

HIV care cascade in Ontario by sex, age and health region: Linkage to care, in care, on antiretroviral treatment and virally suppressed, 2015



About OHESI

The Ontario HIV Epidemiology and Surveillance Initiative (OHESI) is a collaboration involving the AIDS Bureau of the Ontario Ministry of Health and Long-Term Care (MOHLTC), Public Health Ontario (PHO), the Public Health Agency of Canada (PHAC), and the Ontario HIV Treatment Network (OHTN) Applied Epidemiology Unit (AEU). The objectives of OHESI are to analyze, monitor and disseminate knowledge products on the epidemiology of HIV in Ontario. OHESI is a vital partnership that supports Ontario's ongoing ability to assess the impact of policy directions and program initiatives in the "HIV/AIDS Strategy to 2026: Focusing Our Efforts - Changing the Course of the HIV Prevention, Engagement and Care Cascade in Ontario."

The success of the partnership would not be possible without the strategic, technical and resource contributions of all the partners. OHESI also receives ongoing advice from a community advisory committee (Champions Committee): people working in the community-based HIV service sector and HIV clinics whose input helps ensure that OHESI reports and other products support collective efforts and impact in neighborhoods, communities and organizations across the province.

Background

In 2013 and 2014, the OHTN set up the OHTN Applied Epidemiology Unit (AEU), under a funding agreement with the MOHLTC, to support ongoing production of epidemiological information to support Ontario's response to HIV.

In 2014 and 2015, the OHTN AEU initiated the Ontario HIV Epidemiology and Surveillance Initiative (OHESI) and continues to provide administrative and technical support for the partnership.

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Background

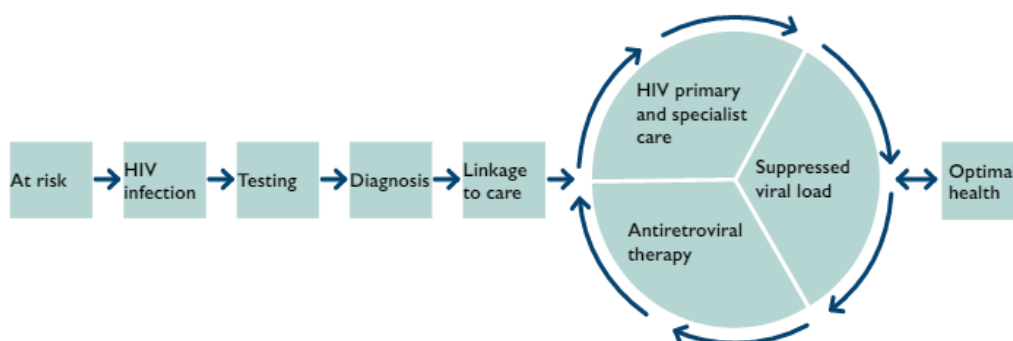
What's new in this report?

- This report provides an assessment of HIV cascade indicators by sex, age and health region for Ontario and is an addendum to a previous OHESI report titled “[HIV care cascade in Ontario: Linkage to care, in care, on antiretroviral treatment and virally suppressed](#)”.
- The previous report – released in July 2017 – presents overall trends in cascade indicators for the province and contains more in-depth information on the data sources and indicator definitions used in this report.

Why look at the HIV cascade and patterns in engagement in care, antiretroviral treatment and viral suppression?

- To maintain and improve health and reduce the risk of new HIV transmissions, it is important for people living with HIV to be diagnosed, in care, on antiretroviral treatment (ART) and virally suppressed (see Figure i).
- Understanding trends in cascade indicators can help measure the impact of HIV care and monitor progress toward meeting the UNAIDS 90-90-90 targets (see box below).
- Identifying gaps between current cascade indicators and provincial targets can help prioritize interventions and inform program/policy changes to improve engagement in the cascade.
- Although being in care, on ART and virally suppressed are important for health and well-being, they do not necessarily reflect overall quality of life for people living with HIV.

Figure i. The HIV prevention, engagement and care cascade



UNAIDS 90-90-90 Targets

- 90% of all people living with HIV will know their HIV status.
- 90% of all people diagnosed with HIV will receive ART.
- 90% of all people receiving ART will achieve viral suppression.

If all three 90-90-90 targets are met, 81% of **all** people living with HIV would be on ART and 73% of **all** people living with HIV would be virally suppressed.

Where do these data come from?

- Data in this report come from the Public Health Ontario Laboratory (PHOL), which conducts centralized HIV diagnostic and viral load (VL) testing for the province.
- PHOL's databases were used to create a group of people with diagnosed HIV living in Ontario – referred to as the Ontario HIV Laboratory Cohort – whose engagement in care, use of ART and achievement of viral suppression can be monitored over time.
- The cohort includes all people in the PHOL databases who have a record of a nominal HIV-positive diagnostic test and/or at least one VL test, and who have not been assessed as administratively lost to follow up (defined as more than two consecutive years with no VL test and no VL test in later years). Individuals lost to follow up are assumed to have died or migrated out of Ontario and are not included in the analyses in this report. For more information on the cohort and how it was created, see the report "[HIV care cascade in Ontario: Linkage to care, in care, on antiretroviral treatment, and virally suppressed](#)".
- All information in the PHOL databases is confidential: only de-identified aggregate data are shared with OHESI partners for inclusion in this report.

What are some of the strengths of these data?

- Data from the Ontario HIV Laboratory Cohort represent the most complete province-wide cascade estimates for people with diagnosed HIV living in Ontario.
- These estimates complement other data sources examining cascade indicators among people with diagnosed HIV who have already entered HIV care in Ontario, including the Ontario HIV Treatment Network Cohort Study (OCS) and the Institute of Clinical Evaluative Sciences (ICES) administrative HIV cohort.
- Information on sex, age and health region among individuals in the Ontario HIV Laboratory Cohort is missing for less than 1% of cohort participants.

What are some of the limitations of these data?

- As with all analyses, there are a number of limitations and caveats so caution is needed when interpreting the estimates in this report. For more in-depth information on limitations, see the report "[HIV care cascade in Ontario: Linkage to care, in care, on antiretroviral treatment, and virally suppressed](#)".
- There is currently no option for documenting transgender status on the HIV test requisition form. Changes to the requisition form to be implemented in 2018 will improve collection of data on trans men and women.
- Health region for individuals in the cohort is only available from 2011 onwards, as address of residence was not collected prior to that year. For this reason, health region figures in this report only present data for the year 2015 instead of trends over time. Data from 2011 to 2015 are available in the [Data tables](#) section of this report.
- In the previous HIV cascade report describing overall trends, a range of plausible estimates were calculated for each cascade indicator. These ranges were based on alternate definitions for each indicator. However, for ease of presentation and clarity, only main estimates are presented in this report. Ranges are available upon request.

Key Trends

By sex

- In 2015, approximately 80% of the 16,110 people with diagnosed HIV living in Ontario were male and 20% were female.
- The percent of people with diagnosed HIV who were female increased from 15.0% in 2000 to 20.0% in 2008, and has remained relatively stable at 20% for the past eight years.
- The numbers of males and females with diagnosed HIV living in Ontario have both increased over time. This increase was likely due to a combination of improved life expectancy (as a result of better care and treatment) as well as ongoing new HIV diagnoses. Increased migration of people living with HIV to Ontario may have also played a role.
- Cascade indicator estimates have improved over time for both sexes. Between 2000 and 2015, there was a doubling in the percent of males and females with diagnosed HIV who were virally suppressed.
- For many cascade indicators, estimates were slightly lower for females than for males. In 2015, the percent of people with diagnosed HIV who were virally suppressed was 80.4% for males and 76.5% for females.
- Cascade estimates may differ within sub-populations of males and females, but these sub-analyses are not presented in this report. For example, other Ontario data sources have demonstrated lower engagement in care for heterosexual males compared to gay males, but these two populations are combined in this report. A future report will include a breakdown of cascade estimates by priority populations, where possible. These populations are outlined in [Ontario's HIV/AIDS strategy](#).

By age

- The age of people with diagnosed HIV living in Ontario has increased over time. Between 2000 and 2015, the average age increased from 40 to 48 years and the percent who were 45 years of age or older doubled from 29.1% to 62.6%. This increase was likely due to improved life expectancy as a result of better care and treatment.
- While cascade indicators have improved over time across all age groups, estimates were generally lower for younger individuals. In 2015, the percent of people with diagnosed HIV who were virally suppressed was 64.2%, 67.9%, 76.4%, 82.2%, and 85.9% for those aged 24 or younger, 25 to 34, 35 to 44, 45 to 54, and 55 or greater, respectively.
- Higher cascade indicator estimates among older individuals may be due to several factors. For example, many older individuals have been diagnosed for a longer period of time and have had more opportunity to progress through the cascade. However, individuals who were newly diagnosed at older ages were also more likely to achieve viral suppression within six months of diagnosis. This suggests that the higher estimates among older people are not solely due to being diagnosed for a longer period of time (as newly diagnosed analyses adjust for time since diagnosis).

By health region

- Health regions are aggregations of public health units and their boundaries. See [Appendices](#) for more information.
- In 2015, the majority of people with diagnosed HIV living in Ontario were residing in Toronto (54.3%), followed by the Central East (12.1%), Central West (10.5%), Ottawa (10.2%), South West (6.8%), Eastern (3.3%) and Northern (2.8%) regions.

- Cascade indicators have improved over time for all health regions but were generally lower for people with diagnosed HIV in the Northern region, and slightly lower for those in Ottawa. In 2015, the percent of people with diagnosed HIV who were virally suppressed were as follows (highest to lowest): Central West (80.9%), Toronto (80.7%), Central East (79.3%), Eastern (78.9%), South West (78.8%), Ottawa (76.5%) and Northern (70.6%).
- Lower cascade estimates in certain health regions may be due to several factors. For example, people with diagnosed HIV living in some regions may be more likely to seek care outside of Ontario. This would lower cascade estimates in these regions as diagnosed individuals in the Ontario HIV Laboratory Cohort who receive care outside of the province are not considered to be in care, on ART or virally suppressed.

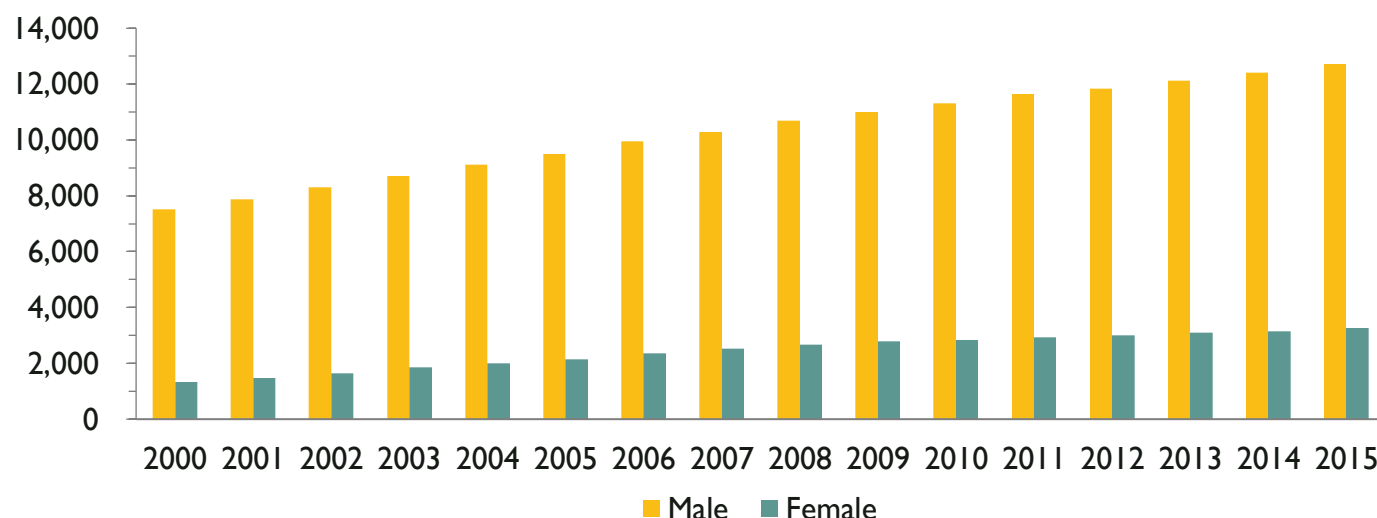
Data and figures

Cascade indicator definitions and underlying data for the figures in this section can be found in the [Data tables](#) at the end of the report.

More in-depth information on indicator definitions and data sources can be found in the previously released OHESI report titled “[HIV care cascade in Ontario: Linkage to care, in care, on antiretroviral treatment, and virally suppressed](#)”.

I. By sex

Figure I.1 Number of people with diagnosed HIV living in Ontario by sex, 2000 to 2015

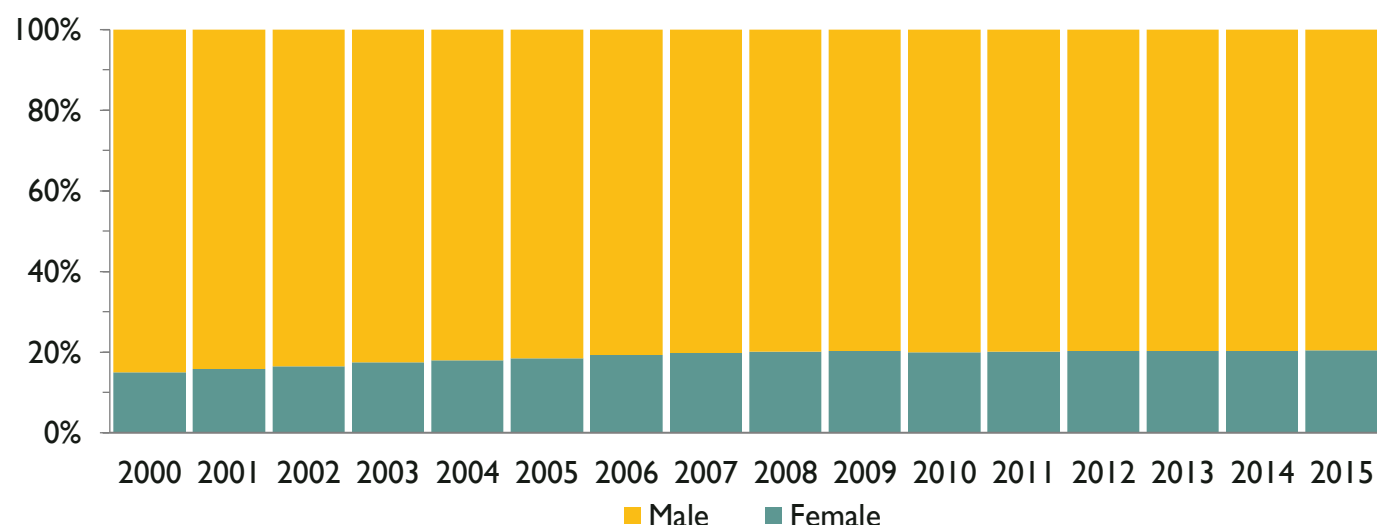


	2000	2015
Male	7,511	12,724
Female	1,328	3,257

Trends

Between 2000 and 2015, the number of people with diagnosed HIV living in Ontario increased for both sexes. While the increase in number was higher for males (5,213 vs. 1,929), the relative increase was higher for females (145% vs. 69%).

Figure I.2 Percent of people with diagnosed HIV living in Ontario by sex, 2000 to 2015



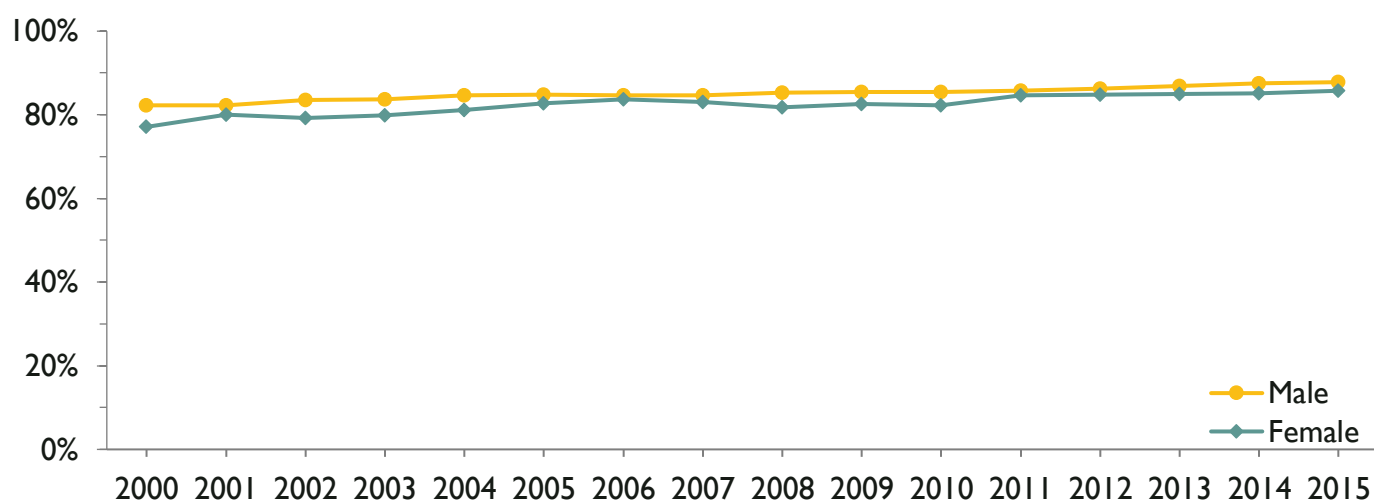
	2000	2015
Male	85.0%	79.6%
Female	15.0%	20.4%

Trends

The percent of people with diagnosed HIV who were female increased from 15.0% in 2000 to 20.0% in 2008 – where it has since remained stable.

Notes: Data provided by the Public Health Ontario Laboratory. Individuals missing information on sex were excluded (approximately 0.4%). See Table I.1 for indicator definitions and underlying data.

Figure 1.3 Percent of people with diagnosed HIV living in Ontario who were in care by sex, 2000 to 2015

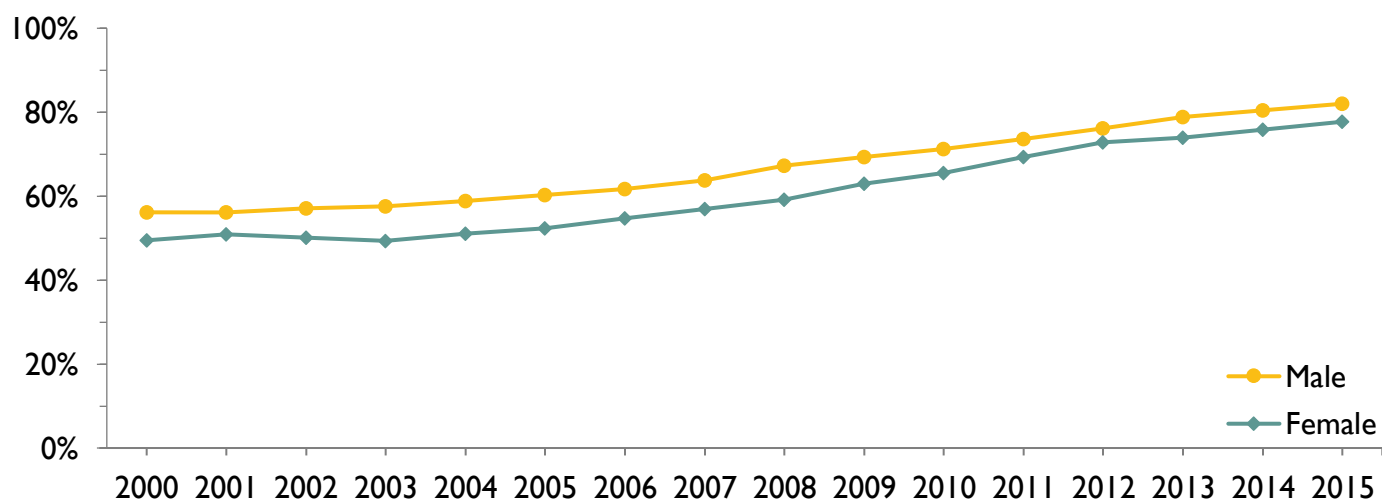


	2000	2015
Male	82.3%	87.8%
Female	77.1%	85.8%

Trends

Between 2000 and 2015, the percent of people with diagnosed HIV who were in care increased slightly for both sexes.

