

***HIV epidemiology update
for gay, bisexual, and
other men who have sex
with men (GBMSM) in
Ontario, 2019***



How many GBMSM are living in Ontario?



Using data from 2017 to 2019, OHESI estimates¹ there were:

217,922

Gay- and bisexual-identifying men, and other men who had recent sex with a man¹ (GBMSM)

4.1%

The above number represents 4.1% of all adult men (≥15 years old) in Ontario

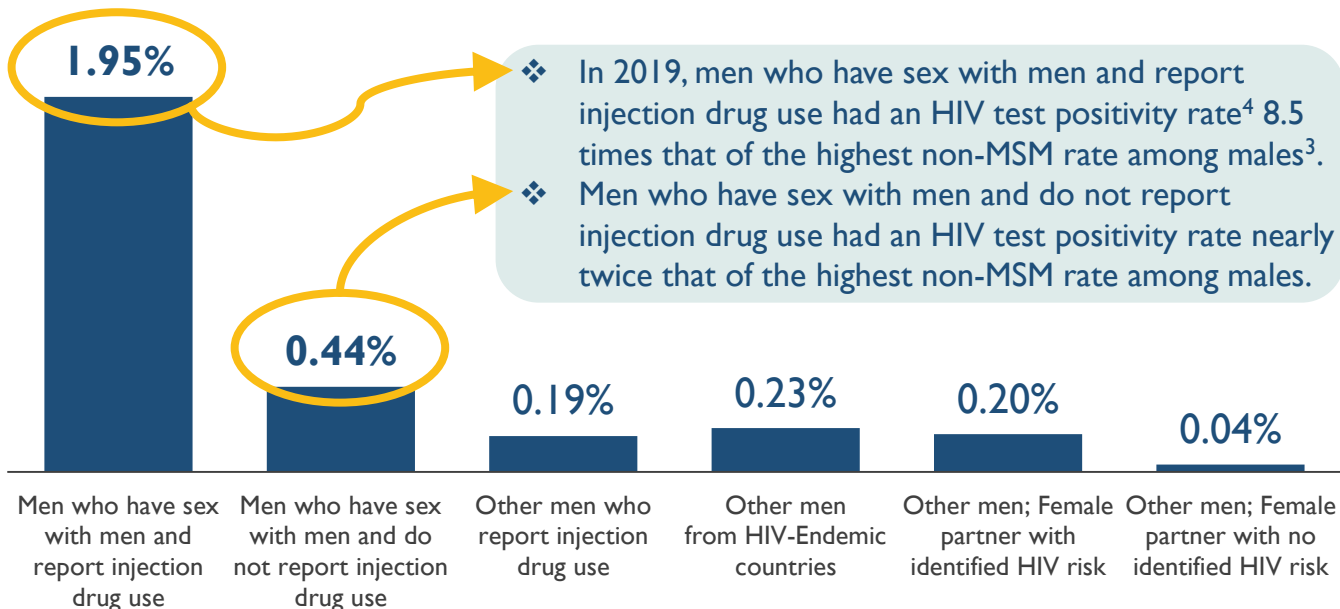


What percentage of HIV tests in Ontario among males are attributed to GBMSM?

1 in 3

In 2019, of the 37% of HIV tests among males where exposure category is known, 35% are attributed to GBMSM^{2,3}.

Which men are most likely to test positive for HIV in Ontario?



