HIV diagnoses in Ontario, 2022

About OHESI

The Ontario HIV Epidemiology and Surveillance Initiative (OHESI) is a collaboration involving the HIV and Hepatitis C Programs, Ministry of Health (MOH), 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 HIV related program initiatives.

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

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

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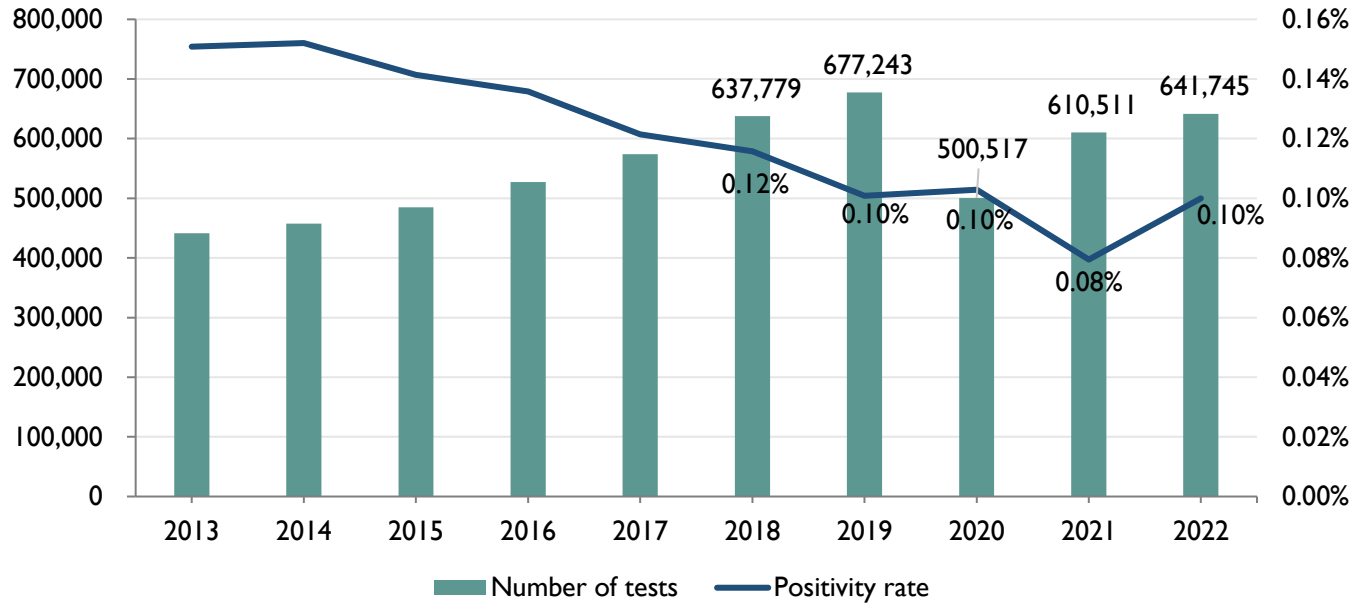
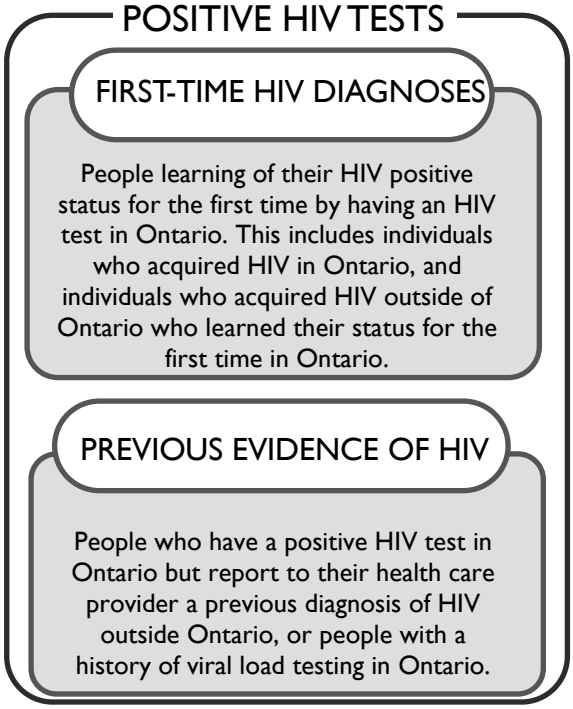
Key Trends and Findings

Throughout the HIV epidemic, Ontario has analyzed surveillance data to assist with targeted delivery of services and deployment of resources. These data inform our progress on targets and help us understand which populations are experiencing a disproportionate burden of HIV risk and infection.

In 2020 and 2021, the COVID-19 pandemic disrupted health services in Ontario. The number of HIV tests and HIV diagnoses dropped significantly due to this disruption. In 2022, both the number of tests and positivity rate returned to close to 2019 levels. However, the impact of COVID-19 makes it difficult to interpret trends over this time period.



OHESI classifies HIV diagnoses in Ontario into two groups: first-time diagnoses (people learning their HIV diagnosis for the first time) and previous evidence of HIV (people previously diagnosed with HIV). Over time, it's important to understand trends in these groups to guide prevention activities and care services for people living with and at risk of HIV:

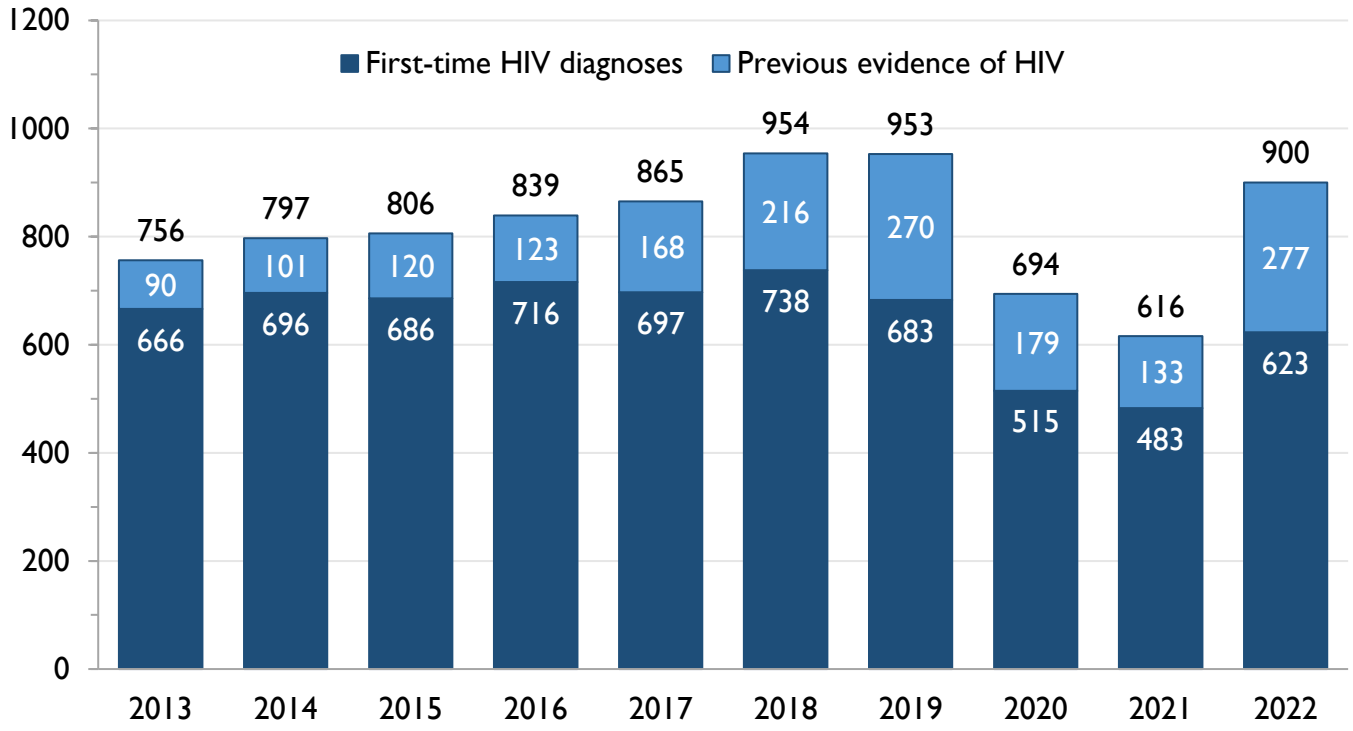


To definitively determine if a positive HIV test is a first-time HIV diagnosis, we would require the LEP returned AND a complete HIV test history. When previous test history is not reported, positive tests default to being categorized as a first-time HIV diagnosis. When previous test history is missing either due to the LEP not being returned or returned with missing information, which is the case for 40%-54% of positive HIV tests in 2022, some positive HIV tests are likely misclassified as first-time diagnoses when they are not.

Despite the efforts of both the next test requisition and the Laboratory Enhancement Program (LEP) to collect information on previous test history for positive HIV tests, this information is missing for a proportion of people. Approximately 36% of first-time HIV diagnoses in 2022 are missing data on test history either because the LEP form is not returned or it is missing data when returned. Any positive HIV test that did not have documentation of a previous positive on the test history section of the LEP was assumed to be a first-time HIV diagnosis, even though this likely overestimates/underestimates the number of first-time HIV diagnoses and underestimates the number of people with previous evidence of HIV.

First-time HIV diagnoses following pre-pandemic trends but differ by sex

Of the 900 positive HIV tests in Ontario in 2022, 623 were classified as first-time HIV diagnoses and 277 were people with previous evidence of HIV. The number of first-time HIV diagnoses was down 15.6% in 2022 from its decade-high of 738 in 2018 and down 8.8% from 2019.



First-time HIV diagnoses differed by sex. The number of first-time HIV diagnoses decreased by 13% in males between 2019 (514) and 2022 (449) and remained unchanged among females between 2019 (167) and 2022 (165). Women made up 1 in 4 (26.9%) first-time HIV diagnoses in 2022, an increase compared to the average over the last decade (20.5% average 2013 to 2022.

The rate of first-time HIV diagnoses per 100,000 people in 2022 was 4.1 per 100,000 people, down 12.2% compared to 2019. Compared to 2019, the rate of first-time HIV diagnoses per 100,000 people decreased more for males (by 16.0% to 6.0) than females (by 4.8% to 2.2). The decrease among males follows years of gradual decline, while the rate among females has been more stable over time.

People with previous evidence of HIV made up a growing share of positive HIV tests

The number of people with previous evidence of HIV had been increasing throughout the last decade (except during the COVID years – 2020 and 2021). The proportion of people with previous evidence of HIV has increased, and was 30.8% in 2022, compared to 11.9% a decade ago (in 2013) and 22.6% 5 years ago (in 2018).

From the beginning of the HIV epidemic, Ontario recognized that certain populations – defined by sexual identity, demographic characteristics (including country of birth and race/ethnicity), behaviour or social/systemic factors – bore a disproportionate burden of HIV. To reduce HIV transmission and improve health outcomes, Ontario's HIV response has focused on these "key" populations, which include: gay, bisexual and other men (including transgender men) who have sex with men (GBMSM), African, Caribbean and Black (ACB) people, people who use injection drugs (PWID), Indigenous Peoples, and women (including transgender women) whose partners are members of these populations and/or who face systematic barriers that put them at risk.

The surveillance data on first-time HIV diagnoses presented in this report reinforce the importance of ensuring all populations disproportionately affected by HIV – especially those who experience multiple behavioural and systemic risk factors – have the same opportunity to benefit from HIV prevention and testing programs and services. If Ontario is to meet the goals of its HIV strategy, particular attention must be paid to reaching racialized peoples and to understanding and mitigating the factors that increase risk.

Not all GBMSM are seeing a decline in first-time HIV diagnoses

GBMSM accounted for 56.8% of first-time HIV diagnoses in 2022 and 75.0% of diagnoses among males **(where exposure category known)**. Despite substantial declines in first-time HIV diagnoses in 2022 compared to 2019 among White GBMSM (63.3% relative decrease), and South Asian GBMSM (50.0% relative decrease) and among Black GBMSM (19.5% relative decrease). While Middle Eastern and Latino/e/x GBMSM saw an increase in first-time HIV diagnoses in 2022 compared to 2019. Central East, South West and Toronto are the regions with the most substantial relative decrease in 2022 compared to 2019 in first-time HIV diagnoses among GBMSM (45.7%, 45.0% and 39.1% decrease, respectively) while Central West saw a relative increase (10.7%).

1 in 5 first-time HIV diagnoses in GBMSM in those aged 40+

Half (49.5%) of first-time HIV diagnoses in GBMSM in 2022 were in those aged 25 to 34, 15.2% were under the age of 25, 14.7% between the ages of 35-39, and a fifth (20.6%) were in those aged 40 or older, reinforcing the importance of regular testing for all GBMSM, regardless of age.

White males account for most of decrease in first-time HIV diagnoses

The number of first-time HIV diagnoses among White males was the lowest it's ever been since recording of race/ethnicity began in 2009 (where race/ethnicity known)[1]. The overall decrease in first-time HIV diagnoses in 2022 relates in large part to decreases in White males. The number of first-time HIV diagnoses in White males had been generally decreasing since 2015, before a more substantial 40.6% relative reduction in 2020 compared to 2019 (175 to 104) and another 12.5% relative decrease in 2022 compared to 2020. The large decrease in the number of first-time HIV diagnoses among White males over time, along with the stabilizing or small increases of first-time HIV diagnoses among other race/ethnicities has driven an increase in the proportion of first-time HIV diagnoses in the other race/ethnicities, most notably among Latino/a/e/x males.

[1] Note: race/ethnicity is missing for around 30% of first-time HIV diagnosis each year.

More first-time HIV diagnoses in ACB males than ACB females

Nearly half (46.6%) of all positive HIV tests in ACB people in 2022 were in people with previous evidence of HIV which is similar to 2019 (48.8%). Almost one third (29.8%) of first-time HIV diagnoses in 2022 were among ACB people, where ACB status could be categorized. [1]

There continued to be more first-time HIV diagnoses among ACB males (68) than ACB females (56) in 2022, a trend that has been consistent for as long as the surveillance data has been able to define ACB people (since 2009). Three in five (60.0%) ACB males diagnosed with HIV for the first time reported male-to-male sexual contact as their HIV exposure category, while 97.7% of ACB females reported heterosexual contact. Injection drug use among ACB females was reported as an exposure category for the first time in 2021 and again in 2022 (previously had been zero).

Approximately 1 in 10 first-time HIV diagnoses were in PWID, majority of whom were male[2]

People who inject drugs (PWID) accounted for 10.6% of first-time HIV diagnoses in 2022: 26 diagnoses in males and 15 in females. While PWID made up about the same proportion of first-time diagnoses in 2022 as in 2019, the number was down by 34.9% from 63 in 2019 to 41 in 2022. The South West region recorded a notable decline in first-time diagnoses in this population, with the number of first-time HIV diagnoses dropping by half in both 2019 and 2020, and remaining stable in 2022. Between 2013 and 2022, the majority of first-time HIV diagnoses among PWID (61.5%-78.9%) were in males.

The majority of the diagnoses in Indigenous people were in the Northern Region and among females, where race/ethnicity is known[3]

Indigenous Peoples accounted for 4.6% of first-time HIV diagnoses in 2022: 6 diagnoses in males and 12 in females (compared to 15 and 11 respectively in 2019). In recent years (2019-2022), among the 40 first-time HIV diagnoses in Indigenous males with a reported HIV exposure category, 50.0% were reported as male-to-male sexual contact (increased over time), 35.0% as IDU (increased over time) and 10.0% as male-to-male sexual contact + IDU (stable over time), whereas more than 9 in 10 (94.4%) Indigenous females diagnosed reported IDU. Over the five-year period from 2018 to 2022, the Northern region accounted for the majority (67.0%) of first-time diagnoses in Indigenous Peoples. Among the 33.0% of Indigenous Peoples diagnosed outside of Northern Ontario, 20.9% were diagnosed in Toronto and 7.7% in Central West.

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[1] *Counts of positive HIV tests and first-time HIV diagnoses among ACB may be underestimated, as between 2013 and 2022, the information required to assign ACB status was not reported for an average of 28.3% of positive HIV tests, and we estimate an average of between 17.9% and 22.8% of first-time HIV diagnoses among Black people to have an uncaptured previous HIV diagnosis in 2022. This is an increased proportion in 2022, where the 5 year average was estimated to be between 11.9% and 14.4%. Data shown are where ACB status was reported.*

[2] *Counts of positive HIV tests and first-time HIV diagnoses among PWID may be underestimated, as between 2013 and 2022, the information required to assign PWID status was not reported for an average of 23.0% of positive HIV tests.*

[3] *Counts of positive HIV tests and first-time HIV diagnoses among Indigenous may be underestimated, as between 2013 and 2022, race/ethnicity was not reported for an average of 32.2% of first-time HIV diagnoses.*

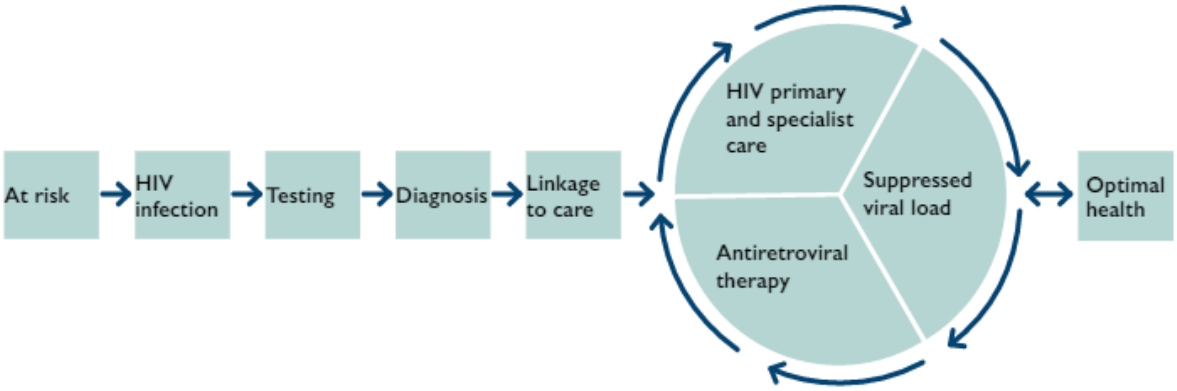
Table of Contents

Introduction

Why look at patterns in HIV diagnoses?

HIV diagnosis is an early step in the HIV prevention, engagement and care cascade (Figure i) and is critical for people living with HIV to be linked to care. The HIV treatment cascade outlines the steps of care that people living with HIV go from at risk to HIV infection to testing to diagnosis to linkage to care, then the cycle of HIV primary and specialist care, antiretroviral therapy, and suppressed viral load, leading to the outcome of optimal health.

Figure i. The HIV prevention, engagement, and care cascade



Ontario needs timely, accurate data on HIV diagnoses to guide both HIV prevention and treatment programs. Ontario is different from other jurisdictions in that it relies on public health laboratory testing data (i.e. HIV diagnostic tests, HIV viral load tests) – as opposed to HIV case reports – to monitor new diagnoses. The Public Health Ontario (PHO) Laboratory conducts all HIV diagnostic testing requested by health care providers in Ontario with very few exceptions.

Data sources

The data used to understand diagnostic trends are collected from the following sources:

- **Information on the HIV test requisition form**. When someone gets an HIV test in Ontario, the ordering health care provider (e.g. a physician, HIV counselor) fills out a form that is sent to PHO. This form, known as the HIV test requisition, collects information on the individual being tested, including their sex, age, HIV risk factors and – since 2018[1] – race/ethnicity, country of birth, test history and transgender identity.
- **Information gathered through the Laboratory Enhancement Program**. If the person tests positive for HIV, the Laboratory Enhancement Program (LEP) sends a second form to the provider who ordered the test to collect information that may have been missed on the test requisition form. Since 2009, the LEP form has collected information on race/ethnicity, country of birth, and test history (data not historically collected on the HIV test requisition).
- **Viral load testing**. People in HIV care in Ontario receive regular viral load testing. If a person has a history of viral load testing data in Ontario and a linked positive HIV test in Ontario, that information determines the person had previous evidence of HIV and is not a first-time diagnosis.

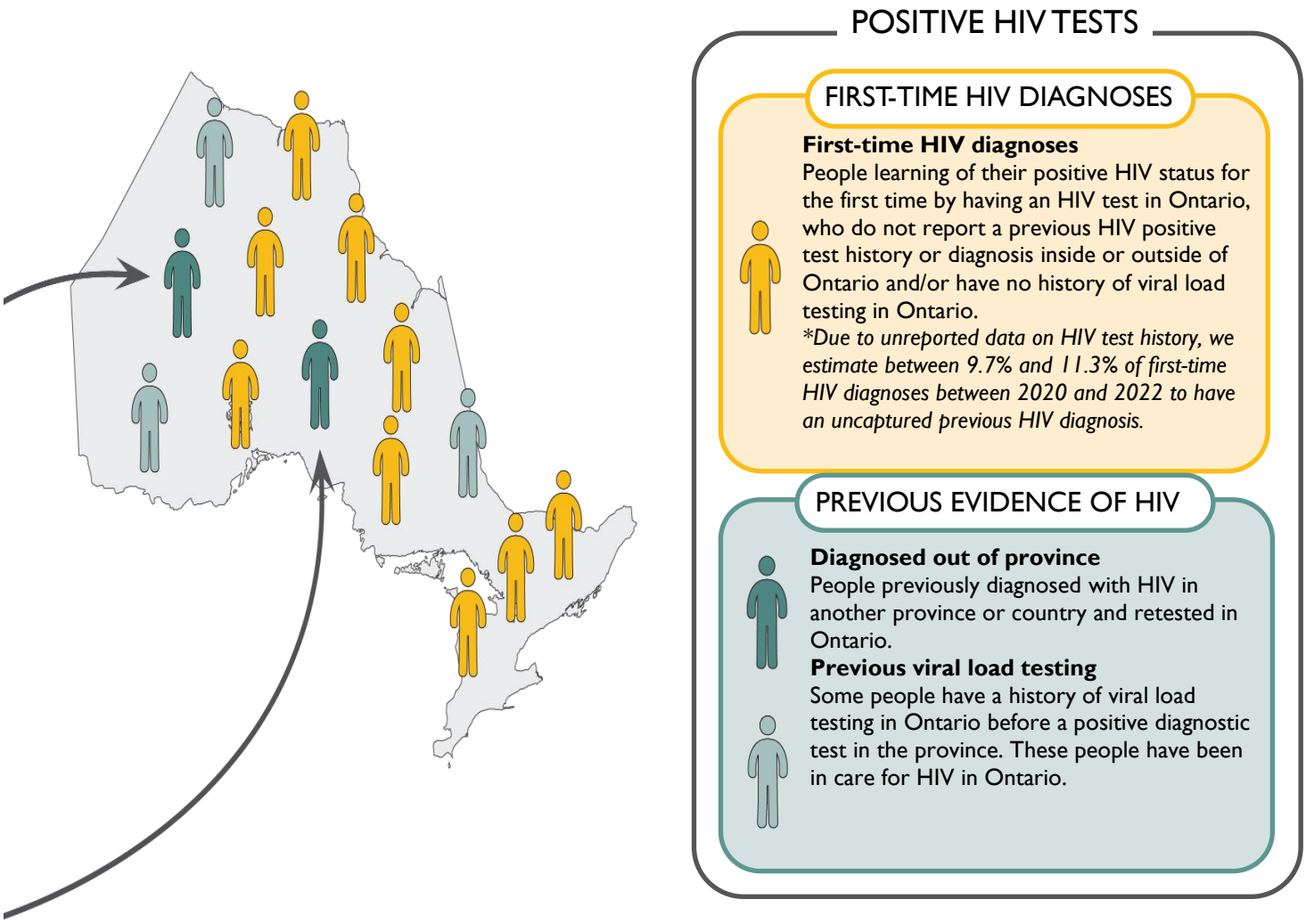
[1] An updated HIV test requisition form was introduced in 2018 to include additional information including race/ethnicity, country of birth, test history and transgender identity categories. In 2022, approximately 78.1% of test requisitions used the updated form. If the updated form was used, information about race/ethnicity and country of birth were used to help assign race/ethnicity and key populations (along with the LEP), otherwise this information would have only been available from the LEP. Test history on the HIV test requisition form was not used to assign first-time HIV diagnoses or PEH status.

Mandate to collect HIV data

The Health Protection and Promotion Act of Ontario outlines which diseases are "diseases of public health significance" in Ontario and the related relevant risk factors[1]. The monitoring of HIV is not for research purposes and is required by the provincial government. These data are collected, stored, and analyzed according to the Personal Health Information Protection Act (PHIPA[2]). Monitoring along the HIV care cascade is essential to the response to the HIV epidemic in Ontario.

Positive HIV tests: First-time HIV diagnoses + people with previous evidence of HIV (PEH)

Figure ii. Positive HIV tests represent unique individuals and include first-time HIV diagnoses and people with previous evidence of HIV. Previous evidence of HIV includes having been diagnosed with HIV previously outside Ontario, or having a history of previous HIV viral load testing in Ontario that can be linked to the same person.[3]



[1] O. 1990, Reg 135/18: DESIGNATIONS OF DISEASES under Health Protection and Promotion act R.S.O. 1990, c.H.7 https://www.ontario.ca/laws/regulation/180135

[2] R.R.O. 1990, Reg. 569: REPORTS under Health Protection and Promotion Act R.S.O. 1990, c.H.7 https://www.ontario.ca/laws/regulation/900569

[3] Refer to Technical Notes – First-time HIV diagnoses, HIV Datamart and Positive HIV test.

A first-time HIV diagnosis is not the same as a new HIV infection. Many people living with HIV are not diagnosed in the same year they acquired HIV. Trends in first-time HIV diagnoses can be influenced by other factors such as frequency of HIV testing and migration patterns, and it is difficult to disentangle these different effects.

The overall section as well as each key population section begins by distinguishing between:

- **First-time HIV diagnoses** – People (unique individuals) newly diagnosed with HIV. First-time HIV diagnoses are our best estimate of the number of people learning their HIV status for the first time. This includes individuals who acquired HIV in Ontario, and individuals who acquired HIV outside of Ontario who learned their status for the first time in Ontario. Where HIV test history information is not reported, positive HIV tests are categorized as first-time HIV diagnoses. These are sometimes simply termed "diagnoses" in this report for ease of description.
    - Looking separate at first-time HIV diagnoses allows us to monitor and understand who is having first-time diagnoses in the province. It is important to understand trends in first-time HIV diagnoses to help prevention and testing programs focus on populations in the province who would benefit most from prevention activities, as well as linkage to care.
- **People with previous evidence of HIV** – People (unique individuals) who already knew their HIV status at the time of their first positive nominal (as opposed to anonymous testing) diagnostic test in Ontario. This previous evidence of HIV includes:
    - People new to care in Ontario but who were previously diagnosed elsewhere (i.e. another province or country) and retested in Ontario.
    - People who have been in HIV care in Ontario[1] (i.e. have a history of viral load tests) but with no previous linkable HIV diagnostic test. These individuals may have originally been tested anonymously and then retested (sometimes many years later) – perhaps when they changed health care providers. People who have evidence of a history of viral load testing before their first reported HIV positive test are counted in the first year where there is evidence of an HIV diagnosis (i.e. the year of their first viral load test).[2]

- **Positive Tests –** looking at both first-time diagnoses and people with previous evidence of HIV allows us to:
    - Identify the care needs of all individuals who test positive each year. It is important to know the total number of people changing or entering care as well as their gender, age, race/ethnicity and region – regardless of whether they already knew their status – to plan patient-centred, culturally relevant services for all people living with HIV in the province.

It is important to note that, despite the efforts of both the new test requisition and LEP forms to collect information on previous test history for positive HIV tests, this information is still missing for a significant proportion of people. Approximately 36% of first-time HIV diagnoses in 2022 are missing data on test history either because the LEP form is not returned or it is missing data when returned. For the purposes of this analysis, any positive HIV test that did not have documentation of a previous positive on the test history section of the LEP was assumed to be a first-time HIV diagnosis, even though this likely overestimates the number of first-time HIV diagnoses and underestimates the number of people with

[1] Evidence of being in care includes anyone with a history of viral load testing in Ontario of 1) more than 30 days before a first diagnostic positive test or 2) within 30 days (including same day) with a viral load <200 copies/ml before a first diagnostic positive test.

[2] In this category, people are never counted as a first-time diagnosis, they are only counted as Previous Evidence of HIV. For example: If the person had a viral load test in 2020 (no previous evidence of diagnostic test) and a diagnostic test in 2022, this person is counted as a PEH in 2020.

previous evidence of HIV. Using race-stratified modelling of test history missingness, OHESI estimates between 9.7% and 11.3% of first-time HIV diagnoses (between 7.6% and 8.9% among males and between 17.4% and 20.6% among females) have an uncaptured previous HIV diagnosis (average 2020 to 2022).

Analytic approach: strengths & limitations

What are some of the strengths of these data and our analytical approach?

- Trends in positive HIV tests and first-time HIV diagnoses are presented as numbers and rates per 100,000 people, where possible. While numbers of diagnoses are influenced by the size of the underlying population, rates take this into account and remove population size as a possible explanation for any observed differences.
- In most figures, diagnoses are shown yearly, over a 10 or 5-year period (2013 to 2022 or 2018 to 2022), to describe trends by sex, age, HIV exposure category, race/ethnicity and health regions. This is done to show year-to-year changes over time. However, when sample sizes are too small (<5 diagnoses in each year within a sub-category), diagnoses are combined over 2-year periods (2015 to 2016, 2017 to 2018, 2019 to 2020 and 2021 to 2022), 4-year periods (2015 to 2018 and 2019 to 2022) or 5-year periods (2013 to 2017 and 2018 to 2022) to reduce the effects of year-to-year variation (which can be particularly influential in populations with a small number of diagnoses) and more clearly present trends over time. Years were combined for first-time HIV diagnoses among PWID, Indigenous Peoples, and ACB females by health region.

What are some of the limitations of this report?

- Unreported data on the test requisition or LEP forms means some positive HIV tests and first-time HIV diagnoses cannot be assigned in terms of sex, age, HIV exposure category, race/ethnicity and/or a key population. It is unknown whether some categories or populations may be more likely to be unreported information, which could potentially bias the proportions in this report.
- Collection and documentation of information on the requisition/LEP forms may vary from provider to provider. For example, some providers may ask the person getting tested about their HIV risk factors and race/ethnicity, while other providers may gather this information from a previous medical chart or use clinical intuition.
- Although the HIV test requisition form captures data on gender minorities and the number of HIV tests by transgender identities is now able to be reported in the OHESI HIV testing report, positive tests and first-time HIV diagnoses by transgender identities were too low to be included in this report.

Data and Figures

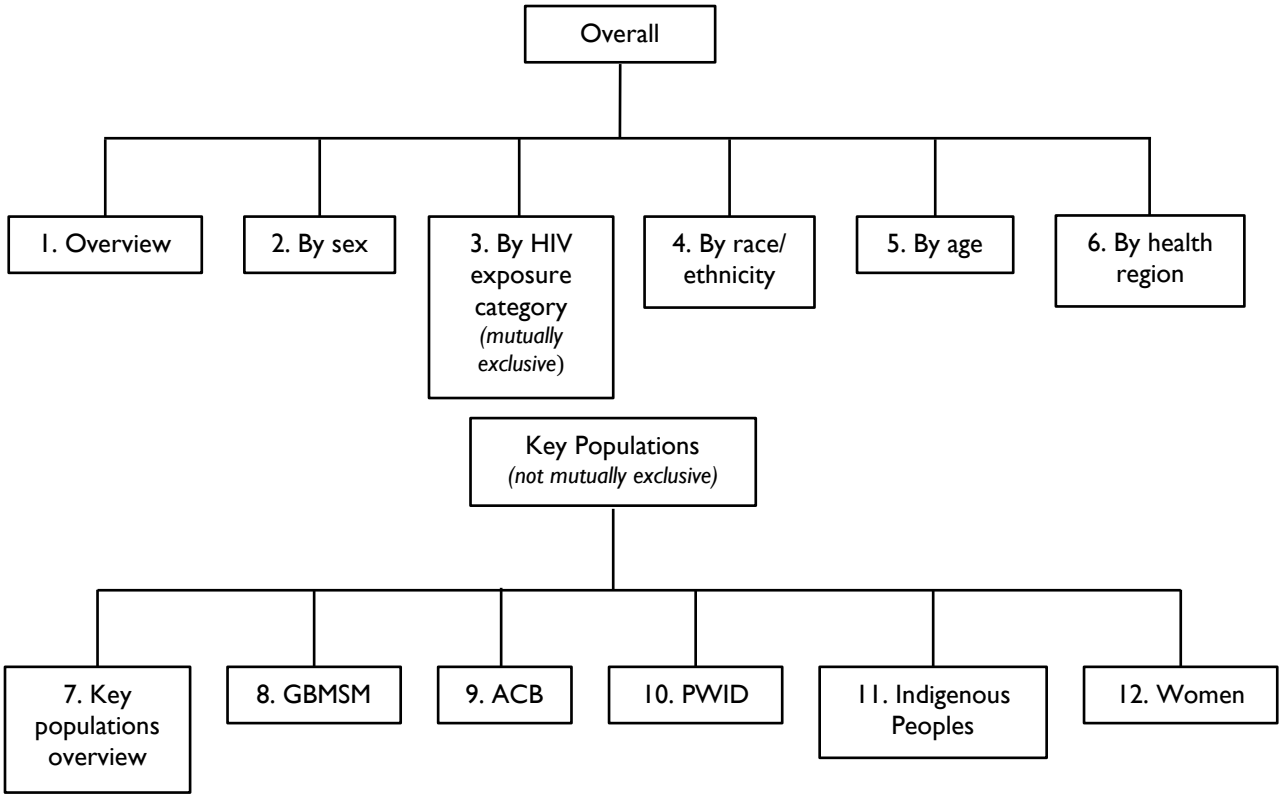
The figures in the following sections show trends in first-time HIV diagnoses and positive HIV tests over the past decade (2013 to 2022), with a focus on 2022 findings. The broad structure of the report is illustrated in **Figure iii**.

The first "**Overall**" section describes findings specific to 2022 and trends over time overall (overview) and broken down by sex. Findings are also broken down by the following factors overall and additionally by sex: HIV exposure category; race/ethnicity; age; and health region.

The second "**Key Populations**" section describes findings across Ontario's five overlapping key populations, and the five subsections within it provide an overview and breakdowns (by sex, HIV exposure category, race/ethnicity, age, and health region, where logical) within each of the respective five key populations. Descriptions of how each key population relate to the larger overall numbers of first-time HIV diagnoses (for example, first-time HIV diagnoses among GBMSM accounted for 56.8% of first-time HIV diagnoses where exposure category is known in 2022), as well as breakdowns of first-time HIV diagnoses *within* the specified key population (for example, 6.4% of the 204 first-time HIV diagnoses among GBMSM were attributed to male-to-male sexual contact + IDU in 2022) are reported.

See the Appendices for more information on the data source and how these numbers were defined and calculated, and the Tables supplement for the numbers underlying the figures.

Figure iii. Schematic of the broad structure of this report. Data and figures in this report are reported in two major sections: Overall and key populations. Further breakdowns within each key population are reported where logical.



Notes: GBMSM = Gay, bisexual, and other men who have sex with men. ACB = African, Caribbean, and Black people. PWID = People who use injection drugs.

List of Figures

Overall

1. Overview

2. Overall by sex

3. Overall by HIV exposure category

3.i. Males by HIV exposure category

3.ii. Females by HIV exposure category

4. Overall by race/ethnicity

4.i. Males by race/ethnicity

4.ii. Females by race/ethnicity

10. People who use injection drugs (PWID)

10.a. PWID overview

10.b. PWID by sex

10.c. PWID by HIV exposure category

10.d. PWID by race/ethnicity

10.e. PWID by age

Overall

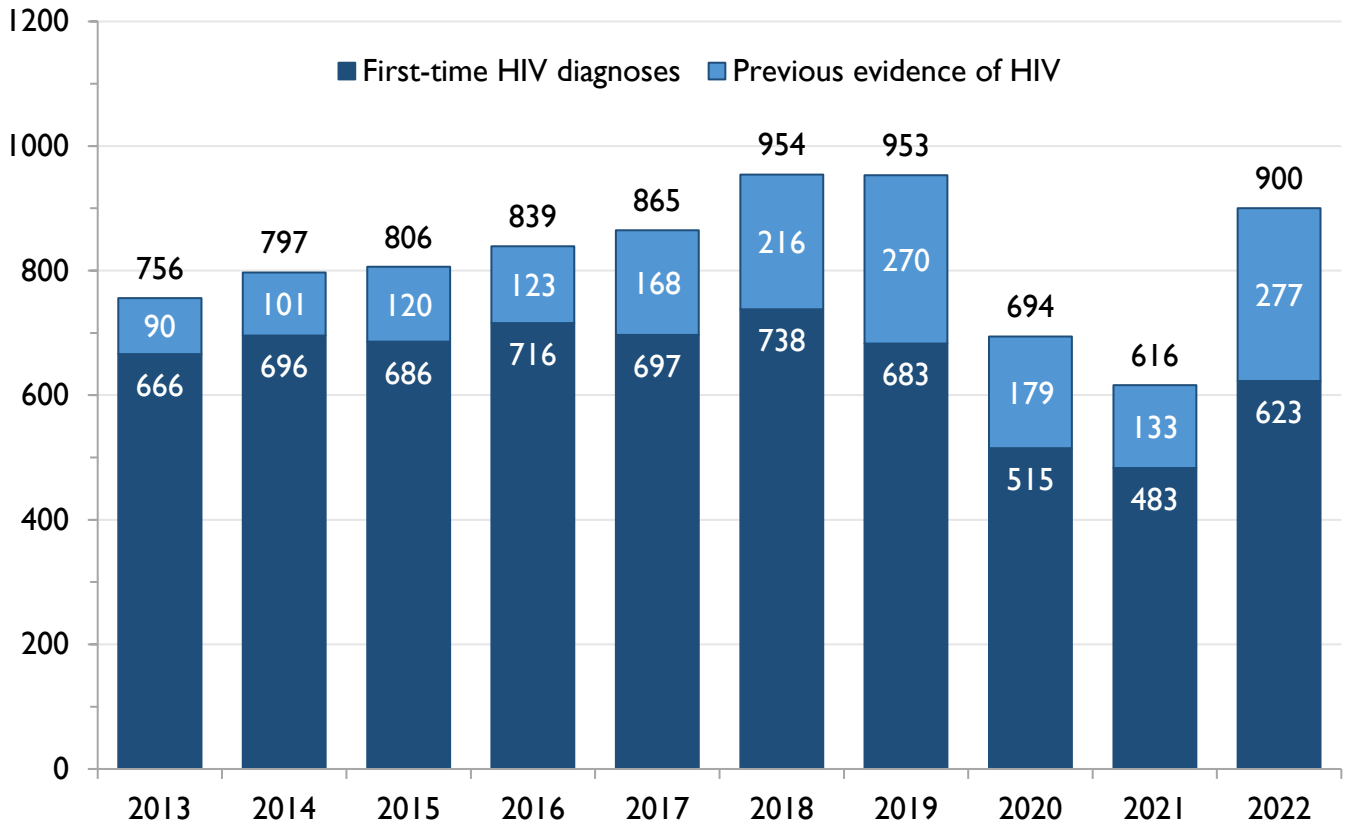
1. Overview

In 2022, Ontario recorded 900 positive HIV tests (rate of 6.0 per 100,000 people). Among the 900 positive tests, 623 were first-time HIV diagnoses (rate of 4.1 per 100,000 people), while 277 were people with previous evidence of HIV. Compared to 2019 (year with similar numbers of HIV tests), the overall number of positive HIV tests decreased slightly in 2022 (5.6% decrease).

There was an 8.8% decrease in the number of first-time HIV diagnoses in 2022 compared to 2019, while the number of people with previous evidence of HIV remained relatively stable (2.6% increase in 2022 compared to 2019). During the years most impacted by COVID-19 (2020 and 2021), the number and rate of positive HIV tests were notably decreased compared to 2022, varying from 4.2 to 4.7 positive HIV tests per 100,000 people; however, the overall number and rate of positive HIV tests remained lower in 2022 (6.0 per 100,000 people) than years with comparable tests conducted (6.7 and 6.6 per 100,000 people in 2018 and 2019, respectively).

Data limitation: *Information on previous testing history is only reported in about 56% of positive HIV tests in 2022 (60% in 2013 to 2022). Due to missing data on HIV test history, we estimate between 9.7% and 11.3% of first-time HIV diagnoses overall to have an uncaptured previous HIV diagnosis (2020-2022 average).*

Figure 1.1 Number of positive HIV tests, by first-time HIV diagnoses and previous evidence of HIV, Ontario, 2013 to 2022



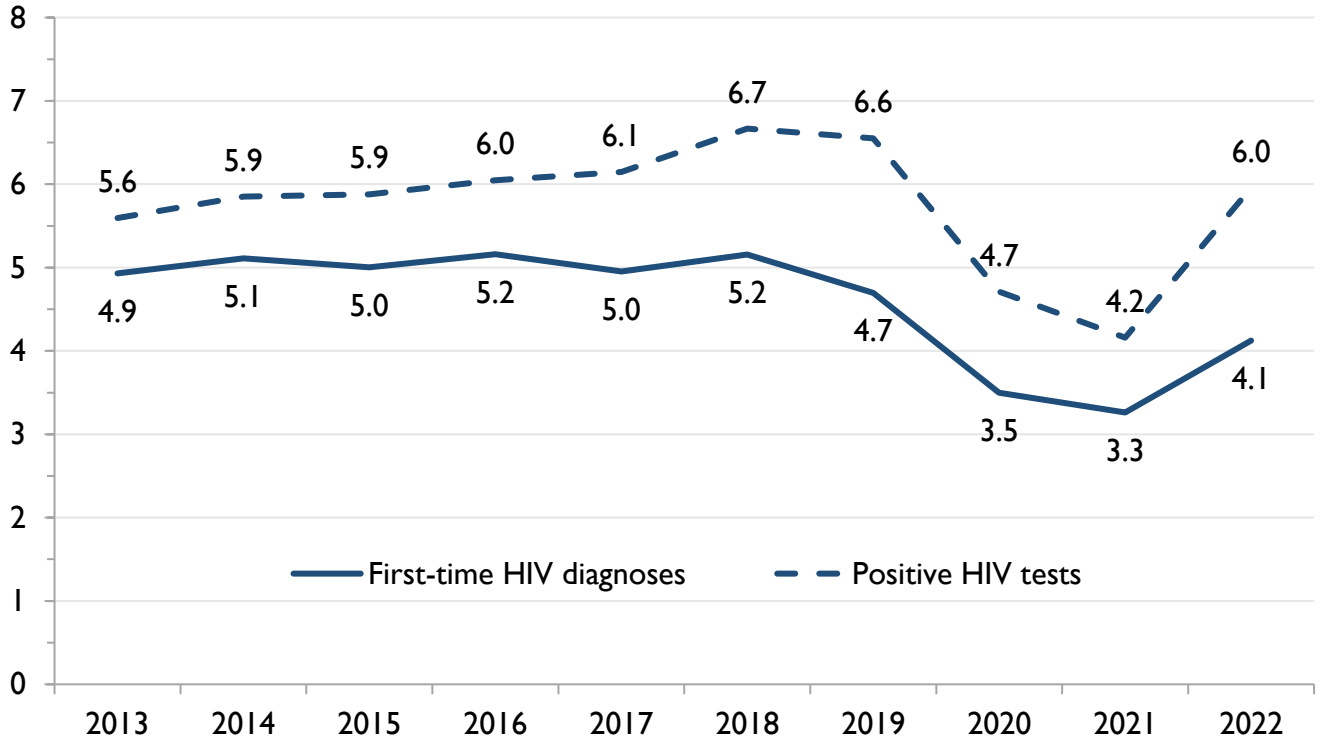
Snapshot

In 2022 of the 900 positive HIV tests in Ontario, 623 were first-time HIV diagnoses and 277 were people with previous evidence of HIV. In 2022 compared to 2019, the number of first-time HIV diagnoses decreased by 8.8% and the number of people with previous evidence of HIV increased by 2.6%. The proportion of people that had previous evidence of HIV has been increasing over time, and was 30.8% in 2022 compared to 11.3% in 2013

Data limitation: *Due to missing data on test history, first-time HIV diagnoses may include some people with an uncaptured previous HIV diagnosis. OHESI estimates this to be between 9.7% and 11.3% of first-time HIV diagnoses (2020-2022 average).*

Notes: Data provided by Public Health Ontario Laboratory. See Appendices for more information. See Tables Supplement for underlying data.

Figure 1.2 Rates of first-time HIV diagnoses and positive HIV tests per 100,000 people, Ontario, 2013 to 2022



Snapshot

Between 2019 and 2022, the rate of first-time HIV diagnoses per 100,000 people decreased by 12.2% from 4.7 to 4.1 and the rate of positive HIV tests per 100,000 people decreased by 9.1% from 6.6 to 6.0. The overall trend since 2019 is a decrease in the rate of positive HIV tests and first-time HIV diagnoses.

Notes: Data provided by Public Health Ontario Laboratory. Rates calculated using Statistics Canada population estimates for all ages, accessed 08/14/2023. See Appendices for more information. See Tables Supplement for underlying data.

2. Overall by sex

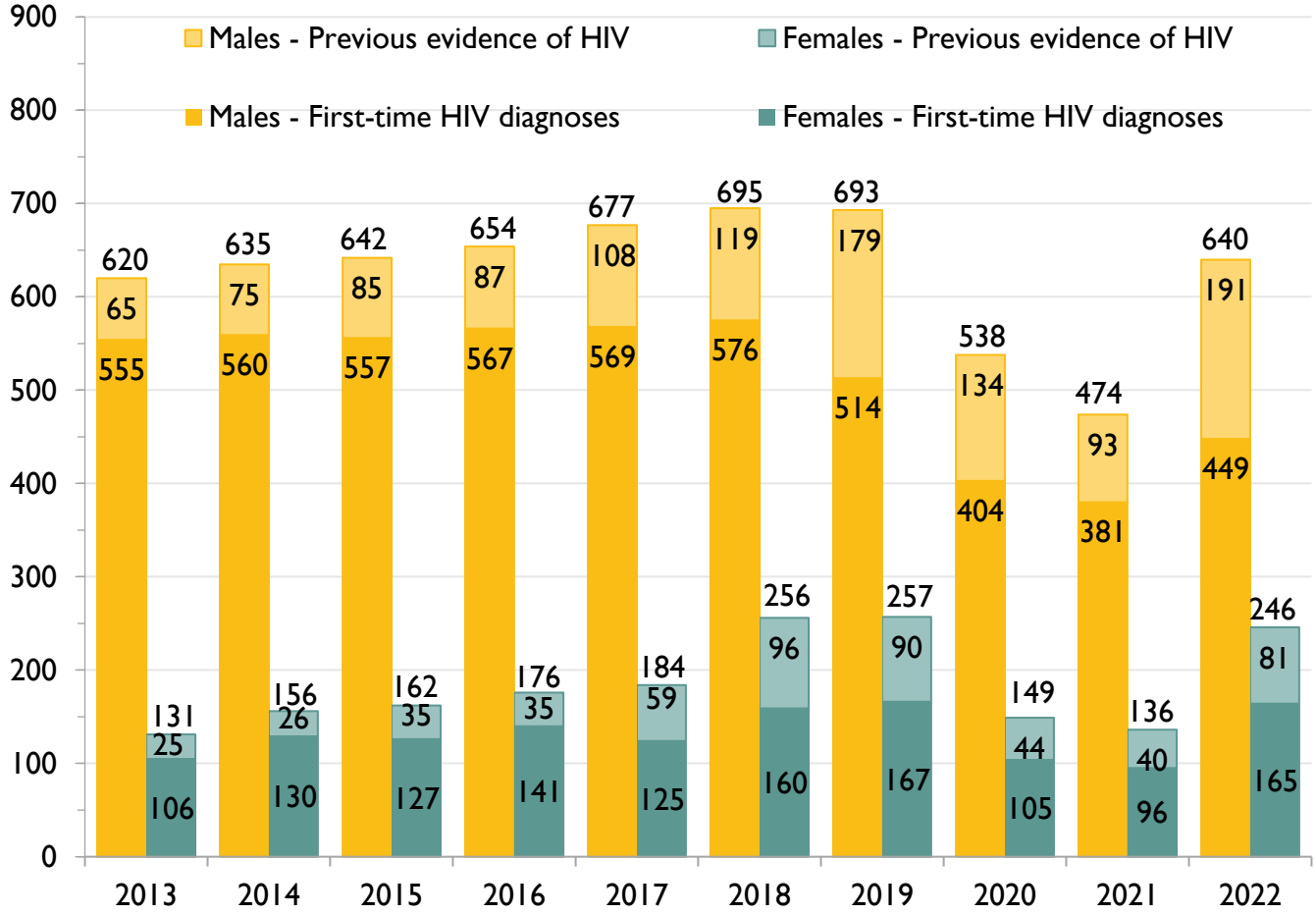
In 2022, of the 640 positive HIV tests among males, 449 (70.2%) were first-time HIV diagnoses and 191 (29.8%) were people with previous evidence of HIV. Of the 246 positive HIV tests among females, 165 (67.1%) were first-time HIV diagnoses and 81 (32.9%) were people with previous evidence of HIV. Due mainly to the decrease in first-time HIV diagnoses in males, females accounted for 26.9% of first-time HIV diagnoses in 2022 – an increase over the previous 10 years, when females accounted for an average of 20% of first-time HIV diagnoses.

The number of first-time HIV diagnoses among males decreased from a fairly consistent average of 564 between 2013 and 2018 to 514 in 2019, to 449 in 2022 - a 12.6% decrease between 2019 and 2022. Among females, between 2013 and 2019, the number of first-time HIV diagnoses was slowly increasing from 106 to 167, then remaining fairly stable at 165 in 2022.

In 2022, the rate of positive HIV tests was 8.6 per 100,000 among males and 3.2 per 100,000 among females, while the rate of first-time HIV diagnoses was 6.0 per 100,000 among males and 2.2 per 100,000 among females. Compared to 2019, the rate of first-time HIV diagnoses among males decreased by 16.0% in 2022, from 7.2 to 6.0 per 100,000 males, while the rate of first-time HIV diagnoses among females decreased 4.8%, from 2.3 to 2.2 per 100,000 females.

Data limitation: *Information on previous testing history is only reported in about 56% of positive HIV tests in 2022 (60% in 2013 to 2022. Due to missing data on test history, first-time HIV diagnoses may include some people with an uncaptured previous HIV diagnosis. OHESI estimates this to be between 7.6% and 8.9% of first-time HIV diagnoses among males and between 17.4% and 20.6% of first-time HIV diagnoses among females (2020-2022 average).*

Figure 2.1 Number of positive HIV tests, by first-time HIV diagnoses and previous evidence of HIV, males and females, Ontario, 2013 to 2022



Snapshot

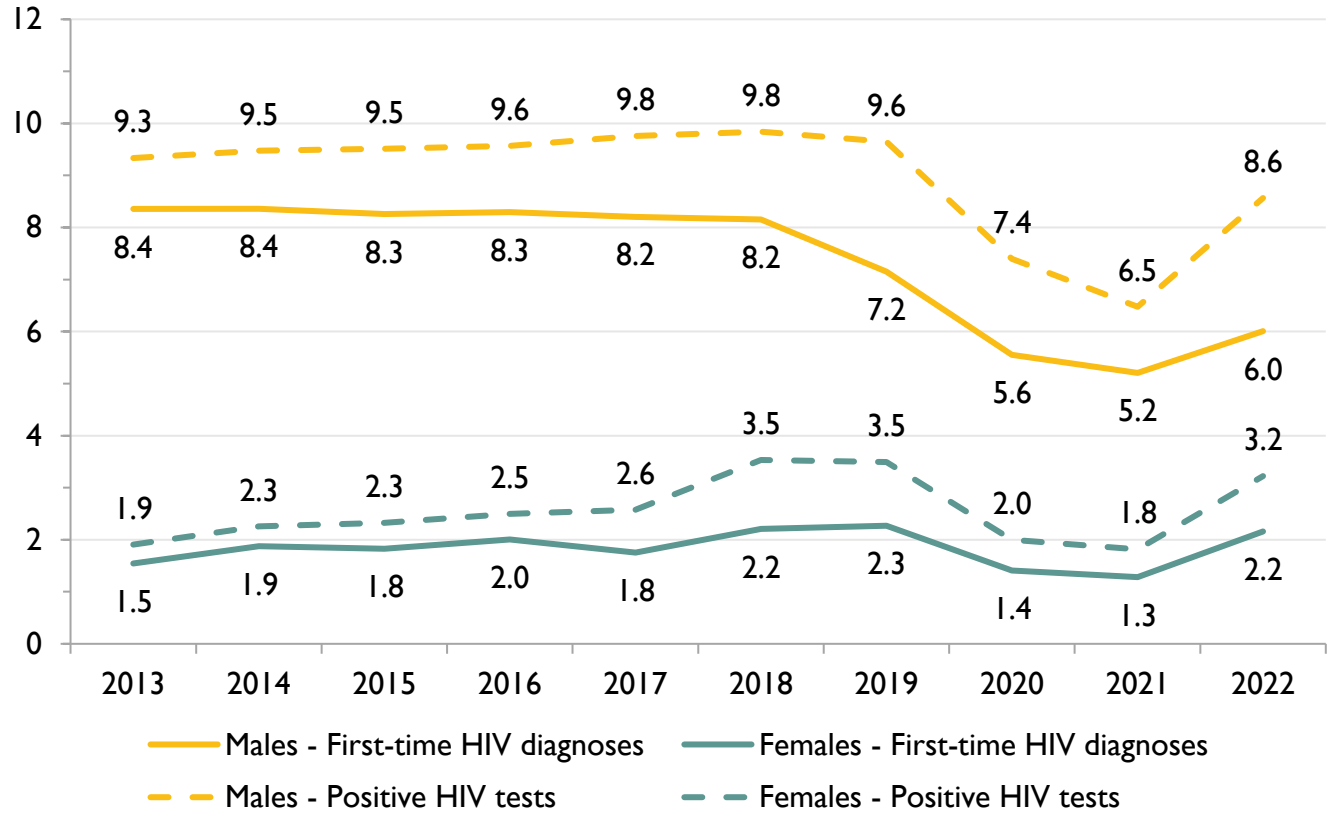
In 2022, of the 640 positive HIV tests among males, 449 (70.2%) were first-time HIV diagnoses and 191 (29.8%) were people with previous evidence of HIV. The number of first-time HIV diagnoses among males in 2022 was 12.6% lower than in 2019. The proportion of people with previous evidence of HIV was the highest in the last decade among males.

In 2022, of the 246 positive HIV tests among females, 165 (67.1%) were first-time HIV diagnoses and 81 (32.9%) were people with previous evidence of HIV. The number of first-time HIV diagnoses among females was similar in 2022 compared to 2019 (1.2% lower). The proportion of people with previous evidence of HIV was similar among females in 2019 compared to 2022.

Data limitation: *Due to missing data on test history, first-time HIV diagnoses may include some people with an uncaptured previous HIV diagnosis. OHESI estimates this to be between 7.6% and 8.9% of first-time HIV diagnoses among males and between 17.4% and 20.6% of first-time HIV diagnoses among females (2020-2022 average)*

Notes: Data provided by Public Health Ontario Laboratory. Diagnoses with unreported sex excluded (less than 1% of diagnoses). See Appendices for more information. See Tables Supplement for underlying data.

Figure 2.2 Rate of first-time HIV diagnoses and positive HIV tests per 100,000 people by sex, Ontario, 2013 to 2022



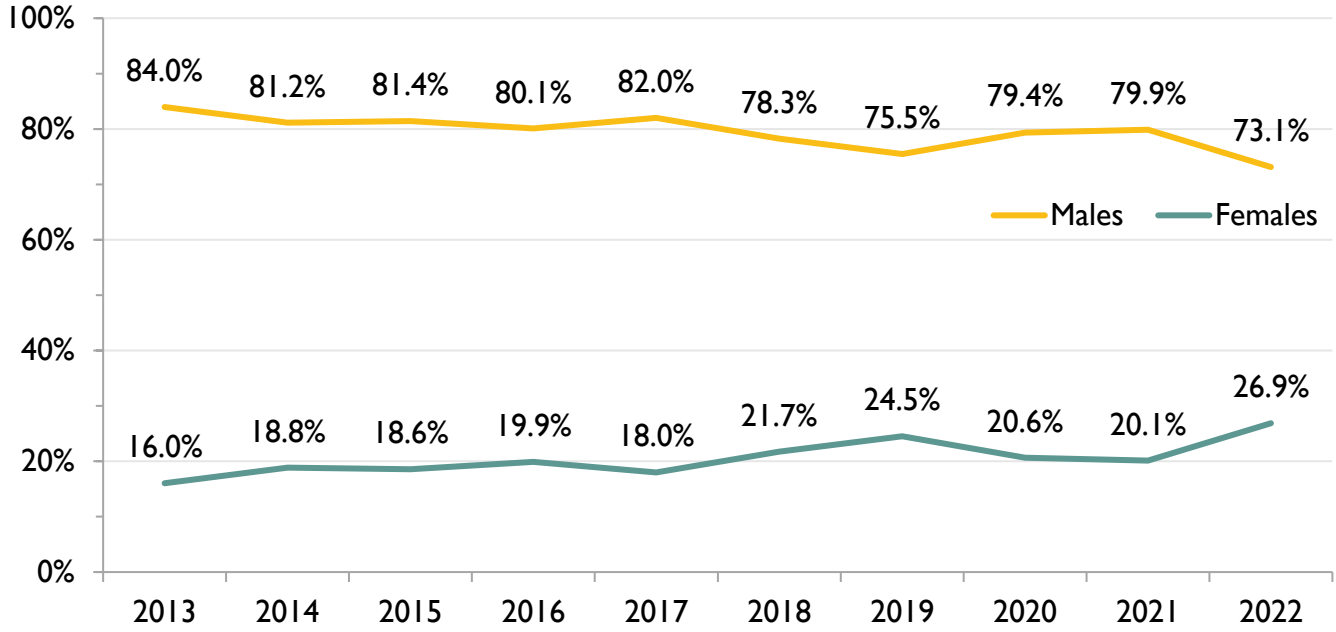
Snapshot

Among males, the rate of first-time HIV diagnoses per 100,000 males had been fairly stable from 2013 to 2018, decreasing in 2019-2021 and was 6.0 in 2022. The rate of positive HIV tests per 100,000 males followed a similar pattern, being relative stable from 2013-2019, decreasing in 2020-2021 and was 8.6 in 2022.

Among females, the rate of first-time HIV diagnoses per 100,000 females had been slightly increasing from 2013 to 2019, decreasing in 2020-2021 and was 2.2 in 2022. The rate of positive HIV tests per 100,000 females slightly increased from 2013 to 2017, increased faster in 2018, remained stable in 2019, decreased in 2020-2021 and was 3.2 in 2022.

Notes: Data provided by Public Health Ontario Laboratory. Rates calculated using Statistics Canada population estimates for all ages, accessed 08/14/2023. First-time diagnoses with unreported sex excluded (less than 1.5% of diagnoses). See Appendices for more information. See Tables Supplement for underlying data.

Figure 2.3 Percent of first-time HIV diagnoses by sex, Ontario, 2013 to 2022.



Snapshot

From 2013 to 2022, males continuously accounted for the largest proportion of first-time HIV diagnoses, with the highest being in 2013 at 84.0%. Males have reached the lowest proportion of first-time HIV diagnoses in 2022, accounting for 73.1%. Females have seen an increasing trend of first-time HIV diagnosis with the lowest in 2013 at 16.0%, accounting for 26.9% in 2022, the highest its ever been.

Notes: Data provided by Public Health Ontario Laboratory. First-time diagnoses where sex was not reported excluded (less than 1.5% of diagnoses). Rates calculated using Statistics Canada population estimates for all ages, accessed 08/14/2023. See Appendices for more information. See Tables Supplement for underlying data.

3. Overall by HIV exposure category

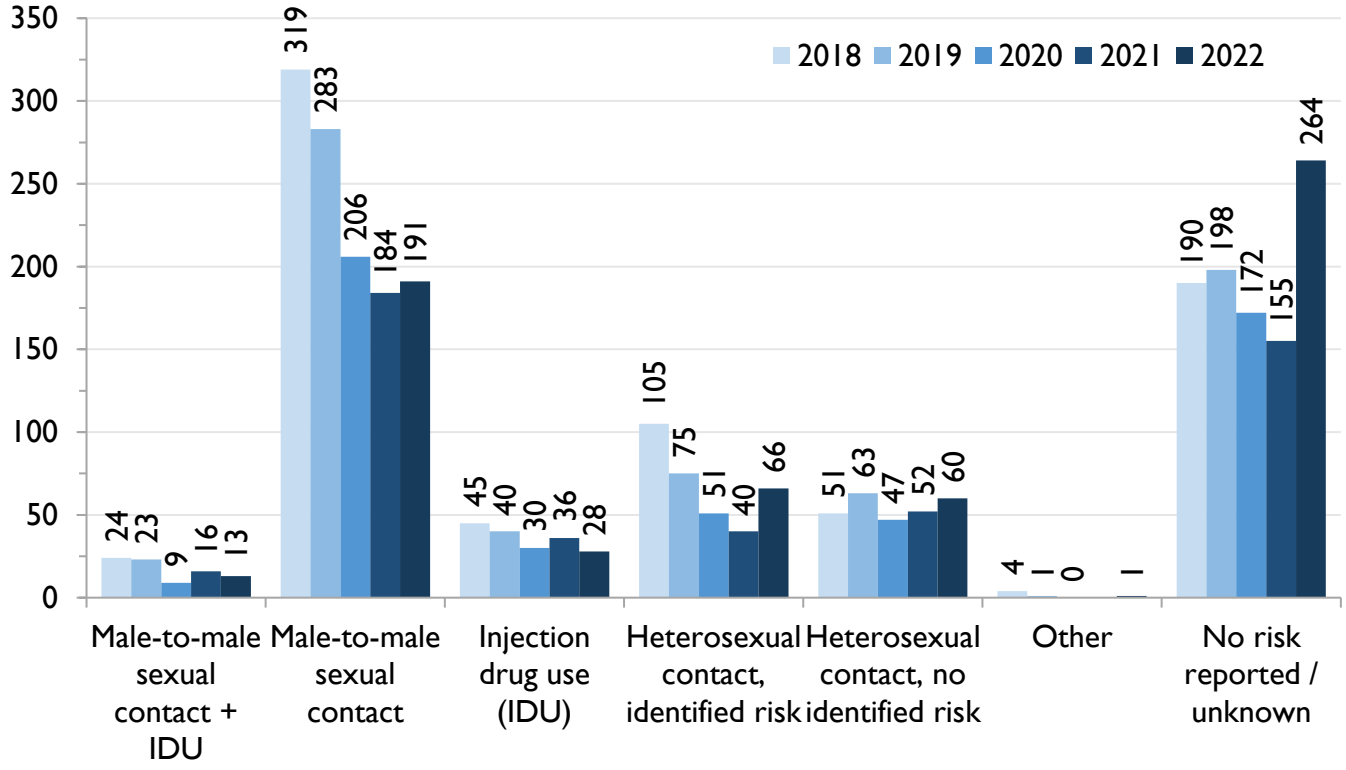
When a person tests for HIV, they are asked to identify their possible risks or exposures based on a standardized list of known routes of HIV transmission. If a person identifies multiple exposures, the most likely route of exposure is assigned in a hierarchical fashion based on known transmission rates. See HIV exposure categories for more information.

In Ontario, the number of first-time HIV diagnoses decreased in all HIV exposure categories in 2022 compared to 2019. In 2022, male-to-male sexual contact continued to be the primary mode of HIV transmission, accounting for 53.2% of the first-time HIV diagnoses where HIV exposure was reported. The next most common HIV exposure categories, when reported, were heterosexual contact with identified risk (18.4%) and heterosexual contact with no identified risk (16.7%), patterns similar to previous years. The proportion of first-time HIV diagnoses that reported injection drug use as the HIV exposure category was 7.8% in 2022, the lowest it has been in the last 5 years. In 2022, heterosexual contact with identified risk and heterosexual contact with no identified risk made up a larger proportion of first-time HIV diagnoses compared to 2019, however, this increase was driven by a decrease in first-time HIV diagnoses in other exposure categories, predominantly male-to-male sexual contact, and not by an absolute increase in diagnoses in those exposure categories.

The number of first-time HIV diagnoses with no risk reported or with unknown risk increased by 33.3% from 2019 to 2022, reaching its 5-year high of 264. Missing data can make it difficult to draw conclusions regarding trends.

Definitions: *The "heterosexual contact, identified risk" category includes diagnoses where sex with a person of the opposite sex/gender is reported and either the individual's country of birth is reported as an HIV-endemic country, or the individual's sex partner is reported to be at least one of: HIV-positive; user of injection drugs; born in an HIV-endemic country; a bisexual male. See HIV exposure categories for more information.*

Figure 3.1 Number of first-time HIV diagnoses by HIV exposure category, Ontario, 2018 to 2022



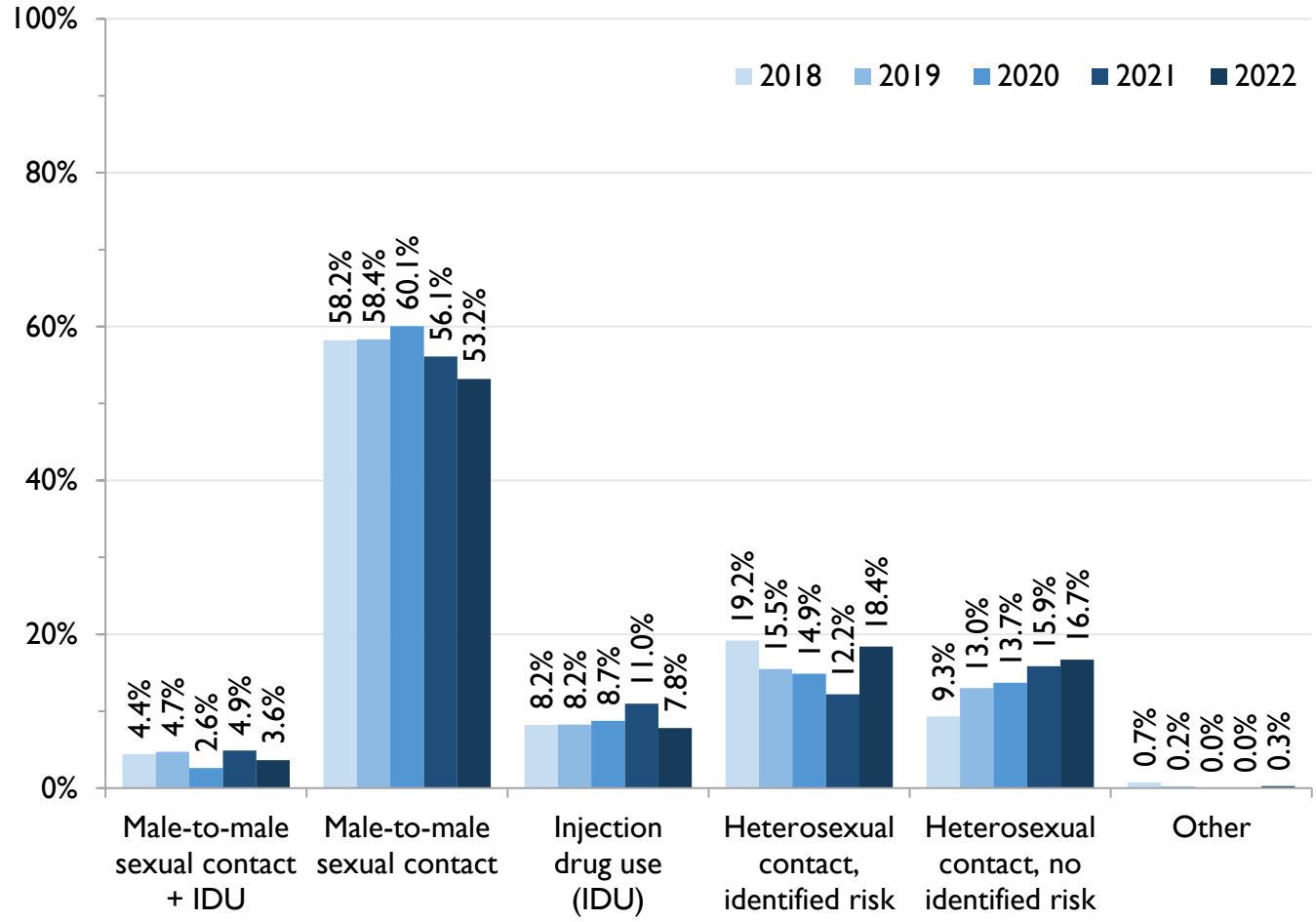
Snapshot

In 2022, 359 of the 623 first-time HIV diagnoses (57.6%) reported an HIV exposure category and 264 (42.4%) did not (i.e. no risk reported / unknown).

Among the 359 first-time HIV diagnoses with a reported HIV exposure category in 2022, the most frequently reported exposure category was male-to-male sexual contact (191), followed by heterosexual contact with identified risk (66) and heterosexual contact with no identified risk (60). The greatest relative decreases in 2022 compared to 2019 were seen in male-to-male sexual contact + IDU (43.5%), male-to-male sexual contact (32.5%) and IDU (30.0%) exposure categories.

Notes: Data provided by Public Health Ontario Laboratory. IDU = injection drug use. See Appendices and specifically HIV exposure categories for more information. See Tables Supplement for underlying data.

Figure 3.2 Percent of first-time HIV diagnoses by HIV exposure category (where reported), Ontario, 2018 to 2022

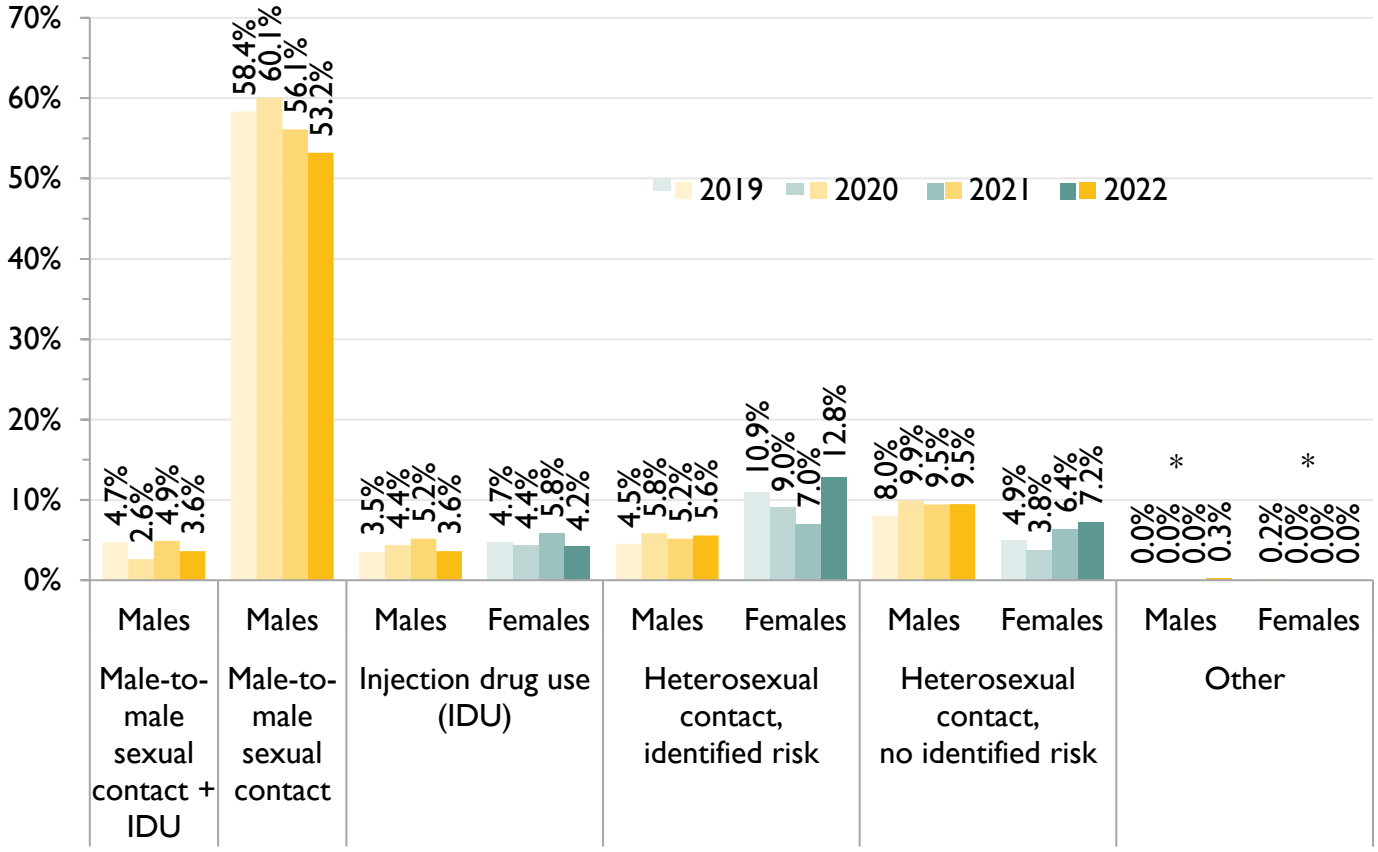


Snapshot

In 2022, among the 359 first-time HIV diagnoses with a reported HIV exposure category, the male-to-male sexual contact exposure category accounted for the largest proportion (53.2%), followed by heterosexual contact with identified risk (18.4%), heterosexual contact with no identified risk (16.7%) and IDU (7.8%). Between 2018 and 2022, heterosexual contact with no identified risk increased year over year.

Notes: Data provided by Public Health Ontario Laboratory. First-time diagnosis where HIV exposure category was not reported were excluded (average of 31.1%). IDU = injection drug use. See Appendices and specifically HIV exposure categories for more information. See Tables Supplement for underlying data.

Figure 3.3 Percent of first-time HIV diagnoses by exposure category (where reported) and sex, Ontario, 2019 to 2022



Snapshot

In 2022, males who reported male-to-male sexual contact accounted for the largest proportion of first-time HIV diagnoses (53.2%), followed by females who reported heterosexual contact with identified risk (12.8%), males who reported heterosexual contact with no identified risk (9.5%) and females who reported heterosexual contact with no identified risk (7.2%). The remaining HIV exposure categories each accounted for less than 6.0% of first-time HIV diagnoses. Between 2019 and 2022, the proportion of males who reported male-to-male sexual contact decreased while the proportion of females reporting heterosexual contact with no identified risk increased.

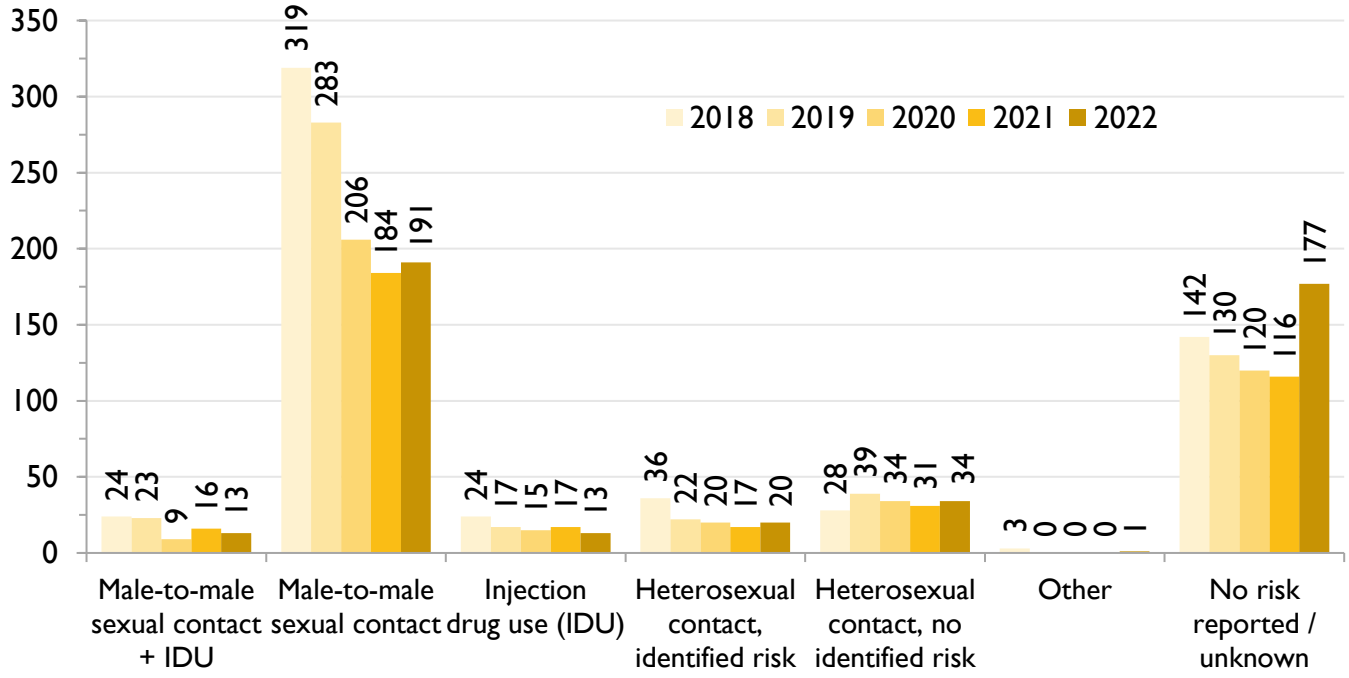
Notes: Data provided by Public Health Ontario Laboratory. * denotes a proportion based on at least one count of <5, therefore proportions may be unstable and trends should be interpreted with caution. First-time diagnoses where HIV exposure category was not reported were excluded (28.4% of diagnoses in 2019, 32.4% in 2020, 31.1% in 2021 and 38.7% in 2022.). IDU = injection drug use. See Appendices and specifically HIV exposure categories for more information. See Tables Supplement for underlying data.

3.i. Males by HIV exposure category

In 2022 among males, male-to-male sexual contact accounted for the largest number (191) and proportion (70.2%) of first-time HIV diagnoses. In 2022, of the 449 first-time HIV diagnoses among males, 272 (60.6%) reported an HIV exposure category, and 177 (39.4%) did not, the highest number of no risk/ unknown risk in the recent years. Compared to 2019, all exposure categories saw a decrease in the number of first-time HIV diagnoses. The largest relative decrease from 2019 to 2022 was among male-to-male sexual contact + IDU (43.5%), followed by male-to-male sexual contact (32.5%).

The proportional breakdown across the categories remained fairly stable between 2018 and 2022, with a small decrease among males reporting male-to-male sexual contact and a small increase among males reporting heterosexual contact without identified risk.

