



Pre-HIV-diagnosis utilization of HIV prevention modalities by people living with HIV in Ontario

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Canadian Association for HIV Research (CAHR) Conference, April 27-29 2022

Background

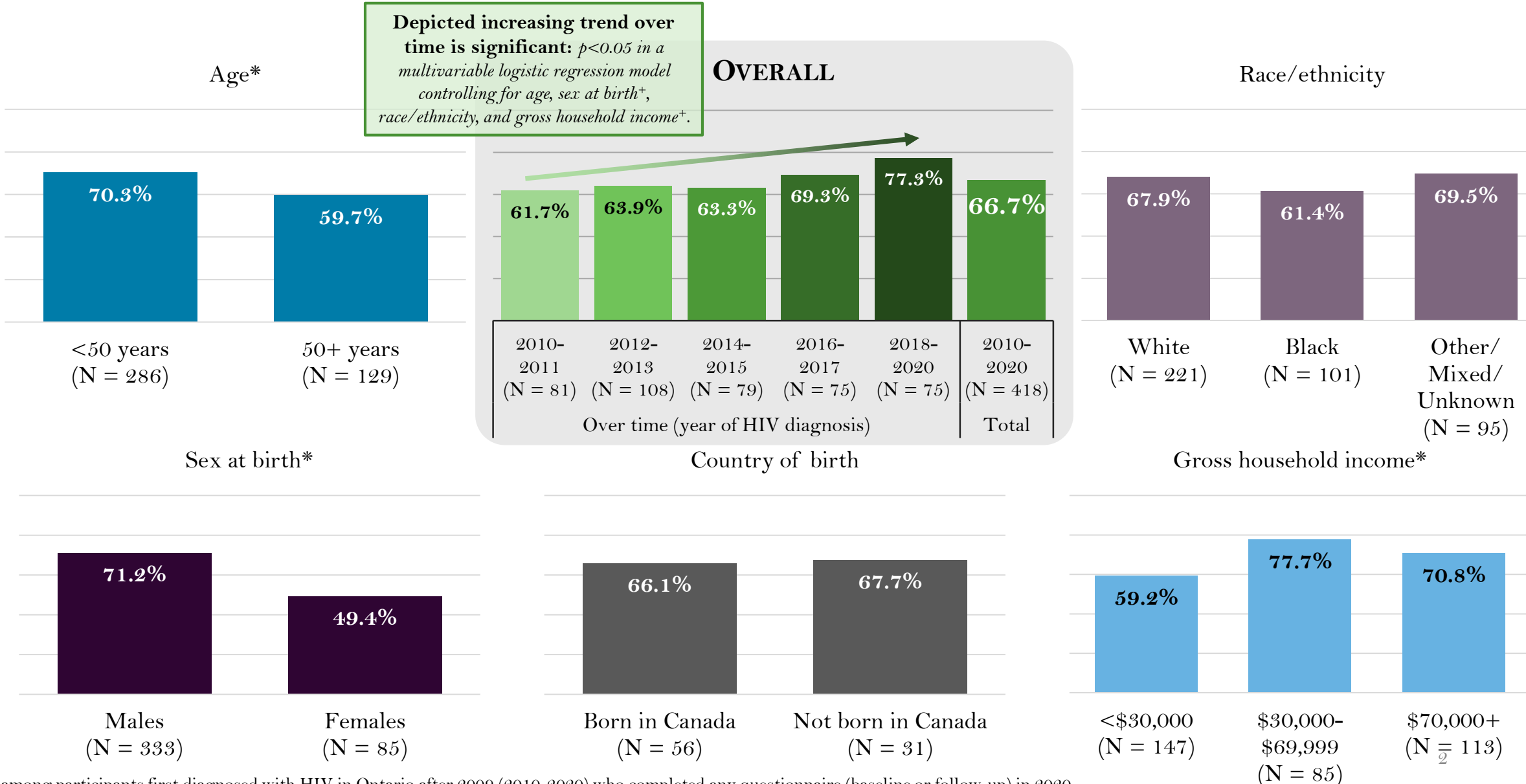
- Timely HIV testing and initiation of antiretroviral therapy are major determinants in achieving optimal health for people living with HIV and preventing ongoing transmission.
- We examined self-reported history of HIV testing and use of prevention modalities among a population of people living with HIV (PLWH) in Ontario to identify missed opportunities for prevention and diagnosis.