Figure 1.4 Percent of people with diagnosed HIV living in Ontario who were on ART by sex, 2000 to 2015



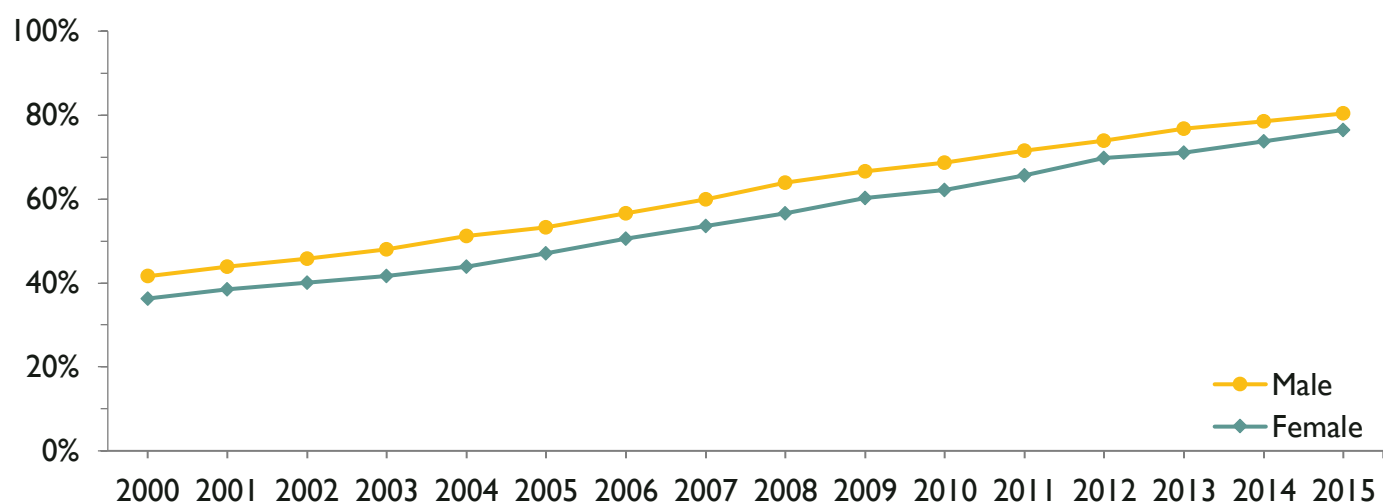
	2000	2015
Male	56.2%	82.0%
Female	49.5%	77.7%

Trends

Between 2000 and 2015, the percent of people with diagnosed HIV who were on ART increased for both sexes. The percent on ART was consistently slightly lower for females.

Notes: Data provided by the Public Health Ontario Laboratory. Individuals missing information on sex were excluded (approximately 0.4%). Individuals missing ART data (17-20%) assumed to be on ART if virally suppressed (different from assumption used in Figure 1.6). See Tables 1.2 and 1.3 for indicator definitions and underlying data.

Figure 1.5 Percent of people with diagnosed HIV living in Ontario who were virally suppressed by sex, 2000 to 2015

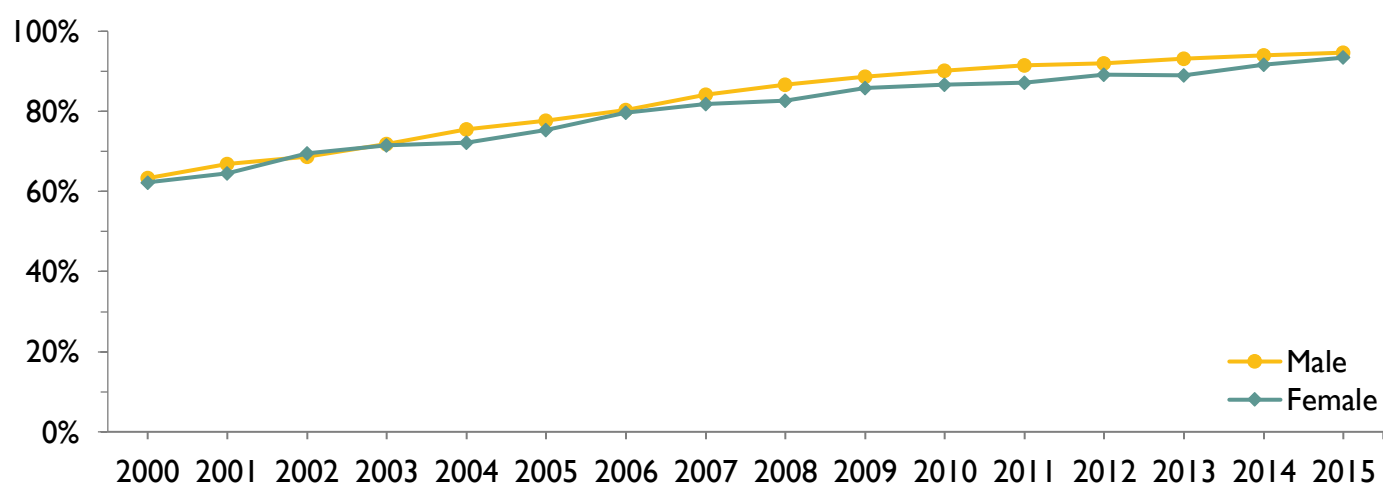


	2000	2015
Male	41.6%	80.4%
Female	36.3%	76.5%

Trends

Between 2000 and 2015, the percent of people with diagnosed HIV who were virally suppressed increased for both sexes. The percent suppressed was consistently slightly lower for females.

Figure 1.6 Percent of people with diagnosed HIV living in Ontario on ART who were virally suppressed by sex, 2000 to 2015



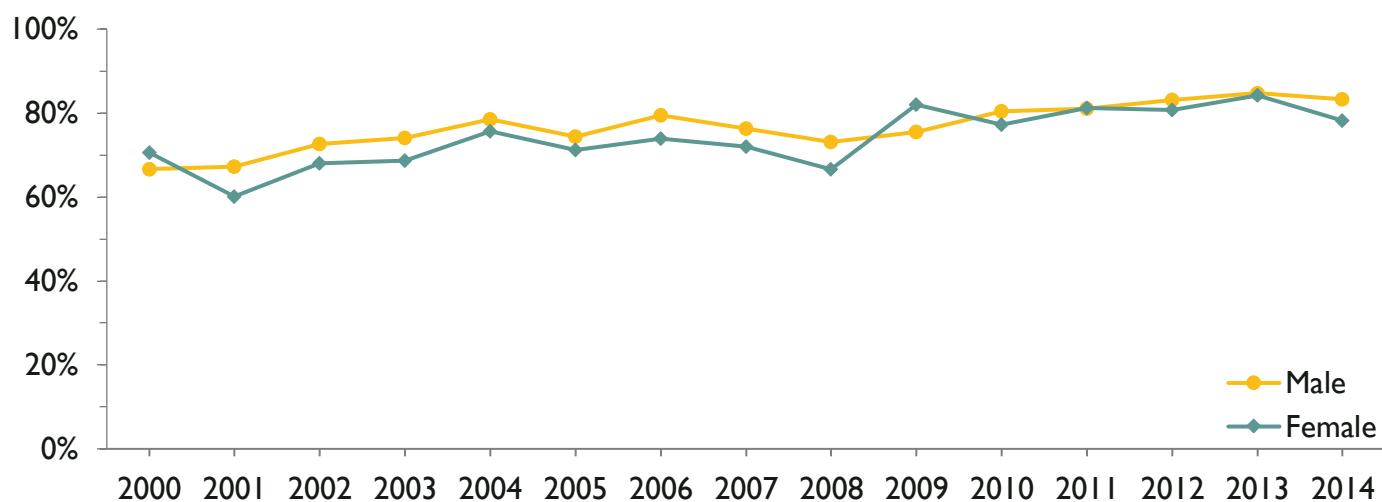
	2000	2015
Male	63.3%	94.7%
Female	62.3%	93.4%

Trends

Between 2000 and 2015, the percent of people on ART who were virally suppressed increased for both sexes.

Notes: Data provided by the Public Health Ontario Laboratory. Individuals missing information on sex were excluded (approximately 0.4%). Individuals missing ART data (17-20%) assumed to be on ART (different from assumption used in Figure 1.4). See Tables 1.4 and 1.5 for indicator definitions and underlying data.

Figure 1.7 Percent of people newly diagnosed with HIV in Ontario who linked to care within three months of diagnosis by sex, 2000 to 2014

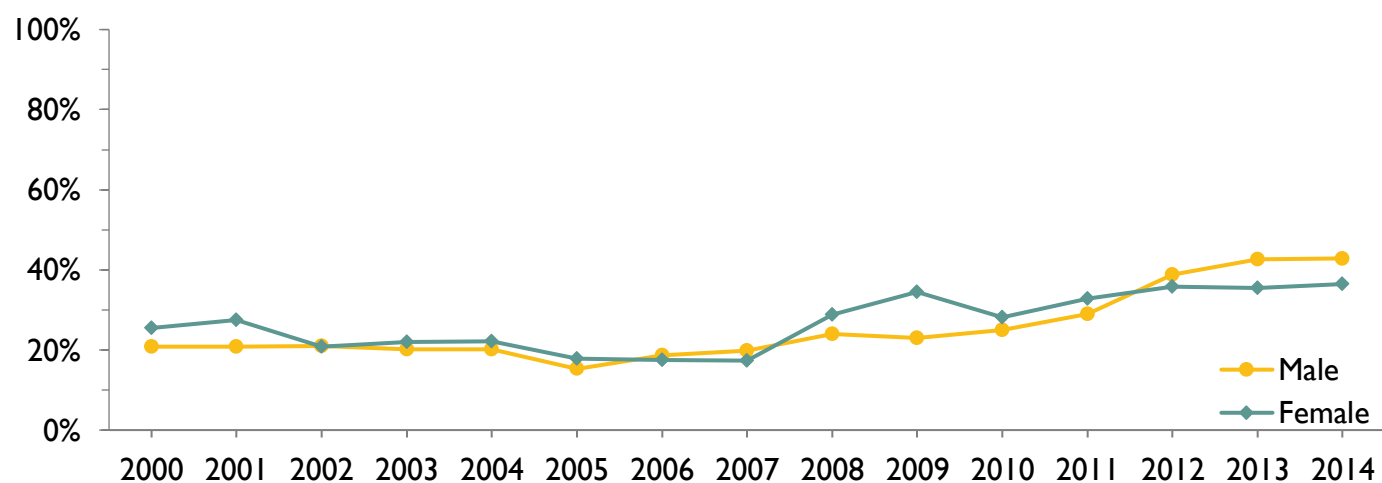


	2000	2014
Male	66.7%	83.3%
Female	70.6%	78.1%

Trends

Between 2000 and 2014, the percent of newly diagnosed people who linked to care within three months of diagnosis increased for both sexes.

Figure 1.8 Percent of people newly diagnosed with HIV in Ontario who achieved virally suppression within six months of diagnosis by sex, 2000 to 2014



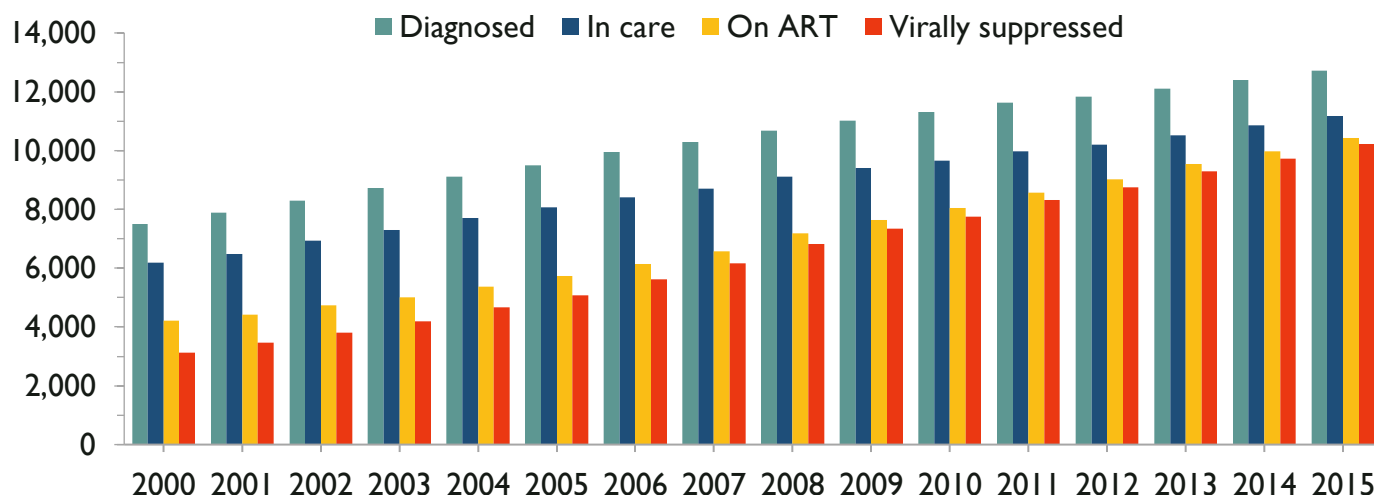
	2000	2014
Male	20.8%	42.9%
Female	25.5%	36.5%

Trends

The percent of newly diagnosed people who achieved suppression within six months of diagnosis was relatively steady at approximately 20% for both sexes until 2007 when it increased.

Notes: Data provided by the Public Health Ontario Laboratory. The year 2015 was not included as some individuals diagnosed in that year would not have had time to reach these endpoints. Individuals missing information on sex were excluded (approximately 0.4%). See Tables 1.6 and 1.7 for indicator definitions and underlying data.

Figure 1.9 Number of **males** living with HIV in Ontario by cascade indicator, 2000 to 2015

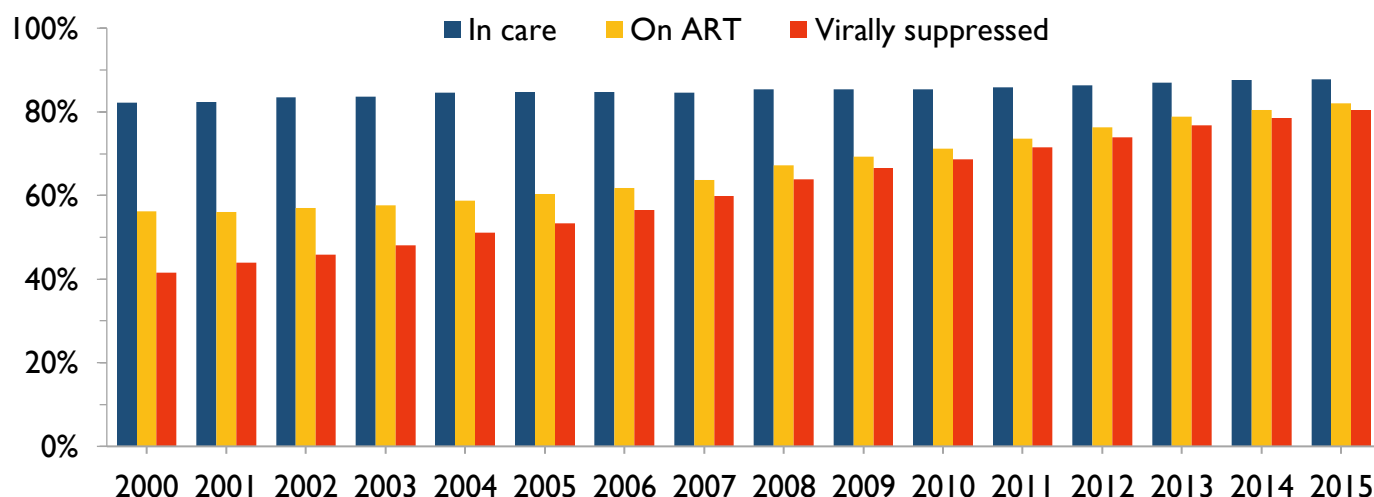


	2000	2015
Diagnosed	7,511	12,724
In care	6,179	11,173
On ART*	4,222	10,473
Virally suppressed	3,125	10,229

Trends

Between 2000 and 2015, the number of males living with HIV who were engaged in each cascade step increased. The increase was greatest for the number virally suppressed.

Figure 1.10 Percent of **males** with diagnosed HIV living in Ontario by cascade indicator, 2000 to 2015



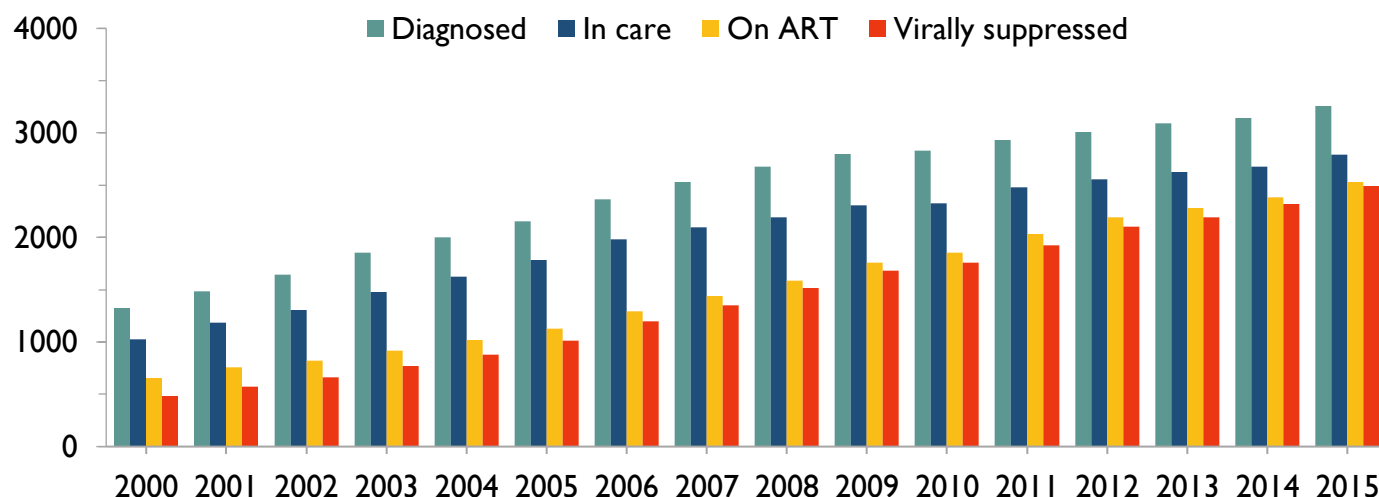
	2000	2015
In care	82.3%	87.8%
On ART*	56.2%	82.0%
Virally suppressed	41.6%	80.4%

Trends

Between 2000 and 2015, the percent of males with diagnosed HIV who were engaged in each cascade step increased. The increase was greatest for the percent virally suppressed.

Notes: Data provided by the Public Health Ontario Laboratory. Individuals missing information on sex were excluded (approximately 0.4%). * Individuals missing ART data (17-20%) assumed to be on ART if virally suppressed (different from assumption used in Figure 1.6).

Figure 1.11 Number of **females** living with HIV in Ontario by cascade indicator, 2000 to 2015

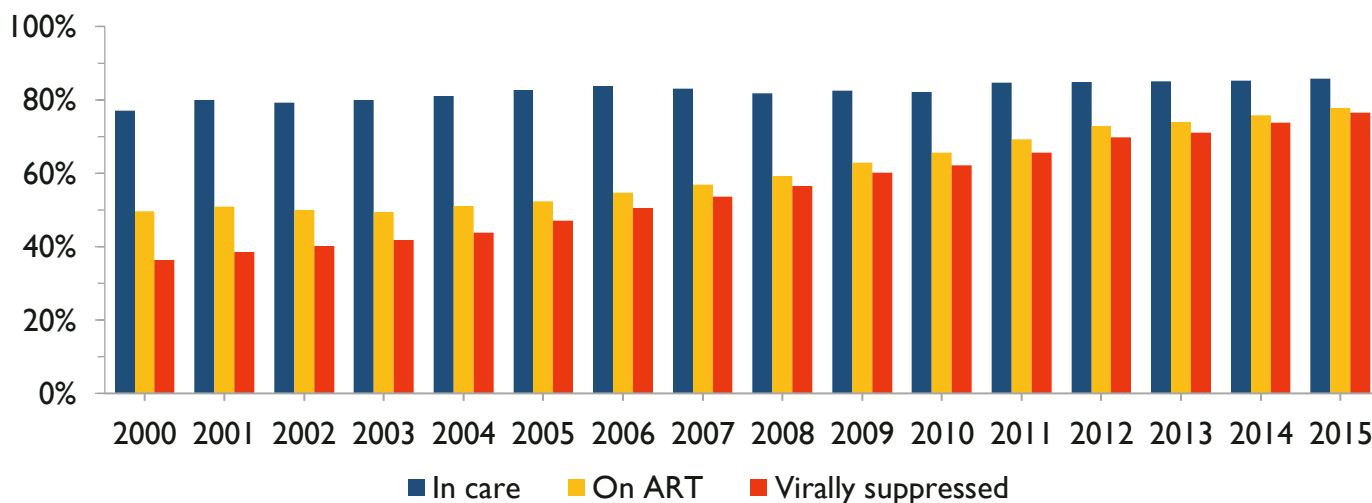


	2000	2015
Diagnosed	1,328	3,257
In care	1,024	2,793
On ART*	658	2,532
Virally suppressed	482	2,491

Trends

Between 2000 and 2015, the number of females living with HIV who were engaged in each cascade step increased. The increase was greatest for the number virally suppressed.