Figure 3.4 Number of first-time HIV diagnoses by HIV exposure category, males, Ontario, 2018 to 2022



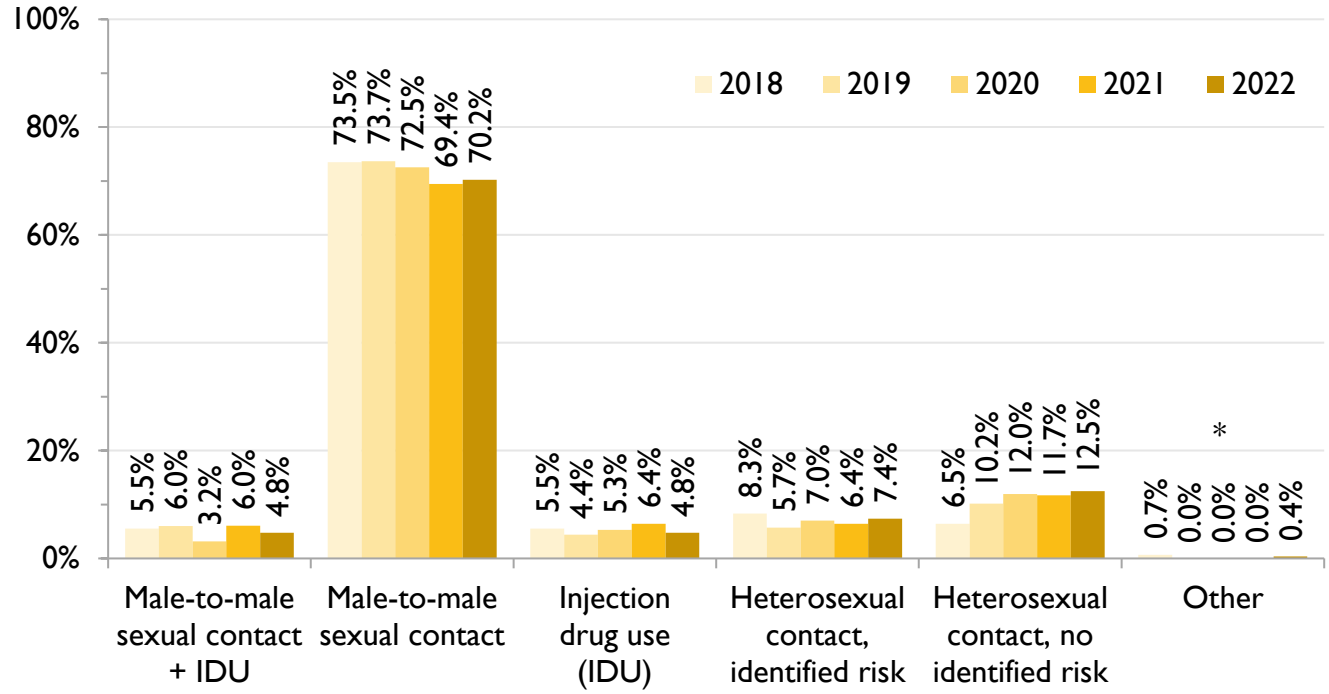
Snapshot

In 2022, 272 of the 449 first-time HIV diagnoses among males (60.6%) reported an HIV exposure category and 177 (39.4%) did not (i.e. no risk reported, unknown).

Among the 272 first-time HIV diagnoses in males with a reported HIV exposure category in 2022, the most frequently reported HIV exposure category was male-to-male sexual contact (191), followed by heterosexual contact with no identified risk (34). The greatest relative decreases in 2022 compared to 2019 were seen in male-to-male sexual contact + IDU (43.5%), male-to-male sexual contact (32.5%) and IDU (30.0%).

Notes: Data provided by Public Health Ontario Laboratory. IDU = injection drug use. See Appendices and specifically HIV exposure categories for more information. See Tables Supplement for underlying data.

Figure 3.5 Percent of first-time HIV diagnoses by HIV exposure category (where reported), males, Ontario, 2018 to 2022



Snapshot

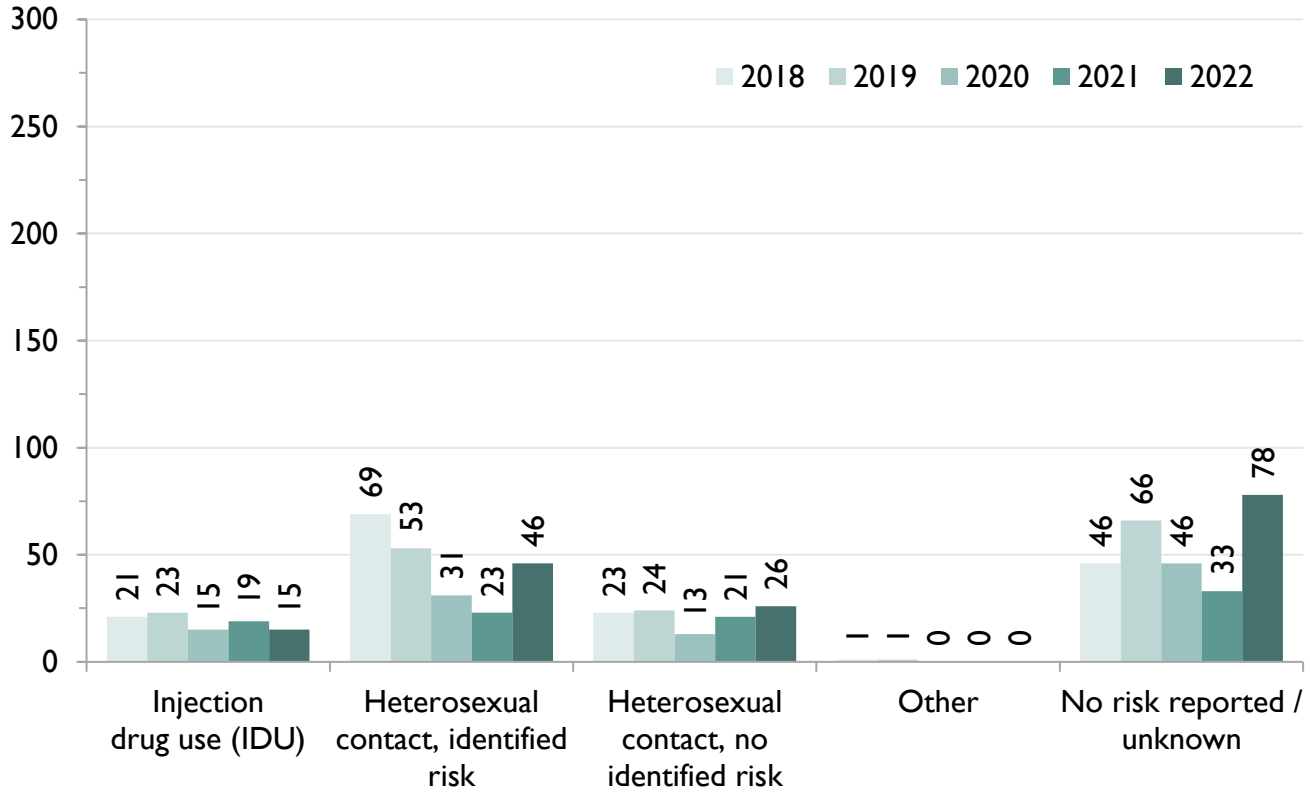
In 2022, among the 272 first-time HIV diagnoses in males with a reported HIV exposure category, male-to-male sexual contact HIV exposure category accounted for the largest proportion (70.2%), followed by heterosexual contact with no identified risk (12.5%). Comparing 2019 and 2022, there was a small decrease in the proportion of first-time HIV diagnoses among males who reported male-to-male sexual contact and male-to-male sexual contact + IDU and a small increase among all other exposure categories.

Notes: Data provided by Public Health Ontario Laboratory. * denotes a proportion based on at least one count of <5, therefore proportions may be unstable and trends should be interpreted with caution. First-time diagnoses where HIV exposure category was not reported were excluded (average of 29.9% of diagnoses over the 2018 to 2022 period). IDU = injection drug use. See Appendices and specifically HIV exposure categories for more information. See Tables Supplement for underlying data.

3.ii. Females by HIV exposure category

In 2022, of the 165 first-time HIV diagnoses among females, 87 (52.7%) reported an HIV exposure category, while 78 (47.3%) did not. Of the females who reported an exposure category in 2022, the majority (46; 52.9%) reported heterosexual contact with identified risk, followed by 26 (29.9%) who reported heterosexual contact with no identified risk, and 15 (17.2%) who reported IDU. The proportional breakdown across the categories between 2018 and 2022 saw a decrease among females reporting heterosexual sex with identified risk and an increase among females reporting heterosexual sex with no identified risk.

Figure 3.6 Number of first-time HIV diagnoses by HIV exposure category, females, Ontario, 2018 to 2022



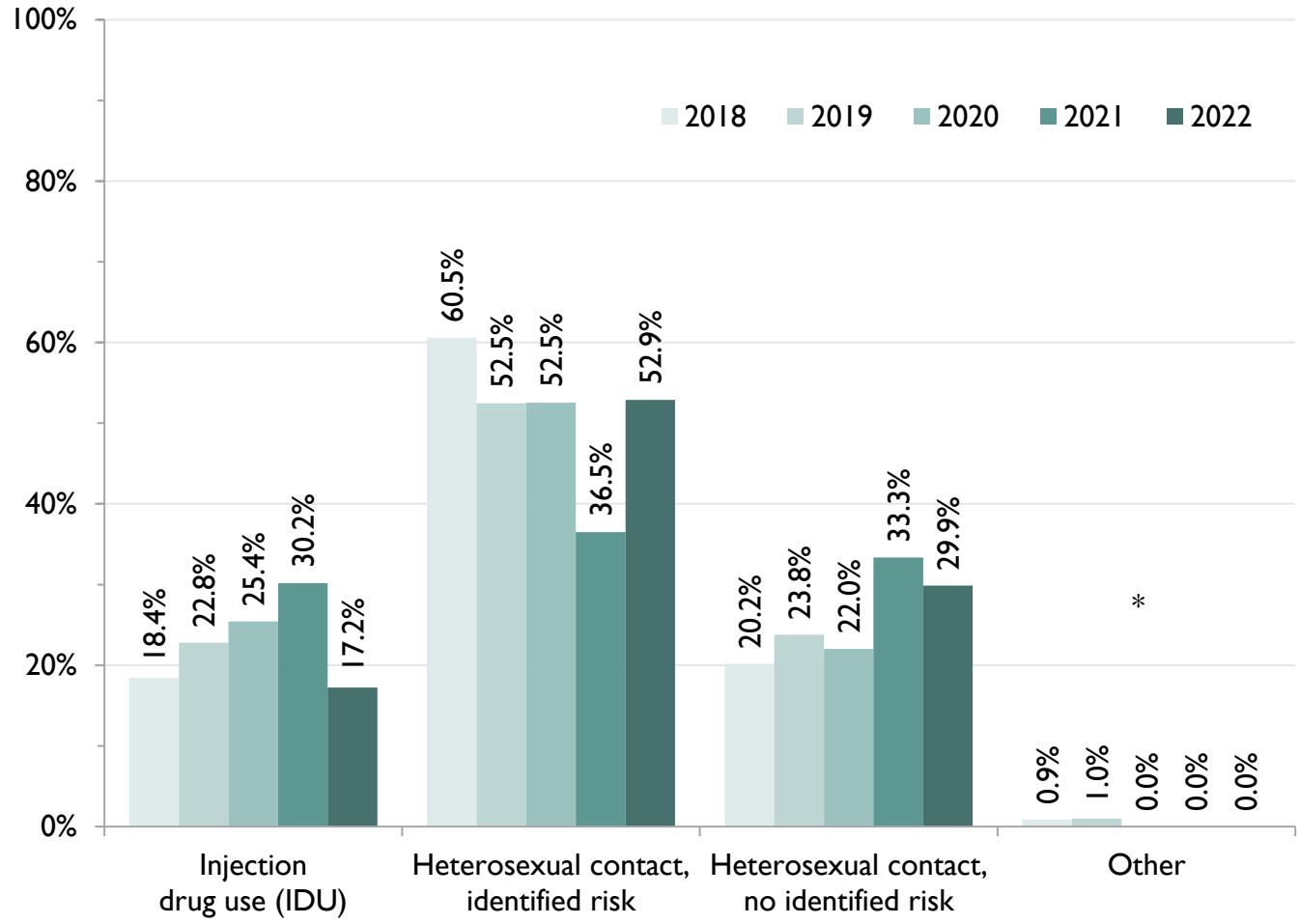
Snapshot

In 2022, 87 of the 165 first-time HIV diagnoses among females (52.7%) reported an HIV exposure category and 78 (47.3%) did not (i.e. no risk reported, unknown).

Among the 87 first-time HIV diagnoses in females with a reported HIV exposure category in 2022, the most frequently reported HIV exposure category was heterosexual contact with identified risk (46), followed by heterosexual contact with no identified risk (26). The greatest relative decreases in 2022 compared to 2019 were in females reporting IDU (34.8%) followed by heterosexual contact with identified risk (13.2%).

Notes: Data provided by Public Health Ontario Laboratory. IDU = injection drug use. See Appendices and specifically HIV exposure categories for more information. See Tables Supplement for underlying data.

Figure 3.7 Percent of first-time HIV diagnoses by HIV exposure category (where reported), females, Ontario, 2018 to 2022



Snapshot

In 2022, among the 87 first-time HIV diagnoses in females with a reported HIV exposure category, 52.9% reported heterosexual contact with identified risk, 29.9% heterosexual contact with no identified risk and 17.2% IDU. Heterosexual contact with identified risk has consistently accounted for the largest proportion of the first-time HIV diagnoses among females.

Notes: Data provided by Public Health Ontario Laboratory* denotes a proportion based on at least one count of <5, therefore proportions may be unstable and trends should be interpreted with caution. First-time diagnoses where HIV exposure category was not reported were excluded (average of 38.7% of diagnoses over the 2018 and 2022 period). IDU = injection drug use. See Appendices and specifically HIV exposure categories for more information. See Tables Supplement for underlying data.

4. Overall by race/ethnicity

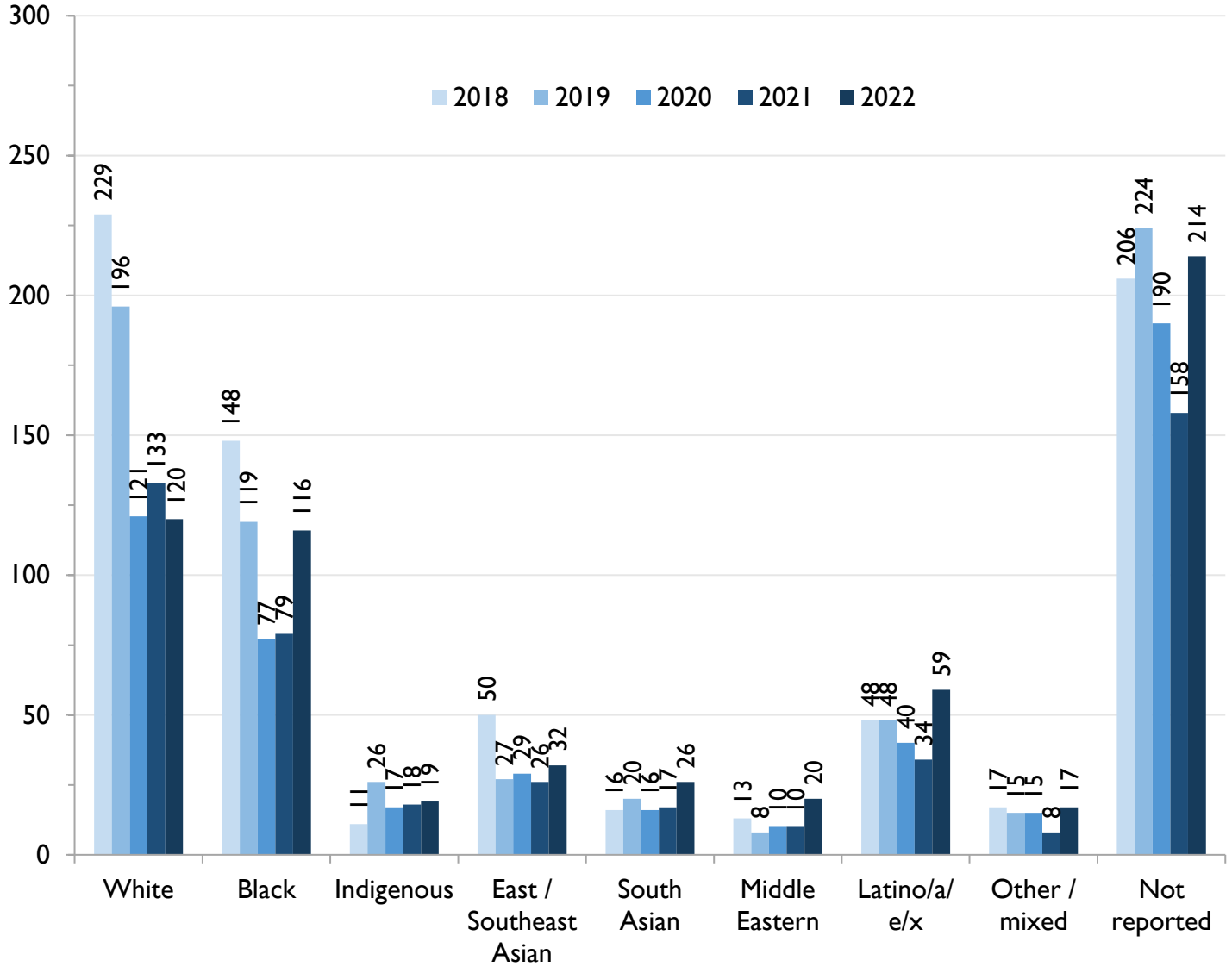
Information about the race/ethnicity of both first-time HIV diagnoses and positive HIV tests is important data for HIV prevention programs to inform and ensure that HIV care services meet the needs of ethnically diverse people.

Of the 623 first-time HIV diagnoses in 2022, 409 (65.7%) reported information on race/ethnicity and 214 (34.3%) did not. Between 2013 and 2022, race/ethnicity was not report for an average of 32.2% of first-time HIV diagnoses.

Between 2018 and 2022, although White people accounted for the largest number and proportion of first-time HIV diagnoses, both the number and proportion decreased over time, and in 2022, it reached its lowest number (120) and proportion (29.3%) in the last 5 years. The large decrease in the number of first-time HIV diagnoses among White people over time, along with the stabilizing or small increases of first-time HIV diagnoses among all other races/ethnicities has driven an increase in the proportion for first-time diagnoses in the other categories, most notably among Latino/a/e/x people.

When the data are broken down by race/ethnicity and sex (where data is known, n=407), in 2022, White males accounted for 22.4% of first-time HIV diagnoses, followed by Black males (15.2%), Latino/a/e/x males (13.5%), and Black females (13.0%). When we include people with previous evidence of HIV (where race/ethnicity and sex is known), the racial/ethnic breakdown of positive tests shifts: Black males account for 19.1% of positive tests, White males for 17.8%, Black females for 16.4% and Latino/a/e/x males for 15.6%.

Figure 4.1 Number of first-time HIV diagnoses by race/ethnicity, Ontario, 2018 to 2022

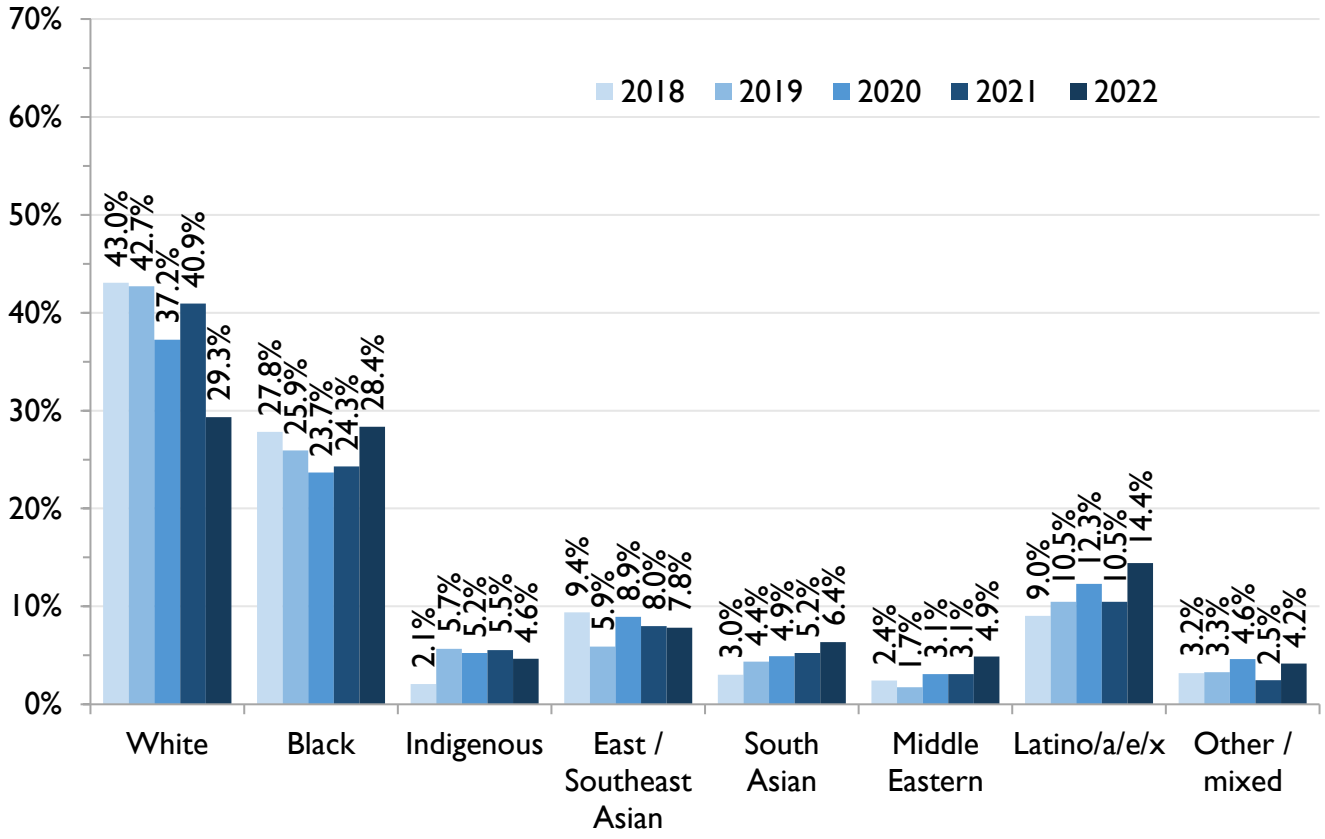


Snapshot

In 2022, among the 409 first-time HIV diagnoses with a reported race/ethnicity, 120 were in White people, 116 in Black people, 59 in Latino/a/e/x people, 32 in East/Southeast Asian people, 26 in South Asian people, 20 in Middle Eastern people, 19 in Indigenous people, and 17 in other/mixed people. Between 2018 and 2022, White people, followed by Black people, accounted for the largest number of first-time HIV diagnoses. Compared to 2019, a relative decrease in first-time HIV diagnoses was seen in 2022 among White (38.8%) and Indigenous (26.9%) race/ethnicities, stable among Black people (2.5% relative decrease), and a relative increase among Middle Eastern (150.0%), South Asian (30.0%) and people of other/mixed (13.3%) race/ethnicities.

Notes: Data provided by Public Health Ontario Laboratory. See Appendices for more information. See Tables Supplement for underlying data.

Figure 4.2 Percent of first-time HIV diagnoses by race/ethnicity (where reported), Ontario, 2018 to 2022



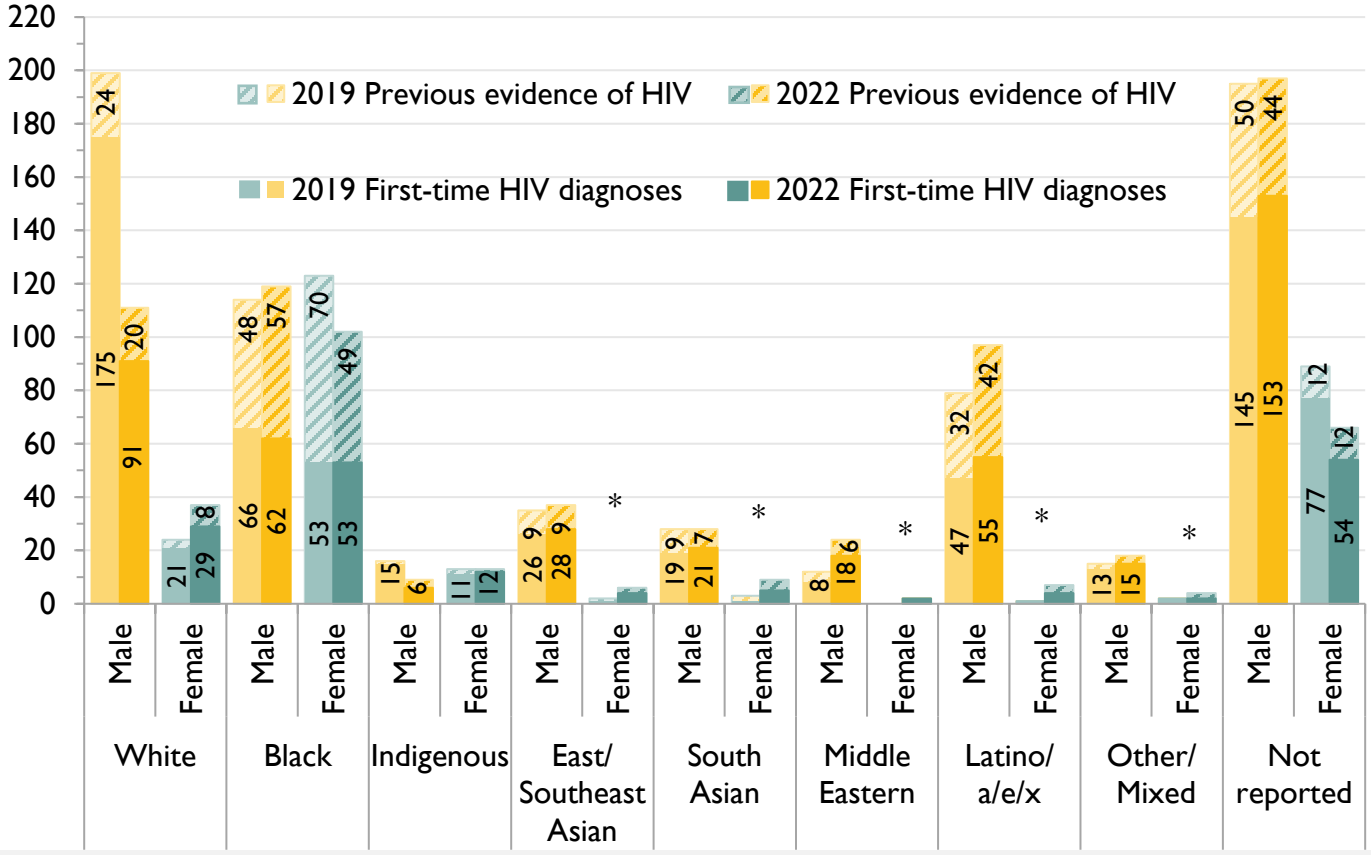
Snapshot

In 2022, among the 409 first-time HIV diagnoses with a reported race/ethnicity, White people accounted for the largest proportion (29.3%) of first-time HIV diagnoses, followed by Black (28.4%), Latino/a/e/x (14.4%), East/Southeast Asian (7.8%) and South Asian (6.4%) peoples. Middle Eastern, Indigenous, and people of other/mixed race/ethnicities each accounted for less than 5.0% of first-time HIV diagnoses in 2022.

Between 2018 and 2022, the proportion of first-time HIV diagnoses attributed to White people decreased from 43.0% to 29.3% while the proportion attributed to Black people remained relatively stable (27.8% to 28.4%). The proportion attributed to Latino/a/e/x people increased from 9% to 14.4%.

Notes: Data provided by Public Health Ontario Laboratory. First-time diagnoses where race/ethnicity was not reported were excluded (average of 32.9% of diagnoses per year between 2018 and 2022). See Appendices for more information. See Tables Supplement for underlying data.

Figure 4.3 Number of first-time HIV diagnoses and positive HIV tests with previous evidence of HIV by race/ethnicity and sex, Ontario, 2019 and 2022



Snapshot

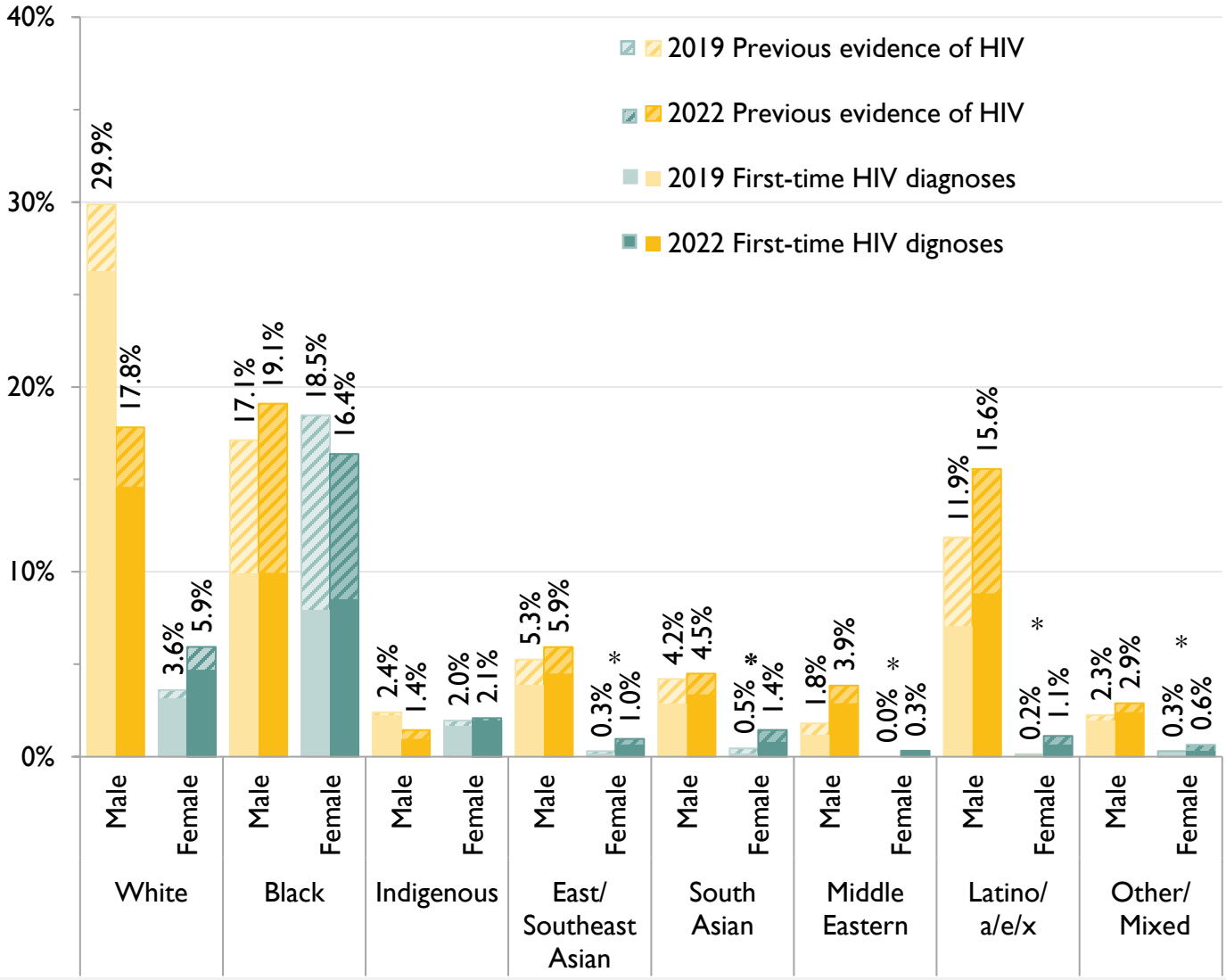
In 2022, among the 407 first-time HIV diagnoses with a reported race/ethnicity and sex, 91 were in White males, 62 in Black males, 55 in Latino/e/x males, 53 Black females, 29 White females, 28 in East/Southeast Asian males, 21 in South Asian males, 18 in Middle Eastern males, 15 in males of other/mixed races/ethnicity, 12 in Indigenous females and 6 in Indigenous males. There were fewer than 5 first-time HIV diagnoses in each of all other categories.

In 2022, among the 216 people with previous evidence of HIV and a reported race/ethnicity and sex, 57 were in Black males, 49 in Black females, 42 in Latino/e/x males, 20 in White males, 9 in East/Southeast Asian males, 8 in White females, 7 in South Asian males, and 6 in Middle Eastern males. There were fewer than 5 people with previous evidence of HIV in each of all other categories.

The greatest numbers and proportions of people with previous evidence of HIV in 2022 were among Black females (49, 48.0% of positive tests), followed by Black males (57, 47.9% of positive tests), and Latino/e/x males (42, 43.3% of positive tests). Between 2019 and 2022, there was an increase in the number of people with previous evidence of HIV among White females, Middle Eastern males, Latino/e/x males and Black males and a relative decrease among Black females, South Asian males and White males.

Notes: Data provided by Public Health Ontario Laboratory. * denotes a proportion based on at least one count of <5, therefore proportions may be unstable and trends are not discussed. See Appendices for more information and Tables Supplement for underlying data.

Figure 4.4 Percent of positive HIV tests by race/ethnicity (where reported) and sex, Ontario, 2019 to 2022



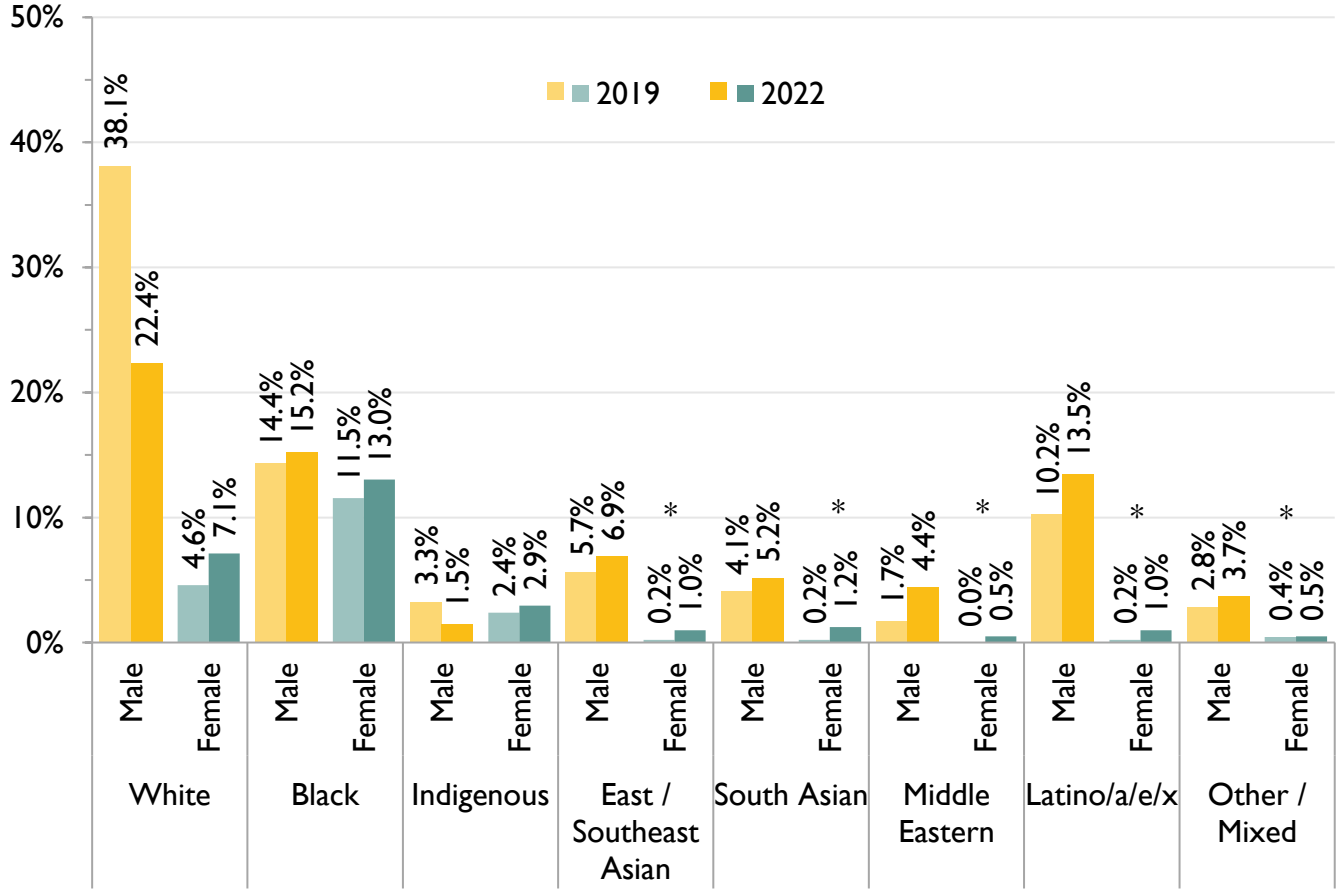
Snapshot

Among the 623 (out of 900) positive HIV tests that had a reported race/ethnicity and sex in 2022, Black males accounted for the largest proportion (19.1%), followed by White males (17.8%), Black females (16.4%), Latino/x males (15.6%), East/Southeast Asian males (5.9%), White females (5.9%). All other categories accounted for less than 5% of positive HIV tests in 2022.

Compared to 2019, White males, Black females and Indigenous males each made up smaller proportions of positive HIV test in 2022 while all other race/ethnicities made up larger proportions. This increase in proportions is related to the large decrease among White males.

Notes: Data provided by Public Health Ontario Laboratory. * denotes a proportion based on at least one count of <5, therefore proportions may be unstable and trends should be interpreted with caution. Positive HIV tests where race/ethnicity was not reported were excluded (30.1% 2019 and 30.2% in 2022). See Appendices for more information. See Tables Supplement for underlying data.

Figure 4.5 Percent of first-time HIV diagnoses by race/ethnicity (where reported) and sex, Ontario, 2019 and 2022



Snapshot

Among the 407 (out of 623) first-time HIV diagnoses with a reported race/ethnicity and sex in 2022, White males accounted for the largest proportion (22.4%), followed by Black males (15.2%), Latino/e/x males (13.5%), Black females (13.0%), White females (7.1%), East/Southeast Asian males (6.9%), and South Asian males (5.2%). All other categories each accounted for less than 5% of first-time HIV diagnoses.

Compared to 2019, White males and Indigenous males each made up smaller proportions of first-time HIV diagnoses in 2022 and Indigenous females remained relatively stable. Black males and females, Latino/e/x males, Middle Eastern males, South Asian males, East/Southeast Asian males and White females each made up larger proportions in 2022 compared to 2019.

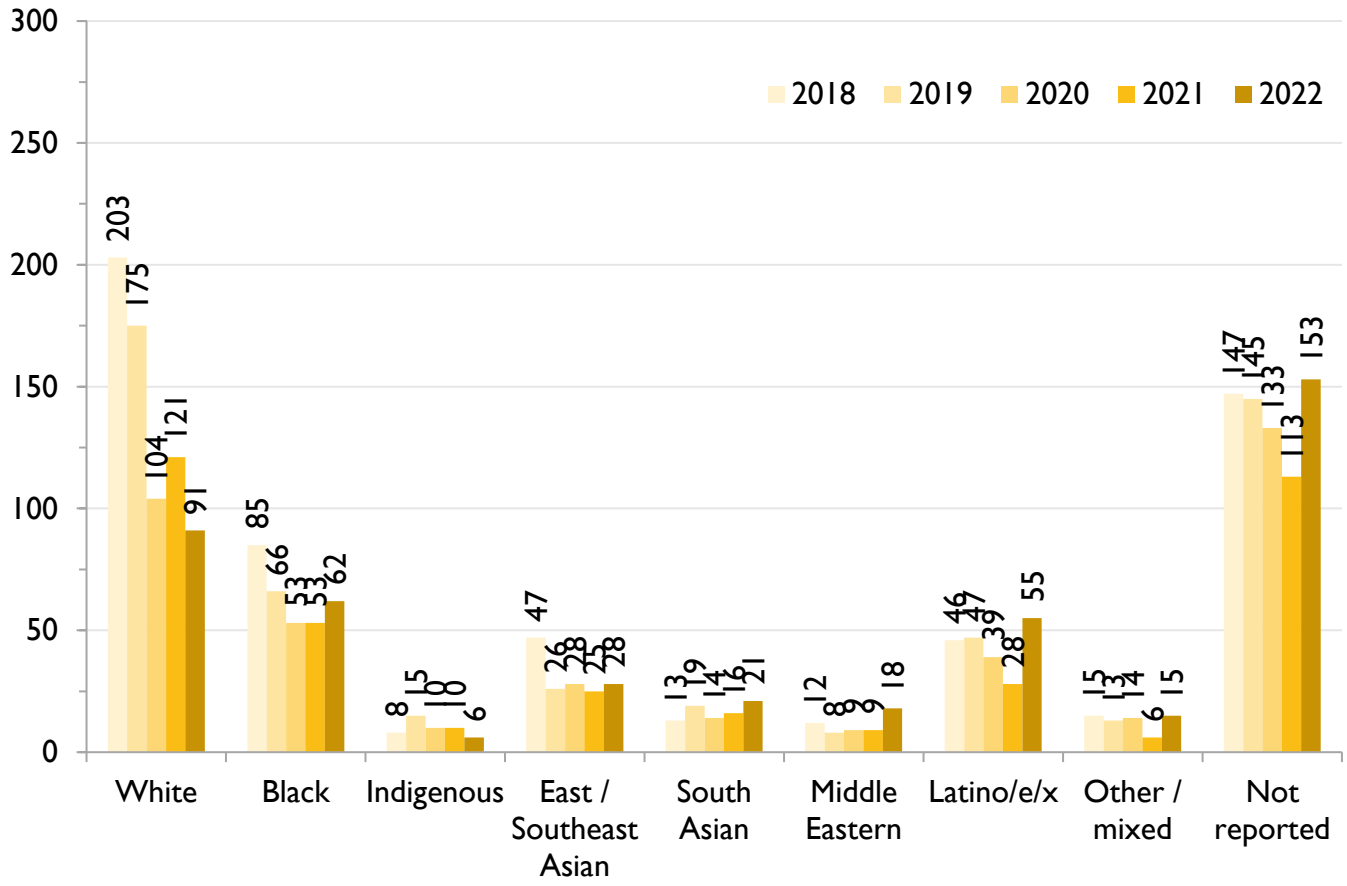
Notes: Data provided by Public Health Ontario Laboratory. * denotes a proportion based on at least one count of <5, therefore proportions may be unstable and trends should be interpreted with caution. First-time diagnoses where race/ethnicity was not reported were excluded (32.8% of first-time diagnoses in 2019 and 34.3% in 2022). See Appendices for more information. See Tables Supplement for underlying data.

4.i. Males by race/ethnicity

Of the 449 first-time HIV diagnoses among males in 2022, 296 (65.9%) reported information on race/ethnicity, and 153 (34.1%) did not. Of those who reported race/ethnicity, the largest proportion (30.7%) were attributed to White males, followed by Black males (20.9%) and Latino/e/x males (18.6%).

Comparing 2022 to 2019, numbers of first-time HIV diagnoses decreased dramatically among White males and remained fairly stable among Black, Indigenous, East/Southeast Asian, South Asian, Middle Eastern, and other/mixed males, with small variable changes over the years.

Figure 4.6 Number of first-time HIV diagnoses by race/ethnicity, males, Ontario, 2018 to 2022



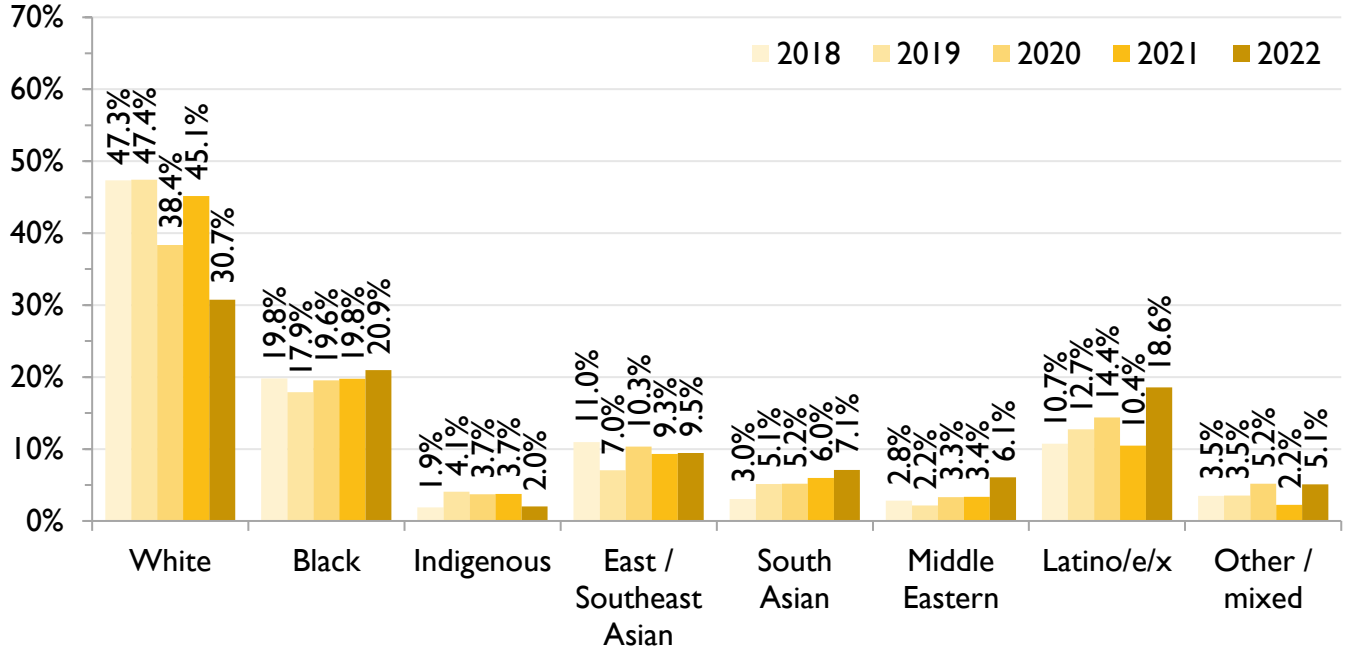
Snapshot

In 2022, among the 296 first-time HIV diagnoses in males with a reported race/ethnicity, 91 were in White males, 62 in Black males, 55 in Latino/e/x males, 28 in East/Southeast Asian males, 21 in South Asian males, 18 in Middle Eastern males, 15 in Other/mixed males and 6 in Indigenous males.

Compared to 2019, the largest relative decrease in first-time HIV diagnoses in 2022 among males was among indigenous males (60.0%), followed by White males (48.0%) and Black males (6.1%) and the largest relative increase was among Middle Eastern males (125.0%), followed by Latino/e/x males (17.0%), males of other/mixed ethnicity (15.4%), South Asian males (10.5%) and East/Southeastern Asian males (6.1%).

Notes: Data provided by Public Health Ontario Laboratory. See Appendices for more information. See Tables Supplement for underlying data.

Figure 4.7 Percent of first-time HIV diagnoses by race/ethnicity (where reported), males, Ontario, 2018 to 2022



Snapshot

In 2022, among the 296 first-time HIV diagnoses in males with a reported race/ethnicity, White males accounted for the largest proportion (30.7%), followed by Black (20.9%), Latino/e/x (18.6%), East/Southeast Asian males (9.5%), South Asian males (7.1%), Middle Eastern males (6.1%), males of other/mixed ethnicity (5.1%) and Indigenous males (2.0%).

The proportion of first-time HIV diagnoses among males that was attributed to Latino/e/x males and Middle Eastern males increased to a 5-year high in 2022. The proportion of first-time HIV diagnoses among males remained relatively stable between 2018 and 2022 among Black, Indigenous, East/Southeast Asian and South Asian males and decreased among White males.

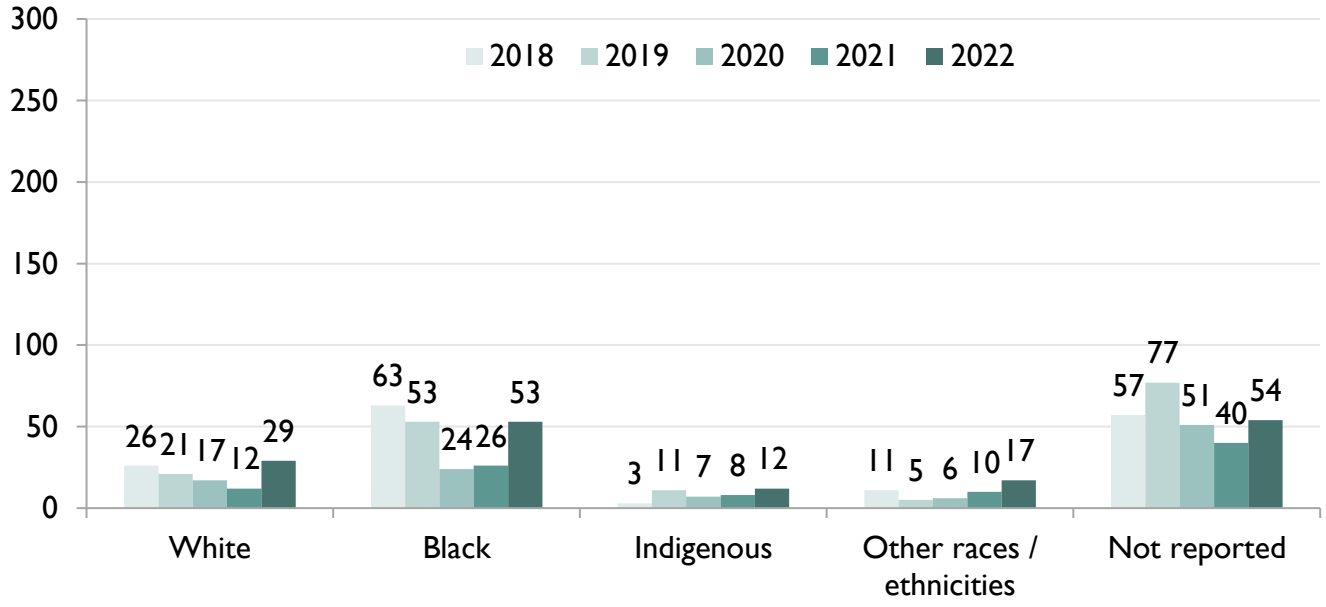
Notes: Data provided by Public Health Ontario Laboratory. First-time diagnoses where race/ethnicity was not reported were excluded (average of 30.1% of diagnoses per year). See Appendices for more information. See Tables Supplement for underlying data.

4.ii. Females by race/ethnicity

Of the 165 first-time HIV diagnoses among females in 2022, 111 (67.3%) reported information on race/ethnicity and 54 (32.7%) did not.

Of the 111 that did report race/ethnicity, the largest proportion was attributed to Black females (47.7%), followed by White (26.1%), other race/ethnicities (15.3%) and Indigenous (10.8%) females. The other race/ethnicities category collapsed all other known race/ethnicity categories due to small counts.

Figure 4.8 Number of first-time HIV diagnoses by race/ethnicity, females, Ontario, 2017 to 2022



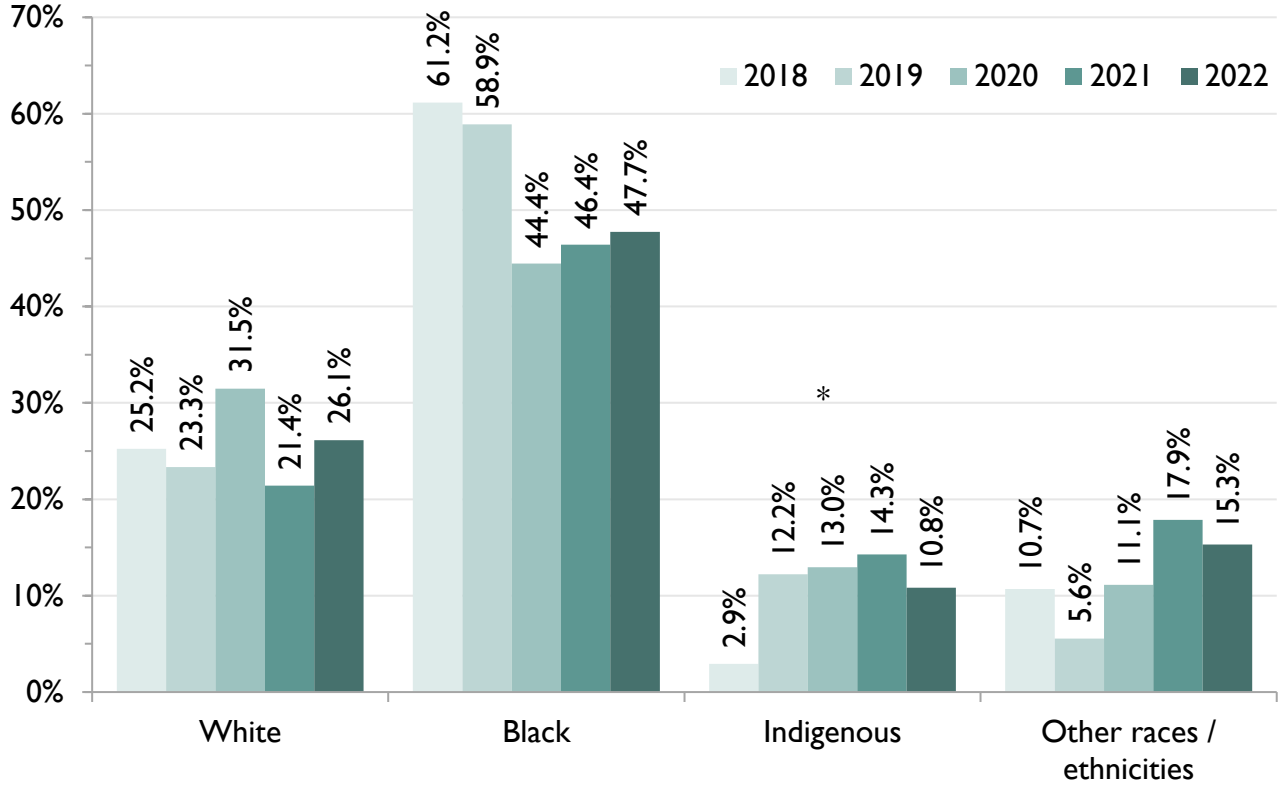
Snapshot

Among the 111 first-time HIV diagnoses among females with a reported race/ethnicity in 2022, 53 were in Black females, 29 in White females, 17 in females of other races/ethnicities and 12 in Indigenous females.

Compared to 2019, the largest relative increase in first-time HIV diagnoses in 2022 among females was among females of other races/ethnicities (240.0%), followed by White females (38.1%) and Indigenous females (9.1%). There was no change in the number of first-time HIV diagnoses in Black females in 2022 compared to 2019.

Notes: Data provided by Public Health Ontario Laboratory. See Appendices for more information. See Tables Supplement for underlying data.

Figure 4.9 Percent of first-time HIV diagnoses by race/ethnicity (where reported), females, Ontario, 2018 to 2022



Snapshot

In 2022, among the 111 first-time HIV diagnoses in females with a reported race/ethnicity, Black females accounted for the largest proportion (47.7%), followed by White females (26.1%), females of other races/ethnicities (15.3%) and Indigenous females (10.8%).

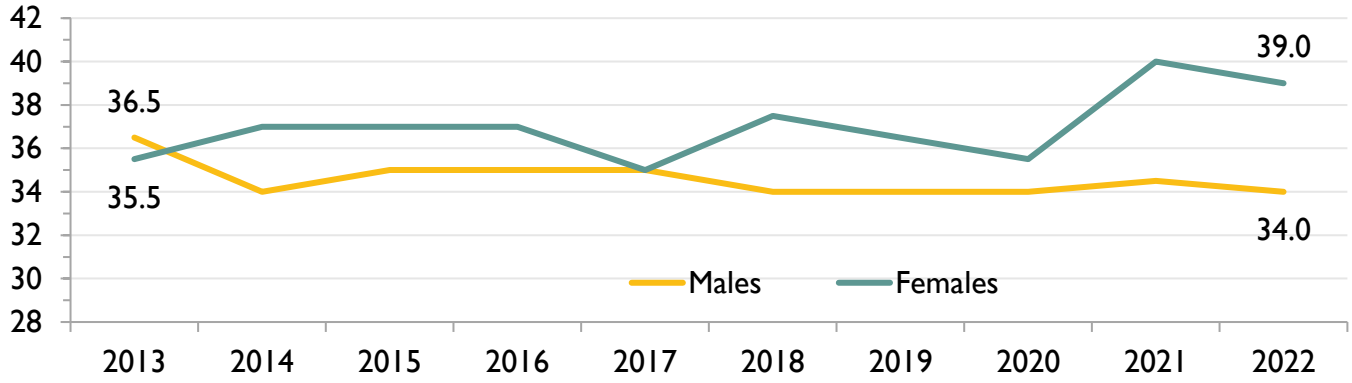
Since 2018, Black females accounted for the largest proportions of first-time HIV diagnoses among females, even after a sustained decrease since 2020. The proportion of first-time HIV diagnoses among females remained relatively stable between 2019 and 2022 among White females and Indigenous females and has increased among females of other races/ethnicities.

Notes: Data provided by Public Health Ontario Laboratory. * denotes a proportion based on at least one count of <5, therefore proportions may be unstable and trends should be interpreted with caution. First-time diagnoses where race/ethnicity was not reported were excluded (average of 40.9% of diagnoses per year). See Appendices for more information. See Tables Supplement for underlying data.

5. Overall by age

Among males, the median age of first-time HIV diagnoses decreased over time from 36.5 years in 2013 to 34.0 years in 2022. Among females, the median age of first-time HIV diagnoses increased from 35.5 years in 2013 to 39.0 years in 2022. In 2022, among males, those aged 30-34 years had the highest rate and accounted for the largest proportion of first-time HIV diagnoses (18.9 per 100,000; 23.6%). Among females, those aged 35-39 years had the highest rates and accounted for the largest proportions of first-time HIV diagnoses among females (5.2 per 100,000; 16.4%). Rates per 100,000 people decreased in nearly all categories in 2022 compared to 2019.

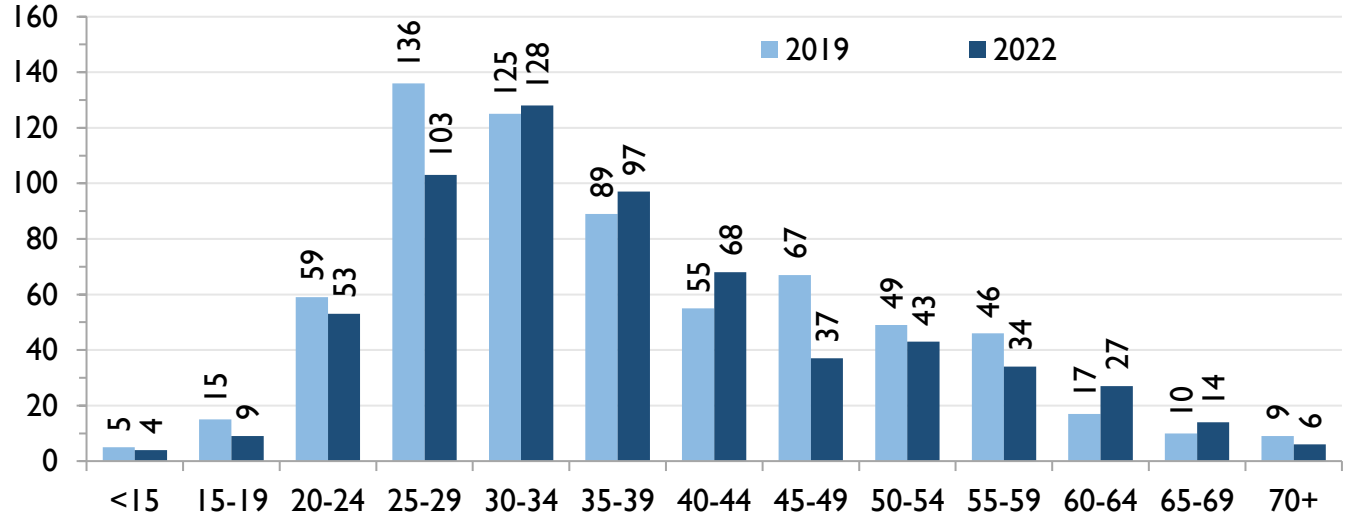
Figure 5.1 Median age of first-time HIV diagnoses by sex, Ontario, 2013 to 2022



Snapshot

In 2022, the median age of first-time HIV diagnoses was 34.0 years among males and 39.0 years among females. Between 2013 and 2022, the median age of first-time HIV diagnoses decreased from 36.5 to 34.0 years among males and increased from 35.5 to 39.0 years among females.

Figure 5.2 Number of first-time HIV diagnoses by age, Ontario, 2019-2022

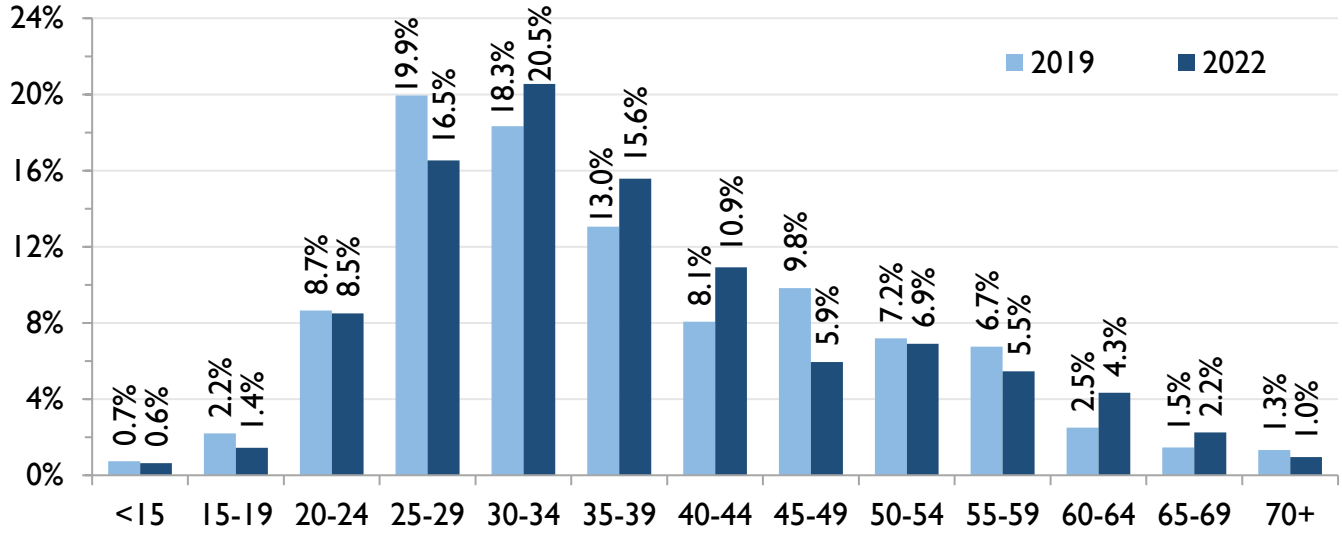


Snapshot

In 2022, those aged 30-34 years accounted for the largest number of first-time HIV diagnoses (128), followed by those aged 25-29 years (103) and those aged 35-39 years (97), whereas in 2019 those aged 25-29 years accounted for the largest number of first-time HIV diagnoses (136).

Notes: Data provided by Public Health Ontario Laboratory. First-time diagnoses with sex and age not reported were excluded (less than 1%). See Appendices for more information. See Tables Supplement for underlying data.

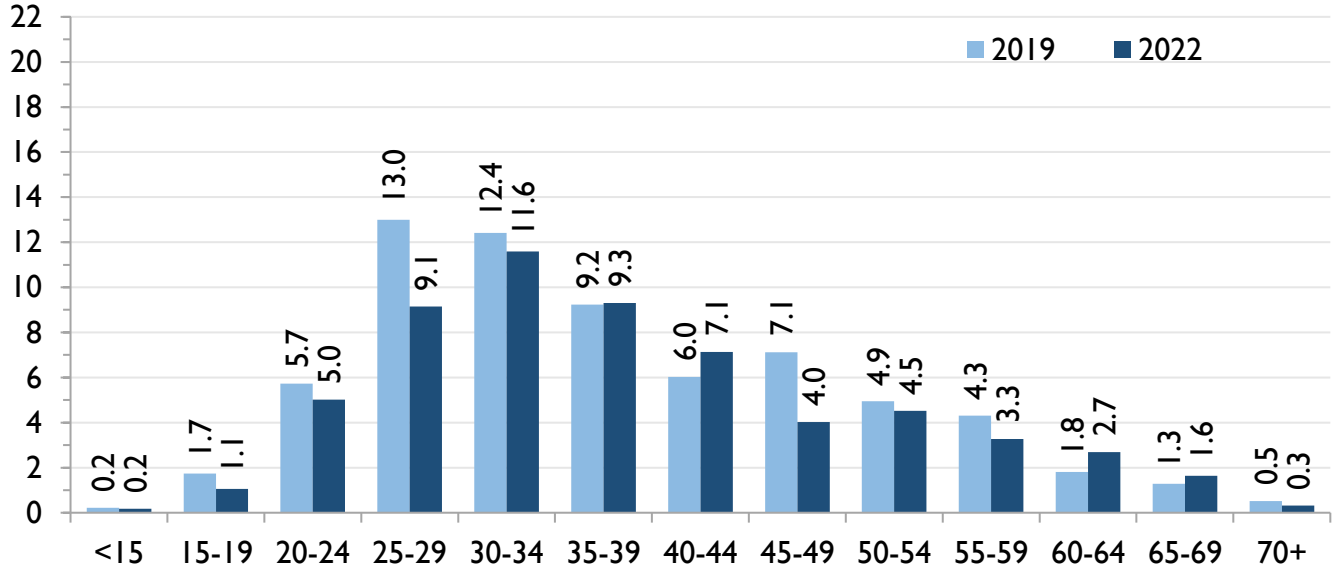
Figure 5.3 Percent of first-time HIV diagnoses by age, Ontario, 2019 and 2022



Snapshot

In 2022, 1 in 5 (20.5%) first-time HIV diagnoses were among those aged 30-34 years, an increase from 2019. The second largest proportion in 2022 was among those aged 25-29 years (16.5%), a decrease from 2019.

Figure 5.4 Rate of first-time HIV diagnoses per 100,000 people by age, Ontario, 2019 to 2022

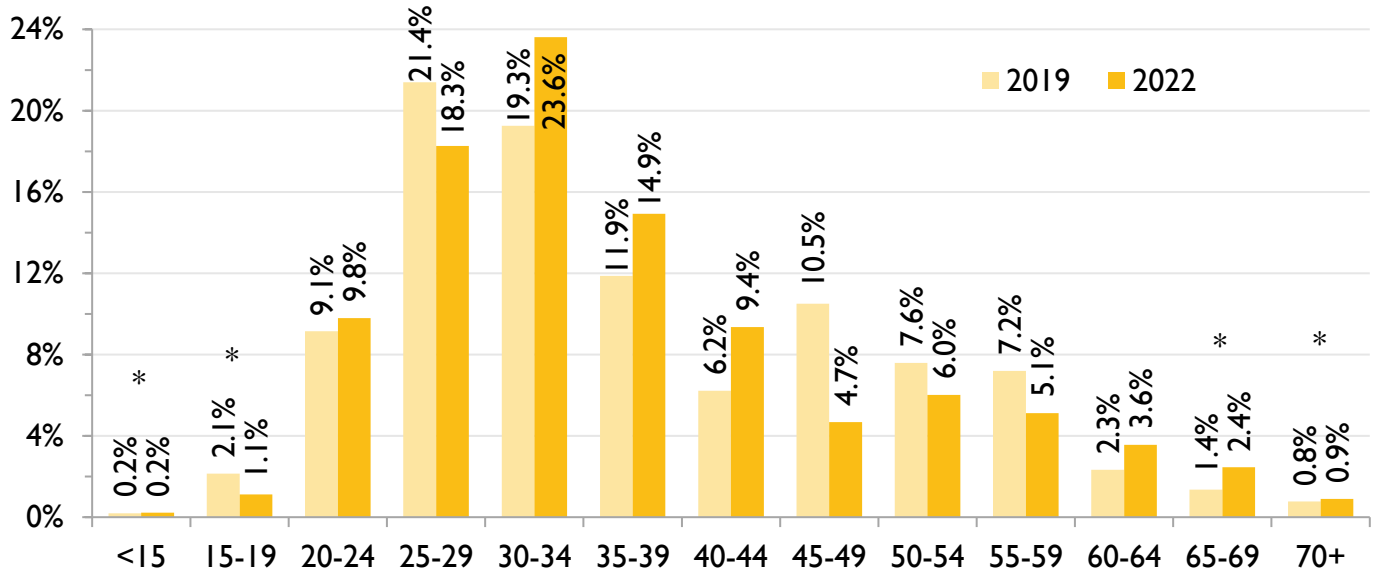


Snapshot

In 2022, the rate of first-time HIV diagnoses per 100,000 people was highest among those aged 30-34 years (11.6 per 100,000 people), a 6.6% relative decrease from 2019 and a change from 2019 when the rate was highest among those aged 25-29 years. The rate of first-time HIV diagnoses among those aged 25-29 had a relative decrease of 29.6% from 2019 to 2022, and remained stable in the 35-39 years old category. The largest relative decrease was seen among those aged 45-49 (43.6%).

Notes: Data provided by Public Health Ontario Laboratory. * denotes a proportion or rate based on at least one count of <5, therefore proportions may be unstable and trends should be interpreted with caution. Rates calculated using Statistics Canada population estimates for all ages, accessed 08/14/2023. First-time diagnoses with age not reported were excluded (less than 1%). See Appendices for more information. See Tables Supplement for underlying data.

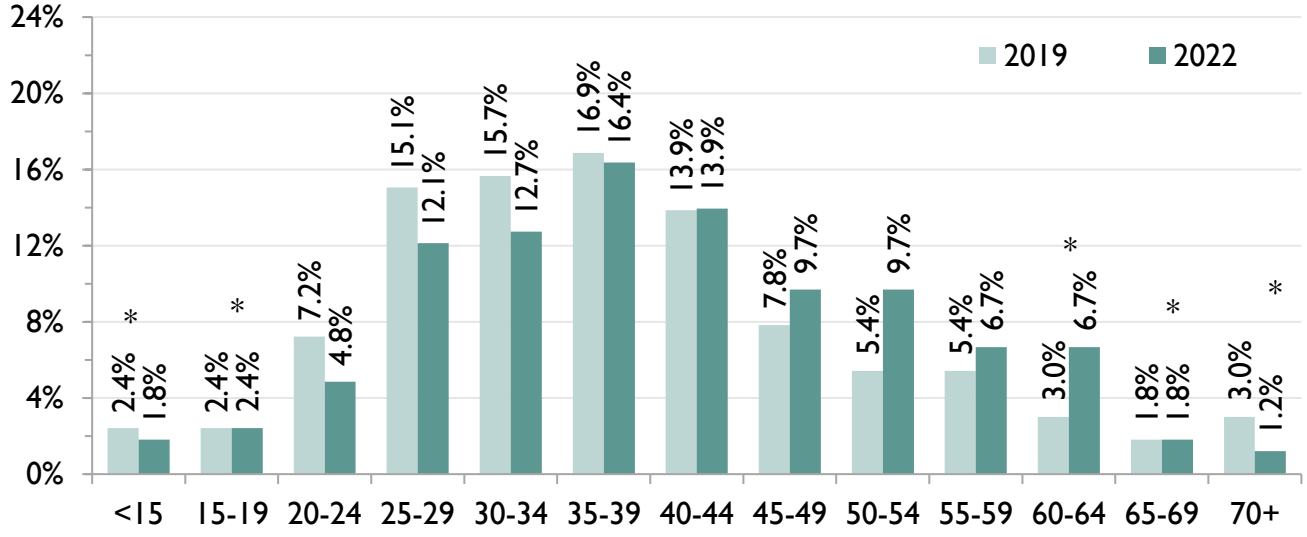
Figure 5.5 Percent of first-time HIV diagnoses by age, males, Ontario, 2019 and 2022



Snapshot

In 2022, 23.6% of first-time HIV diagnoses among males was in those aged 30-34 years, followed by males aged 25-29 (18.3%) and 35-39 years (14.9%). In 2022, the largest proportion of first-time among males was in the 30-34 age category whereas in 2019 it was in the 25-29 age category.

Figure 5.6 Percent of first-time HIV diagnoses by age, females, Ontario, 2019 and 2022

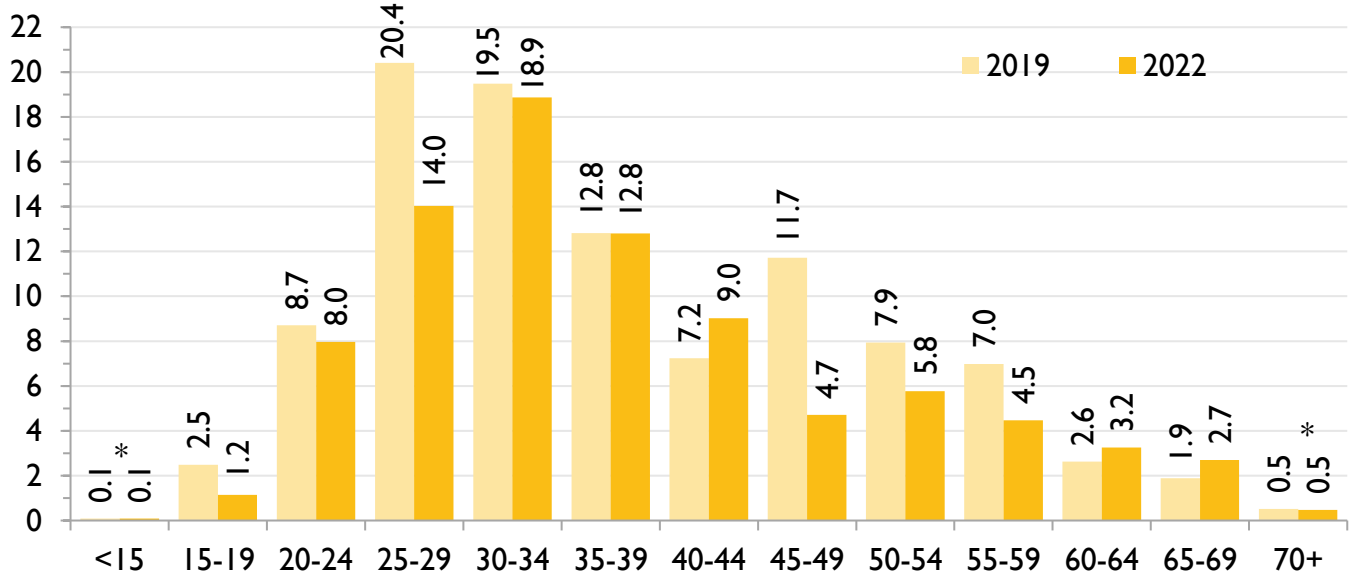


Snapshot

In 2022, the largest proportions of first-time HIV diagnoses among females were in those aged 35-39 years (16.4%) and 40-44 years (13.9%). There was a decrease in the proportion of first-time HIV diagnoses in 2022 compared to 2019 in younger (20-24, 25-29, 30-34) age categories and an increase in the proportion within older age categories (45-49, 50-54, 55-59, 60-64).

Notes: Data provided by Public Health Ontario Laboratory. * denotes a proportion based on at least one count of <5, therefore proportions may be unstable and trends should be interpreted with caution. First-time diagnoses with sex and age not reported were excluded (less than 1%). See Appendices for more information. See Tables Supplement for underlying data.

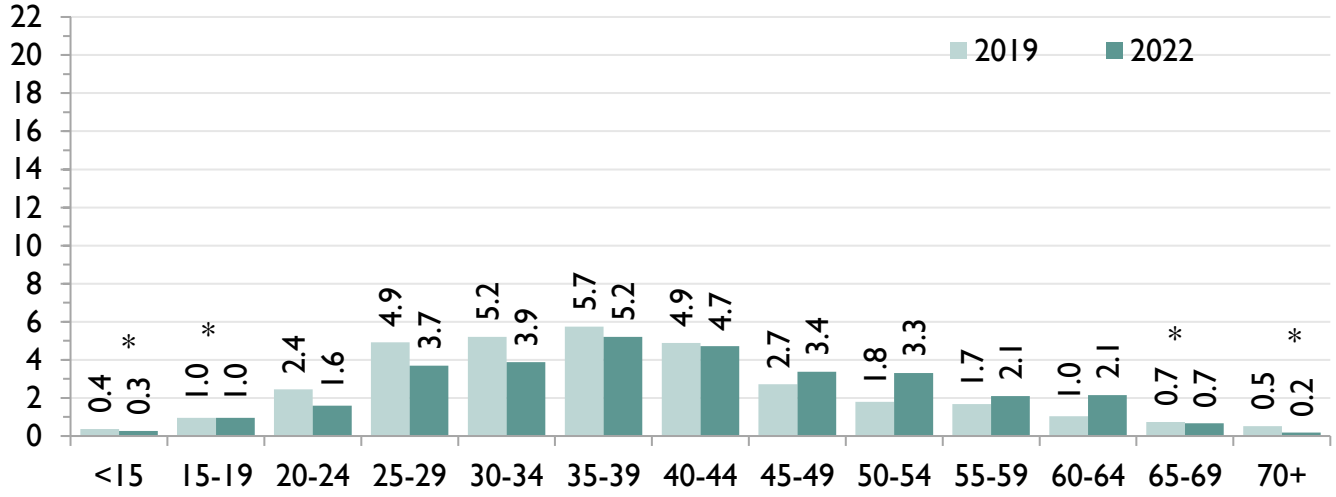
Figure 5.7 Rate of first-time HIV diagnoses per 100,000 people by age, males, Ontario, 2019 and 2022



Snapshot

In 2022, the highest rate of first-time HIV diagnoses among males was in those aged 30-34 years (18.9 per 100,000 males), whereas those aged 25-29 years had the highest rate in 2019 (20.4 per 100,000 males). Compared to 2019, the rate of first-time HIV diagnoses among males decreased in most of the age categories in 2022, with the largest relative decrease among those aged 40-45 (59.8%), followed by 15-19 (small numbers, 53.8%). An increase was seen in those aged 40-44, 60-64 and 65-69 years.

