

**HIV AND THE BLACK COMMUNITY IN CANADA:**

**A SCOPING REVIEW**

**SCOPING REVIEW OF HIV AND THE BLACK COMMUNITY IN CANADA**

**By TATYANA C GRAHAM, HBSc**

**A Thesis**

**Submitted to the School of Graduate Studies**

**in Partial Fulfillment of the Requirements**

**for the Degree**

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### **Lay Abstract**

This thesis summarizes the research on HIV and the Black community in Canada through the use of scoping review methodology. Although HIV is a prominent health research topic, there are gaps in understanding the causes of high rates of HIV infection and HIV-related death in certain groups. The structure of the Canadian health system is flawed, as Black people continue to be unequally burdened by financial, housing, and food insecurity, as well as stigma related to immigration status, race, gender, and HIV status. These ‘structural-level’ issues are linked to a higher risk of HIV infection and poor health outcomes. Research must investigate these issues through different lenses in order to develop appropriate solutions.

In this thesis, a scoping review is used to illustrate how this methodology can identify research gaps on a biomedical topic. Our initial search identified 3060 abstracts. After screening all abstracts and full-texts, we retained 67 articles. We added 11 studies from a recently published review on a similar topic, which resulted in a total of 78 literature sources for this study. HIV outcomes addressed in this review include prevalence, incidence, knowledge about HIV, behaviours related to transmission, access to care, barriers/facilitators to care, use of HIV care, engagement/retention in care, initiation/adherence to treatment, CD4 count, HIV-related stigma, intersectionality, HIV prevention, testing, and resilience.

## **Abstract**

**Background:** The Black community in Canada is disproportionately burdened by HIV (human immunodeficiency virus). Factors at the downstream, midstream, and upstream levels contribute to this ongoing health challenge. The upstream (structural) factors are not well understood by policymakers and the Public Health Agency of Canada continues to request better research in this area. Examining the current research landscape on HIV and the Black community in Canada will identify the gaps and serve as the first step towards addressing them.

**Objective:** The aim of this scoping review is to map existing health literature about HIV and the Black community in Canada and identify gaps that can be addressed in future research on this topic. This review also uses a scoping review methodology as a case to illustrate how this methodology can be used to identify literature gaps of a biomedical topic.

**Methods:** This thesis follows the Joanna Briggs Institute (JBI) Manual for Evidence Synthesis guidelines and was conducted through six major databases (MEDLINE, Embase, CINAHL, Web of Science, EBSCO, and Google Scholar). Studies were systematically screened using the inclusion criteria. Data was analyzed and presented using pre-determined and subsequently developed outcome categories.

**Results:** Our initial search produced 3060 abstracts. After applying our eligibility criteria and screening all abstracts and full-texts, we retained 67 articles. We added 11 studies from a recently published review on a similar topic, which resulted in a total of 78 literature sources for this study. HIV outcomes addressed in this review include prevalence, incidence, knowledge about HIV, behaviours related to transmission, access to care, barriers/facilitators to care, use of HIV care, engagement/retention in care, initiation/adherence to treatment, CD4 count, HIV-related stigma, intersectionality, HIV prevention, testing, and resilience. The majority of studies

were conducted in Ontario (n = 65, ~83.3%) and were either cross-sectional (n = 26) or qualitative (n = 14) designs. The most common outcomes reported were behaviours related to HIV transmission (n = 17), HIV-related stigma (n = 15), and access to HIV care (n = 14).

**Conclusion:** Overall, research gaps were observed at all three levels. Notable gaps include: data from provinces and territories outside of Ontario, incidence and prevalence data that can be pooled, comparisons of HIV knowledge and access to HIV care between Black and non-Black communities, information on HIV transmission through needles, and identifying structural solutions to addressing the HIV burden.