Figure 1.12 Percent of **females** with diagnosed HIV living in Ontario by cascade indicator, 2000 to 2015



	2000	2015
In care	77.1%	85.8%
On ART*	49.5%	77.7%
Virally suppressed	36.3%	76.5%

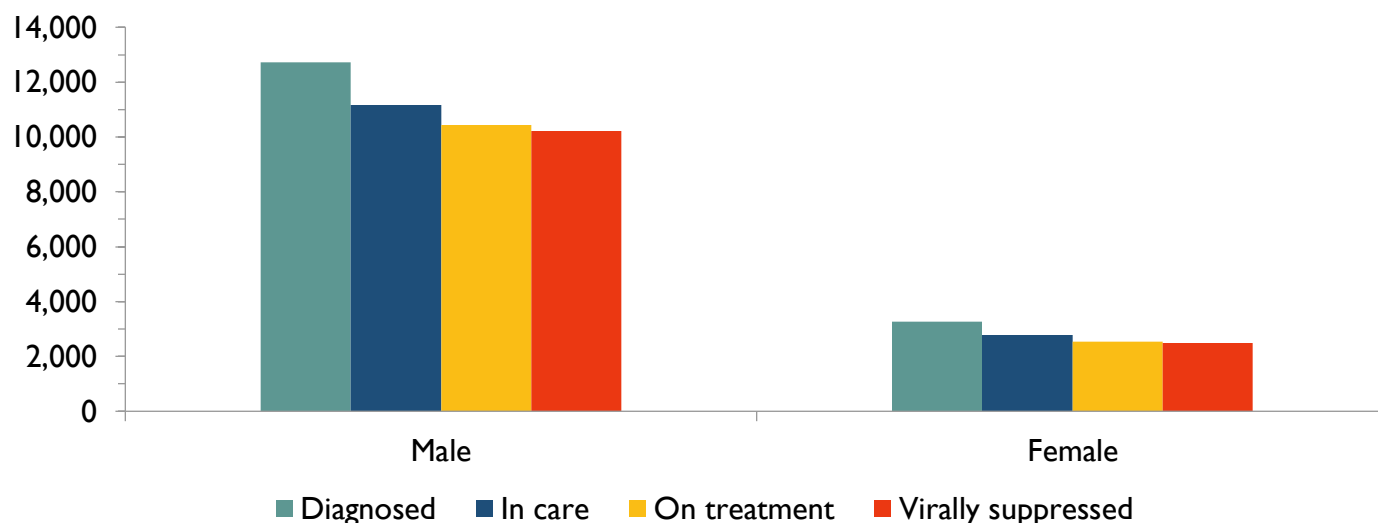
Trends

Between 2000 and 2015, the percent of females with diagnosed HIV who were engaged in each cascade step increased. The increase was greatest for the percent virally suppressed.

Notes: Data provided by the Public Health Ontario Laboratory. Individuals missing information on sex were excluded (approximately 0.4%). * Individuals missing ART data (17-20%) assumed to be on ART if virally suppressed (different from assumption used in Figure 1.6).

Summary figures for 2015

Figure 1.13 Number of people with diagnosed HIV living in Ontario by cascade indicator and sex, 2015

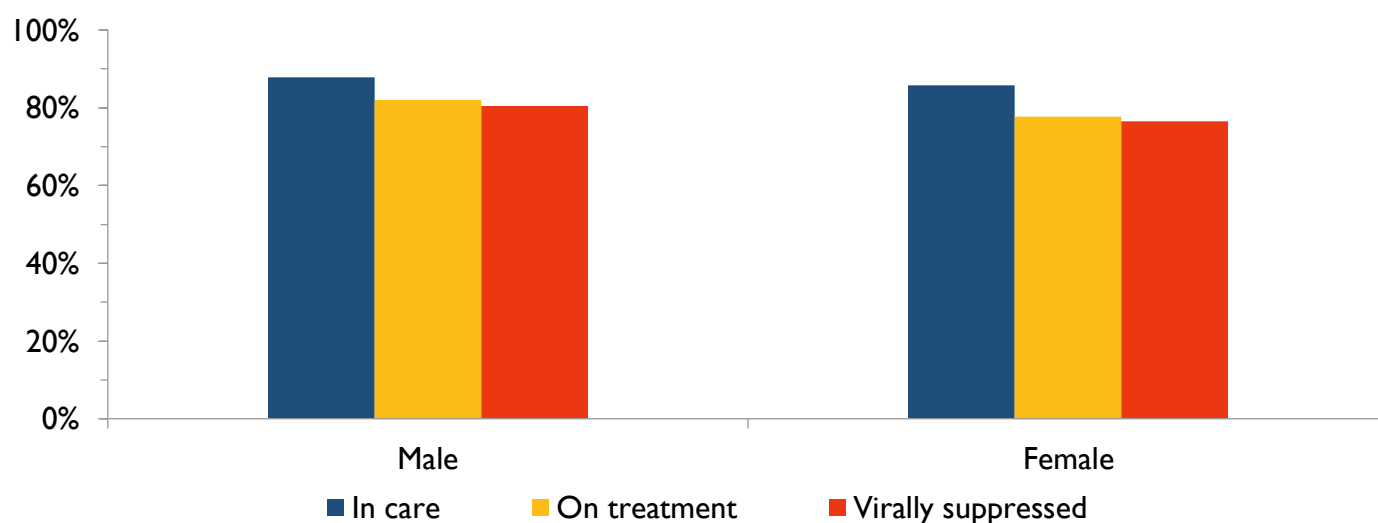


	Male	Female
Diagnosed	12,724	3,257
In care	11,173	2,793
On ART*	10,437	2,532
Virally suppressed	10,229	2,491

Snapshot

In 2015, the number of people who were engaged in each cascade step was lower for females than males, which was expected as there were fewer females living with HIV in the province.

Figure 1.14 Percent of people with diagnosed HIV living in Ontario by cascade indicator and sex, 2015



	Male	Female
In care	87.8%	85.8%
On ART*	82.0%	77.7%
Virally suppressed	80.4%	76.5%

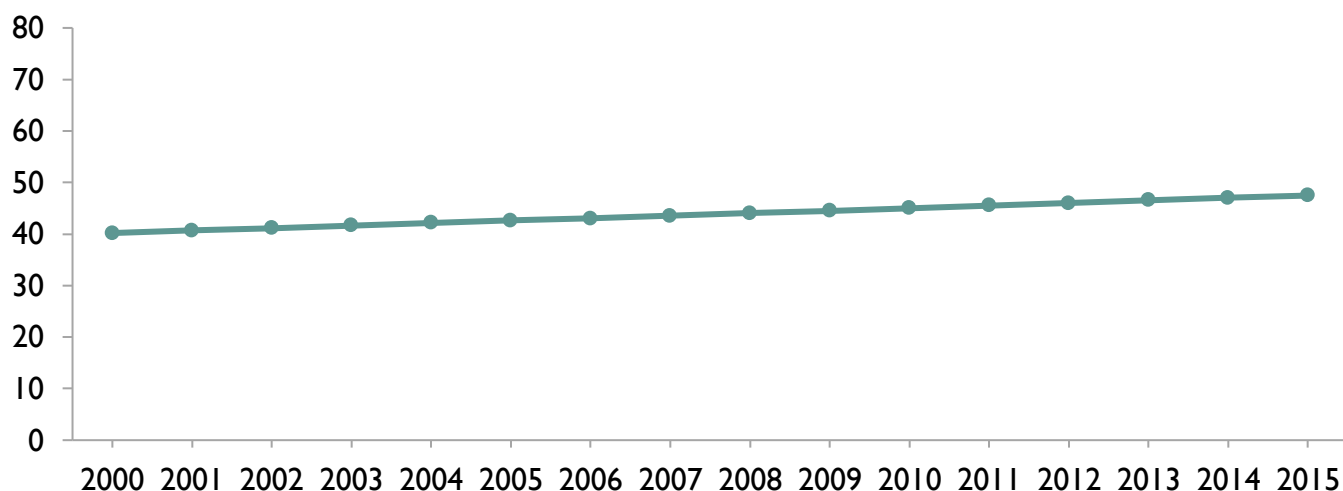
Snapshot

In 2015, the percent of people with diagnosed HIV who were engaged in each cascade step was slightly lower for females than males.

Notes: Data provided by the Public Health Ontario Laboratory. Individuals missing information on sex were excluded (approximately 0.4%). * Individuals missing ART data (17-20%) assumed to be on ART if virally suppressed (different from assumption used in Figure 1.6).

2. By age

Figure 2.1 Average (mean) age of people with diagnosed HIV living in Ontario, 2000 to 2015

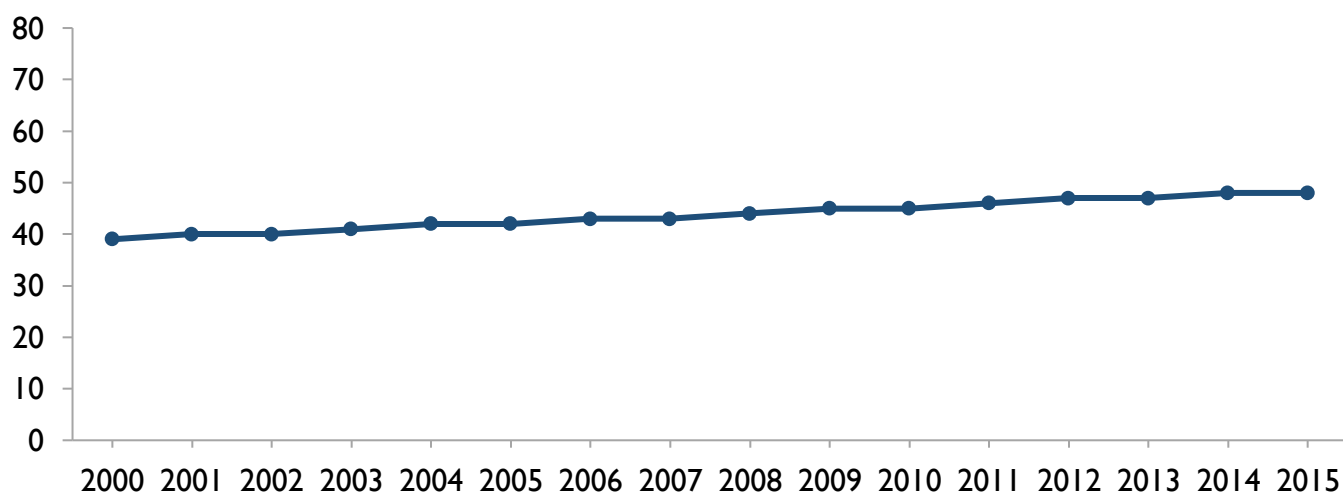


	2000	2015
Average age	40.2	47.5

Trends

Between 2000 and 2015, there was an increase in the average age of people with diagnosed HIV.

Figure 2.2 Median age of people with diagnosed HIV living in Ontario, 2000 to 2015



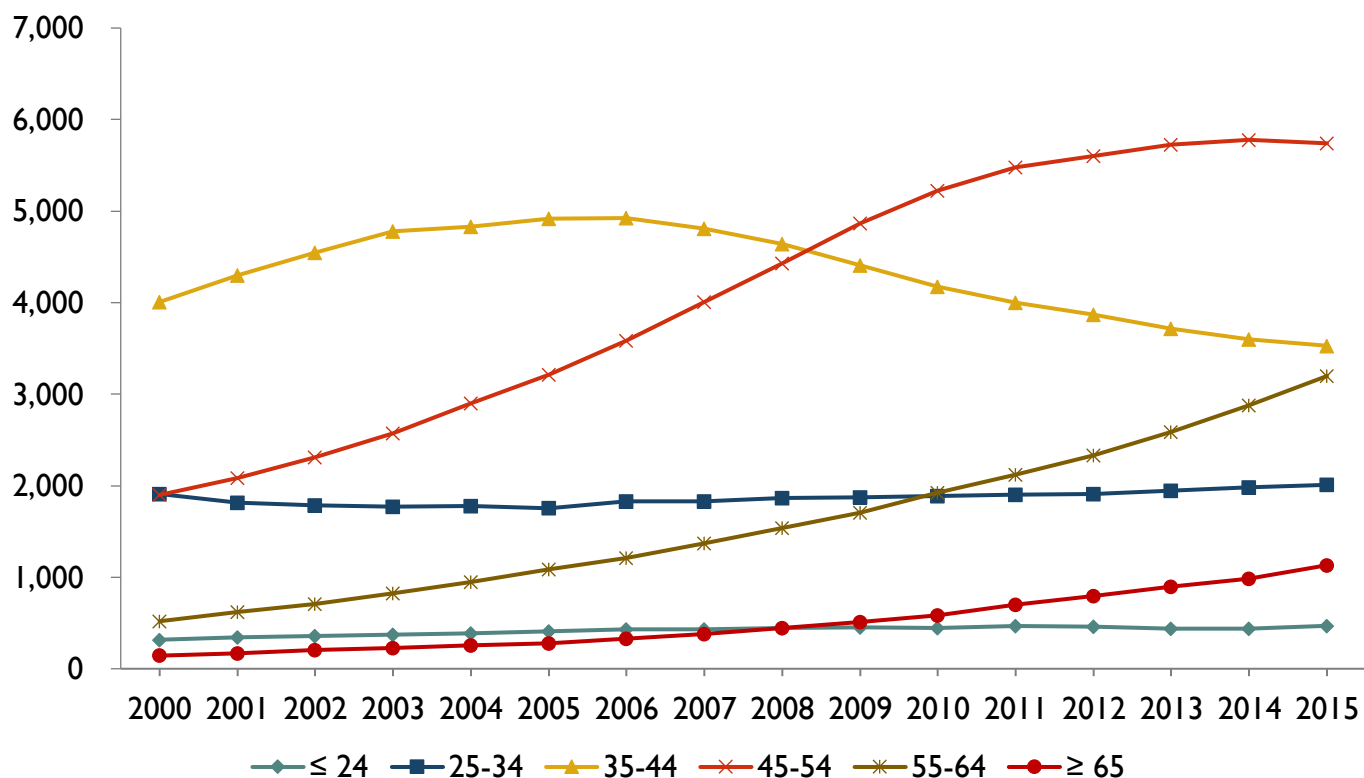
	2000	2015
Median age	39.0	48.0

Trends

Between 2000 and 2015, there was an increase in the median age of people with diagnosed HIV. In 2015, 50% were older than 48 years of age.

Notes: Data provided by the Public Health Ontario Laboratory. Individuals missing information on age were excluded (approximately 0.2%). See Table 2.1 for underlying data.

Figure 2.3 Number of people with diagnosed HIV living in Ontario by age category, 2000 to 2015



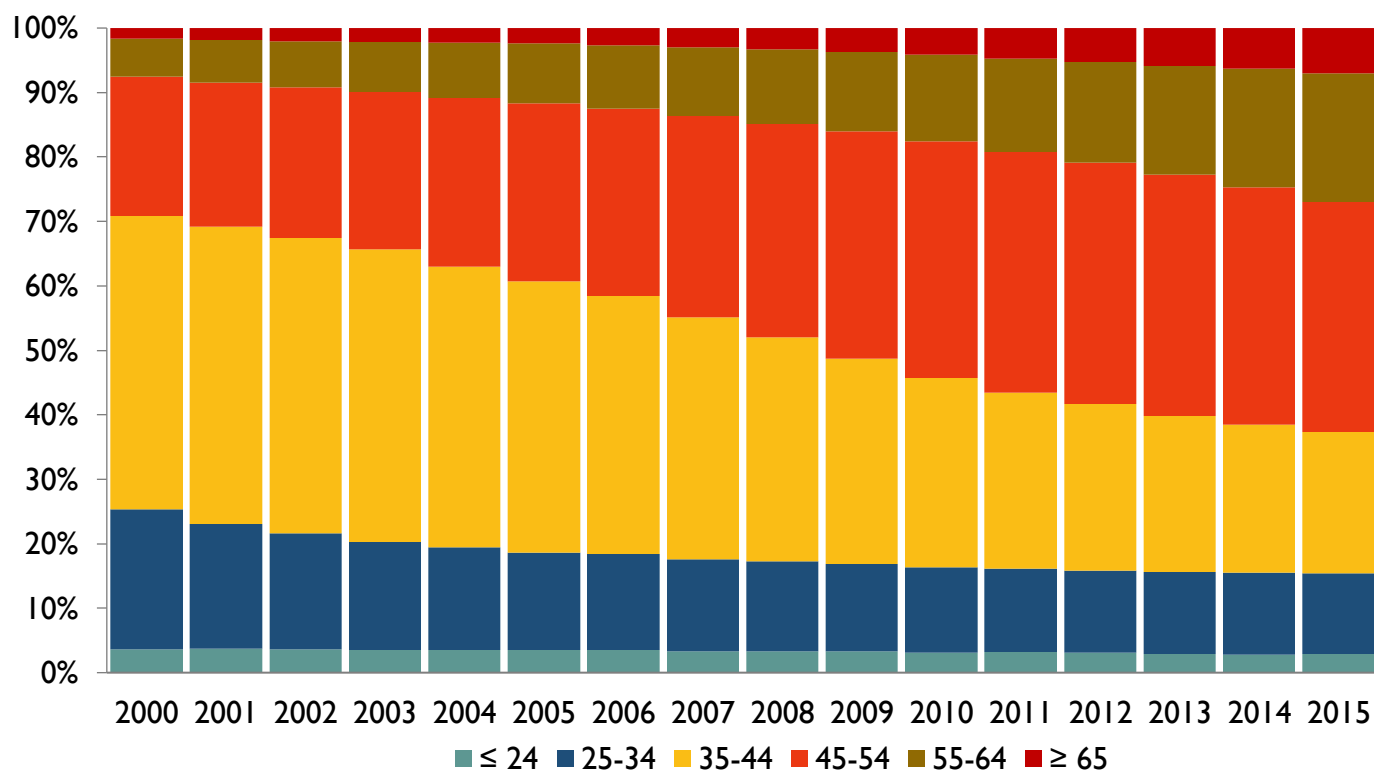
	2000	2015
≤ 24	317	469
25-34	1,910	2,009
35-44	4,005	3,529
45-54	1,889	5,734
55-64	519	3,198
≥ 65	143	1,131

Trends

Trends over time varied by age category. Between 2000 and 2015, the most common age category shifted from the 35 to 44 category to the 45 to 54 category, and the number who were 45 years of age or older increased from 2,551 to 10,063.

Notes: Data provided by the Public Health Ontario Laboratory. Individuals missing information on age were excluded (approximately 0.2%). See Table 2.2 for underlying data.