Figure 5.8 Rate of first-time HIV diagnoses per 100,000 people by age, females, Ontario, 2019 and 2022



Snapshot

In 2022, the highest rate of first-time HIV diagnoses among females was in those aged 35-39 (5.2 per 100,000 females), followed by 40-44 years (4.7 per 100,000 females). Compared to 2019, in 2022 the rate of first-time HIV diagnoses among females saw the largest relative decrease in younger age categories - 20-24 (35.1%), 30-34 (25.6%) and 25-29 (25.0%) and the largest relative increases among older age categories - 60-64 (106.5%), 50-54 (83.7%), 55-59 (25.7%) and 45-49 (24.5%).

Notes: Data provided by Public Health Ontario Laboratory. * denotes a rate based on at least one count of <5, therefore rates may be unstable and trends should be interpreted with caution. Rates calculated using Statistics Canada population estimates for all ages, accessed 08/14/2023. First-time diagnoses with sex and age not reported were excluded (less than 1%). See Appendices for more information. See Tables Supplement for underlying data.

6. Overall by health region

Historically, HIV has been highly concentrated in more populated cities in Ontario – particularly Toronto.

Positive HIV test trends

In 2022, Toronto region had the largest number and highest rate per 100,000 people of positive HIV tests, overall and among males; however, the number and rate saw a decrease compared to 2019. Among females, Toronto region had the largest numbers of both positive HIV tests; however, the number and rate saw a decrease compared to 2019. Among females, the Ottawa region had the highest rate per 100,000 people of positive HIV tests (6.6) and no change compared to 2019.

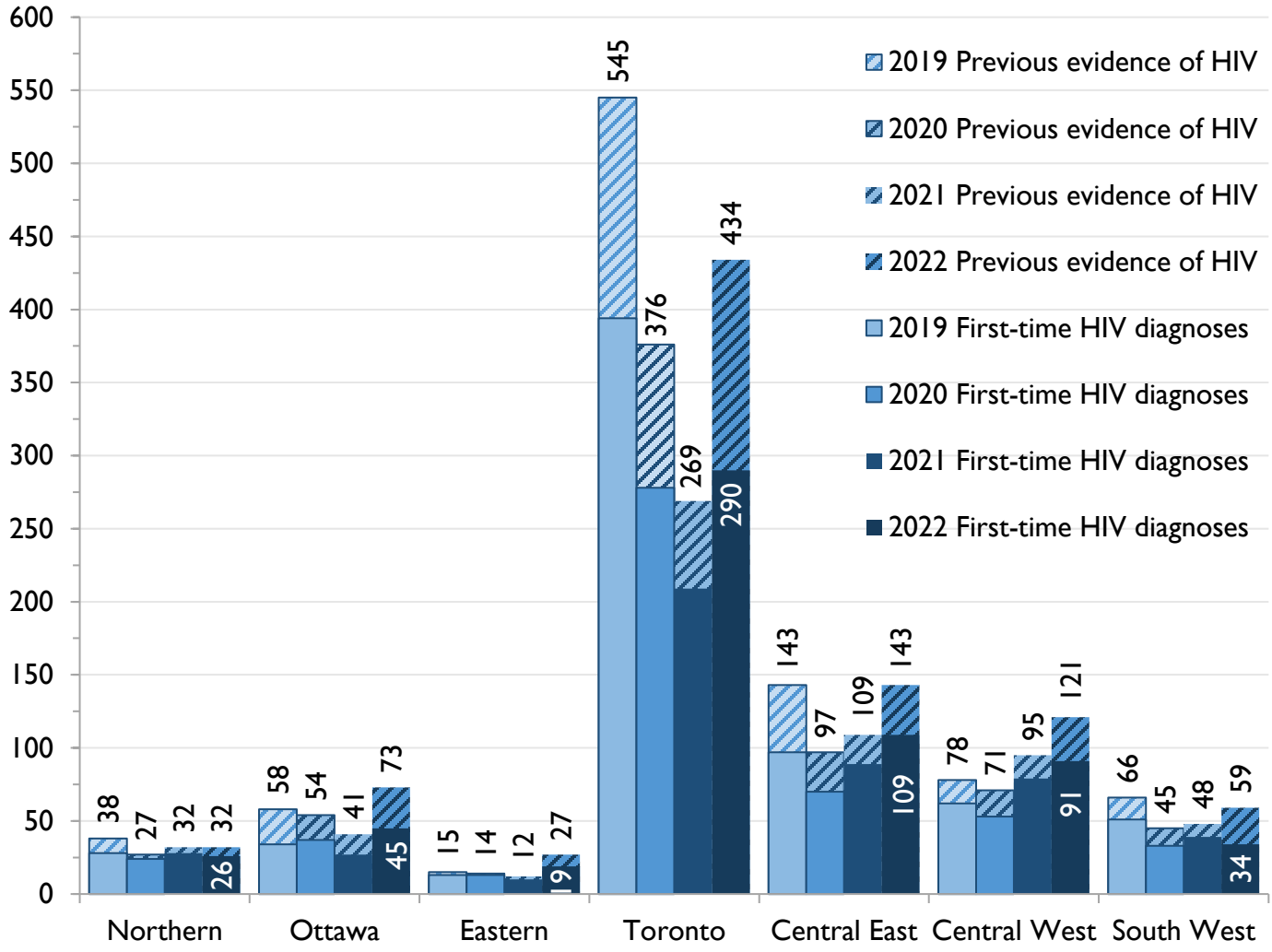
First time diagnoses trends

In 2022, the highest rate of first-time HIV diagnoses overall (9.6 per 100,000 people) and among males (15.2 per 100,000 people) was in the Toronto region and decreased compared to 2019, and the highest rate among females was tied between Toronto and Ottawa (both 3.9 per 100,000 people), a decrease in Toronto and similar in Ottawa compared to 2019.

Previous evidence of HIV trends

In 2022, the South West region has the largest proportion of people with previous evidence of HIV (42.4%), followed by Ottawa (38.4%) and Toronto (33.2%) regions.

Figure 6.1 Number of positive HIV tests by health region by first-time HIV diagnoses and previous evidence of HIV, Ontario, 2019 to 2022



Snapshot

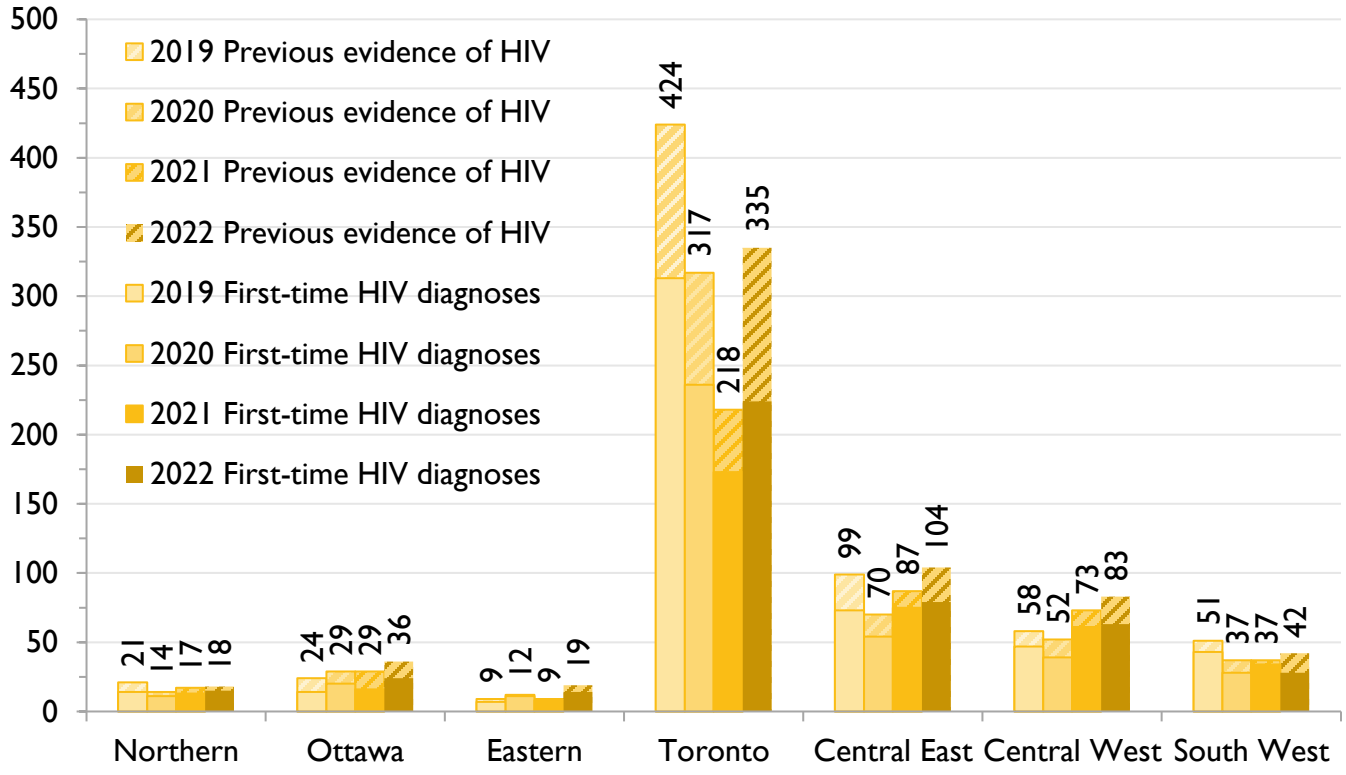
In 2022, Toronto region had the largest number (434) of positive HIV tests, followed by Central East (143), Central West (121), Ottawa (73) and South West (59), Northern (32) and Eastern (27) regions. Compared to 2019, the largest relative increase in the number of positive HIV tests was seen in the Eastern (80.0%) region, followed by Central West (55.1%) and Ottawa (25.9%) regions, whereas the largest relative decrease was in the Toronto (20.4%) followed by Northern (15.8%) and South West (10.6%).

In 2022, South West region had the largest proportion of people with previous evidence of HIV (42.4%), followed by Ottawa (38.4%), Toronto (33.2%), Eastern (29.6%), Central West (24.8%), Central East (23.8%) and Northern (18.8%) regions.

See **Table 6.1** below for breakdown of numbers of positive HIV tests for all regions.

Notes: Data provided by Public Health Ontario Laboratory. Health regions are groupings of Public Health Units. Diagnoses were assigned to a health region based on their address of residence or, if unreported, the address of the ordering provider. See Appendices and specifically Health regions for more information. See Tables Supplement for underlying data.

Figure 6.2 Number of positive HIV tests by health region by first-time HIV diagnoses and previous evidence of HIV, males, Ontario, 2019 to 2022



Snapshot

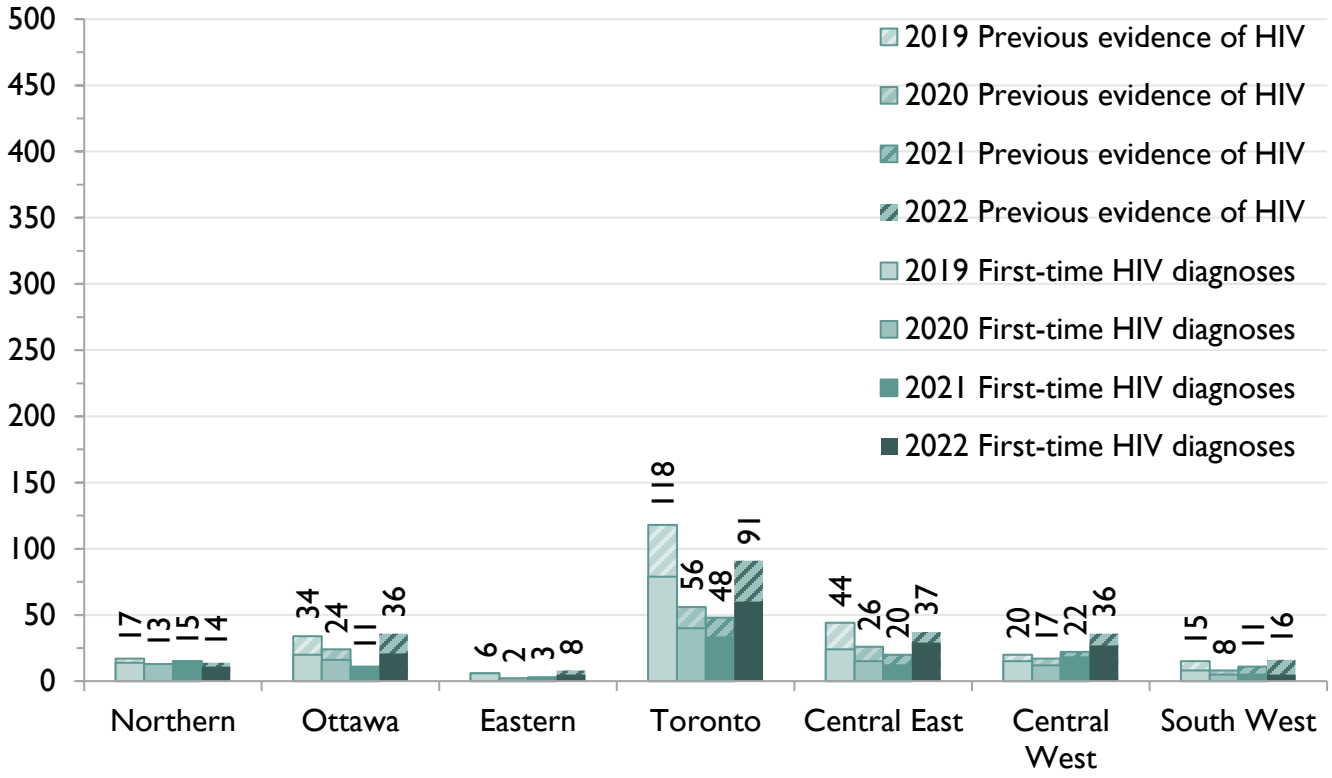
In 2022, among males, Toronto region had the largest number (335) of positive HIV tests, followed by Central East (104), Central West (83), South West (42), Ottawa (36), Eastern (19) and Northern (18) regions. In 2022, among males, compared to 2019, the largest relative increases in numbers of positive HIV tests were in Eastern (111.1%) region, followed by Ottawa (50.0%), Central West (43.1%) and Central East (5.1%) regions; the largest relative decreases were in the Toronto (21.0%), South West (17.6%) and Northern (14.3%) regions.

In 2022, among males, Ottawa and South West regions had the largest proportion of people with previous evidence of HIV (33.3% each), followed by Toronto (33.1%), Eastern (26.3%), Central West (24.1%), Central East (24.0%) and Northern (16.7%) regions. Compared to 2019, the number of males with previous evidence of HIV in 2022 increased in Eastern (150.0% relative increase, based on small numbers), Central West (81.1%), South West (75.0%) and Ottawa (20.0%) regions, remained stable in Toronto (0.0%) and Central East (3.8% relative increase) and had a relative decrease in the Northern (57.1%) region.

See **Table 6.1** below for breakdown of numbers of positive HIV tests, overall and by sex, for all regions.

Notes: Data provided by Public Health Ontario Laboratory. Health regions are groupings of Public Health Units. Diagnoses were assigned to a health region based on their address of residence or, if unreported, the address of the ordering provider. See Appendices and specifically Health regions for more information. See Tables Supplement for underlying data.

Figure 6.3 Number of positive HIV tests by health region by first-time HIV diagnoses and previous evidence of HIV, females, Ontario, 2019 to 2022



Snapshot

In 2022, among females, Toronto region had the largest number (91) of positive HIV tests, followed by Central East (37), Central West (36), Ottawa (36), South West (16), Northern (14) and Eastern (8) regions. In 2022, among females, compared to 2019, the largest relative increases in numbers of positive HIV tests were in Central West (80.0%), Eastern (33.3%) region, South West (6.7%) and Ottawa (5.9%) regions; the largest relative decreases were in the Toronto (22.9%), Northern (17.6%), and Central East(15.9%) regions.

In 2022, among females, South West region had the largest proportion of its positive HIV tests with previous evidence of HIV (68.8%), followed by Ottawa (41.7%), Eastern (37.5%), Toronto (34.1%), Central West (25.0%), Central East (21.6%) and Northern (21.4%) regions. Compared to 2019, the number of females with previous evidence of HIV in 2022 increased Central West (80.0%), South West (57.1%) and Ottawa (7.1%) regions, no change in the Northern region, and had a relative decrease in Toronto (20.5%) and Central East (60.0%) regions.

See **Table 6.1** below for breakdown of numbers of positive HIV tests, overall and by sex, for all regions.

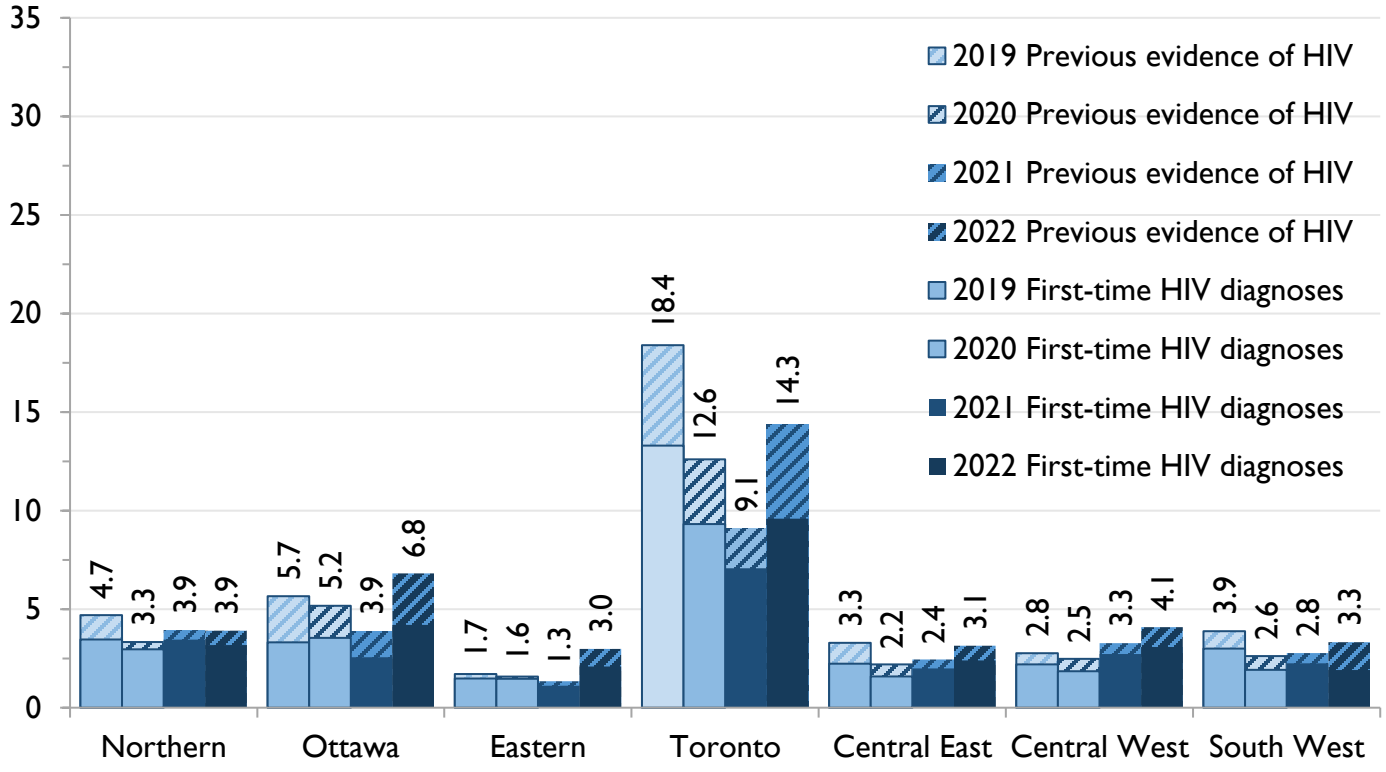
Notes: Data provided by Public Health Ontario Laboratory. Health regions are groupings of Public Health Units. Diagnoses were assigned to a health region based on their address of residence or, if unreported, the address of the ordering provider. See Appendices and specifically Health regions for more information. See Tables Supplement for underlying data.

Table 6.1 Number of positive HIV tests by health region by first-time HIV diagnoses and previous evidence of HIV, overall, males and females, Ontario, 2022

		Northern	Ottawa	Eastern	Toronto	Central East	Central West	South West
Overall	First-time HIV diagnoses	26	45	19	290	109	91	34
	Previous evidence of HIV	6	28	8	144	34	30	25
	Total positive HIV tests	32	73	27	434	143	121	59
Males	First-time HIV diagnoses	15	24	14	224	79	63	28
	Previous evidence of HIV	3	12	5	111	25	20	14
	Total positive HIV tests	18	36	19	335	104	83	42
Females	First-time HIV diagnoses	11	21	5	60	29	27	5
	Previous evidence of HIV	3	15	3	31	8	9	11
	Total positive HIV tests	14	36	8	91	37	36	16

Notes: Data provided by Public Health Ontario Laboratory. Health regions are groupings of Public Health Units. Diagnoses were assigned to a health region based on their address of residence or, if unreported, the address of the ordering provider. See Appendices and specifically Health regions for more information. See Tables Supplement for underlying data.

Figure 6.4 Rate of positive HIV tests per 100,000 people by health region, Ontario, 2019 to 2022

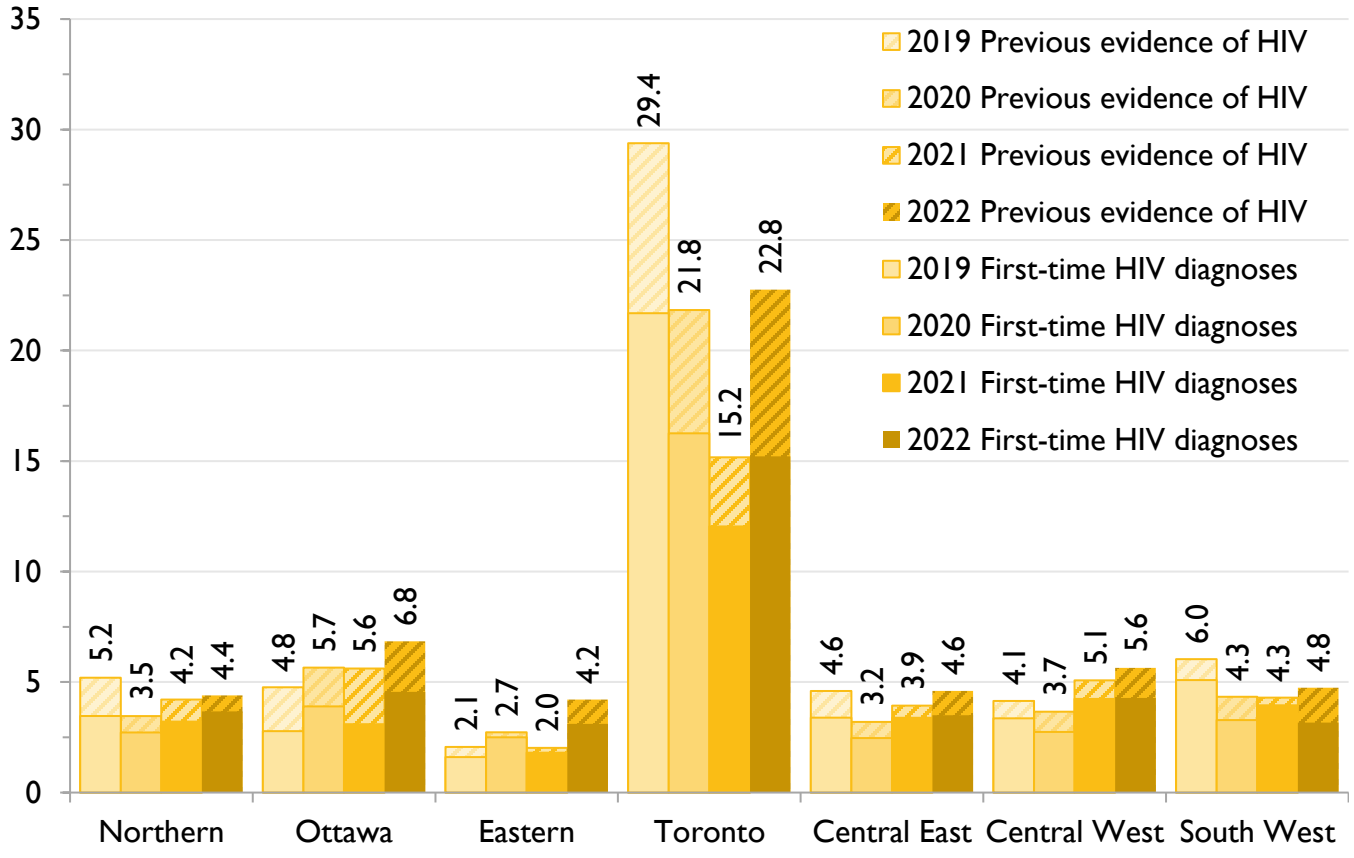


Snapshot

In 2022, Toronto region had the highest rate of positive HIV tests per 100,000 people (14.3), followed by Ottawa (6.8), Central West (4.1), Northern (3.9), South West (3.3), Central East (3.1) and Eastern (3.0) regions. Compared to 2019, the rate of positive HIV tests per 100,000 people in 2022 decreased in Toronto (22.0% relative decrease), Northern (16.9%), South West (14.2%) and Central East (4.5%) regions and had a relative increase in Eastern (74.1%), Central West (44.9%) and Ottawa (20.4%) regions.

Notes: Data provided by Public Health Ontario Laboratory. Health regions are groupings of Public Health Units. Diagnoses were assigned to a health region based on their address of residence or, if unreported, the address of the ordering provider. Rates calculated using Statistics Canada population estimates for all ages, accessed 08/14/2023. See Appendices and specifically Health regions for more information. See Tables Supplement for underlying data.

Figure 6.5 Rate of positive HIV tests per 100,000 people by health region, males, Ontario, 2019 to 2022

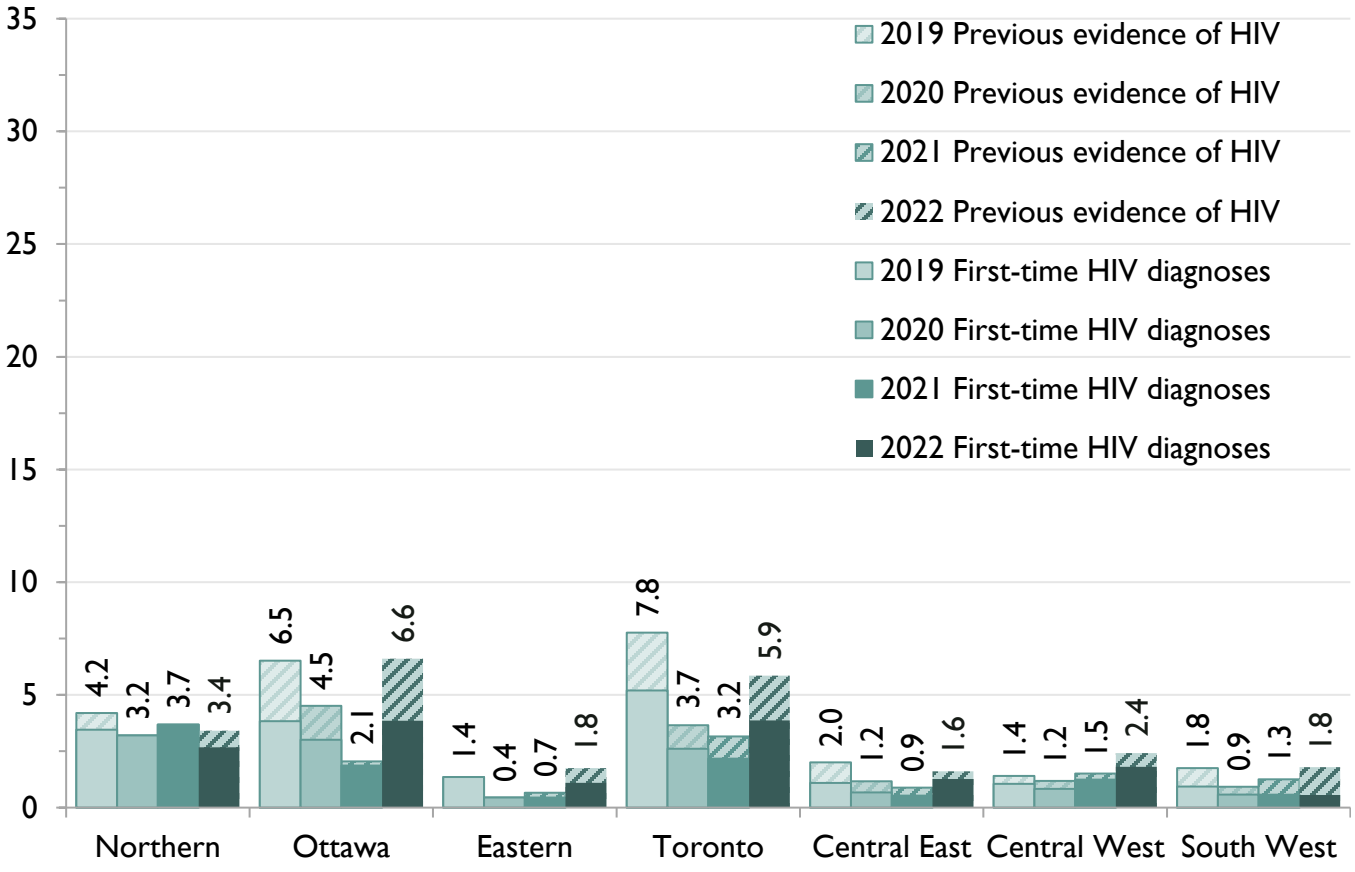


Snapshot

In 2022, among males, Toronto region had the highest rate of positive HIV tests per 100,000 males (22.8), followed by Ottawa (6.8), Central West (5.6), South West (4.8), Central East (4.6), Northern (4.4), and Eastern (4.2) regions. Compared to 2019, the rate of positive HIV tests per 100,000 males decreased in Toronto (22.5% relative decrease), South West (21.3%) and Northern (15.3%) regions, remained stable in Central East and had a relative increase in Eastern (104.1%), Ottawa (43.5%), Central West (36.0%) regions.

Notes: Data provided by Public Health Ontario Laboratory. Health regions are groupings of Public Health Units. Diagnoses were assigned to a health region based on their address of residence or, if unreported, the address of the ordering provider. Rates calculated using Statistics Canada population estimates for all ages, accessed 08/14/2023. See Appendices and specifically Health regions for more information. See Tables Supplement for underlying data.

Figure 6.6 Rate of positive HIV tests per 100,000 people by health region, females, Ontario, 2019 to 2022

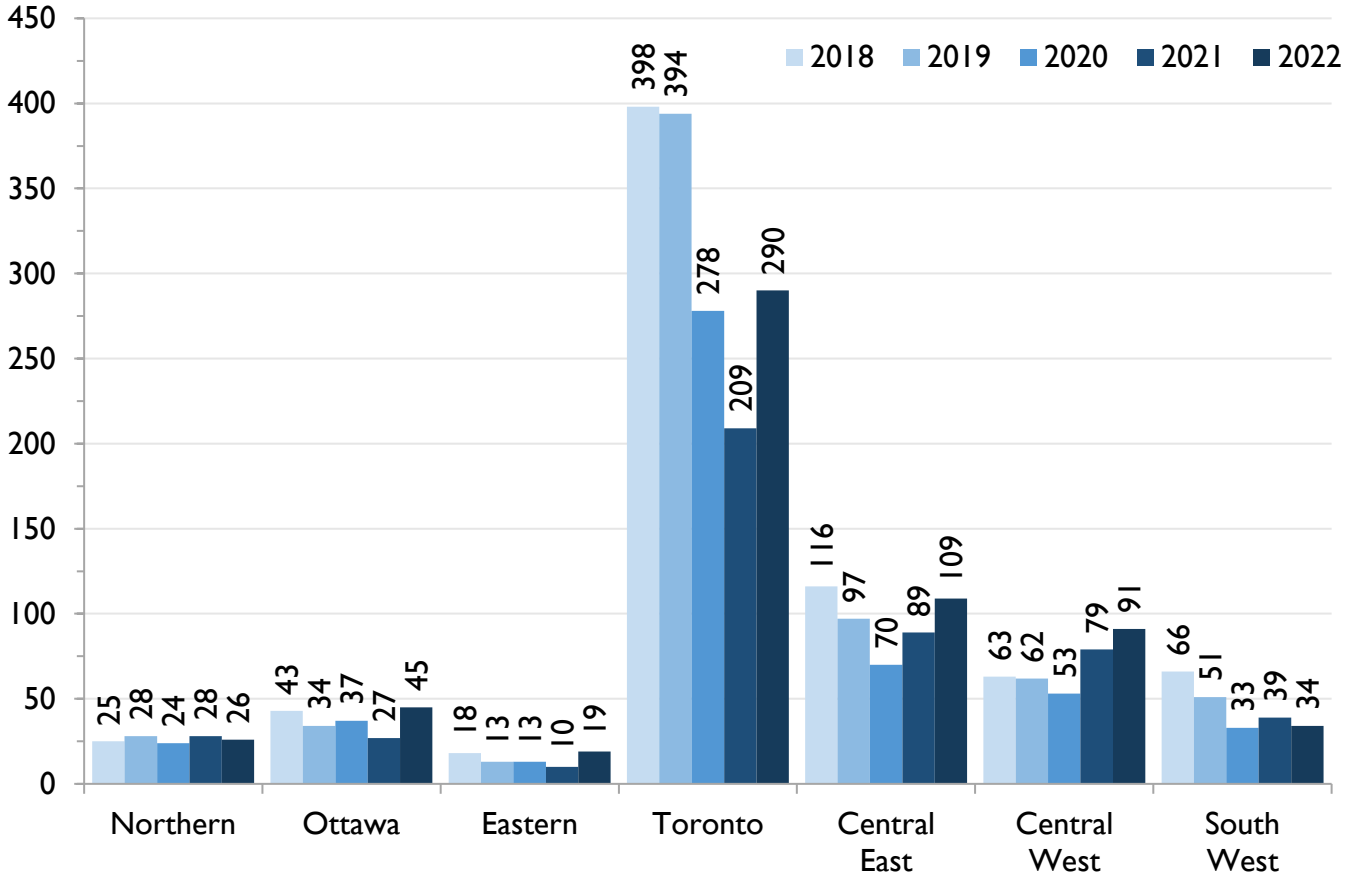


Snapshot

Among females in 2022, Ottawa region had the highest rate of positive HIV tests per 100,000 females (6.6) followed by Toronto (5.9) Northern (3.4), Central West (2.4), Eastern (1.8), South West (1.8) and Central East (1.6) regions. Compared to 2019, the rate of positive HIV tests per 100,000 females in 2022 increased in Central West (72.1% relative increase), Eastern (29.0%), South West (2.7%), remained stable in Ottawa, and had a relative decrease in Toronto (24.6%), Central East (19.5%) and Northern (18.8%) regions.

Notes: Data provided by Public Health Ontario Laboratory. Health regions are groupings of Public Health Units. Diagnoses were assigned to a health region based on their address of residence or, if unreported, the address of the ordering provider. Rates calculated using Statistics Canada population estimates for all ages, accessed 08/14/2023. See Appendices and specifically Health regions for more information. See Tables Supplement for underlying data.

Figure 6.7 Number of first-time HIV diagnoses by health region, Ontario, 2018 to 2022

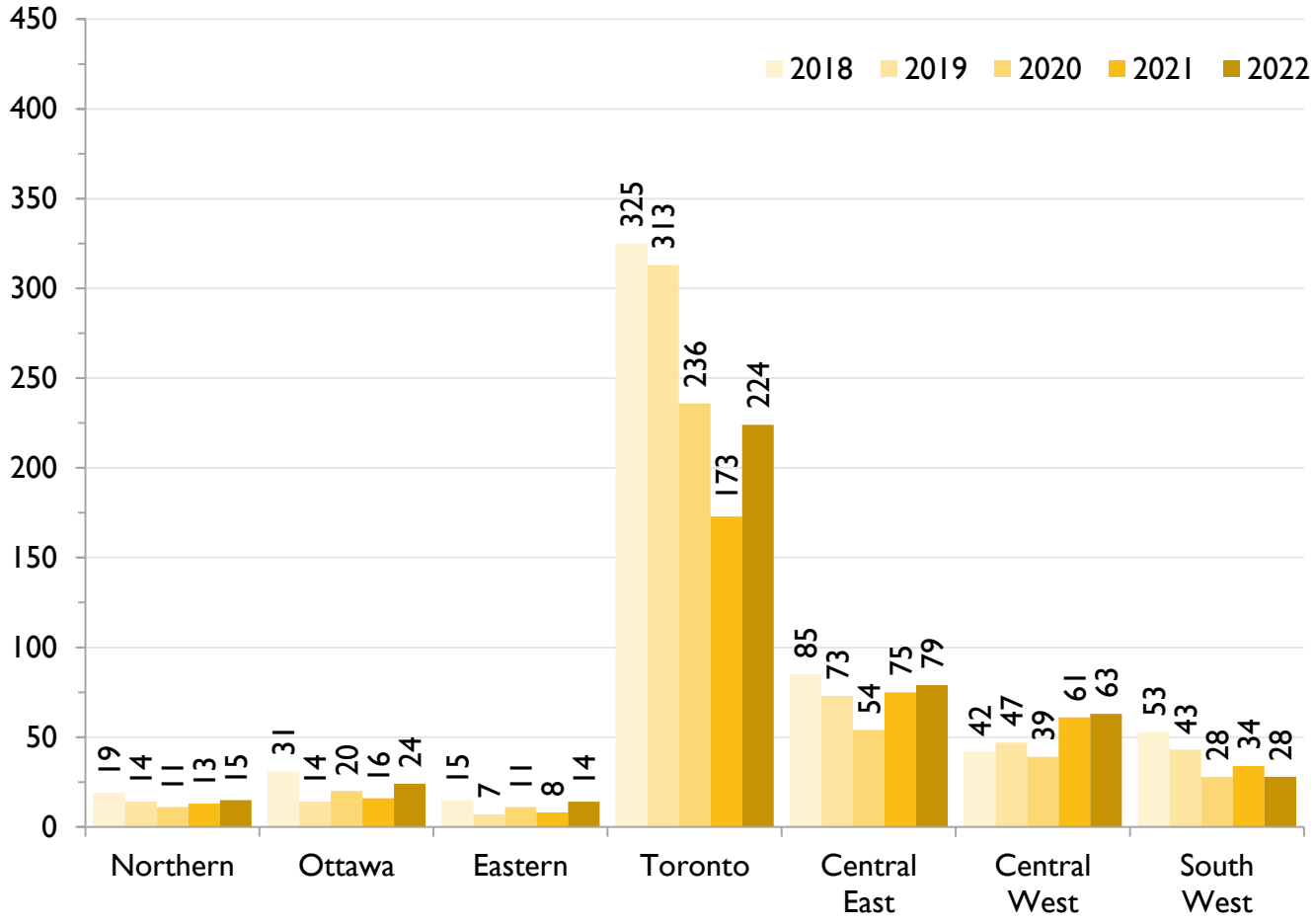


Snapshot

In 2022, Toronto region had the largest number of first-time HIV diagnoses (290), followed by Central East (109) and Central West (91), a pattern consistent with preceding years. Between 2019 and 2022, the number of first-time HIV diagnoses in 2022 increased in Ottawa (34 to 45, 32.4% relative increase), Eastern (13 to 19, 46.2%), Central East (97 to 109, 12.4%), and Central West (62 to 91, 46.8%) regions, and decreased in Toronto (394 to 290, 26.4% relative decrease) and South West (51 to 34, 33.3%) regions.

Notes: Data provided by Public Health Ontario Laboratory. Health regions are groupings of Public Health Units. Diagnoses were assigned to a health region based on their address of residence or, if unreported, the address of the ordering provider. See Appendices and specifically Health regions for more information. See Tables Supplement for underlying data.

Figure 6.8 Number of first-time HIV diagnoses by health region, males, Ontario, 2018 to 2022

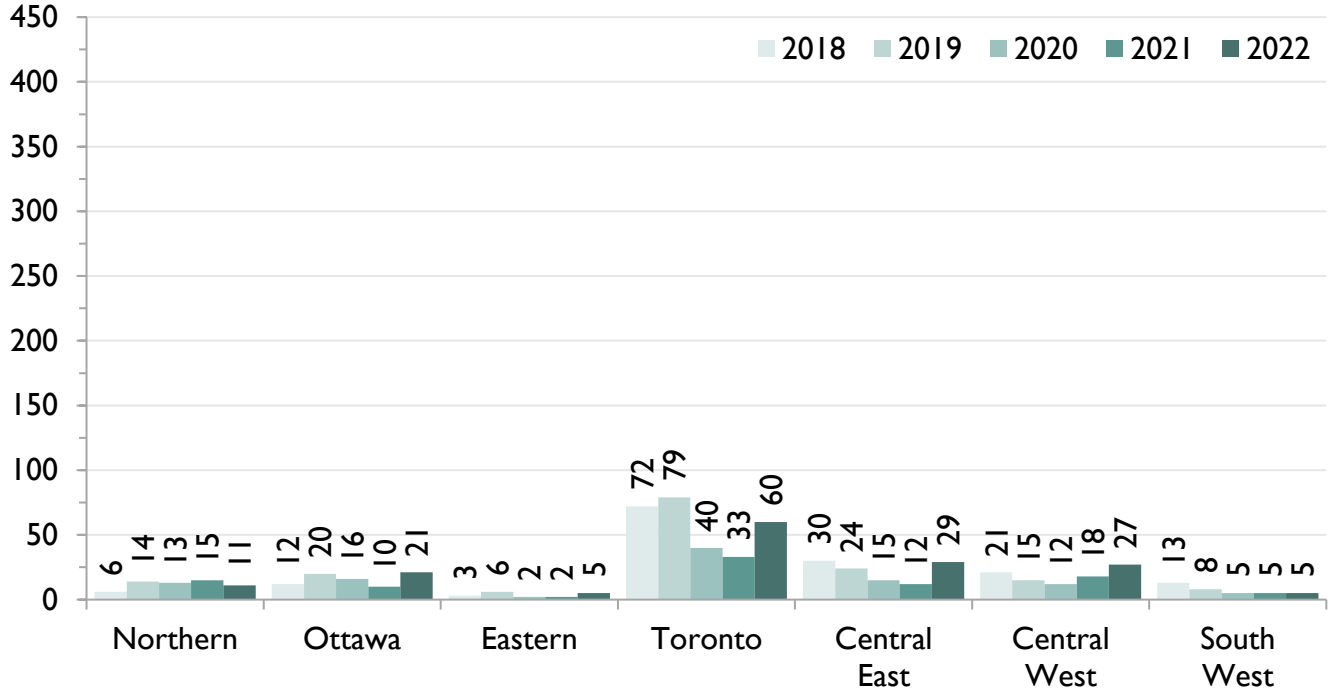


Snapshot

In 2022, Toronto region had the largest number of first-time HIV diagnoses among males (224), followed by Central East (79) and Central West (63), a pattern consistent with preceding years. Between 2019 and 2022, the number of first-time HIV diagnoses in males increased in Ottawa (14 to 24, 71.4% relative increase), Eastern (7 to 14, 100%), Central East (73 to 79, 8.2%), Central West (47 to 63, 34.0%), and Northern (14 to 15, 7.1%) regions, and decreased in Toronto (313 to 224, 28.4% relative decrease) and South West (43 to 28, 34.9%).

Notes: Data provided by Public Health Ontario Laboratory. Health regions are groupings of Public Health Units. Diagnoses were assigned to a health region based on their address of residence or, if unreported, the address of the ordering provider. See Appendices and specifically Health regions for more information. See Tables Supplement for underlying data.

Figure 6.9 Number of first-time HIV diagnoses by health region, females, Ontario, 2018 to 2022

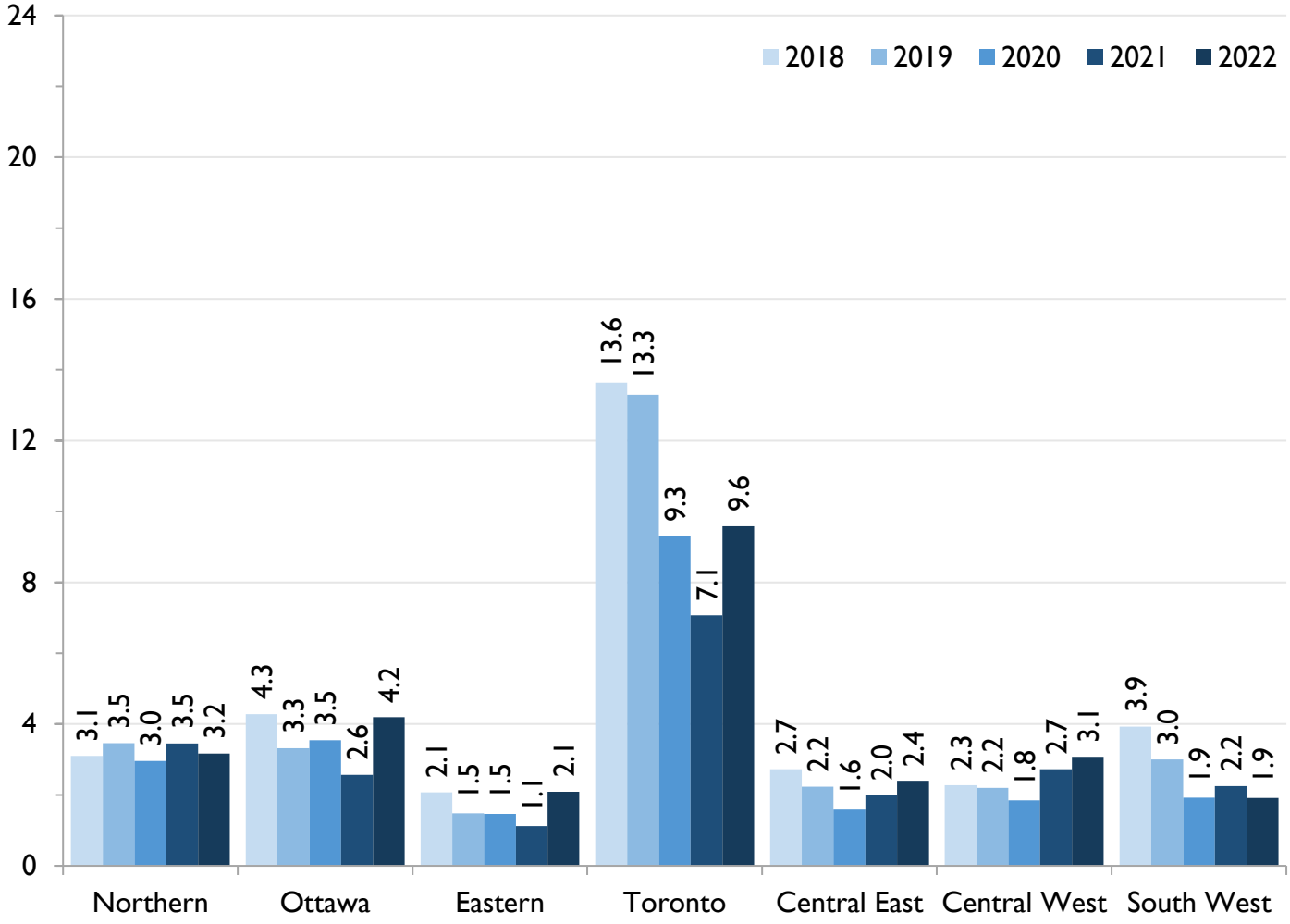


Snapshot

In 2022, Toronto region had the largest number of first-time HIV diagnoses among females (60), followed by Central East (29) and Central West (27), a pattern somewhat consistent with previous years except Ottawa sometimes having the second or third largest number, as in 2019 and 2020. Between 2019 and 2022, the number of first-time HIV diagnoses in females remained stable in Ottawa (20 to 21, 5.0% relative increase) increased in Central East (24 to 20.8%) and Central West (15 to 27, 80.0%) regions and decreased in Northern (14 to 11, 21.4% relative decrease) , Eastern (6 to 5, 16.7% based on small counts), Toronto (79 to 60, 24.1%) and South West (8 to 5, 37.5%) regions.

Notes: Data provided by Public Health Ontario Laboratory. Health regions are groupings of Public Health Units. Diagnoses were assigned to a health region based on their address of residence or, if unreported, the address of the ordering provider. See Appendices and specifically Health regions for more information. See Tables Supplement for underlying data.

Figure 6.10 Rate of first-time HIV diagnoses per 100,000 people by health region, Ontario, 2018 to 2022

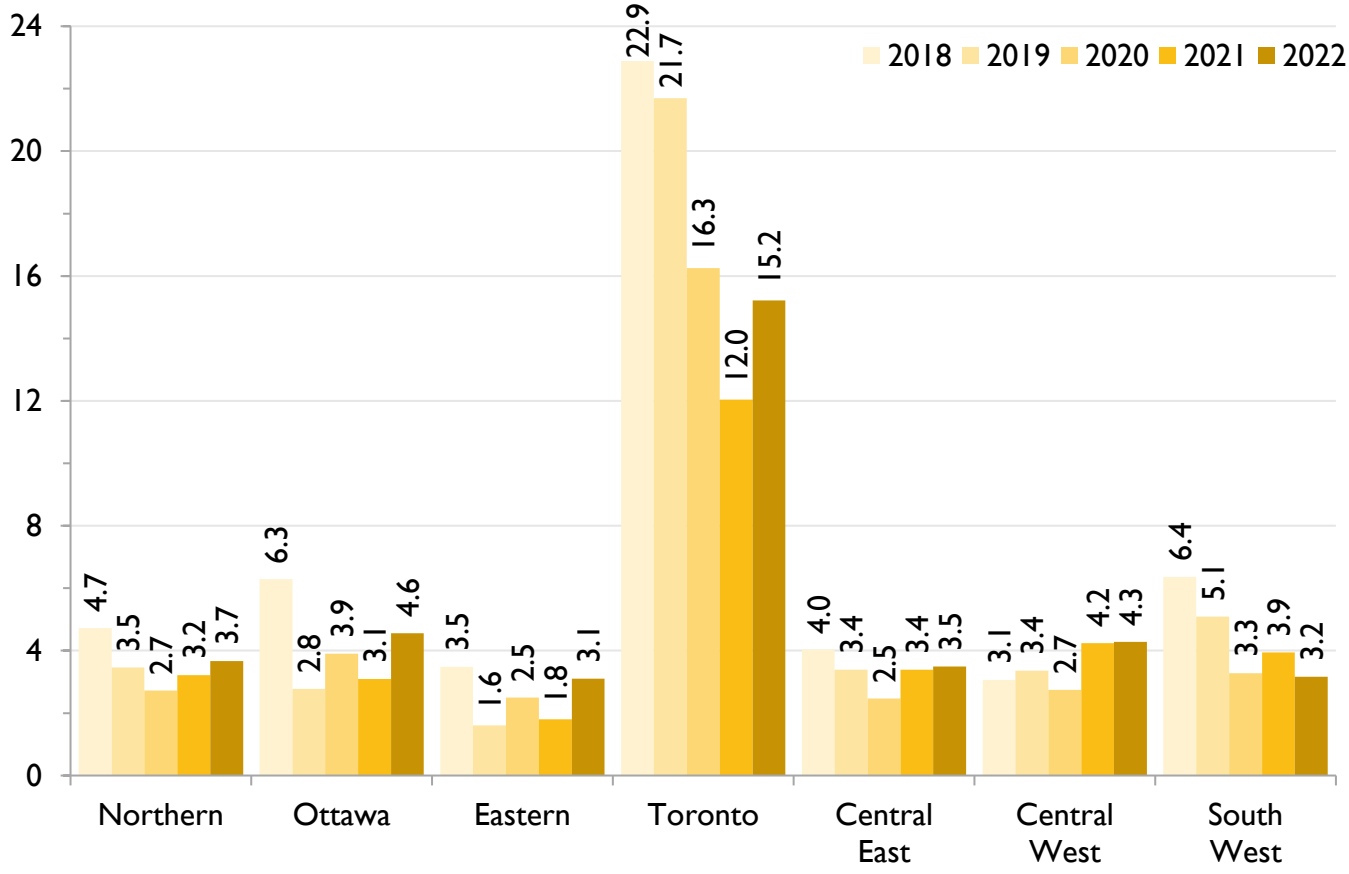


Snapshot

In 2022, Toronto region had the highest rate of first-time HIV diagnoses per 100,000 people (9.6), followed by Ottawa (4.2), Northern (3.2), Central West (3.1), Central East (2.4), Eastern (2.1) and South West (1.9), regions. Compared to 2019, the rate of first-time HIV diagnoses per 100,000 in 2022 decreased in South West region (36.0% relative decrease), Toronto (27.9%) and Northern (8.3%) regions, and had a relative increase in Eastern (41.4%), Central West (39.9%), Ottawa (26.6%) and Central East (7.3%) regions.

Notes: Data provided by Public Health Ontario Laboratory. Health regions are groupings of Public Health Units. Diagnoses were assigned to a health region based on their address of residence or, if unreported, the address of the ordering provider. Rates calculated using Statistics Canada population estimates for all ages, accessed 08/14/2023. See Appendices and specifically Health regions for more information. See Tables Supplement for underlying data.

Figure 6.11 Rate of first-time HIV diagnoses per 100,000 people by health region, males, Ontario, 2018 to 2022

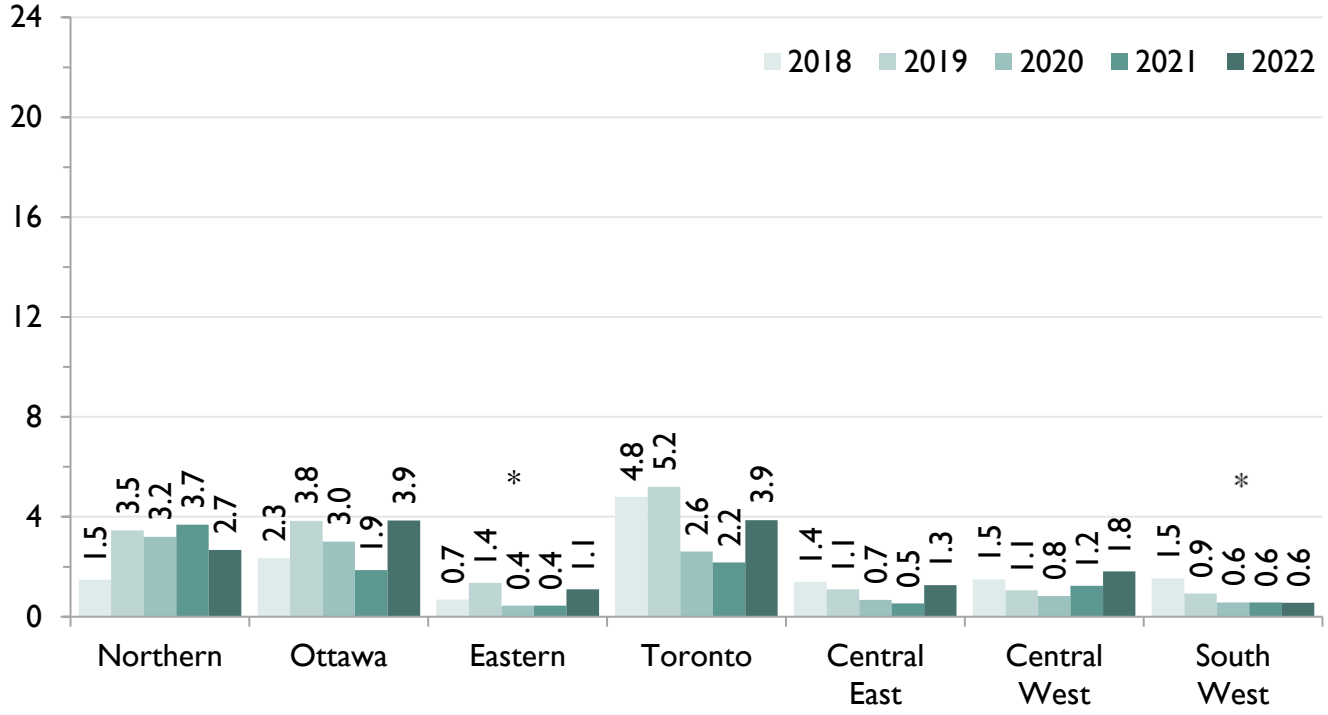


Snapshot

Among males in 2022, Toronto region had the highest rate of first-time HIV diagnoses per 100,000 people (15.2), followed by Ottawa (4.6), Central West (4.3), Northern (3.7), Central East (3.5), South West (3.2) and Eastern (3.1) regions. Compared to 2019, the rate of first-time HIV diagnoses among males per 100,000 males in 2022 decreased South West region (37.8% relative decreased) and Toronto (29.8%), remained stable in Central East (3.2% relative increase) and had a relative increase in Northern (5.9%), Ottawa (64.0%), Eastern (93.4%), and Central West (27.4%) regions.

Notes: Data provided by Public Health Ontario Laboratory. Health regions are groupings of Public Health Units. Diagnoses were assigned to a health region based on their address of residence or, if unreported, the address of the ordering provider. Rates calculated using Statistics Canada population estimates for all ages, accessed 08/14/2023. See Appendices and specifically Health regions for more information. See Tables Supplement for underlying data.

Figure 6.12 Rate of first-time HIV diagnoses per 100,000 people by health region, females, Ontario, 2018 to 2022



Snapshot

Among females in 2022, Toronto and Ottawa regions had the highest rate of first-time HIV diagnoses per 100,000 females (both 3.9), followed by Northern (2.7), Central West (1.8), Central East (1.3), Eastern (1.1), and South West (0.6) regions. The largest relative decrease was in the South West region (39.8%, small numbers), followed by Toronto (25.7%), Northern (22.5%) and Eastern (19.4%, small numbers) regions, remained stable in Ottawa (0.4% relative increase) and had a relative increase in Central West (72.1%), and Central East (15.6%) regions.

Notes: Data provided by Public Health Ontario Laboratory. * denotes a proportion based on at least one count of <5, therefore proportions may be unstable and trends should be interpreted with caution. Health regions are groupings of Public Health Units. Diagnoses were assigned to a health region based on their address of residence or, if unreported, the address of the ordering provider. Rates calculated using Statistics Canada population estimates for all ages, accessed 08/14/2023. See Appendices and specifically Health regions for more information. See Tables Supplement for underlying data.

Key Populations

The Ontario Key Populations for HIV include gay, bisexual and other men who have sex with men (GBMSM), people who are African, Caribbean or Black (ACB), people who use injection drugs (PWID), Indigenous Peoples, and Women* (women who are a part of a key population or face systemic risks of HIV). Each population is uniquely defined by indicators of HIV risk factors, race/ethnicity, country of birth, and/or sex on the HIV test requisition and LEP forms. Positive HIV tests that have the defining indicators reported are assigned to a key population, where applicable. As indicators of systemic risk of HIV are not available in the HIV surveillance data, the key population Women* cannot be defined. Instead, we use "Women", which is defined as those diagnoses that report 'Female' or 'Trans female' sex.

The key populations categories are not mutually exclusive: a person can be a member of multiple key populations. Each key population is tabulated separately and proportions are tabulated where data is reported, that is, where we know the diagnosis belongs to or doesn't belong to that key population. For example, the percent of diagnoses attributed to PWID is the number of diagnoses indicating injection drug use as an exposure category divided by the number of diagnoses known to be PWID plus the number known not to be PWID [e.g. indicating a different exposure category but not indicating PWID]. Unknown exposure category (exposure category missing) is not included in the calculation.

In 2022, among first-time HIV diagnoses where the status (yes or no) of each key population was reported, the largest number of first-time HIV diagnoses (Figure 7.1) were attributed to GBMSM (204), followed by Women (166), ACB people (125), PWID (41), and Indigenous Peoples (19). The number of first-time HIV diagnoses each declined or stayed similar in 2022 compared to 2019, with relative decreases of 33.3% among GBMSM, 34.9% among PWID and 26.9% among Indigenous Peoples and similar counts among ACB people (2.3% relative decrease) and Women (0.6% relative increase).

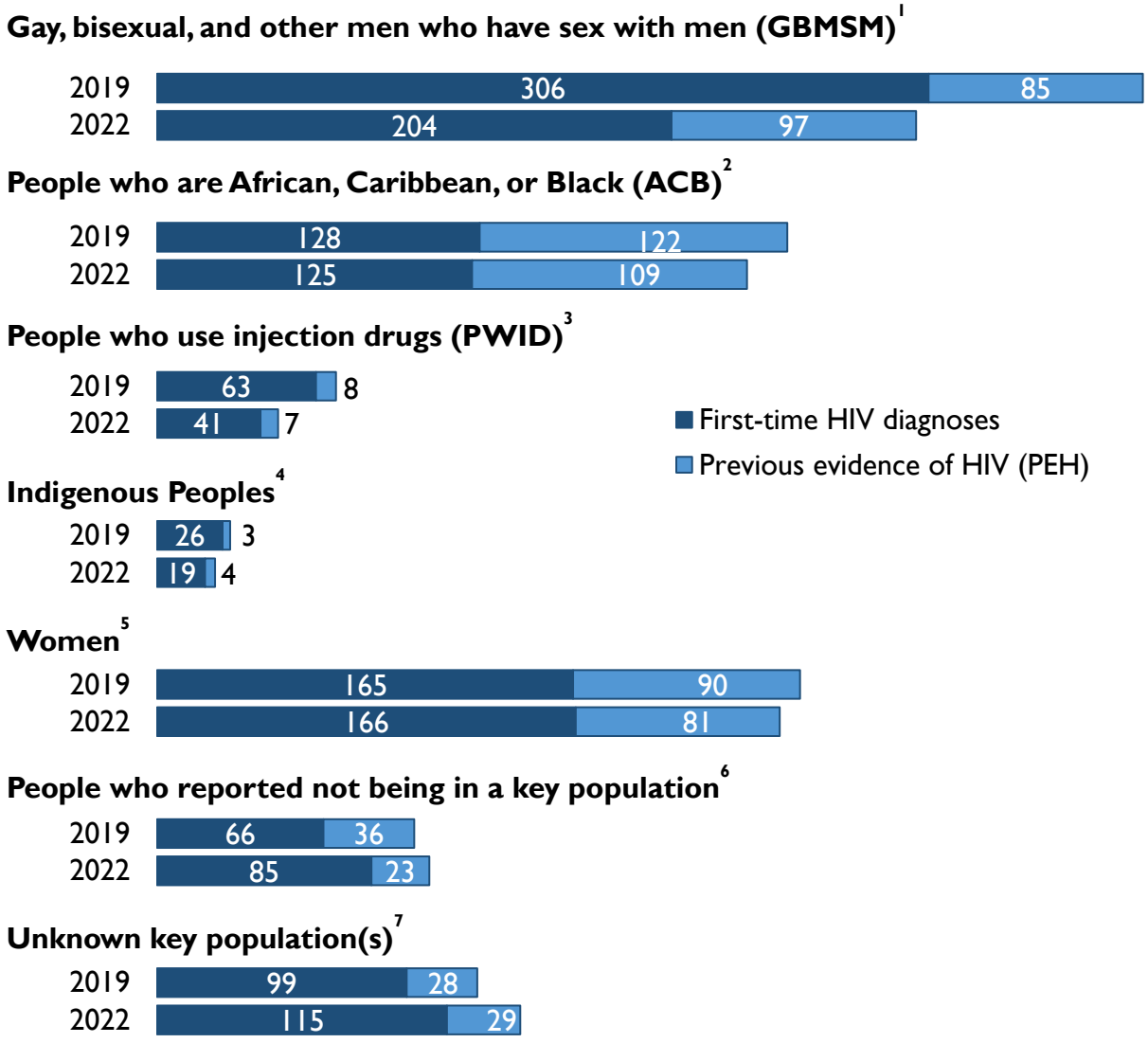
With respect to the proportions of first-time HIV diagnoses attributed to each key population in 2022 (Figure 7.2), more than half (204/359, 56.8%) were among GBMSM, 29.8% (125/420) among ACB people, 26.9% (166/616) among Women, 10.6% (41/385) among PWID, and 4.6% (19/409) among Indigenous Peoples.

Of the 623 first-time HIV diagnoses in 2022, 115 had inadequate information to be attributed to any key population and 85 were reported as not being part of any key population (i.e. males who are reported as not ACB or Indigenous and have a reported HIV risk factor other than sexual contact with men or injection drug use [IDU]).

Key populations are discussed individually, with breakdowns within each, in sections 8 to 12.

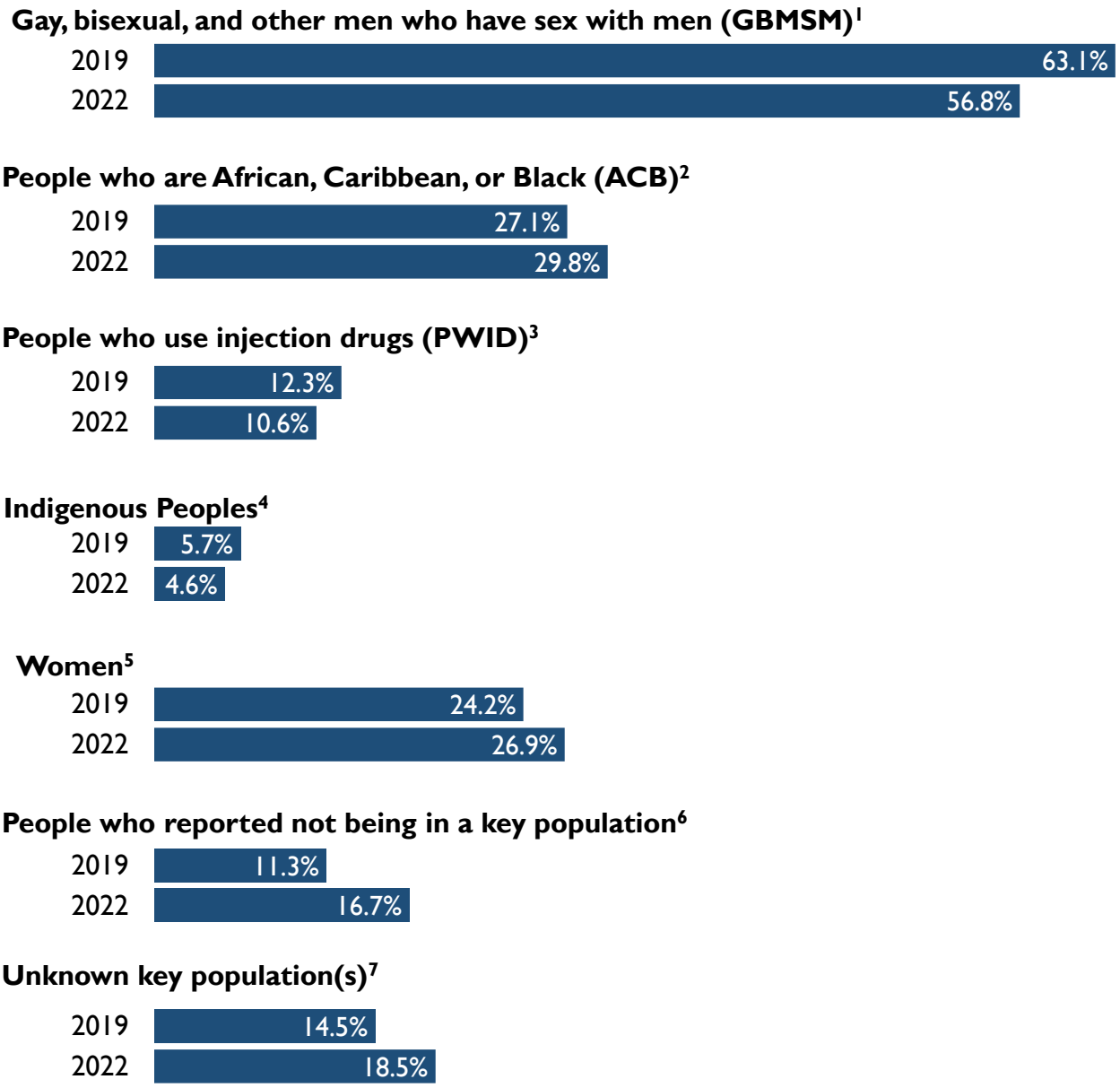
7. Key populations overview

Figure 7.1 Number of positive HIV tests by first-time HIV diagnoses and previous evidence of HIV, within each key population (where each key population status was reported; *not mutually exclusive*), Ontario, 2019 to 2022



Notes: Data provided by Public Health Ontario Laboratory. Key populations are not mutually exclusive and therefore proportions do not sum to 100%. Due to differences in missingness across indicators required to create key populations (e.g. sex is missing <1% but race/ethnicity or exposure category missingness ranges much higher (20%-40%), counts should be interpreted with caution. 1. Where HIV exposure category was reported (not reported for 27.1% of positive HIV tests in 2019 and 34.4% in 2022; 28.4% of first-time HIV diagnoses in 2019 and 38.7% in 2022). 2. Where ACB status was reported (not reported for 27.9% of positive HIV tests in 2019 and 28.1% in 2022, 30.9% of first-time HIV diagnoses in 2019 and 32.6% in 2022). 3. Where PWID status was reported (not reported for 23.3% of positive HIV tests in 2019 and 35.0% in 2022, 24.9% of first-time HIV diagnoses in 2019 and 38.2% in 2022). 4. Where race/ethnicity was reported (not reported for 30.1% of positive HIV tests in 2019 and 30.2 in 2022, 32.8% of first-time HIV diagnoses in 2019 and 34.3% in 2022). Where sex was reported (not reported for less than 1.5% of positive HIV tests and first-time HIV diagnoses, in 2019 and 2022). 6. Where status of at least one key population was reported (not reported for 12.9% of positive HIV tests in 2019 and 18.5% in 2022, 14.5% of first-time HIV diagnoses in 2019 and 18.5% in 2022). 7. Among all positive HIV tests. See Appendices and specifically Key populations for more information. See Tables Supplement for underlying data.

Figure 7.2 Percent of first-time HIV diagnoses by key population (where each key population status was reported; *not mutually exclusive*), Ontario, 2019 to 2022



Notes: Data provided by Public Health Ontario Laboratory. Key populations are not mutually exclusive and therefore proportions do not sum to 100%. 1. Where HIV exposure category was reported (n=485 in 2019, n=359 in 2022, not reported for 27.1% of positive HIV tests in 2019 and 34.4% in 2022; 28.4% of first-time HIV diagnoses in 2019 and 38.7% in 2022). 2. Where ACB status was reported (n=472 in 2019, n=420 in 2022, not reported for 27.9% of positive HIV tests in 2019 and 28.1% in 2022, 30.9% of first-time HIV diagnoses in 2019 and 32.6% in 2022), 3. Where PWID status was reported (n=513 in 2019, n=385 in 2022, not reported for 23.3% of positive HIV tests in 2019 and 35.0% in 2022, 24.9% of first-time HIV diagnoses in 2019 and 38.2% in 2022). 4. Where race/ethnicity was reported (n=459 in 2019, n=409 in 2022, not reported for 30.1% of positive HIV tests in 2019 and 30.2 in 2022, 32.8% of first-time HIV diagnoses in 2019 and 34.3% in 2022). 5. Where sex was reported (n=681 in 2019, n=616 in 2022, not reported for less than 1% of positive HIV tests and first-time HIV diagnoses, in 2019 and 2022). 6. Where status of at least one key population was reported (n=584 in 2019, n=508 in 2022, not reported for 12.9% of positive HIV tests in 2019 and 18.5%, in 2022 14.5% of first-time HIV diagnoses in 2019 and 18.5% in 2022). 7. Among first-time HIV diagnoses. See Appendices and specifically Key populations for more information. See Tables Supplement for underlying data.

8. Gay, bisexual, and other men who have sex with men (GBMSM)

8.a. GBMSM overview

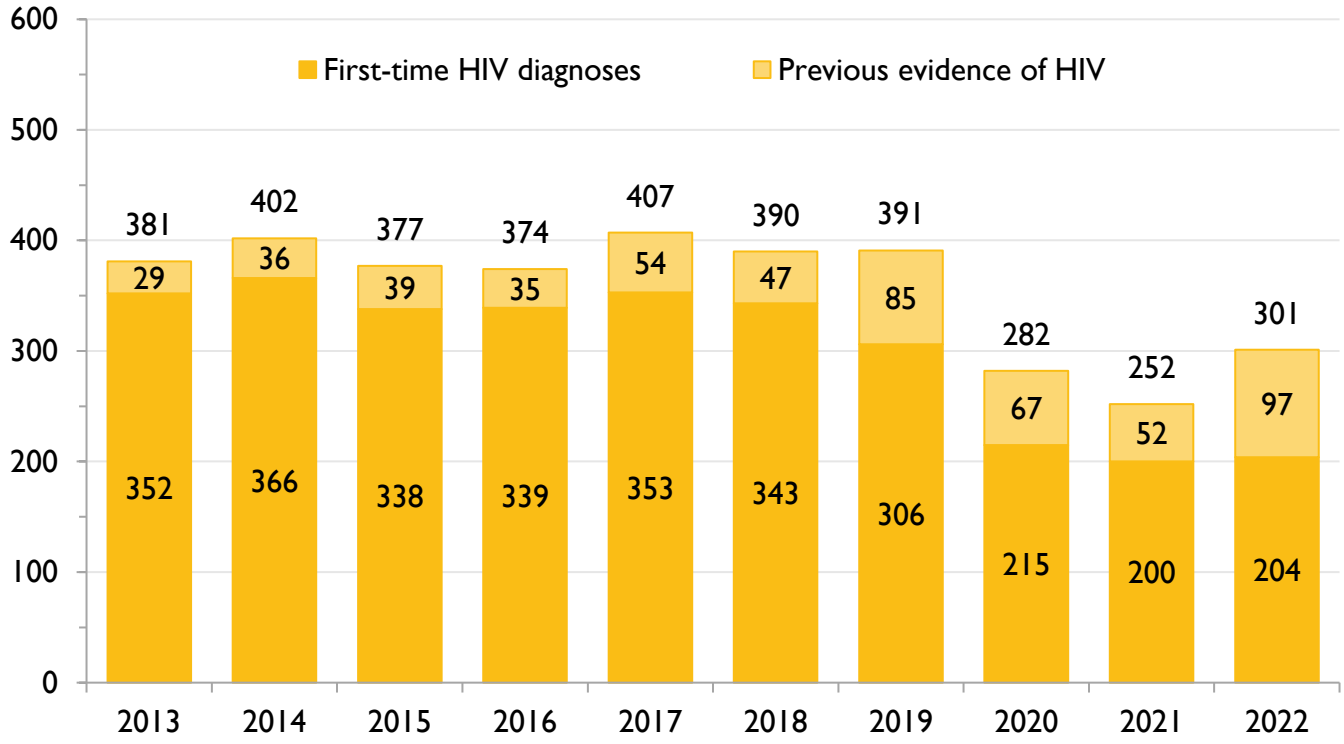
Diagnoses attributed to GBMSM are defined by having reported male or transgender male sex, and sexual contact with men as an HIV risk factor (Note that this includes males who reported both male-to-male sexual contact alone and male-to-male sexual contact along with injection drug use [IDU]). In 2022, of the 301 positive HIV tests attributed to GBMSM in Ontario, 204 were first-time HIV diagnoses (67.8%) and 97 (32.2%) had previous evidence of HIV. The proportion of GBMSM with previous evidence of HIV has increased from 21.7% in 2019 to 32.2% in 2022.

In 2022, GBMSM accounted for 56.8% of first-time HIV diagnoses[1], and 75.0% of first-time HIV diagnoses among males (where an exposure category was reported), with little change since 2013.

Data limitations: *Counts of positive HIV tests and first-time HIV diagnoses among GBMSM may be underestimated, as between 2013 and 2022, the information required to assign GBMSM status was not reported for an average of 17.6% of positive HIV tests, and we estimate between 7.6% and 8.9% of first-time HIV diagnoses among males to have an uncaptured previous HIV diagnosis between 2020-2022. Data shown are where GBMSM status was reported.*

[1] Where exposure category of first-time diagnoses is known. That is, the denominator is first-time HIV diagnoses where the diagnosis was able to be assigned to any exposure category (n=359 in 2022). Information required to assign an exposure category among first-time diagnoses was not reported for an average of 25.9% of first-time HIV diagnoses between 2013 and 2022 (38.7% in 2022).

Figure 8.1 Number of positive HIV tests, by first-time HIV diagnoses and previous evidence of HIV, GBMSM, Ontario, 2013 to 2022



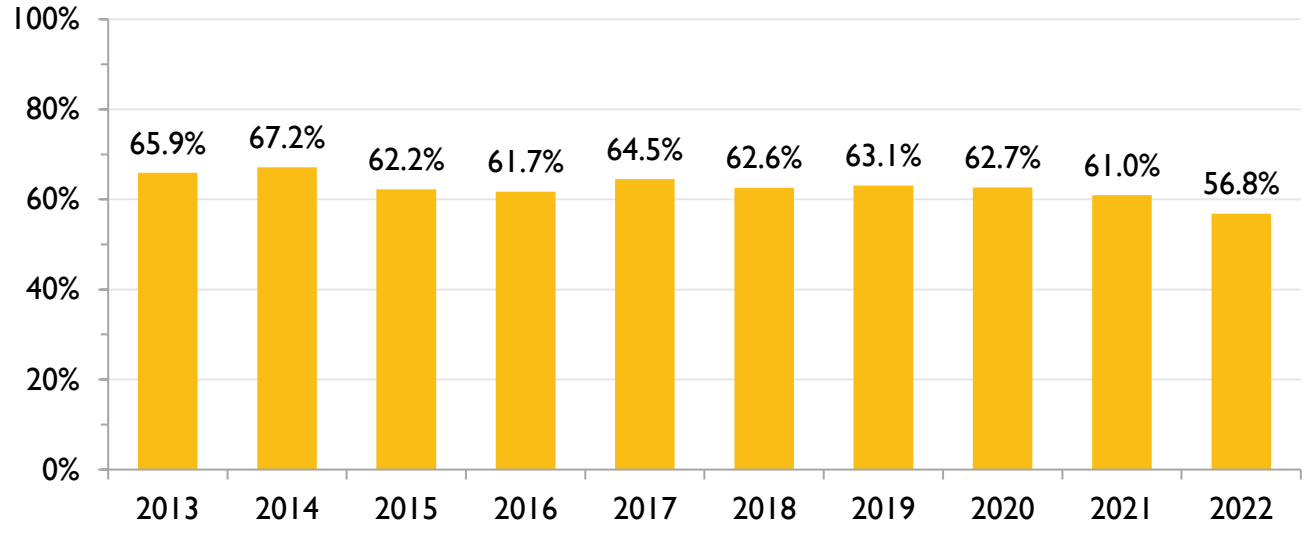
Snapshot

The number of first-time HIV diagnoses attributed to GBMSM was fairly stable between 2013 and 2018, began to decrease in 2019 and was 204 in 2022. The proportion of GBMSM with previous evidence of HIV was fairly stable between 2013 and 2016 (average: 9.1%), increasing to 21.7% in 2019, and was 32.2% in 2022. The change in proportion is due to both increased numbers of GBMSM with previous evidence of HIV and decreasing numbers of first-time HIV diagnoses.