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**List of Abbreviations and Symbols**

ACB:	African, Caribbean, and Black
Anti-HTLVII:	Human T-lymphotropic Virus Types I and II
ASO:	AIDS Service Organization
BV:	Bacterial Vaginosis
CART method:	Classification and Regression Tree Analysis
CD4:	Cluster Differentiation 4
HIV:	Human Immunodeficiency Virus
HPV:	Human Papillomavirus
HSV-2:	Herpes Simplex Virus Type 2
IME:	Immigration Medical Examination
MSM:	Men Who Have Sex with Men
MSW:	Men Who Have Sex with Women
PLHIV:	People Living with HIV
PRISMA-ScR:	Preferred Reporting Items for the Systematic Reviews and Meta-Analyses Extension for Scoping Reviews
RHAC:	Regional HIV/AIDS Connection
SDOH:	Social Determinants of Health
SSA:	sub-Saharan Africa
STBBI:	Sexually Transmitted and Blood Borne Infections
UAI:	Unprotected Anal Intercourse
WHO:	World Health Organization
WLHIV:	Women Living with HIV

**Declaration of Academic Achievement**

Tatyana Graham developed and executed the study under the supervision of Dr. Lawrence Mbuagbaw with input from Dr. Marek Smieja, Dr. Andrew Kapoor, and Dr. Lydia Kapiriri. Tatyana Graham conducted the review and wrote the first draft of the thesis. Dr. Lawrence Mbuagbaw and Dr. Marek Smieja, Dr. Andrew Kapoor, and Dr. Lydia Kapiriri provided revisions to these drafts.

## **Chapter 1. Introduction**

### 1.1 Background: HIV in the Black Community in Canada

The Canadian healthcare system is structured to provide universal access and publicly funded services. Values of access to social and health services for all communities are often expressed by the federal and provincial/territorial governments [2]; however, there remain significant health disparities among racialized communities in Canada. HIV in Canada serves as an interesting case study of these disparities and has been recognized as a major global health challenge. In 2022, the Public Health Agency of Canada reported a 24.9% increase in incident HIV cases and a national rate of 4.7 per 100,000 [3], although it is unclear how many of these new diagnoses were identified upon immigration to Canada. In Canada, although the Black population makes up under 5% of the overall population, 25% of HIV infections are Black people [4]. Additionally, in 2023 Statistics Canada compared HIV-related mortality in various groups and found that mortality rates are higher in Black people when compared to White people in Canada [5]. These statistics should be considered with caution, however, as race/ethnicity information was only available for 45.3% of persons who were newly diagnosed in 2021 [6] and no information was provided regarding refugee/immigrant persons whose diagnosis was not made in Canada (which may lead to overestimating transmission). Additionally, from 2017 to 2021, similar trends are observed in the USA where Black people make up 12% of the overall population and 40% of HIV incidence cases [7]. The continued disproportionate burden of HIV on the Black community in Canada is fueled by many structural (also referred to as ‘underlying’) and non-structural factors. Unfortunately, the structural factors are not well-understood by policymakers, as better research evidence and collection of race-based health data remain on the ‘goals’ list of the Public Health Agency of Canada’s (PHAC) 2021 HIV Surveillance Report [6].

In Canada, social burdens (such as unstable housing, racism, psychological trauma, and medical trauma) create a complexity that the health research world struggles to address, as the PHAC continues to request better research in these areas [6, 8]. Therefore, presenting a comprehensive overview of the current health literature is necessary to identify gaps.

Establishing the gaps is the first step towards addressing them, which will also support the need for race-based data in all health-related areas. The objective of this scoping review is to develop a comprehensive summary of the current literature on HIV and the Black community in Canada. The sub-objectives include: mapping types of studies and articles available, identifying outcomes reported, and identifying the research gaps. Examining the current state of HIV research in the Black community may help to guide future research on this topic and other health topics.

In this review, I use a structural violence lens to identify the underlying factors that lead to the disproportionate burden of HIV on the Black community in Canada. Structural violence, a term coined by Johan Galtung in 1969, refers to economic, political, racial, and other social structures that prevent people from reaching their maximum potential [9, 10]. Utilizing this lens facilitates two important aspects of this review: it supports the conclusions/suggestions provided for future research and ensures that no determinants are overlooked in this analysis. The HIV outcomes of interest in the scoping review include, but are not limited to HIV prevalence, HIV incidence, adherence/initiation to HIV treatment, retention/engagement in HIV care, viral load suppression, CD4 count, knowledge about HIV, behaviours related to HIV transmission, access to HIV care, use of HIV care, and barriers/facilitators to HIV care.