Figure 2.4 Percent of people with diagnosed HIV living in Ontario by age category, 2000 to 2015



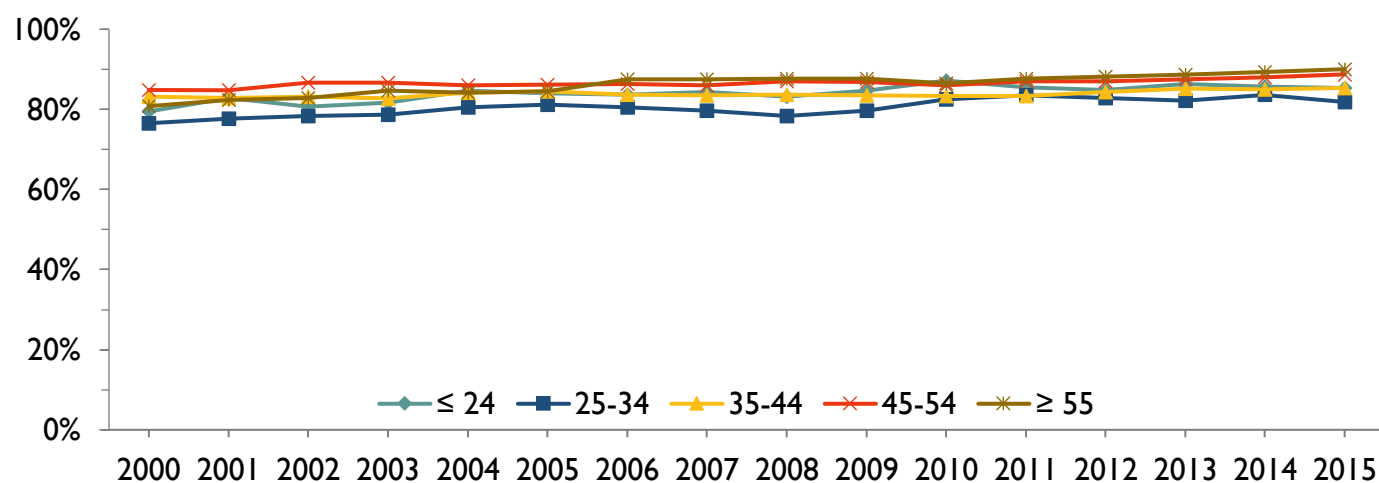
	2000	2015
≤ 24	3.6%	2.9%
25-34	21.7%	12.5%
35-44	45.5%	22.0%
45-54	21.6%	35.7%
55-64	5.9%	19.9%
≥ 65	1.6%	7.0%

Trends

Trends over time varied by age category. Between 2000 and 2015, the most common age category shifted from the 35 to 44 category to the 45 to 54 category, and the percent who were 45 years of age or older increased from 29.1% to 62.6%.

Notes: Data provided by the Public Health Ontario Laboratory. Individuals missing information on age were excluded (approximately 0.2%). See Table 2.2 for underlying data.

Figure 2.5 Percent of people with diagnosed HIV living in Ontario who were in care by age category, 2000 to 2015

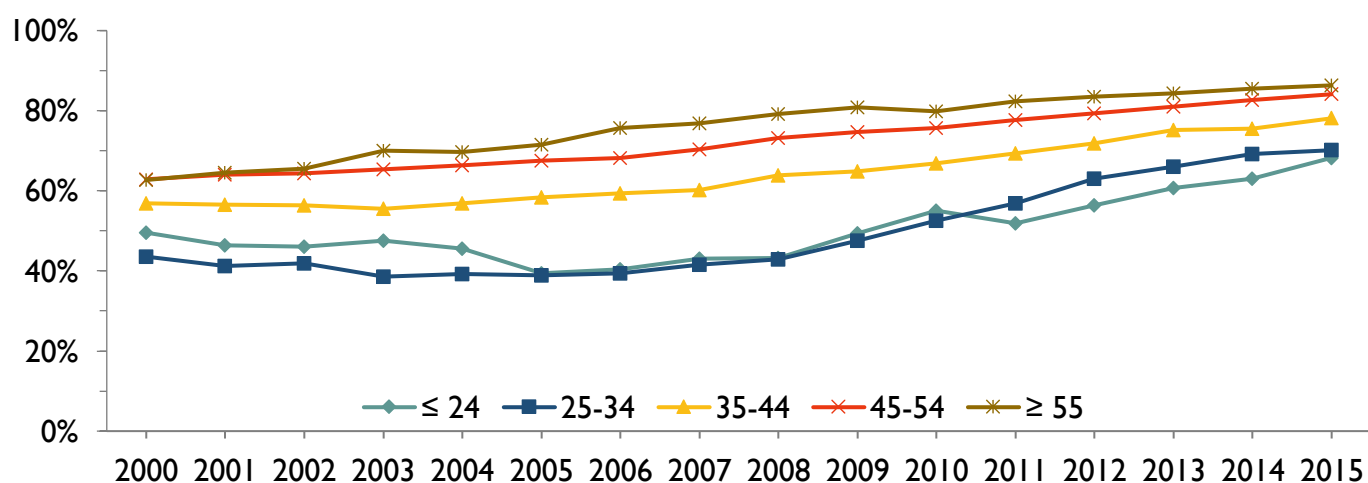


	2000	2015
≤ 24	79.5%	85.3%
25-34	76.5%	81.8%
35-44	83.2%	85.3%
45-54	84.8%	88.8%
≥ 55	80.8%	90.0%

Trends

Between 2000 and 2015, the percent of people with diagnosed HIV who were in care increased slightly across all age categories and was generally slightly higher for people of older ages.

Figure 2.6 Percent of people with diagnosed HIV living in Ontario who were on ART by age category, 2000 to 2015



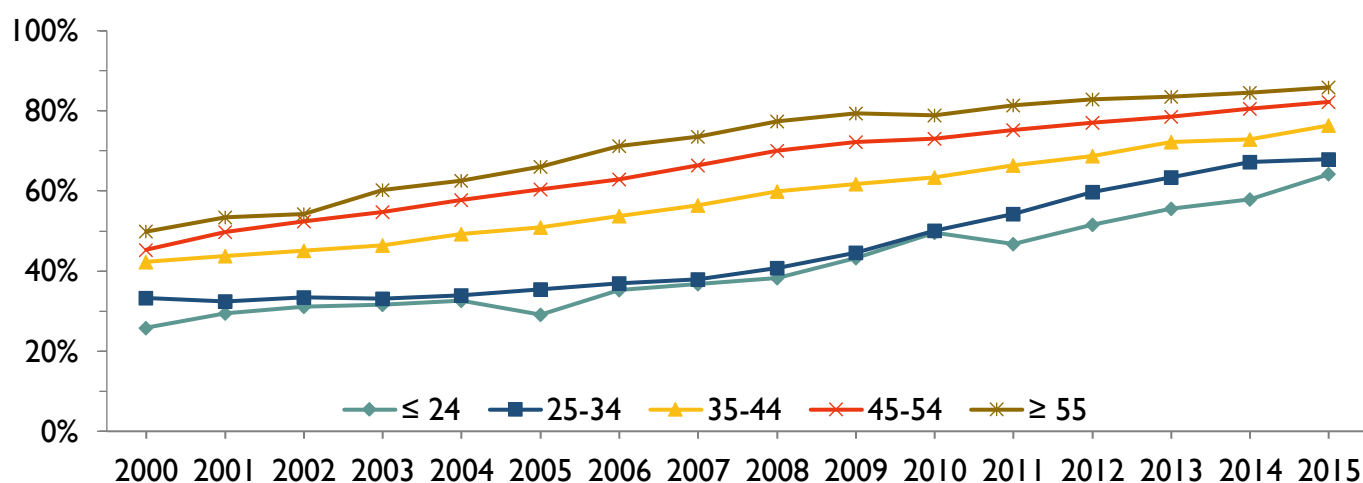
	2000	2015
≤ 24	49.5%	68.2%
25-34	43.6%	70.1%
35-44	56.8%	78.1%
45-54	62.9%	84.1%
≥ 55	62.7%	86.3%

Trends

Between 2000 and 2015, the percent of people with diagnosed HIV who were on ART increased across all age categories and was generally higher for people of older ages.

Notes: Data provided by the Public Health Ontario Laboratory. Individuals missing information on age were excluded (approximately 0.2%). Individuals missing ART data (17-20%) assumed to be on ART if virally suppressed (different from assumption used in Figure 2.8). See Tables 2.3 and 2.4 for indicator definitions and underlying data.

Figure 2.7 Percent of people with diagnosed HIV living in Ontario who were virally suppressed by age category, 2000 to 2015

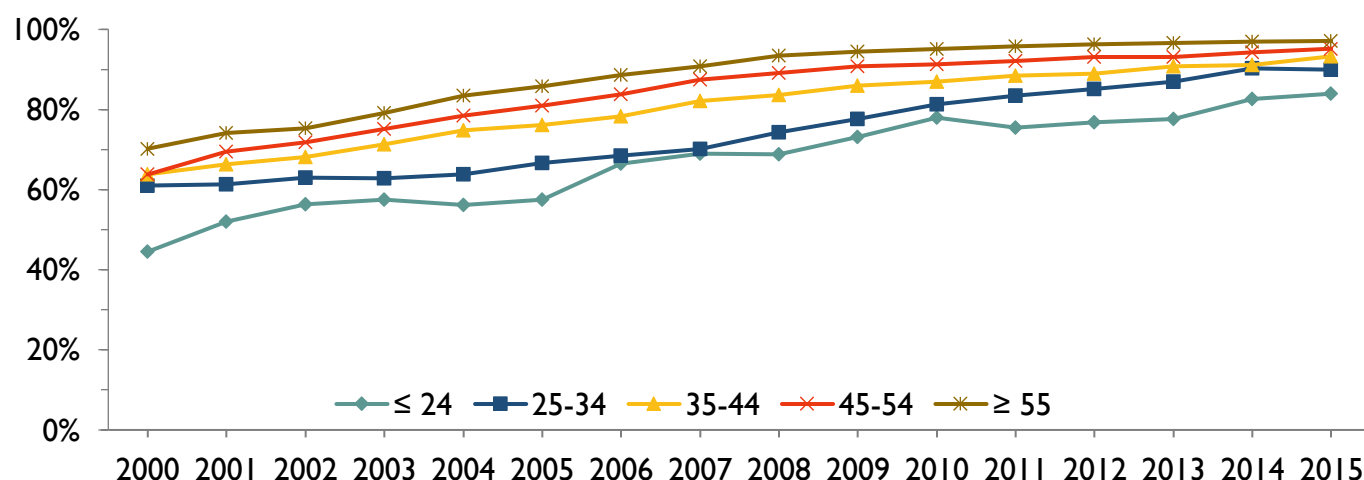


	2000	2015
≤ 24	25.9%	64.2%
25-34	33.2%	67.9%
35-44	42.3%	76.4%
45-54	45.3%	82.2%
≥ 55	49.8%	85.9%

Trends

Between 2000 and 2015, the percent of people with diagnosed HIV who were virally suppressed increased across all age categories and was generally higher for people of older ages.

Figure 2.8 Percent of people with diagnosed HIV living in Ontario on ART who were virally suppressed by age category, 2000 to 2015



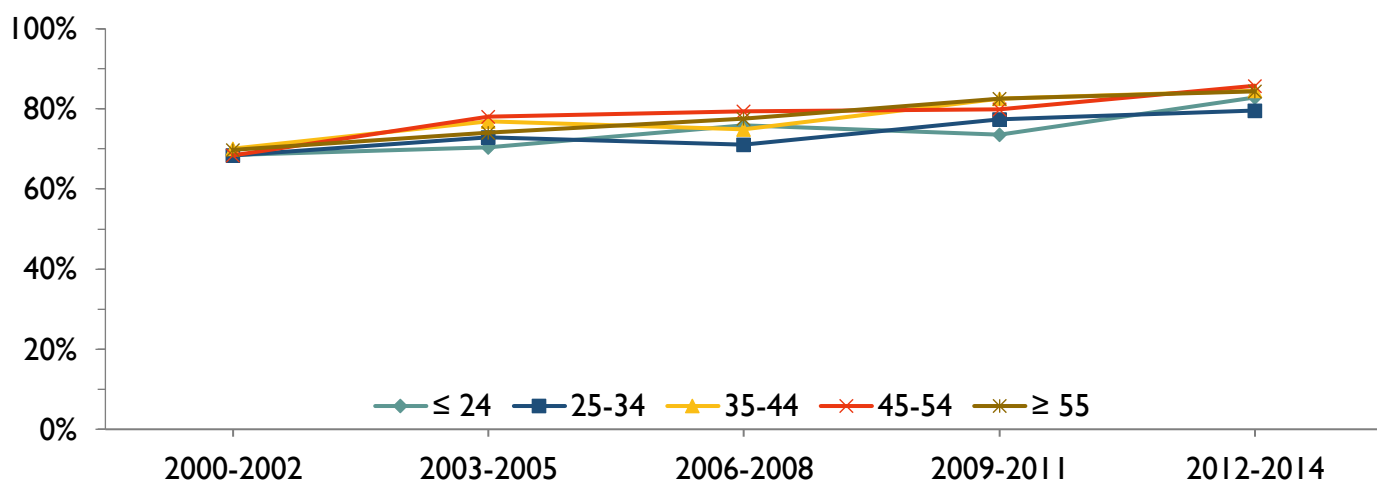
	2000	2015
≤ 24	44.5%	84.0%
25-34	61.0%	89.9%
35-44	63.8%	93.3%
45-54	63.8%	95.2%
≥ 55	70.2%	97.1%

Trends

Between 2000 and 2015, the percent of people on ART who were virally suppressed increased across all age categories and was generally higher for people of older ages.

Notes: Data provided by the Public Health Ontario Laboratory. Individuals missing information on age were excluded (approximately 0.2%). Individuals missing ART data (17-20%) assumed to be on ART (different from assumption used in Figure 2.6). See Tables 2.5 and 2.6 for indicator definitions and underlying data.

Figure 2.9 Percent of people newly diagnosed with HIV in Ontario who linked to care within three months of diagnosis by age category, 2000 to 2014

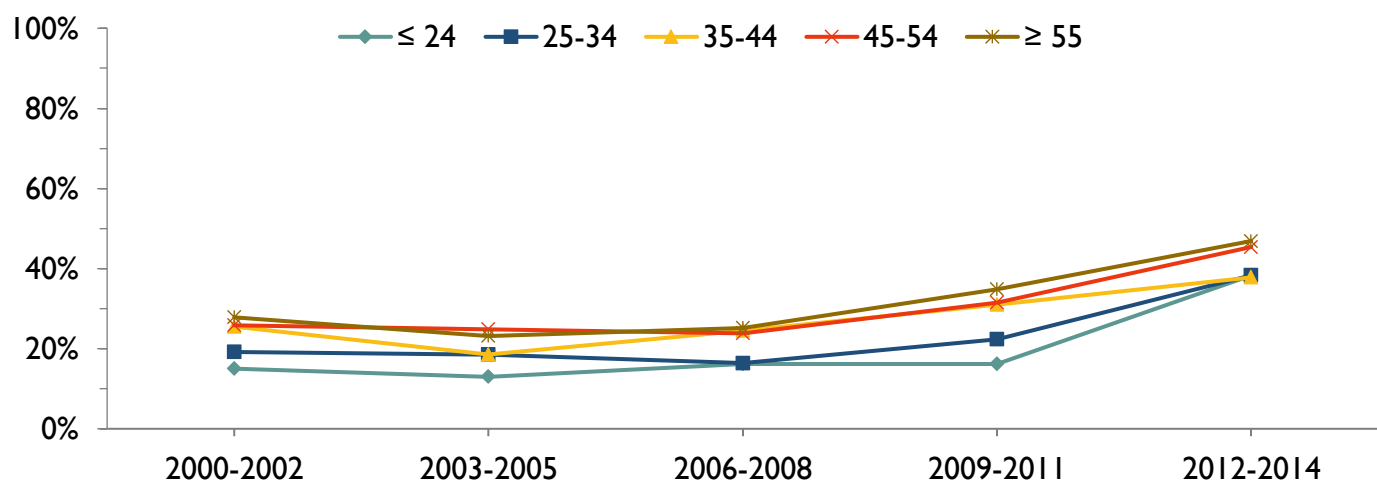


	2000-2002	2012-2014
≤ 24	68.5%	82.9%
25-34	68.4%	79.6%
35-44	70.1%	84.5%
45-54	68.4%	85.8%
≥ 55	69.8%	84.4%

Trends

Between 2000 and 2014, the percent of newly diagnosed people who linked to care within three months of diagnosis increased across all age categories and was generally slightly higher for people of older ages.

Figure 2.10 Percent of people newly diagnosed with HIV in Ontario who achieved viral suppression within six months of diagnosis by age category, 2000 to 2014



	2000-2002	2012-2014
≤ 24	15.1%	38.3%
25-34	19.2%	38.3%
35-44	25.5%	37.8%
45-54	25.8%	45.4%
≥ 55	27.9%	46.9%

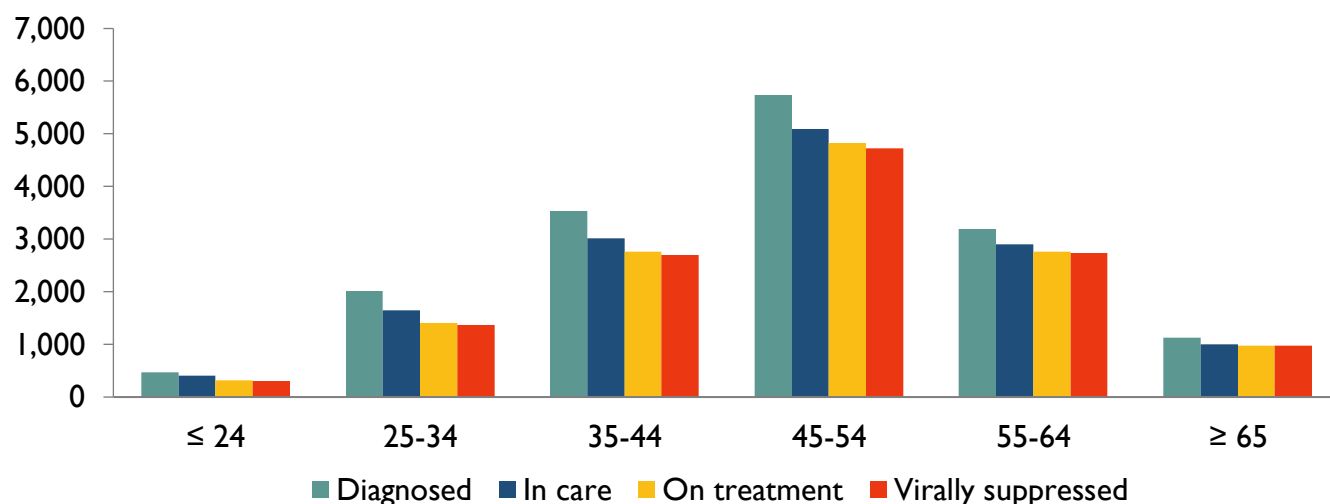
Trends

Between 2000 and 2014, the percent of newly diagnosed people who achieved viral suppression within six months of diagnosis increased across all age categories and was generally higher for people of older ages.

Notes: Data provided by the Public Health Ontario Laboratory. The year 2015 not included as some individuals diagnosed in that year would not have had time to reach these endpoints. Data aggregated over three year intervals to reduce year-to-year variation due to small counts. See Tables 2.7 and 2.8 for indicator definitions and data.