Data limitations: *Counts of positive HIV tests and first-time HIV diagnoses among GBMSM may be underestimated, as between 2013 and 2022, the information required to assign GBMSM status was not reported for an average of 17.6% of positive HIV tests, and we estimate between 7.6% and 8.9% of first-time HIV diagnoses among males to have an uncaptured previous HIV diagnosis between 2020-2022.*

Notes: Data provided by Public Health Ontario Laboratory. Positive HIV tests where GBMSM status was not reported were excluded (average of 17.6% of positive tests per year between 2013 and 2022). See Appendices for more information. See Tables Supplement for underlying data.

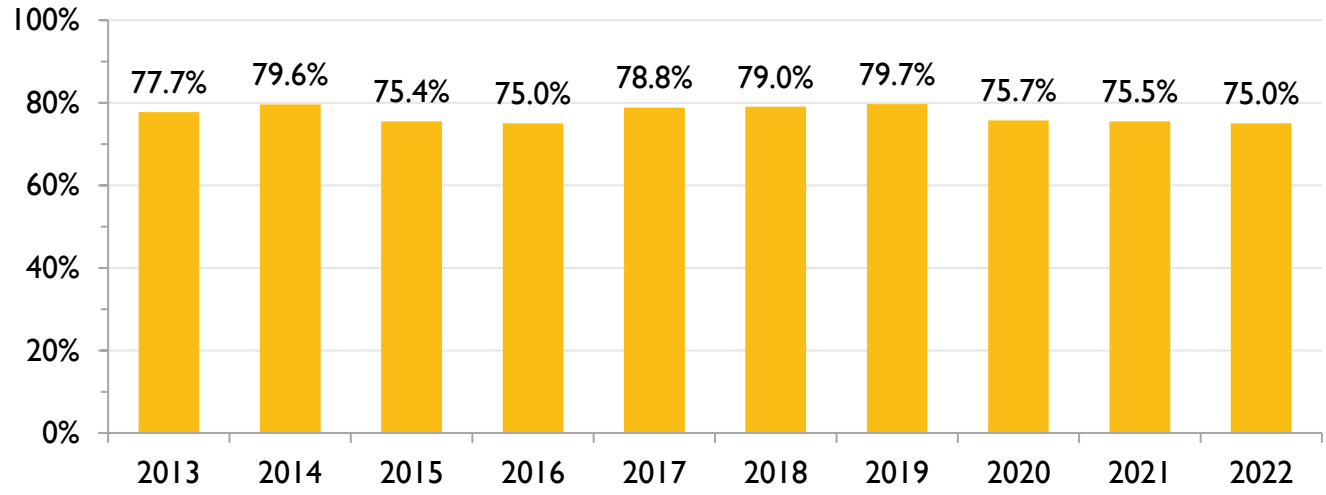
Figure 8.2 Percent of all first-time HIV diagnoses attributed to GBMSM (where HIV exposure category reported), Ontario, 2013 to 2022



Snapshot

Between 2013 and 2021, the proportion of first-time HIV diagnoses attributed to GBMSM was fairly stable, averaging 63.4%, and decreased to 56.8% in 2022.

Figure 8.3 Percent of first-time HIV diagnoses among males attributed to GBMSM (where HIV exposure category reported), Ontario, 2013 to 2022



Snapshot

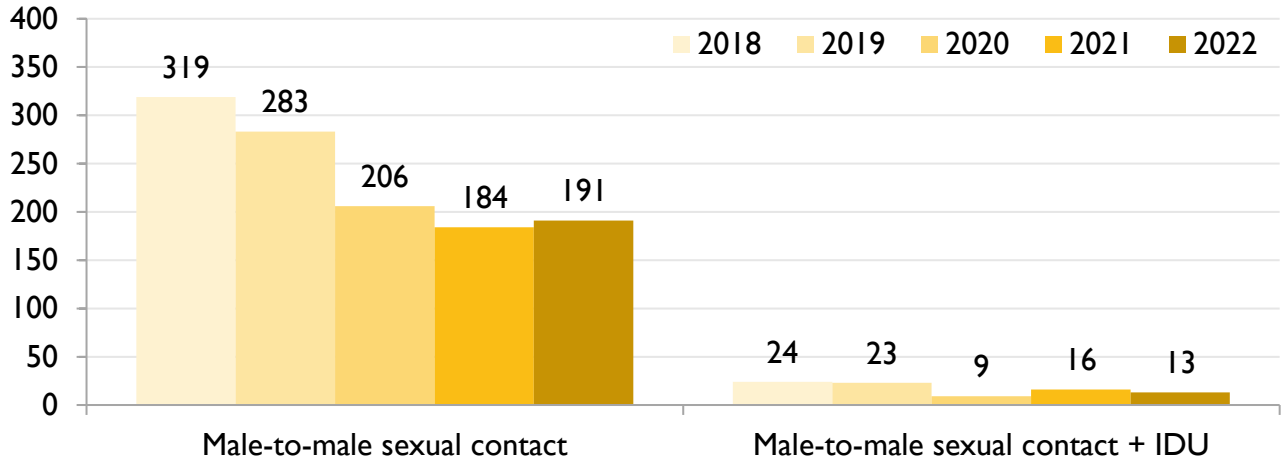
Between 2013 and 2022, the proportion of first-time HIV diagnoses among males attributed to GBMSM was fairly stable, averaging 77.1% and was 75.0% in 2022.

Notes: Data provided by Public Health Ontario Laboratory. Where HIV exposure category is reported, n=359 in 2022. First-time diagnoses where HIV exposure category was not reported were excluded (yearly average between 2013 and 2022 of 31.1% of first-time diagnoses overall and 24.0% of first-time diagnoses among males). See Appendices for more information. See Tables Supplement for underlying data.

8.b. GBMSM by HIV exposure category

GBMSM includes two mutually exclusive (not overlapping) HIV exposure categories: male-to-male sexual contact, and male-to-male sexual contact + IDU.

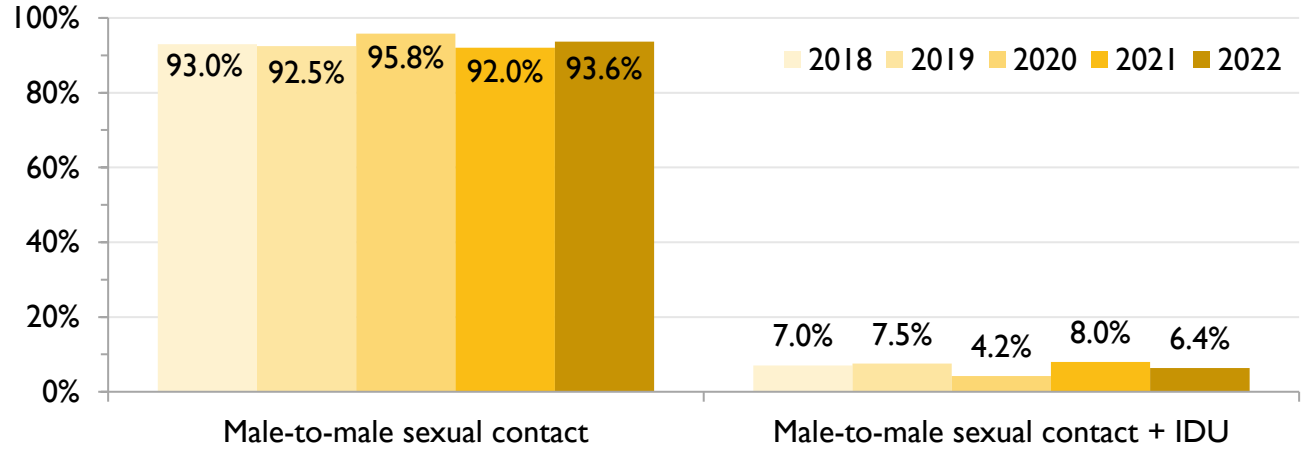
Figure 8.4 Number of first-time HIV diagnoses among GBMSM by HIV exposure category, Ontario, 2018 to 2022



Snapshot

In 2022, male-to-male sexual contact was reported for191 first-time HIV diagnoses among GBMSM (a relative decrease of 32.5% compared to 2019) and 13 reported male-to-male sexual contact + IDU (a relative decrease of 43.5% compared to 2019).

Figure 8.5 Percent of first-time HIV diagnoses among GBMSM by HIV exposure category (where reported), Ontario, 2018 to 2022



Snapshot

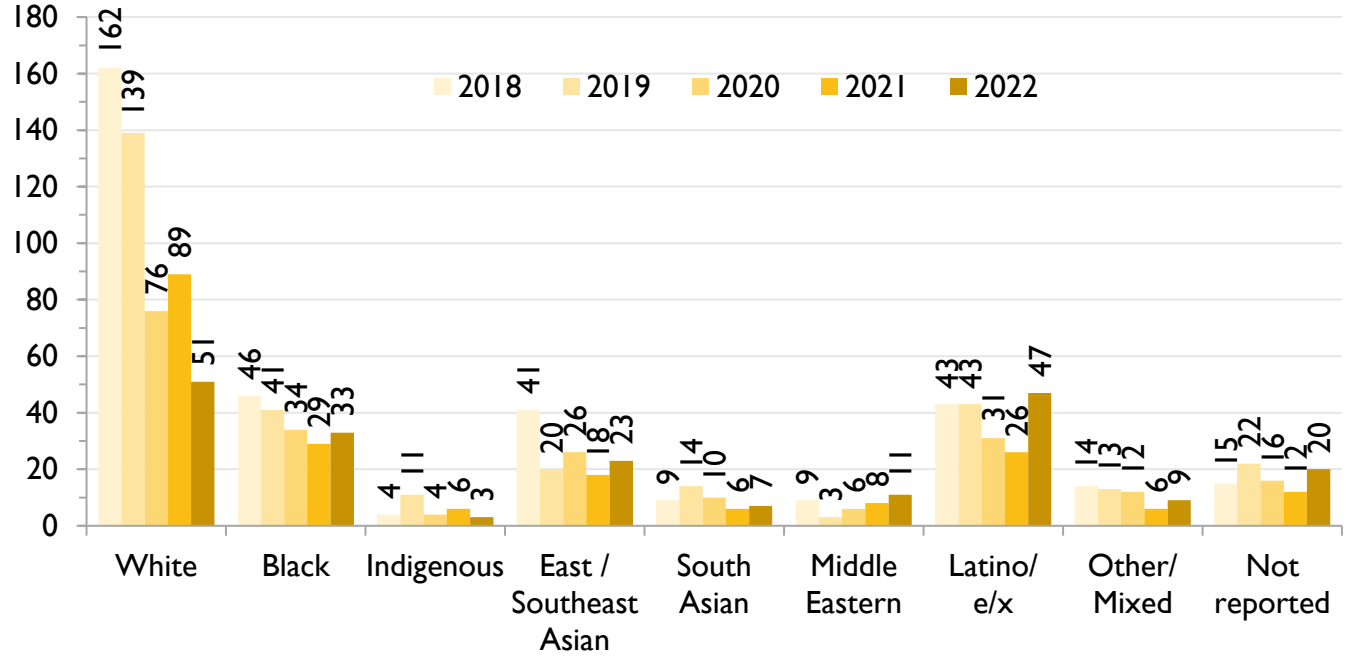
Between 2018 and 2022, the most frequently reported exposure category among first-time HIV diagnoses in GBMSM was male-to-male sexual contact (93.6% in 2022) which was stable over time followed by male-to-male sexual contact + IDU exposure category (6.4% in 2022).

Notes: Data provided by Public Health Ontario Laboratory. First-time diagnoses where GBMSM status was not reported were excluded (average of 20.5% of diagnoses per year between 2018 and 2022). IDU = injection drug use. See Appendices and specifically HIV exposure categories for more information. See Tables Supplement for underlying data.

8.c. GBMSM by race/ethnicity

In 2022, the largest number and proportion of first-time HIV diagnoses among GBMSM was among White GBMSM (51, 27.7%), followed by Latino/e/x (47, 25.5%) and Black (33, 17.9%) GBMSM. With the substantial decrease in the number of first-time HIV diagnoses among White GBMSM between 2018 to 2022, the proportion of first-time HIV diagnoses among all other race/ethnicities increased or remained stable, even if the number of diagnoses decreased, as comparatively to White GBMSM, they decrease to a lesser degree.

Figure 8.6 Number of first-time HIV diagnoses by race/ethnicity, GBMSM, Ontario, 2018 to 2022

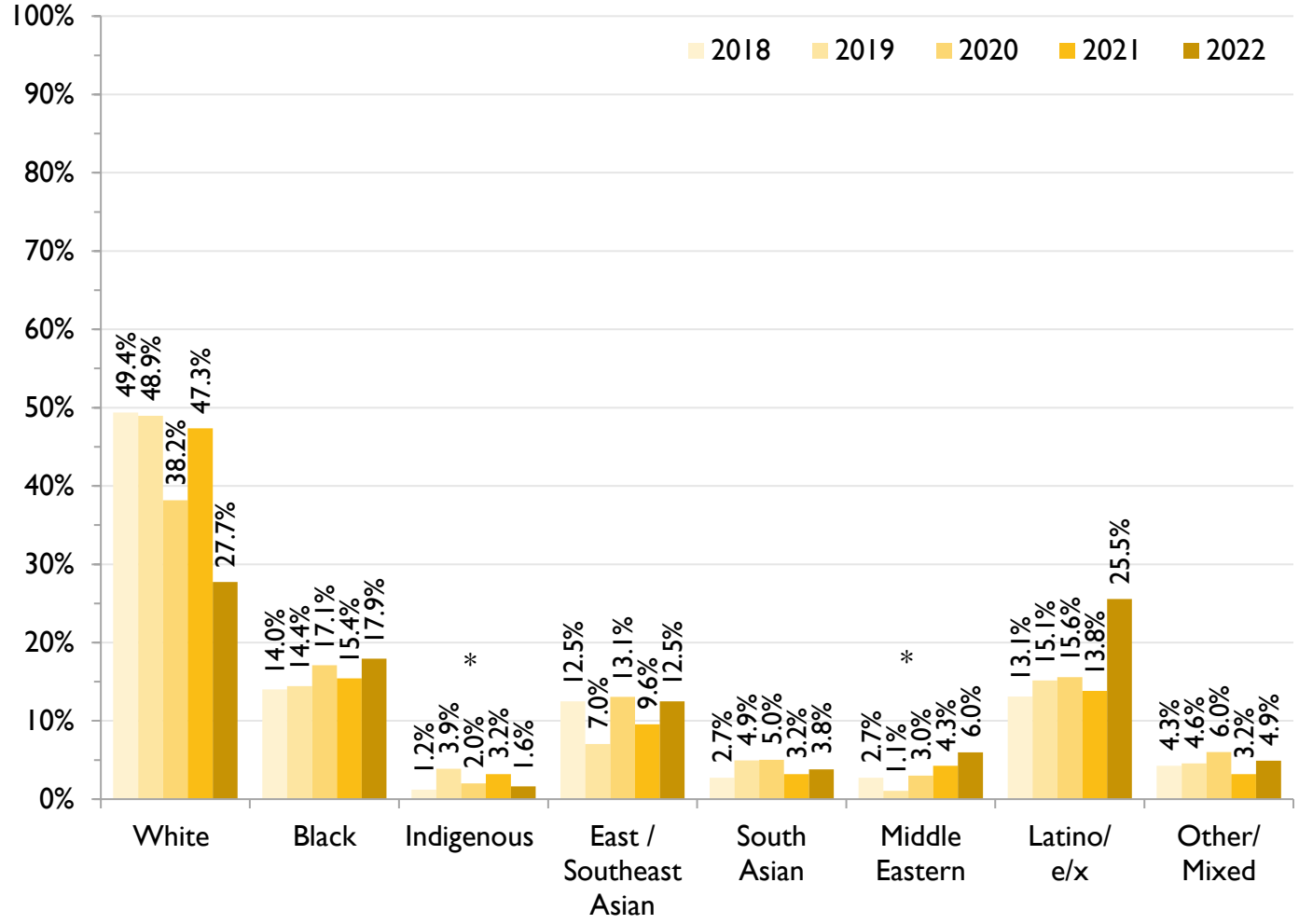


Snapshot

In 2022, 9.8% (20 out of 204) first-time HIV diagnoses in GBMSM had no reported race/ethnicity. Among the 184 first-time HIV diagnoses in GBMSM with a reported race/ethnicity, 51 were in White GBMSM, 47 in Latino/e/x GBMSM, 33 in Black GBMSM, 23 in East/Southeast Asian GBMSM, 11 in Middle Eastern GBMSM, 9 in GBMSM of other/mixed races/ethnicities, 7 South Asian GBMSM and 3 Indigenous GBMSM. Compared to 2019, a relative decrease in first-time HIV diagnoses among GBMSM was seen in 2022 among White (63.3%) GBMSM, South Asian GBMSM (50.0%), other/mixed GBMSM (30.8%) and Black GBMSM (19.5%) remained relatively stable among Indigenous GBMSM and East/Southeast Asian GBMSM and had a relative increase among Middle Eastern GBMSM (266.7%) and Latino/e/x GBMSM (9.3%).

Notes: Data provided by Public Health Ontario Laboratory. Positives tests where GBMSM status was not reported were excluded (average of 20.5% of diagnoses per year between 2018 and 2022). First-time diagnoses where GBMSM status was not reported were excluded (avarage of 21.4% of diagnoses per year between 2018 and 2022). See Appendices for more information. See Tables Supplement for underlying data.

Figure 8.7 Percent of first-time HIV diagnoses by race/ethnicity (where reported), GBMSM, Ontario, 2018 to 2022



Snapshot

In 2022, among the 184 fist-time HIV diagnoses in GBMSM with a reported race/ethnicity, White GBMSM accounted for the largest proportion (27.7%), followed by Latino/e/x GBMSM (25.5%), Black GBMSM (17.9%), East/Southeast Asian GBMSM (12.5%), Middle Eastern GBMSM (6.0%), GBMSM of other/mixed races/ethnicities (4.9%), South Asian GBMSM (3.8%) and Indigenous GBMSM (1.6%).

Between 2018 and 2021, White GBMSM accounted for the largest proportion of first-time HIV diagnoses among GBMSM with a substantially higher proportion than the next highest race/ethnicity.

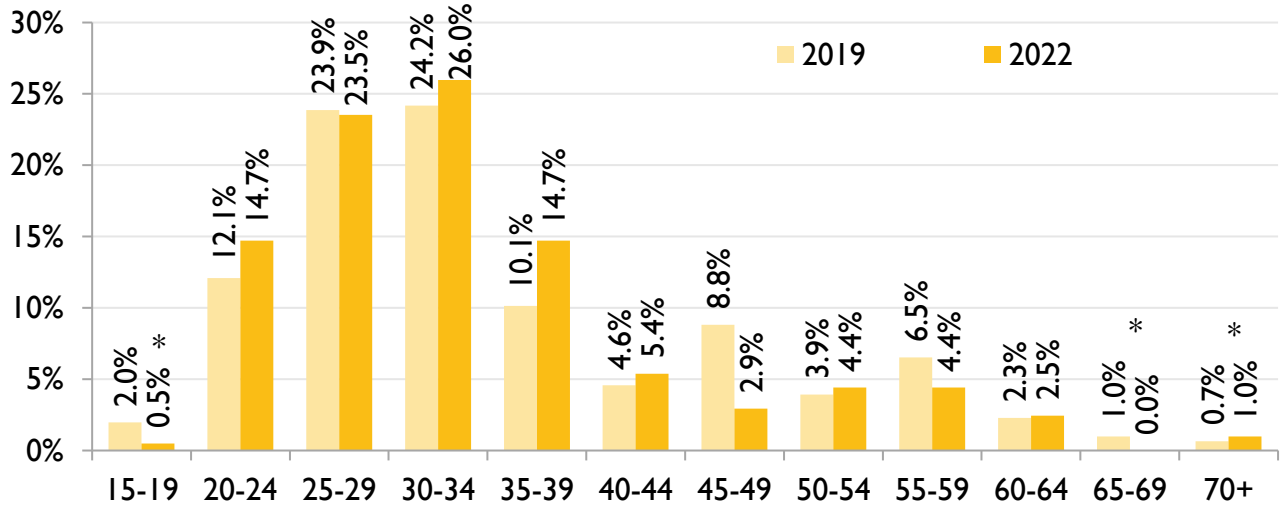
However, with the large decrease in counts among White GBMSM not seen to the same extent among other race/ethnicities between 2018 and 2022, the proportion of first-time HIV diagnoses among Latino/e/x, Black and East/Southeast Asian GBMSM in 2022 were considerably closer in proportion to White GBMSM than any other year in the last 5 years.

Notes: Data provided by Public Health Ontario Laboratory. * denotes a proportion based on at least one count of <5, therefore proportions may be unstable and trends should be interpreted with caution. First-time diagnoses where GBMSM status was not reported were excluded (average of 21.4% of first-time diagnoses per year between 2018 and 2022). First-time diagnoses where GBMSM status was reported but race/ethnicity was not reported were excluded (average of 7.0% of FT diagnoses per year between 2018 and 2022, where GBMSM status reported). See Appendices for more information. See Tables Supplement for underlying data.

8.d. GBMSM by age

In 2022, half (49.5%) of first-time HIV diagnoses among GBMSM were among those aged 25-34.

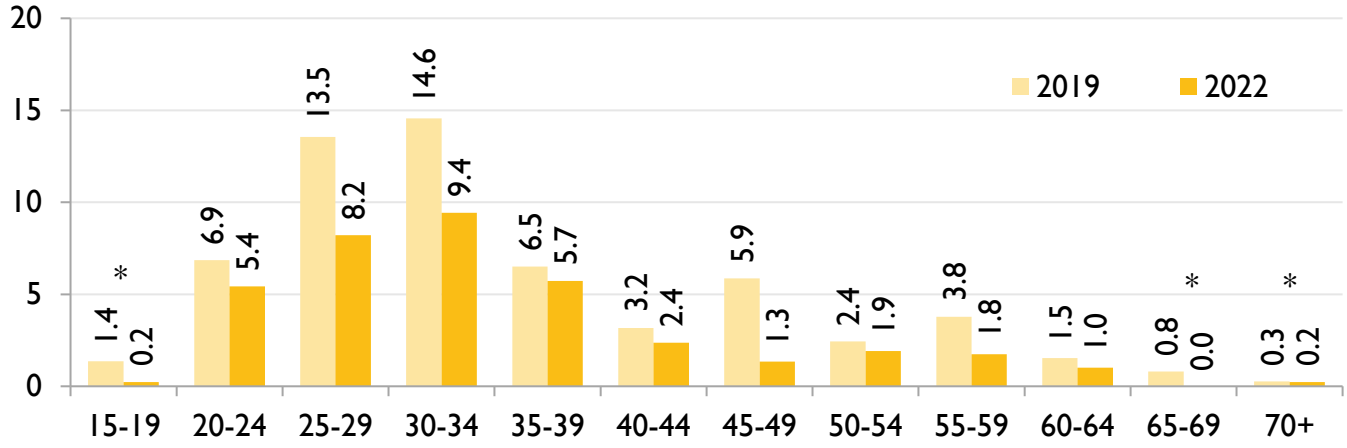
Figure 8.8 Percent of first-time HIV diagnoses by age, GBMSM, Ontario, 2019 to 2022



Snapshot

In 2022, GBMSM aged 30-34 accounted for the largest proportion of first-time HIV diagnoses among GBMSM (26.0%), followed by GBMSM aged 25-29 (23.5%). In 2022, the age distribution is slightly different from 2019, as there was an increase in proportion among GBMSM aged 20-24 and 35-39 and a decrease in proportion among GBMSM aged 45-49 and 55-59.

Figure 8.9 Rate of first-time HIV diagnoses per 100,000 males by age, GBMSM, Ontario, 2019 to 2022



Snapshot

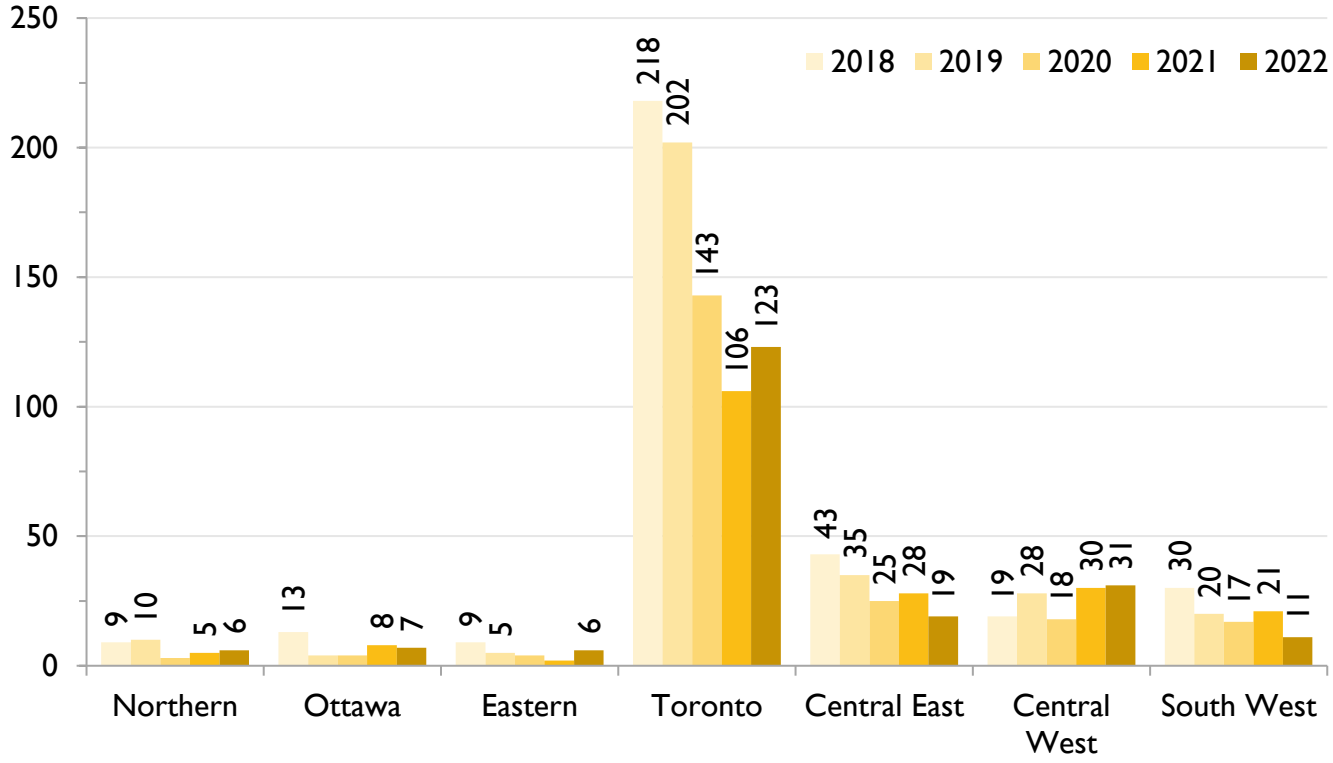
In 2022, the rate of first-time HIV diagnoses per 100,000 males among GBMSM was highest in those aged 30-34 years (9.4), followed by those aged 25-29 (8.2). Compared to 2019, the rate of first-time HIV diagnoses per 100,000 males among GBMSM decreased in all age categories, with the largest relative decrease among those aged 45-49 (77.0%), 55-59 (53.6%) and 25-29 (39.4%).

Notes: Data provided by Public Health Ontario Laboratory. * denotes a proportion or rate based on at least one count of <5, therefore proportions or rates may be unstable and trends should be interpreted with caution. Rates calculated using Statistics Canada population estimates for all ages, among males, accessed 08/14/2023. First-time diagnoses with age not reported were excluded (less than 1%). First-time diagnoses where GBMSM status was not reported were excluded (16.7% of FT diagnoses in 2019, and 27.4 % in 2022). See Appendices for more information. See Tables Supplement for underlying data.

8.e. GBMSM by health region

In 2022, 60.6% of first-time HIV diagnoses among GBMSM were in Toronto region, followed by Central West (15.3%) and Central East (9.4%) regions. Toronto region also had the largest proportion of its first-time HIV diagnoses among males attributed to GBMSM (84.2%), followed by Central West (72.1%), Eastern and Northern (60.0% each, small numbers) and Central East (51.4%) regions. Compared to 2019, the number of first-time HIV diagnoses among GBMSM in 2022 decreased in the Central East, South West, Toronto and Northern regions, and increased in Ottawa, Eastern and Central West regions.

Figure 8.10 Number of first-time HIV diagnoses by health region, GBMSM, Ontario, 2018 to 2022



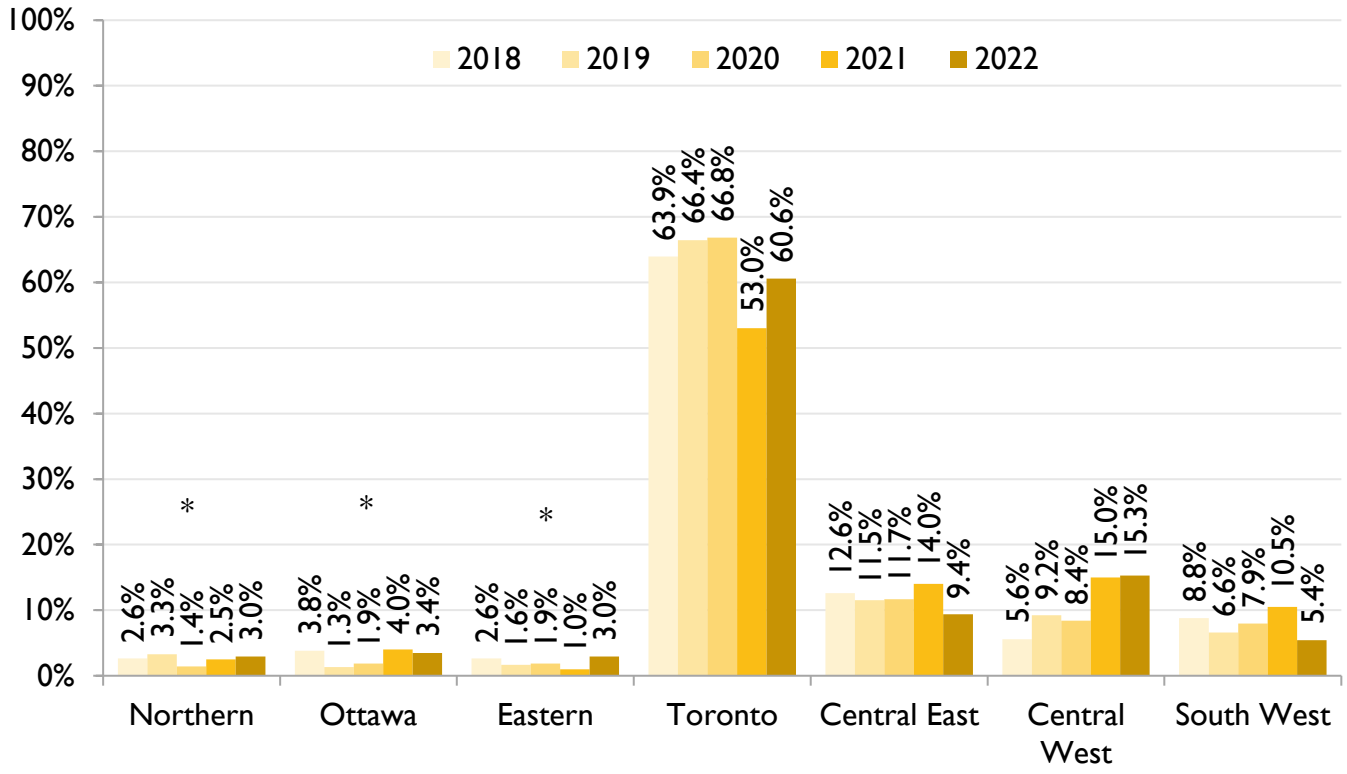
Snapshot

In 2022, Toronto region had the largest number of fist-time HIV diagnoses among GBMSM (123), followed by Central West (31), Central East (19), South West (11), Ottawa (7) and Northern and Eastern (6) regions.

Between 2018 and 2022, Toronto region consistently had the largest number of first-time HIV diagnoses among GBMSM, Central East had the second largest number of first-time diagnoses among GBMSM in 2018 through 2020 and Central West had the second largest number in 2021 and 2022. Compared to 2019, Central West (10.7%) region had a relative increase (10.7%) in the number of first-time HIV diagnoses while there was a decrease in Central East (45.7%), South West (45.0%) and Toronto (39.1%) regions.

Notes: Data provided by Public Health Ontario Laboratory. Health regions are groupings of Public Health Units. Diagnoses were assigned to a health region based on their address of residence or, if unreported, the address of the ordering provider. First-time diagnoses where GBMSM status was not reported were excluded (average of 21.4% of diagnoses per year between 2018 and 2022). See Appendices and specifically Health regions for more information. See Tables Supplement for underlying data.

Figure 8.11 Percent of first-time HIV diagnoses across health regions, GBMSM, Ontario, 2018 to 2022



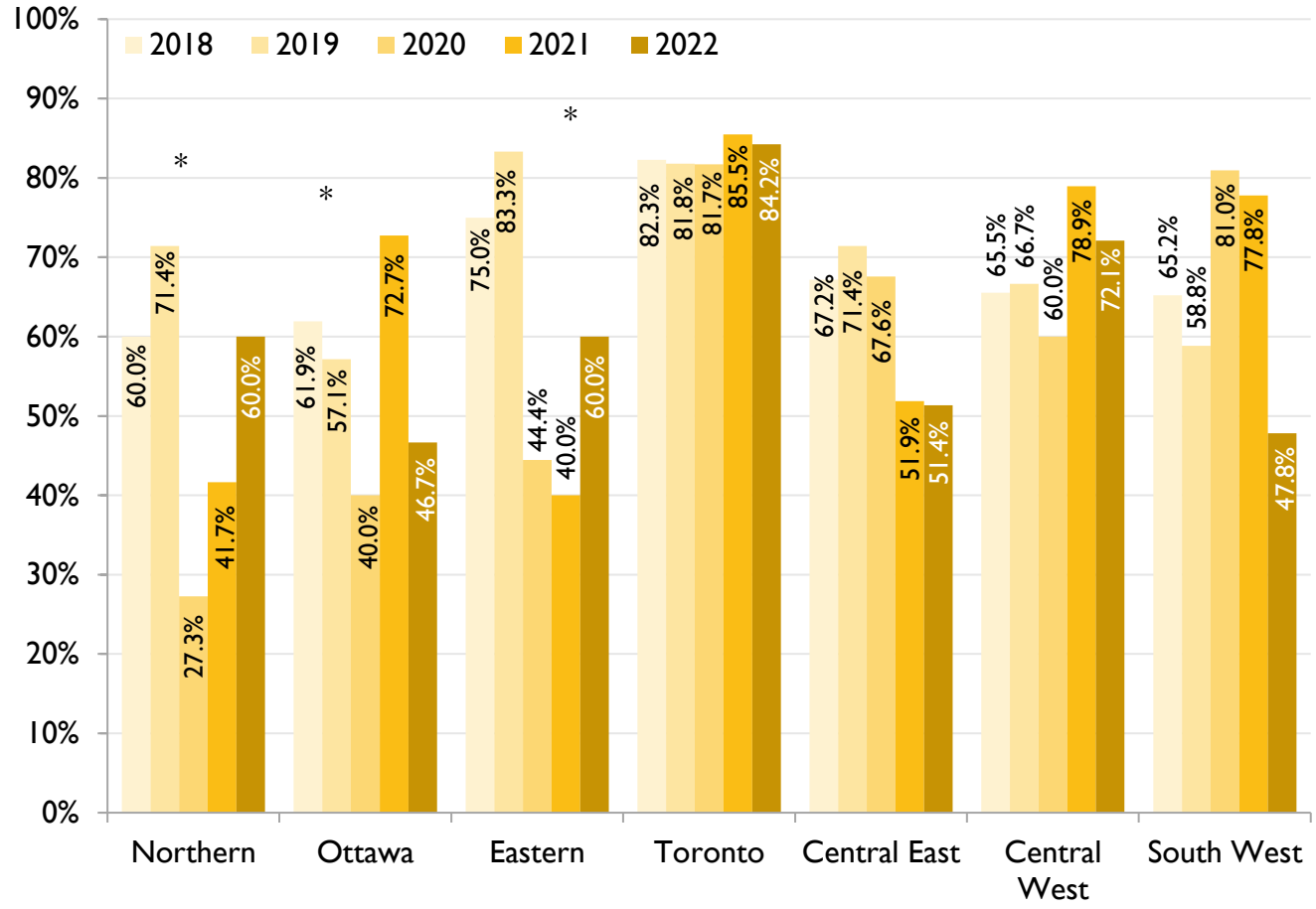
Snapshot

In 2022, Toronto region has the largest proportion of first-time HIV diagnoses among GBMSM (60.6%), followed by Central West (15.3%), Central East (9.4%), and South West (5.4%) regions. Northern, Eastern, and Ottawa regions each had less than 5% of first-time HIV diagnoses among GBMSM.

Between 2018 and 2022, Toronto region had the largest proportion of first-time HIV diagnoses among GBMSM, which decreased substantially in 2021 and increasing to 60.6% in 2022. In 2022, first-time HIV diagnoses among GBMSM from Central East region decreased compared to previous years, while Central West increased in 2021 and 2022.

Notes: Data provided by Public Health Ontario Laboratory. * denotes a proportion based on at least one count of <5, therefore proportions may be unstable and trends should be interpreted with caution. Health regions are groupings of Public Health Units. Diagnoses were assigned to a health region based on their address of residence or, if unreported, the address of the ordering provider. First-time diagnoses where GBMSM status was not reported were excluded (average of 21.4% of diagnoses per year between 2018 and 2022). See Appendices and specifically Health regions for more information. See Tables Supplement for underlying data.

Figure 8.12 Percent of first-time HIV diagnoses among males within each region attributed to GBMSM (where GBMSM status reported), Ontario, 2018 to 2022



Snapshot

In 2022, looking within each region, Toronto region attributed a larger proportion of its first-time HIV diagnoses among males to GBMSM than any other region (84.2%), followed by Central West (72.1%), Northern and Eastern (both at 60.0%), Central East (51.4%), South West (47.8%) and Ottawa (46.7%) regions.

Between 2018 and 2022, Toronto region attributed a larger proportion of its first-time HIV diagnoses among males to GBMSM than any other region in all years except 2019 and has been stable over time. Compared to 2019, the proportion of first-time HIV diagnoses among males attributed to GBMSM decreased in Northern, Ottawa, Eastern, Central East and South West regions, increasing in Toronto and Central West regions.

Notes: Data provided by Public Health Ontario Laboratory. * denotes a proportion based on at least one count of <5, therefore proportions may be unstable and trends should be interpreted with caution. Health regions are groupings of Public Health Units. Diagnoses were assigned to a health region based on their address of residence or, if unreported, the address of the ordering provider. First-time diagnoses where GBMSM status was not reported were excluded (average of 21.4% of diagnoses per year between 2018 and 2022). See Appendices and specifically Health regions for more information. See Tables Supplement for underlying data.

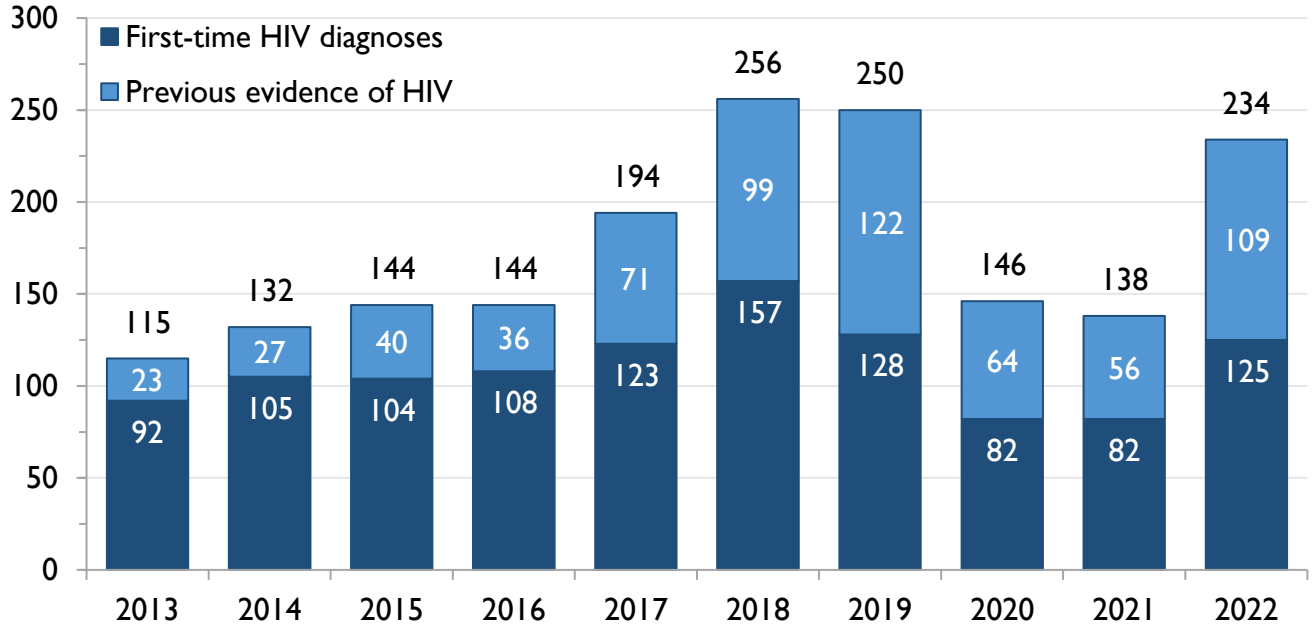
9. People who are African, Caribbean or Black (ACB)

9.a. ACB overview

Diagnoses attributed to ACB are defined by having indicated being Black, or if race/ethnicity is missing, having been born in a high HIV prevalence African or Caribbean country. In 2022, of the 234 positive HIV tests among ACB in Ontario, 125 were first-time HIV diagnoses and 109 had previous evidence of HIV. Between 2013 and 2022, the proportion of ACB people with previous evidence increased from 20.0% to 46.6%. Of the 623 first-time diagnoses in 2022, 125 were among ACB people, 295 were known not to be among ACB people and 203 were missing the required information to assign ACB status.

Data limitations: *Counts of positive HIV tests and first-time HIV diagnoses among ACB may be underestimated, as between 2013 and 2022, the information required to assign ACB status was not reported for an average of 28.3% of positive HIV tests, and we estimate an average of between 17.9% and 22.8% of first-time HIV diagnoses among Black people to have an uncaptured previous HIV diagnosis in 2022. This is an increased proportion in 2022, where the 5 year average was estimated to be between 11.9% and 14.4%. Data shown are where ACB status was reported.*

Figure 9.1 Number of positive HIV tests, by first-time HIV diagnoses and previous evidence of HIV, ACB, Ontario, 2013 to 2022



Snapshot

Between 2013 and 2018, the number of first-time HIV diagnoses attributed to ACB increased from 92 to 157, before decreasing in 2019 through 2021 and was 125 in 2022. The number of positive HIV tests ranged from a low of 115 in 2013 to a high of 256 in 2018 and was 234 in 2022 - similar to pre-pandemic numbers of positive HIV tests. The proportion of ACB people with previous evidence of HIV has been increasing since 2013 and was 46.6% in 2022.

Data limitations: *Counts of positive HIV tests and first-time HIV diagnoses among ACB may be underestimated, as between 2013 and 2022, the information required to assign ACB status was not reported for an average of 28.3% of positive HIV tests, and we estimate an average of between 17.9% and 22.8% of first-time HIV diagnoses among Black people to have an uncaptured previous HIV diagnosis in 2022. This is an increased proportion in 2022, where the 5 year average was estimated to be between 11.9% and 14.4%.*

Notes: Data provided by Public Health Ontario Laboratory. See Appendices for more information. See Tables Supplement for underlying data.

9.b. ACB by sex

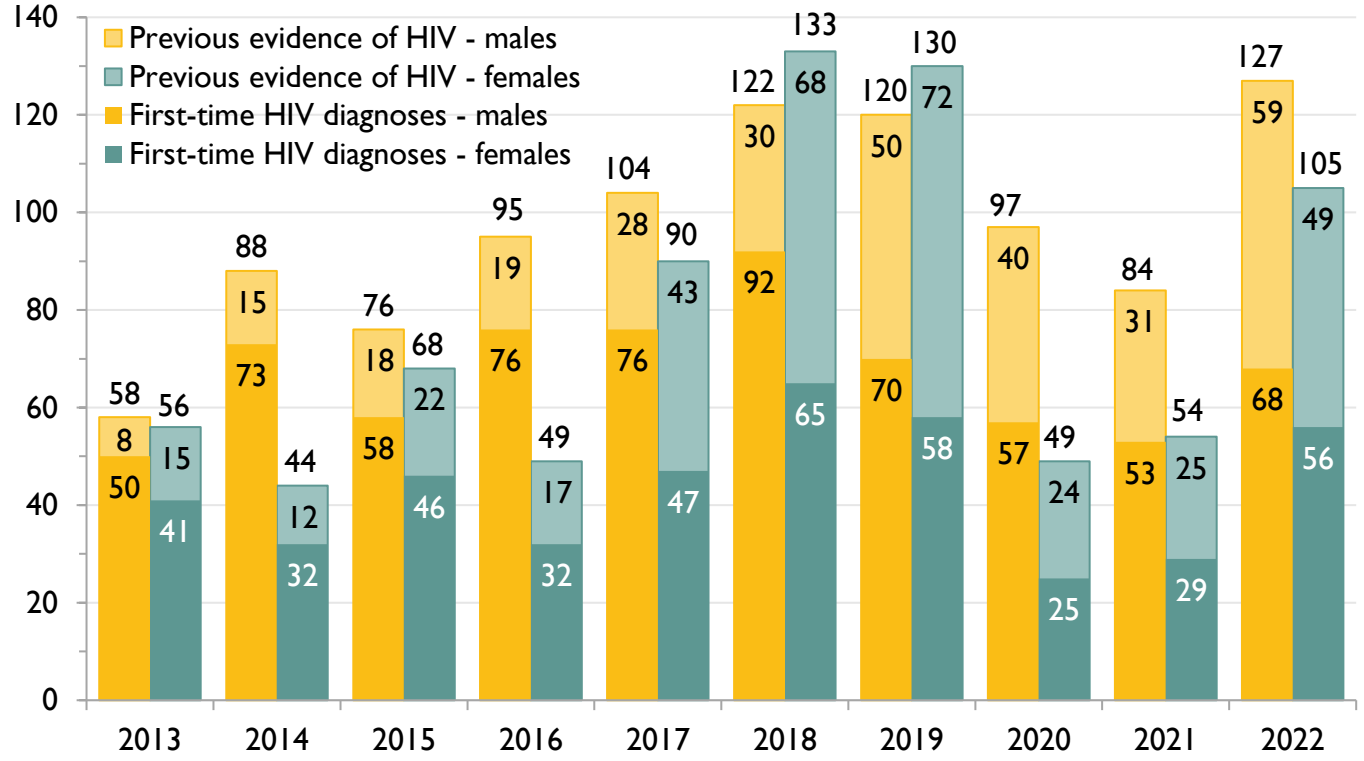
In 2022, of the 127 positive HIV tests among ACB males, 68 were first-time HIV diagnoses and 59 had previous evidence of HIV. Of the 105 positive HIV tests among ACB females, 56 were first-time HIV diagnoses and 49 had previous evidence of HIV.

In 2022, 29.8% of first-time HIV diagnoses[1] were attributed to the ACB population. ACB males accounted for 16.2% of first-time HIV diagnoses (where ACB status known), and 22.4% of first-time HIV diagnoses among males (where male ACB status was known). ACB females accounted for 13.3% of first-time HIV diagnoses (where ACB status known) and 49.1% of first-time HIV diagnoses among females (where female ACB status known). Within the ACB population between 2013 and 2022, ACB males consistently accounted for a larger proportion of first-time HIV diagnoses compared to ACB females.

Data limitation: *Counts of positive HIV tests and first-time HIV diagnoses among ACB may be underestimated, as between 2013 and 2022, the information required to assign ACB status was not reported for an average of 27.3% of first-time HIV diagnoses among males and 35.7% among females. Furthermore, we estimate an average of between 16.0% and 19.9% of first-time HIV diagnoses among Black males and between 20.3% and 27.0% of first-time HIV diagnoses among Black females to have an uncaptured previous HIV diagnosis in 2022. This is an increased proportion in 2022, where the 5-year average was estimated to be between 9.7% and 11.8% among males and between 15.3% and 18.8% between females. Data shown are where ACB status was reported.*

[1] Where ACB status of first-time diagnoses is known. That is, the denominator is first-time HIV diagnoses where the diagnosis was able to be assigned an ACB status (known ACB or known not to be ACB, n=420 overall, 304 among males and 114 among females in 2022). Information required to assign ACB status among first-time diagnoses (ACB status known, and therefore in the denominator) was not reported for an average of 29.5% of first-time HIV diagnoses between 2013 and 2022 (32.6% in 2022).

Figure 9.2 Number of positive HIV tests, by first-time HIV diagnoses and previous evidence of HIV, males and females, ACB, Ontario, 2013 to 2022



Snapshot

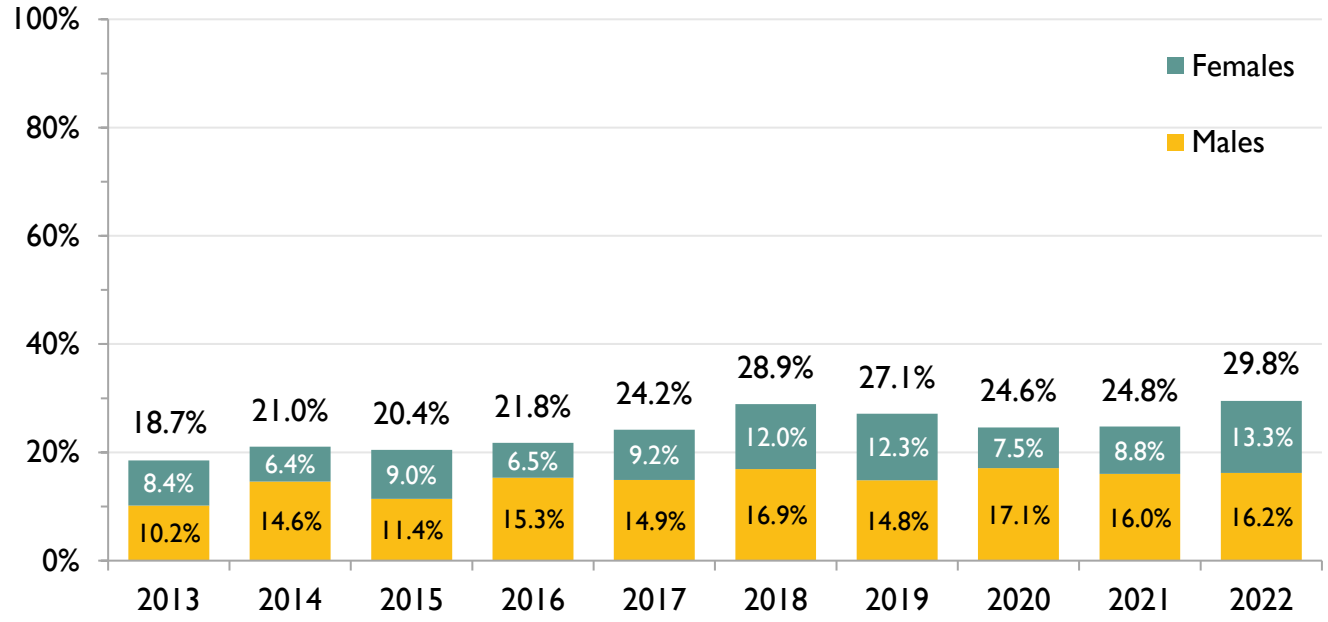
Between 2013 and 2022, the number of first-time HIV diagnoses among ACB males (dark yellow) ranged between 50 and 92, reaching 68 in 2022 (similar to 2019). The number of ACB males with previous evidence of HIV (light yellow) was fairly stable between 2013 and 2016 (average of 15, making up 18.6% of positive HIV tests among ACB males), before increasing over time and was 46.5% in 2022 (59 out of 127 positive HIV tests among ACB males, the highest proportion between 2013 and 2022).

Between 2013 and 2022, the number of first-time HIV diagnoses among ACB females (dark green) ranged from 41 and 65, and was 56 in 2022 (similar to 2019). The number of ACB females with previous evidence of HIV (light green) was fairly stable between 2013 and 2016 (average of 17, making up 30.3% of positive HIV tests among ACB females), before increasing over time and was 46.7% in 2022 (49 out of 105 positive HIV tests among ACB females, a 9% absolute decrease compared to the peak in 2019 of 55.4%).

Data limitation: *Counts of positive HIV tests and first-time HIV diagnoses among ACB may be underestimated, as between 2013 and 2022, the information required to assign ACB status was not reported for an average of 27.3% of first-time HIV diagnoses among males and 35.7% among females. Furthermore, we estimate an average of between 16.0% and 19.9% of first-time HIV diagnoses among Black males and between 20.3% and 27.0% of first-time HIV diagnoses among Black females to have an uncaptured previous HIV diagnosis in 2022. This is an increased proportion in 2022, where the 5-year average was estimated to be between 9.7% and 11.8% among males and between 15.3% and 18.8% between females. Data shown are where ACB status was reported.*

Notes: Data provided by Public Health Ontario Laboratory. See Appendices for more information. See Tables Supplement for underlying data.

Figure 9.3 Percent of first-time HIV diagnoses attributed to ACB (where ACB status reported) by sex, Ontario, 2013 to 2022



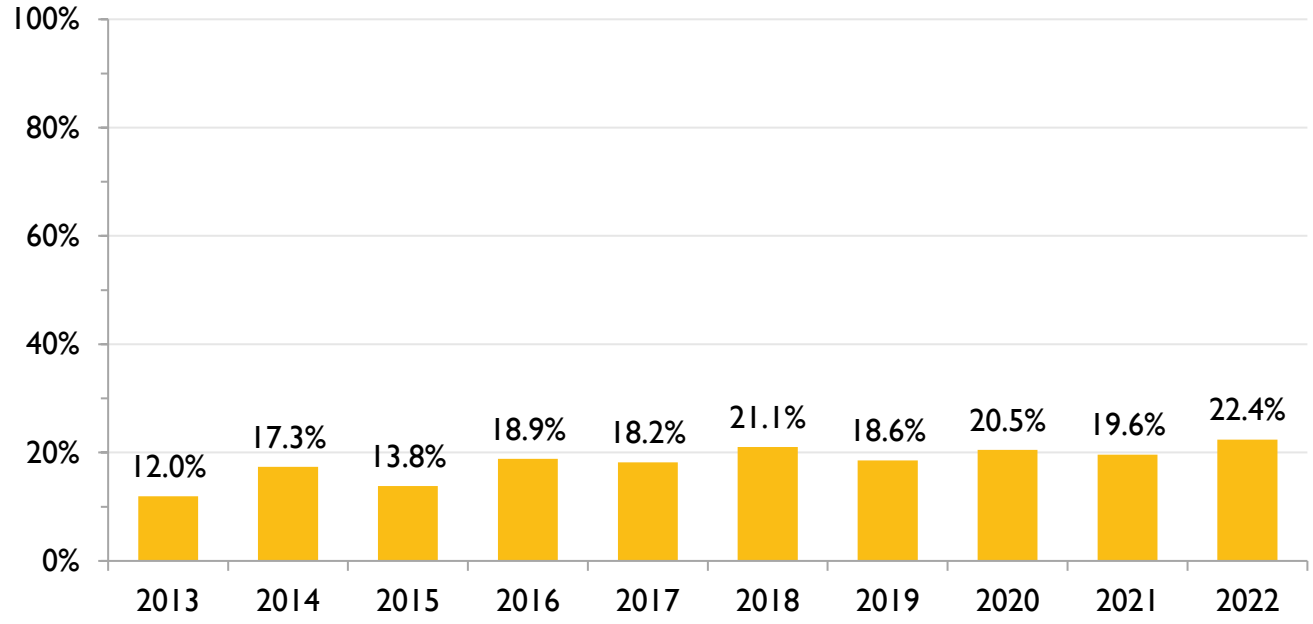
Snapshot

In 2022, ACB males accounted for 16.2% and ACB females 13.3% of all first-time HIV diagnoses, for a total of 29.8% of first-time HIV diagnoses being attributed to ACB people. This is consistent with prior years.

Between 2013 and 2022, ACB people accounted for between 18.7% and 29.8% of first-time HIV diagnoses, with ACB males accounting for between 10.2% and 17.1%, and ACB females for between 6.4% and 13.3%.

Notes: Data provided by Public Health Ontario Laboratory. Where ACB status of first-time diagnoses is known., n=420. First-time diagnoses where ACB status was not reported were excluded (average of 27.3% of diagnoses per year among males, 35.7% among females). See Appendices for more information. See Tables Supplement for underlying data.

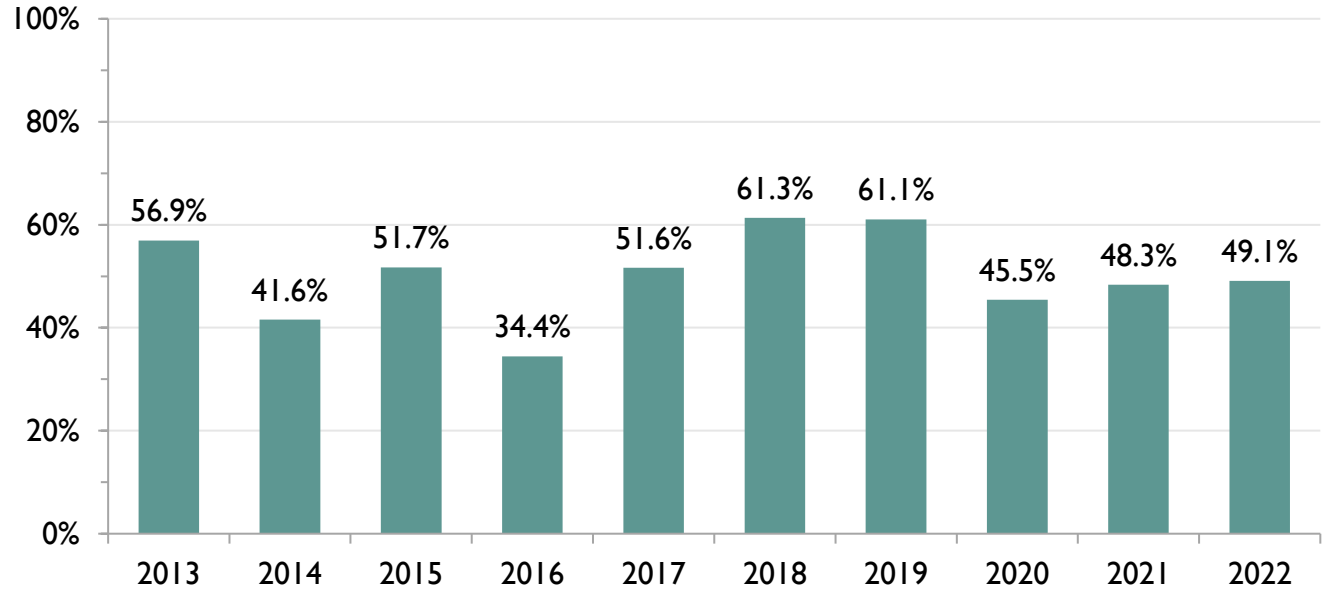
Figure 9.4 Percent of first-time HIV diagnoses among males attributed to ACB (where ACB status reported), Ontario, 2013 to 2022



Snapshot

Between 2013 and 2021, proportion of first-time HIV diagnoses attributed to ACB was fairly stable, averaging 18.2%, and was 22.4% in 2022.

Figure 9.5 Percent of first-time HIV diagnoses among females attributed to ACB (where ACB status reported), Ontario, 2013 to 2022

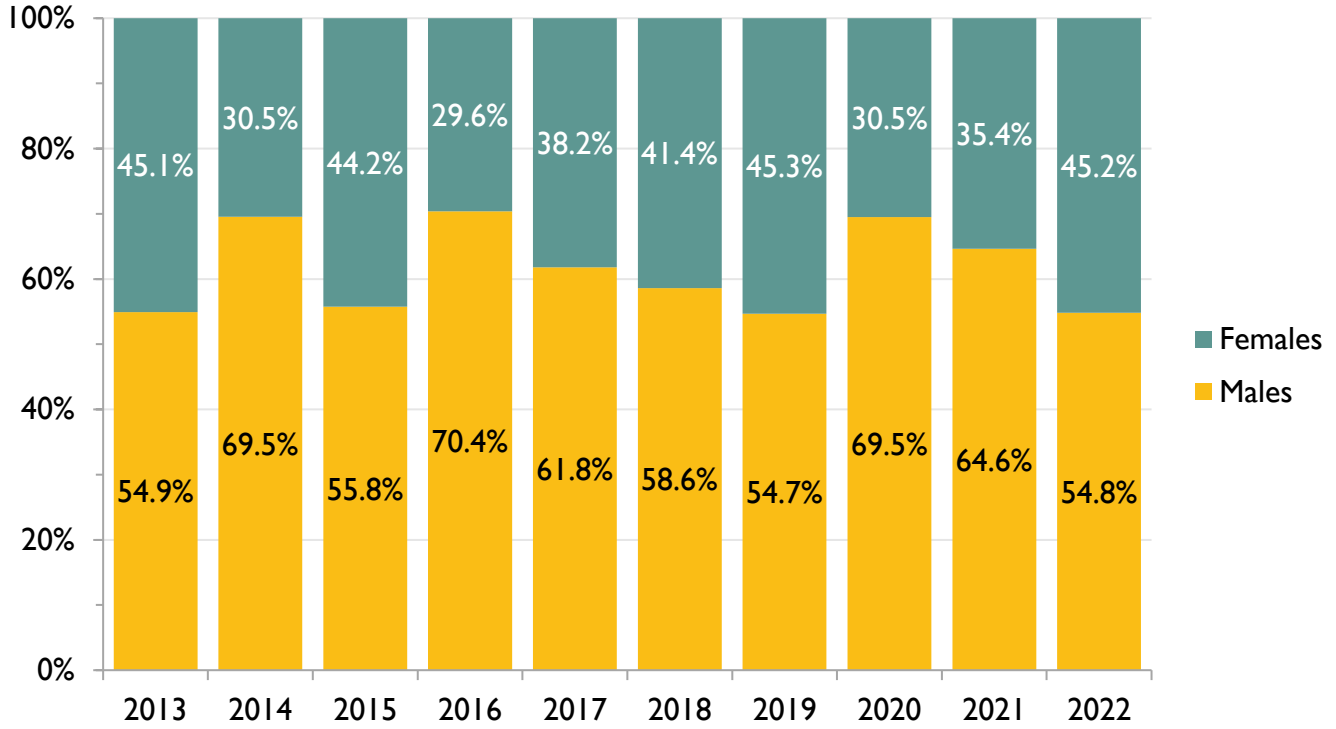


Snapshot

In 2022, ACB females accounted for 49.1% of first-time HIV diagnoses among females, which ranged from a low of 34.4% in 2016 and a high of 61.3% in 2018, for an average of 50.2% between 2013 and 2022.

Notes: Data provided by Public Health Ontario Laboratory. Where ACB status of first-time diagnoses is known, n=304 among males and 114 among females in 2022). First-time diagnoses where ACB status was not reported were excluded (average of 27.3% of diagnoses per year among males, 35.7% among females). See Appendices for more information. See Tables Supplement for underlying data.

Figure 9.6 Percent of first-time HIV diagnoses by sex, ACB, Ontario, 2013 to 2022



Snapshot

In 2022, females accounted for 45.2% of first-time HIV diagnoses among ACB, while males accounted for 54.8%. Between 2013 and 2022, ACB males accounted for an average of 61.5% of first-time HIV diagnoses among ACB, while ACB females accounted for an average of 38.5%.

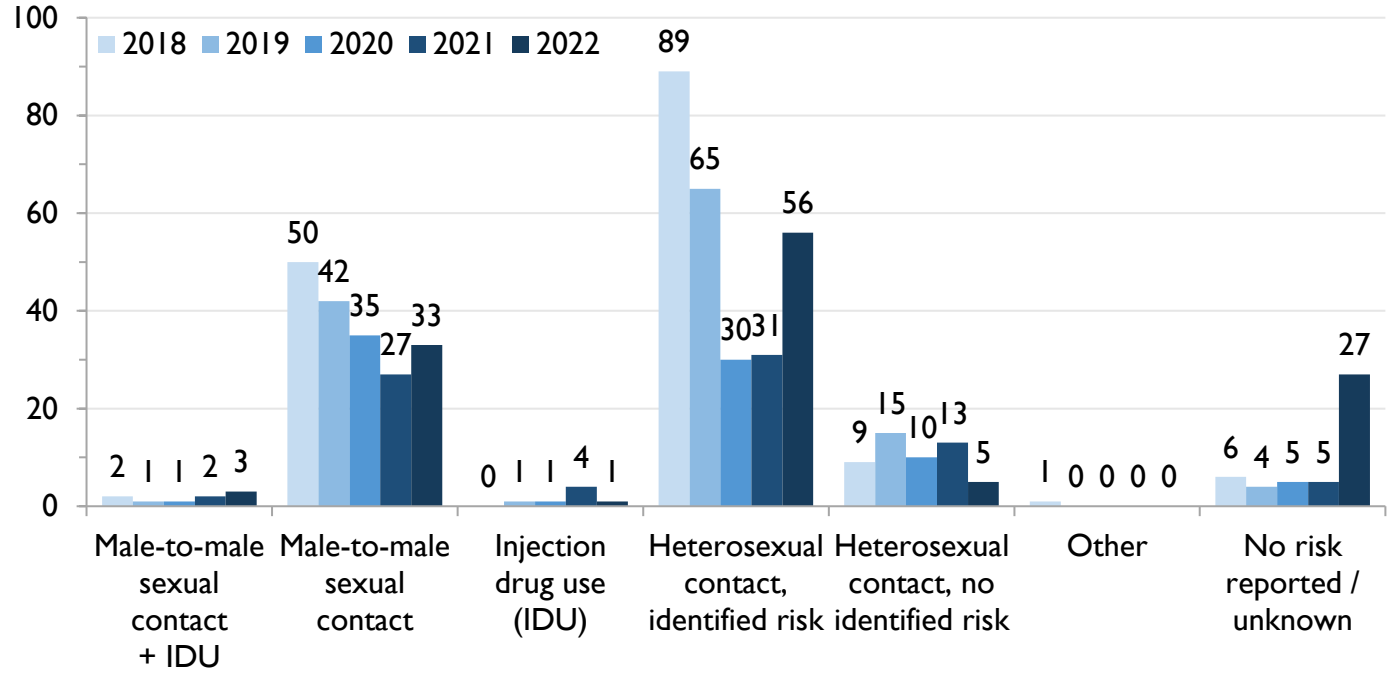
Notes: Data provided by Public Health Ontario Laboratory. Diagnoses where ACB status was not reported were excluded (average of 26.9% of diagnoses per year among males, 31.7% among females). See Appendices for more information. See Tables Supplement for underlying data.

9.c. ACB by HIV exposure category

In 2022, in terms of HIV exposure category, the largest proportion of first-time HIV diagnoses among ACB people were reported as heterosexual contact with identified risk (57.1%). Among ACB males, the largest proportion of first-time HIV diagnoses were reported as male-to-male sexual contact (60.0%), while 90.9% of ACB females reported heterosexual contact with identified risk as the exposure category.

Definitions: *The "Heterosexual contact, identified risk" category includes diagnoses where sex with a person of the opposite sex/gender is reported and either the individual's country of birth is reported as an HIV-endemic country, or the individual's sex partner is reported to be at least one of: HIV-positive; user of injection drugs; born in an HIV-endemic country; a bisexual male. See HIV exposure categories for more information.*

Figure 9.7 Number of first-time HIV diagnoses by HIV exposure category, ACB, Ontario, 2018 to 2022



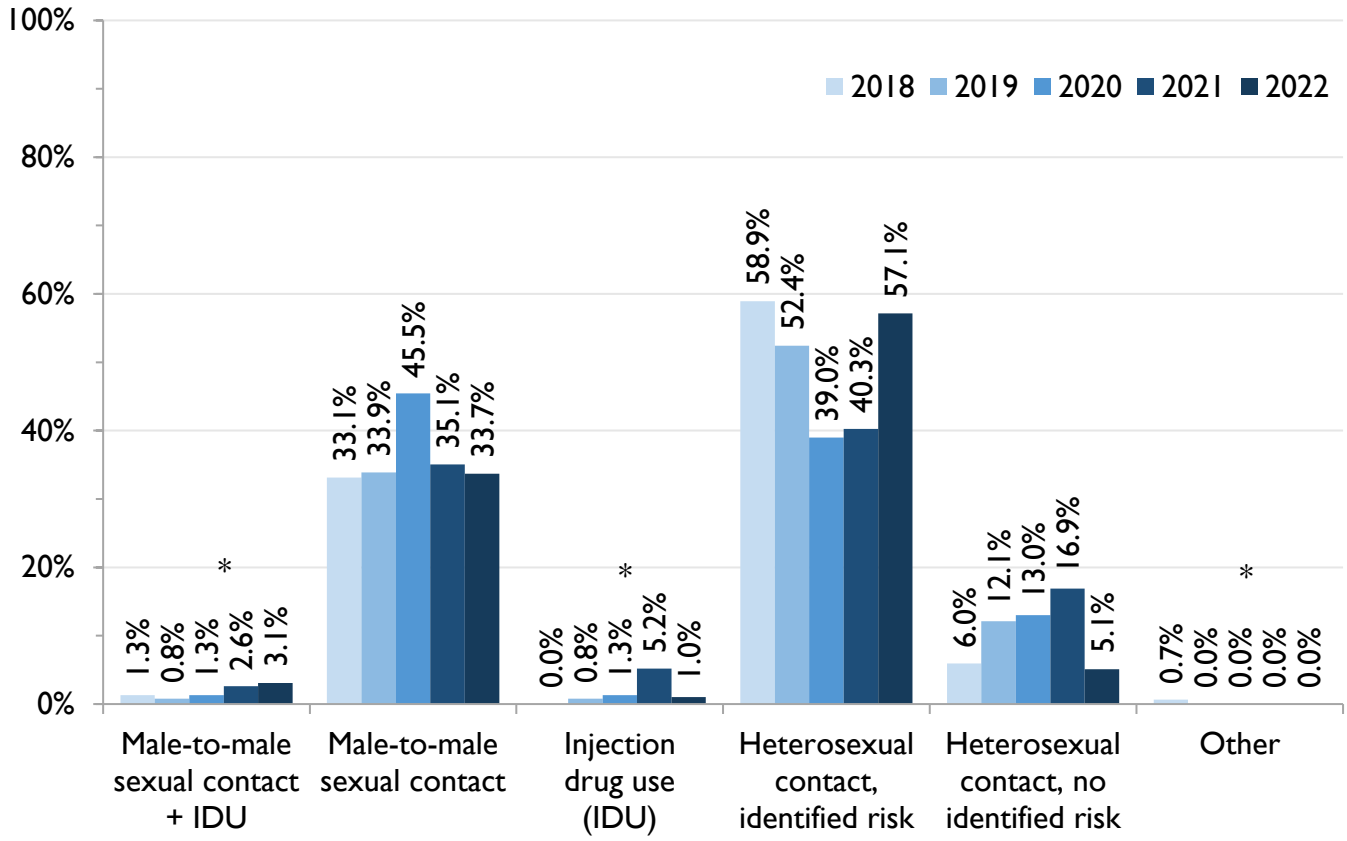
Snapshot

In 2022, 27 of the 125 first-time HIV diagnoses in ACB people did not report an HIV exposure category. Among the 98 first-time HIV diagnoses with a reported HIV exposure category in 2022, 56 were reported as heterosexual contact with identified risk, 33 as male-to-male sexual contact and 5 as heterosexual contact with no identified risk.

Between 2018 and 2022, heterosexual contact with identified risk accounted for the largest numbers of first-time HIV diagnoses among ACB, followed by male-to-male sexual contact except in 2020 when male-to-male sexual contact was the largest. Compared to 2019, the number of first-time HIV diagnoses among ACB decreased in most exposure categories with the largest relative decrease among heterosexual contact with no identified risk (66.7%) and male-to-male sexual contact (21.4%).

Notes: Data provided by Public Health Ontario Laboratory. First-time diagnoses where ACB status was not reported were excluded (average of 29.5% of diagnoses per year). IDU = injection drug use. See Appendices and specifically HIV exposure categories for more information. See Tables Supplement for underlying data.

Figure 9.8 Percent of first-time HIV diagnoses by HIV exposure category (where reported), ACB, Ontario, 2018 to 2022



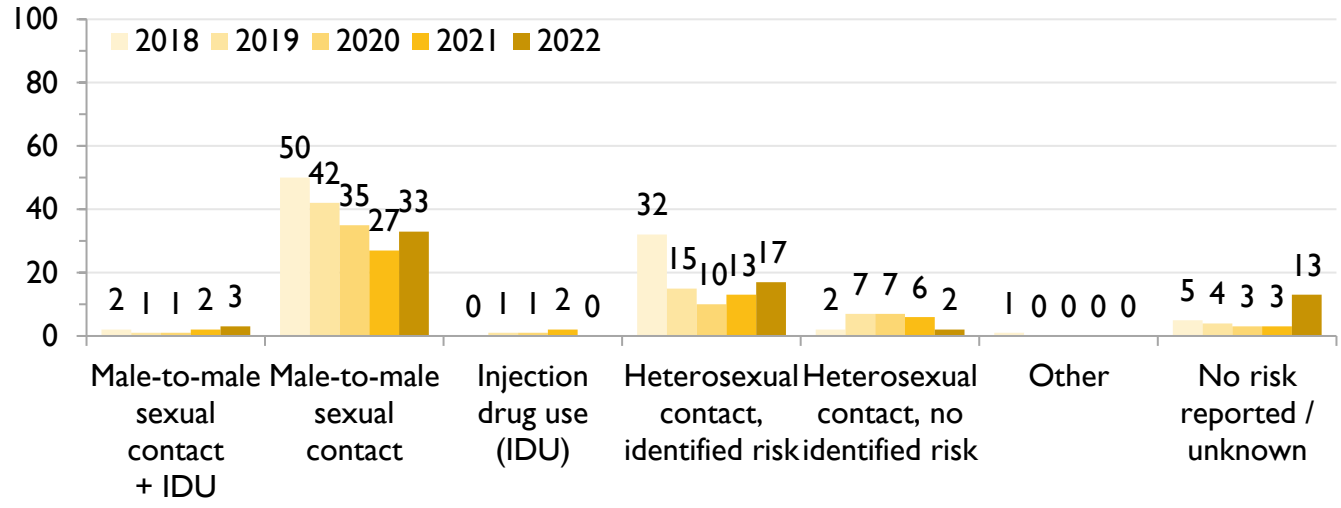
Snapshot

In 2022, among the 98 first-time HIV diagnoses with a reported HIV exposure category, 57.1% were reported as heterosexual contact with identified risk, 33.7% as male-to-male sexual contact, and 5.1% as heterosexual contact with no identified risk.

Between 2018 and 2022, heterosexual contact with identified risk, followed by male-to-male sexual contact, accounted for the largest proportions of first-time HIV diagnoses among ACB. These were reversed in 2020.

Notes: Data provided by Public Health Ontario Laboratory. * denotes a proportion based on at least one count of <5, therefore proportions may be unstable and trends should be interpreted with caution. First-time diagnoses where ACB status was not reported were excluded (average of 29.5% of diagnoses per year). Diagnoses where ACB status was reported but HIV exposure category was not reported were excluded (average of 8.1% of diagnoses per year where ACB status was reported). IDU = injection drug use. See Appendices and specifically HIV exposure categories for more information. See Tables Supplement for underlying data.

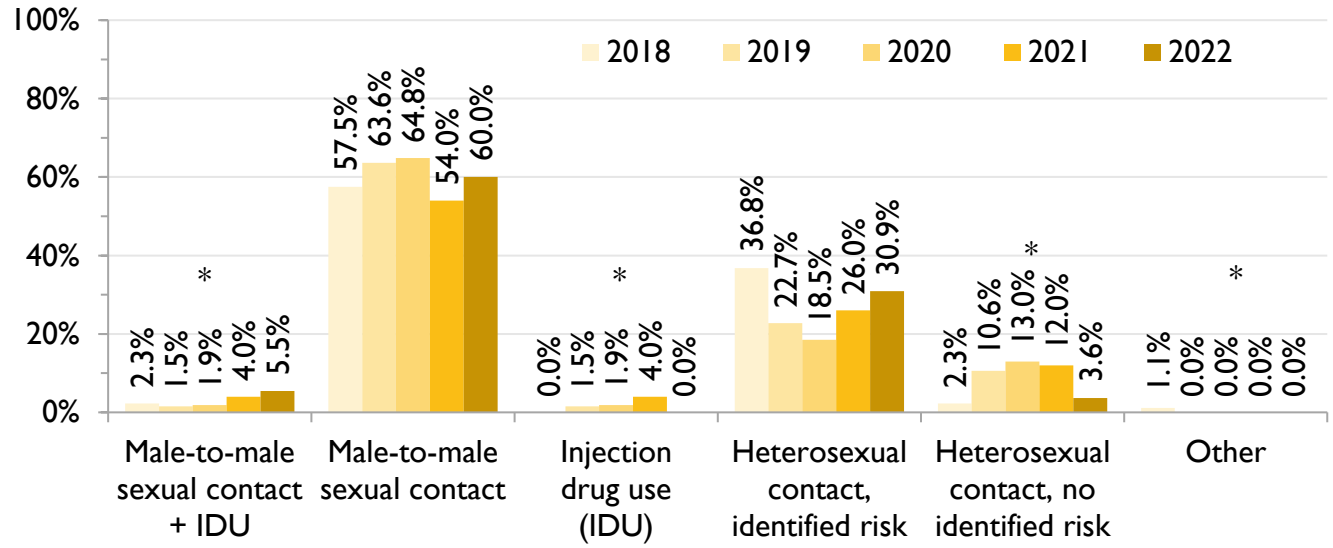
Figure 9.9 Number of first-time HIV diagnoses by HIV exposure category, ACB males, Ontario, 2018 to 2022



Snapshot

Among the 55 first-time HIV diagnoses in ACB males with a reported HIV exposure category in 2022, 33 were reported as male-to-male sexual contact and 17 as heterosexual contact with identified risk. Between 2018 and 2022, male-to-male sexual contact accounted for the largest numbers of first-time HIV diagnoses among ACB males.