Methods

- Results are from analysis of the 2019 and 2020 interviewer-administered annual questionnaires of the Ontario HIV Treatment Network (OHTN) Cohort Study (OCS), a longstanding community-governed prospective longitudinal biobehavioural (clinical and questionnaire data) study of >8,000 PLWH (>5,000 active as of Dec 2021) across 15 clinical sites in Ontario.
- Participants complete a “baseline” questionnaire upon initiation in the study, then subsequent annual “follow-up” questionnaires.
- Outcomes variables (and bivariate breakdowns if applicable) reported:
 - Having ever taken an HIV test prior to their HIV diagnosis (including breakdowns by age, sex, Canadian-born, race/ethnicity, and income)
 - Having experienced any symptoms at the time of their HIV diagnosis (including breakdowns as above)
 - Means of being tested for HIV when first diagnosed
 - Having been first diagnosed with HIV through anonymous HIV testing
 - Having ever used post-exposure prophylaxis (PEP) before being diagnosed with HIV
 - Having ever used pre-exposure prophylaxis (PrEP) before being diagnosed with HIV

Participants who had ever taken an HIV test prior to their HIV diagnosis were disproportionately <50 years old, male, and with incomes \$30,000+

Proportions of participants who reported having ever received an HIV test prior to HIV diagnosis, OCS, 2020