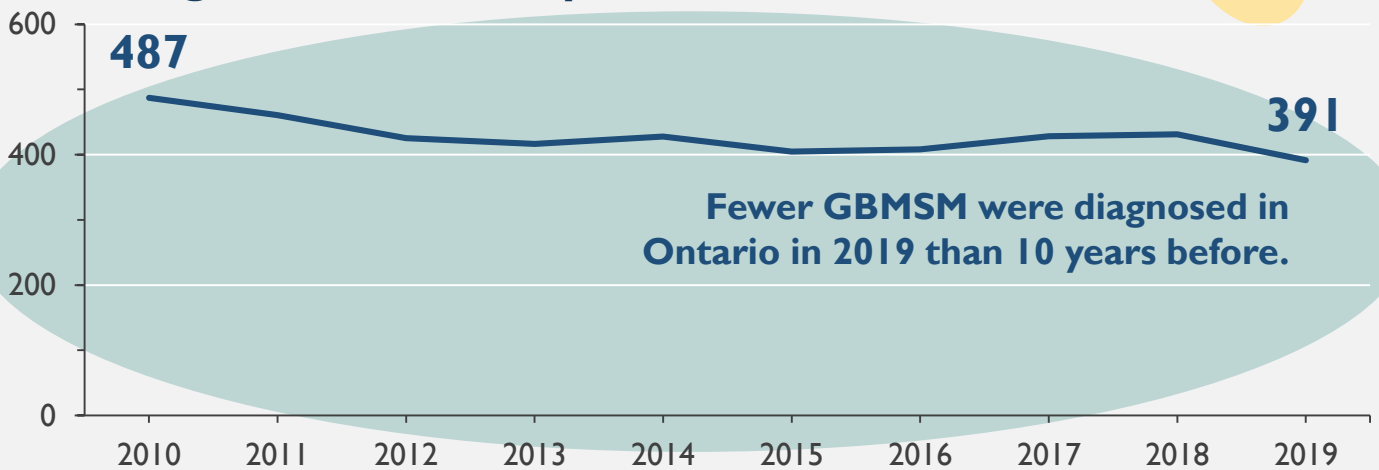
Exposure categories are mutually exclusive and assigned by hierarchy from left to right³.

What percentage of people diagnosed with HIV for the first time in Ontario are GBMSM?

From 2010 to 2019, between 62% and 67% of people diagnosed with HIV for the first time were GBMSM, depending on the year (among those where HIV exposure category known)^{2,3,5}.

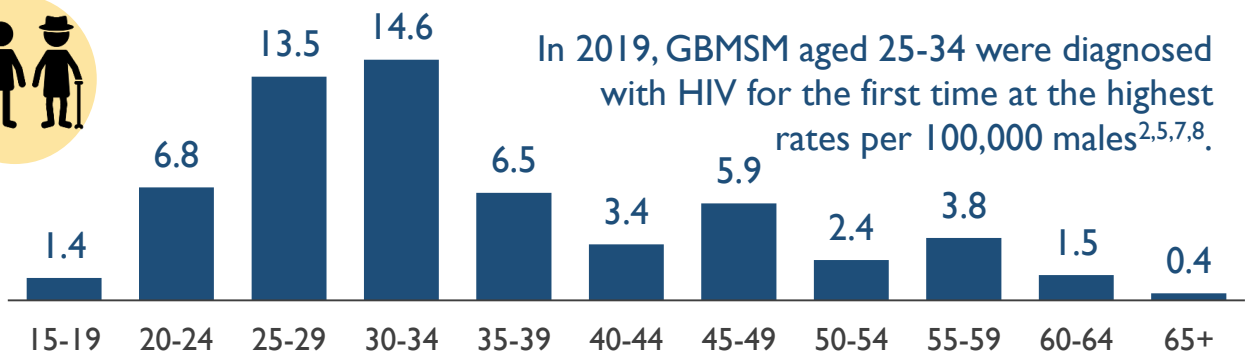
62-67%

What is the trend in the number of diagnoses among GBMSM in the past decade?