Figure 9.10 Percent of first-time HIV diagnoses by HIV exposure category (where reported), ACB males, Ontario, 2018 to 2022

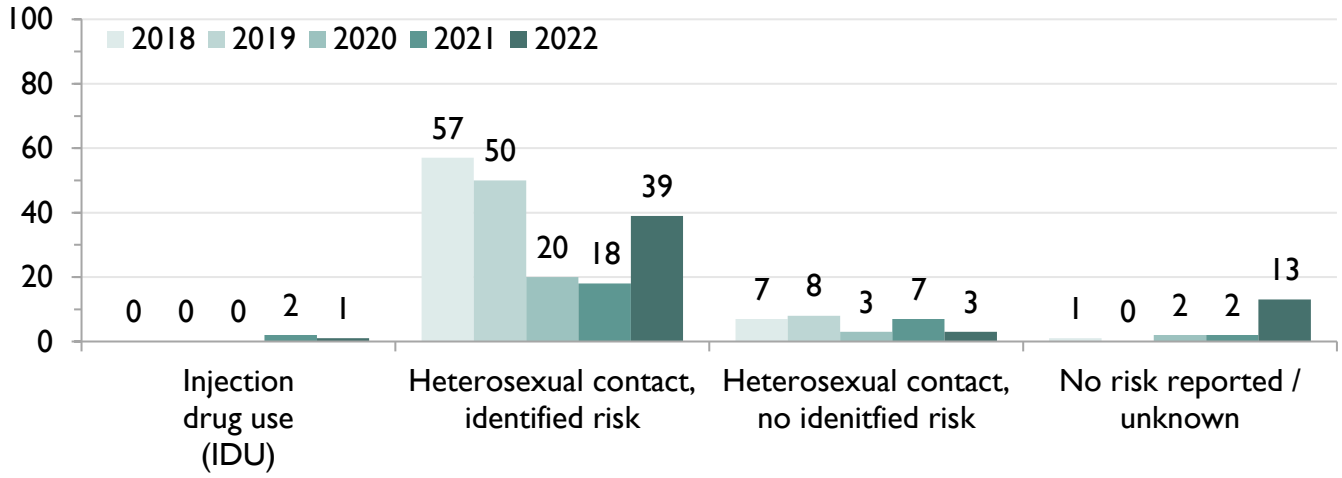


Snapshot

In 2022, among the 55 first-time HIV diagnoses in ACB males with a reported HIV exposure category, 60.0% were reported as male-to-male sexual contact, consistent over time and 30.9% as heterosexual contact with identified risk.

Notes: Data provided by Public Health Ontario Laboratory. * denotes a proportion based on at least one count of <5, therefore proportions may be unstable and trends should be interpreted with caution. First-time diagnoses where ACB status was not reported were excluded (average of 28.7% of diagnoses per year). First-time diagnoses where ACB status was reported but HIV exposure category was not reported were excluded from Figure 9.10 (average of 8.2% of FT diagnoses per year where ACB status reported). IDU = injection drug use. See Appendices and specifically HIV exposure categories for more information. See Tables Supplement for underlying data.

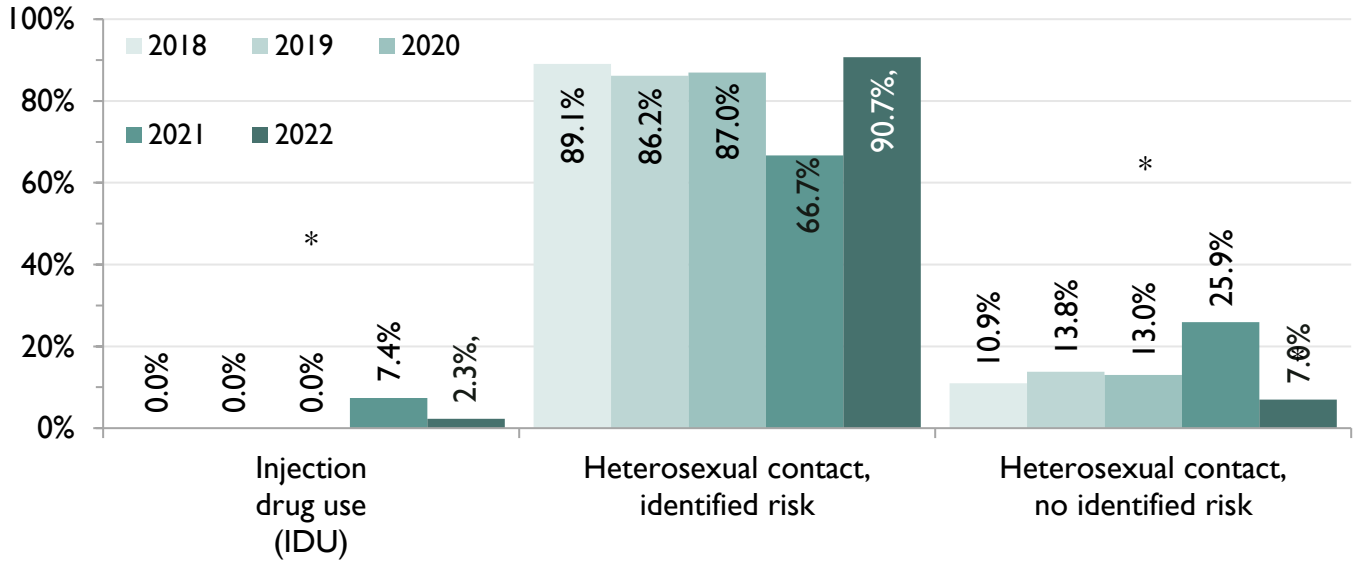
Figure 9.11 Number of first-time HIV diagnoses by HIV exposure category, ACB females, Ontario, 2018 to 2022



Snapshot

Among the 43 first-time HIV diagnoses in ACB females with a reported HIV exposure category in 2022, 39 were reported as heterosexual contact with identified risk, 3 as heterosexual contact with no identified risk and 1 as IDU. Between 2018 and 2022, the majority of first-time HIV diagnoses among ACB females were reported as heterosexual contact with identified risk.

Figure 9.12 Percent of first-time HIV diagnoses by HIV exposure category (where reported), ACB females, Ontario, 2018 to 2022



Snapshot

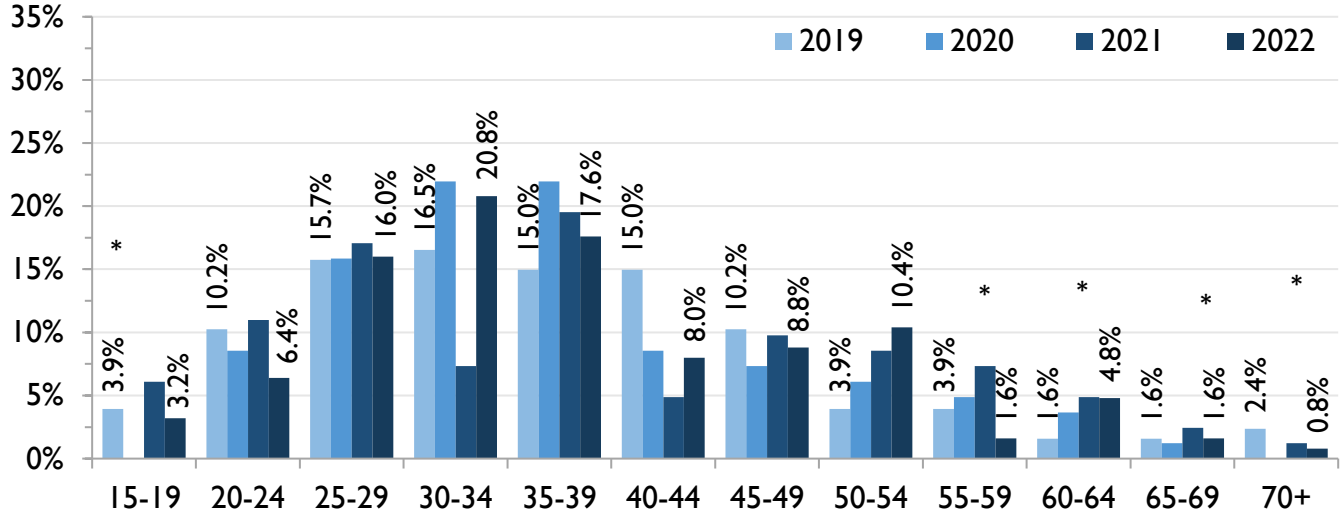
In 2022, among the 43 first-time HIV diagnoses in ACB females with a reported HIV exposure category, 90.7% were reported as heterosexual contact with identified risk and 7.0% as heterosexual contact with no identified risk.

Notes: Data provided by Public Health Ontario Laboratory. * denotes a proportion based on at least one count of <5, therefore proportions may be unstable and trends should be interpreted with caution. First-time diagnoses where ACB status was not reported were excluded (average of 35.7% of FT diagnoses per year). First-time diagnoses where ACB status was reported but HIV exposure category was not reported were excluded from Figure 9.12 (average of 7.9% of FT diagnoses per year where ACB status was reported). IDU = injection drug use. See Appendices and specifically HIV exposure categories for more information. See Tables Supplement for underlying data.

9.d. ACB by age

In 2022, the largest proportion of first-time HIV diagnoses among ACB people were in those aged 30-34 (20.8%) and 35-39 (17.6%). Over the four-year period 2019-2022, among ACB females, 20.4% were in those aged 35-39, while 25-29 and 30-34 accounted for the largest proportions among males (18.1%).

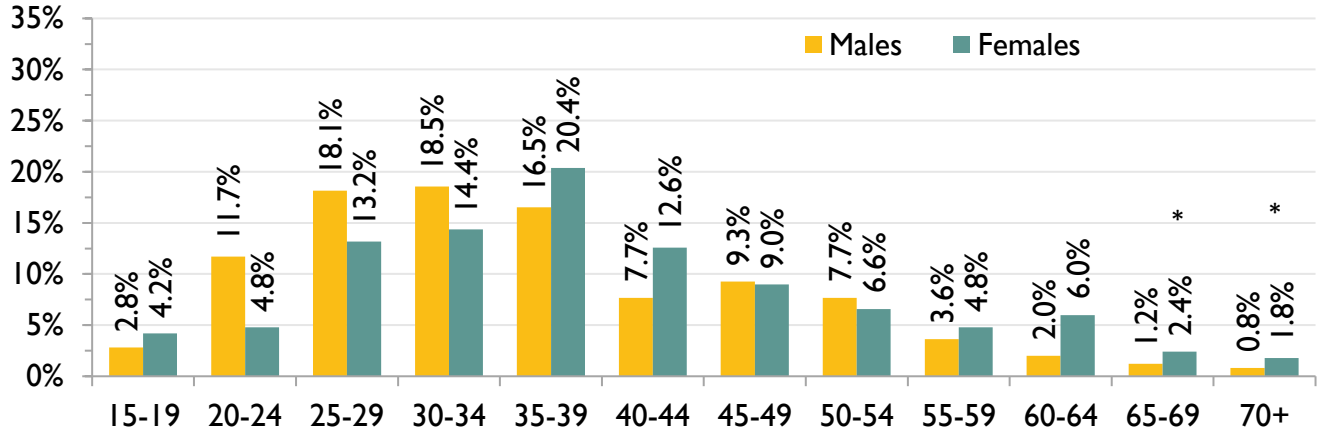
Figure 9.13 Percent of first-time HIV diagnoses by age, ACB, Ontario, 2019 to 2022



Snapshot

In 2022, over 1 in 2 (54.4%) first-time HIV diagnoses among ACB were among those aged 25-39 years of age. The 30-34 and 35-39 age categories accounted for the largest proportion in 2022 (20.8% and 17.6%, respectively).

Figure 9.14 Percent of first-time HIV diagnoses by age, ACB males and ACB females, Ontario, 2019-2022



Snapshot

Over the four-year period (2019-2022), the largest proportion of first-time HIV diagnoses among ACB males was in those aged 30-34 (18.5%), while among ACB females was in those aged 35-39 (20.4%).

Notes: Data provided by Public Health Ontario Laboratory. * denotes proportion based on at least one count of <5, therefore proportions may be unstable and trends should be interpreted with caution. First-time diagnoses with age not reported were excluded (less than 1%).First-time diagnoses where ACB status was not reported were excluded (30.9% of diagnoses overall in 2019 and 31.5% in 2022; 29.8% among males over the 4-year period 2019-2022 and 39.8% among females). See Appendices for more information. See Tables Supplement for underlying data.

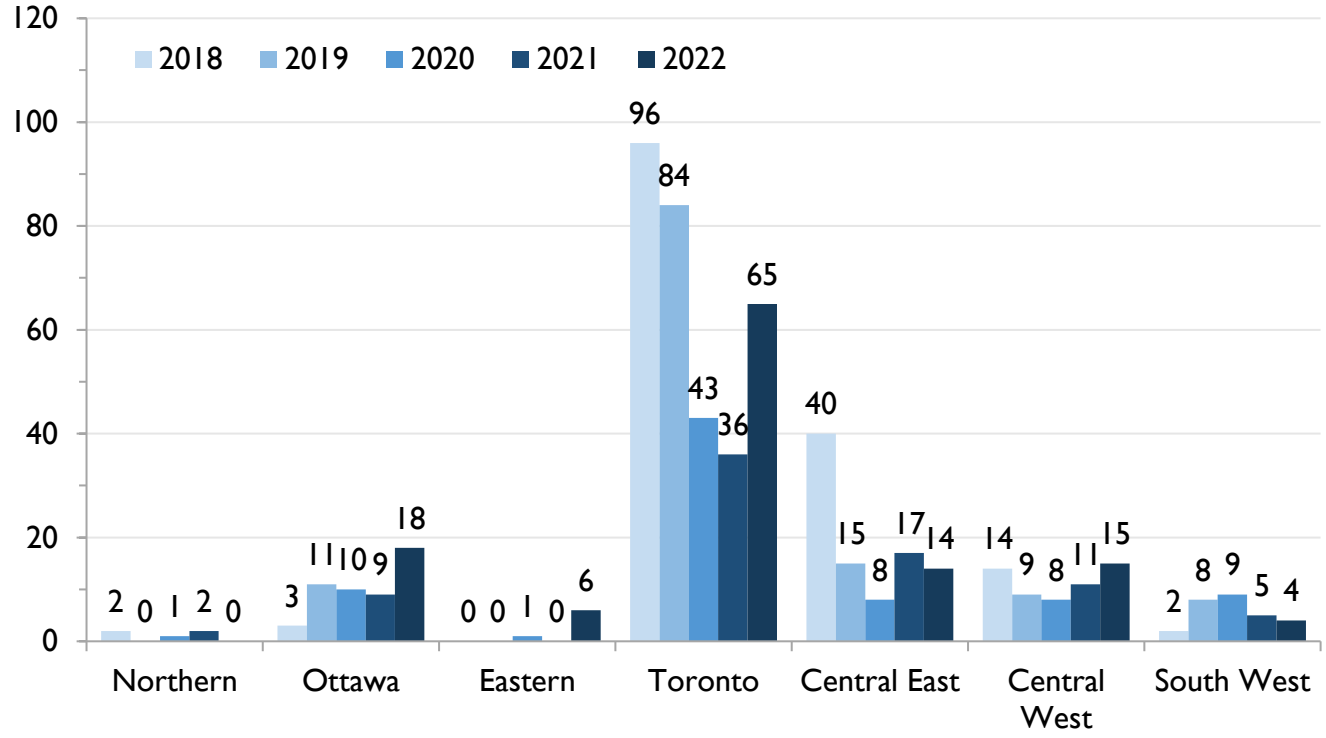
9.e. ACB by health region

In 2022, Toronto region had the largest proportion of first-time HIV diagnoses among ACB overall (53.3%), among ACB males (64.7%) and ACB females (32.9%). Same pattern seen in previous years (2019-2022).

Compared to 2019, the number of first-time HIV diagnoses among ACB in 2022 decreased in the Southwest (50.0%), Toronto (22.6%) and Central East (6.7%) regions, and increased in the Ottawa (63.6%), Eastern (0 to 6), and Central West (66.7%) regions.

Looking within each health region in 2022, Ottawa region attributed a larger proportion of its first-time HIV diagnoses to ACB than any other region (56.3%, though this is based on small numbers), followed by Eastern (40.0%), Toronto (33.3%), Central West (26.8%), Central East (20.3%) regions.

Figure 9.15 Number of first-time HIV diagnoses by health region, ACB, Ontario, 2016 to 2020



Snapshot

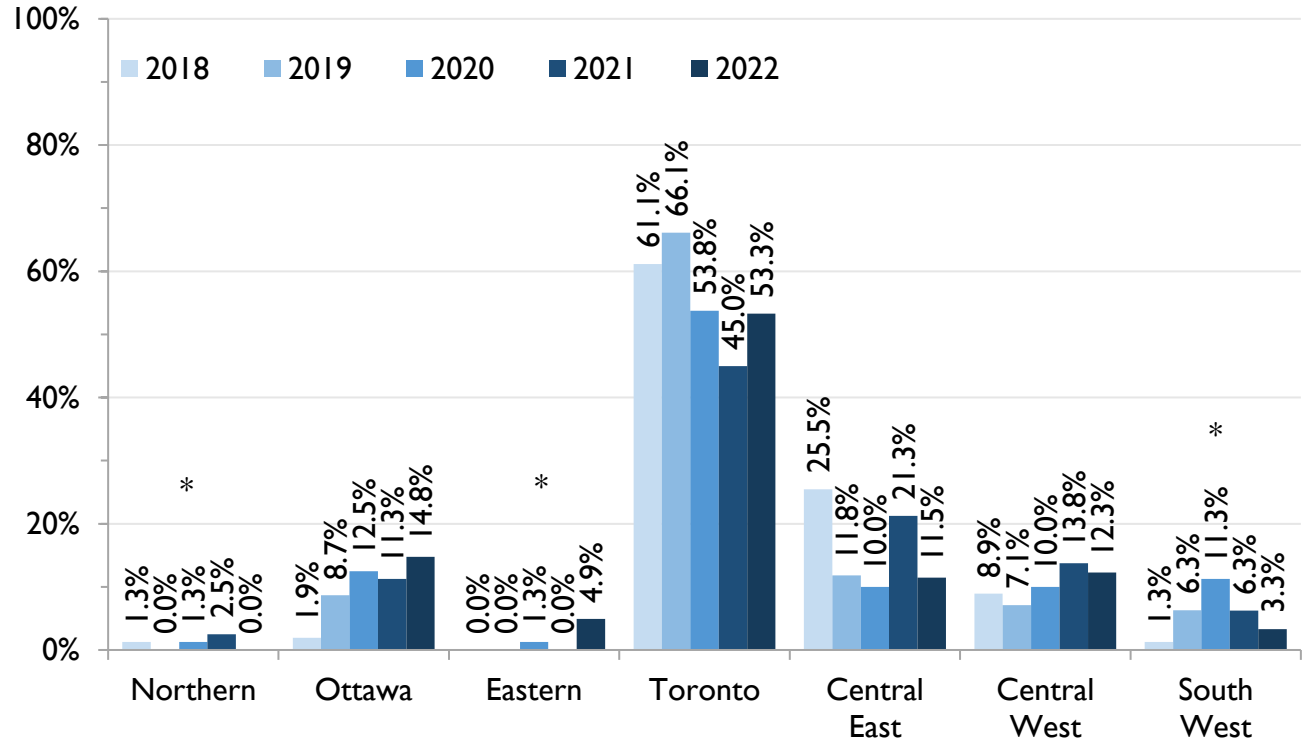
In 2022, comparing across health regions, Toronto region had the largest number of first-time HIV diagnoses among ACB (65), followed by Ottawa (18), Central West (15), Central East (14), Eastern (6) and South West (4) regions. No first-time HIV diagnoses were reported among ACB in the Northern region in 2022.

Between 2021 and 2022, the largest relative increase happened in the Ottawa region (100.0%), followed by Toronto (80.6%) and Central West (36.4%) regions, whereas a relative decrease happened in the South West (20.0%) and Central East (17.6%).

Compared to both 2018 and 2019, Ottawa region had the largest relative increase (500.0% and 63.6%, respectively), however those are based in small numbers. Toronto region saw a decrease compared to 2018 and 2019 (32.3% and 22.6%, respectively).

Notes: Data provided by Public Health Ontario Laboratory. Health regions are groupings of Public Health Units. Diagnoses were assigned to a health region based on their address of residence or, if unreported, the address of the ordering provider. First-time diagnoses where ACB status was not reported were excluded (average of 29.5% of FT diagnoses per year). See Appendices and specifically HIV exposure categories for more information. See Tables Supplement for underlying data.

Figure 9.16 Percent of first-time HIV diagnoses across health regions, ACB, Ontario, 2018 to 2022



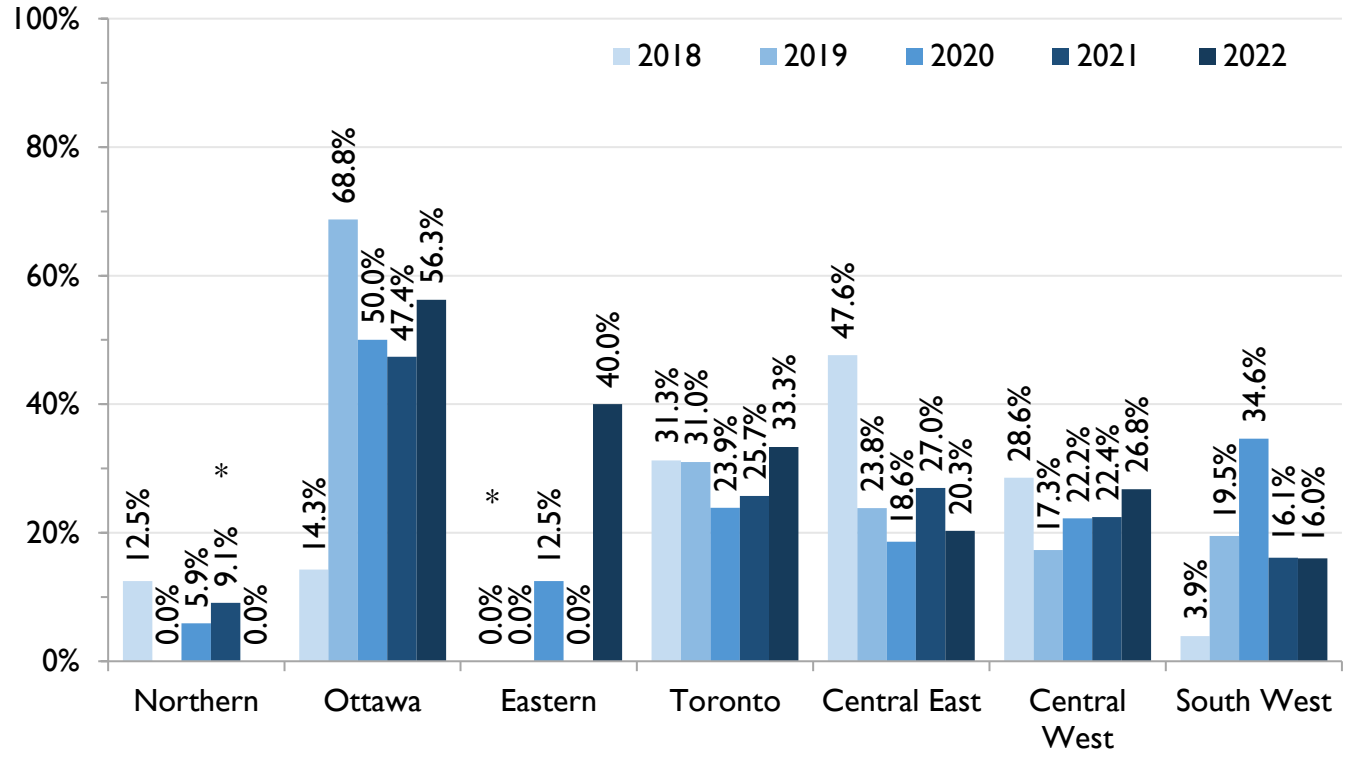
Snapshot

In 2022, Toronto region had the largest proportion of first-time HIV diagnoses among ACB (53.3%), followed by Ottawa (14.8%), Central West (12.3%) and Central East (11.5%) regions. Northern, Eastern and South West regions made up less than 5% of first-time HIV diagnoses attributed to ACB in 2022.

Between 2018 and 2022, Toronto region had the largest proportion of first-time HIV diagnoses among ACB.

Notes: Data provided by Public Health Ontario Laboratory. * denotes a proportion based on at least one count of <5, therefore proportions may be unstable and trends should be interpreted with caution. Health regions are groupings of Public Health Units. Diagnoses were assigned to a health region based on their address of residence or, if unreported, the address of the ordering provider. First-time diagnoses where ACB status was not reported were excluded (average of 29.5% of FT diagnoses per year). See Appendices and specifically Health regions for more information. See Tables Supplement for underlying data.

Figure 9.17 Percent of first-time HIV diagnoses within each health region attributed to ACB (where ACB status reported), Ontario, 2018 to 2022



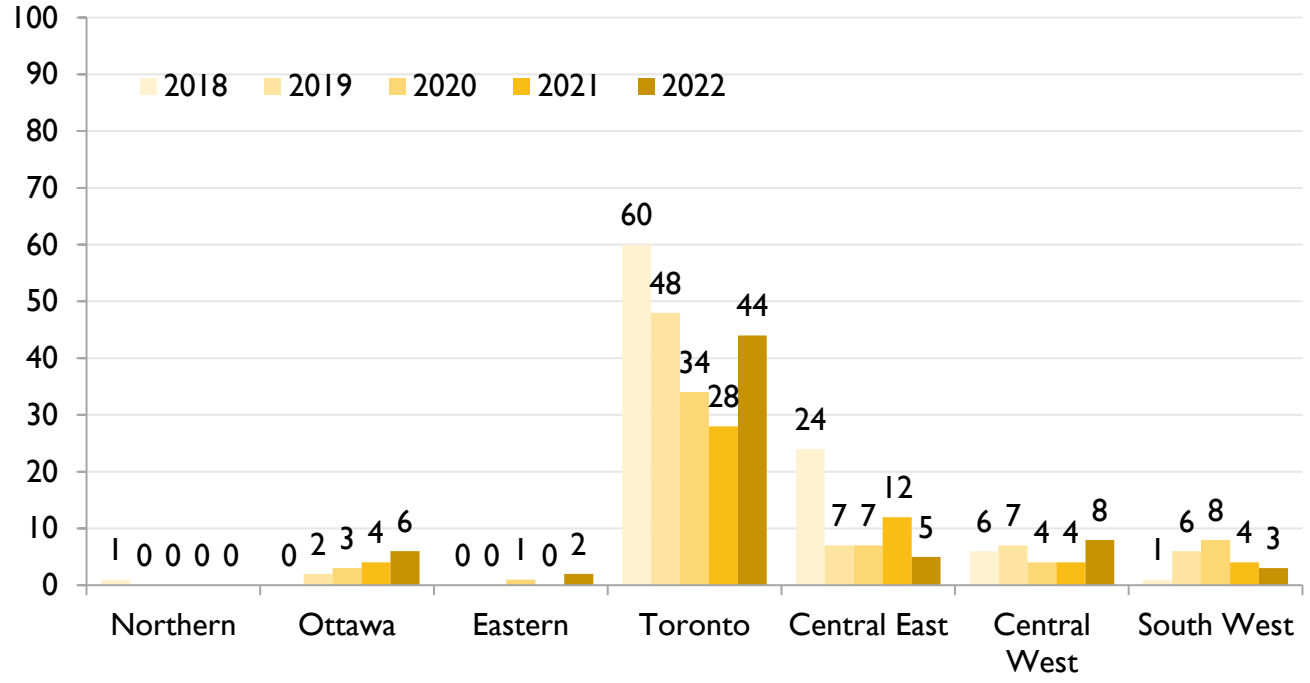
Snapshot

In 2022, looking within each health region, Ottawa region attributed a larger proportion of its first-time HIV diagnoses to ACB than any other region (56.3%), followed by Eastern (40.0%), Toronto (33.3%), Central West (26.8%), Central East (20.3%) and South West (16.0%) regions.

Between 2018 and 2022, Ottawa region attributed a larger proportion of its first-time HIV diagnoses to ACB than any other region.

Notes: Data provided by Public Health Ontario Laboratory. * denotes a proportion based on at least one count of <5, therefore proportions may be unstable and trends should be interpreted with caution. Health regions are groupings of Public Health Units. Diagnoses were assigned to a health region based on their address of residence or, if unreported, the address of the ordering provider. First-time diagnoses where ACB status was not reported were excluded (average of 29.5% of FT diagnoses per year). See Appendices and specifically Health regions for more information. See Tables Supplement for underlying data.

Figure 9.18 Number of first-time HIV diagnoses by health region, ACB males, Ontario, 2018 to 2022



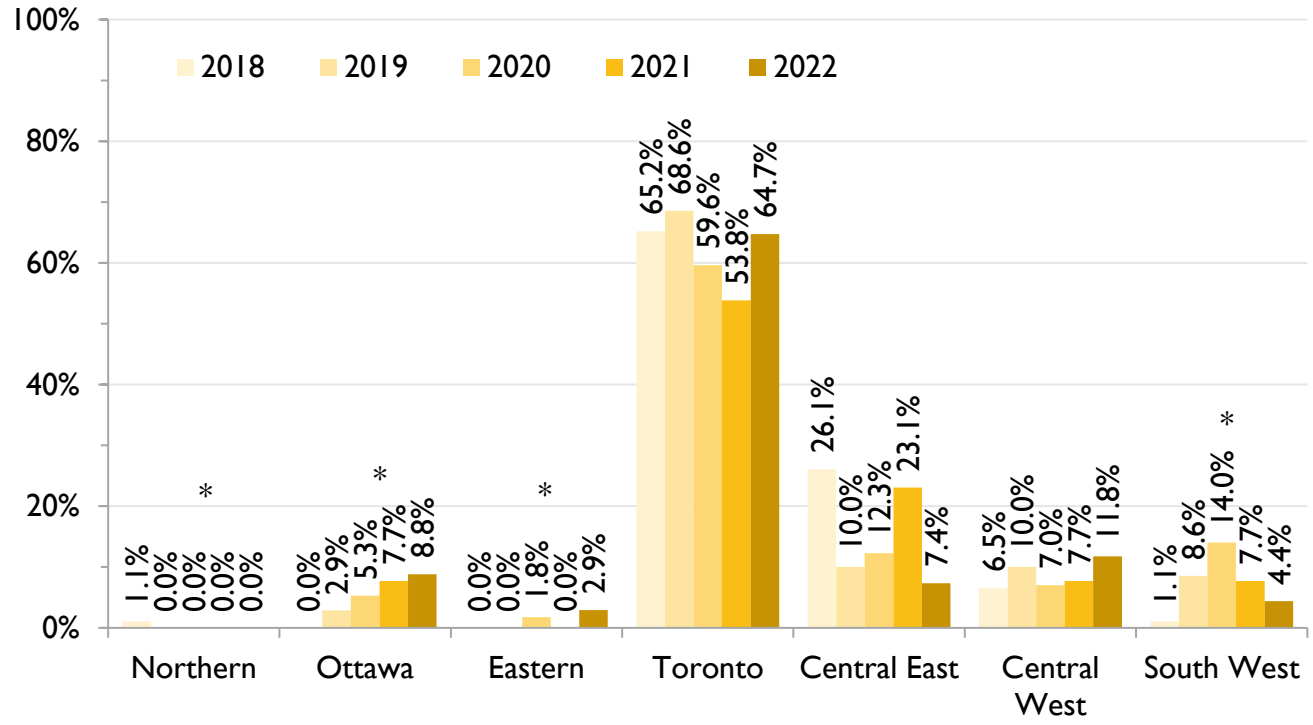
Snapshot

In 2022, Toronto region had the largest number of first-time HIV diagnoses among ACB males (44), followed by Central West (8), Ottawa (6) and Central East (5) regions. All other regions had less than 5 first-time diagnoses attributed to ACB males.

Between 2018 and 2022, Toronto region had the largest number of first-time HIV diagnoses among ACB males.

Notes: Data provided by Public Health Ontario Laboratory. Health regions are groupings of Public Health Units. Diagnoses were assigned to a health region based on their address of residence or, if unreported, the address of the ordering provider. First-time diagnoses where ACB status was not reported were excluded (average of 28.7% of FT diagnoses per year). See Appendices and specifically Health regions for more information. See Tables Supplement for underlying data.

Figure 9.19 Percent of first-time HIV diagnoses across health regions, ACB males, Ontario, 2018 to 2022



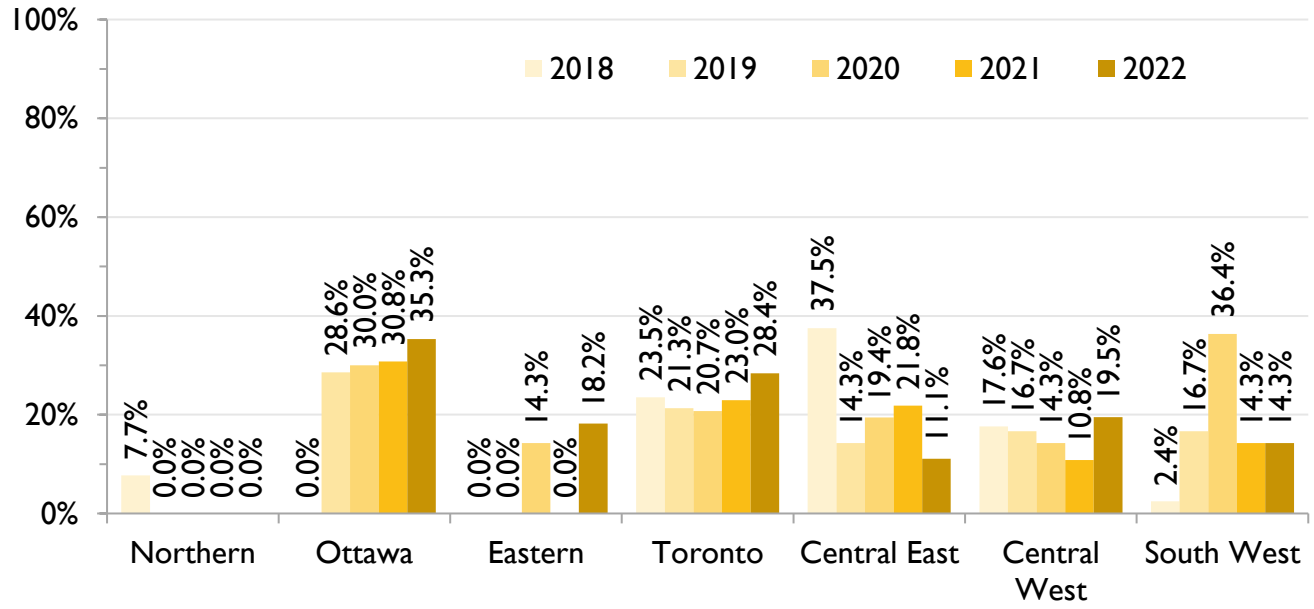
Snapshot

In 2022, Toronto region had the largest proportion of first-time HIV diagnoses among ACB males (64.7%), followed by Central West (11.8%), Ottawa (8.8%) and Central West (7.4%) regions. Northern, Eastern and South West regions accounted for less than 5% each.

Between 2018 and 2022, Toronto region had the largest proportion of first-time HIV diagnoses among ACB and Ottawa region had an increase in the proportion year over year.

Notes: Data provided by Public Health Ontario Laboratory. * denotes a proportion based on at least one count of <5, therefore proportions may be unstable and trends should be interpreted with caution. Health regions are groupings of Public Health Units. Diagnoses were assigned to a health region based on their address of residence or, if unreported, the address of the ordering provider. First-time diagnoses where ACB status was not reported were excluded (average of 28.7% of FT diagnoses per year). See Appendices and specifically Health regions for more information. See Tables Supplement for underlying data.

Figure 9.20 Percent of first-time HIV diagnoses among males within each health region attributed to ACB (where ACB status reported), Ontario, 2018 to 2022



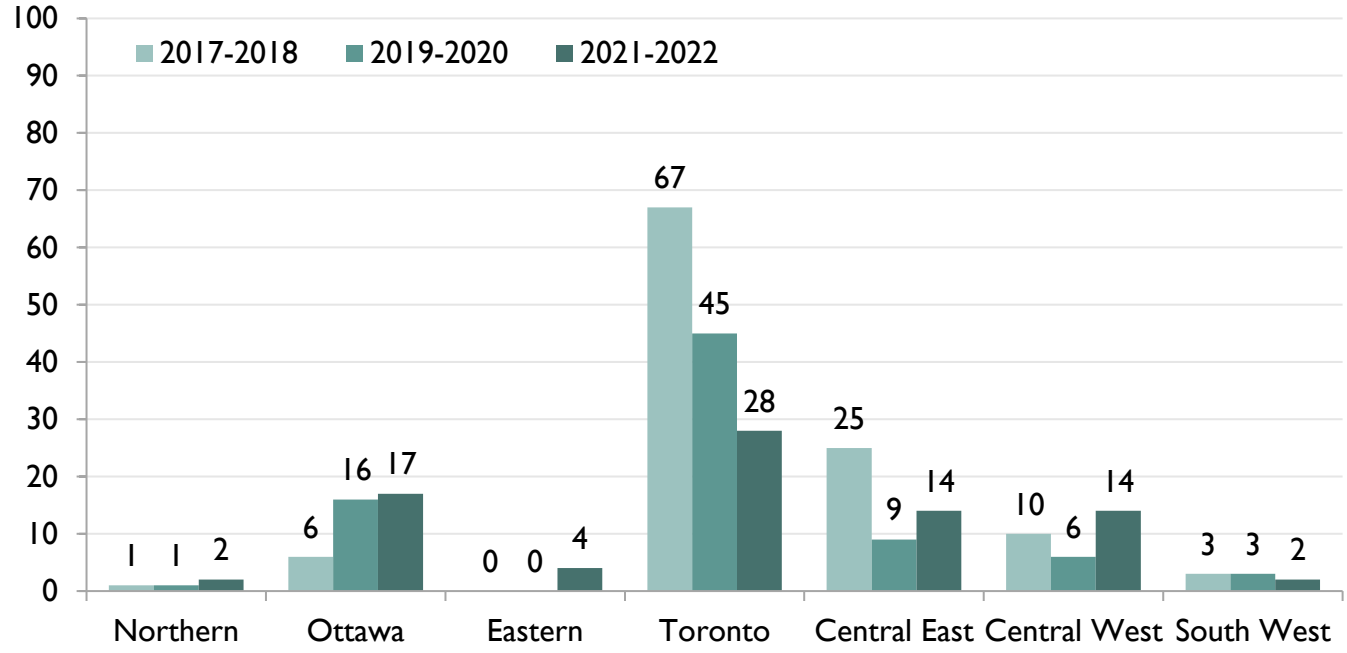
Snapshot

In 2022, looking within each region, Ottawa region attributed a larger proportion of its first-time HIV diagnoses among males to ACB than any other region (35.3%), followed by Toronto (28.4%), Central West (19.5%), Eastern (18.2%), South West (14.3%) and Central East (11.1%).

Between 2018 and 2022, the proportions of first-time HIV diagnoses among males attributed to ACB in Ottawa region varied between 0% and 35.3%, while in Toronto varied between 23.5% and 28.4%. Proportions of first-time HIV diagnoses in other regions are more variable as they are based on relatively small numbers.

Notes: Data provided by Public Health Ontario Laboratory. * denotes a proportion based on at least one count of <5, therefore proportions may be unstable and trends should be interpreted with caution. Health regions are groupings of Public Health Units. Diagnoses were assigned to a health region based on their address of residence or, if unreported, the address of the ordering provider. First-time diagnoses where ACB status was not reported were excluded (average of 28.7% of FT diagnoses per year). See Appendices and specifically Health regions for more information. See Tables Supplement for underlying data.

Figure 9.21 Number of first-time HIV diagnoses by health region, ACB females, Ontario, 2017-2018 to 2021-2022



Snapshot

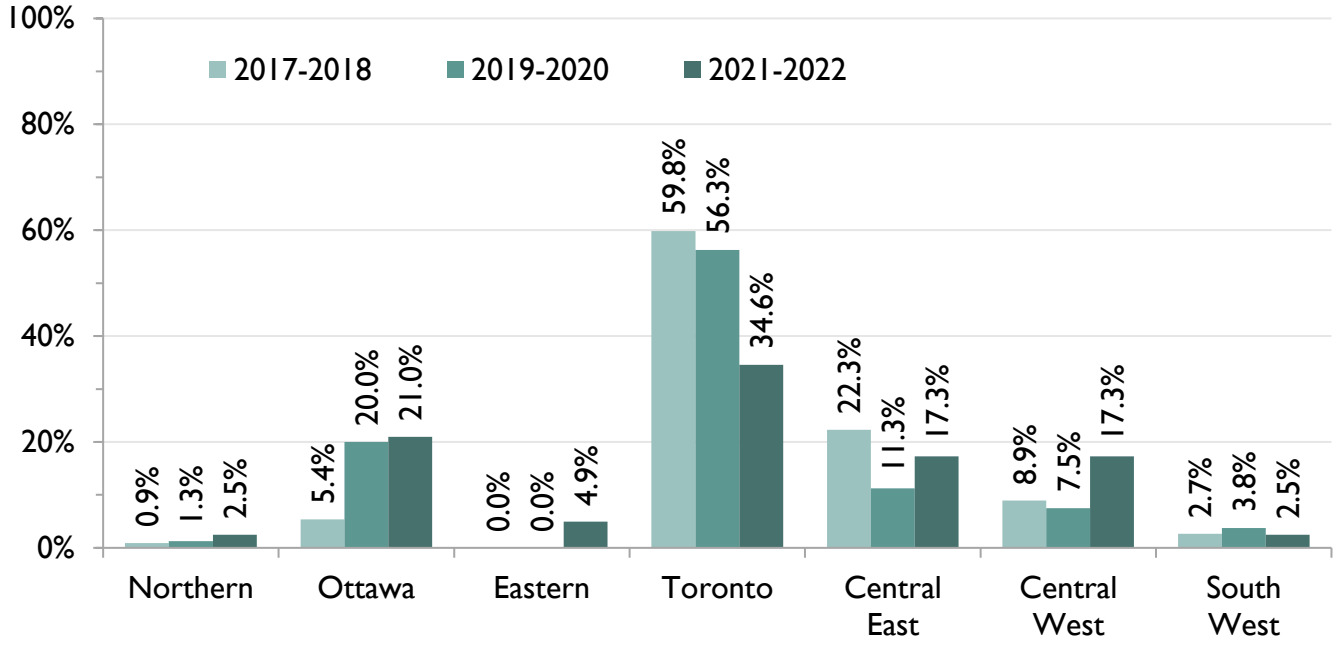
Over the two-year period 2021-2022, Toronto region had the largest number of first-time HIV diagnoses among ACB female (28), followed by Ottawa (17), Central West and Central East (both reporting 14 first-time HIV diagnose among ACB females), Eastern (4), South West and Northern (both reporting 2) regions.

Between the two-year periods 2017-2018, 2019-2020 and 2021-2022, Toronto region had the largest number of first-time HIV diagnoses among ACB females, however it has been decreasing from 67 to 28.

Data limitations: *In these figures, data is combined in two-year groupings (2017-2018, 2019-2020, 2021-2022). This was done systematically to ensure at least 50% of cell counts were ≥5 in order to reduce the effects of year-to-year variation.*

Notes: Data provided by Public Health Ontario Laboratory. Health regions are groupings of Public Health Units. Diagnoses were assigned to a health region based on their address of residence or, if unreported, the address of the ordering provider. First-time diagnoses where ACB status was not reported were excluded (average of 36.4% of FT diagnoses per year). See Appendices and specifically Health regions for more information. See Tables Supplement for underlying data.

Figure 9.22 Percent of first-time HIV diagnoses across health regions, ACB females, Ontario, 2017-2018 to 2021-2022



Snapshot

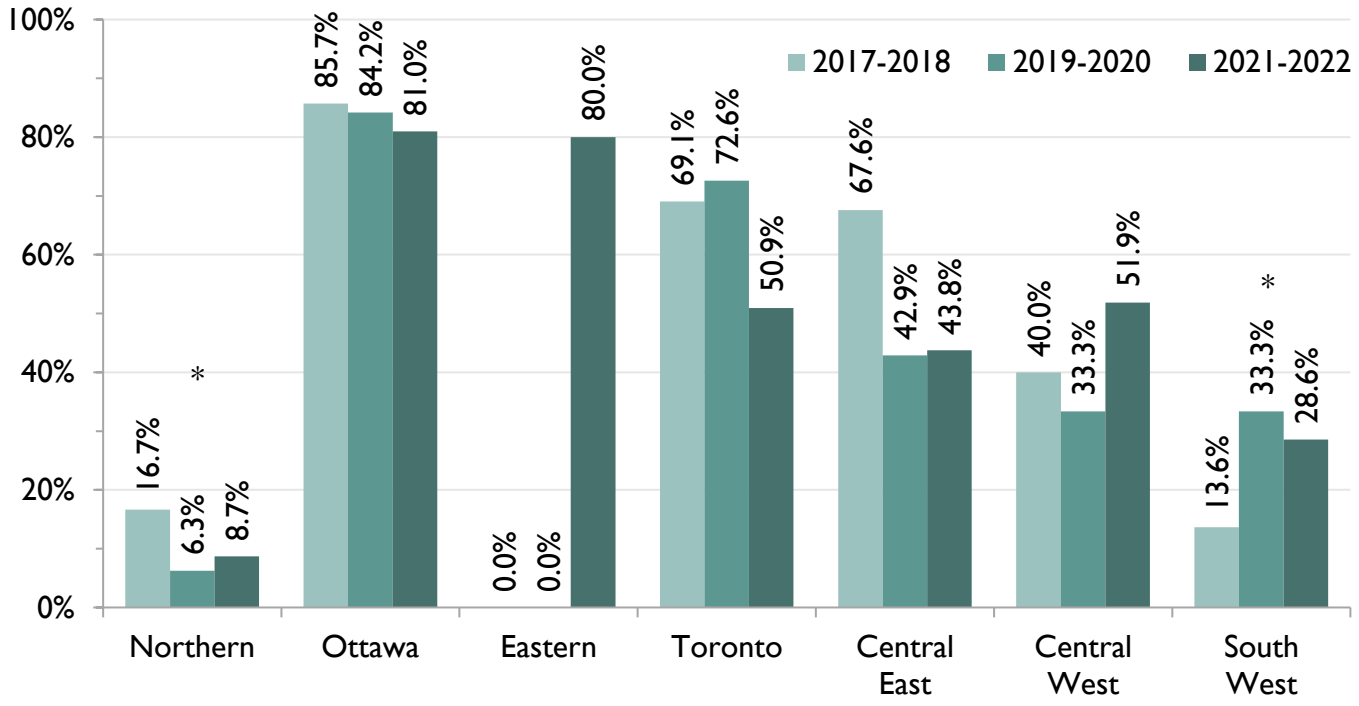
Over the two-year period 2021-2022, Toronto region had the largest proportion of first-time HIV diagnoses among ACB females (34.6%), followed by Ottawa (21.0%), Central East and Central West (both at 17.3%), and Eastern (4.9%) regions. Northern and South West regions attributed less than 4.0% of first-time HIV diagnoses among ACB females.

This trend has been consistent over time: between the two-year periods 2017-2018, 2019-2020 and 2021-2022, Toronto region had the largest proportion of first-time HIV diagnoses among ACB females.

Data limitations: *In these figures, data is combined in two-year groupings (2017-2018, 2019-2020, 2021-2022). This was done systematically to ensure at least 50% of cell counts were ≥5 in order to reduce the effects of year-to-year variation.*

Notes: Data provided by Public Health Ontario Laboratory. * denotes a proportion based on at least one count of <5, therefore proportions may be unstable and trends should be interpreted with caution. Health regions are groupings of Public Health Units. Diagnoses were assigned to a health region based on their address of residence or, if unreported, the address of the ordering provider. First-time diagnoses where ACB status was not reported were excluded (average of 36.4% of FT diagnoses per year). See Appendices and specifically Health regions for more information. See Tables Supplement for underlying data.

Figure 9.23 Percent of first-time HIV diagnoses among females within each health region attributed to ACB (where ACB status reported), Ontario, 2017-2018 to 2021-2022



Snapshot

Over the two-year period 2021-2022, analysing within each region, Ottawa region attributed a larger proportion of its first-time HIV diagnoses among females to ACB than any other region (81.0%), followed by Eastern (80.0%, despite having 4 ACB first-time HIV diagnoses in 2022), Central West (51.9%), Toronto (50.9%), Central East (43.8%), South West (28.6%) and Northern (8.7%) regions. These trends have been fairly consistent over time, except in the Eastern region where the proportion of its first-time HIV diagnoses among females attributed to ACB was 0.0% in previous years.

Data limitations: *In these figures, data is combined in two-year groupings (2017-2018, 2019-2020, 2021-2022). This was done systematically to ensure at least 50% of cell counts were ≥5 in order to reduce the effects of year-to-year variation.*

Notes: Data provided by Public Health Ontario Laboratory. * denotes a proportion based on at least one count of <5, therefore proportions may be unstable and trends should be interpreted with caution. Health regions are groupings of Public Health Units. Diagnoses were assigned to a health region based on their address of residence or, if unreported, the address of the ordering provider. First-time diagnoses where ACB status was not reported were excluded (average of 36.4% of FT diagnoses per year). See Appendices and specifically Health regions for more information. See Tables Supplement for underlying data.

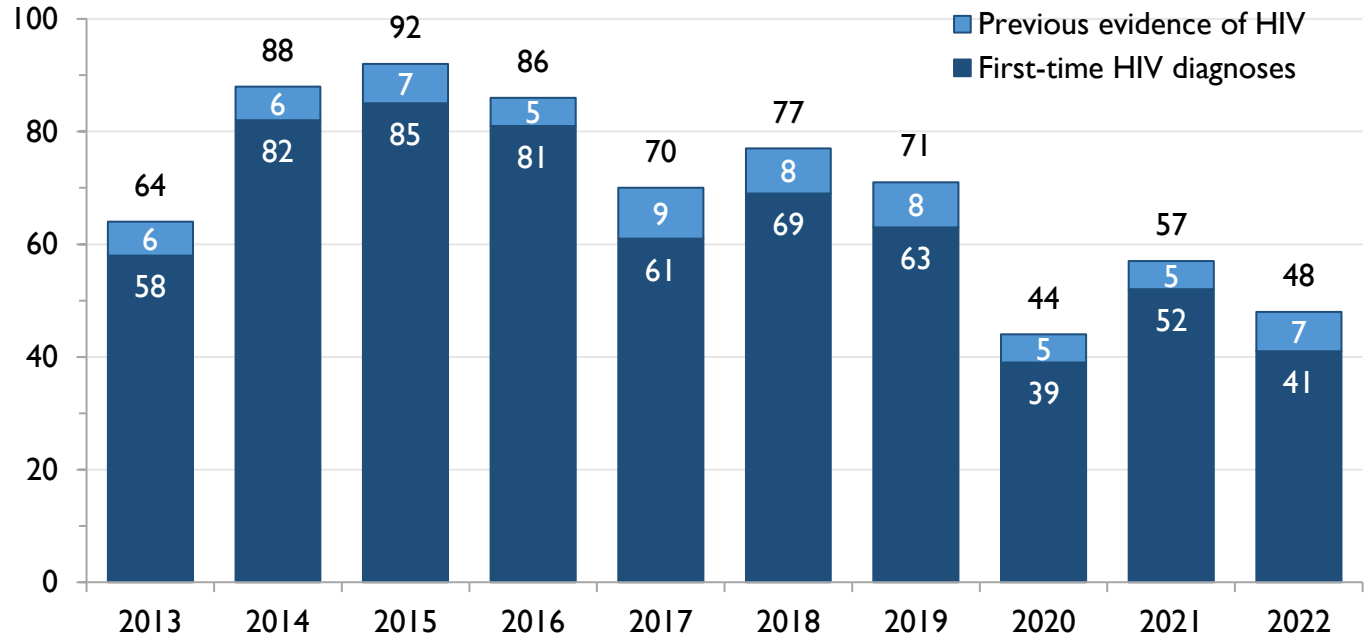
10. People who use injection drugs (PWID)

10.a. PWID overview

Diagnoses attributed to PWID are defined by having reported injection drug use as an HIV risk factor. In 2022, 41 of the 48 positive HIV tests attributed to PWID in Ontario were first-time HIV diagnoses and 7 had previous evidence of HIV. Of the 623 first-time diagnoses in 2022, 41 were among PWID, 344 were known not to be attributed to PWID and 238 were missing the required information to assign PWID status.

Data limitations: *Counts of positive HIV tests and first-time HIV diagnoses among PWID may be underestimated, as between 2013 and 2022, the information required to assign PWID status was not reported for an average of 23.0% of positive HIV tests, and we estimate between 9.7% and 11.3% of first-time HIV diagnoses overall to have an uncaptured previous HIV diagnosis between 2020-2022. Data shown are where PWID status was reported.*

Figure 10.1 Number of positive HIV tests, by first-time HIV diagnoses and previous evidence of HIV, PWID, Ontario, 2013 to 2022



Snapshot

In 2022, 41 of the 48 positive HIV tests attributed to PWID in Ontario were first-time HIV diagnoses, with 7 having previous evidence of HIV. Between 2013 and 2019, the number of first-time HIV diagnoses attributed to PWID ranged from 58 to 85, decreasing to 39 in 2020 and was 41 in 2022. Compared to 2019, the number of first-time HIV diagnoses attributed to PWID is 34.9% lower in 2022.

The proportion of positive HIV tests that had previous evidence of HIV among PWID was 14.6% in 2022.

Data limitations: *Counts of positive HIV tests and first-time HIV diagnoses among PWID may be underestimated, as between 2013 and 2022, the information required to assign PWID status was not reported for an average of 23.0% of positive HIV tests, and we estimate between 9.7% and 11.3% of first-time HIV diagnoses overall to have an uncaptured previous HIV diagnosis between 2020-2022.*

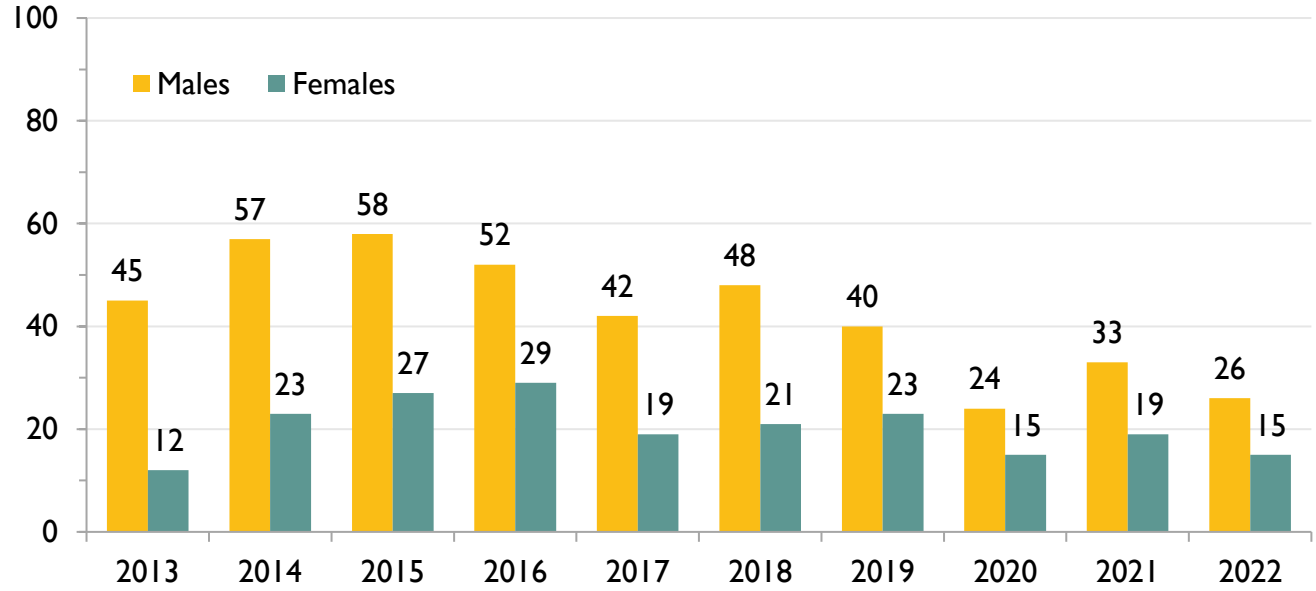
Notes: Data provided by Public Health Ontario Laboratory. Positive HIV tests where PWID status was not reported were excluded (average of 23.0% of tests per year). See Appendices for more information. See Tables Supplement for underlying data.

10.b. PWID by sex

In 2022, there were 26 first-time HIV diagnoses among male PWID and 15 first-time HIV diagnoses among female PWID. 10.6% of first-time HIV diagnoses were attributed to PWID[1] (where PWID status known) ,with males accounting for 6.8% and females for 3.9% of first-time HIV diagnoses. 9.1% of first-time HIV diagnoses among males was attributed to PWID (where male PWID status was known) and 15.6% of first-time HIV diagnoses among females we attributed to PWID (where female PWID status was known). Females accounted for 36.6% of first-time HIV diagnoses among PWID in 2022, this ranged from 21.1% to 38.5% from 2013 to 2022.

Data limitations: *Counts of first-time HIV diagnoses among PWID may be underestimated, as 2013 to 2022, the information required to assign PWID status was not reported for an average of 21.6% of first-time HIV diagnoses among males and 27.7% among females, and we estimate between 7.6% and 8.9% among males and between 17.4% and 20.6% among females to have an uncaptured previous HIV diagnosis. Data shown are where PWID status was reported.*

Figure 10.2 Number of first-time HIV diagnoses by sex, PWID, Ontario, 2013 to 2022



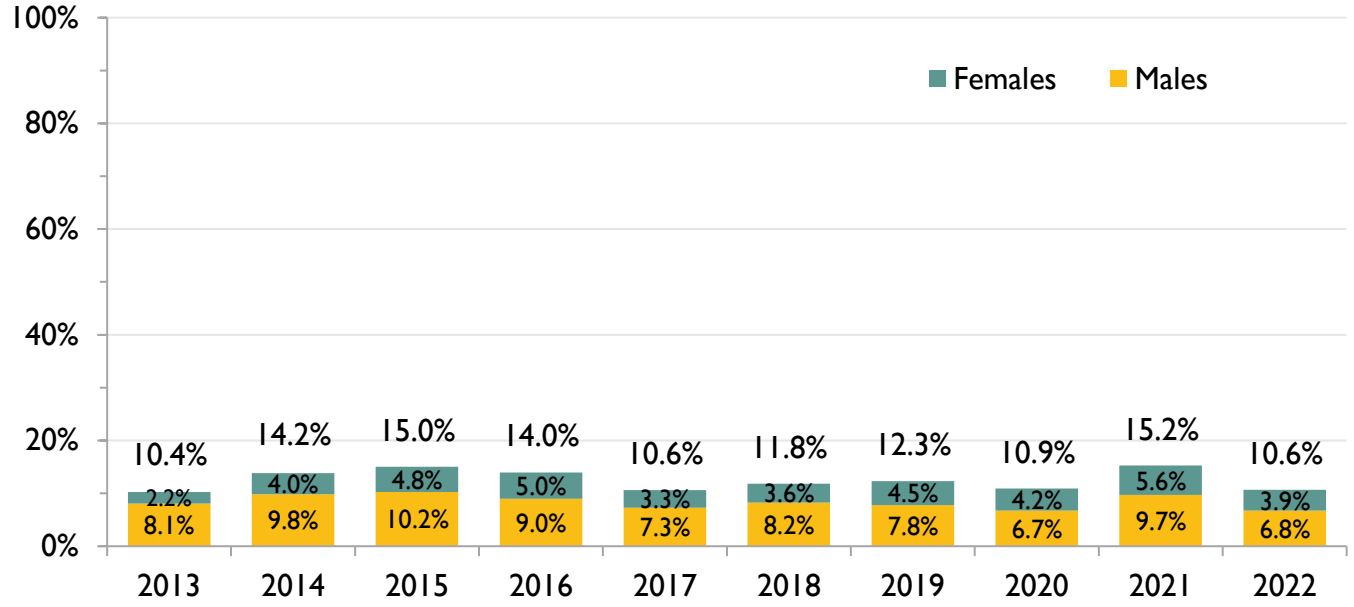
Snapshot

In 2022, there were 26 first-time HIV diagnoses among PWID males and 15 among PWID females. Between 2013 and 2022, the number of first-time HIV diagnoses among PWID males ranged from a low of 24 (2020) to 58 (2015). The number of first-time HIV diagnoses among PWID females ranged from a low of 12 (2013) to 29 (2016)

Notes: Data provided by Public Health Ontario Laboratory. First-time diagnoses where PWID status was not reported were excluded (average of 21.6% of FT diagnoses per year among males, 27.7% among females). See Appendices for more information. See Tables Supplement for underlying data.

Figure 10.3 Percent of first-time HIV diagnoses attributed to PWID (where PWID status reported) by sex, Ontario, 2013 to 2022

[1] Where PWID status of first-time diagnoses is known. That is, the denominator is first-time HIV diagnoses where the diagnosis was able to be assigned a PWID status (known PWID or known not to be PWID, n=385 overall, 285 among males and 96 among females in 2022). Information required to assign PWID status among first-time diagnoses (PWID status known, and therefore in the denominator) was not reported for an average of 23.1% of first-time HIV diagnoses between 2013 and 2022 (28.8% in 2022).



Snapshot

In 2022, male PWID accounted for 6.8% of first-time HIV diagnoses, and female PWID for 3.9%[1]. Overall PWID accounted for a total of 10.6% of first-time HIV diagnoses.

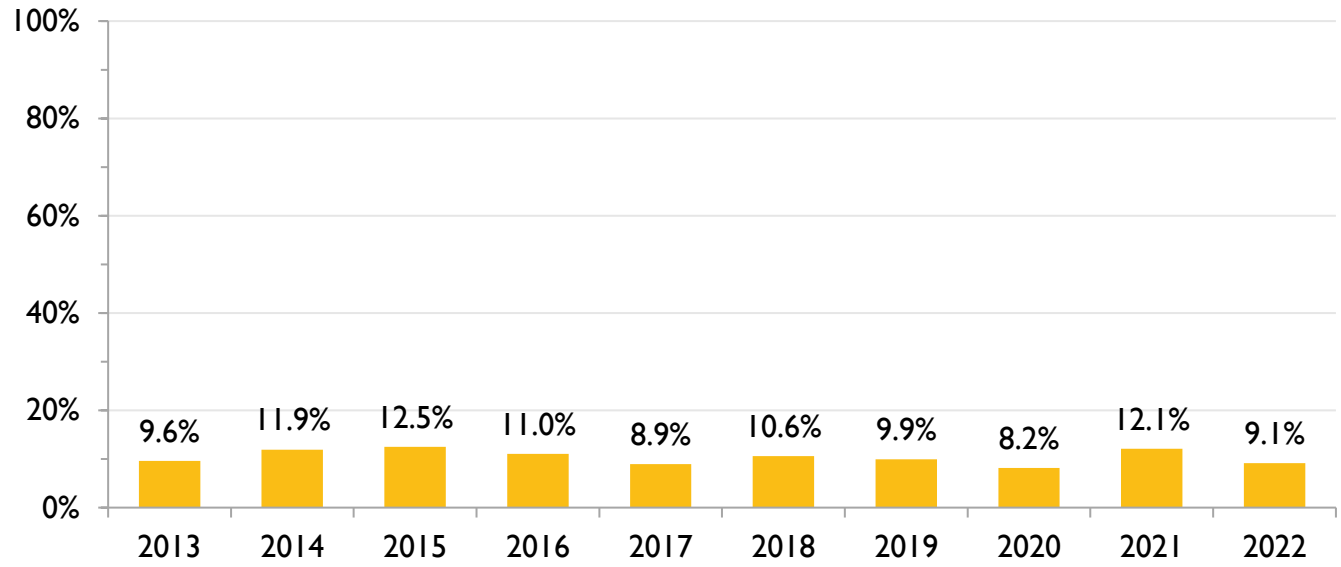
Between 2013 and 2022, PWID accounted for between 10.4% and 15.2% of first-time HIV diagnoses, male PWID ranged between 7.3% and 10.2%, while female PWID ranged between 2.2% and 5.6%.

Data limitations: *Counts of first-time HIV diagnoses among PWID may be underestimated, as 2013 and 2022, the information required to assign PWID status was not reported for an average of 21.6% of first-time HIV diagnoses among males and 27.7% among females, and we estimate between 7.6% and 8.9% among males and between 17.4% and 20.6% among females to have an uncaptured previous HIV diagnosis.*

Notes: Data provided by Public Health Ontario Laboratory. First-time diagnoses where PWID status was not reported were excluded (average of 21.6% of FT diagnoses per year among males, 27.7% among females). See Appendices for more information. See Tables Supplement for underlying data.

Figure 10.4 Percent of first-time HIV diagnoses among males attributed to PWID (where PWID status reported), Ontario, 2013 to 2022

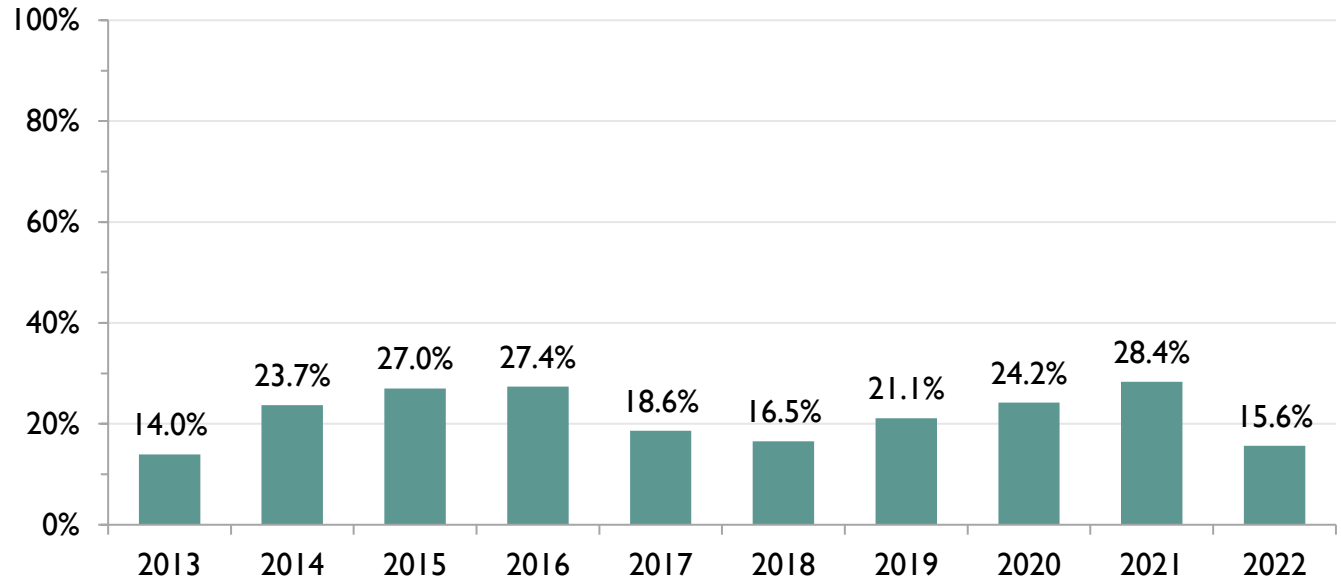
[1] Where PWID status of first-time diagnoses is known. That is, the denominator is first-time HIV diagnoses where the diagnosis was able to be assigned a PWID status (known PWID or known not to be PWID, n=385 overall). Information required to assign PWID status among first-time diagnoses (PWID status known, and therefore in the denominator) was not reported for an average of 23.1% of first-time HIV diagnoses between 2013 and 2022 (28.8% in 2022).



Snapshot

In 2022, male PWID accounted for 9.1% of first-time HIV diagnoses among males. Between 2013 and 2022, male PWID accounted for between 8.2% and 12.5% of first-time HIV diagnoses among males.

Figure 10.5 Percent of first-time HIV diagnoses among females attributed to PWID (where PWID status reported), Ontario, 2013 to 2022

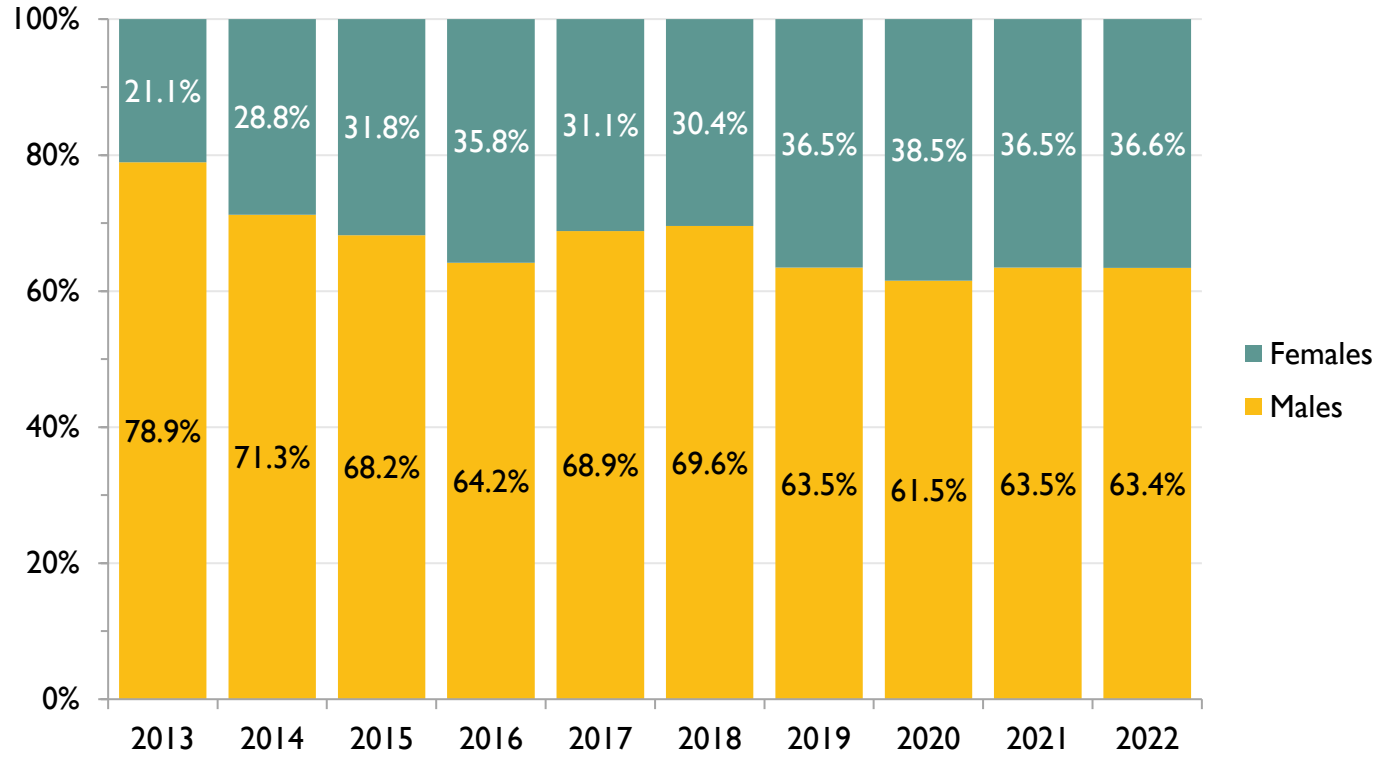


Snapshot

In 2022, female PWID accounted for 15.6% of first-time HIV diagnoses among females. Between 2013 and 2022, female PWID accounted for between 14.0% and 28.4% of first time HIV diagnoses among females.

Notes: Data provided by Public Health Ontario Laboratory. Where PWID status of first-time diagnoses is known. 285 among males and 96 among females in 2022). Information required to assign PWID status among first-time diagnoses (PWID status known, and therefore in the denominator) was not reported for an average of 23.1% of first-time HIV diagnoses between 2013 and 2022 (28.8% in 2022). First-time diagnoses where PWID status was not reported were excluded (average of 21.6% of diagnoses per year among males, 27.7% among females). See Appendices for more information. See Tables Supplement for underlying data.

Figure 10.6 Percent of first-time HIV diagnoses by sex, PWID, Ontario, 2013 and 2022



Snapshot

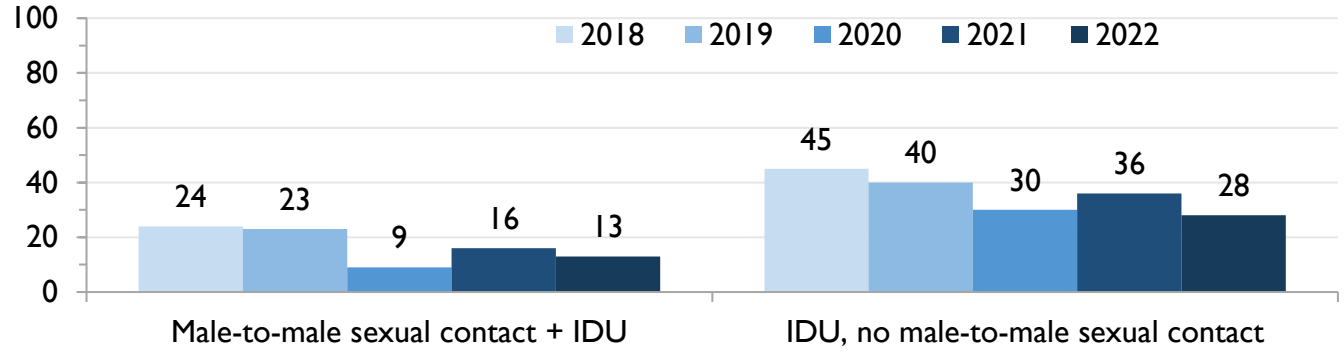
Between 2013 and 2022, males accounted for the majority of first-time HIV diagnoses in PWID, accounting for between 78.9% and 61.5%. In 2022, females accounted for 36.6% of first-time HIV diagnoses among PWID, and males accounted for 63.4%.

Notes: Data provided by Public Health Ontario Laboratory. First-time diagnoses where PWID status was not reported were excluded (average of 21.6% of FT diagnoses per year among males, 27.7% among females). See Appendices for more information. See Tables Supplement for underlying data.

10.c. PWID by HIV exposure category

PWID include two exposure categories: male-to-male sexual contact + IDU (males only), and IDU (no male-to-male sexual contact; includes both males and females). As only males can be in both categories, a within-gender breakdown is only provided for males. Between 2018 and 2022, the majority of first-time HIV diagnoses among PWID were reported as IDU (no male-to-male sexual contact). Among male PWID between 2018 and 2022, both IDU (no male-to-male sexual contact) and male-to-male sexual contact + IDU had similar counts of diagnoses, except for 2020, where there were more diagnoses among IDU (no male-to-male sexual contact). In 2022, both categories had 13 first-time HIV diagnoses.

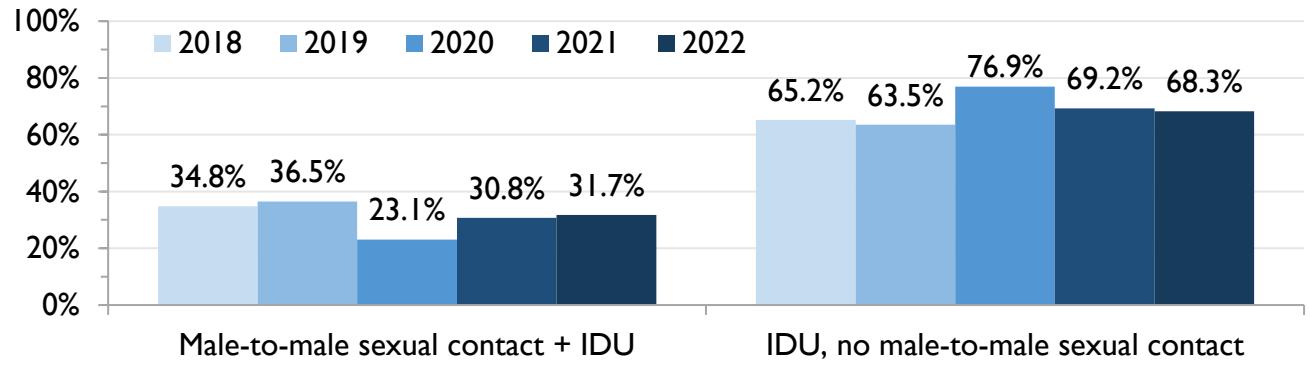
Figure 10.7 Number of first-time HIV diagnoses among PWID by HIV exposure category, Ontario, 2018 to 2022



Snapshot

In 2022, 28 of the 41 first-time HIV diagnoses among PWID were reported as IDU (no male-to-male sexual contact) and 13 were reported as male-to-male sexual contact + IUD. Between 2018 and 2022, diagnoses reported as IDU with no male-to-male contact accounted for the largest number of first-time HIV diagnoses among PWID, ranging from 28 to 45. Compared to 2019, the number of first-time HIV diagnoses among PWID reported as IDU decreased in both categories.