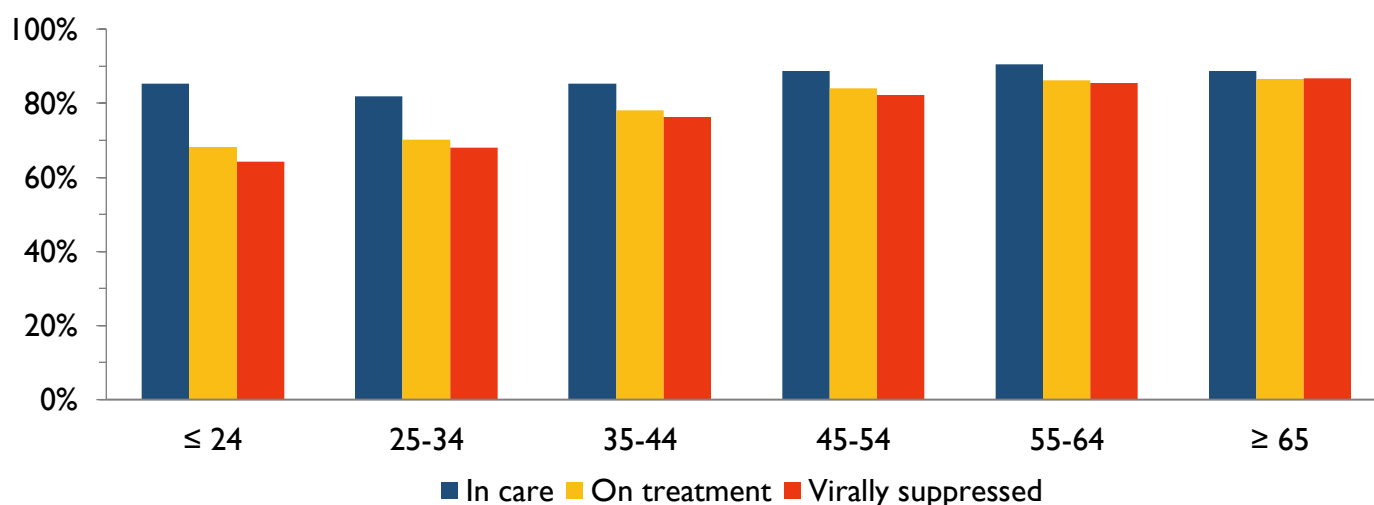
Summary figures for 2015

Figure 2.11 Number of people living with HIV in Ontario by cascade indicator and age category, 2015



	≤ 24	25-34	35-44	45-54	55-64	≥ 65
Diagnosed	469	2,009	3,529	5,737	3,198	1,131
In care	400	1,644	3,012	5,092	2,895	1,003
On ART*	320	1,409	2,756	4,825	2,758	979
Virally suppressed	301	1,365	2,695	4,718	2,736	981

Figure 2.12 Percent of people with diagnosed HIV living in Ontario who were engaged in the cascade by indicator and age category, 2015

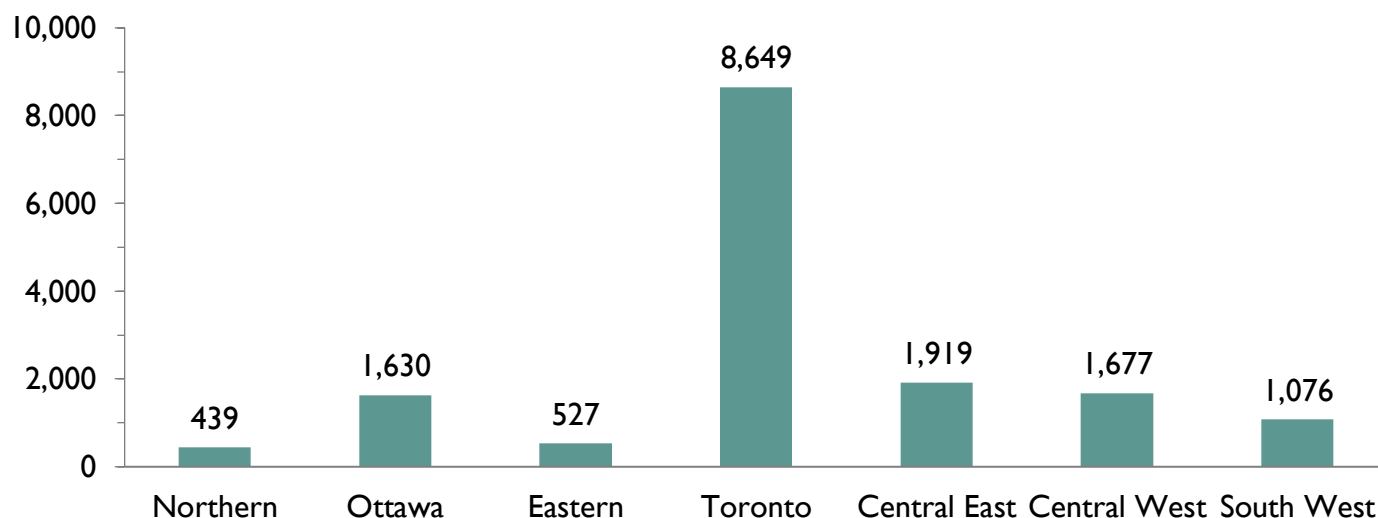


	≤ 24	25-34	35-44	45-54	55-64	≥ 65
In care	85.3%	81.8%	85.3%	88.8%	90.5%	88.7%
On ART*	68.2%	70.1%	78.1%	84.1%	86.2%	86.6%
Virally suppressed	64.2%	67.9%	76.4%	82.2%	85.6%	86.7%

Notes: Data provided by the Public Health Ontario Laboratory. Individuals missing information on age were excluded (approximately 0.2%). * Individuals missing ART data (17-20%) assumed to be on ART if virally suppressed (different from assumption used in Figure 2.8).

3. By health region (data shown for the year 2015 only*)

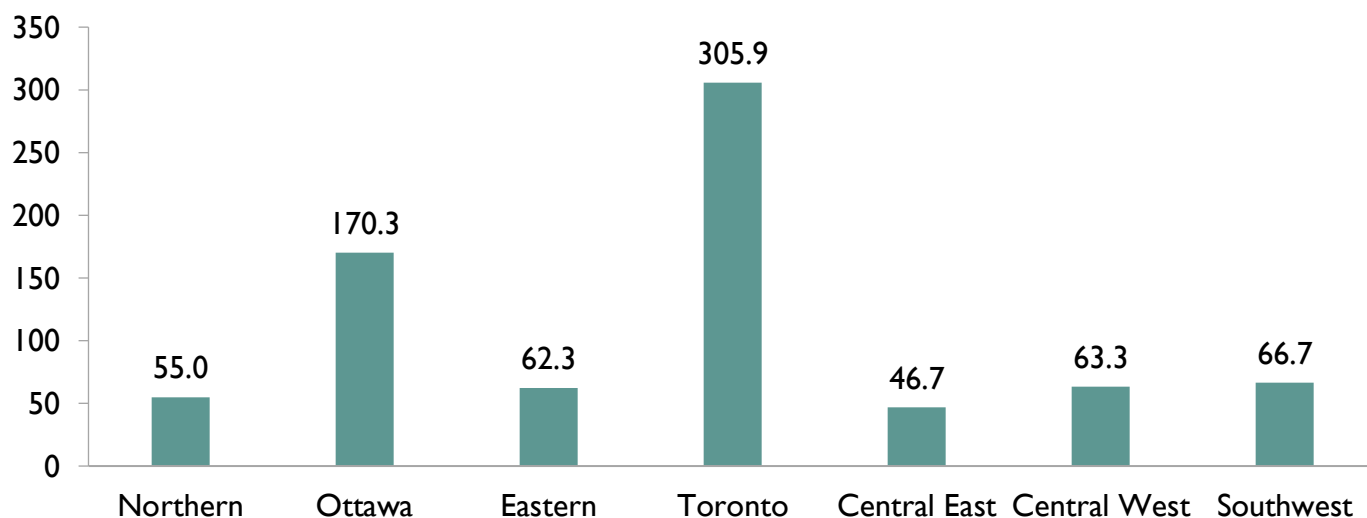
Figure 3.1 Number of people with diagnosed HIV living in Ontario by health region, 2015



Snapshot

In 2015, the number of people with diagnosed HIV was highest in Toronto and lowest in the Northern and Eastern regions.

Figure 3.2 Number of people with diagnosed HIV living in Ontario per 100,000 people by health region, 2015

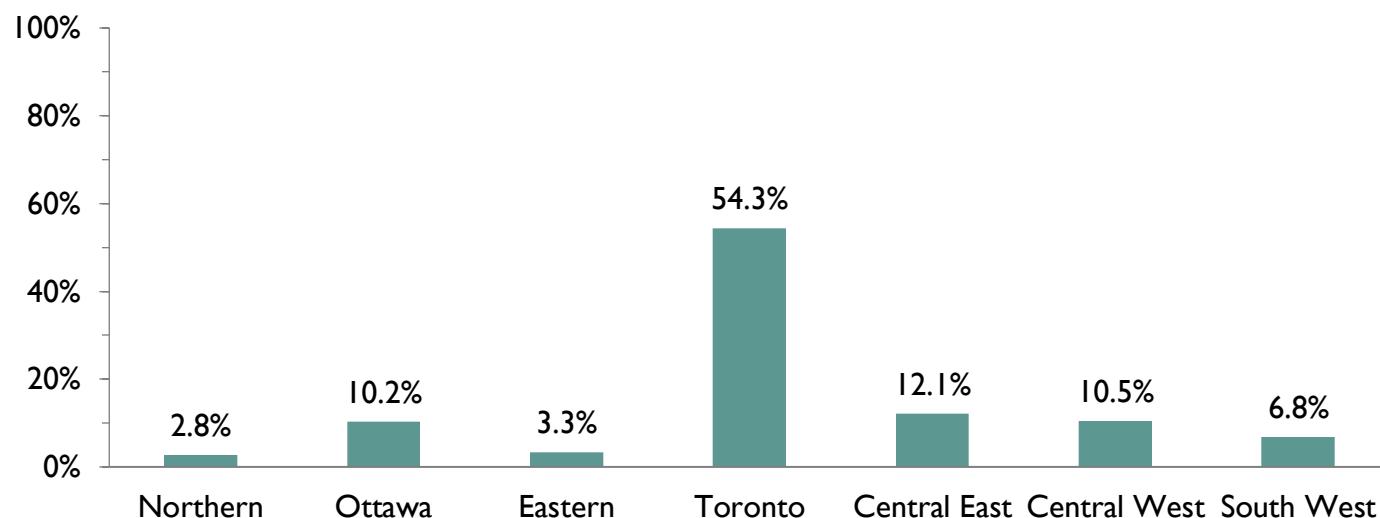


Snapshot

In 2015, the number of people with diagnosed HIV per 100,000 people was highest in Toronto and lowest in the Central East region.

Notes: Data provided by the Public Health Ontario Laboratory. Health regions are aggregations of public health units (see [Appendices](#)). Diagnoses assigned to a health region based on their address of residence or, if unknown, the address of the ordering provider. Excludes 180 people who were living out of province. * Information on residence only collected from 2011 onwards. See Tables 3.1 and 3.2 for indicator definitions and underlying data.

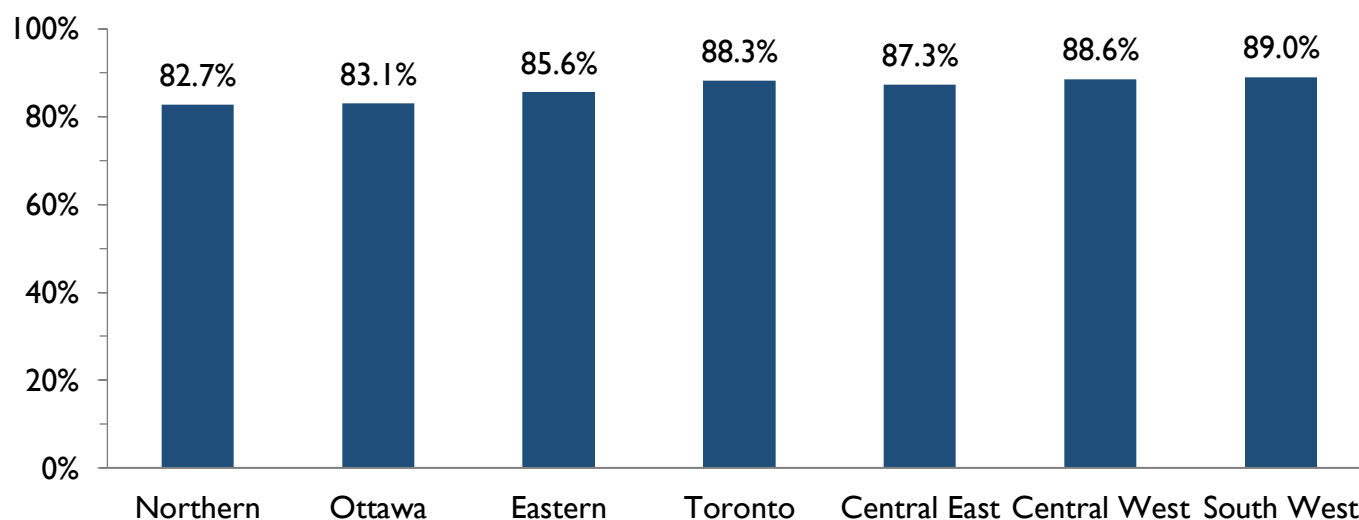
Figure 3.3 Distribution of people with diagnosed HIV living in Ontario by health region, 2015



Snapshot

In 2015, the majority of people with diagnosed HIV were living in Toronto, with the lowest percentages living in the Eastern and Northern health regions.

Figure 3.4 Percent of people with diagnosed HIV living in Ontario who were in care by health region, 2015

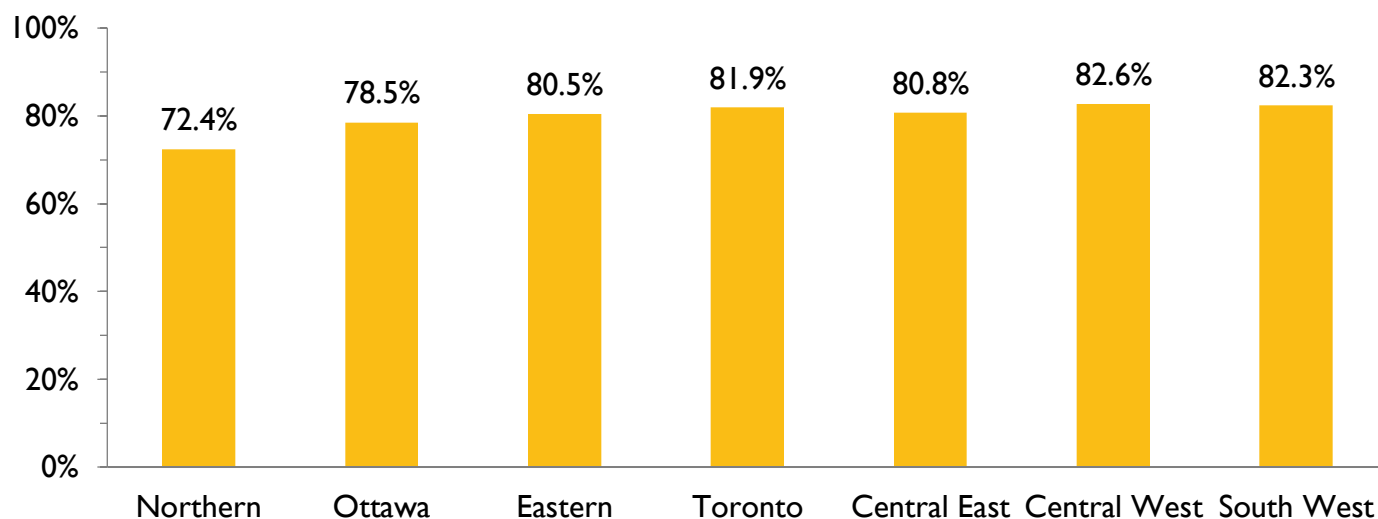


Snapshot

In 2015, the percent of people with diagnosed HIV who were in care was highest in the South West and lowest in the Northern health region.

Notes: Data provided by the Public Health Ontario Laboratory. Health regions are aggregations of public health units (see [Appendices](#)). Diagnoses assigned to a health region based on their address of residence or, if unknown, the address of the ordering provider. Excludes 180 people who were living out of province. See Tables 3.1 and 3.3 for indicator definitions and underlying data.

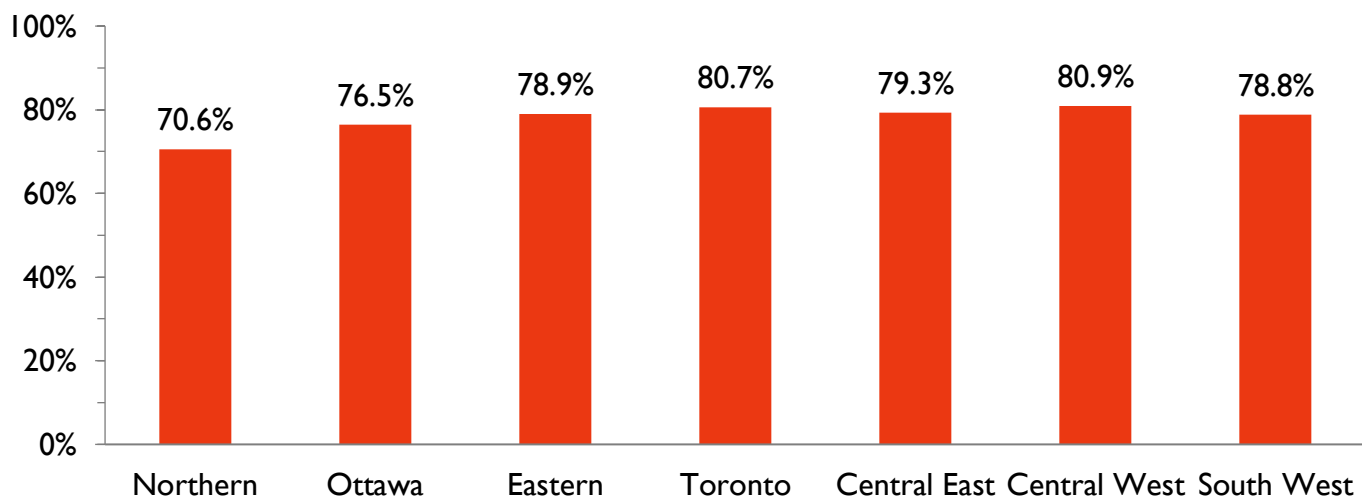
Figure 3.5 Percent of people with diagnosed HIV living in Ontario who were on ART by health region, 2015



Snapshot

In 2015, the percent of people with diagnosed HIV who were on ART was highest in the Central West and lowest in the Northern health region.

Figure 3.6 Percent of people with diagnosed HIV living in Ontario who were virally suppressed by health region, 2015

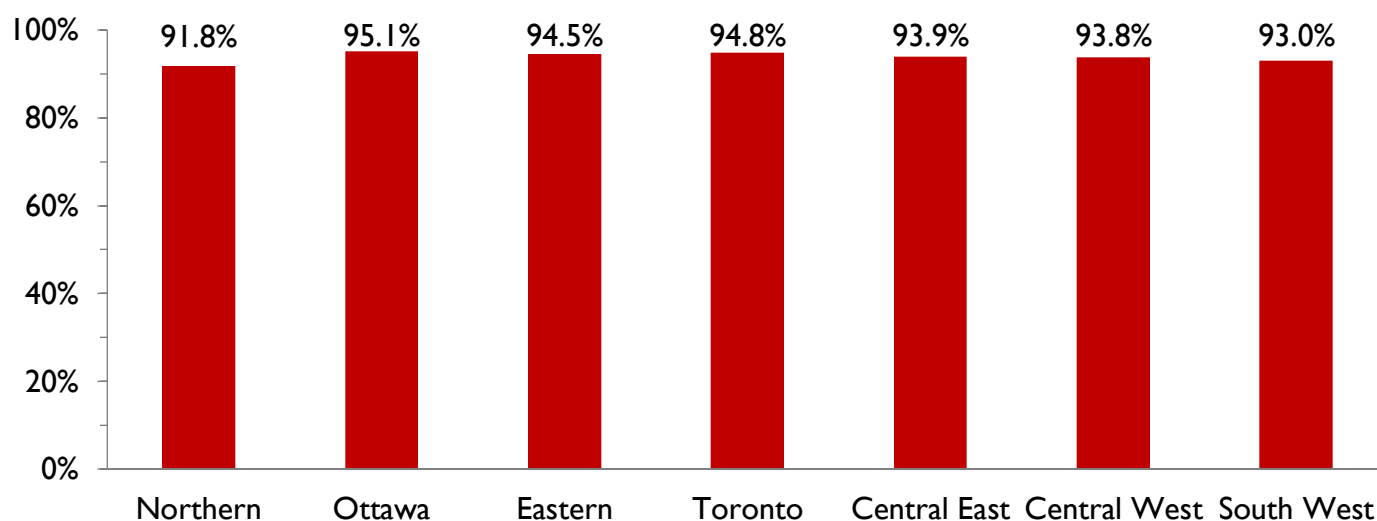


Snapshot

In 2015, the percent of people with diagnosed HIV who were virally suppressed was highest in the Central West and lowest in the Northern health region.

Notes: Data provided by the Public Health Ontario Laboratory. Health regions are aggregations of public health units (see [Appendices](#)). Diagnoses assigned to a health region based on their address of residence or, if unknown, the address of the ordering provider. Excludes 180 people who were living out of province. Individuals missing ART data (17-20%) assumed to be on ART if virally suppressed (different from assumption used in Figure 3.7). See Tables 3.4 and 3.5 for indicator definitions and underlying data.