## 1.2 Background: Scoping Review Methodology

Scoping reviews provide a comprehensive overview of the characteristics within a body of literature [11]. Authors must understand the distinction between systematic and scoping

reviews so the appropriate methodology is used [11, 12]. A systematic review aims to assess the effectiveness or feasibility of an intervention to inform clinical practice, while critically appraising relevant articles [12, 13]. This type of review involves a quality assessment of the studies included and may involve a meta-analysis [12, 13]. In contrast, a scoping review is used for describing the characteristics and concepts in the health literature [12], and can include a wide range of articles. Due to the descriptive nature of scoping reviews, a quality assessment is not needed (Munn et al., 2018). Rather than combining quantitative/qualitative data to produce synthesized results, a scoping review presents a ‘map’ of the relevant evidence [11]. However, the strength of inference drawn from scoping reviews is limited, as this methodology cannot provide conclusions on the effectiveness of interventions or treatments [12]. In this case, a scoping review methodology offers several advantages over systematic review methodology. Due to the flexibility and broad coverage of literature, this approach provides a comprehensive overview of HIV and the Black community in Canada, including emerging areas of research that may not yet have substantial evidence [14].

In 2005, Arksey and O’Malley [14] were the first to publish a framework outlining four main purposes of a scoping review: 1. Identifying the extent of research on a topic; 2. Defining the cost, feasibility, and/or relevance of conducting a systematic review; 3. Providing a targeted synthesis in a time-effective manner; and 4. Drawing conclusions and identifying gaps in the literature. Since then, new frameworks have been developed to provide methodological guidance for conducting a scoping review and reporting the findings. The JBI Manual for Evidence Synthesis provides a systematic guide for every step in the scoping review process [11, 15], while the PRISMA-ScR (Preferred Reporting Items for the Systematic Reviews and Meta-Analyses Extension for Scoping Reviews) [16] is a guideline for reporting results. This thesis

uses a scoping review methodology as a case to illustrate how this methodology can be used to identify literature gaps in the research landscape of a biomedical topic. This review also identifies how the structural factors are reflected in the key findings of HIV (human immunodeficiency virus) research in the Black community in Canada, to provide suggestions for future research.

### 1.3 Previous and Ongoing Scoping Reviews

As of March 2024, there is one published scoping review and one protocol on HIV in the Black community in Canada. The protocol by Olanlesi-Alu et al. reports the intention to provide an overview of the range and types of research conducted on the health of Black Canadians [17]. They will use the Arksey and O'Malley framework and HIV is one of the many health topics they will report [17]. The scoping review by Demeke et al. focused on reporting available health literature on HIV-related outcomes in Black MSM (men who have sex with men) in Canada [18]. Using an intersectionality lens (which, in this case, highlights the social categories 'Black' and 'MSM' that intersect and affect health and wellbeing) the review provided an evaluation of HIV prevention, treatments, and care for Black MSM [18]. While these studies have offered important contributions, they lack a comprehensive overview of structural factors associated with HIV in the Black community in Canada.

In contrast, this scoping review will broaden the understanding of specific areas of HIV care concerning the Black community, as a whole, in Canada. Using a structural violence lens, this research demonstrates the importance of investigating upstream factors on biomedical topics. Highlighting the upstream research gap creates opportunities for future studies to address deficiencies in Black health research. An example of this is observed in a systematic review that examined structural violence in relation to health-outcomes in Europe [19]. They concluded that



various structural forces inflicted harm, negatively impacted the health and well-being of citizens, and affected their ability to access healthcare services [19].

#### 1.4 The Canadian Research Landscape

The global impact of HIV has highlighted the importance of comprehensive ‘*research landscapes*’. This terminology is used by Nguyen et al. to describe the idea that, like an environmental landscape, the health research pool grows and changes overtime [20]. In this paper, a research landscape will refer to the characterization and identification of all existing approaches and interventions reported in health research on HIV in the Black community in Canada. The development of research landscapes that align with the needs of a community can be challenging; for researchers to create and for healthcare professionals and policymakers to navigate, due to the complexity of community needs and evolving challenges. If newly developed research struggles to address underlying issues in vulnerable communities, then those communities will remain disproportionately burdened. The evidence researchers and clinicians provide to policymakers for the development of guidelines and policies may have limited information on the root causes. In the Government of Canada’s 2021 HIV Surveillance Report, they mention a need for research that understands, addresses, and reduces the impact of stigma and racism [6]. Recent initiatives have begun to address these issues. Canada’s Anti-Racism Strategy 2019-2022 [21], increased funding from the Canadian Institutes of Health Research [22], and the Black HIV Manifesto [23] are some of the most prominent initiatives aimed at filling the knowledge gaps. However, a comprehensive summary of the available evidence that can inform future research priorities is lacking. This is a significant dilemma, and the first step towards addressing it is examining the research landscape on this topic and filling the gaps in health

literature. Addressing these gaps is crucial for developing effective interventions and policies that mitigate the impact of structural racism on health outcomes.