Figure 10.8 Percent of first-time HIV diagnoses among PWID by HIV exposure category (where reported), Ontario, 2018 to 2022

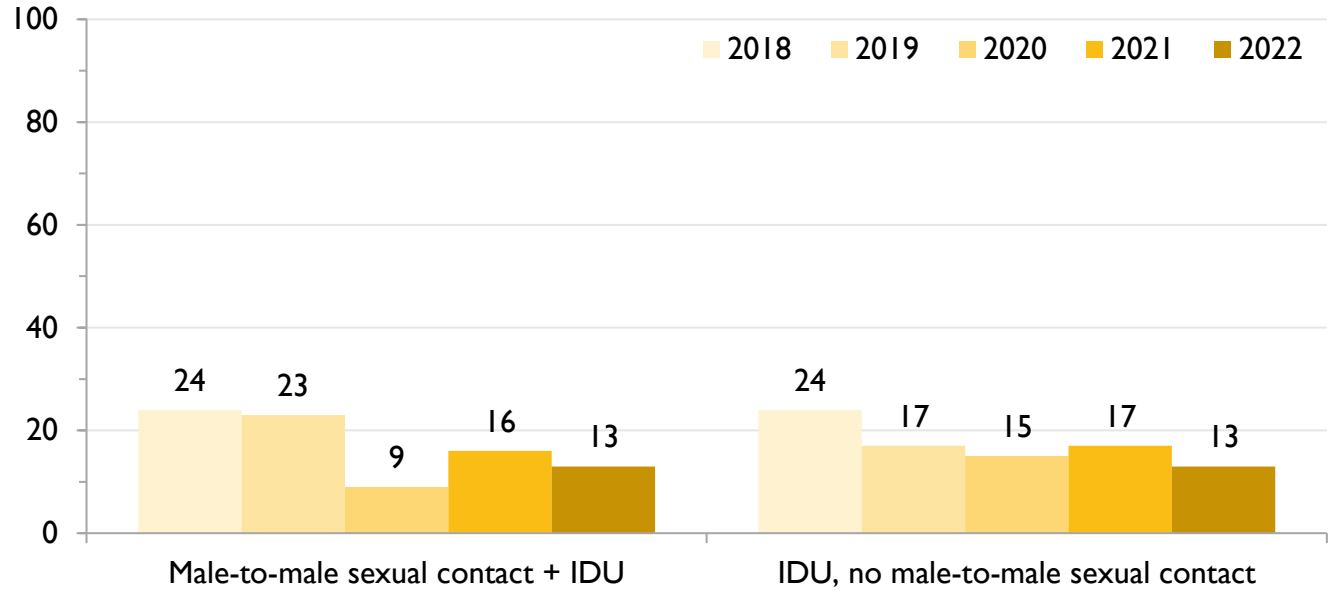


Snapshot

In 2022, 68.3% of first-time HIV diagnoses among PWID were reported as IDU (no male-to-male sexual contact), and 31.7% were reported as male-to-male sexual contact + IDU. Between 2018 and 2022, the proportion attributed to IDU with no male-to-male contact ranged slightly increased and the proportion of male-to-male sexual contact + IDU slightly decreased.

Notes: Data provided by Public Health Ontario Laboratory. First-time diagnoses where PWID status was not reported were excluded (average of 28.8% of diagnoses per year). IDU = injection drug use. See Appendices and specifically HIV exposure categories for more information. See Tables Supplement for underlying data.

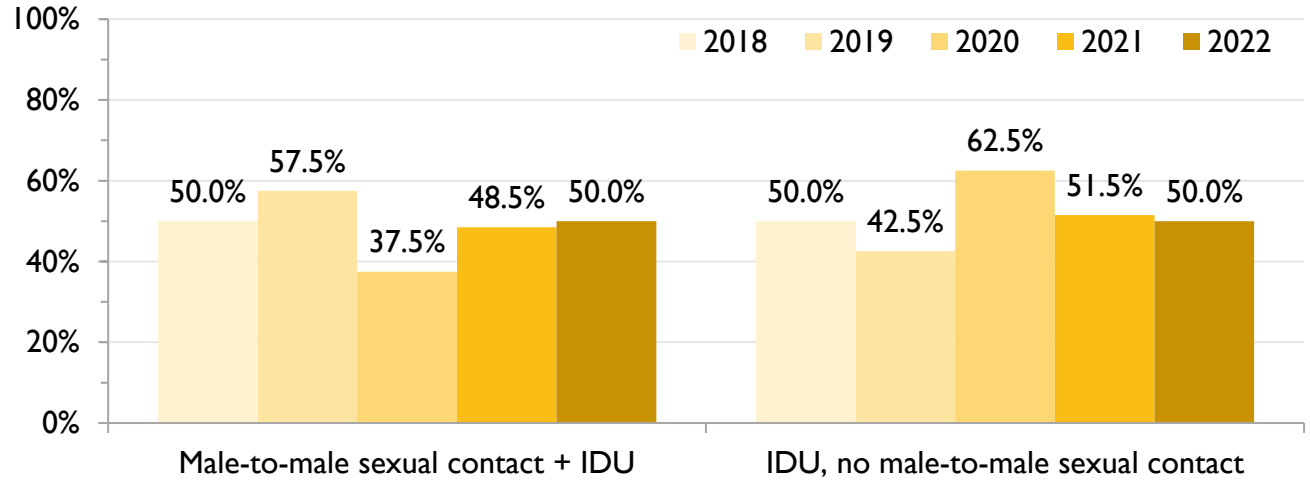
Figure 10.9 Number of first-time HIV diagnoses among male PWID by HIV exposure category, Ontario, 2018 to 2022



Snapshot

In 2022, 13 out of 26 first-time HIV diagnoses among male PWID were reported as male-to-male sexual contact + IDU, a relative decrease of 43.5% in 2022 compared to 2019. In 2022, 13 out of 26 first-time HIV diagnoses among male PWID were reported as IDU (no male-to-male sexual contact), a relative decrease of 23.5% in 2022 compared to 2019.

Figure 10.10 Percent of first-time HIV diagnoses among male PWID by HIV exposure category (where reported), Ontario, 2018 to 2022



Snapshot

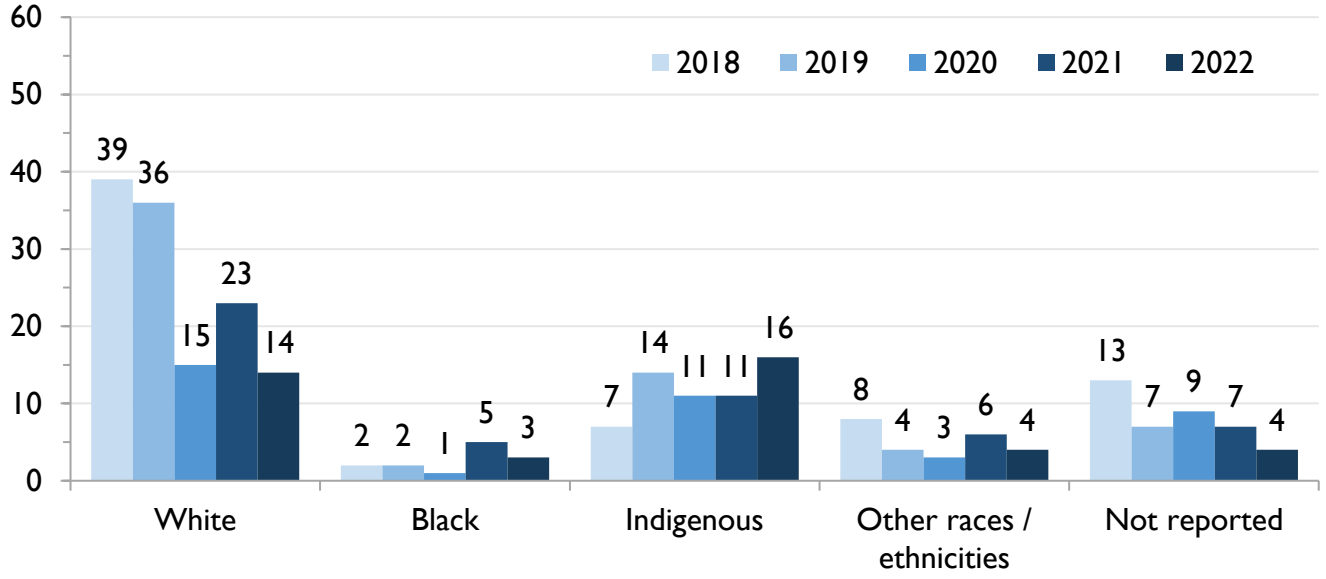
In 2022, 50.0% of first-time HIV diagnoses among male PWID were reported as male-to-male sexual contact + IDU and 50.0% as IDU (no male-to-male sexual contact).

Notes: Data provided by Public Health Ontario Laboratory. First-time diagnoses where PWID status was not reported were excluded (average of 26.9% of FT diagnoses per year). IDU = injection drug use. See Appendices and specifically HIV exposure categories for more information. See Tables Supplement for underlying data.

10.d. PWID by race/ethnicity

In 2022, 43.2% of first-time HIV diagnoses among PWID were in Indigenous PWID and 37.8% in White PWID. Over the two-year period 2021-2022, White PWID accounted for 60.4% of first-time HIV diagnoses among male PWID and 18.5% among female PWID; while Indigenous PWID accounted for 15.1% among male PWID and 70.4% among female PWID. The number of first-time diagnoses in White PWID decreased among PWID overall between 2018 and 2022, and among both male and female PWID between the two-year periods 2019-2020 and 2021-2022.

Figure 10.11 Number of first-time HIV diagnoses by race/ethnicity, PWID, Ontario, 2018 to 2022



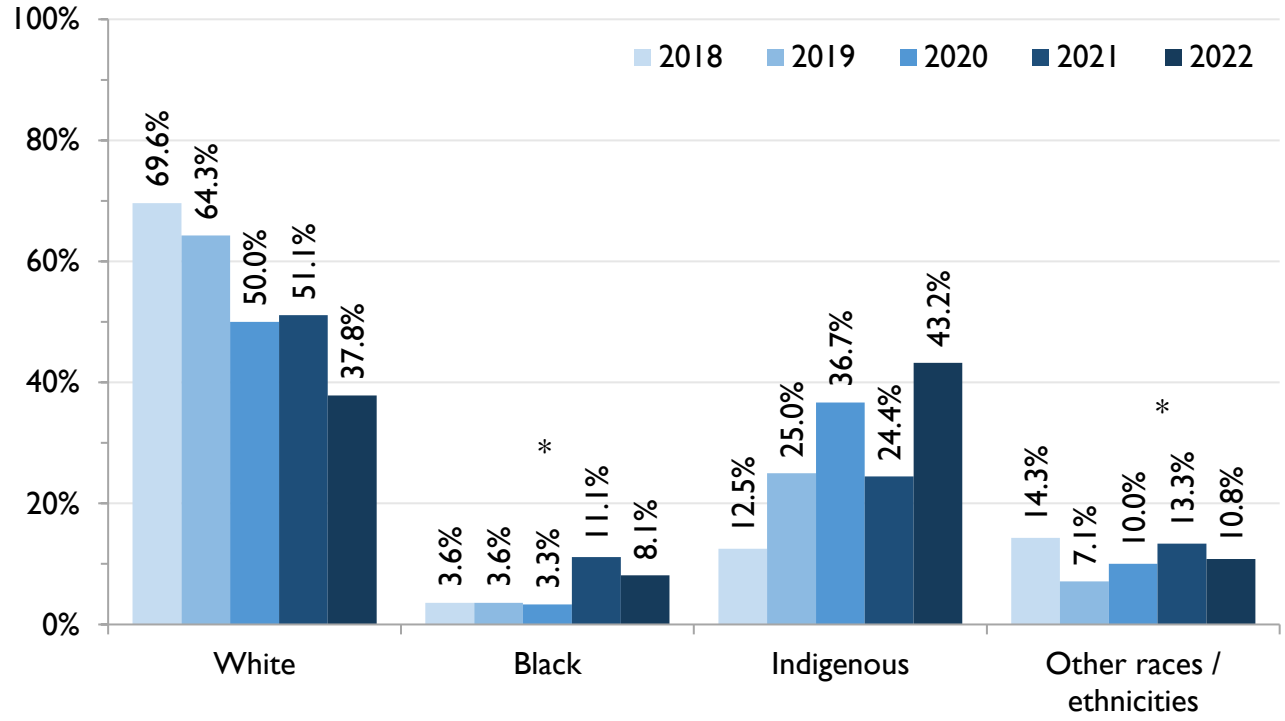
Snapshot

In 2022, 4 of the 41 (9.8%) first-time HIV diagnoses attributed to PWID had no reported race/ethnicity. Among the 37 first-time HIV diagnoses attributed to PWID with a reported race/ethnicity in 2022, 16 were in Indigenous PWID, 14 were in White PWID, 4 were in PWID of other races/ethnicities and 3 in Black PWID.

Compared to 2019, the number of first-time HIV diagnoses among Black PWID increased by 50.0% (small numbers) and by 14.3% among Indigenous PWID, while it declined by 61.1% among White PWID, remaining the same among PWID of "other races/ethnicities".

Notes: Data provided by Public Health Ontario Laboratory. First-time diagnoses where PWID status was not reported were excluded (average of 28.8% of diagnoses per year). See Appendices for more information. See Tables Supplement for underlying data.

Figure 10.12 Percent of first-time HIV diagnoses by race/ethnicity (where reported), PWID, Ontario, 2018 to 2022



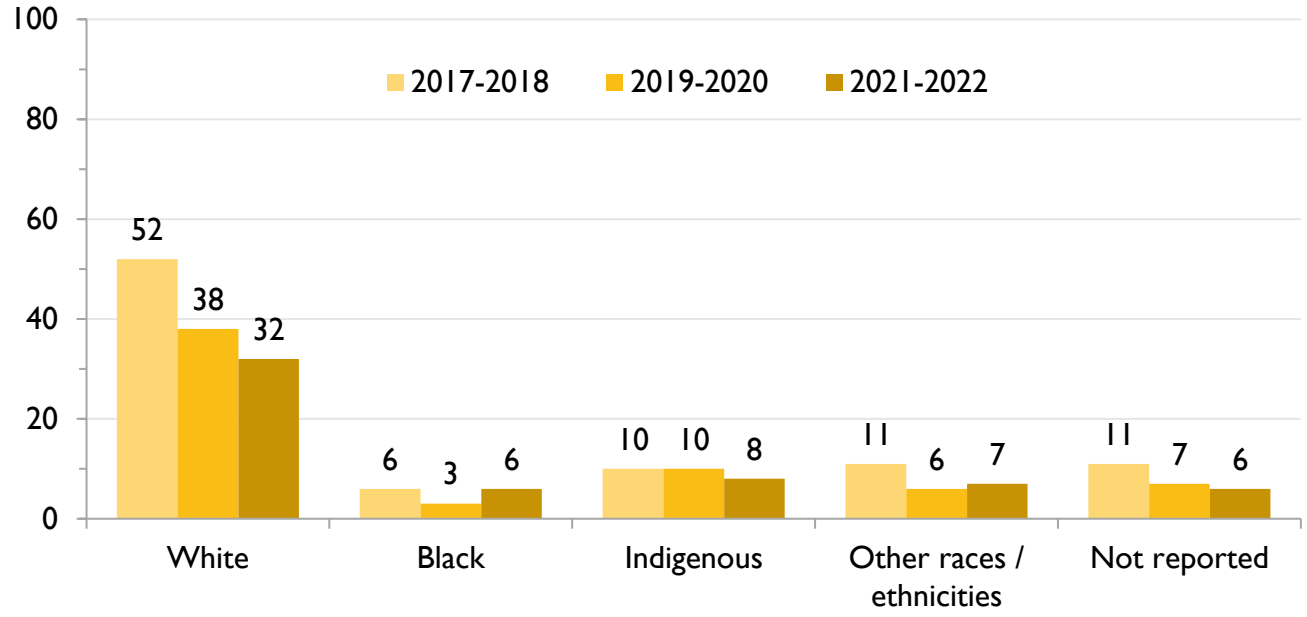
Snapshot

In 2022, among the 37 first-time HIV diagnoses attributed to PWID with a reported race/ethnicity, Indigenous PWID (43.2%) accounted for the largest proportion, followed by White PWID (37.8%), PWID of other/mixed races/ethnicities (10.8%) and Black PWID (8.1%).

Between 2018 and 2021, White PWID accounted for the largest proportion of first-time HIV diagnoses among PWID however in 2022, Indigenous PWID accounted for the largest proportion, surpassing White PWID.

Notes: Data provided by Public Health Ontario Laboratory. * denotes a proportion based on at least one count of <5, therefore proportions may be unstable and trends should be interpreted with caution. First-time diagnoses where PWID status was not reported were excluded (average of 28.8% of diagnoses per year). First-time diagnoses where PWID status was reported but race/ethnicity was not reported were excluded (average of 15.2% of diagnoses between 2018 and 2022, 9.8% in 2022, where PWID status was reported). See Appendices for more information. See Tables Supplement for underlying data.

Figure 10.13 Number of first-time HIV diagnoses by race/ethnicity, male PWID, Ontario, 2017-2018 to 2021-2022



Snapshot

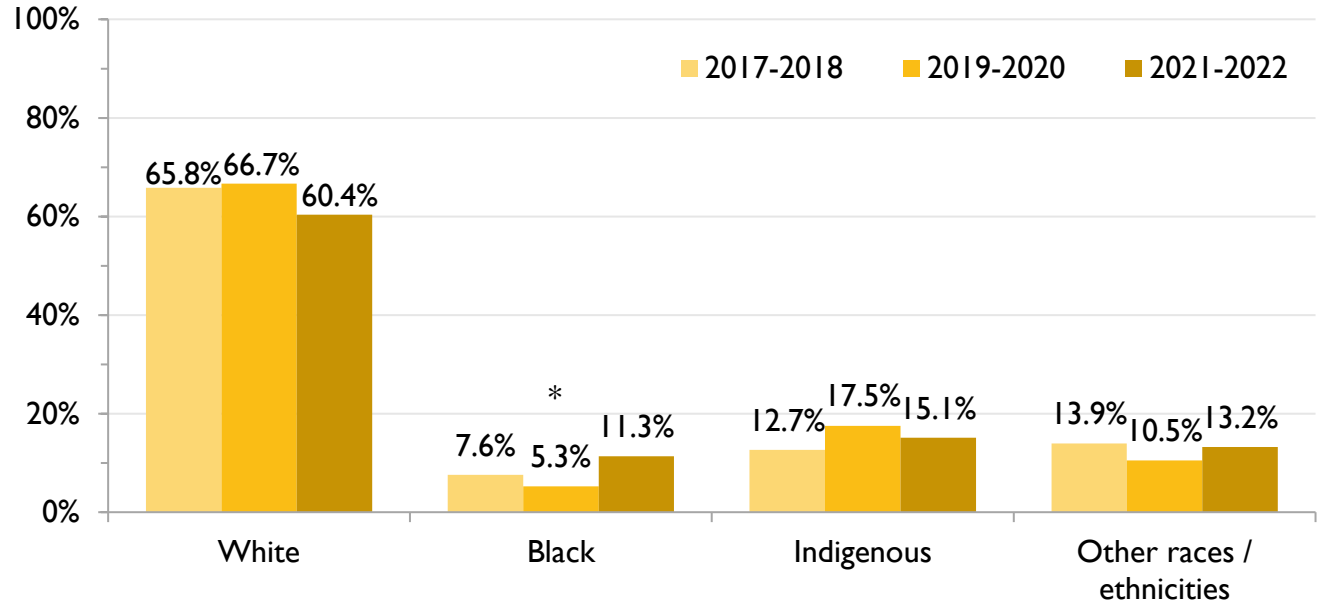
Over the two-year period 2021-2022, 6 out of 59 first-time HIV diagnoses attributed to male PWID did not report race/ethnicity. Among the 53 first-time HIV diagnoses attributed to PWID males with a reported race/ethnicity, 32 were in White PWID males, 8 were in Indigenous PWID males, 7 in males of other races/ethnicity, and 6 in Black PWID males.

Between the two-year periods 2017-2018, 2019-2020 and 2021-2022, White PWID accounted for the larger number of first-time HIV diagnoses among PWID males, decreasing over time, while the number attributed to other races/ethnicities remained relatively stable.

Note: *In these figures, data is combined in two-year groupings (2017-2018, 2019-2020 and 2021-2022). This was done systematically to ensure at least 50% of cell counts were ≥5 in order to reduce the effects of year-to-year variation.*

Notes: Data provided by Public Health Ontario Laboratory. First-time diagnoses where PWID status was not reported were excluded (average of 25.3% of diagnoses per 2-year period among males). See Appendices for more information. See Tables Supplement for underlying data.

Figure 10.14 Percent of first-time HIV diagnoses by race/ethnicity (where reported), male PWID, Ontario, 2017-2018 to 2021-2022



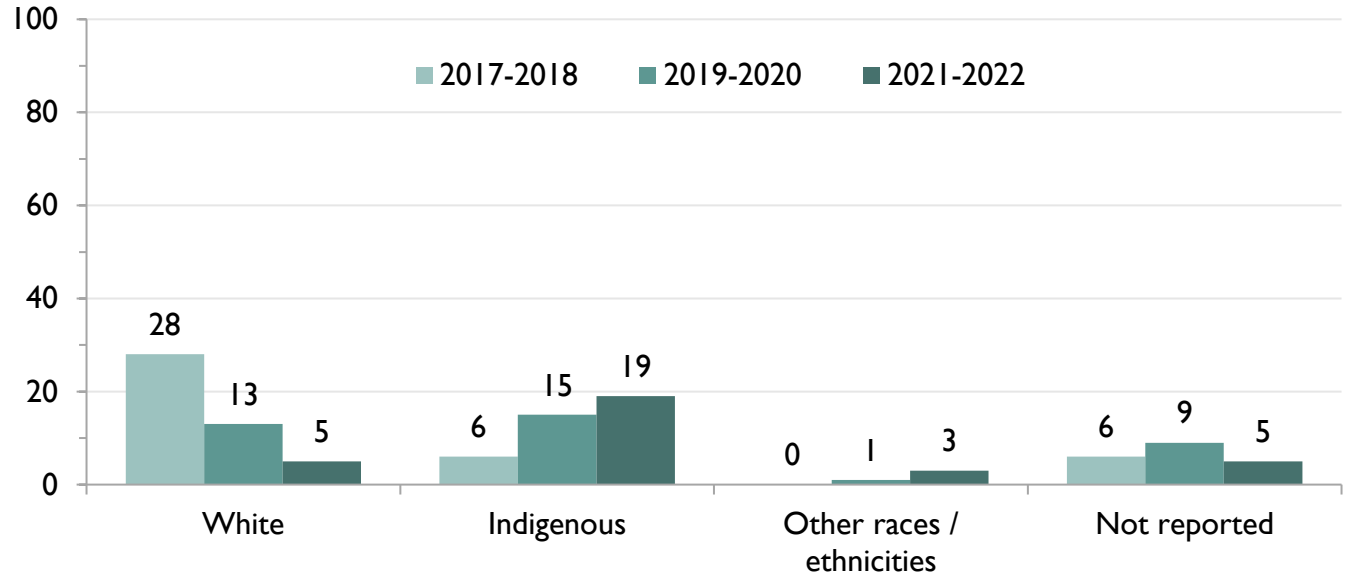
Snapshot

Over the two-year period 2021-2022, among the 53 first-time HIV diagnoses attributed to PWID males with a reported race/ethnicity, White males accounted for the largest proportion (60.4%), followed by Indigenous males (15.1%), males of other/mixed races/ethnicity (13.2%) and Black males (11.3%).

Note: *In these figures, data is combined in two-year groupings (2017-2018, 2019-2020 and 2021-2022). This was done systematically to ensure at least 50% of cell counts were ≥5 in order to reduce the effects of year-to-year variation.*

Notes: Data provided by Public Health Ontario Laboratory. * denotes a proportion based on at least one count of <5, therefore proportions may be unstable and trends should be interpreted with caution. First-time diagnoses where PWID status was not reported were excluded (average of 25.3% of diagnoses per 2-year period among males). First-time diagnoses where PWID status was reported but race/ethnicity was not reported were excluded (average of 11.1% of diagnoses per 2-year period among males, where PWID status was reported). See Appendices for more information. See Tables Supplement for underlying data.

Figure 10.15 Number of first-time HIV diagnoses by race/ethnicity, female PWID, Ontario, 2017-2018 to 2021-2022



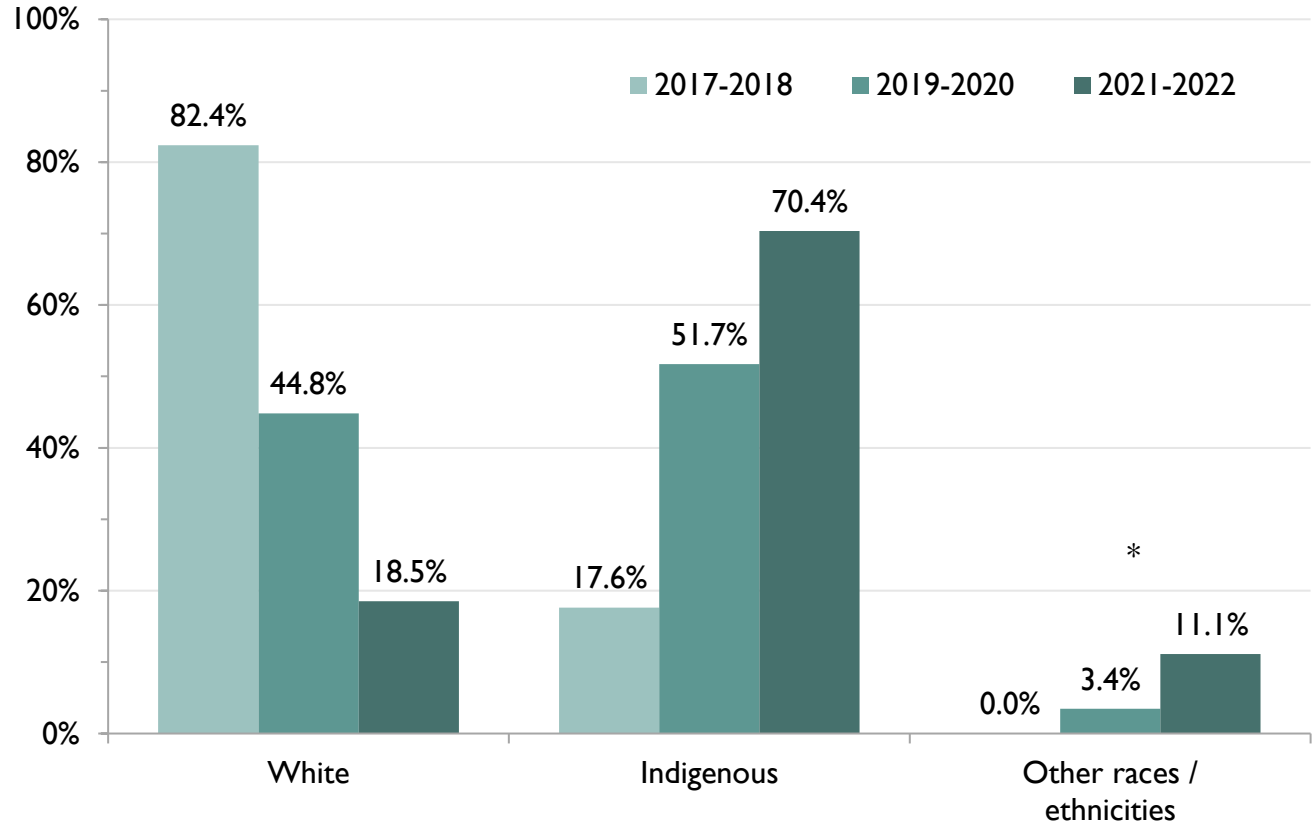
Snapshot

Over the two-year period 2021-2022, 5 of 32 first-time HIV diagnoses in female PWID did not report race/ethnicity. Among the 27 first-time HIV diagnoses attributed to female PWID with a reported race/ethnicity, 19 were in Indigenous females, 5 in White females and 3 in females of other races/ethnicities. The number of first-time HIV diagnoses in females PWID has been decreasing in White females whereas Indigenous females and females of other race/ethnicities saw an increase in first-time HIV diagnoses.

Note: *In these figures, data is combined in two-year groupings (2017-2018, 2019-2020 and 2021-2022). This was done systematically to ensure at least 50% of cell counts were ≥5 in order to reduce the effects of year-to-year variation.*

Notes: Data provided by Public Health Ontario Laboratory. First-time diagnoses where PWID status was not reported were excluded (average of 31.4% of diagnoses per 2-year period among females). See Appendices for more information. See Tables Supplement for underlying data.

Figure 10.16 Percent of first-time HIV diagnoses by race/ethnicity (where reported), female PWID, Ontario, 2017-2018 to 2021-2022



Snapshot

Over the two-year period 2021-2022, among the 27 first-time HIV diagnoses attributed to female PWID with a reported race/ethnicity, Indigenous females accounted for the largest proportion (70.4%), followed by White females (18.5%) and females of other races/ethnicities (11.1%). Over past years White females accounted for a decrease in the proportions of first-time HIV diagnoses among females PWID, with the proportion of Indigenous females and females of other race/ethnicities increasing.

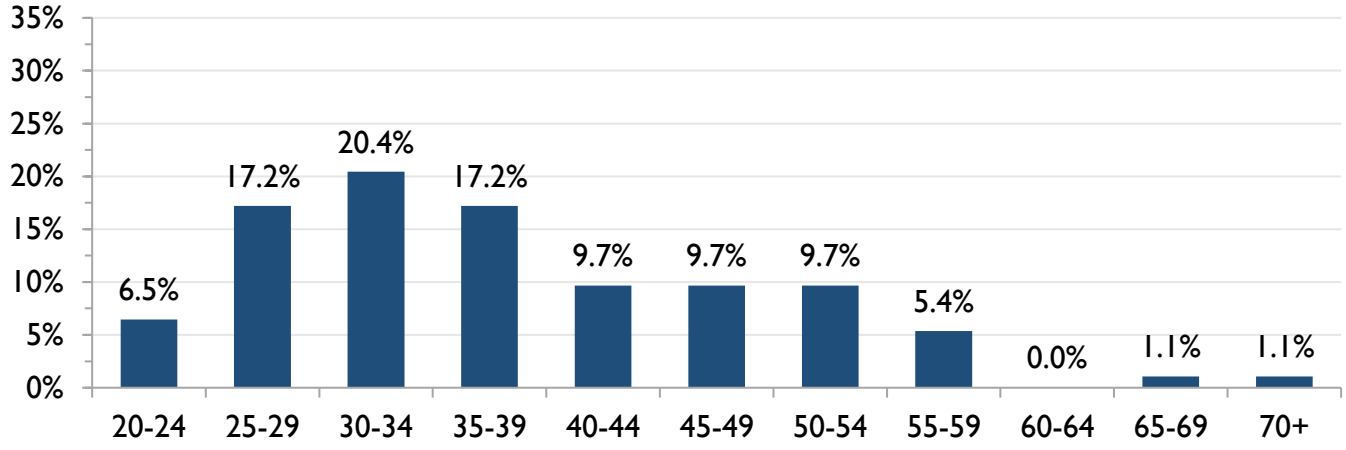
Note: *In these figures, data is combined in two-year groupings (2017-2018, 2019-2020 and 2021-2022). This was done systematically to ensure at least 50% of cell counts were ≥5 in order to reduce the effects of year-to-year variation.*

Notes: Data provided by Public Health Ontario Laboratory. * denotes a proportion based on at least one count of <5, therefore proportions may be unstable and trends should be interpreted with caution. First-time diagnoses where PWID status was not reported were excluded (average of 31.4% of diagnoses per 2-year period among females). First-time diagnoses where PWID status was reported but race/ethnicity was not reported were excluded (average of 18.1% of diagnoses per 2-year period among females, where PWID status was reported). See Appendices for more information. See Tables Supplement for underlying data.

10.e. PWID by age

Over the two-year period 2021-2022, the largest proportions of first-time HIV diagnoses among PWID (20.4%) was in those aged 30-34. Over the four-year period 2019-2022, those aged 30-34 accounted for the largest proportion of first-time HIV diagnoses among PWID males (24.4%) while those aged 25-29 accounted for the largest proportion among PWID females (29.6%).

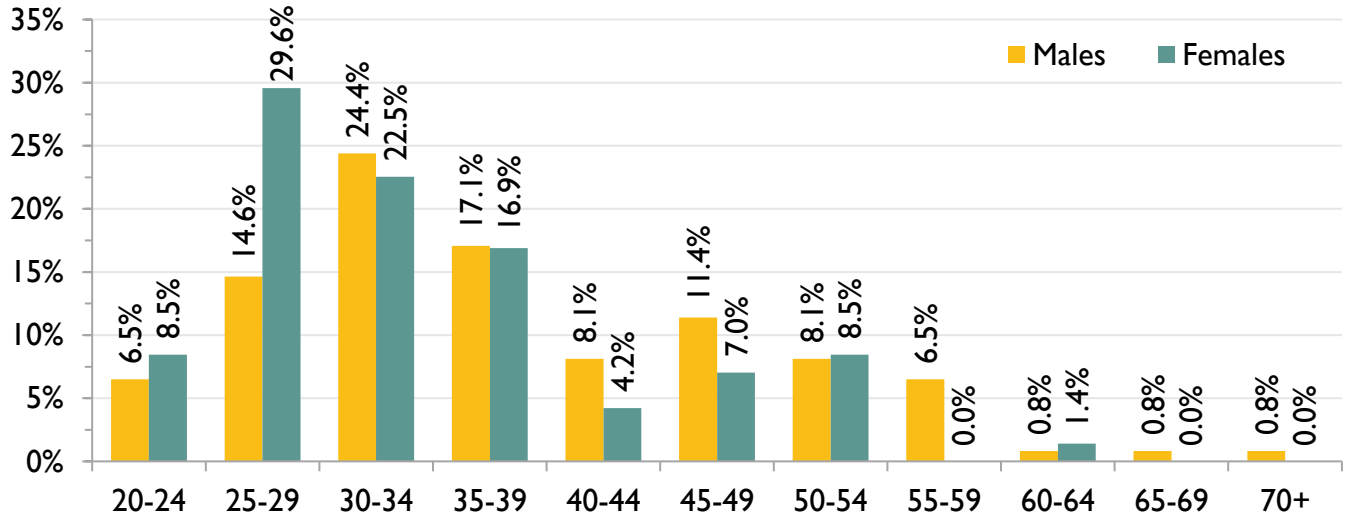
Figure 10.17 Percent of first-time HIV diagnoses by age, PWID, Ontario, 2021-2022



Snapshot

Over the two-year period 2021-2022, 54.8% of first-time HIV diagnoses among PWID were among those aged 25-39 years, with those aged 30-34 accounting for the largest proportion (20.4%).

Figure 10.18 Percent of first-time HIV diagnoses by age, male PWID and female PWID, Ontario, 2019-2022



Snapshot

Over the four-year period 2019-2022, males aged 30-34 accounted for the largest proportion of first-time HIV diagnoses among male PWID (24.4%), and females aged 25-29 accounted for the largest proportion of first-time HIV diagnoses among female PWID (29.6%).

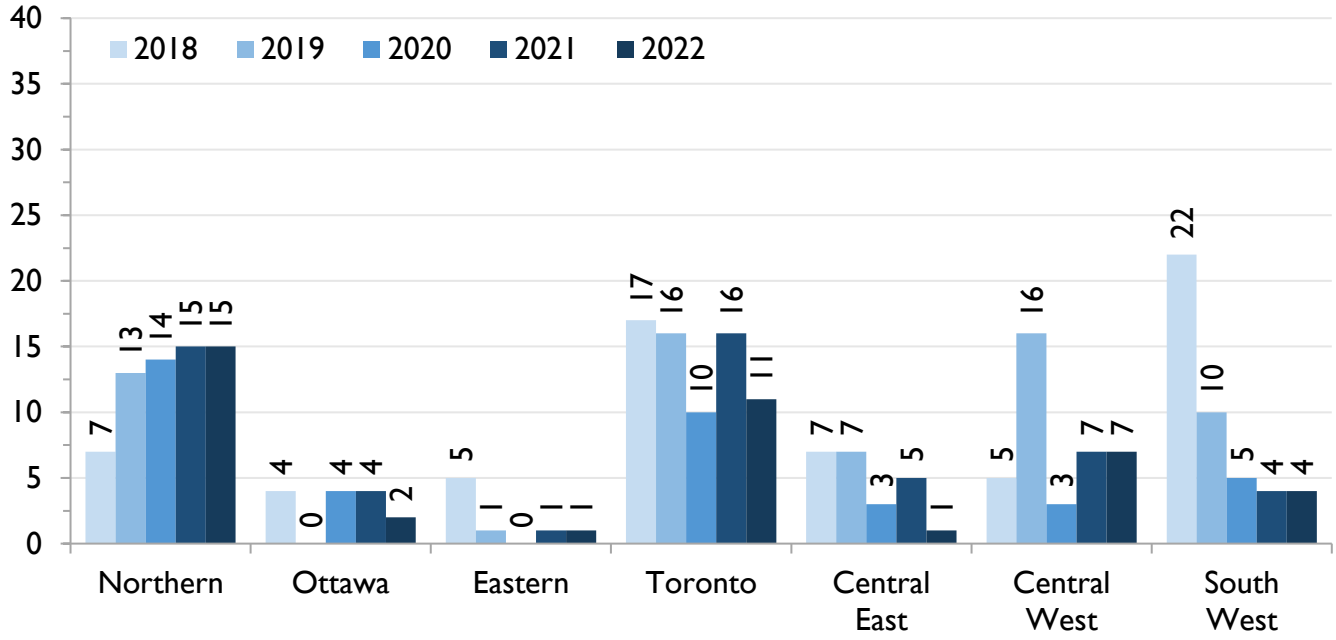
Notes: Data provided by Public Health Ontario Laboratory. First-time diagnoses with age not reported were excluded (less than 1%). First-time diagnoses where PWID status was not reported were excluded (23.1% of FT diagnoses overall, 28.4% among males over the 4-year period 2019-2022 and 37.3% among females). See Appendices for more information. See Tables Supplement for underlying data.

10.f. PWID by health region

In 2022, Northern, Toronto and Central West regions together accounted for 8 in 10 (80.5%) first-time HIV diagnoses among PWID, with the Northern region alone accounting for 36.6%. Looking within each region, Northern region attributed 75.0% of its overall first-time HIV diagnoses to PWID (driven by female diagnoses attributed to PWID within the Northern region), the largest proportion, followed by South West (14.8%) and Central West (11.9%).

The number of first-time HIV diagnoses attributed to PWID in South West region decreased from 22 in 2018 to 4 in 2022.

Figure 10.19 Number of first-time HIV diagnoses by health region, PWID, Ontario, 2018 to 2022



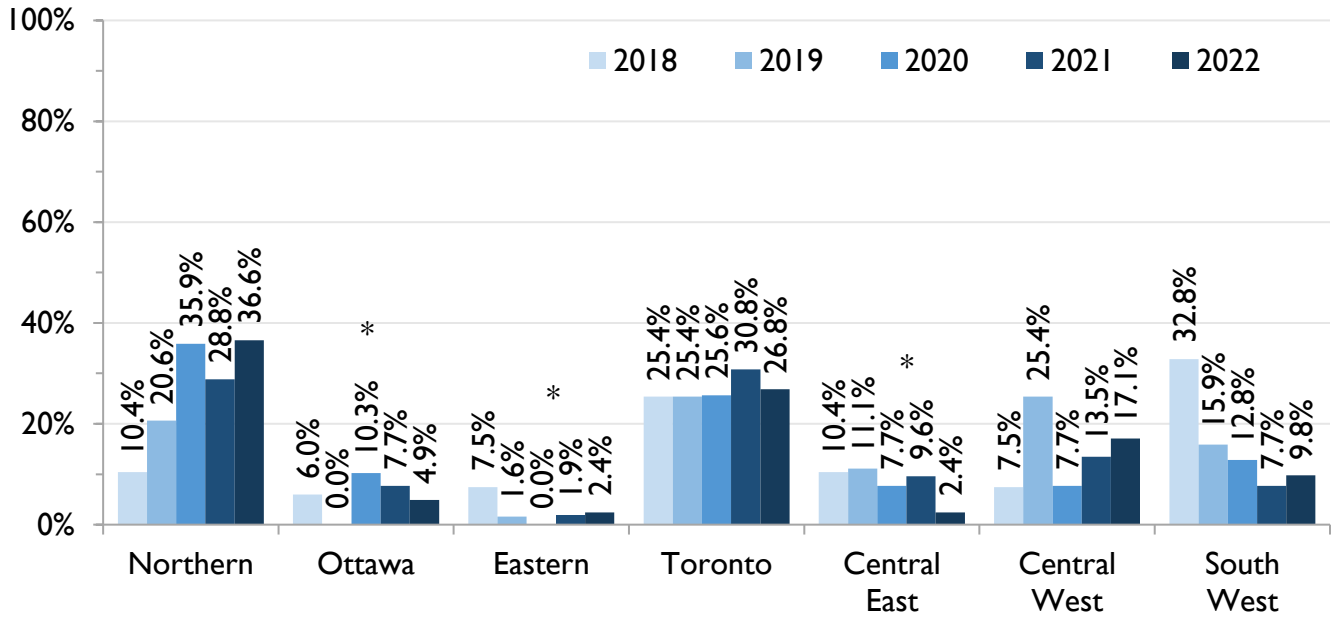
Snapshot

In 2022, Northern region had the largest number of first-time HIV diagnoses among PWID (15), followed by Toronto (11), Central West (7), South West (4), Ottawa (2) regions. Both Eastern and Central East regions had 1 first-time HIV diagnoses among PWID in 2022.

Between 2018 and 2022, the number of first-time HIV diagnoses consistently decreased in South West region from 22 in 2018 to 4 in 2022, while this number increased in Northern region from 7 in 2018 to 15 in 2022.

Notes: Data provided by Public Health Ontario Laboratory. Health regions are groupings of Public Health Units. Diagnoses were assigned to a health region based on their address of residence or, if unreported, the address of the ordering provider. First-time diagnoses where PWID status was not reported were excluded (average of 28.8% of FT diagnoses per year between 2018 and 2022). See Appendices and specifically Health regions for more information. See Tables Supplement for underlying data.

Figure 10.20 Percent of first-time HIV diagnoses across health regions, PWID, Ontario, 2018 to 2022



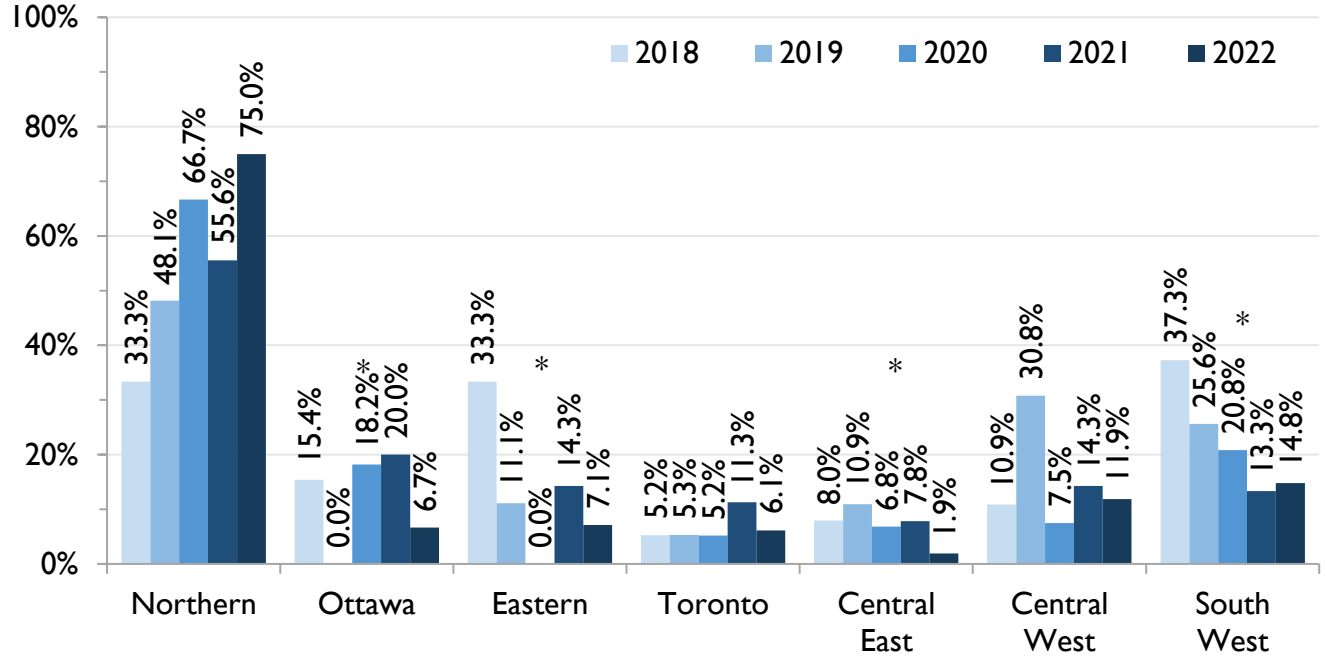
Snapshot

In 2022, the Northern region had the largest proportion of first-time HIV diagnoses among PWID (36.6%), followed by Toronto (26.8%), Central West (17.1%), South West (9.8%), Ottawa (4.9%) and Central East and Eastern regions (both at 2.4%).

The proportion of first-time HIV diagnoses among PWID has been decreasing in South West region, from 32.8% in 2018 to 9.8% in 2022, while it has been increasing in Northern region, from 10.4% in 2018 to 36.6%. Toronto region has been relatively stable, around 25-26%.

Notes: Data provided by Public Health Ontario Laboratory. * denotes a proportion based on at least one count of <5, therefore proportions may be unstable and trends should be interpreted with caution. Health regions are groupings of Public Health Units. Diagnoses were assigned to a health region based on their address of residence or, if unreported, the address of the ordering provider. First-time diagnoses where PWID status was not reported were excluded (average of 28.8% of FT diagnoses per year between 2018 and 2022). See Appendices and specifically Health regions for more information. See Tables Supplement for underlying data.

Figure 10.21 Percent of first-time HIV diagnoses within each health region attributed to PWID (where PWID status reported), Ontario, 2018 to 2022



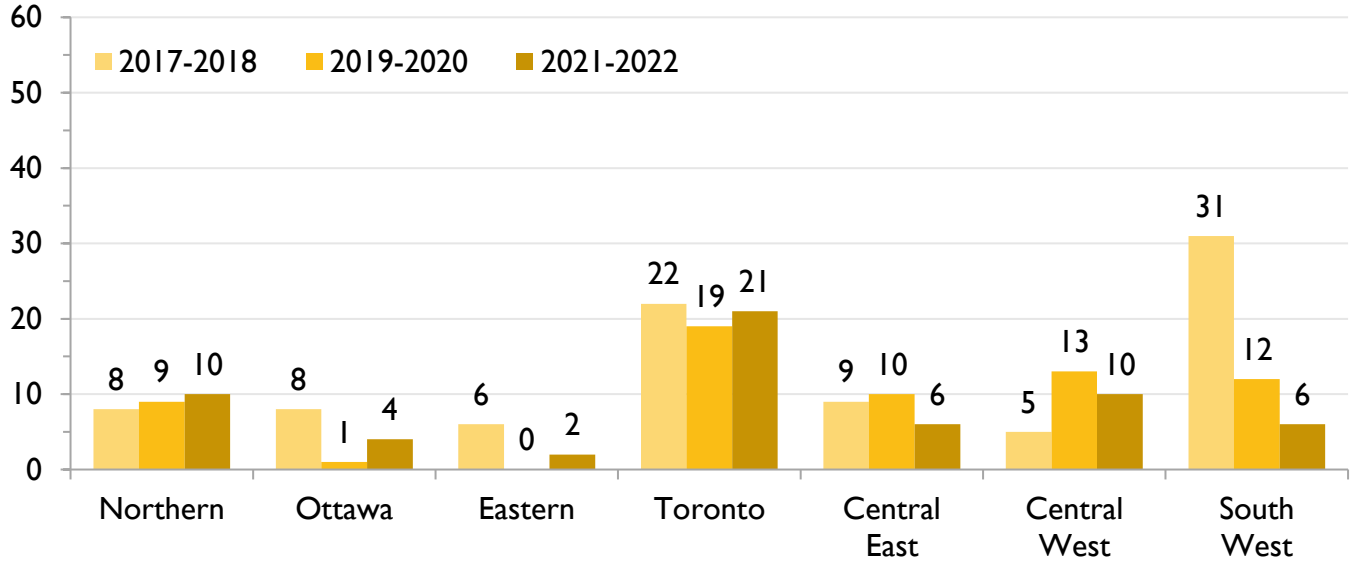
Snapshot

In 2022, looking within each region, Northern region attributed a larger proportion of its first-time HIV diagnoses to PWID than any other region (75.0%), followed by South West (14.8%), Central West (11.9%), Eastern (7.1%), Ottawa (6.7%), Toronto (6.1%) and Central East (1.9%) regions.

Northern region attributed a larger proportion of its first-time HIV diagnoses to PWID than any other region, increasing between 2018 and 2022, while South West attributed the largest proportion in 2018 and decreasing over time.

Notes: Data provided by Public Health Ontario Laboratory. * denotes a proportion based on at least one count of <5, therefore proportions may be unstable and trends should be interpreted with caution. Health regions are groupings of Public Health Units. Diagnoses were assigned to a health region based on their address of residence or, if unreported, the address of the ordering provider. First-time diagnoses where PWID status was not reported were excluded (average of 28.8% of FT diagnoses per year between 2018 and 2022). See Appendices and specifically Health regions for more information. See Tables Supplement for underlying data.

Figure 10.22 Number of first-time HIV diagnoses by health region, male PWID, Ontario, 2017-2018 to 2021-2022



Snapshot

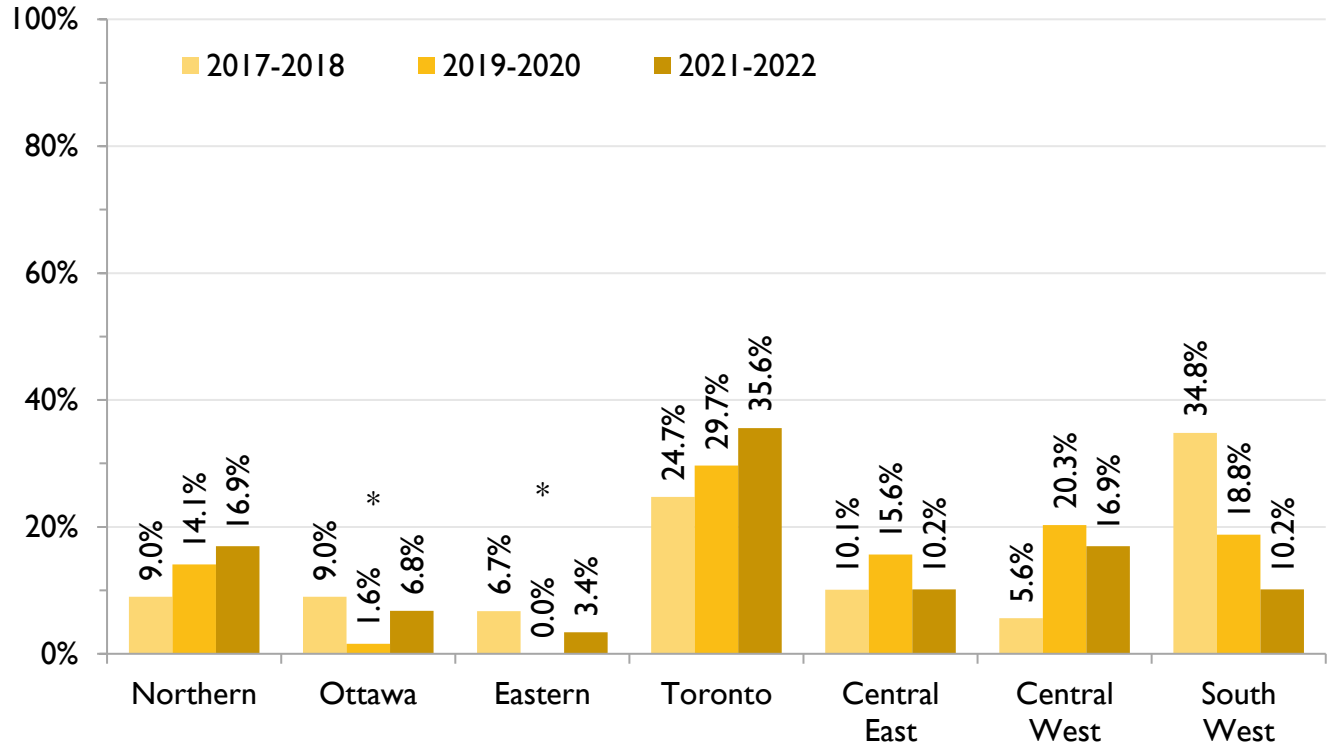
Over the two-year period 2021-2022, Toronto region had the largest number of first-time HIV diagnosis among male PWID (21), followed by Northern (10), Central West (10), South West (6), Central East (6), Ottawa (4) and Eastern (2) regions.

South West region had the largest number of first-time HIV diagnoses among male PWID over the two-year period of 2017-2018, decreasing 80.6% in 2021-2022. The numbers of first-time HIV diagnoses increased in Northern and Central West regions from 2017-2018 to 2021-2022, decreasing in all other regions.

Note: *In these figures, data is combined in two-year groupings (2017-2018, 2019-2020 and 2021-2022). This was done systematically to ensure at least 50% of cell counts were ≥5 in order to reduce the effects of year-to-year variation.*

Notes: Data provided by Public Health Ontario Laboratory. Health regions are groupings of Public Health Units. Diagnoses were assigned to a health region based on their address of residence or, if unreported, the address of the ordering provider. First-time diagnoses where PWID status was not reported were excluded (average of 25.3% of diagnoses per 2-year period among males). See Appendices and specifically Health regions for more information. See Tables Supplement for underlying data.

Figure 10.23 Percent of first-time HIV diagnoses across health regions, male PWID, Ontario, 2017-2018 to 2021-2022



Snapshot

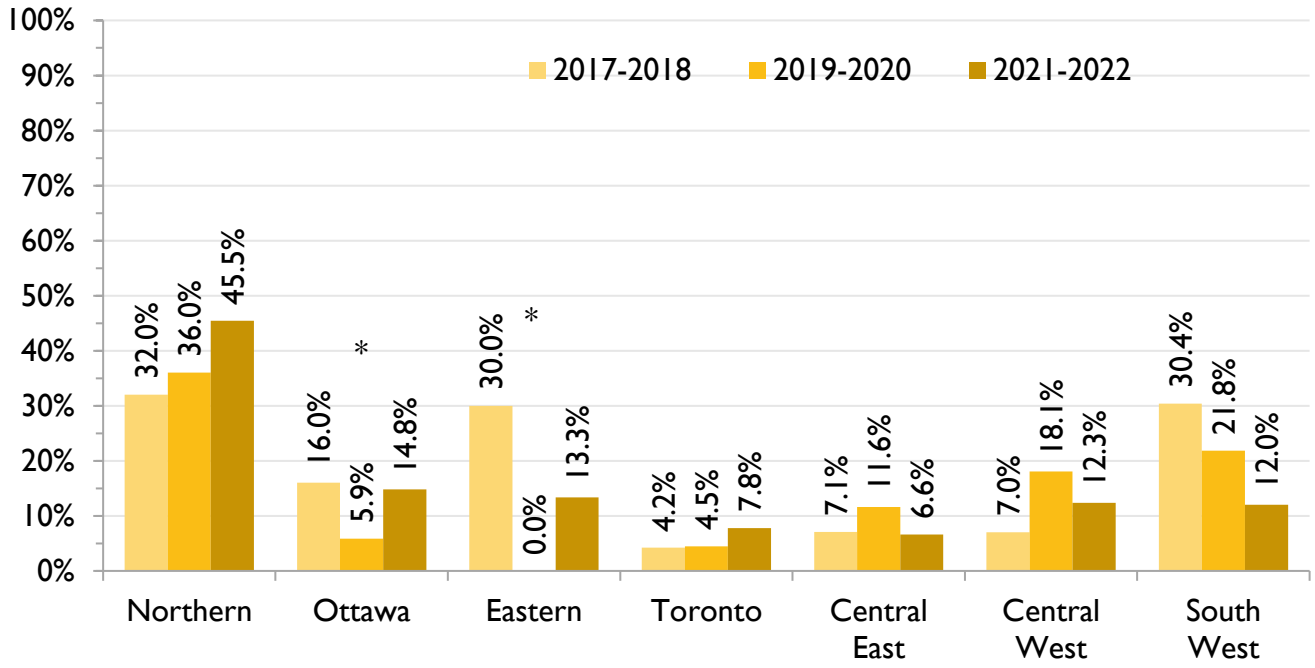
Over the two-year period 2021-2022, Toronto region had the largest proportion of first-time HIV diagnoses among males PWID (35.6%), followed by Central West (16.9%), Northern (16.9%), Central East (10.2%), South West (10.2%), Ottawa (6.8%) and Eastern (3.4%) regions.

South West region had the largest proportion of first-time HIV diagnoses among male PWID over the two-year period of 2017-2018; while Toronto region had the largest proportion in 2019-2020 and 2021-2022. Northern region accounted for a growing proportion of first-time HIV diagnoses among male PWID while South West region accounted for a decreasing.

Note: *In these figures, data is combined in two-year groupings (2017-2018, 2019-2020 and 2021-2022). This was done systematically to ensure at least 50% of cell counts were ≥5 in order to reduce the effects of year-to-year variation.*

Notes: Data provided by Public Health Ontario Laboratory. * denotes a proportion based on at least one count of <5, therefore proportions may be unstable and trends should be interpreted with caution. Health regions are groupings of Public Health Units. Diagnoses were assigned to a health region based on their address of residence or, if unreported, the address of the ordering provider. First-time diagnoses where PWID status was not reported were excluded (average of 25.3% of diagnoses per 2-year period among males). See Appendices and specifically Health regions for more information. See Tables Supplement for underlying data.

Figure 10.24 Percent of first-time HIV diagnoses among males within each health region attributed to PWID (where PWID status reported), Ontario, 2017-2018 to 2021-2022



Snapshot

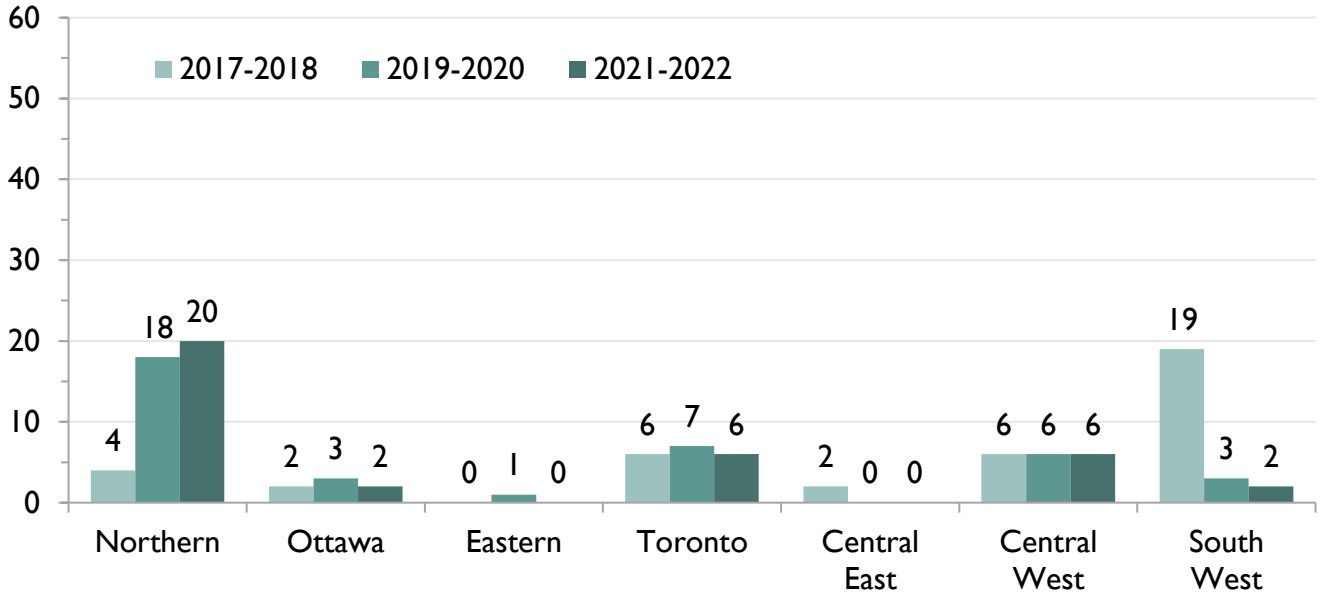
Over the two-year period 2021-2022, looking within each region, Northern region attributed a larger proportion of its first-time HIV diagnoses among males to PWID than any other region (45.5%), followed by Ottawa (14.8%), Eastern (13.3%), Central West (12.3%), South West (12.0%), Toronto (7.8%) and Central East (6.6%) regions.

The Northern region attributed a larger proportion than the other regions, and increased year over year, whereas the South West region decreased year over year.

Note: *In these figures, data is combined in two-year groupings (2017-2018, 2019-2020 and 2021-2022). This was done systematically to ensure at least 50% of cell counts were ≥5 in order to reduce the effects of year-to-year variation.*

Notes: Data provided by Public Health Ontario Laboratory. * denotes a proportion based on at least one count of <5, therefore proportions may be unstable and trends should be interpreted with caution. Health regions are groupings of Public Health Units. Diagnoses were assigned to a health region based on their address of residence or, if unreported, the address of the ordering provider. First-time diagnoses where PWID status was not reported were excluded (average of 25.3% of diagnoses per 2-year period among males). See Appendices and specifically Health regions for more information. See Tables Supplement for underlying data.

Figure 10.25 Number of first-time HIV diagnoses by health region, female PWID, Ontario, 2017-2018 to 2021-2022



Snapshot

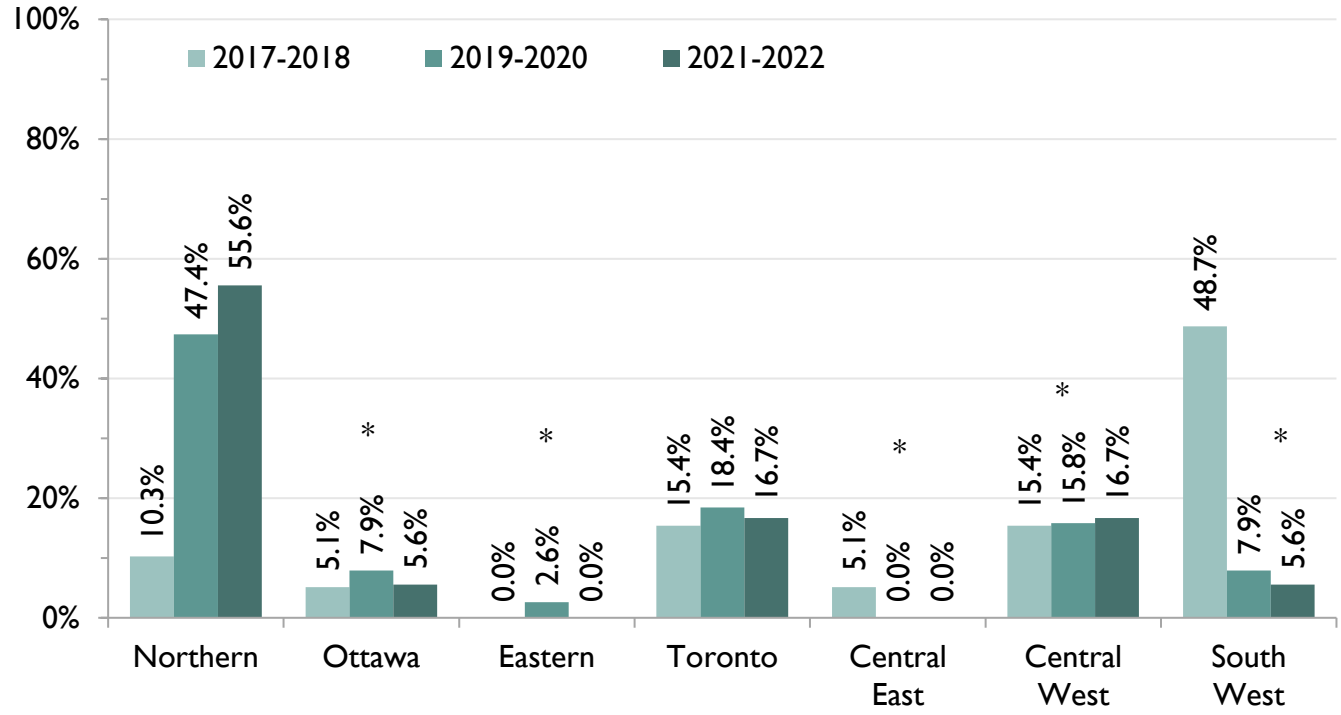
Over the two-year period 2021-2022, Northern region had the largest number of first-time HIV diagnoses among female PWID (20), followed by Toronto (6), Central West (6), Ottawa (2), and South West (2) regions. Central East and Eastern regions had 0 first-time HIV diagnoses among female PWID in 2021-2022.

South West region had the largest number of first-time HIV diagnoses among female PWID over the two-year periods 2017-2018, decreasing in 2019-2022. Northern region had the largest number in 2019-2020 and 2021-2022.

Note: *In these figures, data is combined in two-year groupings (2017-2018, 2019-2020 and 2021-2022). This was done systematically to ensure at least 50% of cell counts were ≥5 in order to reduce the effects of year-to-year variation.*

Notes: Data provided by Public Health Ontario Laboratory. Health regions are groupings of Public Health Units. Diagnoses were assigned to a health region based on their address of residence or, if unreported, the address of the ordering provider. First-time diagnoses where PWID status was not reported were excluded (average of 31.4% of diagnoses per 2-year period among females). See Appendices and specifically Health regions for more information. See Tables Supplement for underlying data.

Figure 10.26 Percent of first-time HIV diagnoses across health regions, female PWID, Ontario, 2017-2018 to 2021-2022



Snapshot

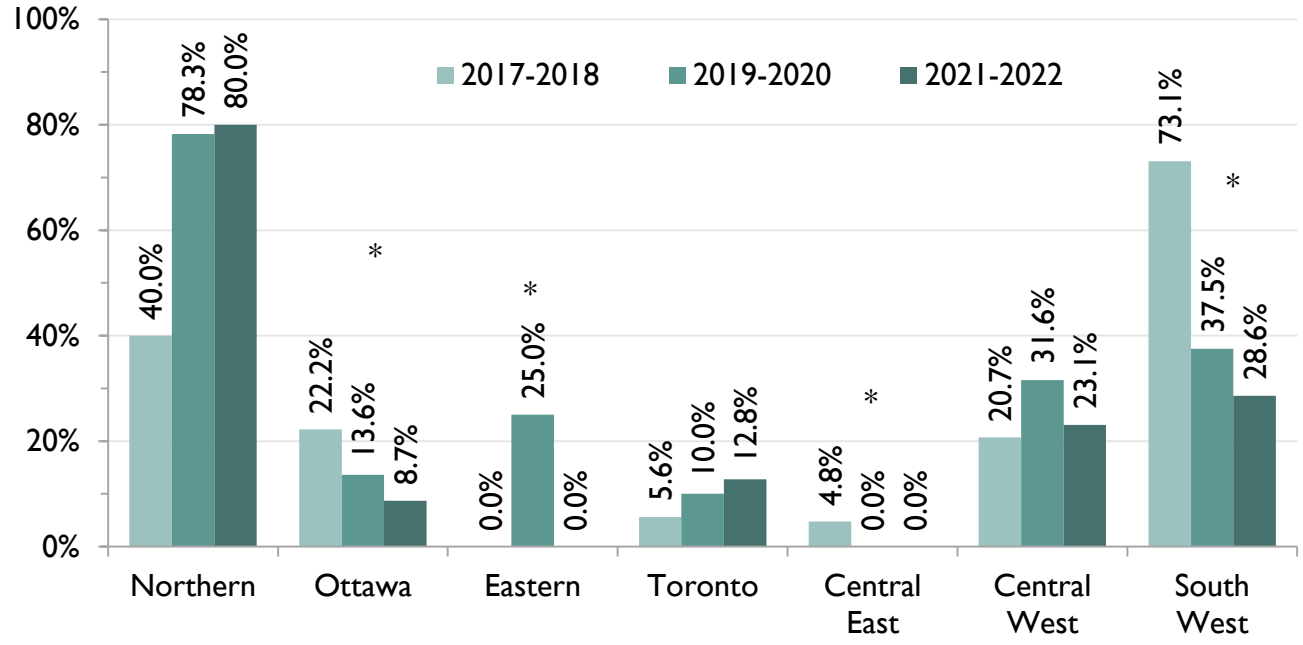
Over the two-year period 2021-2022, the Northern region had the largest proportion of first-time HIV diagnoses among female PWID (55.6%), followed by Toronto (16.7%), Central West (16.7%), Ottawa (5.6%) and South West (5.6%) regions. Central East and Eastern regions had 0 first-time HIV diagnoses among female PWID in 2021-2022.

South West region had the largest proportion of first-time HIV diagnoses among female PWID over 2017-2018 while Northern region had the largest proportion in 2019-2022.

Note: *In these figures, data is combined in two-year groupings (2017-2018, 2019-2020 and 2021-2022). This was done systematically to ensure at least 50% of cell counts were ≥5 in order to reduce the effects of year-to-year variation.*

Notes: Data provided by Public Health Ontario Laboratory. * denotes a proportion based on at least one count of <5, therefore proportions may be unstable and trends should be interpreted with caution. Health regions are groupings of Public Health Units. Diagnoses were assigned to a health region based on their address of residence or, if unreported, the address of the ordering provider. First-time diagnoses where PWID status was not reported were excluded (average of 31.4% of diagnoses per 2-year period). See Appendices and specifically Health regions for more information. See Tables Supplement for underlying data.

Figure 10.27 Percent of first-time HIV diagnoses among females within each health region attributed to PWID (where PWID status reported), Ontario, 2017-2018 to 2021-2022



Snapshot

Over the two-year period 2021-2022, looking within each region, Northern region attributed a larger proportion of its first-time HIV diagnoses among females to PWID than any other region (80.0%), followed by South West (28.6%), Central West (23.1%), Toronto (12.8%) and Ottawa (8.7%) regions. Central East and Eastern regions had 0 first-time HIV diagnoses among female PWID in 2021-2022.

Over the two-year period 2017-2018, South West region attributed the larger proportion of its first-time HIV diagnosis among females to PWID, followed by a decreased in the following years while the Northern region increased, attributing a larger population of its first-time HIV diagnoses among females to PWID.

Note: *In these figures, data is combined in two-year groupings (2017-2018, 2019-2020 and 2021-2022). This was done systematically to ensure at least 50% of cell counts were ≥5 in order to reduce the effects of year-to-year variation.*

Notes: Data provided by Public Health Ontario Laboratory. * denotes a proportion based on at least one count of <5, therefore proportions may be unstable and trends should be interpreted with caution. Health regions are groupings of Public Health Units. Diagnoses were assigned to a health region based on their address of residence or, if unreported, the address of the ordering provider. First-time diagnoses where PWID status was not reported were excluded (average of 31.4% of diagnoses per 2-year period among females). See Appendices and specifically Health regions for more information. See Tables Supplement for underlying data.

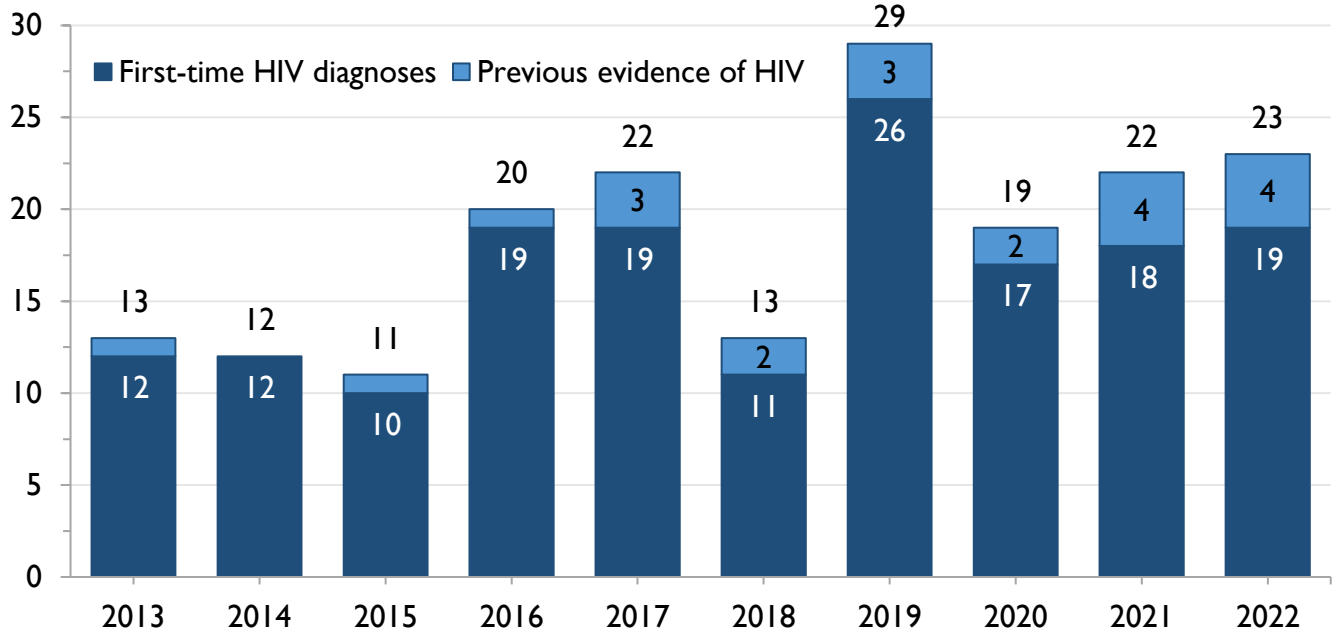
11. Indigenous Peoples

11.a. Indigenous overview

Diagnoses attributed to Indigenous Peoples are defined as reporting 'First Nations', 'Inuit', and/or 'Métis' race/ethnicity. In 2022, 19 of the 23 positive HIV tests attributed to Indigenous Peoples in Ontario were first-time HIV diagnoses.

Data limitations: *Counts of positive HIV tests and first-time HIV diagnoses among Indigenous may be underestimated, as between 2013 and 2022, race/ethnicity was not reported for an average of 32.2% of first-time HIV diagnoses, and we estimate an average of between 0.9% and 1.0% of first-time HIV diagnoses among Indigenous Peoples to have an uncaptured previous HIV diagnosis in 2022 (5-year average estimated to be between 3.0% and 4.3%). Data shown are where race/ethnicity was reported.*

Figure 11.1 Number of positive HIV tests, by first-time HIV diagnoses and previous evidence of HIV, Indigenous Peoples, Ontario, 2013 to 2022



Snapshot

In 2022, 19 of the 23 positive HIV tests attributed to Indigenous Peoples in Ontario were first-time HIV diagnoses, and 4 had previous evidence of HIV.

Between 2013 and 2022, the number of first-time HIV diagnoses in Indigenous Peoples ranged from a low of 10 in 2015 to a high of 26 in 2019. The number of positive HIV tests ranged from 11 to 29. The proportion of positive HIV tests with previous evidence of HIV was 17.4% in 2022.

Data limitations: *Counts of positive HIV tests and first-time HIV diagnoses among Indigenous may be underestimated, as between 2013 and 2022, race/ethnicity was not reported for an average of 32.2% first-time HIV diagnoses, and we estimate an average of between 0.9% and 1.0% of first-time HIV diagnoses among Indigenous Peoples to have an uncaptured previous HIV diagnosis in 2022 (5-year average estimated to be between 3.0% and 4.3%).*

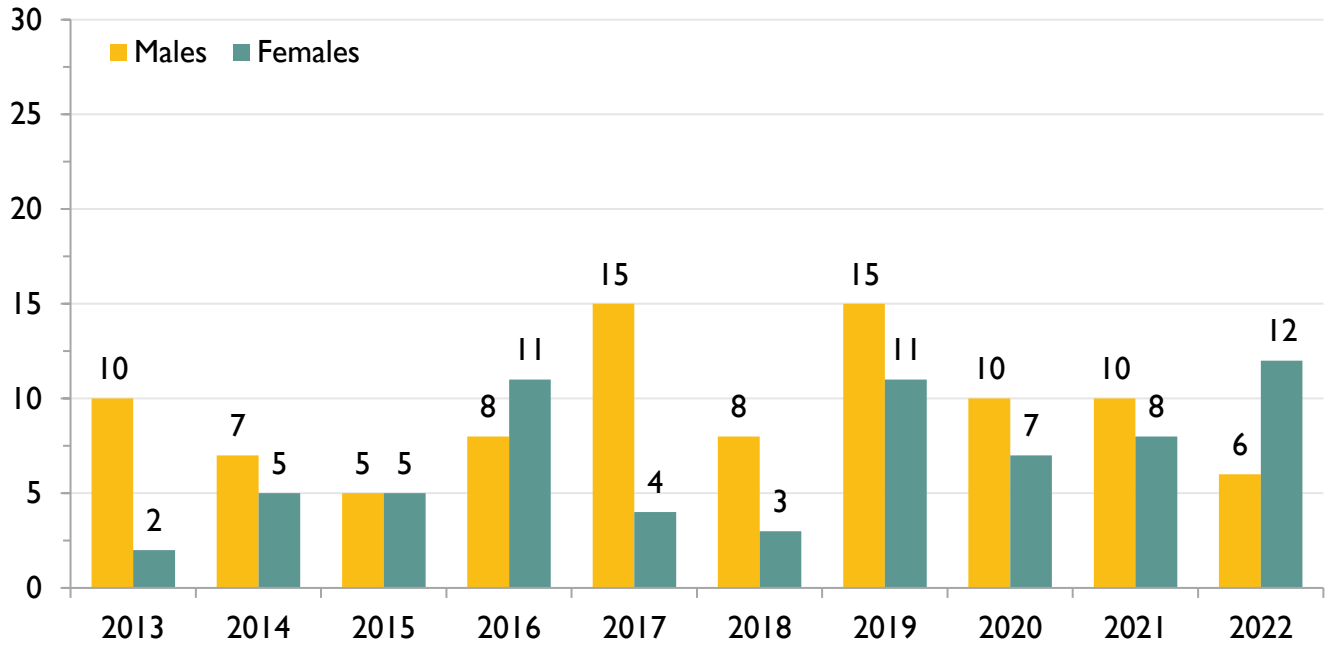
Notes: Data provided by Public Health Ontario Laboratory. Positive HIV tests where race/ethnicity was not reported were excluded (average of 32.2% of tests per year between 2013 and 2022). See Appendices for more information. See Tables Supplement for underlying data.

11.b. Indigenous by sex

In 2022, there were 19 first-time HIV diagnoses among Indigenous Peoples: 6 among Indigenous males, 12 among Indigenous females and 1 unknown sex. Indigenous Peoples accounted for 4.6% of all first-time HIV diagnoses[1] in Ontario with Indigenous males accounting for 1.5% and females for 2.9%. Indigenous males accounted for 2.0% of first-time HIV diagnoses among males and Indigenous females accounted for 10.8% of first-time HIV diagnoses among females. Females accounted for 66.7% of first-time HIV diagnoses among Indigenous Peoples in 2022, the highest it's ever been.