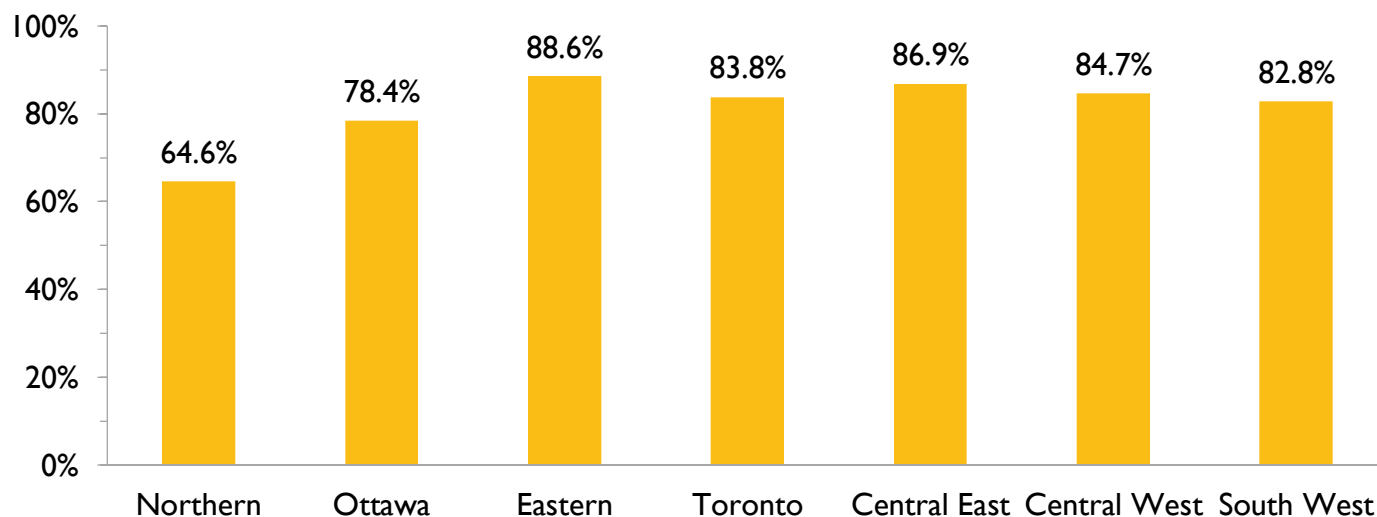
Figure 3.7 Percent of people with diagnosed HIV living in Ontario on ART who were virally suppressed by health region, 2015



Snapshot

In 2015, the percent of people on ART who were virally suppressed was highest in Ottawa and lowest in the Northern health region.

Figure 3.8 Percent of people newly diagnosed with HIV in Ontario who linked to care within three months of diagnosis by health region, 2012 to 2014 (combined)

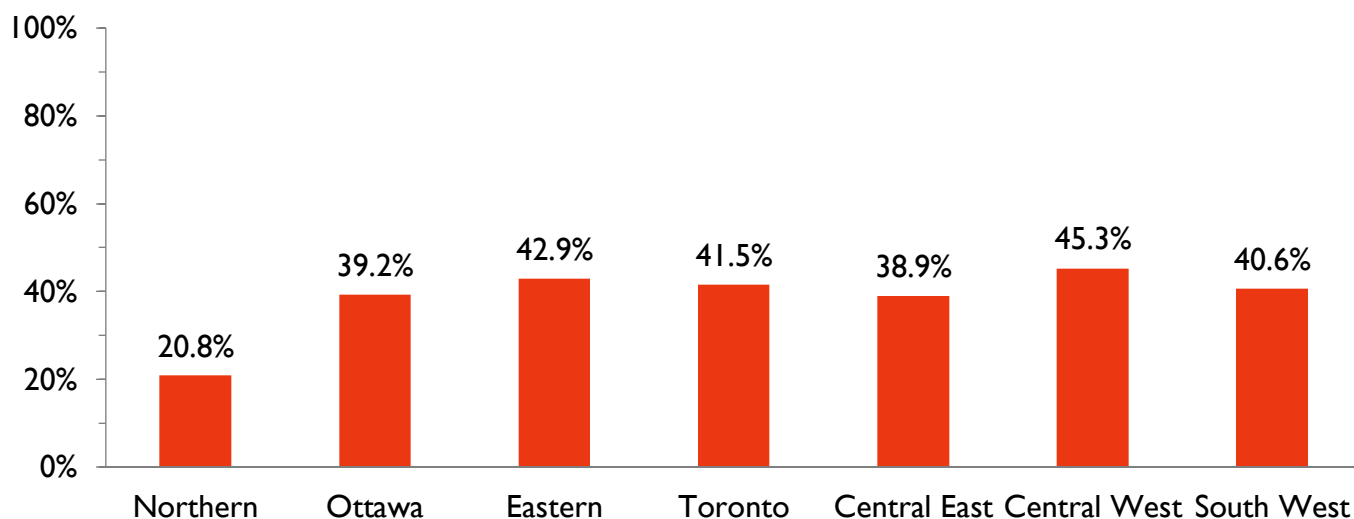


Snapshot

The percent of people newly diagnosed in 2012 to 2014 (combined) who linked to care within three months of diagnosis was highest in Eastern and lowest in the Northern health region.

Notes: Data provided by the Public Health Ontario Laboratory. Health regions are aggregations of public health units (see [Appendices](#)). Diagnoses assigned to a health region based on their address of residence or, if unknown, the address of the ordering provider. Excludes 180 people who were living out of province. Individuals missing ART data (17-20%) all assumed to be on ART (different from assumption used in Figure 3.6). See Tables 3.6 and 3.7 for indicator definitions and underlying data.

Figure 3.9 Percent of people newly diagnosed with HIV in Ontario who achieved viral suppression within six months of diagnosis by health region, 2012 to 2014 (combined)

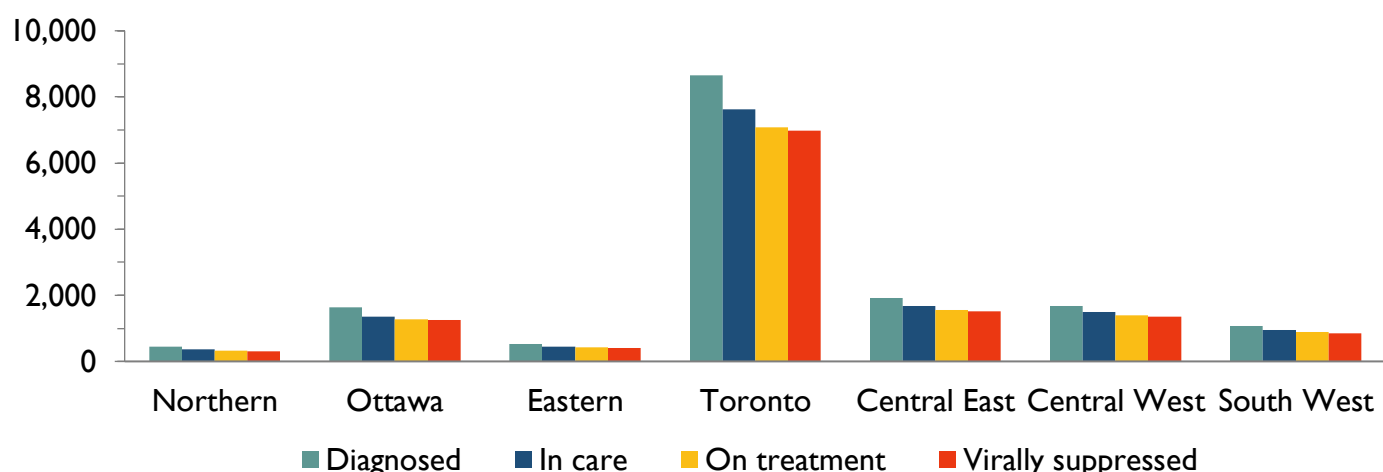


Snapshot

The percent of people newly diagnosed in 2012 to 2014 (combined) who achieved viral suppression within six months of diagnosis was highest in Central West and lowest in the Northern health region.

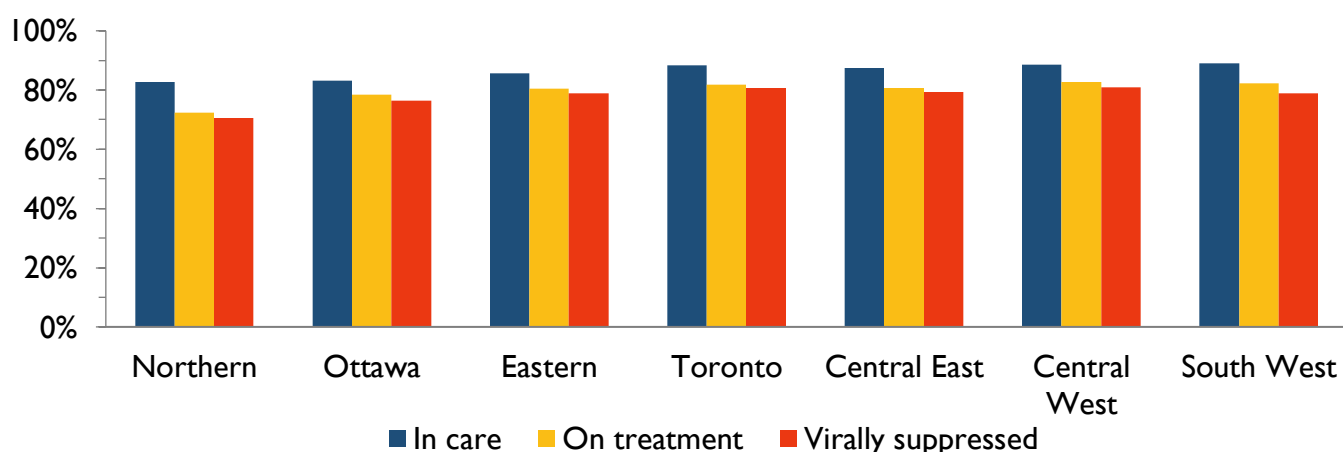
Notes: Data provided by the Public Health Ontario Laboratory. Health regions are aggregations of public health units (see [Appendices](#)). Diagnoses assigned to a health region based on their address of residence or, if unknown, the address of the ordering provider. Excludes 180 people who were living out of province. See Table 3.8 for indicator definitions and underlying data.

Figure 3.10 Number of people living with HIV in Ontario who were diagnosed, in care, on ART or virally suppressed by health region, 2015



Number 2015	Northern	Ottawa	Eastern	Toronto	Central East	Central West	South West
Diagnosed	439	1,630	527	8,649	1,919	1,677	1,076
In care	363	1,354	451	7,633	1,676	1,485	958
On ART*	318	1,280	424	7,082	1,550	1,386	886
Virally suppressed	310	1,247	416	6,976	1,522	1,357	848

Figure 3.11 Percent of people with diagnosed HIV living in Ontario who were in care, on ART or virally suppressed by health region, 2015



Percent 2015	Northern	Ottawa	Eastern	Toronto	Central East	Central West	South West
In care	82.7%	83.1%	85.6%	88.3%	87.3%	88.6%	89.0%
On ART*	72.4%	78.5%	80.5%	81.9%	80.8%	82.6%	82.3%
Virally suppressed	70.6%	76.5%	78.9%	80.7%	79.3%	80.9%	78.8%

Notes: Data provided by the Public Health Ontario Laboratory. Health regions are aggregations of Public Health Units (see Appendices). Diagnoses assigned to a health region based on their address of residence or, if unknown, the address of the ordering provider. Excludes 180 people living out of province. * Individuals missing ART data (17-20%) assumed to be on ART if virally suppressed (different from assumption used in Figure 3.7).

Data tables

I. By sex

Table I.1 Number and percent of people with diagnosed HIV living in Ontario by sex, 2000 to 2015

Year	Both sexes	Male	Female	% female
	Diagnosed	Diagnosed	Diagnosed	
	Nominal HIV-positive diagnostic test and/or ≥ 1 VL test, and not LTFU after 2 years	Nominal HIV-positive diagnostic test and/or ≥ 1 VL test, and not LTFU after 2 years	Nominal HIV-positive diagnostic test and/or ≥ 1 VL test, and not LTFU after 2 years	
2000	8,839	7,511	1,328	15.0%
2001	9,362	7,877	1,485	15.9%
2002	9,941	8,295	1,646	16.6%
2003	10,569	8,715	1,854	17.5%
2004	11,118	9,115	2,003	18.0%
2005	11,659	9,504	2,155	18.5%
2006	12,307	9,940	2,367	19.2%
2007	12,822	10,293	2,529	19.7%
2008	13,367	10,687	2,680	20.0%
2009	13,806	11,010	2,796	20.3%
2010	14,133	11,302	2,831	20.0%
2011	14,565	11,634	2,931	20.1%
2012	14,844	11,833	3,011	20.3%
2013	15,201	12,112	3,089	20.3%
2014	15,552	12,406	3,146	20.2%
2015	15,981	12,724	3,257	20.4%

Notes: Data provided by the Public Health Ontario Laboratory. Diagnosed = people with diagnosed HIV living in Ontario. LTFU = lost to follow up = no record of a VL test in more than two years, and no VL test in later years. VL = viral load. Individuals missing information on sex were excluded (approximately 0.4%).

Table 1.2 Number and percent of people with diagnosed HIV living in Ontario who were in care by sex, 2000 to 2015

Year	Male			Female		
	In care (numerator)	Diagnosed (denominator)	%	In care (numerator)	Diagnosed (denominator)	%
	At least 1 VL test	Nominal HIV- positive diagnostic test and/or ≥ 1 VL test, and not LTFU after 2 years		At least 1 VL test	Nominal HIV- positive diagnostic test and/or ≥ 1 VL test, and not LTFU after 2 years	
2000	6,179	7,511	82.3%	1,024	1,328	77.1%
2001	6,481	7,877	82.3%	1,188	1,485	80.0%
2002	6,928	8,295	83.5%	1,304	1,646	79.2%
2003	7,294	8,715	83.7%	1,481	1,854	79.9%
2004	7,710	9,115	84.6%	1,625	2,003	81.1%
2005	8,059	9,504	84.8%	1,782	2,155	82.7%
2006	8,418	9,940	84.7%	1,981	2,367	83.7%
2007	8,714	10,293	84.7%	2,099	2,529	83.0%
2008	9,123	10,687	85.4%	2,193	2,680	81.8%
2009	9,407	11,010	85.4%	2,309	2,796	82.6%
2010	9,656	11,302	85.4%	2,327	2,831	82.2%
2011	9,983	11,634	85.8%	2,481	2,931	84.6%
2012	10,209	11,833	86.3%	2,555	3,011	84.9%
2013	10,528	12,112	86.9%	2,625	3,089	85.0%
2014	10,862	12,406	87.6%	2,680	3,146	85.2%
2015	11,173	12,724	87.8%	2,793	3,257	85.8%

Notes: Data provided by the Public Health Ontario Laboratory. Diagnosed = people with diagnosed HIV living in Ontario. LTFU = lost to follow up = no record of a VL test in more than 2 years and no VL test in later years. VL = viral load. Individuals missing information on sex were excluded (approximately 0.4%).

Table 1.3 Number and percent of people with diagnosed HIV living in Ontario who were on ART by sex, 2000 to 2015

Year	Male			Female		
	On ART (numerator)	Diagnosed (denominator)	%	On ART (numerator)	Diagnosed (denominator)	%
	Documented on ART, or ART status missing and virally suppressed, on last VL test	Nominal HIV- positive diagnostic test and/or ≥ 1 VL test, and not LTFU after 2 years		Documented on ART, or ART status missing and virally suppressed, on last VL test	Nominal HIV- positive diagnostic test and/or ≥ 1 VL test, and not LTFU after 2 years	
2000	4,222	7,511	56.2%	658	1,328	49.5%
2001	4,421	7,877	56.1%	757	1,485	51.0%
2002	4,731	8,295	57.0%	824	1,646	50.1%
2003	5,017	8,715	57.6%	915	1,854	49.4%
2004	5,362	9,115	58.8%	1,022	2,003	51.0%
2005	5,729	9,504	60.3%	1,127	2,155	52.3%
2006	6,138	9,940	61.8%	1,294	2,367	54.7%
2007	6,562	10,293	63.8%	1,440	2,529	56.9%
2008	7,182	10,687	67.2%	1,586	2,680	59.2%
2009	7,635	11,010	69.3%	1,759	2,796	62.9%
2010	8,047	11,302	71.2%	1,855	2,831	65.5%
2011	8,568	11,634	73.6%	2,032	2,931	69.3%
2012	9,020	11,833	76.2%	2,193	3,011	72.8%
2013	9,553	12,112	78.9%	2,283	3,089	73.9%
2014	9,978	12,406	80.4%	2,386	3,146	75.8%
2015	10,437	12,724	82.0%	2,532	3,257	77.7%

Notes: Data provided by the Public Health Ontario Laboratory. Diagnosed = people with diagnosed HIV living in Ontario. LTFU = lost to follow up = no record of a VL test in more than 2 years, and no VL test in later years. VL = viral load. ART = antiretroviral treatment. ART status documented on VL test requisition by ordering provider and missing for 17-20% of requisitions. Individuals missing information on sex were excluded (approximately 0.4%).

Table 1.4 Number and percent of people with diagnosed HIV living in Ontario who were virally suppressed by sex, 2000 to 2015

Year	Male			Female		
	Virally suppressed (numerator)	Diagnosed (denominator)	%	Virally suppressed (numerator)	Diagnosed (denominator)	%
	VL less than 200 copies per ml on last VL test	Nominal HIV-positive diagnostic test and/or ≥ 1 VL test, and not LTFU after 2 years		VL less than 200 copies per ml on last VL test	Nominal HIV-positive diagnostic test and/or ≥ 1 VL test, and not LTFU after 2 years	
2000	3,125	7,511	41.6%	482	1,328	36.3%
2001	3,458	7,877	43.9%	571	1,485	38.5%
2002	3,803	8,295	45.8%	661	1,646	40.2%
2003	4,192	8,715	48.1%	774	1,854	41.7%
2004	4,665	9,115	51.2%	878	2,003	43.8%
2005	5,066	9,504	53.3%	1,015	2,155	47.1%
2006	5,626	9,940	56.6%	1,198	2,367	50.6%
2007	6,163	10,293	59.9%	1,354	2,529	53.5%
2008	6,832	10,687	63.9%	1,516	2,680	56.6%
2009	7,337	11,010	66.6%	1,684	2,796	60.2%
2010	7,761	11,302	68.7%	1,760	2,831	62.2%
2011	8,323	11,634	71.5%	1,923	2,931	65.6%
2012	8,752	11,833	74.0%	2,102	3,011	69.8%
2013	9,300	12,112	76.8%	2,193	3,089	71.0%
2014	9,735	12,406	78.5%	2,320	3,146	73.7%
2015	10,229	12,724	80.4%	2,491	3,257	76.5%

Notes: Data provided by the Public Health Ontario Laboratory. Diagnosed = people with diagnosed HIV living in Ontario. LTFU = lost to follow up = no record of a VL test in more than 2 years and no VL test in later years. VL = viral load. Individuals missing information on sex were excluded (approximately 0.4%).

Table 1.5 Number and percent of people with diagnosed HIV living in Ontario on ART who were virally suppressed by sex, 2000 to 2015

Year	Male			Female		
	Virally suppressed (numerator)	On ART (denominator)	%	Virally suppressed (numerator)	On ART (denominator)	%
	VL less than 200 copies per ml on last VL test, and known on ART or ART status missing, on last VL test	Known on ART, or ART status missing, on last VL test		VL less than 200 copies per ml on last VL test, and known on ART or ART status missing, on last VL test	Known on ART, or ART status missing, on last VL test	
2000	3,039	4,798	63.3%	456	732	62.3%
2001	3,375	5,043	66.9%	546	845	64.6%
2002	3,711	5,405	68.7%	629	905	69.5%
2003	4,073	5,670	71.8%	737	1,031	71.5%
2004	4,577	6,061	75.5%	836	1,158	72.2%
2005	4,970	6,391	77.8%	954	1,267	75.3%
2006	5,497	6,840	80.4%	1,123	1,408	79.8%
2007	6,041	7,178	84.2%	1,294	1,580	81.9%
2008	6,725	7,752	86.8%	1,444	1,747	82.7%
2009	7,226	8,148	88.7%	1,618	1,884	85.9%
2010	7,642	8,482	90.1%	1,706	1,968	86.7%
2011	8,213	8,974	91.5%	1,857	2,130	87.2%
2012	8,644	9,388	92.1%	2,049	2,299	89.1%
2013	9,202	9,884	93.1%	2,132	2,395	89.0%
2014	9,648	10,264	94.0%	2,264	2,470	91.7%
2015	10,128	10,697	94.7%	2,430	2,601	93.4%

Notes: Data provided by the Public Health Ontario Laboratory. LTFU = no record of a VL test in more than 2 years, and no VL test in later years. VL = viral load. ART = antiretroviral treatment. ART status documented on VL test requisition by ordering provider and missing for 17-20% of requisitions. Individuals missing information on sex were excluded (approximately 0.4%).