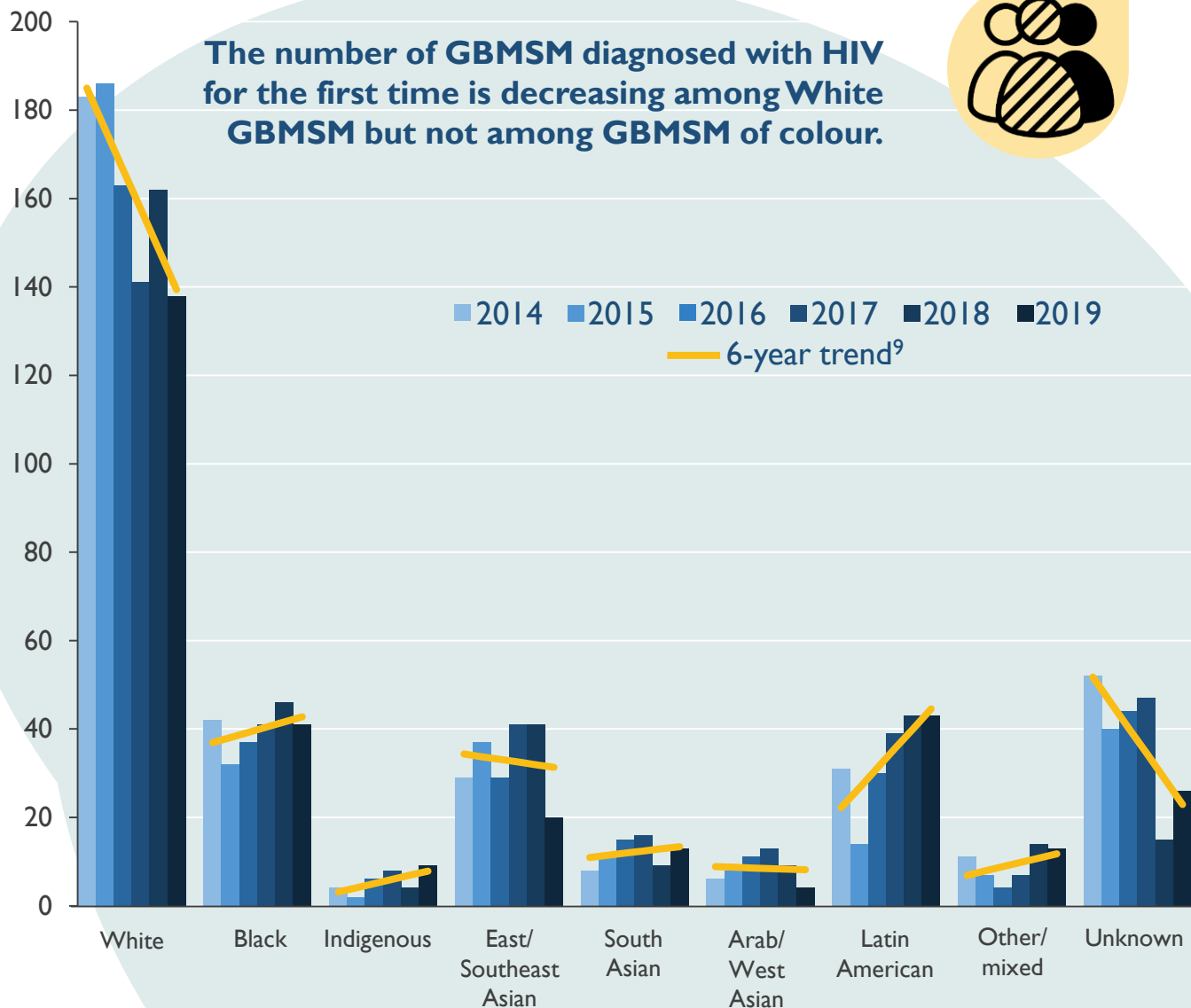


- ❖ In 2010, 487 GBMSM were diagnosed with HIV for the first time in Ontario^{2,5,6}. This number fluctuated around 420 between 2012 and 2018, then decreased to 391 in 2019.
- ❖ These numbers translate to 7.6 diagnoses among GBMSM per 100,000 males in 2010, and 5.4 diagnoses among GBMSM per 100,000 males in 2019⁷.

What age group of GBMSM has the highest rate of first-time HIV diagnoses in Ontario in 2019?



How is the ethno-racial distribution of first-time HIV diagnoses among GBMSM changing over time?