Data limitations: *Counts of first-time HIV diagnoses among Indigenous may be underestimated, as between 2013 and 2022, race/ethnicity was not reported for an average of 29.9% of first-time HIV diagnoses among males and 39.2% among females, and we estimate an average of between 5.6% and 6.3% among Indigenous males and between 0.0% and 0.0% among Indigenous females to have an uncaptured previous HIV diagnosis in 2022. This is an increased proportion in 2022 among males, where the 5-year average was estimated to be between 2.3% and 2.7% among males and a decreased proportion in 2022 among females, where the 5-year average was estimated to be between 5.5% and 8.5% among females. Data shown are where race/ethnicity was reported.*

Figure 11.2 Number of first-time HIV diagnoses by sex, Indigenous Peoples, Ontario, 2013 to 2022



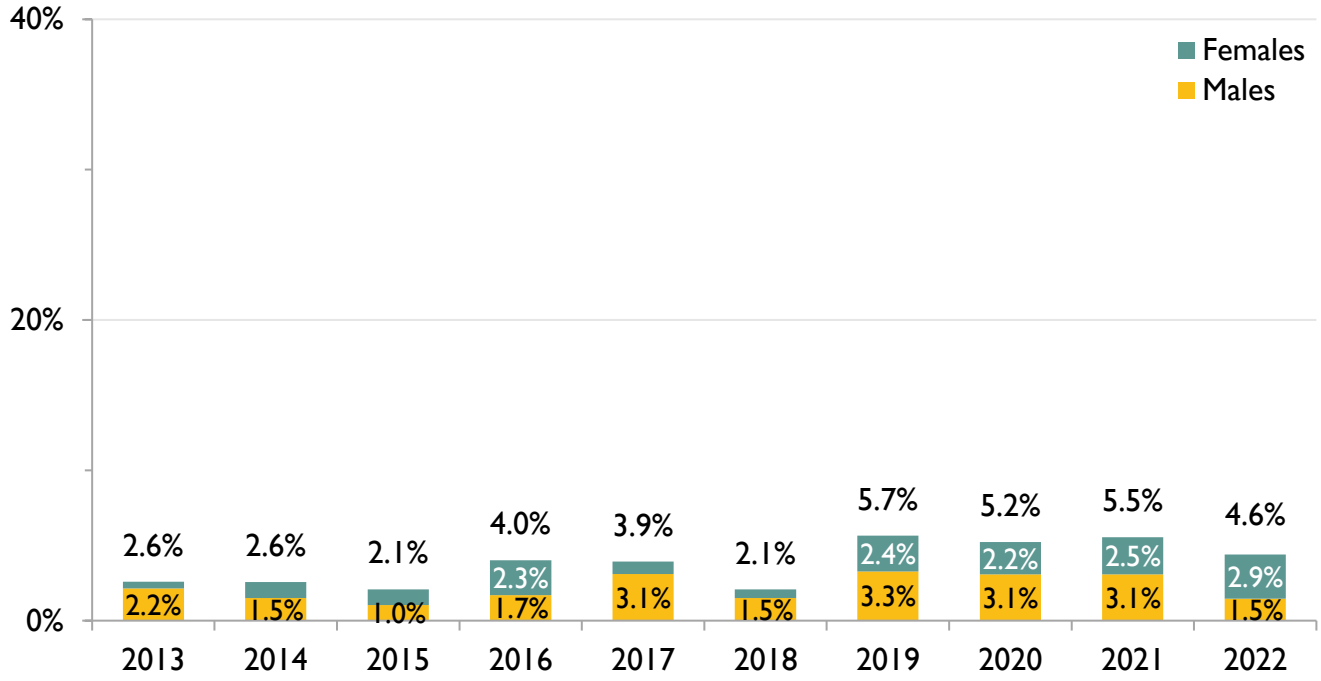
Snapshot

In 2022, there were 12 first-time HIV diagnoses among Indigenous females and 6 among Indigenous males, a change from previous years were males accounted for a higher number of first-time HIV diagnoses. Between 2013 and 2022, the number of first-time HIV diagnoses among Indigenous males ranged from 5 to 15, and the number among Indigenous females ranged from 2 to 12.

Notes: Data provided by Public Health Ontario Laboratory. First-time diagnoses where race/ethnicity was not reported were excluded (average of 29.9% of FT diagnoses per year among males, 39.2% among females between 2013 and 2022). See Appendices for more information. See Tables Supplement for underlying data.

[1] Where Indigenous race/ethnicity of first-time diagnoses is known. That is, the denominator is first-time HIV diagnoses where the diagnosis was able to be assigned an Indigenous race/ethnicity (known Indigenous or known not to be Indigenous, n=409 overall, 296 among males and 111 among females in 2022). Information required to assign Indigenous race/ethnicity among first-time diagnoses (Indigenous race/ethnicity known, and therefore in the denominator) was not reported for an average of 32.2% of first-time HIV diagnoses between 2013 and 2022 (34.3% in 2022).

Figure 11.3 Percent of first-time HIV diagnoses attributed to Indigenous Peoples (where race/ethnicity reported), Ontario, 2013 to 2022



Snapshot

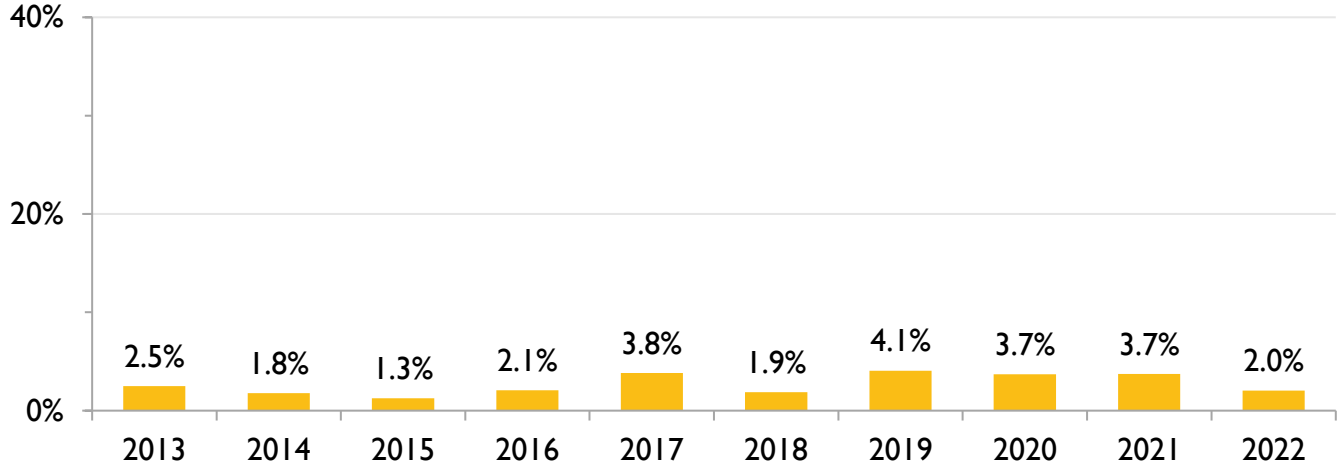
In 2022, Indigenous females accounted for 2.9% of all first-time HIV diagnoses[1], while males accounted for 1.5%. A total of 4.6% of first-time HIV diagnoses were attributed to Indigenous Peoples.

Between 2013 and 2022, Indigenous Peoples accounted for between 2.1% and 5.7% of first-time HIV diagnoses, with Indigenous male's first-time HIV diagnoses ranging from 1.0% to 3.3% and females ranging from 0.4% to 2.9%.

Notes: Data provided by Public Health Ontario Laboratory. First-time diagnoses where race/ethnicity was not reported were excluded (average of 29.9% of FT diagnoses per year among males, 39.2% among females, between 2013 to 2022). See Appendices for more information. See Tables Supplement for underlying data.

[1] Where Indigenous race/ethnicity of first-time diagnoses is known. That is, the denominator is first-time HIV diagnoses where the diagnosis was able to be assigned an Indigenous race/ethnicity (known Indigenous or known not to be Indigenous, n=409 overall in 2022). Information required to assign Indigenous race/ethnicity among first-time diagnoses (Indigenous race/ethnicity known, and therefore in the denominator) was not reported for an average of 32.2% of first-time HIV diagnoses between 2013 and 2022 (34.3% in 2022).

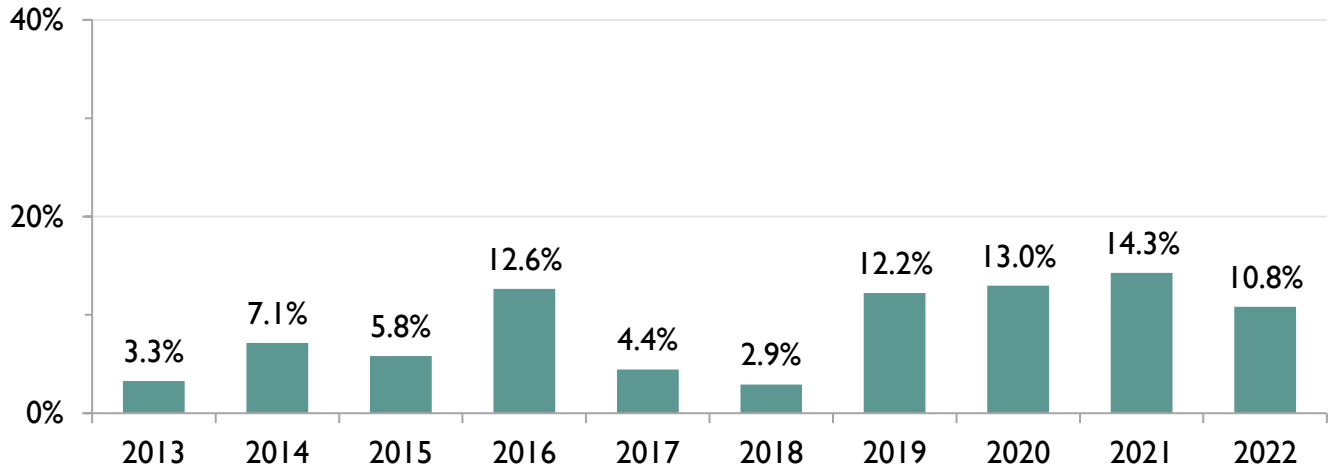
Figure 11.4 Percent of first-time HIV diagnoses among males attributed to Indigenous Peoples (where race/ethnicity reported), Ontario, 2013 to 2022



Snapshot

In 2022, Indigenous males accounted for 2.0% of first-time HIV diagnoses among males. Between 2013 and 2022, Indigenous males accounted for between 1.3% and 4.1% of first-time HIV diagnoses among males.

Figure 11.5 Percent of first-time HIV diagnoses among females attributed to Indigenous Peoples (where race/ethnicity reported), Ontario, 2013 to 2022

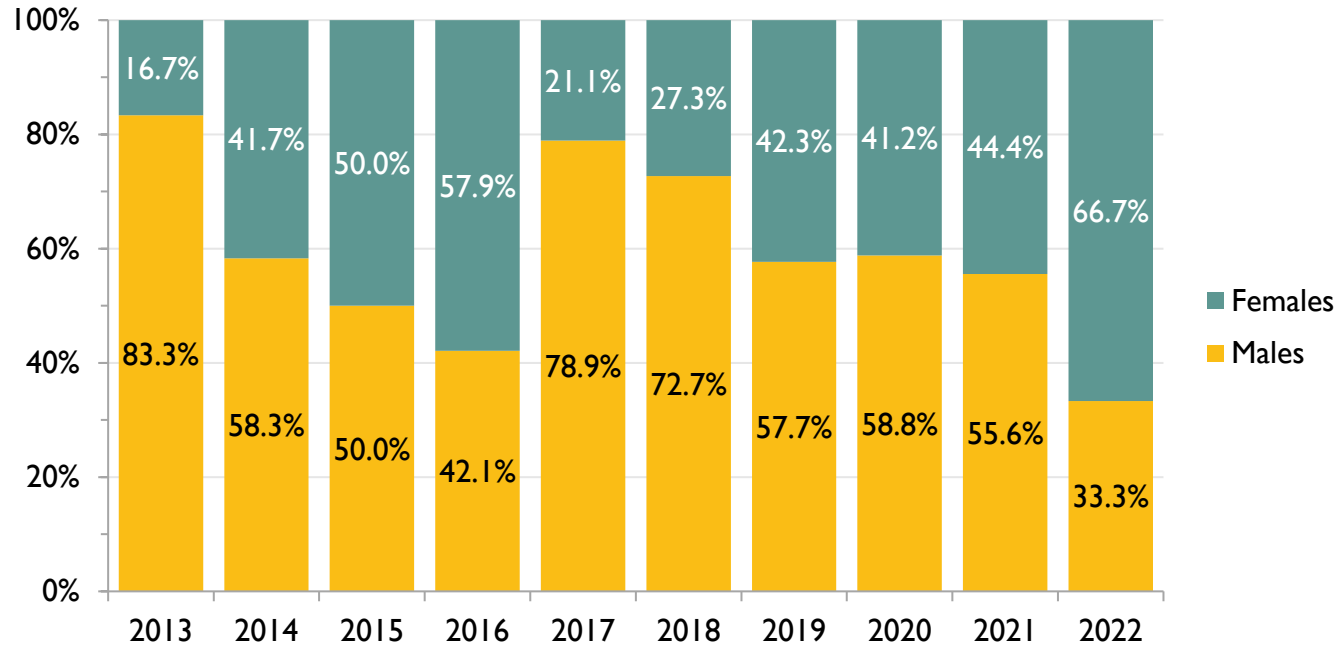


Snapshot

In 2022, Indigenous females accounted for 10.8% of first-time HIV diagnoses among females. Between 2013 and 2022, Indigenous females accounted for between 2.9% and 14.3% of first-time HIV diagnoses among females.

Notes: Data provided by Public Health Ontario Laboratory. Where race/ethncity of first-time diagnoses is known, 296 among males and 111 among females in 2022). First-time diagnoses where race/ethnicity was not reported were excluded (average of 29.9% of FT diagnoses per year among males, 39.2% among females between 2013 and 2022). See Appendices for more information. See Tables Supplement for underlying data.

Figure 11.6 Percent of first-time HIV diagnoses among Indigenous Peoples by sex, Ontario, 2013 to 2022



Snapshot

In 2022, females accounted for 66.7% of first-time HIV diagnoses among Indigenous Peoples, and males accounted for 33.3%. Between 2013 and 2022, females accounted for between a low of 16.7% and a high of 66.7% of first-time HIV diagnoses among Indigenous Peoples, while males ranged from a low of 33.3% and a high of 83.3%.

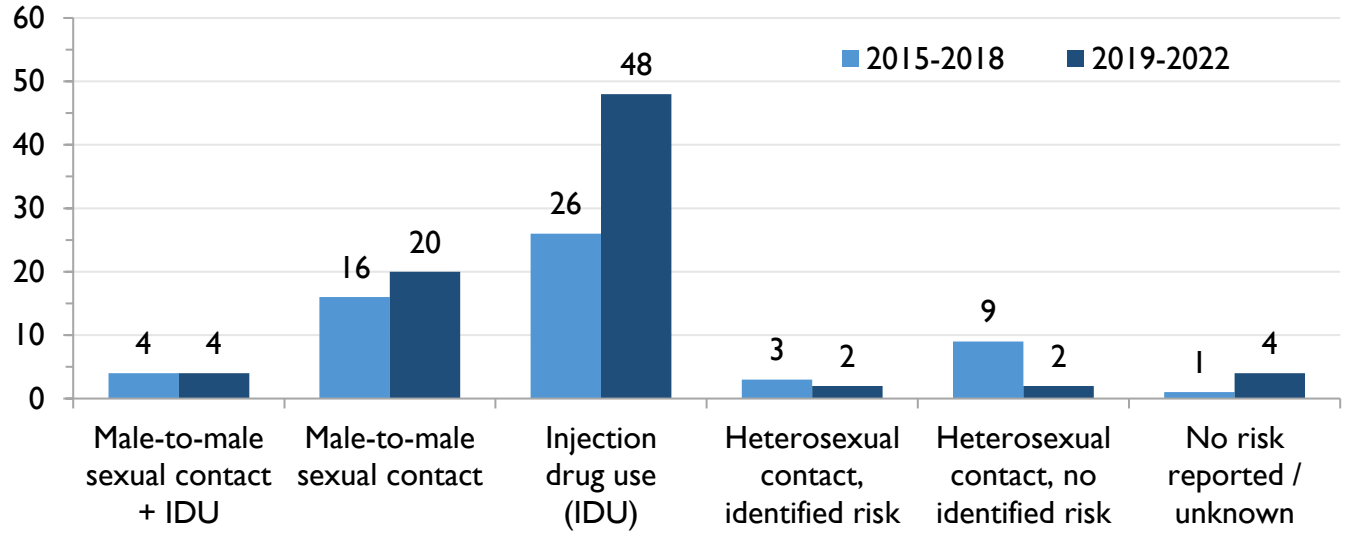
Notes: Data provided by Public Health Ontario Laboratory. First-time diagnoses where race/ethnicity was not reported were excluded (average of 29.9% of FT diagnoses per year among males, 39.2% among females, between 2013 and 2022). See Appendices for more information. See Tables Supplement for underlying data.

11.c. Indigenous by HIV exposure category

Over the four-year period 2019-2022, the largest proportion of first-time HIV diagnoses among Indigenous Peoples was reported as IDU (63.2%), followed by male-to-male sexual contact (26.3%). Over this same period, 50.0% of first-time HIV diagnoses in Indigenous males were reported as male-to-male sexual contact and between the four-year periods 2015-2018 and 2019-2022, the number of first-time HIV diagnoses among Indigenous males reported as male-to-male sexual contact increased from 16 to 20 and those reported as IDU increased from 10 to 14. 94.4% of first-time HIV diagnoses in Indigenous females were reported as IDU over the four-year period 2019-2022; between the four-year periods 2015-2018 and 2019-2022, the number of first-time HIV diagnoses among Indigenous females reported as IDU increased from 16 to 34.

Data limitations and definitions: *In these figures, data is combined in four-year groupings (2015-2018 and 2019-2022). This was done systematically to ensure at least 50% of cell counts were ≥5 in order to reduce the effects of year-to-year variation.*
The "Heterosexual contact, identified risk" category includes diagnoses where sex with a person of the opposite sex/gender is reported and either the individual's country of birth is reported as an HIV-endemic country, or the individual's sex partner is reported to be at least one of: HIV-positive; user of injection drugs; born in an HIV-endemic country; a bisexual male. See HIV exposure categories for more information.

Figure 11.7 Number of first-time HIV diagnoses by HIV exposure category, Indigenous Peoples, Ontario, 2015-2018 and 2019-2022



Snapshot

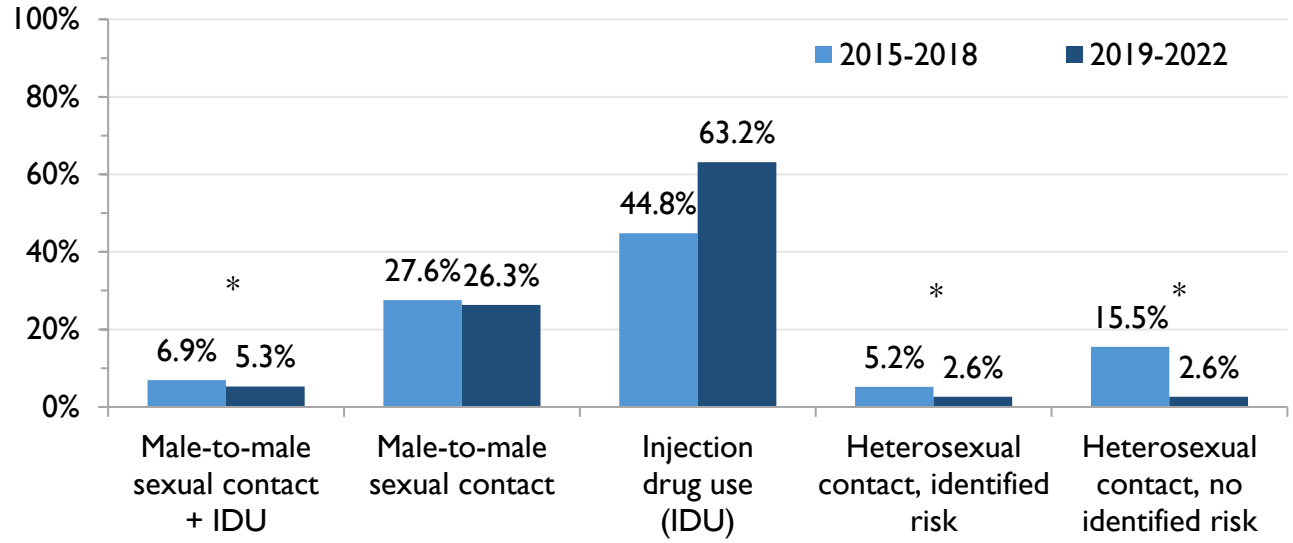
Over the four-year period 2019-2022, 4 out of 80 first-time HIV diagnoses in Indigenous Peoples did not report an HIV exposure category.

Among the 76 first-time HIV diagnoses in Indigenous Peoples with a reported HIV exposure category in 2019-2022, 48 were reported as IDU and 20 as male-to-male sexual contact.

Between the four-year periods 2015-2018 and 2019-2022, the largest numbers of first-time HIV diagnoses were reported as IDU and increased over time, followed by male-to-male sexual contact which also increased over time.

Notes: Data provided by Public Health Ontario Laboratory. First-time diagnoses where race/ethnicity was not reported were excluded (average of 32.3% of diagnoses per 4-year period). IDU = injection drug use. See Appendices and specifically HIV exposure categories for more information. See Tables Supplement for underlying data.

Figure 11.8 Percent of first-time HIV diagnoses by HIV exposure category (where reported), Indigenous Peoples, Ontario, 2015-2018 and 2019-2022



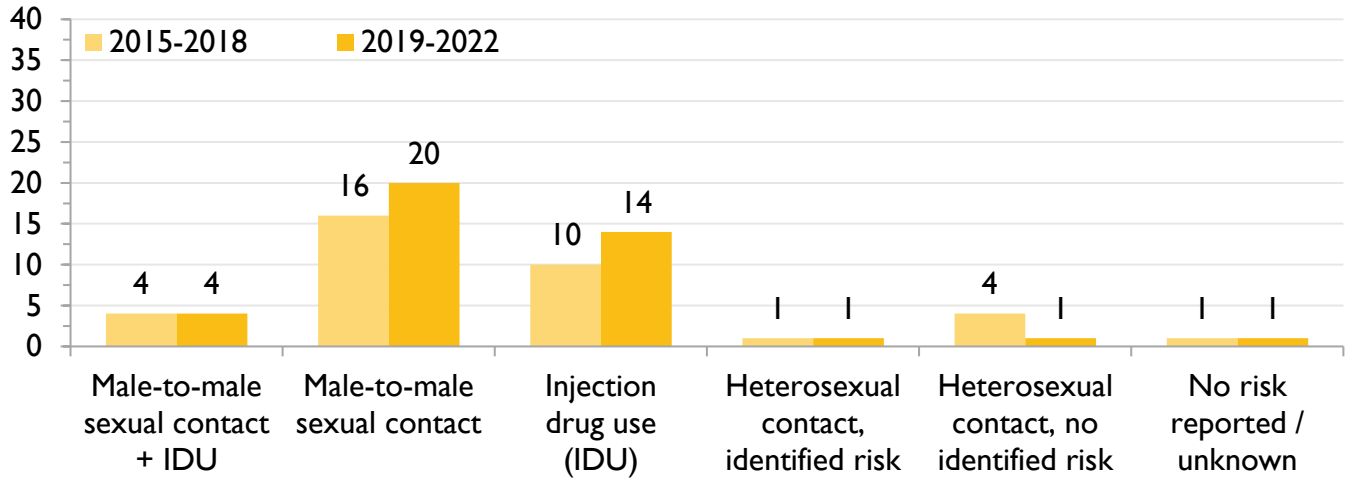
Snapshot

Over the four-year period 2019-2022, among the 76 first-time HIV diagnoses in Indigenous Peoples with a reported HIV exposure category, 63.2% were reported as IDU, 26.3% to male-to-male sexual contact, 5.3% as male-to-male sexual contact + IDU, and less than 5% as heterosexual contact with or without identified risks.

Between the four-year periods 2015-2018 and 2019-2022, IDU followed by male-to-male sexual contact accounted for the largest proportions of first-time HIV diagnoses. The proportions reported as IDU increased over time while male-to-male sexual contact remained relatively stable.

Notes: Data provided by Public Health Ontario Laboratory. First-time diagnoses where race/ethnicity was not reported were excluded (average of 32.3% of diagnoses per 4-year period). First-time diagnoses where race/ethnicity was reported but HIV exposure category was not reported were excluded (average of 3.3% of diagnoses per 4-year period where race/ethnicity was reported). IDU = injeciton drug use. See Appendices and specifically HIV exposure categories for more information. See Tables Supplement for underlying data.

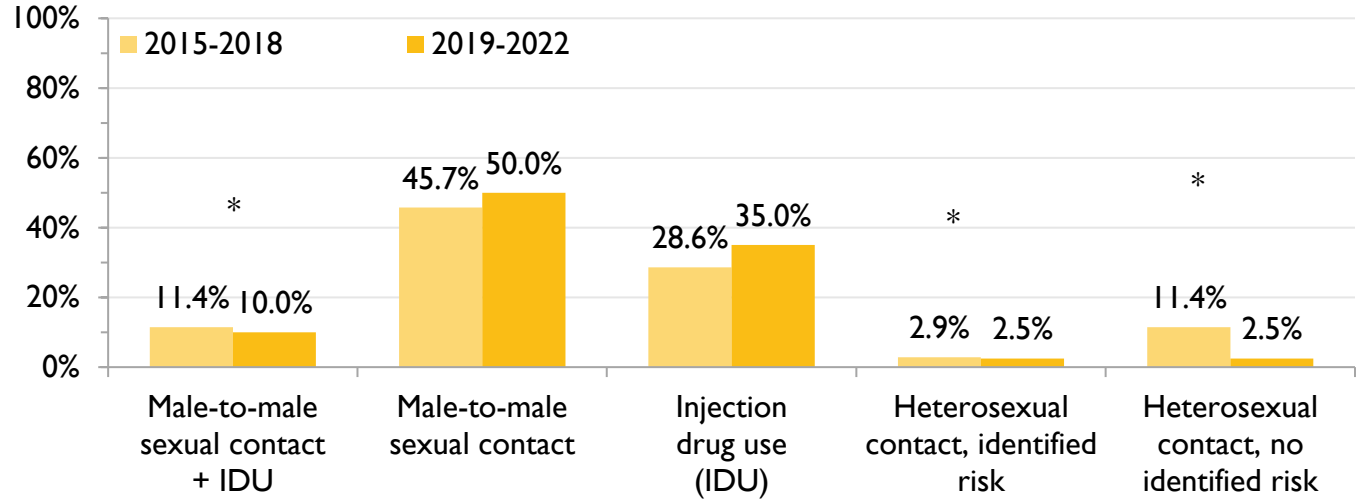
Figure 11.9 Number of first-time HIV diagnoses by HIV exposure category, Indigenous males, Ontario, 2015-2018 and 2019-2022



Snapshot

Over the four-year period 2019-2022, 1 of the 41 first-time HIV diagnoses in Indigenous males did not report an HIV exposure category. Among the 40 first-time HIV diagnoses in Indigenous males with a reported HIV exposure category, the largest number was report as male-to-male sexual contact (20), followed by IDU (14), male-to-male sexual contact + IDU (4), while heterosexual contact with and without identified risk reported 1 first-time HIV diagnoses each.

Figure 11.10 Percent of first-time HIV diagnoses by HIV exposure category (where reported), Indigenous males, Ontario, 2015-2018 and 2019-2022

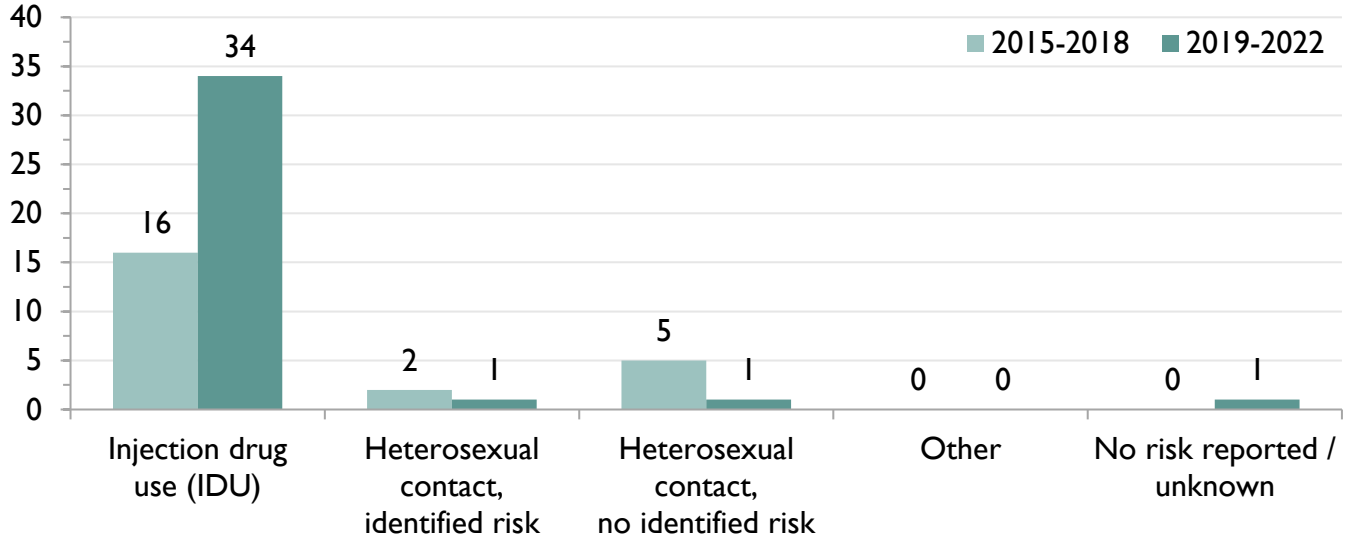


Snapshot

Over the four-year period 2019-2022, among the 40 first-time HIV diagnoses in Indigenous males with a reported HIV exposure category, 50.0% were reported as male-to-male sexual contact (increased over time), 35.0% as IDU (increased over time) and 10.0% as male-to-male sexual contact + IDU (stable over time).

Notes: Data provided by Public Health Ontario Laboratory. * denotes a proportion based on at least one count of <5, therefore proportions may be unstable and trends should be interpreted with caution. First-time diagnoses where race/ethnicity was not reported were excluded (average of 30.2% of FT diagnoses per 4-year period). First-time diagnoses where race/ethnicity was reported but HIV exposure category was not reported were excluded in Figure 11.10 (average of 2.6% of FT diagnoses per 4-year period where race/ethnicity was reported). IDU = injection drug use. See Appendices and specifically HIV exposure categories for more information. See Tables Supplement for underlying data.

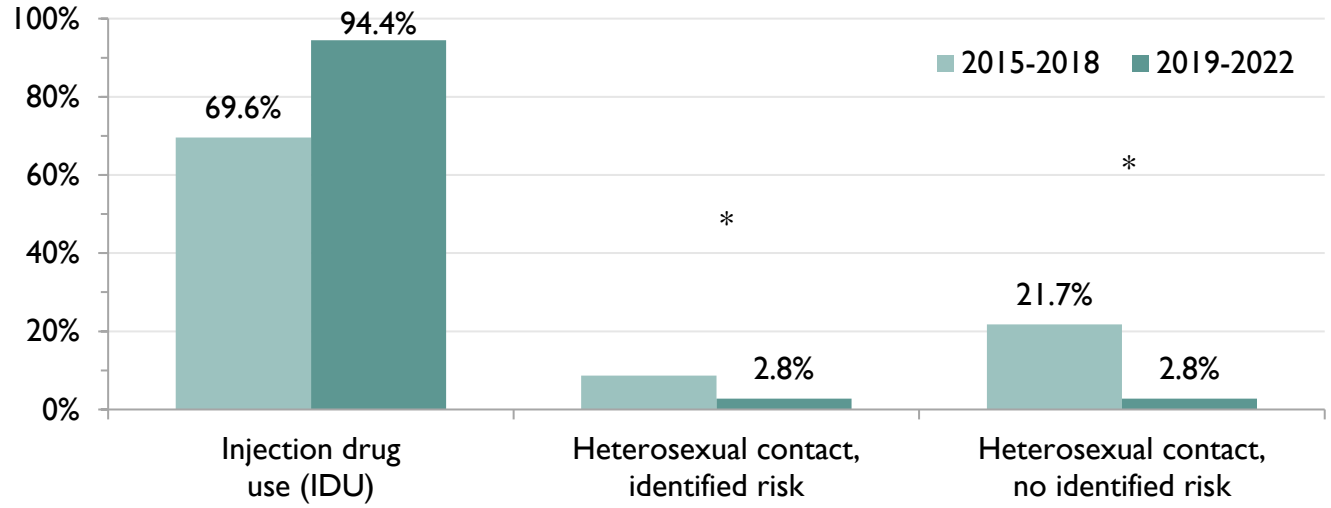
Figure 11.11 Number of first-time HIV diagnoses by HIV exposure category, Indigenous females, Ontario, 2015-2018 and 2019-2022



Snapshot

Over the four-year period 2019-2022, 1 of the 37 first-time HIV diagnoses in Indigenous females did not report an HIV exposure category. Among the 36 first-time HIV diagnoses in Indigenous females with a reported HIV exposure category in 2019-2022, almost all (34) were reported as IDU.

Figure 11.12 Percent of first-time HIV diagnoses by HIV exposure category (where reported), Indigenous females, Ontario, 2013-2016 and 2017-2020



Snapshot

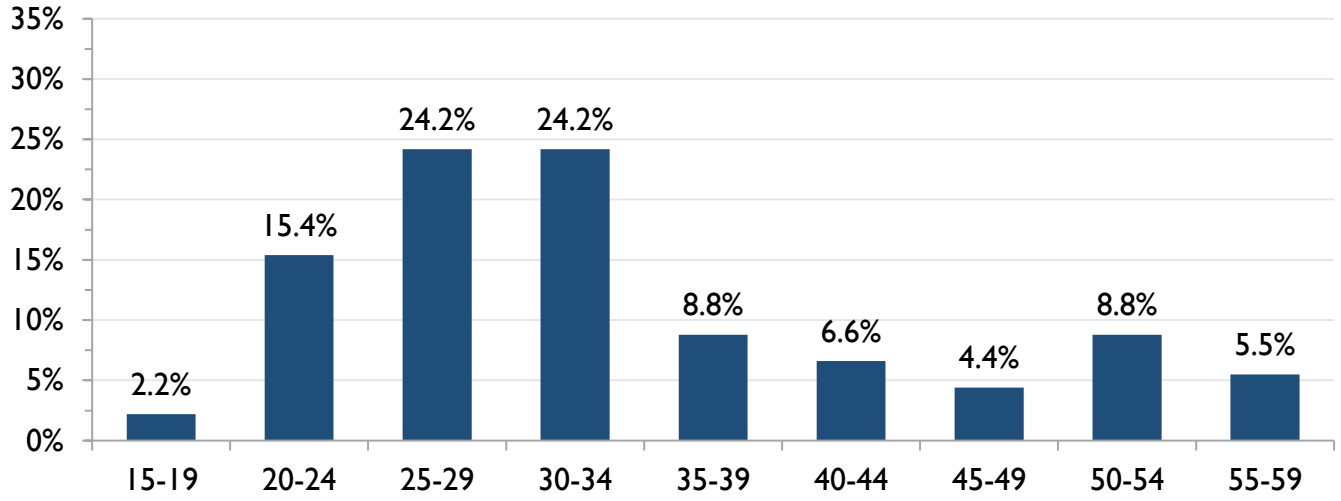
Over the four-year period 2019-2022, among the 36 first-time HIV diagnoses in Indigenous females with a reported HIV exposure category, 94.4% were reported as IDU (increased over time) and 2.8% as Heterosexual contact with or without identified risk (Both decreased over time).

Notes: Data provided by Public Health Ontario Laboratory. * denotes a proportion based on at least one count of <5, therefore proportions may be unstable and trends should be interpreted with caution. First-time diagnoses where race/ethnicity was not reported were excluded (average of 37.7% of FT diagnoses per 4-year period). First-time diagnoses where race/ethnicity was reported but HIV exposure category was not reported were excluded from Figure 11.12 (average of 2.4% of FT diagnoses per 4-year period where race/ethnicity was reported). IDU = injeciton drug use. See Appendices and specifically HIV exposure categories for more information. See Tables Supplement for underlying data.

11.d. Indigenous by age

Over the five-year period 2018-2022, those aged 25-34 years accounted for the largest proportion of first-time HIV diagnoses among Indigenous people overall (48.4%), as well as among both Indigenous males (53.0%) and Indigenous females (44.0%).

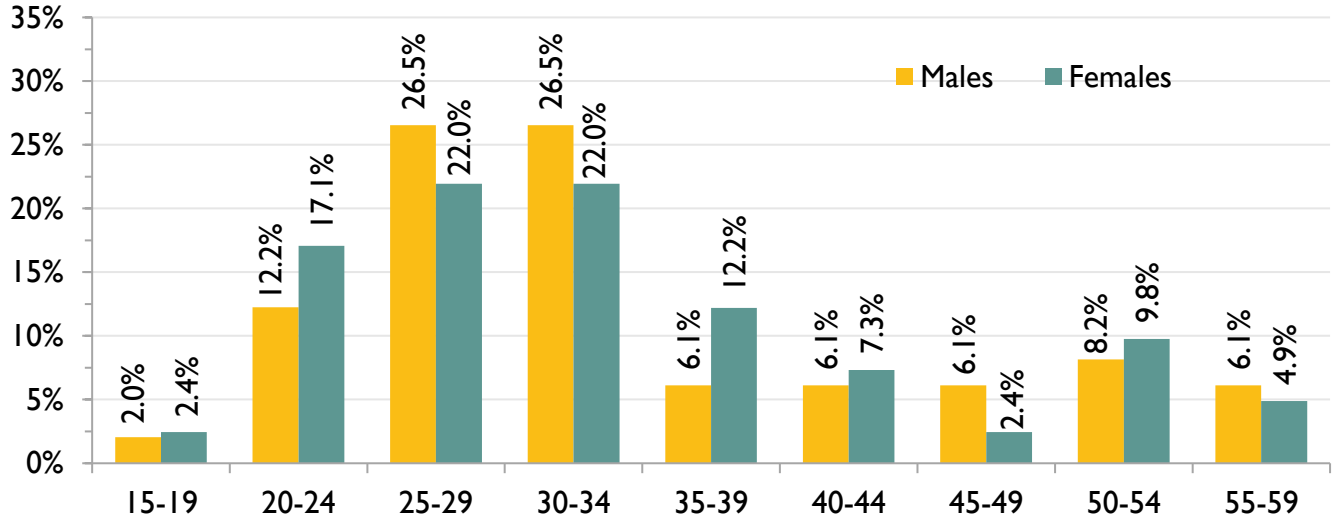
Figure 11.13 Percent of first-time HIV diagnoses by age, Indigenous Peoples, Ontario, 2018-2022



Snapshot

Over the five-year period 2018-2022, 63.8% of first-time HIV diagnoses among Indigenous Peoples were among those aged 20-34 years, with both 25-29 and 30-34 age groups accounting for 24.2% each.

Figure 11.14 Percent of first-time HIV diagnoses by age, Indigenous males and Indigenous females, Ontario, 2018-2022



Snapshot

Over the five-year period 2018-2022, those aged 25-34 accounted for the largest proportion of first-time HIV diagnoses among both Indigenous males and Indigenous females.

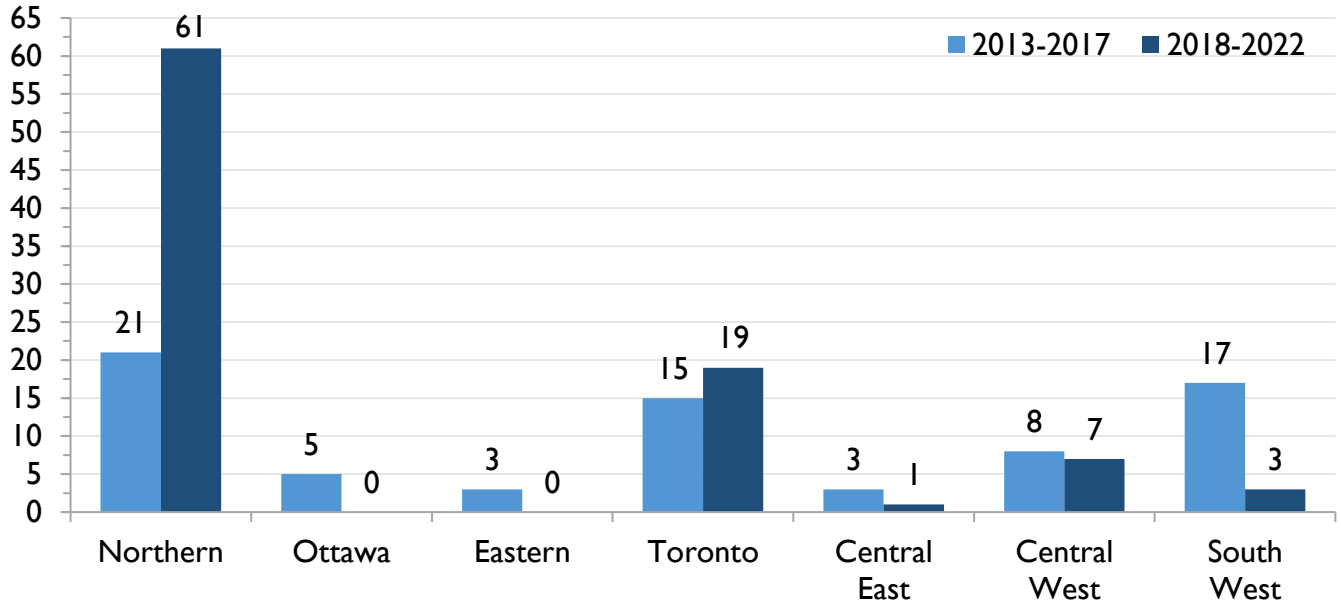
Notes: Data provided by Public Health Ontario Laboratory. First-time diagnoses with age not reported were excluded (less than 1%). First-time diagnoses where race/ethnicity was not reported were excluded (32.1% of diagnoses, 29.8% among males, 38.8% among females). See Appendices for more information. See Tables Supplement for underlying data.

11.e. Indigenous by health region

Over the five-year period 2018-2022, Northern region had the largest proportion of Indigenous first-time HIV diagnoses (67.0%), followed by Toronto region (20.9%). Within regions, Indigenous Peoples accounted for a larger proportion of first-time HIV diagnoses in the Northern region (60.7%) than any other region with very small proportions of Indigenous Peoples accounting for first-time HIV diagnoses in Central West (3.0%), Toronto (1.8%) and South West (1.7%).

Note: *In these figures, data is combined in five-year groupings (2013-2017 and 2018-2022). This was done systematically, where possible, to ensure at least 50% of cell counts were ≥5 in order to reduce the effects of year-to-year variation.*

Figure 11.15 Number of first-time HIV diagnoses by health region, Indigenous Peoples, Ontario, 2013-2017 and 2018-2022



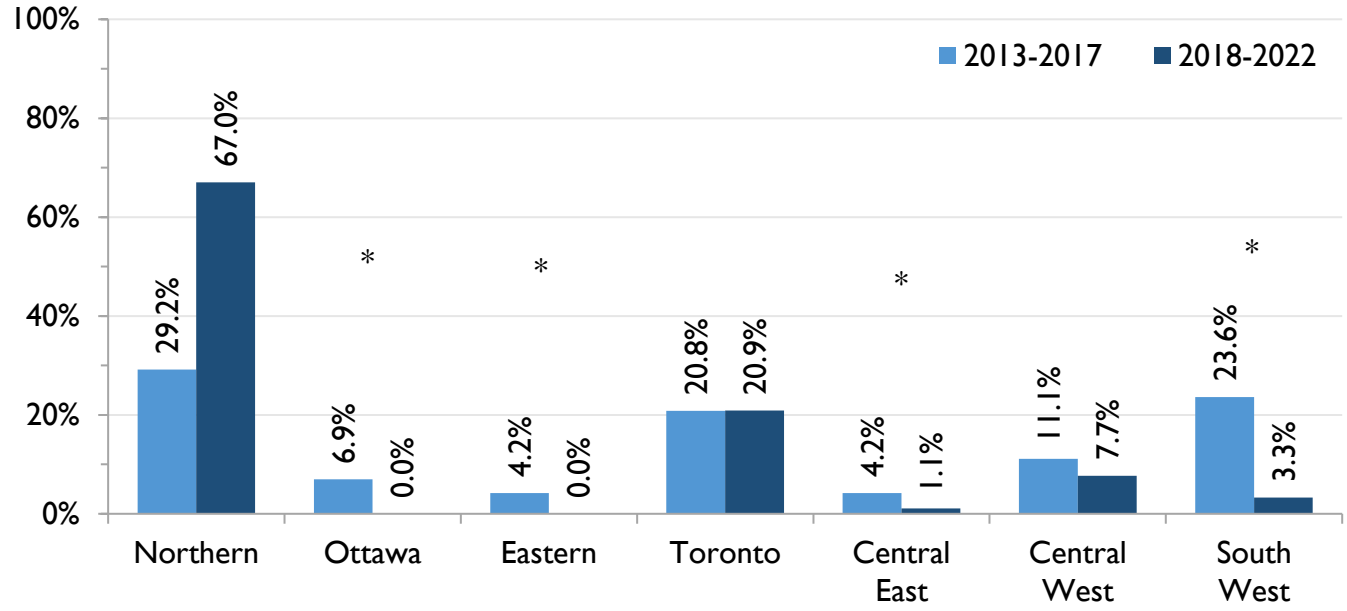
Snapshot

Over the five-year period 2018-2022, Northern region had the largest number of fist-time HIV diagnoses among Indigenous Peoples (61), followed by Toronto (19), Central West (7), South West (3) and Central East (1) regions. Ottawa and Eastern region reported 0 first-time HIV diagnosis among Indigenous Peoples during this time.

The number of first-time HIV diagnoses among Indigenous Peoples increased in the Northern (190.5% relative increase) and Toronto regions (26.7% relative increase) between 2013-2017 and 2018-2022, and decreased in Ottawa, Eastern, Central East, Central West and South West regions.

Notes: Data provided by Public Health Ontario Laboratory. Health regions are groupings of Public Health Units. Diagnoses were assigned to a health region based on their address of residence or, if unreported, the address of the ordering provider. First-time diagnoses where race/ethnicity was not reported were excluded (average of 32.1% of diagnoses per 5-year period). See Appendices and specifically Health regions for more information. See Tables Supplement for underlying data.

Figure 11.16 Percent of first-time HIV diagnoses across health regions, Indigenous Peoples, Ontario, 2013-2017 and 2018-2022



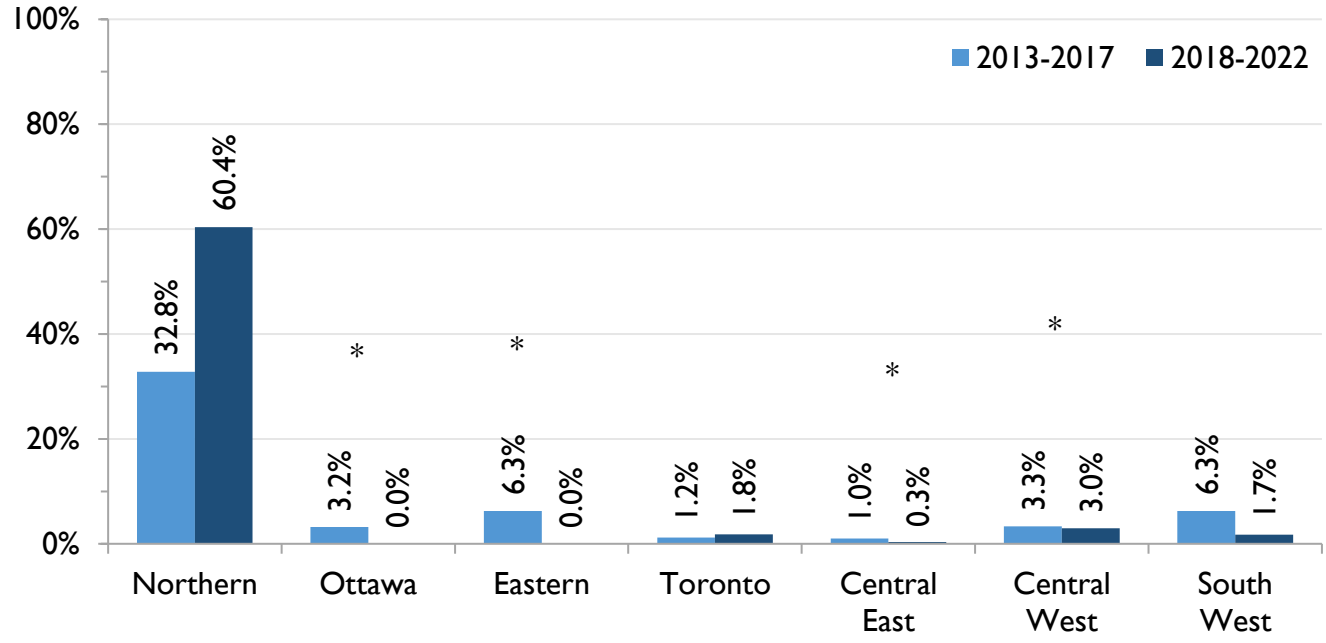
Snapshot

Over the five-year period 2018-2022, Northern region had the largest proportion of first-time HIV diagnoses among Indigenous Peoples (67.0%), followed by Toronto (20.9%) and Central West (7.7%). Ottawa, Eastern, Central East and South West regions has less than 5% of first-time HIV diagnoses among Indigenous Peoples each, over the same period.

Northern region also had the largest increase in proportion of first-time HIV diagnoses among Indigenous Peoples between the two five-year while South West had the largest decrease.

Notes: Data provided by Public Health Ontario Laboratory. * denotes a proportion based on at least one count of <5, therefore proportions may be unstable and trends should be interpreted with caution. Health regions are groupings of Public Health Units. Diagnoses were assigned to a health region based on their address of residence or, if unreported, the address of the ordering provider. First-time diagnoses where race/ethnicity was not reported were excluded (average of 32.1% of diagnoses per 5-year period). See Appendices and specifically Health regions for more information. See Tables Supplement for underlying data.

Figure 11.17 Percent of first-time HIV diagnoses within each health region attributed to Indigenous Peoples (where race/ethnicity reported), Ontario, 2013-2017 and 2018-2022



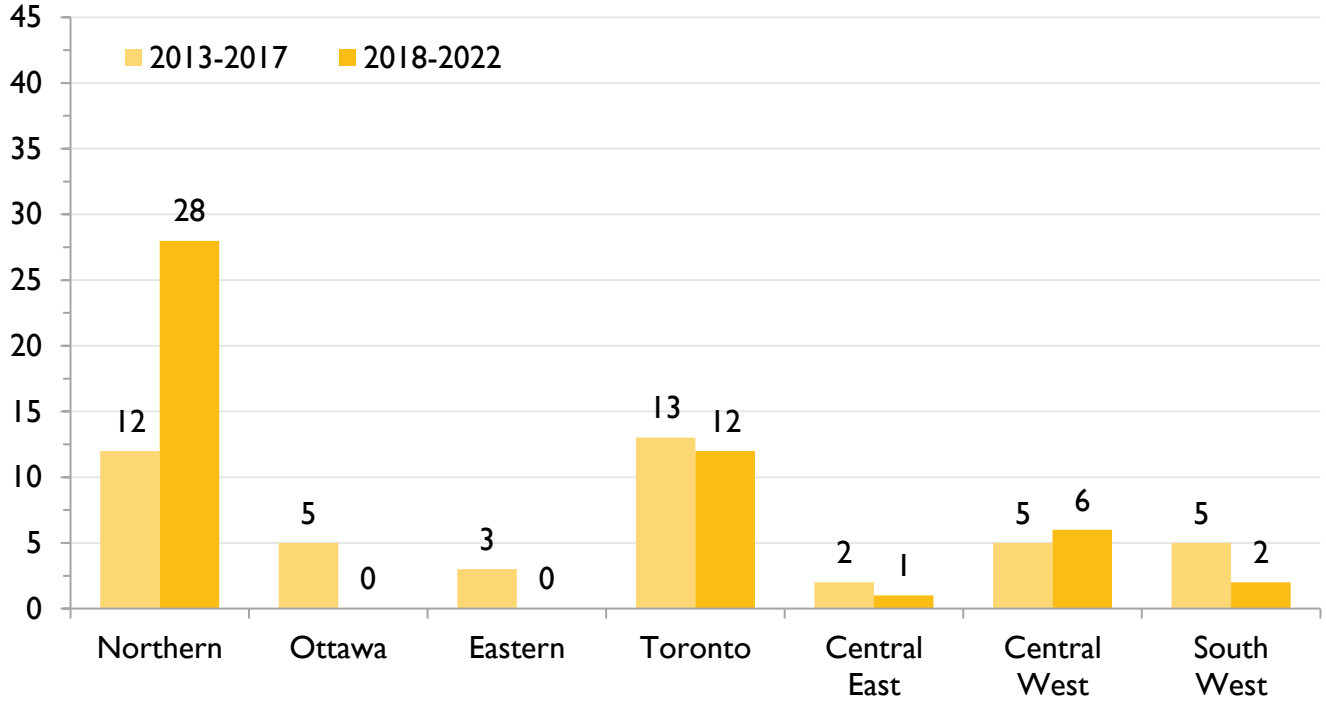
Snapshot

Over the five-year period 2018-2022, looking within each region, Northern region attributed a larger proportion of its first-time HIV diagnoses to Indigenous Peoples than any other region (60.4%), followed by Central West (3.0%) region. Ottawa, Eastern, Toronto, Central East and South West regions each attributed less than 2.0% of their first-time HIV diagnoses to Indigenous people.

Northern region attributed a larger proportion of its first-time HIV diagnoses to Indigenous Peoples (32.8%) than any other region in 2013-2017 and this proportion increased over time.

Notes: Data provided by Public Health Ontario Laboratory. * denotes a proportion based on at least one count of <5, therefore proportions may be unstable and trends should be interpreted with caution. Health regions are groupings of Public Health Units. Diagnoses were assigned to a health region based on their address of residence or, if not reported, the address of the ordering provider. First-time diagnoses where race/ethnicity was not reported were excluded (average of 32.1% of diagnoses per 5-year period). See Appendices and specifically Health regions for more information. See Tables Supplement for underlying data.

Figure 11.18 Number of first-time HIV diagnoses by health region, Indigenous males, Ontario, 2013-2017 and 2018-2022



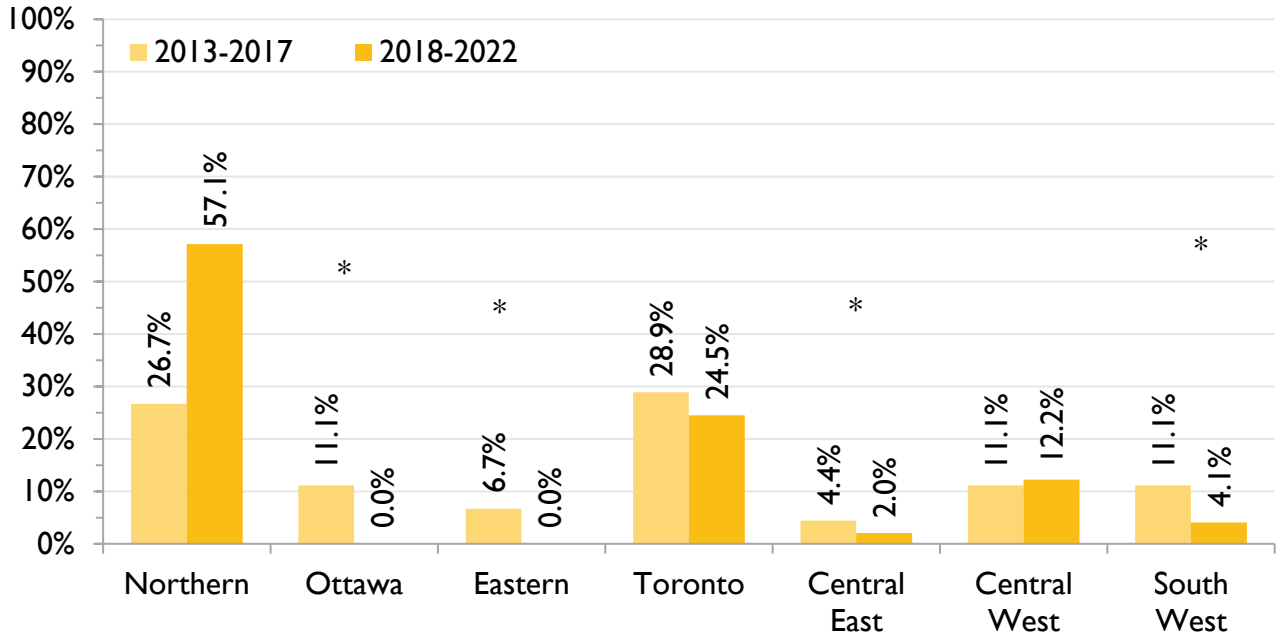
Snapshot

Over the five-period 2018-2022, Northern region had the largest number of first-time HIV diagnoses among Indigenous males (28), followed by Toronto (12), Central West (6), South West (2) and Central East (1) regions. Ottawa and Eastern regions had 0 cases in the same period.

The largest relative increase between the two time periods was in the Northern region (133.3%) followed by Central West (20.0%, based on small numbers).

Notes: Data provided by Public Health Ontario Laboratory. Health regions are groupings of Public Health Units. Diagnoses were assigned to a health region based on their address of residence or, if unreported, the address of the ordering provider. First-time diagnoses where race/ethnicity was not reported were excluded (average of 29.8% of diagnoses per 5-year period). See Appendices and specifically Health regions for more information. See Tables Supplement for underlying data.

Figure 11.19 Percent of first-time HIV diagnoses across health regions, Indigenous males, Ontario, 2013-2017 and 2018-2022



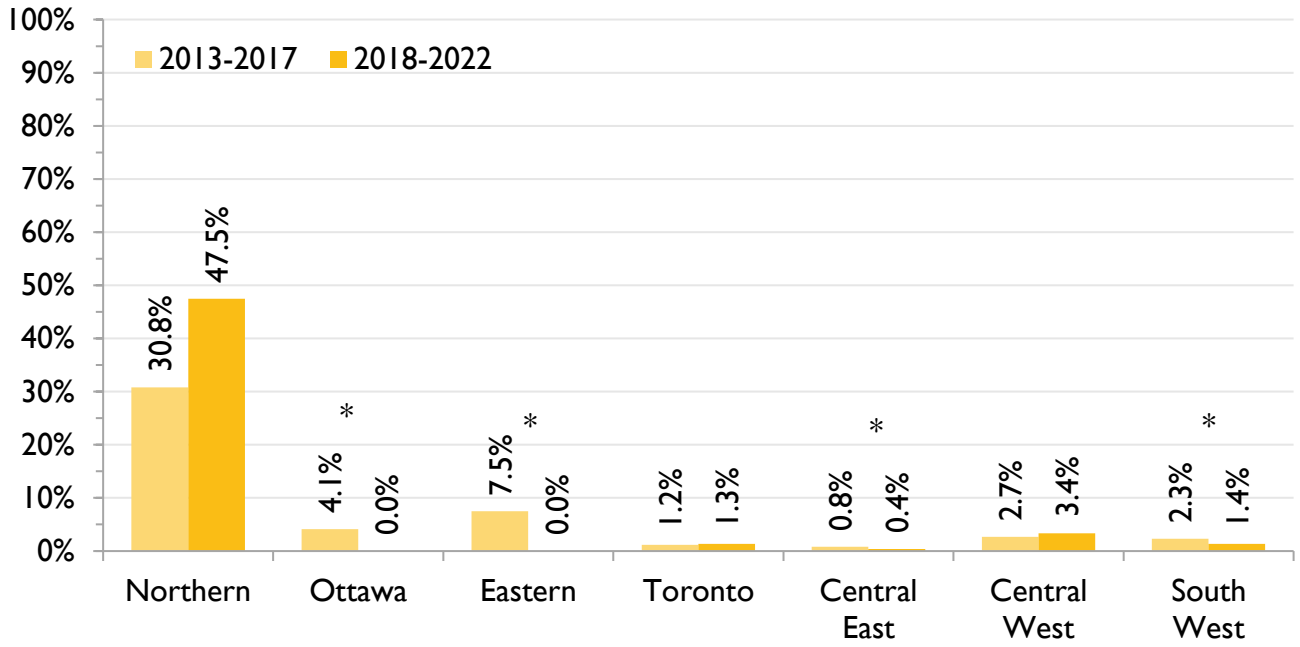
Snapshot

Over the five-year period 2018-2022, Northern region had the largest proportion of first-time HIV diagnoses among Indigenous males (57.1%), followed by Toronto (24.5%), Central West (12.2%) and South West (4.1%) regions. Ottawa, Eastern and Central East regions each had less than 5% of first-time HIV diagnoses among Indigenous males.

Northern region also had the largest proportion of first-time HIV diagnoses among Indigenous males (26.7%) over the five-year period 2013-2017 and this increased over time.

Notes: Data provided by Public Health Ontario Laboratory. * denotes a proportion based on at least one count of <5, therefore proportions may be unstable and trends should be interpreted with caution. Health regions are groupings of Public Health Units. Diagnoses were assigned to a health region based on their address of residence or, if unreported, the address of the ordering provider. First-time diagnoses where race/ethnicity was not reported were excluded (average of 29.8% of diagnoses per 5-year period). See Appendices and specifically Health regions for more information. See Tables Supplement for underlying data.

Figure 11.20 Percent of first-time HIV diagnoses among males within each health region attributed to Indigenous males (where race/ethnicity reported), Ontario, 2013-2017 and 2018-2022



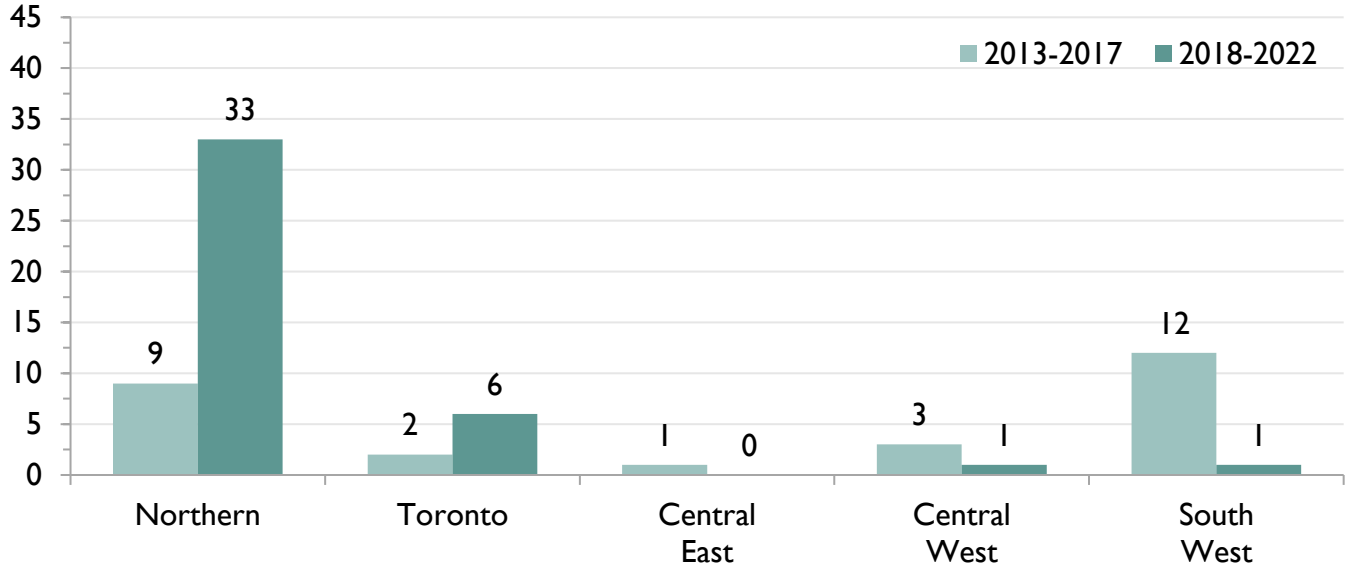
Snapshot

Over the five-year period 2018-2022, looking within each region, Northern region attributed a larger proportion of its first-time HIV diagnoses among males to Indigenous Peoples than any other region (47.5%), followed by Central West (3.4%) region. Ottawa, Eastern, Toronto, Central West and South West each attributed less than 3% of its first-time HIV diagnoses among males to Indigenous Peoples.

Northern region also attributed a larger proportion of its first-time HIV diagnoses to Indigenous Peoples (30.8%) than any other region over the five-year period 2013-2017 and this increased over time.

Notes: Data provided by Public Health Ontario Laboratory. * denotes a proportion based on at least one count of <5, therefore proportions may be unstable and trends should be interpreted with caution. Health regions are groupings of Public Health Units. Diagnoses were assigned to a health region based on their address of residence or, if unreported, the address of the ordering provider. First-time diagnoses where race/ethnicity was not reported were excluded (average of 29.8% of diagnoses per 5-year period). See Appendices and specifically Health regions for more information. See Tables Supplement for underlying data.

Figure 11.21 Number of first-time HIV diagnoses by health region, Indigenous females, Ontario, 2013-2017 and 2018-2022



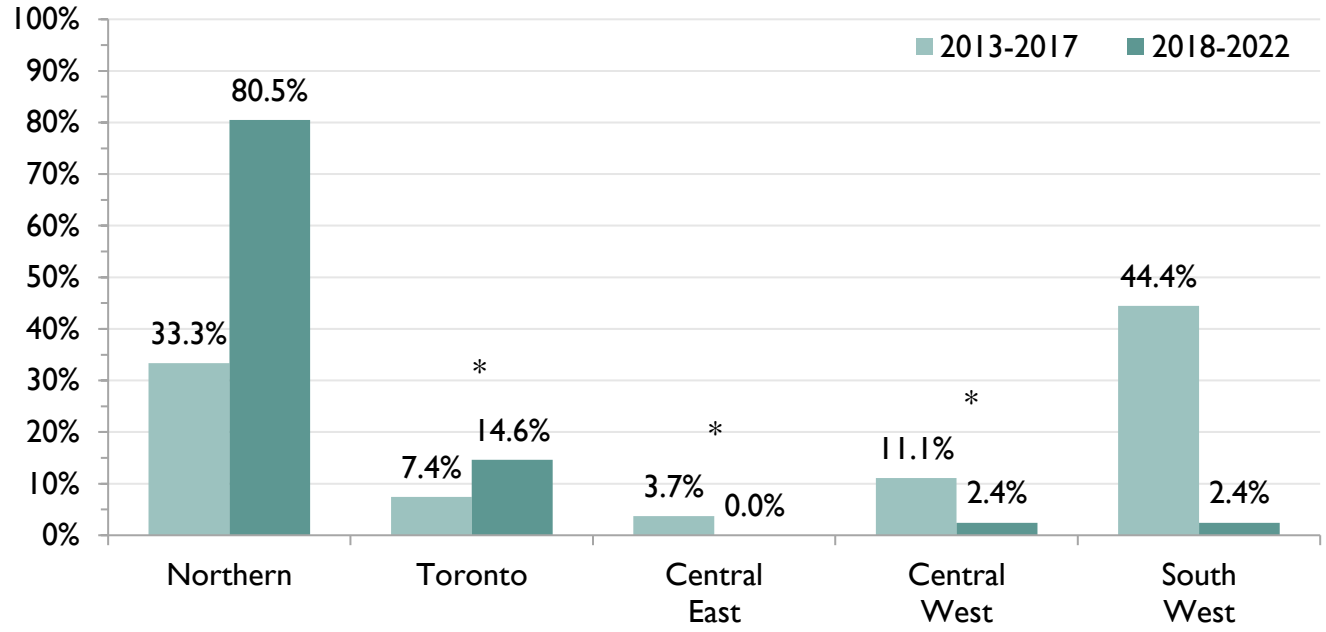
Snapshot

Over the five-year period 2018-2022, Northern region had the largest number of first-time HIV diagnoses among Indigenous females (33), followed by Toronto (6), Central West and South West (1 each) regions. Ottawa and Eastern regions reported no first-time HIV diagnoses among Indigenous females from 2013 to 2022 and are not shown on the figure.

Over the previous five-year period, 2013-2017, South West region had the largest number of first-time HIV diagnoses among Indigenous females (12), followed by Northern (9) and Toronto (2) regions. Between 2013-2017 and 2018-2022, the largest relative increase was on the Northern region (266.7%) followed by Toronto (200.0%, based on small numbers).

Notes: Data provided by Public Health Ontario Laboratory. Health regions are groupings of Public Health Units. Diagnoses were assigned to a health region based on their address of residence or, if unreported, the address of the ordering provider. Fist-time diagnoses where race/ethnicity was not reported were excluded (average of 38.8% of diagnoses per 5-year period). See Appendices and specifically Health regions for more information. See Tables Supplement for underlying data.

Figure 11.22 Percent of first-time HIV diagnoses across health regions, Indigenous females, Ontario, 2013-2017 and 2018-2022



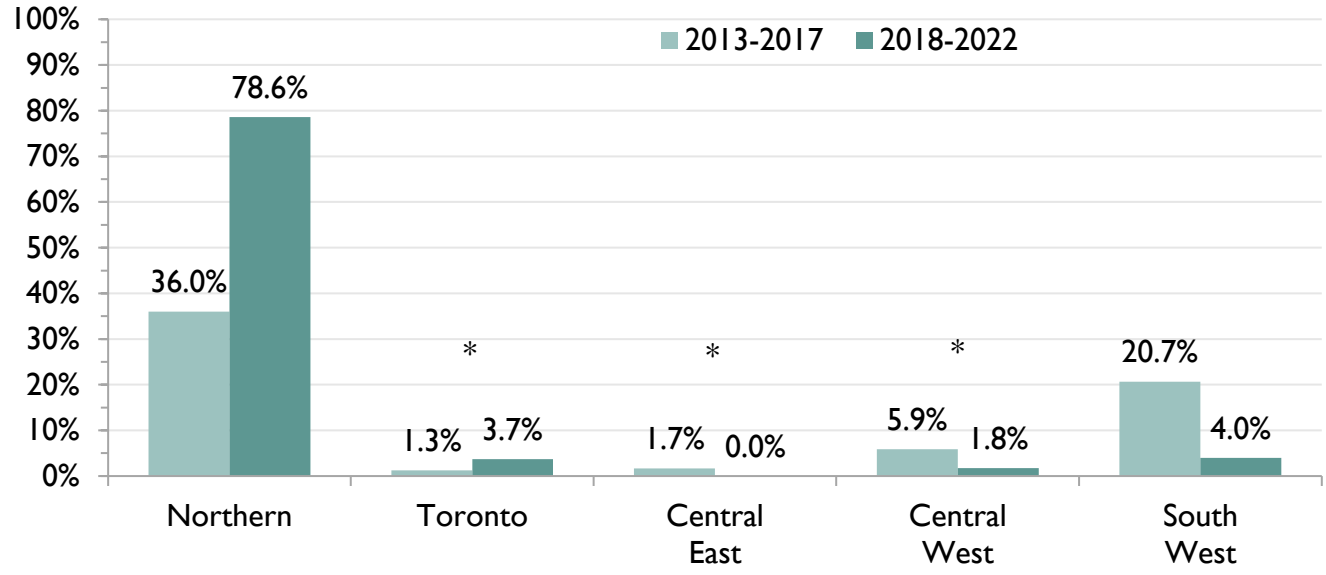
Snapshot

Over the five-year period 2018-2022 Northern region had the largest proportion of first-time HIV diagnoses among Indigenous females (80.5%), followed by Toronto (14.6%), Central West and South West (2.4% each) regions.

In the previous five-year period (2013-2017), South West region had the largest proportion of first-time HIV diagnoses among Indigenous females (44.4%), followed by Northern (33.3%) and Central West (11.1%) regions.

Notes: Data provided by Public Health Ontario Laboratory. * denotes a proportion based on at least one count of <5, therefore proportions may be unstable and trends should be interpreted with caution. Health regions are groupings of Public Health Units. Diagnoses were assigned to a health region based on their address of residence or, if unreported, the address of the ordering provider. First-time diagnoses where race/ethnicity was not reported were excluded (average of 38.8% of diagnoses per 5-year period). See Appendices and specifically Health regions for more information. See Tables Supplement for underlying data.

Figure 11.23 Percent of first-time HIV diagnoses among females within each health region attributed to Indigenous females (where race/ethnicity reported), Ontario, 2013-2017 and 2018-2022



Snapshot

Over the five-year period 2018-2022, Northern region attributed a larger proportion of its first-time HIV diagnoses among females to Indigenous Peoples than any other region (78.6%), followed by South West (4.0%), Toronto (3.7%), Central West (1.8%), while Central East attributed 0% of the first-time HIV diagnoses among females to Indigenous Peoples.

Northern region also attributed a larger proportion of its first-time HIV diagnoses among females to Indigenous Peoples (36.0%) than any other region over the five-year period 2013-2017, which increased over time followed by South West (20.7%) (decreased over time) and Central West (5.9%) regions (decreased over time).

Notes: Data provided by Public Health Ontario Laboratory. * denotes a proportion based on at least one count of <5, therefore proportions may be unstable and trends should be interpreted with caution. Health regions are groupings of Public Health Units. Diagnoses were assigned to a health region based on their address of residence or, if unreported, the address of the ordering provider. First-time diagnoses where race/ethnicity was not reported were excluded (average of 38.8% of diagnoses per 5-year period). See Appendices and specifically Health regions for more information. See Tables Supplement for underlying data.

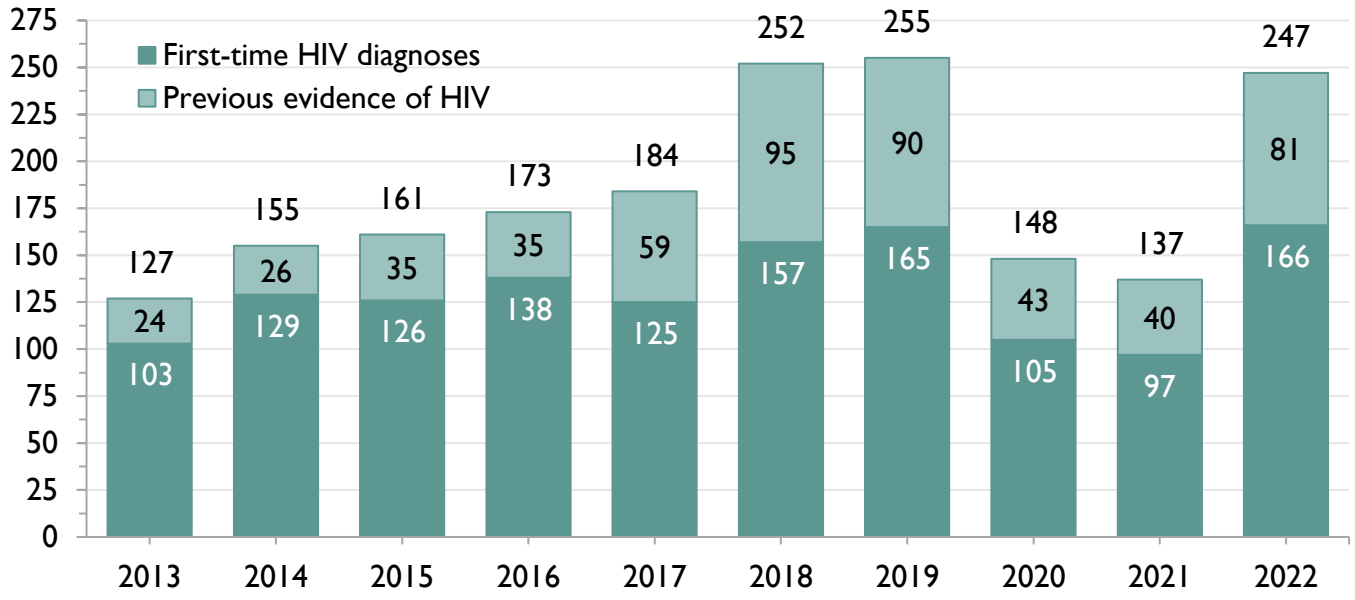
12. Women

12.a. Women overview

Diagnoses attributed to Women are defined by having 'Female' or 'Trans female' sex reported. In 2022, of the 247 positive HIV tests attributed to Women in Ontario, 166 were first-time HIV diagnoses and 81 had previous evidence of HIV, similar to 2019, a year which the number of tests was comparable. Of the 623 first-time diagnoses in 2022, 166 were among Women, 450 were known not to be Women and 7 were missing the required information to assign a Woman status. The proportion of positive tests in Women with previous evidence of HIV increased from 16.8% in 2014 to 32.8% in 2022, peaking at 37.7% in 2018. In 2022, Women accounted for 26.9% of all first-time HIV diagnoses, the highest percentage between 2013-2022.