Table 1.6 Number and percent of people newly diagnosed with HIV in Ontario who linked to care within three months by sex, 2000 to 2014

Year	Male			Female		
	Linked to care (numerator)	Newly diagnosed (denominator)	%	Linked to care (numerator)	Newly diagnosed (denominator)	%
	First VL within 3 months of HIV diagnosis	Nominal HIV-positive diagnostic test and no evidence of previous diagnosis		First VL within 3 months of HIV diagnosis	Nominal HIV-positive diagnostic test and no evidence of previous diagnosis	
2000	176	264	66.7%	72	102	70.6%
2001	191	284	67.3%	83	138	60.1%
2002	262	361	72.6%	121	178	68.0%
2003	272	367	74.1%	125	182	68.7%
2004	311	396	78.5%	130	172	75.6%
2005	312	419	74.5%	104	146	71.2%
2006	324	408	79.4%	139	188	73.9%
2007	307	402	76.4%	108	150	72.0%
2008	304	416	73.1%	102	153	66.7%
2009	301	399	75.4%	100	122	82.0%
2010	329	409	80.4%	88	114	77.2%
2011	325	401	81.0%	99	122	81.1%
2012	280	337	83.1%	88	109	80.7%
2013	284	335	84.8%	64	76	84.2%
2014	309	371	83.3%	75	96	78.1%

Notes: Data provided by the Public Health Ontario Laboratory. VL = viral load. No evidence of previous diagnosis = no detectable viral load test or CD4 count before diagnosis date, and first VL after diagnosis not virally suppressed. The year 2015 not included as some individuals diagnosed in this year would not have had time to link to care. Individuals missing information on sex were excluded (approximately 0.4%).

Table 1.7 Number and percent of people newly diagnosed with HIV in Ontario who achieved viral suppression within six months of diagnosis by sex, 2000 to 2014

Year	Male			Female		
	Time to viral suppression (numerator)	Newly diagnosed (denominator)	%	Time to viral suppression (numerator)	Newly diagnosed (denominator)	%
	Suppressed VL within 6 months of HIV diagnosis	Nominal HIV-positive diagnostic test and no evidence of previous diagnosis		Suppressed VL within 6 months of HIV diagnosis	Nominal HIV-positive diagnostic test and no evidence of previous diagnosis	
2000	55	264	20.8%	26	102	25.5%
2001	59	284	20.8%	38	138	27.5%
2002	76	361	21.1%	37	178	20.8%
2003	74	367	20.2%	40	182	22.0%
2004	80	396	20.2%	38	172	22.1%
2005	64	419	15.3%	26	146	17.8%
2006	76	408	18.6%	33	188	17.6%
2007	80	402	19.9%	26	150	17.3%
2008	100	416	24.0%	44	153	28.8%
2009	92	399	23.1%	42	122	34.4%
2010	102	409	24.9%	32	114	28.1%
2011	116	401	28.9%	40	122	32.8%
2012	131	337	38.9%	39	109	35.8%
2013	143	335	42.7%	27	76	35.5%
2014	159	371	42.9%	35	96	36.5%

Notes: Data provided by the Public Health Ontario Laboratory. VL = viral load. No evidence of previous diagnosis = no detectable viral load test or CD4 count before diagnosis date, and first VL after diagnosis not suppressed. The year 2015 was removed as some individuals diagnosed in that year would not have had time to reach viral suppression. Individuals missing information on sex were excluded (approximately 0.4%).

2. By age

Table 2.1 Mean and median age of people with diagnosed HIV living in Ontario, 2000 to 2015

Year	Age	
	Mean	Median
2000	40.2	39.0
2001	40.7	40.0
2002	41.2	40.0
2003	41.6	41.0
2004	42.2	42.0
2005	42.6	42.0
2006	43.0	43.0
2007	43.5	43.0
2008	44.0	44.0
2009	44.5	45.0
2010	45.0	45.0
2011	45.6	46.0
2012	46.0	47.0
2013	46.6	47.0
2014	47.1	48.0
2015	47.5	48.0

Notes: Data provided by the Public Health. People with diagnosed HIV living in Ontario defined as having had a nominal HIV-positive diagnostic test and/or ≥ 1 VL test, and not LTFU after 2 years. LTFU = lost to follow up = no record of a VL test in more than 2 years, and no VL test in later years. Individuals missing information on age were excluded (approximately 0.2%).

Table 2.2 Number and percent of diagnosed people with HIV living in Ontario by age category, 2000 to 2015

Year	All ages	≤24		25-34		35-44		45-54		55-64		≥65	
	Diagnosed	Diagnosed	%	Diagnosed	%	Diagnosed	%	Diagnosed	%	Diagnosed	%	Diagnosed	%
2000	8,793	317	3.6%	1,910	21.7%	4,005	45.5%	1,899	21.6%	519	5.9%	143	1.6%
2001	9,319	343	3.7%	1,811	19.4%	4,297	46.1%	2,083	22.4%	617	6.6%	168	1.8%
2002	9,908	356	3.6%	1,784	18.0%	4,546	45.9%	2,307	23.3%	708	7.1%	207	2.1%
2003	10,545	370	3.5%	1,771	16.8%	4,780	45.3%	2,574	24.4%	825	7.8%	225	2.1%
2004	11,101	386	3.5%	1,776	16.0%	4,833	43.5%	2,898	26.1%	951	8.6%	257	2.3%
2005	11,656	411	3.5%	1,753	15.0%	4,914	42.2%	3,212	27.6%	1,088	9.3%	278	2.4%
2006	12,305	429	3.5%	1,832	14.9%	4,924	40.0%	3,582	29.1%	1,213	9.9%	325	2.6%
2007	12,822	429	3.3%	1,826	14.2%	4,811	37.5%	4,006	31.2%	1,373	10.7%	377	2.9%
2008	13,366	445	3.3%	1,867	14.0%	4,639	34.7%	4,432	33.2%	1,537	11.5%	446	3.3%
2009	13,810	450	3.3%	1,872	13.6%	4,408	31.9%	4,865	35.2%	1,704	12.3%	511	3.7%
2010	14,240	445	3.1%	1,889	13.3%	4,178	29.3%	5,221	36.7%	1,922	13.5%	585	4.1%
2011	14,672	467	3.2%	1,905	13.0%	4,001	27.3%	5,477	37.3%	2,119	14.4%	703	4.8%
2012	14,959	460	3.1%	1,912	12.8%	3,866	25.8%	5,600	37.4%	2,329	15.6%	792	5.3%
2013	15,306	441	2.9%	1,942	12.7%	3,716	24.3%	5,727	37.4%	2,584	16.9%	896	5.9%
2014	15,657	438	2.8%	1,983	12.7%	3,596	23.0%	5,779	36.9%	2,875	18.4%	986	6.3%
2015	16,073	469	2.9%	2,009	12.5%	3,529	22.0%	5,737	35.7%	3,198	19.9%	1,131	7.0%

Notes: Data provided by the Public Health Ontario Laboratory. Percentages calculated using number of diagnosed individuals for a specific age category in the numerator and all diagnosed individuals in the denominator. Diagnosed = people with diagnosed HIV living in Ontario = nominal HIV-positive diagnostic test and/or ≥ 1 VL test, and not LTFU after 2 years. LTFU = lost to follow up = no record of a VL test in more than 2 years, and no VL test in later years. Individuals missing information on age were excluded (approximately 0.2%).

Table 2.3 Number and percent of people with diagnosed HIV living in Ontario who were in care by age category, 2000 to 2015

Year	≤24			25-34			35-44			45-54			≥55		
	In care	Diagnosed	%	In care	Diagnosed	%	In care	Diagnosed	%	In care	Diagnosed	%	In care	Diagnosed	%
2000	252	317	79.5%	1,462	1,910	76.5%	3,334	4,005	83.2%	1,611	1,899	84.8%	535	662	80.8%
2001	284	343	82.8%	1,407	1,811	77.7%	3,558	4,297	82.8%	1,766	2,083	84.8%	647	785	82.4%
2002	287	356	80.6%	1,399	1,784	78.4%	3,785	4,546	83.3%	2,001	2,307	86.7%	758	915	82.8%
2003	302	370	81.6%	1,395	1,771	78.8%	3,956	4,780	82.8%	2,231	2,574	86.7%	890	1,050	84.8%
2004	327	386	84.7%	1,430	1,776	80.5%	4,068	4,833	84.2%	2,494	2,898	86.1%	1,017	1,208	84.2%
2005	345	411	83.9%	1,423	1,753	81.2%	4,154	4,914	84.5%	2,769	3,212	86.2%	1,155	1,366	84.6%
2006	359	429	83.7%	1,476	1,832	80.6%	4,122	4,924	83.7%	3,095	3,582	86.4%	1,347	1,538	87.6%
2007	362	429	84.4%	1,456	1,826	79.7%	4,019	4,811	83.5%	3,447	4,006	86.0%	1,530	1,750	87.4%
2008	370	445	83.1%	1,464	1,867	78.4%	3,885	4,639	83.7%	3,859	4,432	87.1%	1,737	1,983	87.6%
2009	381	450	84.7%	1,492	1,872	79.7%	3,678	4,408	83.4%	4,226	4,865	86.9%	1,941	2,215	87.6%
2010	388	445	87.2%	1,560	1,889	82.6%	3,480	4,178	83.3%	4,493	5,221	86.1%	2,169	2,507	86.5%
2011	399	467	85.4%	1,592	1,905	83.6%	3,338	4,001	83.4%	4,765	5,477	87.0%	2,476	2,822	87.7%
2012	390	460	84.8%	1,585	1,912	82.9%	3,263	3,866	84.4%	4,875	5,600	87.1%	2,752	3,121	88.2%
2013	381	441	86.4%	1,597	1,942	82.2%	3,164	3,716	85.1%	5,013	5,727	87.5%	3,083	3,480	88.6%
2014	375	438	85.6%	1,658	1,983	83.6%	3,059	3,596	85.1%	5,084	5,779	88.0%	3,452	3,861	89.4%
2015	400	469	85.3%	1,644	2,009	81.8%	3,012	3,529	85.3%	5,092	5,737	88.8%	3,898	4,329	90.0%

Notes: Data provided by the Public Health Ontario Laboratory. Percentages calculated using ‘in care’ in the numerator and ‘diagnosed’ in the denominator. In care = At least one viral test in a given year. Diagnosed = people with diagnosed HIV living in Ontario = nominal HIV-positive diagnostic test and/or ≥1 VL test, and not LTFU after 2 years. LTFU = lost to follow up = no record of a VL test in more than 2 years, and no viral load test in later years. Individuals missing information on age were excluded (approximately 0.2%).

Table 2.4 Number and percent of people with diagnosed HIV living in Ontario who were on ART by age category, 2000 to 2015

Year	≤24			25-34			35-44			45-54			≥55		
	On ART	Diagnosed	%	On ART	Diagnosed	%	On ART	Diagnosed	%	On ART	Diagnosed	%	On ART	Diagnosed	%
2000	157	317	49.5%	833	1,910	43.6%	2,276	4,005	56.8%	1,194	1,899	62.9%	415	662	62.7%
2001	159	343	46.4%	748	1,811	41.3%	2,429	4,297	56.5%	1,334	2,083	64.0%	507	785	64.6%
2002	164	356	46.1%	746	1,784	41.8%	2,559	4,546	56.3%	1,486	2,307	64.4%	599	915	65.5%
2003	176	370	47.6%	683	1,771	38.6%	2,653	4,780	55.5%	1,684	2,574	65.4%	736	1,050	70.1%
2004	176	386	45.6%	698	1,776	39.3%	2,747	4,833	56.8%	1,923	2,898	66.4%	841	1,208	69.6%
2005	162	411	39.4%	683	1,753	39.0%	2,872	4,914	58.4%	2,167	3,212	67.5%	976	1,366	71.4%
2006	173	429	40.3%	721	1,832	39.4%	2,927	4,924	59.4%	2,445	3,582	68.3%	1,163	1,538	75.6%
2007	185	429	43.1%	759	1,826	41.6%	2,899	4,811	60.3%	2,816	4,006	70.3%	1,344	1,750	76.8%
2008	192	445	43.1%	801	1,867	42.9%	2,966	4,639	63.9%	3,240	4,432	73.1%	1,569	1,983	79.1%
2009	222	450	49.3%	889	1,872	47.5%	2,861	4,408	64.9%	3,630	4,865	74.6%	1,792	2,215	80.9%
2010	245	445	55.1%	993	1,889	52.6%	2,796	4,178	66.9%	3,954	5,221	75.7%	2,002	2,507	79.9%
2011	242	467	51.8%	1,082	1,905	56.8%	2,775	4,001	69.4%	4,255	5,477	77.7%	2,323	2,822	82.3%
2012	259	460	56.3%	1,205	1,912	63.0%	2,778	3,866	71.9%	4,447	5,600	79.4%	2,604	3,121	83.4%
2013	268	441	60.8%	1,283	1,942	66.1%	2,793	3,716	75.2%	4,637	5,727	81.0%	2,932	3,480	84.3%
2014	276	438	63.0%	1,373	1,983	69.2%	2,718	3,596	75.6%	4,774	5,779	82.6%	3,300	3,861	85.5%
2015	320	469	68.2%	1,409	2,009	70.1%	2,756	3,529	78.1%	4,825	5,737	84.1%	3,737	4,329	86.3%

Notes: Data provided by the Public Health Ontario Laboratory. Percentages calculated using ‘on ART’ in the numerator and ‘diagnosed’ in the denominator. On ART = documented on ART, or ART status missing and virally suppressed, on last viral load test. On ART documented by ordering provider on viral load test requisitions and missing for 17-20% of requisitions. Diagnosed = people with diagnosed HIV living in Ontario = nominal HIV-positive diagnostic test and/or ≥1 viral load test, and not LTFU after 2 years. LTFU = lost to follow up = no record of a viral load test in more than 2 years, and no viral load test in later years. Individuals missing information on age were excluded (approximately 0.2%).

Table 2.5 Number and percent of people with diagnosed HIV living in Ontario who were virally suppressed by age category, 2000 to 2015

Year	≤24			25-34			35-44			45-54			≥55		
	Virally supp.	Diagnosed	%	Virally supp.	Diagnosed	%	Virally supp.	Diagnosed	%	Virally supp.	Diagnosed	%	Virally supp.	Diagnosed	%
2000	82	317	25.9%	635	1,910	33.2%	1,695	4,005	42.3%	861	1,899	45.3%	330	662	49.8%
2001	101	343	29.4%	587	1,811	32.4%	1,884	4,297	43.8%	1,036	2,083	49.7%	420	785	53.5%
2002	111	356	31.2%	598	1,784	33.5%	2,049	4,546	45.1%	1,209	2,307	52.4%	496	915	54.2%
2003	117	370	31.6%	586	1,771	33.1%	2,221	4,780	46.5%	1,409	2,574	54.7%	633	1,050	60.3%
2004	126	386	32.6%	604	1,776	34.0%	2,384	4,833	49.3%	1,674	2,898	57.8%	756	1,208	62.6%
2005	120	411	29.2%	620	1,753	35.4%	2,502	4,914	50.9%	1,940	3,212	60.4%	903	1,366	66.1%
2006	151	429	35.2%	677	1,832	37.0%	2,644	4,924	53.7%	2,254	3,582	62.9%	1,095	1,538	71.2%
2007	158	429	36.8%	694	1,826	38.0%	2,715	4,811	56.4%	2,663	4,006	66.5%	1,288	1,750	73.6%
2008	170	445	38.2%	762	1,867	40.8%	2,776	4,639	59.8%	3,105	4,432	70.1%	1,535	1,983	77.4%
2009	195	450	43.3%	834	1,872	44.6%	2,723	4,408	61.8%	3,512	4,865	72.2%	1,757	2,215	79.3%
2010	221	445	49.7%	946	1,889	50.1%	2,646	4,178	63.3%	3,812	5,221	73.0%	1,978	2,507	78.9%
2011	218	467	46.7%	1,034	1,905	54.3%	2,655	4,001	66.4%	4,116	5,477	75.2%	2,296	2,822	81.4%
2012	237	460	51.5%	1,142	1,912	59.7%	2,656	3,866	68.7%	4,312	5,600	77.0%	2,588	3,121	82.9%
2013	245	441	55.6%	1,230	1,942	63.3%	2,684	3,716	72.2%	4,500	5,727	78.6%	2,909	3,480	83.6%
2014	254	438	58.0%	1,332	1,983	67.2%	2,622	3,596	72.9%	4,656	5,779	80.6%	3,266	3,861	84.6%
2015	301	469	64.2%	1,365	2,009	67.9%	2,695	3,529	76.4%	4,718	5,737	82.2%	3,717	4,329	85.9%

Notes: Data provided by the Public Health Ontario Laboratory. Percentages calculated using ‘virally supp.’ in the numerator and ‘diagnosed’ in the denominator. Virally supp. = virally suppressed = viral load less than 200 copies per ml on last viral load test. Diagnosed = people with diagnosed HIV living in Ontario = nominal HIV-positive diagnostic test and/or ≥1 viral load test, and not LTFU after 2 years. LTFU = lost to follow up = no record of a viral load test in more than 2 years, and no viral load test in later years. Individuals missing information on age were excluded (approximately 0.2%).

Table 2.6 Number and percent of people with diagnosed HIV living in Ontario on ART who were virally suppressed by age category, 2000 to 2015

Year	≤24			25-34			35-44			45-54			≥55		
	Virally Supp.	On ART	%	Virally Supp.	On ART	%	Virally Supp.	On ART	%	Virally Supp.	On ART	%	Virally Supp.	On ART	%
2000	77	173	44.5%	609	998	61.0%	1,649	2,584	63.8%	840	1,317	63.8%	316	450	70.2%
2001	93	179	52.0%	563	919	61.3%	1,840	2,773	66.4%	1,015	1,460	69.5%	409	552	74.1%
2002	107	190	56.3%	570	905	63.0%	1,994	2,923	68.2%	1,179	1,641	71.8%	489	649	75.3%
2003	114	198	57.6%	546	869	62.8%	2,153	3,021	71.3%	1,372	1,824	75.2%	625	789	79.2%
2004	118	210	56.2%	576	903	63.8%	2,325	3,110	74.8%	1,647	2,100	78.4%	748	897	83.4%
2005	111	193	57.5%	578	868	66.6%	2,451	3,218	76.2%	1,894	2,341	80.9%	893	1,041	85.8%
2006	137	206	66.5%	622	908	68.5%	2,571	3,280	78.4%	2,205	2,629	83.9%	1,082	1,222	88.5%
2007	151	219	68.9%	658	937	70.2%	2,641	3,213	82.2%	2,611	2,986	87.4%	1,275	1,404	90.8%
2008	161	234	68.8%	720	969	74.3%	2,719	3,249	83.7%	3,050	3,423	89.1%	1,519	1,624	93.5%
2009	190	260	73.1%	795	1,024	77.6%	2,660	3,095	85.9%	3,455	3,806	90.8%	1,744	1,848	94.4%
2010	213	273	78.0%	913	1,124	81.2%	2,591	2,980	86.9%	3,760	4,117	91.3%	1,953	2,054	95.1%
2011	212	281	75.4%	994	1,192	83.4%	2,601	2,938	88.5%	4,064	4,415	92.0%	2,270	2,369	95.8%
2012	226	294	76.9%	1,121	1,318	85.1%	2,606	2,929	89.0%	4,256	4,574	93.0%	2,562	2,662	96.2%
2013	235	303	77.6%	1,199	1,380	86.9%	2,644	2,914	90.7%	4,458	4,787	93.1%	2,873	2,974	96.6%
2014	251	304	82.6%	1,308	1,449	90.3%	2,583	2,837	91.0%	4,607	4,883	94.3%	3,237	3,341	96.9%
2015	293	349	84.0%	1,336	1,486	89.9%	2,654	2,845	93.3%	4,672	4,908	95.2%	3,680	3,789	97.1%

Notes: Data provided by the Public Health Ontario Laboratory. Percentages calculated using ‘virally supp.’ in the numerator and ‘on ART’ in the denominator. Virally supp. = virally suppressed = viral load less than 200 copies per ml on last viral load test. On ART = documented on ART, or ART status missing, on last viral load test. On ART documented by ordering provider on viral load test requisitions and is missing for 17-20% of requisitions. Individuals missing information on age were excluded (approximately 0.2%).