### 1.5 The Upstream Factors and Structural Violence

Using the lens of structural violence can reveal how social and institutional dynamics operate in ways that may not immediately appear related to health. The term “structural” refers to the economic, political, and social composition of our world; and this leads to “violence” because people are injured and harmed through disparity [24]. Health disparity is not only an outcome of individualized health behaviours, therefore, health research landscapes should reflect this. If HIV interventions and programs are only focused on the midstream and downstream levels (e.g. changing health behaviours) then the underlying factors that impact Black peoples’ opportunities to improve their health and their ability to make healthy decisions remain, and lead to structural violence. Structural factors can inhibit Black people’s access to HIV care, as well as their ability to achieve and maintain viral suppression [25], therefore HIV programs and interventions that are aimed at improving HIV-related prevention behaviours are not sufficient.

Figure 1 provides a simplified illustration of the three stream levels. Through addressing the community level research gap, both communities and individuals will benefit. Clinical and social approaches are not isolated at the downstream and midstream levels, they often function collaboratively. Similarly, upstream issues may require a combination of social and structural approaches, thus a plethora of research at the social and structural levels is needed. In this review, inequities at the structural and social levels include, but are not limited to: housing and financial insecurity, food security, unemployment, immigration status, stigma, racism, sexism, gender discrimination, and barriers at the health systems level.



Figure 1. Illustration of the river model (upstream, midstream, and downstream) [1].

Protocol

# HIV and Black People in Canada: Protocol for a Scoping Review

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## Abstract

**Background:** Race-based health information is necessary to address disproportionate barriers racial communities face and to achieve optimal health outcomes. In Canada, Black people are disproportionately affected by HIV. There is an emerging body of literature on this topic, but a concise summary is lacking. There is a need to collectively and critically analyze research on HIV in the Black population in Canada to identify knowledge gaps and address this disproportionate burden.

**Objective:** The aim of this scoping review is to summarize the evidence on HIV and Black people in Canada. The main outcomes of interest are HIV prevalence, access to care, HIV prevention and treatment, the HIV care cascade, and related HIV outcomes. Through this scoping review, we aim to provide a comprehensive overview of the existing literature and highlight topics that need more investigation in future research.

**Methods:** We will conduct a scoping review of electronic databases using a systematic search strategy for qualitative, quantitative, or mixed methods studies reporting on HIV and Black people in Canada. We will conduct our searches in MEDLINE, Embase, CINAHL, Web of Science, EBSCO, and Google Scholar for literature published between 1985 and 2023. Gray literature, including government reports, dissertations, and other reports, will be included. Search results will be screened, and the full text of relevant literature will be retrieved. The extraction of data will be conducted independently by 2 reviewers. Consensus meetings will be held to resolve conflicts. Our results will be reported according to the PRISMA-ScR (Preferred Reporting Items for the Systematic Reviews and Meta-Analyses Extension for Scoping Reviews).

**Results:** The initial title and abstract review identified 447 articles. These articles will be critically appraised, and relevant information will be extracted. Information from these articles will be compared using charts and tables. Screening will start in November 2023, and we anticipate publishing the scoping review in June 2024.

**Conclusions:** The findings from this scoping review will help inform policy, practice, and research on HIV and Black people in Canada.

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**KEYWORDS**

African; barrier; Black community; Black research; Canada; Caribbean; community; conflict; HIV; mixed methods; public health; qualitative; quantitative; race; racial community; racial; scoping review

## Introduction

In 2021, it was reported that the HIV epidemic had led to over 80 million people being infected and over 40 million deaths globally [1]. The World Health Organization reported in 2021 that approximately 38.4 million people worldwide are living with HIV [1]. In Canada, 4.5 people per 100,000 were diagnosed with HIV in 2021 [2]. For over 4 decades, the Black community has been disproportionately impacted by HIV [3]. Although the Black community makes up less than 5% of Canada's total population, 25% of new HIV infections are Black people [3-5]. Additionally, in 2023, Statistics Canada reported higher HIV-related mortality rates among Black Canadians when compared with other ethnicities [6].