Data limitations: *Due to missing data on test history, first-time HIV diagnoses may include some people with an uncaptured previous HIV diagnosis. OHESI estimates this to be between 17.4% and 20.6% of first-time HIV diagnoses among females between 2020-2022.*

Figure 12.1 Number of positive HIV tests, by first-time HIV diagnoses and previous evidence of HIV, Women, Ontario, 2013 to 2022



Snapshot

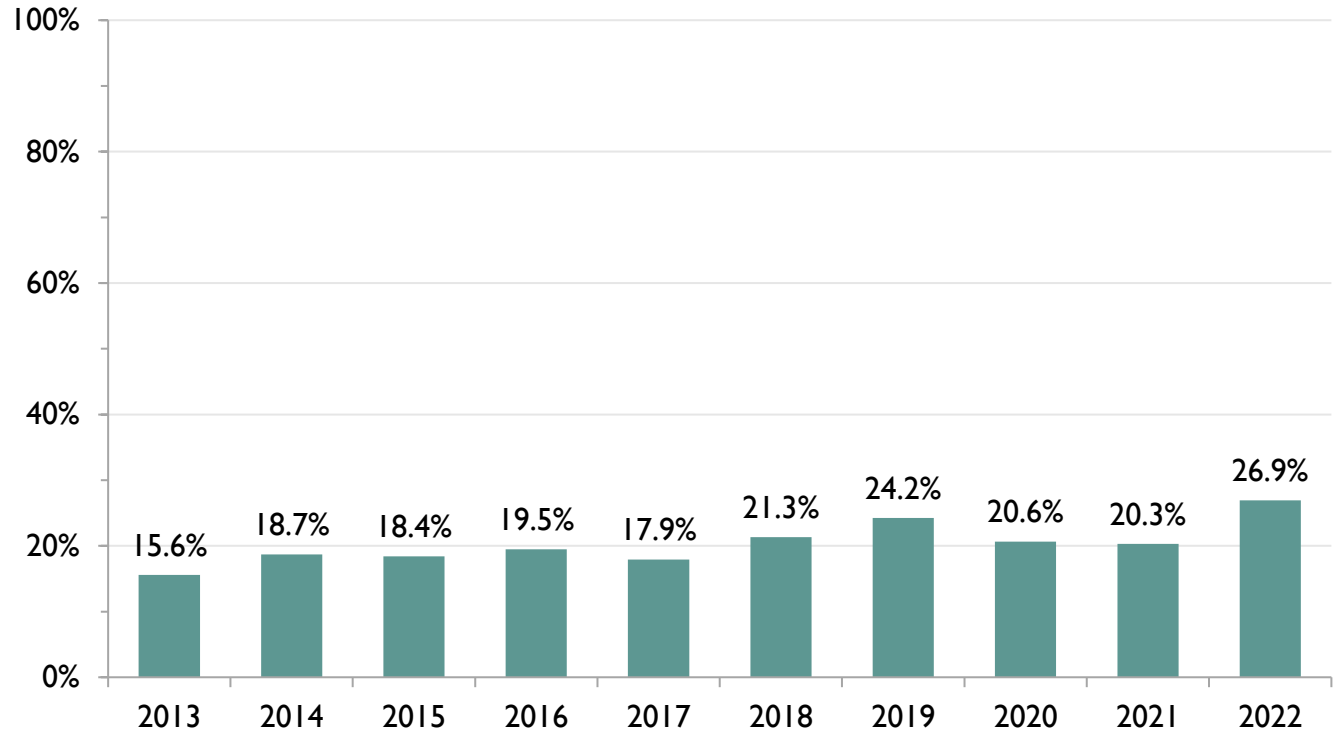
Between 2013 and 2017, the number of first-time HIV diagnoses among Women was fairly consistent (average 124), with an increase in 2018 (157) and 2019 (165), followed by a decrease in 2020 (105) and 2021 (97). The number of first-time HIV diagnoses reached its all time high in 2022, at 166 first-time HIV diagnoses.

The proportion of Women with previous evidence of HIV ranged from 16.8% to 37.7%, the highest in 2018 and 32.8% in 2022.

Data limitations: *Due to missing data on test history, first-time HIV diagnoses may include some people with an uncaptured previous HIV diagnosis. OHESI estimates this to be between 16.8% and 20.6% of first-time HIV diagnoses among females.*

Notes: Data provided by Public Health Ontario Laboratory. Positive HIV tests where sex was not reported were excluded (average of less than 1.5% of tests per year). See Appendices for more information. See Tables Supplement for underlying data.

Figure 12.2 Percent of first-time HIV diagnoses attributed to Women, Ontario, 2013 to 2022



Snapshot

In 2022, Women accounted for 26.9%[1] of all first-time HIV diagnoses. Between 2013 and 2022, Women accounted for between 15.6% and 24.2% of all first-time HIV diagnoses.

Notes: Data provided by Public Health Ontario Laboratory. First-time diagnoses where sex was not reported were excluded (average of less than 1.5% of diagnoses per year). See Appendices for more information. See Tables Supplement for underlying data.

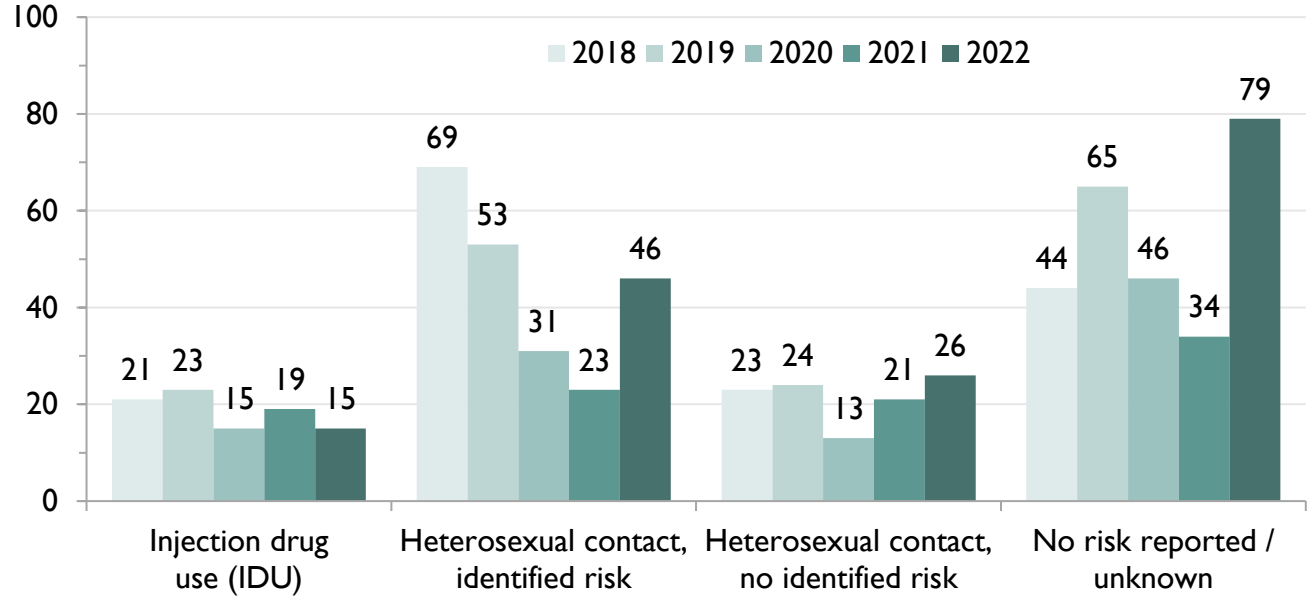
[1] Where Women status of first-time diagnoses is known. That is, the denominator is first-time HIV diagnoses where the diagnosis was able to be assigned a Woman status (known Women or known not to be Women, n=616 overall. Information required to assign Women status among first-time diagnoses (Women status known, and therefore in the denominator) was not reported for an average of <1% of first-time HIV diagnoses between 2013 and 2022 (1.8% in 2022).

12.b. Women by HIV exposure category

Patterns of HIV exposure categories have remained fairly stable over time in first-time HIV diagnoses among Women. Between 2018 and 2022, the most frequently reported HIV exposure category among first-time HIV diagnoses in Women was heterosexual contact with identified risk (52.9% in 2022, where exposure category known) followed by heterosexual contact with no identified risk and then IDU. In 2022, 47.6% of the first-time HIV diagnoses among Women had no risk reported/unknown risk, the highest over the past five years.

Data limitations: *The "Heterosexual contact, identified risk" category includes diagnoses where sex with a person of the opposite sex/gender is reported and either the individual's country of birth is reported as an HIV-endemic country, or the individual's sex partner is reported to be at least one of: HIV-positive; user of injection drugs; born in an HIV-endemic country; a bisexual male. See HIV exposure categories for more information.*

Figure 12.3 Number of first-time HIV diagnoses by HIV exposure category, Women, Ontario, 2018 to 2022



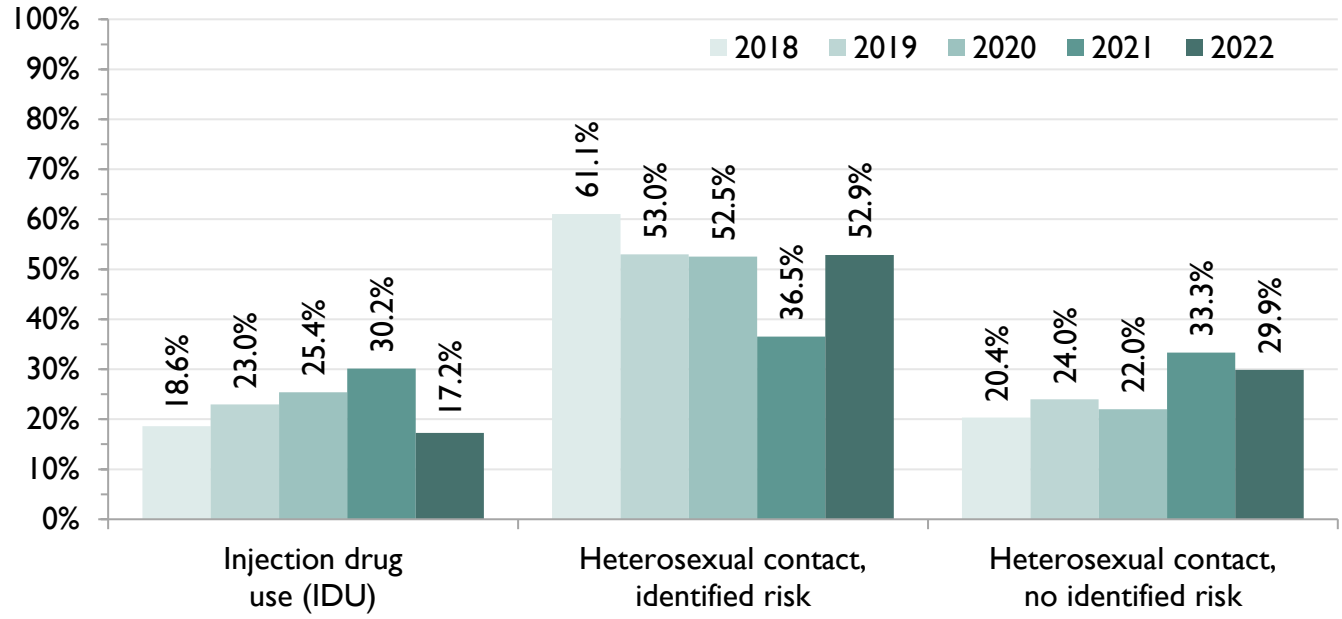
Snapshot

In 2022, 87 (52.4%) of the 166 first-time HIV diagnoses among Women reported an HIV exposure category, and 79 (47.6%) did not (i.e. no risk reporter, unknown).

Among the 87 first-time HIV diagnoses with a reported HIV exposure category in 2022, the most frequently reported HIV exposure category was heterosexual contact with identified risk (46), followed by heterosexual contact with no identified risk (26) and injection drug use (15). The number of first-time HIV diagnoses between 2019 and 2022 had a relative decrease among IDU (34.8%) and heterosexual contact with identified risk (13.2%), and increased among heterosexual contact with no identified risk (8.3%).

Notes: Data provided by Public Health Ontario Laboratory. First-time diagnoses where sex was not reported were excluded (average of less than 1.5% of diagnoses per year). IDU = injection drug use. See Appendices and specifically HIV exposure categories for more information. See Tables Supplement for underlying data.

Figure 12.4 Percent of first-time HIV diagnoses by HIV exposure category (where reported), Women, Ontario, 2018 to 2022



Snapshot

In 2022, among the 87 first-time HIV diagnoses in Women with a reported HIV exposure category, heterosexual contact with identified risk accounted for the largest proportion among the exposure categories (52.9%), followed by heterosexual contact with no identified risk (29.9%) and IDU (17.2%). This pattern is consistent between 2018 and 2022.

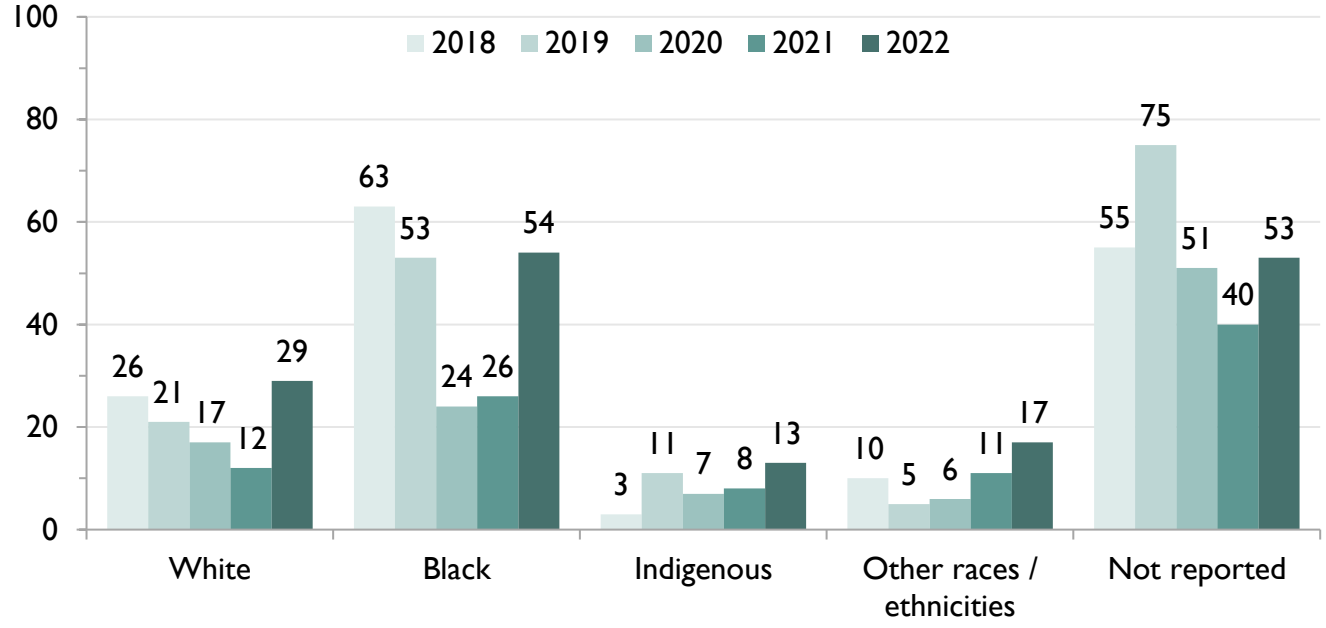
Notes: Data provided by Public Health Ontario Laboratory. First-time diagnoses where sex was not reported were excluded (average of less than 1.5% of diagnoses per year). First-time diagnoses where sex was reported but HIV exposure category was not reported were excluded (average of 38.8% of diagnoses per year where sex was reported). IDU = injection drug use. See Appendices and specifically HIV exposure categories for more information. See Tables Supplement for underlying data.

12.c. Women by race/ethnicity

Of the 166 first-time HIV diagnoses among Women in 2022, 113 (68.1%) reported information on race/ethnicity and 53 (31.9%) did not.

Of the 113 that did report race/ethnicity in 2022, the largest proportion was attributed to Black women (47.8%), followed by White (25.7%), and Indigenous (11.5%) women.

Figure 12.5 Number of first-time HIV diagnoses by race/ethnicity, Women, Ontario, 2018 to 2022



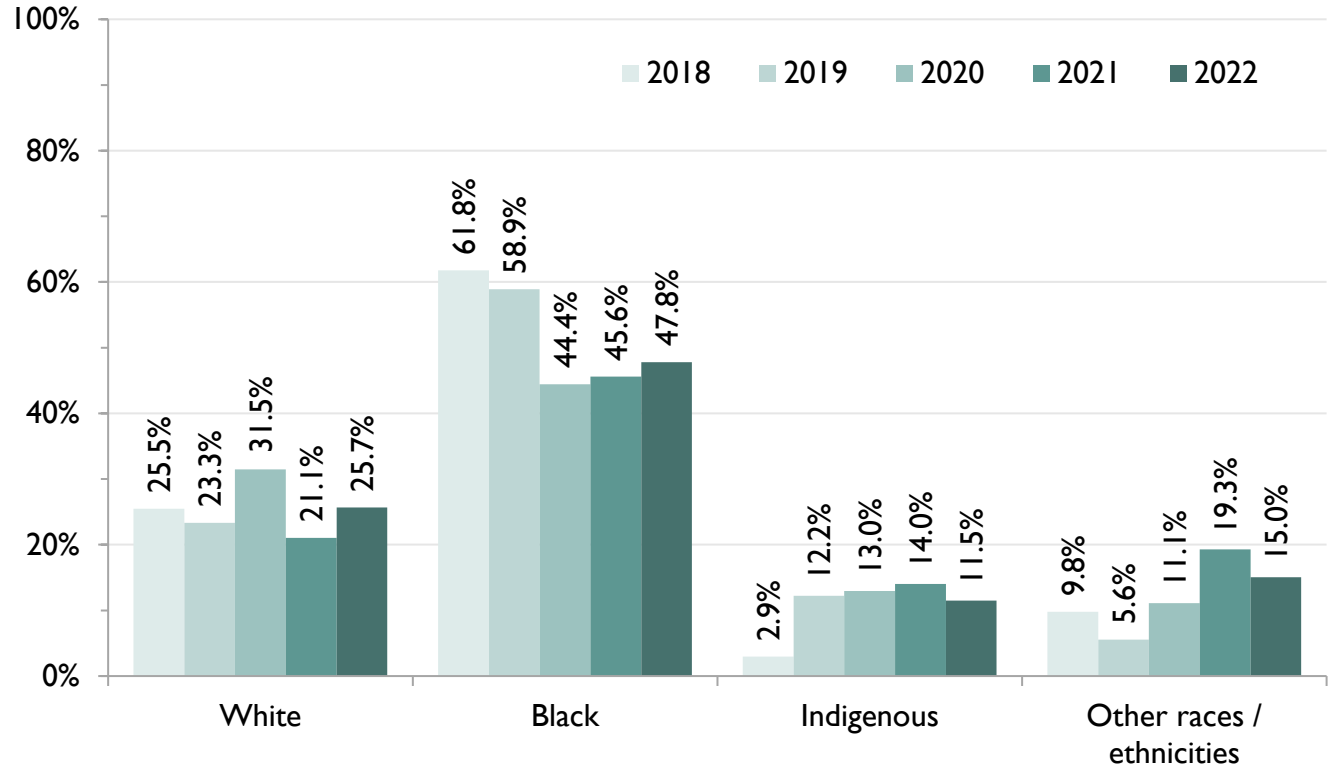
Snapshot

In 2022, among the 113 first-time HIV diagnoses among Women with a reported race/ethnicity, 54 were in Black women, 29 in White women, 17 in other races/ethnicities women and 13 in Indigenous women.

Between 2018 and 2022, Black women accounted for the largest number of first-time HIV diagnoses among Women. Compared to 2019, the number of first-time HIV diagnoses among Women had a relative increase in all races/ethnicities in 2022, with the largest relative increase seen in other races/ethnicities (240.0%), followed by White women (38.1%), Indigenous women (18.2%) and Black women (1.9%).

Notes: Data provided by Public Health Ontario Laboratory. First-time Diagnoses where sex was not reported were excluded (average of less than 1.5% of diagnoses per year). See Appendices for more information. See Tables Supplement for underlying data.

Figure 12.6 Percent of first-time HIV diagnoses by race/ethnicity (where reported), Women, Ontario, 2018 to 2022



Snapshot

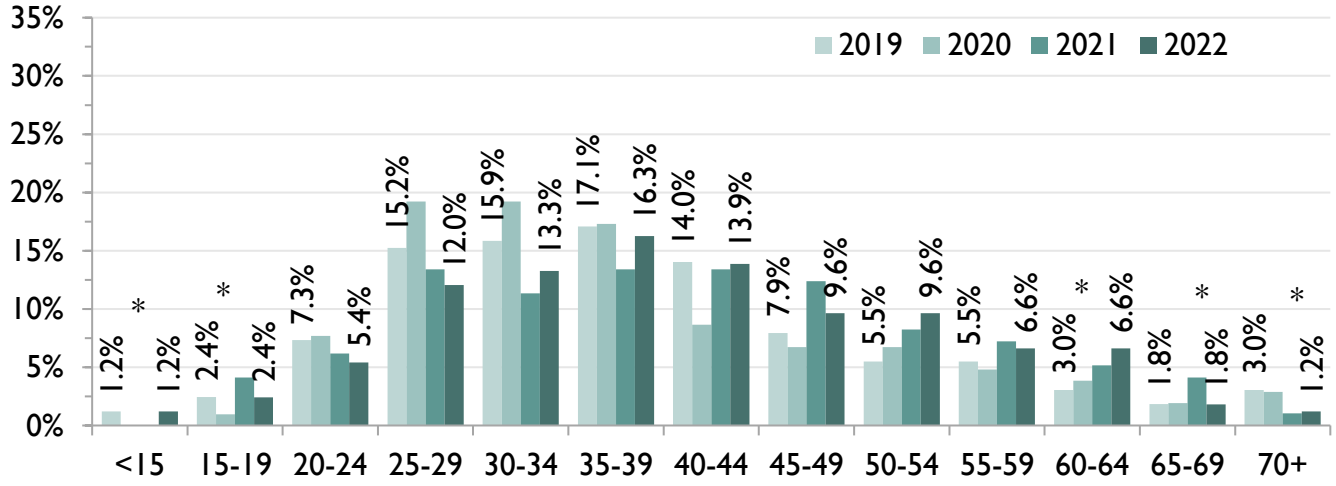
In 2022, among the 113 first-time HIV diagnoses in Women with a reported race/ethnicity, Black women accounted for the largest proportion (47.8%), followed by White women (25.7%), women of other races/ethnicities (15.0%) and Indigenous women (11.5%). This pattern is consistent between 2018 and 2022.

Notes: Data provided by Public Health Ontario Laboratory. First-time diagnoses where sex was not reported were excluded (average of less than 1.5% of diagnoses per year). First-time diagnoses where sex was reported but race/ethnicity was not reported were excluded (average of 40.4% of diagnoses per year where sex was reported between 2018 and 2022). See Appendices for more information. See Tables Supplement for underlying data.

12.d. Women by age

In 2022, women aged 35-39 years accounted for the largest proportion and rate of first-time HIV diagnoses among Women (16.3%, 5.2 per 100,000 females), followed by women aged 40-44 (13.9%).

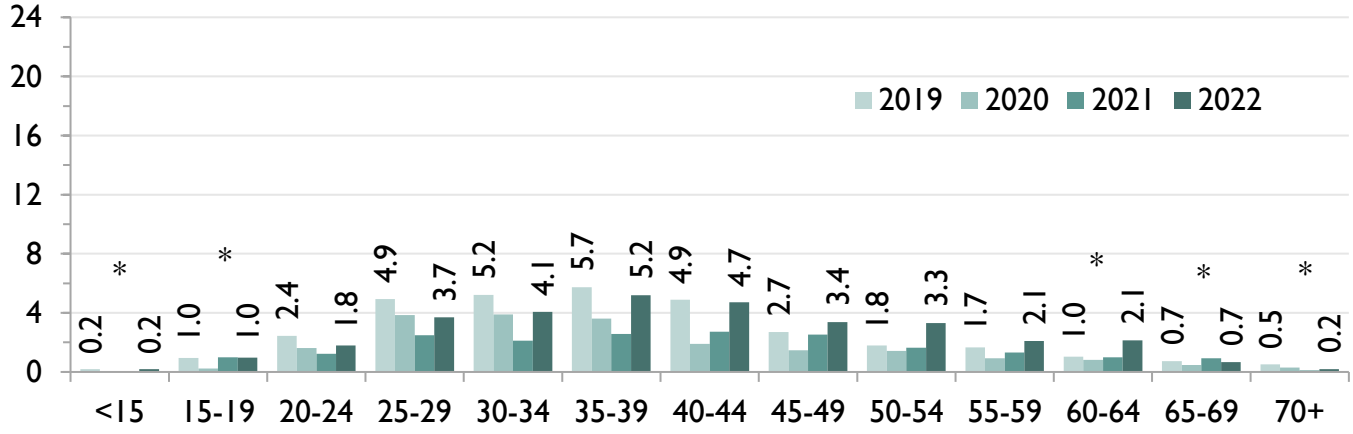
Figure 12.7 Percent of first-time HIV diagnoses by age, Women, Ontario, 2019 to 2022



Snapshot

In 2022, 55.4% of first-time HIV diagnoses among Women were among those aged 25-44 years, with 35-39 and 40-44 age categories accounting for the largest proportions (16.3% and 13.9%, respectively).

Figure 12.8 Rate of first-time HIV diagnoses per 100,000 females by age, Women, Ontario, 2019 to 2022



Snapshot

In 2022, the rate of first-time HIV diagnoses among Women was highest among those aged 35-39 years (5.2 per 100,000 females), followed by those aged 40-44 years (4.7 per 100,000) and 30-34 (4.1 per 100,000). The rate of first-time HIV diagnoses among Women decreased in most age categories compared to 2019, with the largest relative decrease among those aged 20-24 (27.0%) and 25-29 (25.0%).

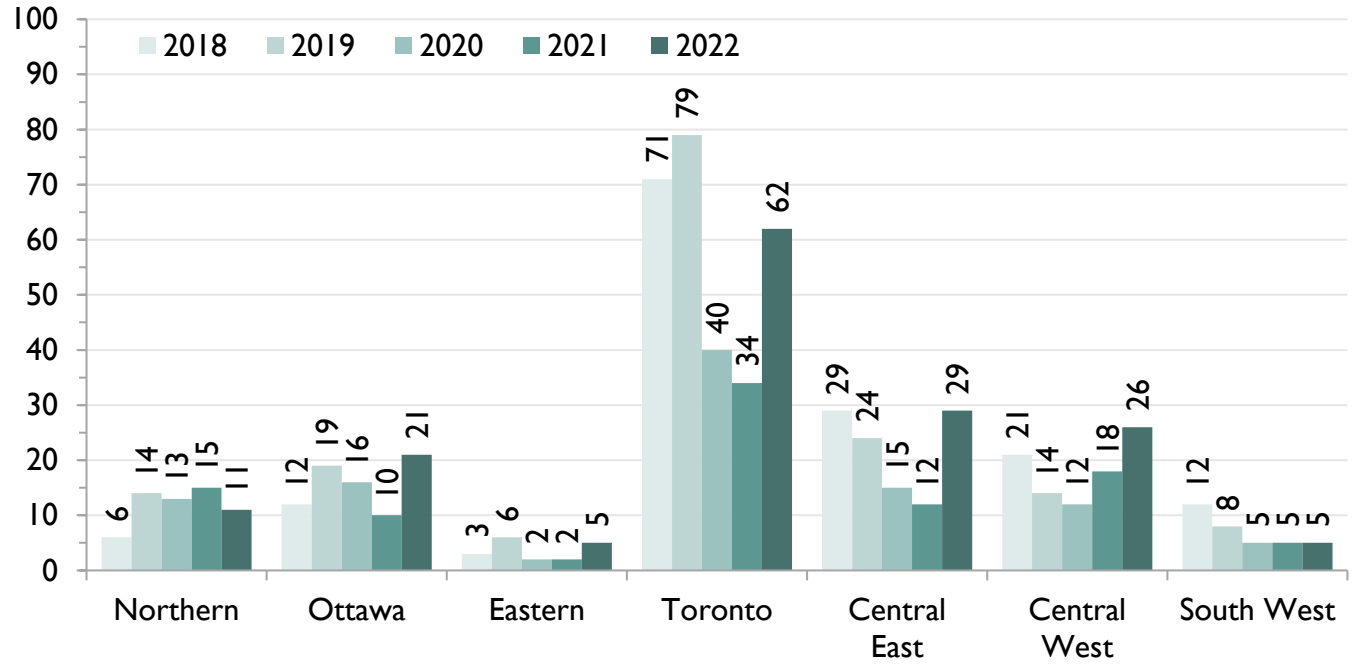
Notes: Data provided by Public Health Ontario Laboratory. * denotes a proportion based on at least one count of <5, therefore proportions may be unstable and trends should be interpreted with caution. Rates calculated using Statistics Canada population estimates for all ages, accessed 08/14/2023. First-time diagnoses where sex was not reported were excluded (average of less than 1.5% of diagnoses per year). First-time diagnoses where age was not reported were excluded (less than 1%). See Appendices for more information. See Tables Supplement for underlying data.

12.e. Women by health region

In 2022, Toronto had the largest proportion of first-time HIV diagnoses among women (39.0%), as well the highest rate (4.0 per 100,000 females), followed by Ottawa (3.9 per 100,000 females) and Northern (2.7 per 100,000 females) regions.

The number of first-time HIV diagnoses among Women in Toronto region ranged from a high of 79 (2019) to a low of 34 (2021), with 62 first-time HIV diagnoses being reported among Women in 2022. In 2022, looking within each region, Ottawa region attributed a larger proportion of its first-time HIV diagnoses to women than any other region (46.7%), followed by Northern (42.3%) and Central West (28.9%) regions.

Figure 12.9 Number of first-time HIV diagnoses among Women by health region, Ontario, 2018 to 2022



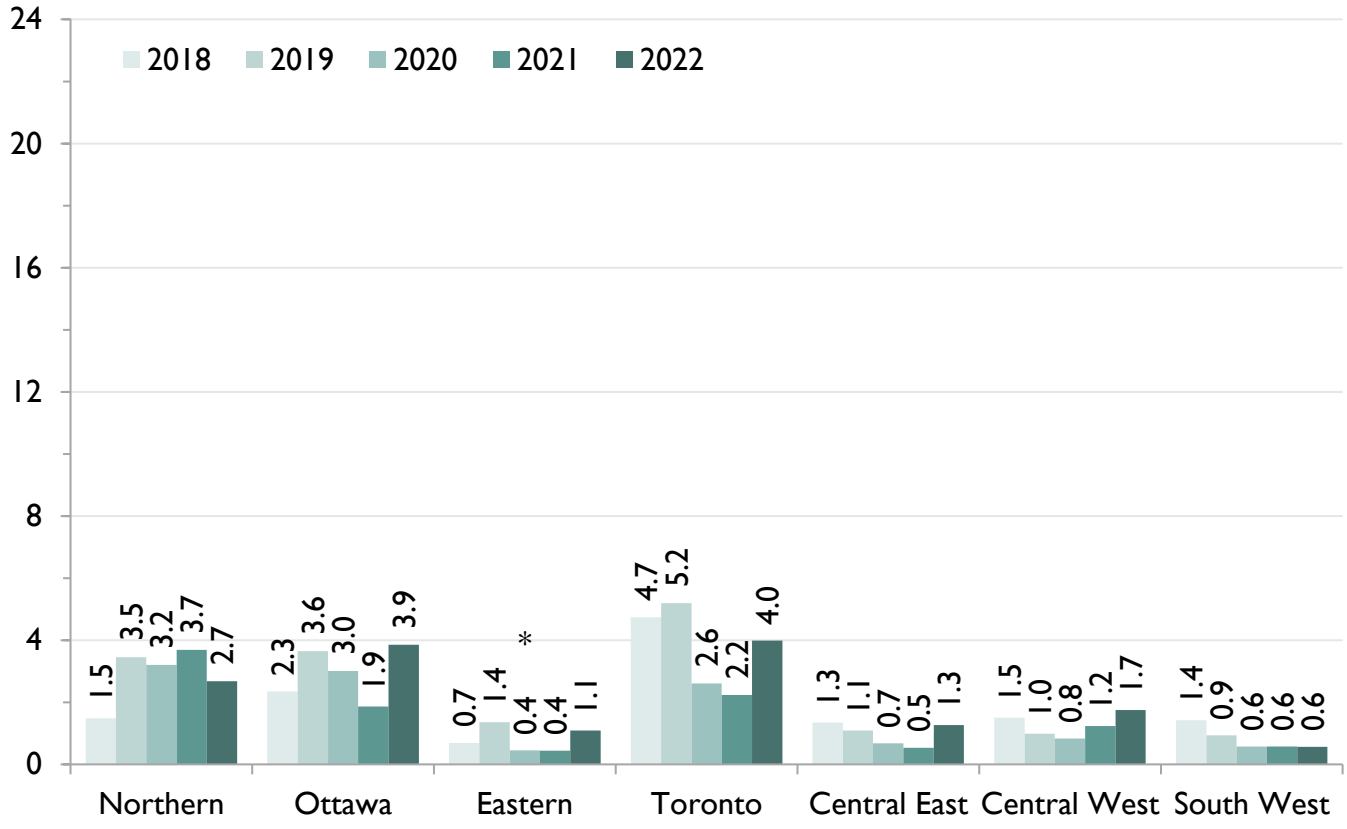
Snapshot

In 2022, Toronto region had the largest number of first-time HIV diagnoses among women (62), followed by Central East (29), Central West (26), Ottawa (21), Northern (11), Eastern and South West (5 each) regions.

Between 2018 and 2022, Toronto region had the largest number of first-time HIV diagnoses among Women. Compared to 2019, in 2022 there was a decrease in first-time HIV diagnoses among women in Northern, Eastern, Toronto and South West regions, with an increase in Ottawa, Central East and Central West.

Notes: Data provided by Public Health Ontario Laboratory. Health regions are groupings of Public Health Units. Diagnoses were assigned to a health region based on their address of residence or, if not reported, the address of the ordering provider. First-time diagnoses where sex was not reported were excluded (average of less than 1.5% of diagnoses per year). See Appendices and specifically Health regions for more information. See Tables Supplement for underlying data.

Figure 12.10 Rate of first-time HIV diagnoses per 100,000 females by health region, Women, Ontario, 2018 to 2022



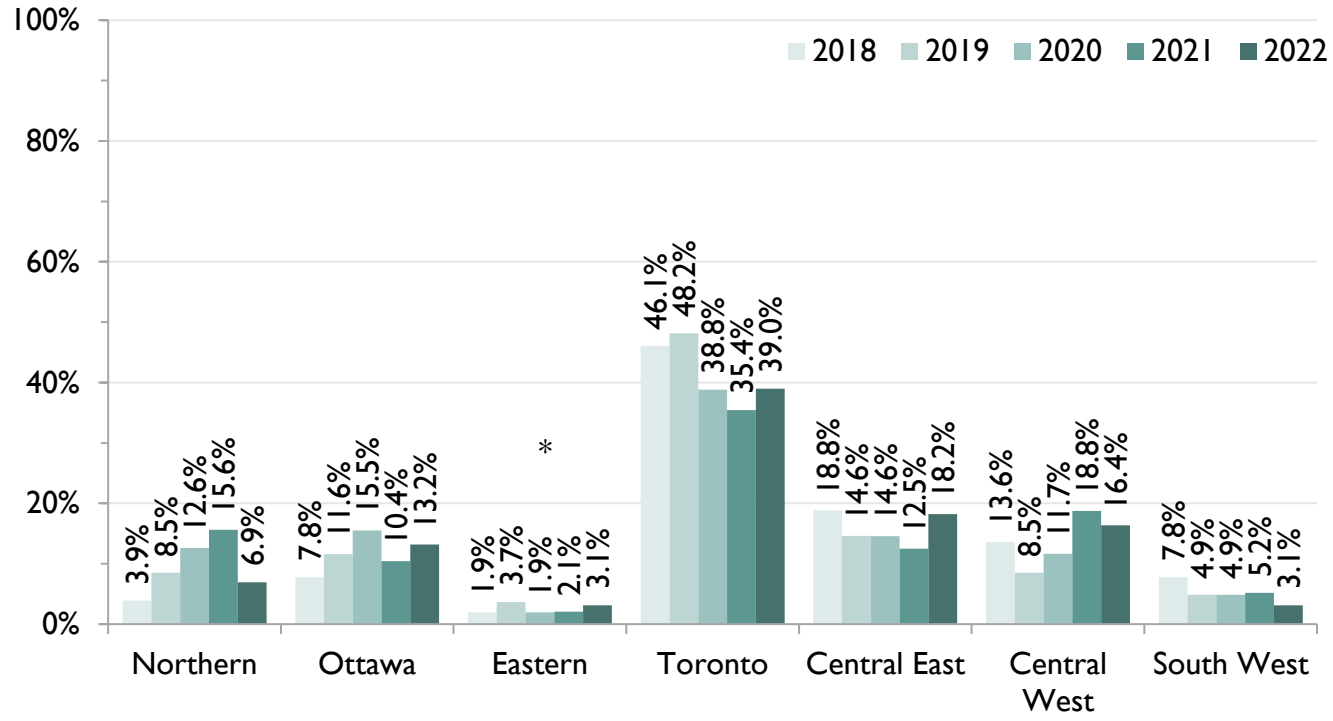
Snapshot

In 2022, Toronto region had the highest rate of first-time HIV diagnoses among Women (4.0 per 100.000 females), whereas Northern region had the highest rate in 2020 and 2021 (3.2 and 3.7).

Compared to 2019, a decrease in the rate was seen in South West (39.8%), Toronto (23.2%), Northern (22.5%) and Eastern (19.4%) regions, whereas an increase was seen in the other regions, with a 77.6% increase in the Central West region.

Notes: Data provided by Public Health Ontario Laboratory. Health regions are groupings of Public Health Units. * denotes a proportion based on at least one count of <5, therefore proportions may be unstable and trends should be interpreted with caution. Diagnoses were assigned to a health region based on their address of residence or, if not reported, the address of the ordering provider. First-time diagnoses where sex was not reported were excluded (average of less than 1.5% of diagnoses per year). Rates calculated using Statistics Canada population estimates for all ages, accessed 08/14/2023. See Appendices and specifically Health regions for more information. See Tables Supplement for underlying data.

Figure 12.11 Percent of first-time HIV diagnoses across health regions, Women, Ontario, 2018 to 2022

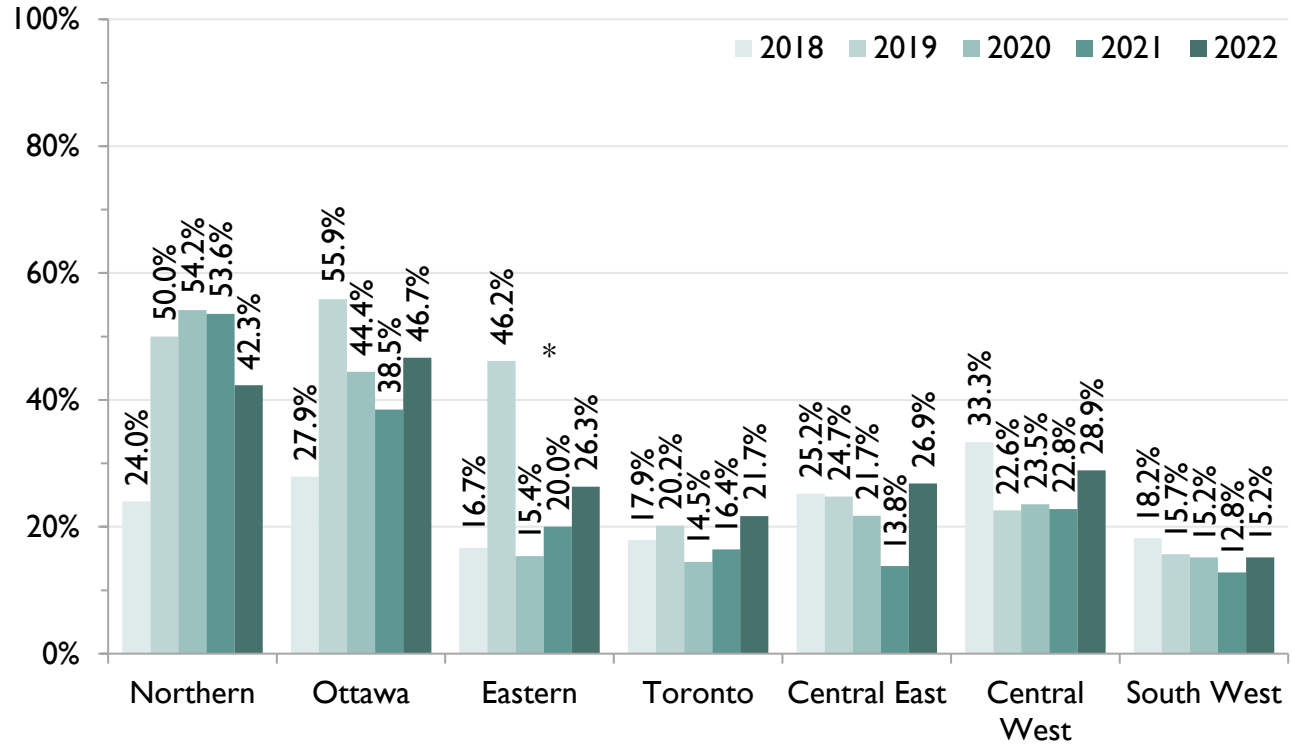


Snapshot

In 2022, Toronto region had the largest proportion of first-time HIV diagnoses among Women (39.0%), followed by Central East (18.2%), Central West (16.4%), Ottawa (13.2%), Northern (6.9%), Eastern and South West regions (both at 3.1%). This trend has been consistent between 2018 and 2022, with Toronto region accounting for the largest proportion of first-time HIV diagnoses among Women year after year.

Notes: Data provided by Public Health Ontario Laboratory. Health regions are groupings of Public Health Units. * denotes a proportion based on at least one count of <5, therefore proportions may be unstable and trends should be interpreted with caution. Diagnoses were assigned to a health region based on their address of residence or, if not reported, the address of the ordering provider. First-time diagnoses where sex was not reported were excluded (average of less than 1.5% of diagnoses per year). See Appendices and specifically Health regions for more information. See Tables Supplement for underlying data.

Figure 12.12 Percent of first-time HIV diagnoses within each region attributed to Women (where sex reported), Ontario, 2018 to 2022



Snapshot

In 2022, looking within each region, Ottawa region attributed a larger proportion of its first-time HIV diagnoses to Women than any other region (46.7%), followed by Northern (42.3%), Central West (28.9%), Central East (26.9%), Eastern (26.3%), Toronto (21.7%) and South West (15.2%) regions.

Notes: Data provided by Public Health Ontario Laboratory. Health regions are groupings of Public Health Units. * denotes a proportion based on at least one count of <5, therefore proportions may be unstable and trends should be interpreted with caution. Diagnoses were assigned to a health region based on their address of residence or, if not reported, the address of the ordering provider. First-time diagnoses where sex was not reported were excluded (average of less than 1.5% of diagnoses per year). See Appendices and specifically Health regions for more information. See Tables Supplement for underlying data.

Appendices

1. Definitions

African, Caribbean or Black (ACB) people

One of Ontario's key populations. Diagnoses attributed to ACB are defined by having indicated Black race/ethnicity and if race/ethnicity is missing, having been born in a high HIV prevalence African or Caribbean country. If an individual reports 'Black' race/ethnicity in addition to at least one other race/ethnicity category, they are categorized as "Other/mixed" in the race/ethnicity breakdowns, but are considered part of the ACB key population. See Key populations for more information.

Anonymous HIV testing

A type of non-nominal HIV diagnostic testing where no identifying information on the individual being tested is collected on the test requisition form. The lack of identifying information means that it is not possible to link anonymous HIV-positive diagnostic tests to viral load tests within the HIV Datamart.

Coded HIV testing

A type of non-nominal HIV diagnostic testing where a code, instead of the name of the individual being tested, is collected on the test requisition form. The lack of identifying information means that it is not possible to link coded HIV-positive diagnostic tests to viral load tests within the HIV Datamart.

Gay, bisexual, and other men who have sex with men (GBMSM)

One of Ontario's key populations. Diagnoses attributed to GBMSM are defined by having reported 'Male' or 'Transgender male' sex, and sexual contact with men as an HIV risk factor. See Key populations for more information.

First-time HIV diagnoses

First-time HIV diagnoses are positive HIV tests with no previous evidence of HIV. That is, unique individuals newly diagnosed with HIV. First-time HIV diagnoses are our best estimate of the number of people learning their HIV status for the first time. This includes individuals who acquired HIV in Ontario and individuals who acquired HIV outside of Ontario who learned their status for the first time in Ontario. We look at this number to better understand what populations might benefit most from prevention activities. Where HIV test history information is not reported, positive HIV tests default to being a first-time HIV diagnosis. This may overestimate the number of first-time HIV diagnoses.

First-time HIV diagnoses exclude anyone with a previous positive diagnostic test as indicated on the LEP form, regardless of the location of the previous positive test (inside or outside of Ontario). It also uses linked viral load testing history in Ontario as evidence of being in care for HIV so excludes 1) anyone with a history of viral load testing in Ontario of more than 30 days before to their first nominal confirmatory diagnostic test in Ontario, or 2) anyone with a history of viral load testing in Ontario within 30 days (including same day) of their first nominal confirmatory diagnostic test with a viral load of <200 copies/mL indicating prior treatment. People who have evidence of a history of viral load testing before their first reported HIV positive test are counted as a positive HIV test in the first year which there is evidence of an HIV diagnoses (i.e. the year of their first viral load test).

Health regions

Groupings of public health units that have historically been used in HIV epidemiology and surveillance reports. There are seven health regions: Northern, Ottawa, Eastern, Toronto, Central East, Central West and Southwest. See Health regions for more information on these groupings and boundaries.

HIV Datamart

All data in this report is stored in the HIV Datamart, an integrated data platform composed of Public Health Ontario Laboratory's diagnostic and viral load testing databases. Within the Datamart, diagnostic and viral load test records are linked together for the same person (however, linkage is not possible for anonymous and coded HIV-positive diagnostic tests).

HIV exposure category

A category meant to represent an individual's most likely means of HIV acquisition. An individual getting tested is assigned to an exposure category based on reported "HIV risk factors" (defined below) collected on the test requisition form. Exposure categories are mutually exclusive, which means an individual can only be assigned to one category. When more than one exposure category is applicable for a single individual, a hierarchy is used to assign them to a single category. This hierarchy is based on the level of HIV risk associated with different exposure categories. See HIV exposure categories for more information.

HIV risk factor

A factor reported on the HIV test requisition form and/or the LEP form that relates to an individual's potential route(s) of HIV acquisition. HIV risk factors are used to define both HIV exposure categories and HIV key populations. They are not mutually exclusive (as many as are applicable can be selected) and include: sexual contact with women; sexual contact with men; injection drug use; having been born in an HIV-endemic country (includes countries in sub-Saharan Africa and the Caribbean); being a child of HIV-positive mother; sex with a person who was known to be HIV-positive; sex with a person who was known to be using injection drugs; sex with a person who was known to be born in an HIV-endemic country (includes countries in sub-Saharan Africa and the Caribbean); and sex with a person who was known to be a bisexual male (for female individuals).

HIV-positive diagnostic test

Defined as a blood sample that has initially tested reactive on a screening test (either at the laboratory or on a point-of-care / rapid test), and has been confirmed as HIV-positive by a separate test (Western Blot (prior to November 2016)/ Geenius™ HIV-1/-2 Differential confirmatory assay, p24 antigen confirmatory test, or polymerase chain reaction for children <18 months). HIV-positive diagnostic tests in the HIV Datamart includes all people who were diagnosed with HIV. That is, people who test HIV-positive for the first time in Ontario (never tested HIV-positive out-of-province), as well as people who were diagnosed HIV-positive elsewhere and moved to Ontario and tested again ('out-of-province' diagnoses).

Indigenous Peoples

One of Ontario's key populations. Diagnoses attributed to Indigenous Peoples are defined by having the 'First Nations', 'Inuit', and/or 'Métis' race/ethnicity reported. See Key populations for more information.

Integrated Public Health Information System (iPHIS)

iPHIS is an electronic, web-based system used by public health units (PHUs) for case-management and reporting to the Ontario Ministry of Health on diseases of public health significance, including HIV. It is the main source of data used by PHUs and Public Health Ontario to produce surveillance reports on diseases of public health significance. iPHIS data are not used in this report.

Laboratory Enhancement Program (LEP)

When a person receives a new HIV diagnosis in Ontario, a Laboratory Enhancement Program (LEP) form is sent to the health care provider who ordered the test in order to collect further information on the person who tested HIV-positive. This includes information collected on the original test requisition (e.g. risk factors), as well as additional information. Since 2009, the LEP form has collected information on race/ethnicity and country of birth.

Nominal HIV testing

A type of HIV diagnostic testing where the test requisition form contains the name of the individual being tested. Nominal HIV tests can be linked to viral load tests in the HIV Datamart using patient identifiers.

Non-nominal HIV testing

A type of HIV diagnostic testing where the test requisition form does not contain the name of the individual being tested. There are two types of non-nominal testing in Ontario: anonymous and coded. The lack of identifying information means that it is not possible to link non-nominal HIV-positive diagnostic tests to previous diagnostic tests and viral load tests within the HIV Datamart.

People who use injection drugs (PWID)

One of Ontario's key populations. Diagnoses attributed to PWID are defined by having reported injection drug use as an HIV risk factor. See Key populations for more information.

Positive HIV tests

Positive HIV tests includes all unique individuals (i.e. only one test for each individual) receiving a confirmed HIV-positive diagnosis in Ontario. This includes individuals who have previously tested positive for HIV outside of Ontario, but does not include individuals who have previously tested positive for HIV in Ontario. It also includes individuals who have a history of viral load testing in Ontario without a recorded and linked prior confirmatory diagnostic test in Ontario. Only the first positive test in Ontario is included toward the positive HIV tests counts.

A reactive rapid/point-of-care test result (i.e. suggestive of an HIV-positive result) must be confirmed through laboratory testing to be counted as a Positive HIV Test. Individuals with a previous record of an HIV-positive test *within* Ontario are excluded to prevent double-counting. The LEP is used to remove tests which cannot be linked by identifying information on the requisition form, but are indicated as a repeat test. This will remove many additional duplicates, but if repeat test information is missing or not reported, or a patient tests HIV-positive more than once through non-nominal testing, duplicate tests will still remain.

Individuals with a positive HIV test include: 1) first-time HIV diagnoses and 2) people who have previous evidence of HIV. People with previous evidence of HIV either 1) had an HIV-positive diagnoses outside of Ontario and later retested in Ontario (as recorded on the test history section of the laboratory

enhancement program (LEP) case report or the test requisition form), or 2) had a history of viral load testing in Ontario more than 30 days prior to their first nominal confirmatory diagnostic test in Ontario, or 3) had a history of viral load testing in Ontario within 30 days (including same day) of their first nominal confirmatory diagnostic test with a viral load of <200 copies/mL indicating prior treatment. People who have evidence of a history of viral load testing before their first reported HIV positive test are counted as a positive HIV test in the first year which there is evidence of an HIV diagnoses (i.e. the year of their first viral load test).

Previous evidence of HIV (PEH)

People with previous evidence of HIV represent unique individuals (i.e. only one test for each individual) include both 1) people who may be new to the province who already knew their HIV-positive status and have a confirmatory HIV test in Ontario ('out-of-province' HIV diagnoses) and 2) people who may or may not have acquired HIV in Ontario, have been living and receiving care (viral load testing) in the province but have no prior linked confirmatory diagnostic test in Ontario. People who have evidence of a history of viral load testing before their first reported HIV positive test are counted as a positive HIV test in the first year which there is evidence of an HIV diagnoses (i.e. the year of their first viral load test).

Key Population

Populations outlined as priorities for HIV programming in Ontario's response to HIV, including gay, bisexual and other men who have sex with men, including trans men (GBMSM); people who are African, Caribbean or Black (ACB); Indigenous Peoples; people who use injection drugs (PWID); and women. Information from the test requisition (both new and old test requisition forms) and LEP forms are used to assign an HIV diagnosis (i.e. HIV-positive test) to a key population, where applicable. Unlike HIV exposure categories, these key populations are not mutually exclusive. That means that an HIV diagnosis can be assigned to more than one key population (if applicable) – an approach which better represents Ontario's HIV epidemic. To be assigned to any key population, only information on that single key population is required. For example, if race/ethnicity is missing but exposure category indicates male-to-male sexual contact, the individual could be assigned the GBMSM key population. Assignment of key population is excluded if data is not reported to define that key population. See Key populations for more information.

Test requisition form

A form filled out by a health care provider along with each HIV diagnostic test. The HIV diagnostic test requisition form collects information on the age, sex and HIV risk factors of the person getting tested. As of 2018, the HIV test requisition form also collects information on race/ethnicity, country of birth, transgender identity and PrEP status. Note, race/ethnicity and country of birth information has been collected on the Laboratory Enhancement Program (LEP) form since 2009.

Women* / Women

Women* is the official key population as outlined in Ontario's Provincial HIV/AIDS Strategy; it includes ACB women, women who use injection drugs, Indigenous women, transgender women, other women who face systemic and social inequities, and women who are more likely to be exposed to HIV through a sexual or drug using partner. As indicators of systemic and social inequities of HIV are not available in the HIV surveillance data, the key population Women* is unable to be defined. Instead, we use "Women" in this report, which is defined by having 'Female' or 'Trans female' sex reported. See Key populations for more information.

2. Abbreviations

ACB = African Caribbean and Black

GBMSM = Gay, bisexual and other men who have sex with men

LEP = Laboratory Enhancement Program

OHESI = Ontario HIV Epidemiology and Surveillance Initiative

PHO = Public Health Ontario

PWID = People who use injection drugs

3. Technical notes

When a person living with HIV retests and receives a second or mulitiple additional positive test results, measures are in place to prevent the second or multiple tests from being counted as a positive HIV test. The information on the HIV test requisition form is entered in the laboratory information system and is matched to previous tests in the PHO HIV Datamart using the name and health card number of the patient. When the name or OHIP number has changed, or a person tests anonymously or using a coded test, it is not possible to link that test to other test results. For example, an individual who initially tested HIV-positive through anonymous testing, and then later received a nominal HIV-positive test when entering care, would be inadvertently counted as two separate new diagnoses.

Since its introduction in 1999, the Laboratory Enhancement Program (LEP) has collected information to supplement what is collected on the HIV test requisition for individuals newly diagnosed with HIV, including HIV testing history. When test history is completed, it is not necessary to link the test back to previous results. A test indicating a previous HIV-positive diagnosis in Ontario can be directly removed as a duplicate test. For the analyses in this report (both positive HIV tests and first-time HIV diagnoses), these duplicates with reported test history in Ontario have been removed.

The definition of an 'HIV diagnosis' has been updated to gain a more accurate picture of people diagnosed or entering care for HIV in Ontario and people who are learning their HIV diagnoses for the first time. The positive HIV tests definition includes 1) first-time HIV diagnoses and 2) people who have previous evidence of HIV (had been diagnosed previously). People who have previous evidence of HIV may be newly entering care in Ontario. Only the first positive test in Ontario is included toward the positive HIV tests counts.

Using the LEP and the PHO viral load testing data, it is possible to examine first-time HIV diagnoses. First-time HIV diagnoses are individuals who have no previous evidence of HIV. That is, they are learning of their HIV diagnosis for the first time. First-time HIV diagnoses exclude anyone with a previous positive diagnostic test in another province or country and who retested in Ontario, as indicated on the HIV test requisition (since 2018) or the LEP form. It also uses linked viral load testing history in Ontario as evidence of being in care for HIV and so excludes 1) anyone with a history of viral load testing in Ontario of more than 30 days before a first diagnostic positive test and 2) anyone with viral load testing in Ontario within 30 days (including same day) with a viral load <200 copies/mL. People who have evidence of a history of viral load testing before their first reported HIV positive test are counted as a positive HIV test in the first year which there is evidence of an HIV diagnoses (i.e. the year of their first viral load test). Viral load history is only available from 1996 on, as this is when viral load testing became widely available in Ontario. Therefore, categorizing diagnoses as having previous evidence of HIV is only available after this date. A validation study was carried out to assess case history information from the integrated Public Health Information System (iPHIS). Overall, for the cases that could be linked, iPHIS concurred with the exclusions applied by the viral load criteria of previous evidence of HIV.

We report on positive HIV tests in Ontario to inform policy and planning services that can be tailored to all people living with HIV. We look at first-time HIV diagnoses to better understand what populations might be at most risk and benefit most from prevention activities.

Approximately three in ten positive HIV tests (30.8% in 2022) had previous evidence of HIV. The ascertainment of repeated testing within Ontario (duplicates) and positive HIV tests with previous evidence of HIV due to a diagnosis out of province are both likely to be underestimated because it is only

possible when test history is complete or repeated tests can be linked. Reasons for unlinked data include an individual having one (or more) anonymous or coded HIV tests prior to their nominal test. Another reason could be because either 1) the LEP questionnaire is missing, or 2) the HIV testing history section of the LEP is incomplete. Between 2013 and 2022, approximately 59.5% of positive HIV tests in Ontario had both the LEP forms returned and the test history section complete (55.8% in 2022). The ascertainment of previous evidence of HIV due to a history of viral load testing could overestimate the number of positive HIV tests (but would give a more accurate number of first-time HIV diagnoses). When an individual has a history of viral load testing, they may have already received a diagnostic test in Ontario that could not be linked to their viral load tests. That first diagnostic test could have been anonymous, coded, or unable to be linked for some other reason. When this person is included because they've received a new diagnostic test, they may be counted twice in the data: at the time of their first unlinked diagnosis and at the time of their first viral load test. As it is not possible to know if they've already had a positive diagnostic test in Ontario, these individuals are counted as a positive HIV test, and as a first-time HIV diagnosis.

The continued refinement of surviellance data means that historical numbers will be updated in OHESI reports. Therefore, previous releases of surveillance numbers no longer represent the most accurate representation, and the most recent report should always be cited.

Limitations to HIV testing and new HIV diagnoses

Information about risk factors and demographics are only available when test forms are filled out completely and correctly. Approximately 37% of LEP forms are not returned by 3 months and in total, approximately 30% of LEP forms in 2022 were not returned. After combining information from both forms (HIV test requisition and LEP), exposure category information is missing for approximately 34.4% of positive HIV tests in 2022. Due to race/ethnicity historically (prior to 2018) only been collected on the LEP and not the HIV test requisition, and low uptake of the new test requisition form that does collect information on race/ethnicity since 2018, there is a high rate of race/ethnicity information that is missing; approximately 30.2% of positive HIV tests in 2022. The missing information means that some positive HIV tests and first-time HIV diagnoses cannot be assigned to key populations. It is unknown whether some categories or populations may be more likely to be missing information, which could potentially bias the proportions. There may also be bias due to varied practices among providers for filling out the requisition and LEP forms. For example, some providers may ask about ethnicity or risk factors, while others may not ask or make assumptions. The time it takes for LEP forms to be returned can result in reporting delays.

Historiclly, data on transgender individuals has not been collected in a consistent manner over time. With the increase in the uptake of the updated HIV test requisition form enabled the number of HIV tests by transgender identity to be reported, counts of positive HIV tests and first-time HIV diagnoses are too small to report on separately. For this reason, transgender individuals are not included in any of the HIV diagnosis counts or rates when stratified by sex. Transgender females are counted when reporting on Women and transgender males are counted as GBMSM if sex with a man is reported. As data collection becomes more consistent with capturing transgender identity, future reports will incorportate this information.

4. HIV exposure categories

An attempt is made to assign each HIV test to an exposure category based on what reported HIV risk factor information is collected on the requisition form. The exposure category is meant to represent an individual's most likely means of HIV acquisition. The exposure categories are mutually exclusive. When more than one risk factor is reported for a single individual, a hierarchy is used to assign an HIV test to a single exposure category. This hierarchy is as follows:

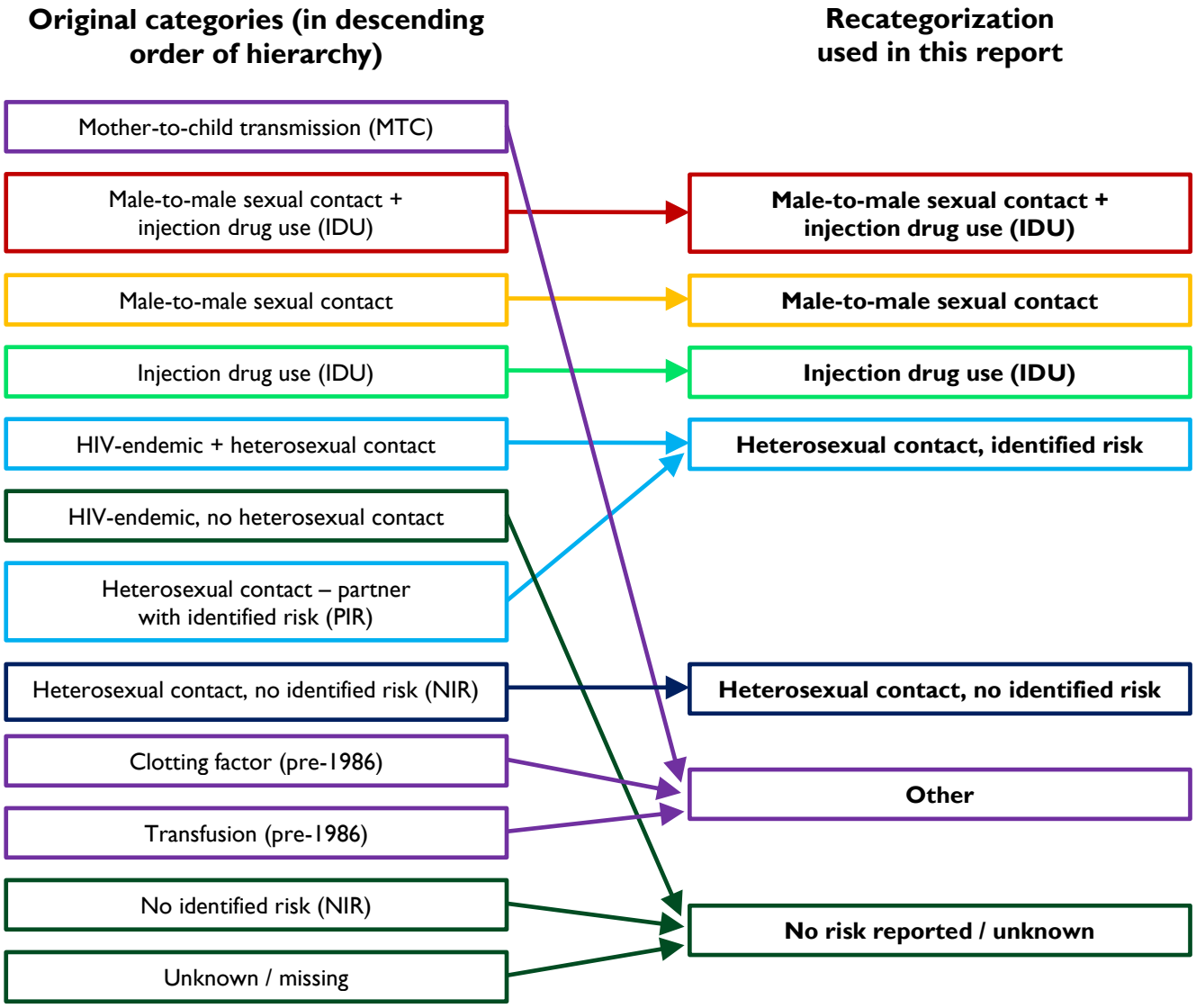
1. Mother-to-child transmission (MTC): Being a child of an HIV-positive mother or aged less than 18 months
2. Male-to-male sexual contact + injection drug use (IDU): Being male and indicating sex with men and injection drug use
3. Male-to-male sexual contact: Being male and indicating sex with men
4. Injection drug use (IDU): Indicating injection drug use
5. HIV-endemic
    a. HIV-endemic + heterosexual contact: (Country of birth is HIV-endemic or "Born in an HIV-endemic country" indicated as HIV risk factor) + indication of heterosexual contact (defined as being male or female and indicating sex with a person of the opposite sex/gender)
    b. HIV-endemic, no heterosexual contact: (Country of birth is HIV-endemic or "Born in an HIV-endemic country" indicated as HIV risk factor) + no indication of heterosexual contact as in 5a
6. Heterosexual contact – partner with identified risk (PIR): Being male or female and indicating sex with a person of the opposite sex/gender who is either HIV-positive, uses injection drugs, born in an HIV-endemic country, or is a bisexual male.
7. Heterosexual contact, no identified risk: Being male or female and indicating sex with a person of the opposite sex/gender who has no identified risk.
8. Clotting factor (pre-1986): Indicating clotting factor pre-1986
9. Transfusion (pre-1986): Indicating a blood transfusion pre-1986
10. No identified risk (NIR): Indicating "none" or "other" or "needlestick injury" as a risk factor
11. Unknown/missing: No risk factors indicated (form not completed)

In this report, some of the above categories are combined to form broader categories (see **Figure iv** below):

- Heterosexual contact, identified risk: combines diagnoses assigned to "HIV-endemic + heterosexual contact" (category #5a above) and "Heterosexual contact – partner with identified risk (PIR)" (category #6)
- Other: combines diagnoses assigned to "Mother-to-child transmission (MTC)" (category #1), "Clotting factor (pre-1986)" (category #8), and transfusion categories (category #9).
- No risk reported/unknown: combines diagnoses assigned to "HIV-endemic, no heterosexual contact" (category #5b) and "No identified risk" (category #10), or where the form is not completed (category #11).

HIV-endemic areas (category #5) are classified by the Public Health Agency of Canada as countries where the prevalence of HIV among adults (15-49 years old) is 1.0% or greater and one of the following criteria is met: at least 50% are attributed to heterosexual transmission; a male to female ratio of 2:1 or less among prevalent infections; or HIV prevalence greater than or equal to 2% among women receiving prenatal care. A list of these countries can be found here.

Figure iv. Original hierarchical HIV exposure categories (in descending order) and how they were recategorized for this report.



HIV risk factor data used to determine an individual's exposure category is missing for about one quarter of first-time HIV diagnoses (average of 25.9% per year between 2013 and 2022). These diagnoses are included in figures of numbers of diagnoses and excluded from figures of proportions by HIV exposure category.

It is unknown whether individuals with certain HIV risk factors, and hence exposure categories, are more likely to be missing information, which could introduce bias into the exposure category breakdowns. Also, provider practices for filling out the requisition forms may vary, leading to further bias. For example, some providers may ask people getting tested about their risk factors, while others may make assumptions or not ask.

In 2018, a "country of birth" field was added to the HIV test requisition form which better informed attribution to the HIV-endemic exposure category and likely contributed to the larger proportion of HIV tests attributed to this category since 2019. As exposure category attribution follows a hierarchy,

increasing proportions in higher categories would decrease proportions attributed to subsequent categories. Any interpretation of changes between exposure category proportions of HIV tests in 2019 and beyond, compared to previous years should remain mindful of this caveat.

5. Key populations

Positive HIV tests and first-time HIV diagnoses are assigned (where applicable) to one or more of the key populations outlined in Ontario's Provincial HIV/AIDS Strategy. These populations are not mutually exclusive, and individuals can be classified as belonging to more than one key population. In 2022, approximately 72.0% of positive HIV tests belonged to at least one key population (GBMSM, PWID, ACB, Indigenous or Women). Approximately 22% of positive HIV tests belonged to two or more key populations at one time. Approximately 67% of first-time HIV diagnoses belonged to at least one key population. Approximately 20% of first-time HIV diagnoses belonged to two or more key populations at one time.

Each population is uniquely defined by indicators of HIV risk factors, race/ethnicity, country of birth, and/or sex on the HIV test requisition and LEP forms. Where the defining criteria of each key population is reported, HIV diagnoses are assigned to a key population, where applicable. Assignment to these populations is based on information from the HIV test requisition forms and LEP forms, as follows:

Gay, bisexual and other men who have sex with men (GBMSM)
- Sex is male or transgender male, and sexual contact with men reported as an HIV risk factor

People who are African, Caribbean, or Black (ACB)
- Country of birth is an African or Caribbean country and/or race/ethnicity is Black

People who use injection drugs (PWID)
- Injection drug use (IDU) reported as an HIV risk factor

Indigenous Peoples
- Race/ethnicity is First nations or Inuit or Métis

Women (instead of Women*, see below)
- Sex is female or transgender female

Women* is the official key population as outlined in Ontario's Provincial HIV/AIDS Strategy; it includes ACB women, women who use injection drugs, Indigenous women, transgender women, other women who face systemic and social inequities, and women who are more likely to be exposed to HIV through a sexual or drug using partner. As indicators of systemic and social inequities of HIV are not available in the HIV surveillance data, the key population Women* is unable to be defined. Instead, we use "Women" in this report, which is inclusive of all females and transgender women.

Information on HIV diagnoses by key population is available for different years based on the key population. Historically, the HIV test requisition form has obtained information on HIV risk factor and sex. Therefore, the GBMSM, PWID and Women key populations are able to be assigned (if appropriate) from 1985 onward. Information on race/ethnicity and country of birth were added to the LEP form in 2009. Therefore, the ACB and Indigenous key populations are only able to be assigned from 2009 onwards. The HIV test requisition underwent revision in 2018 to collect information on race/ethnicity and country of birth, and improve the documentation of transgender men and transgender women within HIV diagnosis data. Additional information on the revised HIV test requisition form is used to help assign

key populations (but not sex). These revisions will allow us to better characterize key populations for both negative and positive tests. The high amount of missing information for positive HIV tests (approximately 31.2% on race/ethnicity and approximately 25.9% on exposure category between 2013 to 2022) means that information on key population is missing for many diagnoses. Therefore, it may be more valid to focus on trends over time rather than the specific numbers or proportions.

To be assigned to any key population, only information on that single key population is required. For example, if race/ethnicity is missing but sex indicates male and HIV risk factors indicate sexual contact with men, the individual could be assigned to the GBMSM key population. Assignment of key population is excluded if data that defines that key population is not reported.

6. Statistical methods

Rates are a measure of how frequently an event occurs in a defined population over a specified period of time. Because rates take into account the size of the population (denominator) over a specific time period and place, rates are helpful for comparing disease frequency among different groups or across different locations. For example, if we were to only look at the numbers of positive HIV tests within, for example, a health region, one region may have the second largest *number* of positive HIV tests; while after taking into account the size of the health regions, a different health region could have the second highest *rate* of positive HIV tests when comparing health regions. The rates of positive HIV tests and first-time HIV diagnoses per 100,000 people were calcualted using population estimates from Statistics Canada.

Population estimates were accessed on 08/14/2023 and can be found from Statistics Canada: here.

In some figures, data is combined in two-, four-, or five-year groupings (2017-2018, 2019-2020 and 2021-2022, or 2015-2018 and 2019-2022, or 2013-2017 and 2018-2022). This was done systematically where possible to ensure at least 50% of cell counts were ≥5. The number of HIV diagnoses are combined over these time periods to reduce the effects of year-to-year variation (which can be particularly influential for populations with a small number of diagnoses [<5 per year]). Where possible, single year data are reported.

Percentages associated with key populations are calculated based on each key population separately and only where the defining information is reported. That is, the percentage calculation is based off the diagnoses known to be attributed to a single key population (numerator) divided by the total number of diagnoses where the status of that key population (yes or no) is known (denominator). When considering one key population, no information on any other key population (whether the individual belongs to another key population or if there is missing or incomplete information on other data used to create other key populations) is considered. The proportion of missingness is now reported (where appropriate) in the notes at the bottom of each page and Tables section of the report.

Counts of first-time HIV diagnoses and/or positive HIV tests have not historically been reported by key population or race/ethnicity due to high proportions of missing data (both from the LEP not being returned an/or the LEP being returned but missing information), and therefore undercounts of the number of diagnoses by sub-group. As with the 2020 diagnoses report, we are reporting the raw (reported) counts of first-time HIV diagnoses by key population, exposure category, and race/ethnicity. The reported count is the number of reported first-time HIV diagnoses within each sub-group (e.g. within a key population, exposure category or race/ethnicity). For example, there were 28 first-time HIV diagnoses that are reported to be PWID due to 'injection drug use' being marked on the risk factors

section of the HIV test requisition form and/or the LEP form. There were 344 first-time HIV diagnoses that were reported not to be PWID. This gives a proportion of 8.13% (28/344) individuals classified as PWID in 2022. Each key population has its own numbers of reported to be part of that key population and reported not to be of that key population. There are counts of HIV diagnoses where key population is not reported. In this case, it is "unknown" as to whether the diagnoses are or are not part of that key population and diagnoses are classified as such. The number of diagnoses reported "not to be in a key population" (have information to classify diagnosis as not part of any key population) is reported, along with the number of diagnoses with unknown key population. We do not have any information on whether any one key population would be more or less likely to be missing information, we only know that some diagnoses cannot be classified. Therefore, interpret counts with caution.

7. iPHIS vs. PHO data

For positive HIV tests, OHESI uses laboratory data on HIV-positive diagnostic tests from the Public Health Ontario (PHO) Laboratory along with information documented by ordering providers on test requisition forms and from the LEP.

OHESI **does not** use information from the integrated Public Health Information System (iPHIS). iPHIS is an electronic, web-based system used by PHUs for case-management and reporting to the Ontario Ministry of Health on diseases of public health significance, including HIV. It is the main source of data used by PHO to produce reportable disease surveillance reports. iPHIS includes information elicited during public health follow up of HIV cases.

The number of HIV diagnoses in iPHIS does not correspond to the number of positive HIV tests in PHO HIV surveillance. Potential sources of discrepancy include:

- Additional exclusion within iPHIS of repeated HIV-positive tests based on information elicited during PHU follow-up, whereas this may not be possible in PHO data due to lack of identifying information to link tests (e.g. when an HIV-positive individual initially tests anonymously and then nominally).
- Collection of risk factor and demographics differ between iPHIS and PHO data and may result in different characterization of the diagnosed population.
- iPHIS does not include HIV diagnoses that arise from testing non-Ontario residents (e.g., Quebec residents testing in Ontario are included in provincial totals in PHO HIV surveillance).
- iPHIS includes diagnoses who have moved to Ontario, been reported to the local PHU as an HIV case, but who have not received a HIV diagnostic lab test in Ontario.
- iPHIS may include more complete information on an individual's address (obtained during public health follow up) than lab data (which is solely based on what is documented on the test requisition form), and this may influence the PHU (and hence health regions) to which an HIV case is assigned.
- Data entry errors within iPHIS that result in cases being misclassified and not captured in final counts.
- Cases may be assigned to different dates in PHO and iPHIS data (e.g., date of confirmed diagnosis vs. date of report to PHU). Therefore, case counts based on calendar year may differ.

8. Health regions

Individuals who receive an HIV diagnostic test are assigned to a geographic region based on their residence or, if not reported, the address of the ordering provider. Approximately 19% of diagnoses are missing information on address of residence in 2022 and assigned based on provider address.

Ontario can be divided geographically by health region or public health units (PHU). These are defined below:

- Health regions – Groupings of PHUs that have historically been used in HIV epidemiology and surveillance reports. See the following page for health region breakdowns.
- Public health unit – A health agency that provides health promotion and disease prevention programs. There are currently (2022) 34 PHUs in Ontario and each has its own unique geographical boundary. This is different from previous years where there were 36 PHUs (2017 and before). The change reflects the Oxford PHU being combined with the Elgin-St. Thomas PHU to form the new 'Southwestern' PHU. It also reflects Huron and Perth being combined. The larger health regions did not change from previous reports.

Groupings of public health units for each health region

Toronto health region
- Toronto

Ottawa health region
- Ottawa

Northern health region
- Algoma
- North Bay Parry Sound
- Northwestern
- Porcupine
- Sudbury
- Thunder Bay
- Timiskaming

Eastern health region
- Eastern Ontario
- Hastings and Prince Edward Counties
- Kingston, Frontenac, Lennox & Addington
- Leeds, Grenville and Lanark
- Renfrew

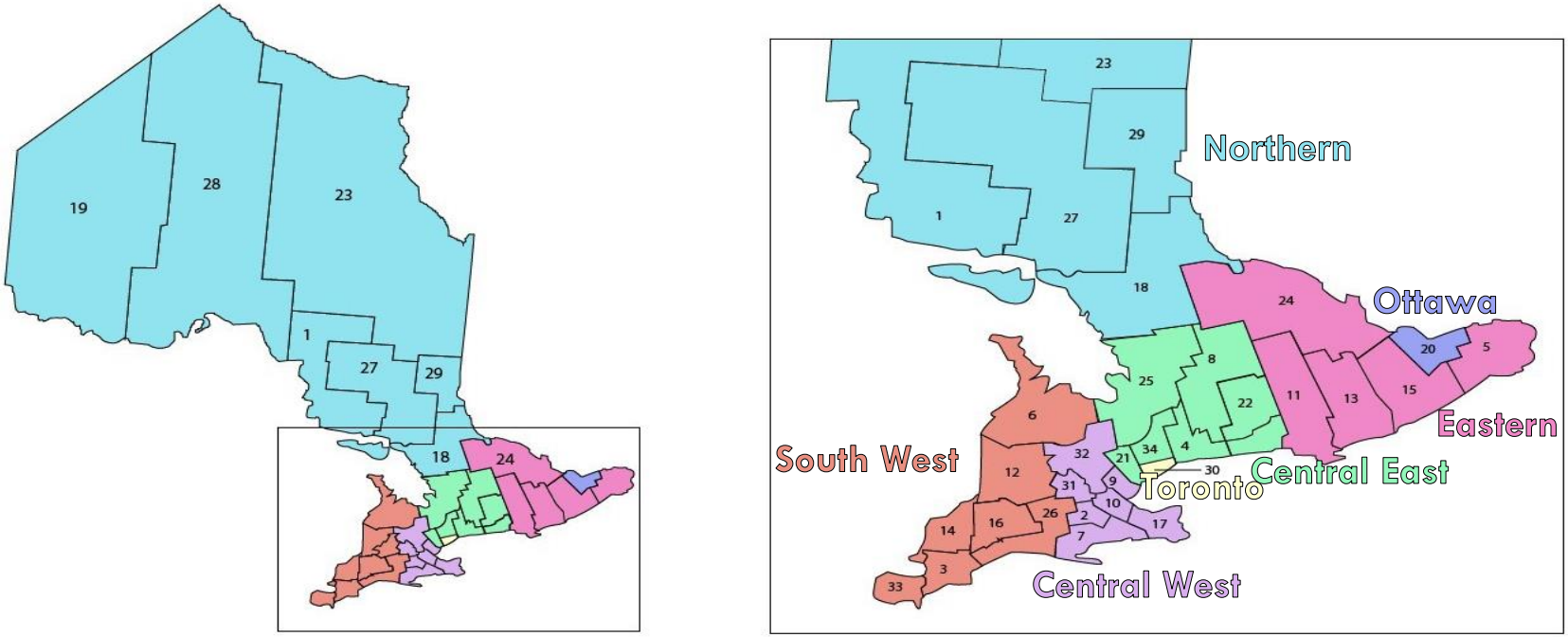
Central East health region
- Durham
- Haliburton, Kawartha, Pine Ridge
- Peel
- Peterborough
- Simcoe Muskoka
- York

Central West health region
- Brant
- Haldimand-Norfolk
- Halton
- Hamilton
- Niagara
- Waterloo
- Wellington-Dufferin-Guelph

South West health region
- Grey Bruce
- Huron / Perth
- Chatham-Kent
- Lambton
- Middlesex-London
- Southwestern (Oxford, Elgin and St. Thomas)
- Windsor-Essex

Health regions map

Figure v. Geographic map of health region and public health unit boundaries in 2022.



Public health units (map legend)

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

Note: Map created using Statistics Canada boundary files

Tables

Data tables are available in a separate supplement: HIV diagnoses in Ontario, 2022: Tables supplement.