Table 2.7 Number and percent of people newly diagnosed with HIV in Ontario who linked to care within three months of diagnosis by age category, 2000 to 2014

Year	≤24			25-34			35-44			45-54			≥55		
	Linked to care	Newly diagnosed	%	Linked to care	Newly diagnosed	%	Linked to care	Newly diagnosed	%	Linked to care	Newly diagnosed	%	Linked to care	Newly diagnosed	%
2000-2002	100	146	68.5%	320	468	68.4%	321	458	70.1%	106	155	68.4%	60	86	69.8%
2002-2005	114	162	70.4%	394	541	72.8%	477	620	76.9%	192	246	78.0%	80	108	74.1%
2006-2008	154	203	75.9%	372	524	71.0%	423	565	74.9%	253	319	79.3%	86	111	77.5%
2009-2011	150	204	73.5%	352	455	77.4%	371	449	82.6%	253	317	79.8%	123	149	82.6%
2012-2014	145	175	82.9%	347	436	79.6%	284	336	84.5%	223	260	85.8%	108	128	84.4%

Notes: Data provided by the Public Health Ontario Laboratory. Percentages calculated using ‘linked to care’ in the numerator and ‘newly diagnosed’ in the denominator. Linked to care = first VL within three months of HIV diagnosis. Newly diagnosed = nominal HIV-positive diagnostic test and no evidence of previous diagnosis (i.e. no detectable viral load test or CD4 count before diagnosis date, and first VL after diagnosis not suppressed). Percents aggregated over multiple years to reduce year-to-year variation due to small counts. The year 2015 not included as some individuals diagnosed in this year would not have had time to link to care. Individuals missing information on age were excluded (approximately 0.2%).

Table 2.8 Number and percent of people newly diagnosed with HIV in Ontario who achieved virally suppressed within six months of diagnosis by age category, 2000 to 2014

Year	≤24			25-34			35-44			45-54			≥55		
	Virally supp.	Newly diagnosed	%	Virally supp.	Newly diagnosed	%	Virally supp.	Newly diagnosed	%	Virally supp.	Newly diagnosed	%	Virally supp.	Newly diagnosed	%
2000-2002	22	146	15.1%	90	468	19.2%	117	458	25.5%	40	155	25.8%	24	86	27.9%
2002-2005	21	162	13.0%	100	541	18.5%	115	620	18.5%	61	246	24.8%	25	108	23.1%
2006-2008	33	203	16.3%	86	524	16.4%	138	565	24.4%	76	319	23.8%	28	111	25.2%
2009-2011	33	204	16.2%	102	455	22.4%	139	449	31.0%	100	317	31.5%	52	149	34.9%
2012-2014	67	175	38.3%	167	436	38.3%	127	336	37.8%	118	260	45.4%	60	128	46.9%

Notes: Data provided by the Public Health Ontario Laboratory. Percentages calculated using ‘virally supp.’ in the numerator and ‘newly diagnosed’ in the denominator. Virally supp. = virally suppressed within 6 months of diagnosis = record of a viral load less than 200 copies/ml within 6 months of diagnosis. Newly diagnosed = nominal HIV-positive diagnostic test and no evidence of previous diagnosis (i.e. no detectable viral load test or CD4 count before their diagnosis date, and first VL after diagnosis not suppressed). Percents aggregated over multiple years to reduce year-to-year variation due to small counts. The year 2015 not included as some individuals diagnosed in that year would not have had time to reach viral suppression. Individuals missing information on age were excluded (approximately 0.2%).

3. By health region

Table 3.1 Number and percent of people with diagnosed HIV living in Ontario by health region, 2011 to 2015

Year	Northern		Ottawa		Eastern		Toronto		Central East		Central West		South West	
	Diagnosed	%	Diagnosed	%	Diagnosed	%	Diagnosed	%	Diagnosed	%	Diagnosed	%	Diagnosed	%
2011	374	2.6%	1,739	12.0%	425	2.9%	8,215	56.6%	1,465	10.1%	1,398	9.6%	907	6.2%
2012	394	2.7%	1,661	11.2%	449	3.0%	8,342	56.2%	1,611	10.8%	1,467	9.9%	929	6.3%
2013	393	2.6%	1,640	10.8%	494	3.3%	8,387	55.3%	1,739	11.5%	1,535	10.1%	989	6.5%
2014	415	2.7%	1,655	10.7%	509	3.3%	8,467	54.6%	1,857	12.0%	1,587	10.2%	1,022	6.6%
2015	439	2.8%	1,630	10.2%	527	3.3%	8,649	54.3%	1,919	12.1%	1,677	10.5%	1,076	6.8%

Notes: Data provided by the Public Health Ontario Laboratory. Diagnoses assigned to a health region based on their address of residence or, if unknown, the address of the ordering provider. Percentages calculated using number 'diagnosed' in a specific health region in the numerator and the number of all diagnosed people in Ontario in the denominator (denominator data available in Table 1.1). Diagnosed = people with diagnosed HIV living in Ontario = nominal HIV-positive diagnostic test and/or ≥ 1 viral load test, and not LTFU after 2 years. LTFU = lost to follow up = no record of a viral load test in more than 2 years, and no viral load test in later years. Individuals living out of province (approximately 1% each year) or with missing health region (approximately 0.1% each year) were excluded.

Table 3.2 Number of people with diagnosed HIV living in Ontario per 100,000 population by health region, 2015

Year	Northern		Ottawa		Eastern		Toronto		Central East		Central West		South West	
	Pop.	Rate	Pop.	Rate	Pop.	Rate	Pop.	Rate	Pop.	Rate	Pop.	Rate	Pop.	Rate
2015	798,132	55.0	956,929	170.3	845,673	62.3	2,827,234	305.9	4,107,607	46.7	2,64,8326	63.3	1,613,137	66.7

Notes: Data provided by the Public Health Ontario Laboratory. Diagnoses assigned to a health region based on their address of residence or, if unknown, the address of the ordering provider. Pop. = population = Statistics Canada population estimate (all ages). Rate = number of people with diagnosed HIV per 100,000 people in region. Rates calculated using the number of people with diagnosed HIV in the numerator (see Table 3.1 for numerator data for each region) and health region population estimates in the denominator. Individuals living out of province (approximately 1% each year) or with missing health region (approximately 0.1% each year) were excluded.

Table 3.3 Number and percent of people with diagnosed HIV living in Ontario who were in care by health region, 2011 to 2015

Year	Northern		Ottawa		Eastern		Toronto		Central East		Central West		South West	
	In care	%	In care	%	In care	%	In care	%	In care	%	In care	%	In care	%
2011	307	82.1%	1,379	79.3%	368	86.6%	7,077	86.1%	1,336	91.2%	1,213	86.8%	819	90.3%
2012	317	80.5%	1,384	83.3%	388	86.4%	7,168	85.9%	1,416	87.9%	1,273	86.8%	835	89.9%
2013	314	79.9%	1,329	81.0%	427	86.4%	7,316	87.2%	1,529	87.9%	1,324	86.3%	882	89.2%
2014	344	82.9%	1,342	81.1%	434	85.3%	7,445	87.9%	1,616	87.0%	1,405	88.5%	913	89.3%
2015	363	82.7%	1,354	83.1%	451	85.6%	7,633	88.3%	1,676	87.3%	1,485	88.6%	958	89.0%

Notes: Data provided by the Public Health Ontario Laboratory. Diagnoses were assigned to a health region based on their address of residence or, if unknown, the address of the ordering provider. Percentages calculated using the number 'in care' in the numerator and the number of people with diagnosed HIV living in the health region in the denominator (see Table 3.1 for denominator data). In care = at least one viral test in a given year. Individuals living out of province (approximately 1% each year) or with missing health region (approximately 0.1% each year) were excluded.

Table 3.4 Number and percent of people with diagnosed HIV living in Ontario who were on ART by health region, 2011 to 2015

Year	Northern		Ottawa		Eastern		Toronto		Central East		Central West		South West	
	On ART	%	On ART	%	On ART	%	On ART	%	On ART	%	On ART	%	On ART	%
2011	250	66.8%	1,180	67.9%	333	78.4%	5,935	72.2%	1,130	77.1%	1,074	76.8%	711	78.4%
2012	270	68.5%	1,213	73.0%	359	80.0%	6,237	74.8%	1,255	77.9%	1,138	77.6%	747	80.4%
2013	274	69.7%	1,194	72.8%	398	80.6%	6,560	78.2%	1,359	78.1%	1,212	79.0%	806	81.5%
2014	297	71.6%	1,243	75.1%	405	79.6%	6,771	80.0%	1,465	78.9%	1,298	81.8%	840	82.2%
2015	318	72.4%	1,280	78.5%	424	80.5%	7,082	81.9%	1,550	80.8%	1,386	82.6%	886	82.3%

Notes: Data provided by the Public Health Ontario Laboratory. Diagnoses were assigned to a health region based on their address of residence or, if unknown, the address of the ordering provider. Percentages calculated using 'on ART' in the numerator and the number of people with diagnosed HIV living in the health region in the denominator (see Table 3.1 for denominator data). On ART = documented on ART, or ART status missing and suppressed, on last viral load test. On ART documented by ordering provider on viral load test requisitions and missing for 17-20% of requisitions. Individuals living out of province (approximately 1% each year) or with missing health region (approximately 0.1% each year) were excluded.

Table 3.5 Number and percent of people with diagnosed HIV living in Ontario who were virally suppressed by health region, 2011 to 2015

Year	Northern		Ottawa		Eastern		Toronto		Central East		Central West		South West	
	Virally supp.	%	Virally supp.	%	Virally supp.	%	Virally supp.	%	Virally supp.	%	Virally supp.	%	Virally supp.	%
2011	225	60.2%	1,145	65.8%	324	76.2%	5,758	70.1%	1,097	74.9%	1,024	73.2%	684	75.4%
2012	250	63.5%	1,180	71.0%	346	77.1%	6,068	72.7%	1,204	74.7%	1,107	75.5%	706	76.0%
2013	261	66.4%	1,143	69.7%	387	78.3%	6,408	76.4%	1,317	75.7%	1,176	76.6%	769	77.8%
2014	280	67.5%	1,202	72.6%	399	78.4%	6,635	78.4%	1,426	76.8%	1,259	79.3%	810	79.3%
2015	310	70.6%	1,247	76.5%	416	78.9%	6,976	80.7%	1,522	79.3%	1,357	80.9%	848	78.8%

Notes: Data provided by the Public Health Ontario Laboratory. Diagnoses were assigned to a health region based on their address of residence or, if unknown, the address of the ordering provider. Percentages calculated using 'virally supp.' in the numerator and the number of people with diagnosed HIV living in the health region in the denominator (see Table 3.1 for denominator data). Virally supp. = virally suppressed = less than 200 copies of HIV per ml on last viral load test. Individuals living out of province (approximately 1% each year) or with missing health region (approximately 0.1% each year) were excluded.

Table 3.6 Number and percent of people with diagnosed HIV living in Ontario on ART who were virally suppressed by health region, 2011 to 2015

Year	Northern		Ottawa		Eastern		Toronto		Central East		Central West		South West	
	Virally supp.	%	Virally supp.	%	Virally supp.	%	Virally supp.	%	Virally supp.	%	Virally supp.	%	Virally supp.	%
2011	223	86.8%	1,123	91.1%	323	91.2%	5,657	90.3%	1,071	91.0%	1,009	91.5%	673	90.7%
2012	244	86.5%	1,158	90.8%	342	91.4%	5,982	91.7%	1,186	90.9%	1,088	93.1%	699	90.9%
2013	257	89.9%	1,131	91.0%	382	92.3%	6,310	92.7%	1,298	91.9%	1,165	93.1%	759	91.6%
2014	276	89.3%	1,190	93.4%	395	95.2%	6,554	93.9%	1,406	92.5%	1,246	93.8%	801	92.7%
2015	304	91.8%	1,232	95.1%	412	94.5%	6,887	94.8%	1,501	93.9%	1,339	93.8%	842	93.0%

Notes: Data provided by the Public Health Ontario Laboratory. Diagnoses were assigned to a health region based on their address of residence or, if unknown, the address of the ordering provider. Percentages calculated using 'virally supp.' in the numerator and 'on ART' in the denominator (number 'on ART' not shown). Virally supp. = virally suppressed = less than 200 copies of HIV per ml on last viral load test and also on antiretroviral treatment (ART). On ART = documented on ART, or ART status missing, on last viral load test ('on ART' defined differently than in Table 3.4). On ART documented by ordering provider on viral load test requisitions and missing for 17-20% of requisitions. Individuals living out of province (approximately 1% each year) or with missing health region (approximately 0.1% each year) were excluded.

Table 3.7 Number of people newly diagnosed with HIV in Ontario and percent linked to care within three months of HIV diagnosis by health region, 2012 to 2014

Year	Northern		Ottawa		Eastern		Toronto		Central East		Central West		South West	
	Newly diagnosed	%	Newly diagnosed	%	Newly diagnosed	%	Newly diagnosed	%	Newly diagnosed	%	Newly diagnosed	%	Newly diagnosed	%
2012-2014	48	64.6%	102	78.4%	35	88.6%	667	83.8%	198	86.9%	137	84.7%	128	82.8%

Notes: Data provided by the Public Health Ontario Laboratory. Diagnoses were assigned to a health region based on their address of residence or, if unknown, the address of the ordering provider. Percentages calculated using the number linked to care within three months of HIV diagnosis in the numerator (data not shown) and 'newly diagnosed' in the denominator. Newly diagnosed = nominal HIV-positive diagnostic test and no evidence of previous diagnosis (i.e. no detectable viral load test or CD4 count before their diagnosis date, and first VL after diagnosis not suppressed). Percents aggregated over multiple years to reduce year-to-year variation due to small counts. The year 2015 not included as some individuals diagnosed in this year would not have had time to link to care. Individuals living out of province (approximately 1% each year) or with missing health region (approximately 0.1% each year) were excluded.

Table 3.8 Number of people newly diagnosed with HIV in Ontario and percent virally suppressed within six months of HIV diagnosis by health region, 2012 to 2014

Year	Northern		Ottawa		Eastern		Toronto		Central East		Central West		South West	
	Newly diagnosed	%	Newly diagnosed	%	Newly diagnosed	%	Newly diagnosed	%	Newly diagnosed	%	Newly diagnosed	%	Newly diagnosed	%
2012-2014	48	20.8%	102	39.2%	35	42.9%	667	41.5%	198	38.9%	137	45.3%	128	40.6%

Notes: Data provided by the Public Health Ontario Laboratory. Diagnoses were assigned to a health region based on their address of residence or, if unknown, the address of the ordering provider. Percentages calculated using number virally suppressed within six months of diagnosis in the numerator (data not shown) and 'newly diagnosed' in the denominator. Newly diagnosed = nominal HIV-positive diagnostic test and no evidence of previous diagnosis (i.e. no detectable viral load test or CD4 count before their diagnosis date, and first VL after diagnosis not suppressed). Percents aggregated over multiple years to reduce year-to-year variation due to small counts. The year 2015 was removed as some individuals diagnosed in this year would not have had time to reach viral suppression. Individuals living out of province (approximately 1% each year) or with missing health region (approximately 0.1% each year) were excluded.

Appendices

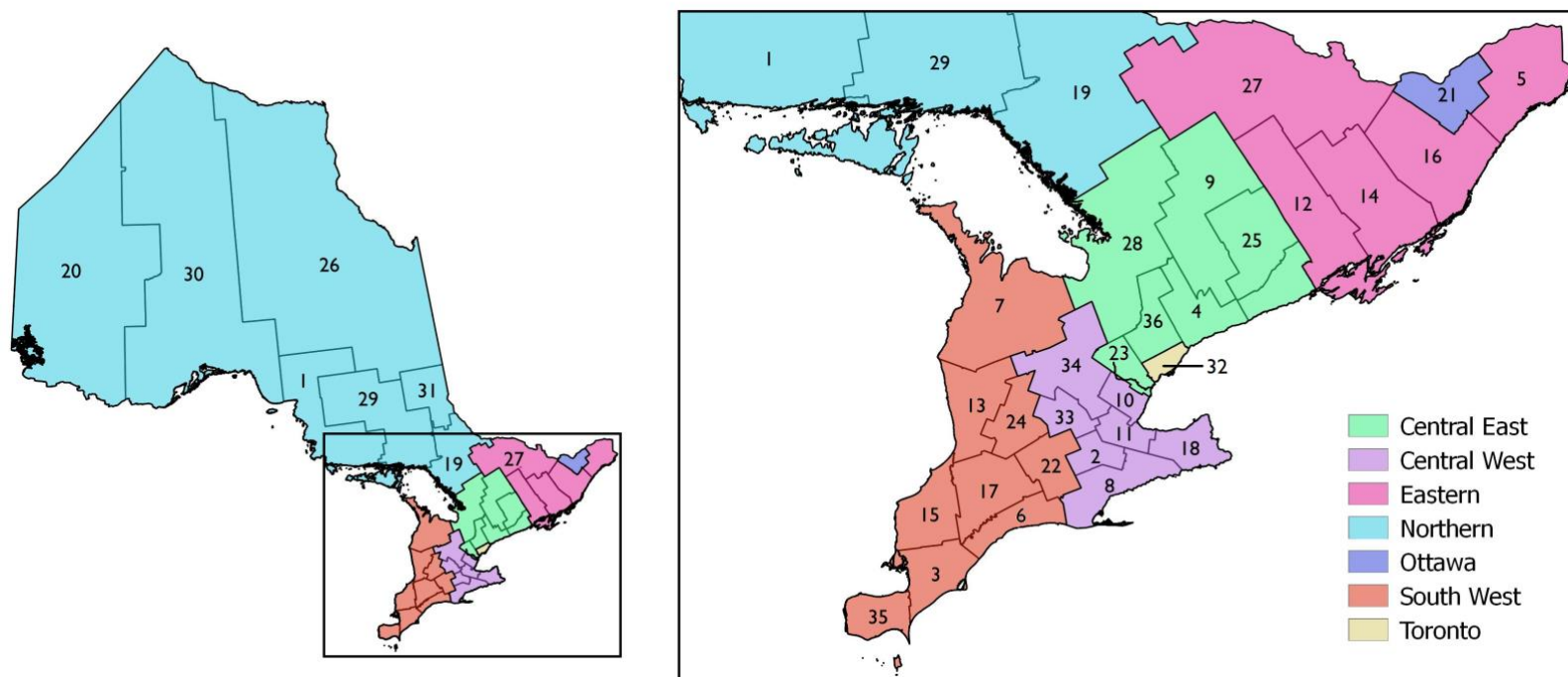
Health regions

Health regions are aggregations of public health units and their boundaries (see Table and Figure below).

Table. Aggregations of public health units for each health region.

Health region	Public health unit
Toronto	Toronto
Ottawa	Ottawa
Northern	Algoma North Bay Parry Sound Northwestern Porcupine Sudbury Thunder Bay Timiskaming
Eastern	Eastern Ontario Hastings and Prince Edward Counties Kingston, Frontenac, Lennox & Addington Leeds, Grenville and Lanark Renfrew
Central East	Durham Haliburton, Kawartha, Pine Ridge Peel Peterborough Simcoe Muskoka York Region
Central West	Brant Haldimand-Norfolk Halton Hamilton Niagara Waterloo Wellington-Dufferin-Guelph
Southwest	Grey Bruce Elgin-St. Thomas Huron Chatham-Kent Lambton Middlesex-London Oxford Perth Windsor-Essex

Figure. Geographic map of health region and public health unit boundaries.



Public health units			
1. Algoma	10. Halton	19. North Bay Parry Sound	28. Simcoe Muskoka
2. Brant	11. Hamilton	20. Northwestern	29. Sudbury
3. Chatham-Kent	12. Hastings and Prince Edward Counties	21. Ottawa	30. Thunder Bay
4. Durham	13. Huron	22. Oxford	31. Timiskaming
5. Eastern Ontario	14. Kingston, Frontenac, Lennox & Addington	23. Peel	32. Toronto
6. Elgin-St. Thomas	15. Lambton	24. Perth	33. Waterloo
7. Grey Bruce	16. Leeds, Grenville and Lanark	25. Peterborough	34. Wellington-Dufferin-Guelph
8. Haldimand-Norfolk	17. Middlesex-London	26. Porcupine	35. Windsor-Essex
9. Haliburton, Kawartha, Pine Ridge	18. Niagara	27. Renfrew	36. York

Notes: Map created using Statistics Canada boundary files.