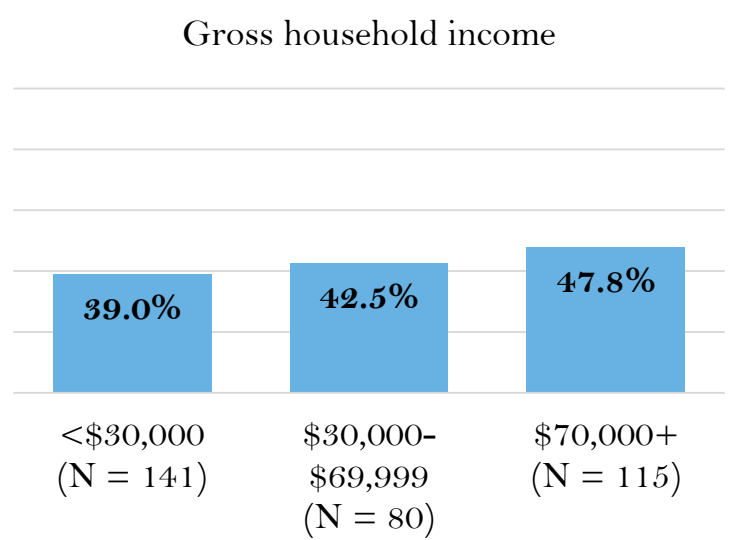
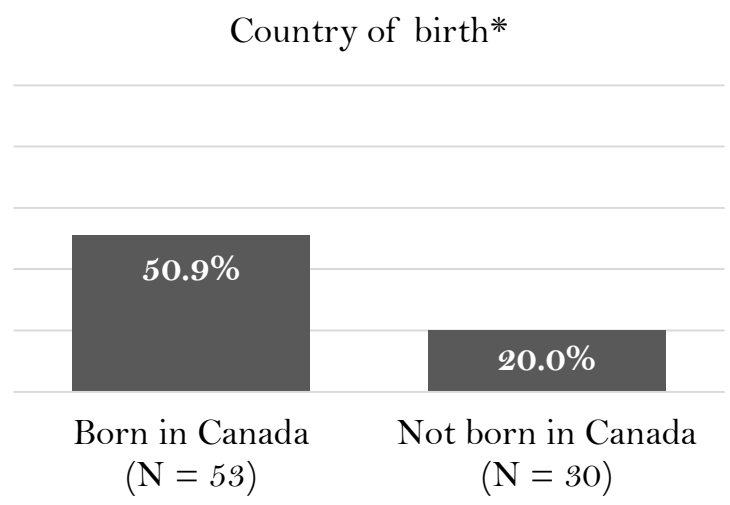
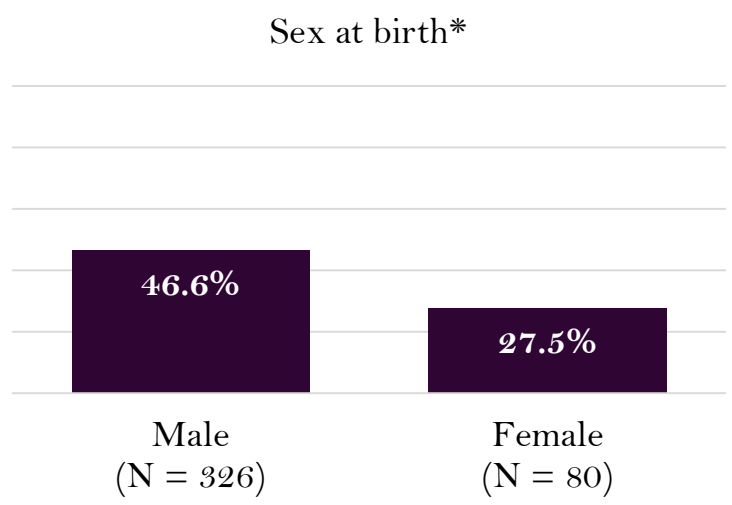
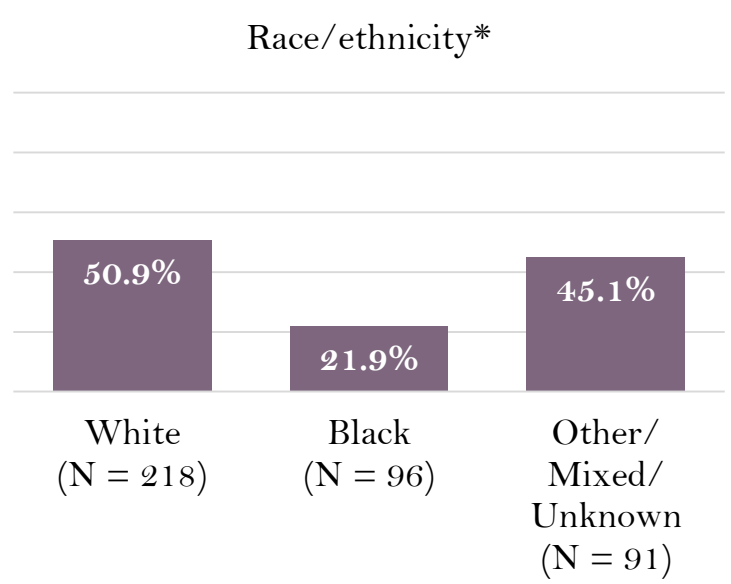
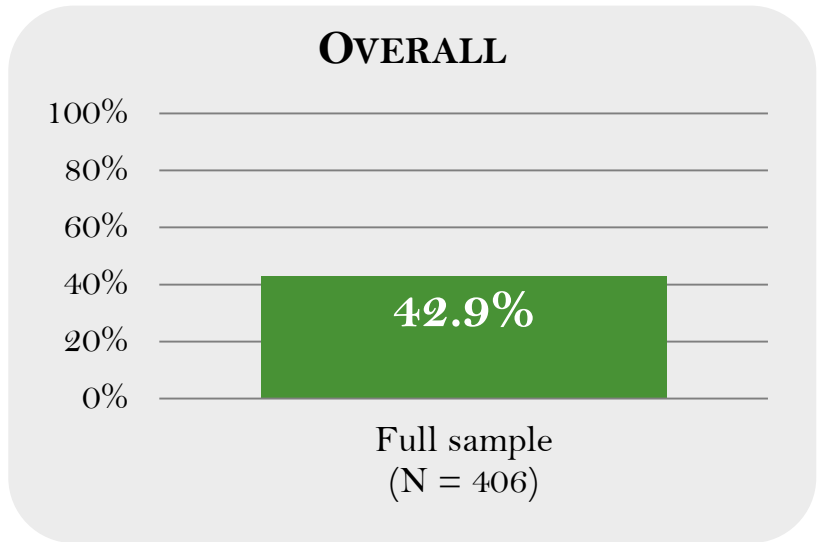
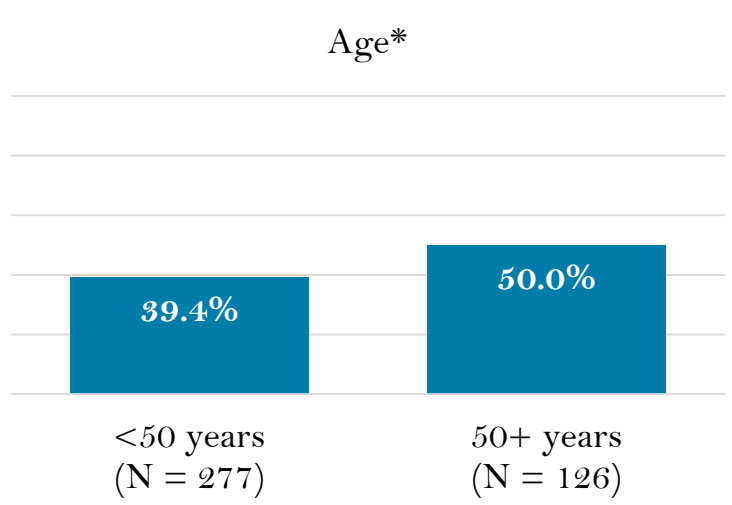


