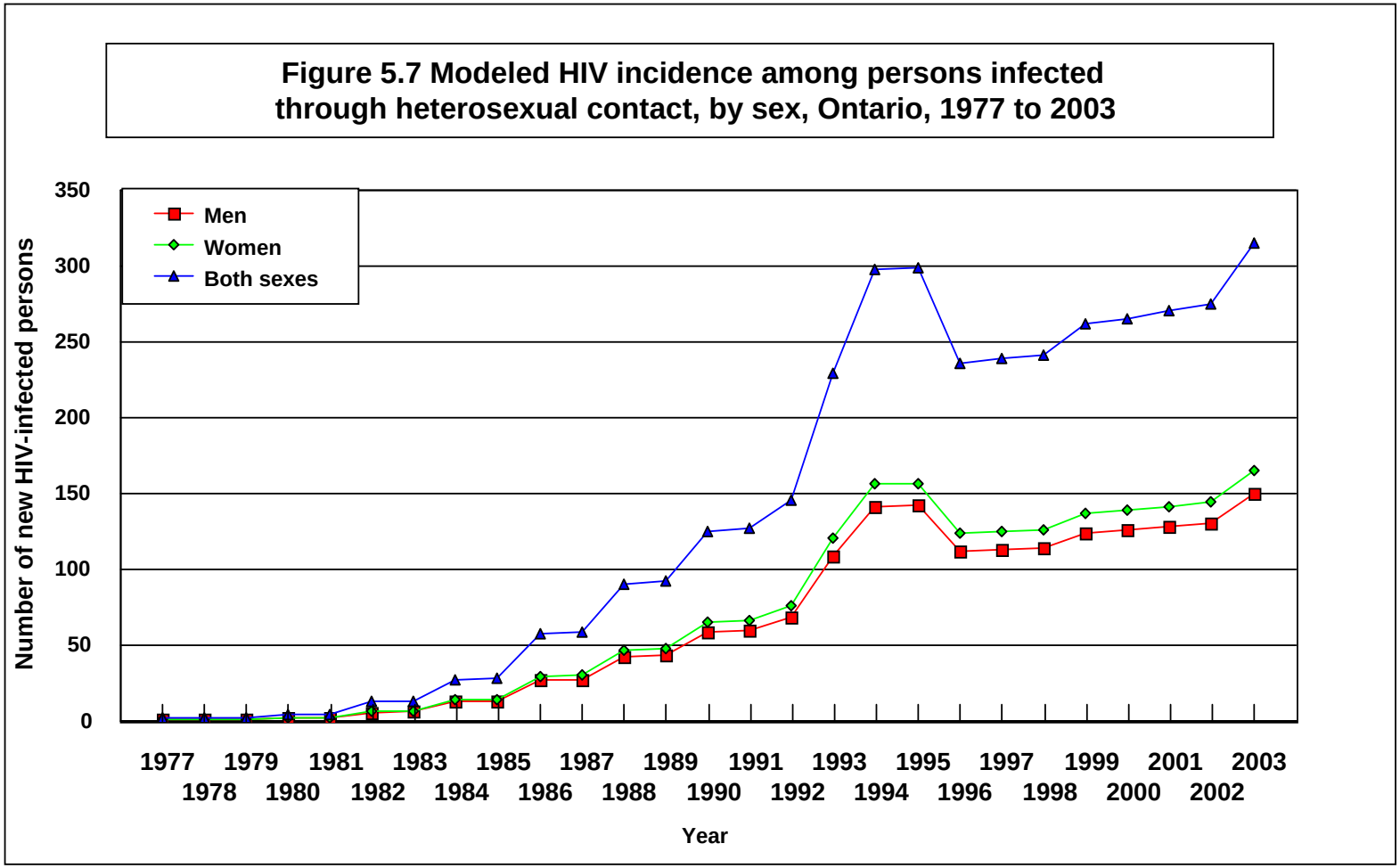


Figure 5.8 Modeled HIV prevalence among persons infected through heterosexual contact, by sex, Ontario, 1977 to 2003