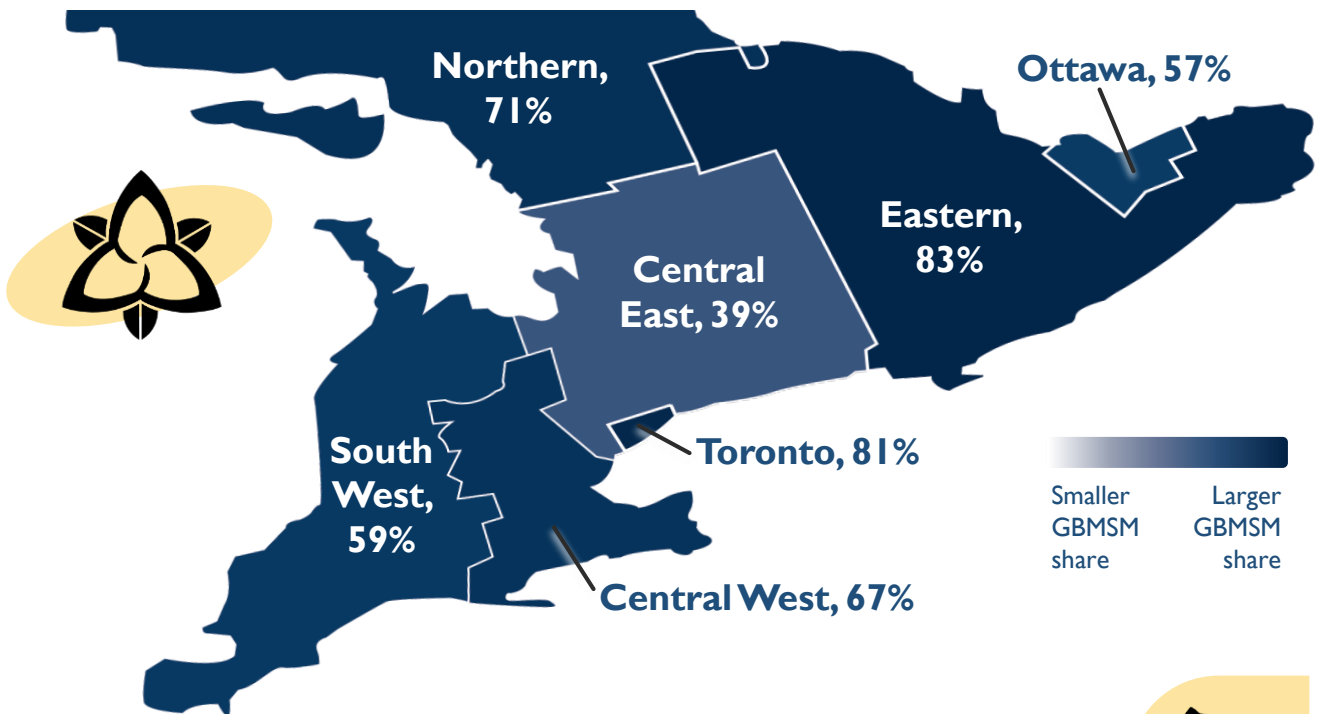
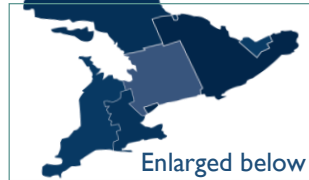
- ❖ White GBMSM made up the largest number of first-time diagnoses among GBMSM between 2014 and 2019. The number of White GBMSM diagnosed with HIV for the first time has decreased over time^{2,5,8,9}.

- ❖ Trends in first-time diagnoses among GBMSM of colour are less clear. However, GBMSM of colour have not experienced the same decrease in first-time diagnoses as White GBMSM.



Where are GBMSM being diagnosed with HIV for the first time in Ontario?

In 2019, Eastern region had the largest proportion of its HIV diagnoses among males that was attributed to GBMSM (83%), followed by Toronto (81%), Northern region (71%), Central West region (67%), South West region (59%), Ottawa (57%), and Central East region (39%)^{2,5,8,10}.



What is the prevalence of diagnosed HIV among GBMSM in Ontario?

In 2018, there were an estimated 10,909 GBMSM² living with diagnosed¹¹ HIV in Ontario, giving an estimated prevalence¹² of **5.0% of diagnosed HIV** among the estimated 217,922 GBMSM¹.

5.0%

Most GBMSM living with HIV are on antiretroviral therapy (ART) and, when they are, they achieve very high levels of viral suppression.