Results are among participants first diagnosed with HIV in Ontario after 2009 (2010-2020) who completed any questionnaire (baseline or follow-up) in 2020.

⁺Sex at birth and gross household income covariates were also statistically significant ($p \leq 0.05$) in the multivariable logistic regression model. Asterisk (*) indicates statistically significant at $p \leq 0.05$ (chi square).

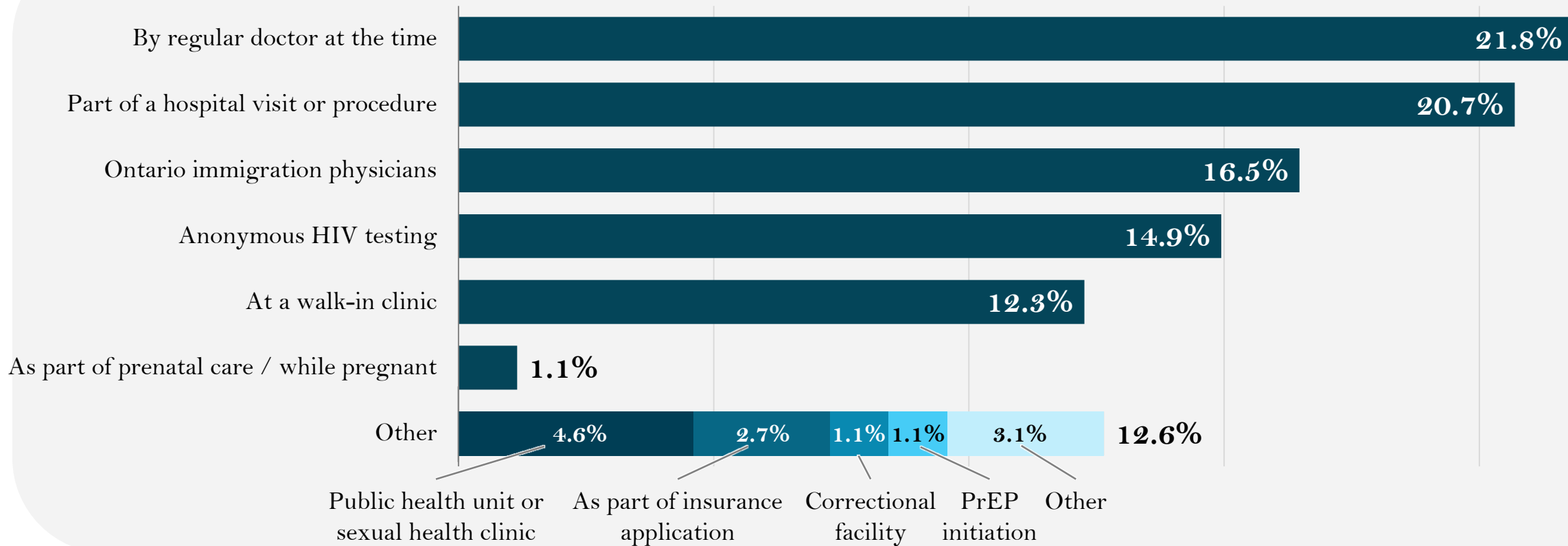
Participants who were experiencing any symptoms at the time of HIV diagnosis were disproportionately 50+ years old, male, born in Canada, and white

Proportions of participants who reported experiencing any symptoms at the time of HIV diagnosis, OCS, 2020



Among participants first diagnosed with HIV in Ontario after 2009 (2010-2020) who completed any questionnaire (baseline or follow-up) in 2020. Asterisk (*) indicates statistically significant at $p \leq 0.05$ (chi square).

MEANS OF BEING TESTED FOR HIV, WHERE DIAGNOSED FOR THE FIRST TIME IN ONTARIO (N = 261)¹



PEP

Post-exposure prophylaxis (PEP) was first available in Ontario in 2006; 10 of the 728 participants² (1.4%) diagnosed in Ontario after 2005 had used PEP prior to their HIV diagnosis.

PrEP

Pre-exposure prophylaxis (PrEP) was approved in Ontario in 2016; fewer than 5 of the 208 participants² diagnosed in Ontario after 2015 had used PrEP prior to their HIV diagnosis.

1. Among participants first diagnosed with HIV in Ontario after 2009 who completed our baseline questionnaire in either 2019 or 2020. "Other" sub-categorized from write-in text responses.

2. Among participants who completed our baseline questionnaire in 2019 or any questionnaire (baseline or follow-up) in 2020.

Discussion & Conclusions

- Two thirds (66.7%) of participants diagnosed between 2010 and 2020 inclusive had taken an HIV test prior to their HIV diagnosis, and this increased over time. Still, more than a fifth (22.7%) of participants were diagnosed with HIV on their first HIV test over the 3 years 2018-2020. This suggests the opportunity for continued improvement in HIV testing programs reaching those at high risk.
 - There was clear differential uptake of HIV testing, with participants who had ever taken an HIV test prior to their HIV diagnosis being disproportionately younger (<50 years old), male, and with household incomes \$30,000+.
- Approximately 4 in 10 participants reported experiencing symptoms at the time of their HIV diagnosis.
 - Participants who reported having symptoms at the time of their HIV diagnosis were disproportionately older (aged 50+ years), male, born in Canada, and white.
 - This questionnaire item did not differentiate between symptoms related to acute HIV seroconversion or chronic HIV infection, additional research must be done to determine the cause of reported symptoms.
- Approximately 1 in 6 participants (16.5%) were diagnosed with HIV in Ontario as part of their immigration process. As these HIV tests occurred months or years after moving to Ontario, it is not possible to differentiate if the HIV seroconversion occurred before or after immigration to Canada.
- Approximately 1 in 7 participants (14.9%) were diagnosed with HIV in Ontario through anonymous testing. This may attest to the utility of anonymous HIV testing in Ontario and the reduction in barriers to testing it may represent, including stigmatization.
- Biomedical prevention modalities (PEP and PrEP) are in use in Ontario and very small counts of participants reported having ever used them prior to their HIV diagnosis. This data will be monitored over time relative to PrEP rollout.