Footnotes

1. To estimate the number of GBMSM in Ontario we started with the number of males aged ≥ 15 years who identified as “homosexual” or “bisexual” in the Canadian Community Health Survey (CCHS 2017-2019 [combined yearly cross-sectional data]). That number was adjusted upward to account for men who told the cross-sectional community-based Sex Now survey that they do not disclose their sexual orientation to Statistics Canada surveys. In addition, men who report having anal sex with other men in the past 6 or 12 months, but do not identify as homosexual or bisexual, were added to the estimate. The two recall periods exist because the estimates were produced through averaging estimates from two data sources, each with a different recall period. More information regarding this estimate and the methods employed to produce it can be found [here](#).
2. Data provided by the Public Health Ontario (PHO) Laboratory. GBMSM are one of Ontario’s specified “priority populations” – populations outlined as priorities for HIV programming in Ontario’s response to HIV. Individuals are assigned to the GBMSM priority population in HIV testing and diagnoses data if they meet one of the following two HIV exposure categories: “men who have sex with men and who use injection drugs (MSM-PWID)” (defined as male sex + indication of sex with men and needle use); or “men who have sex with men (MSM)” (defined as male sex + indication sex with men). See footnote 3 below for more information about exposure category criteria.
3. An HIV exposure category is a category meant to represent an individual’s most likely means of HIV transmission. An individual getting tested is assigned to an exposure category based on reported HIV risk factors 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. 62.6% of HIV tests among males had unknown HIV exposure category in 2019. HIV exposure category was unknown for an average of 26.4% of first-time HIV diagnoses (defined in footnote #5) between 2010 and 2019. More information about HIV exposure categories can be found [here](#).
4. Data provided by the Public Health Ontario (PHO) Laboratory. An HIV test positivity rate is the proportion of HIV diagnostic tests with a confirmed HIV-positive result. HIV test positivity rates can provide insight into which sub-populations have a higher level of HIV risk. HIV-negative prenatal tests not included.
5. First-time HIV diagnoses are positive HIV tests with no previous evidence of HIV. We look at this number to better understand which diagnoses are likely due to local transmission in Ontario and, therefore, what populations might be at most risk and benefit most from prevention activities. First-time HIV diagnoses exclude anyone with an indicated previous positive diagnostic test, regardless of the location of the previous positive test (inside of outside of Ontario). It also uses linked viral load testing history in Ontario as evidence of being in care for HIV and thus excludes 1) anyone with a history of viral load testing in Ontario of more than 30 days before 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 known 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). More information about first-time diagnoses can be found [here](#). GBMSM status was unknown for an average of 14.8% of first-time HIV diagnoses per year between 2010 and 2019, and for 16.6% of first-time HIV diagnoses in 2019.
6. Counts of GBMSM diagnosed with HIV are estimated by applying the proportion of diagnoses attributed to GBMSM among males where GBMSM status is known to the diagnoses among males where GBMSM status is unknown. For example, in 2019, 307 of the 404 (76.0%) first-time diagnoses among males with known GBMSM status were attributed to GBMSM, therefore 76.0% of the 111 diagnoses among males with unknown GBMSM status ($0.760 \times 111 = 84$) were estimated to be GBMSM. 307 diagnoses known to be GBMSM plus the 84 diagnoses estimated to be GBMSM from those with unknown GBMSM status equals the 391 total estimated GBMSM diagnosed with HIV for the first time in 2019, as reported in this factsheet. GBMSM status was unknown for an average of 17.6% of first-time HIV diagnoses among males per year between 2010 and 2019, and for 21.6% of first-time HIV diagnoses among males in 2019.
7. Rates calculated using Statistics Canada population estimates, accessed February 1st, 2021.
8. Restricted to where GBMSM status is known.
9. Trendlines calculated using linear regression models over the six-year period of 2014-2019.
10. More information about OHESI health regions can be found [here](#).
11. Does not include GBMSM living with HIV who have not yet been diagnosed. More information about the methods used to produce the estimated number of GBMSM living with diagnosed HIV can be found [here](#).
12. Prevalence is defined as the proportion of a population that is affected with a particular disease at a given time.