In 2014, the Joint United Nations Programme on HIV/AIDS organization, a global initiative aimed at eradicating HIV, developed the 95-95-95 approach (where 95% of people living with HIV are diagnosed, 95% of those diagnosed are on treatment, and 95% of those on treatment have a suppressed viral load) [7]. The Government of Canada aims to end the transmission of HIV by 2030 by adopting the 95-95-95 approach [8,9]. Canada's action plan includes tracking prevalence, increasing access to HIV care and treatments, and focusing on prevention and the care cascade [3,9]. It is unclear how this goal will be fulfilled in the Black community, although Canada's Federal Initiative to Address HIV/AIDS aims to address inequities. In 2016, the results of a Canada-wide census illustrated lower educational attainment, housing access, income, and employment in the Black population when compared with the White population [10]. A study by Husbands et al [11] found that Black Canadian participants were less likely to be tested for HIV if they had racist experiences. Systematic disadvantages, lower income, poorer living conditions, higher rates of unemployment, stigma, precarious work, and many other socioeconomic factors plague the Black community and impact the effectiveness of HIV control and care [3,5,12]. These factors also affect Black people's ability to achieve and maintain viral suppression, which is necessary to end transmission [13].

In addition to behavioral modifications to prevent HIV infection, preventive treatment options for persons at high risk of acquiring HIV include pre-exposure prophylaxis, a combination of antiretroviral drugs [3]. On the other hand, people living with HIV can achieve viral suppression through antiretroviral therapy, therefore decreasing the risk of transmission [3]. Although these options are available, there are still many barriers to accessing them for people in the Black community [8]. A study conducted by Etowa et al [14] identified multilevel barriers, including those at the individual and health system levels that require community-level, health policy, and intersectional interventions. Barriers also remain at other stages of the cascade, such as diagnosis, adherence to antiretroviral therapy, and sustaining care over time [8]. Black French speakers living in predominantly English-speaking provinces also face additional language and communication barriers in HIV diagnosis and treatment [15]. Black people in Canada living with HIV may also be overlooked in surveillance data due to a lack of ethnicity- and race-based data [5]. Therefore, it is beneficial to review the available health literature pertaining to the people living with

HIV in the Black community to capture the overall progress toward achieving the 95-95-95 and equitable care.

Some researchers are concerned that once the government of Canada meets the 95-95-95 target, investments in HIV care and research may wane, thus compromising outcomes for the Black community and other subgroups of people who have not met these targets [3]. Identifying the gaps in Black health literature related to HIV is necessary as it will help us better understand the specific vulnerabilities to HIV infection faced by Black people and identify how Black people living with HIV can be better supported. Additionally, having this knowledge can help in the development of a more inclusive HIV response plan and provide the necessary information to fulfill Canada's Federal Initiative [16].

Although several studies have investigated HIV in Black people, this evidence has not been synthesized in a systematic way, and therefore the state of the evidence is unknown and knowledge gaps have not been thoroughly mapped. This scoping review will highlight areas of HIV research that require further evaluation and identify gaps in the current research regarding HIV and Black people in Canada. A preliminary search was conducted using the Cochrane Database of Systematic Reviews and MEDLINE; no scoping or systematic reviews were found on this topic. The purpose of this scoping review is to inform health policy makers, HIV organizations, and researchers on the state of the evidence on the disproportionate burden of HIV on the Black community in Canada and its impact on their lives.

## Methods

### Overview

This scoping review will use the approach of Peterson et al [17] to inform current HIV research, policies, and education. In contrast to a systematic review, which aims to answer a research question, this scoping review will appraise a wide range of information to illustrate how HIV impacts the Black community in Canada.

This scoping review will be conducted and reported according to PRISMA-ScR (Preferred Reporting Items for the Systematic Reviews and Meta-Analyses Extension for Scoping Reviews) guidelines [18]. The data will be summarized in tables and described narratively. Where possible, we will use means (SD) or counts (percent) to summarize the data from the included studies. Key findings from the studies will be summarized narratively, and the data will be interpreted to identify knowledge gaps, challenges, and opportunities for evidence generation on HIV in the Black community in Canada.

### Collaboration

The public and patients were not involved in this review.

### Eligibility Criteria for Articles

#### Types of Studies

Qualitative, quantitative, mixed methods, experimental, and observational study designs will be considered. Additionally, systematic reviews and gray literature will be considered. To fulfill the eligibility criteria, a study must include data on HIV

and Black people in Canada and address an outcome of interest. reviewers are not fluent in other languages ([Textbox 1](#)). Literature in English and French will be included, as our

**Textbox 1.** Eligibility criteria.

**Inclusion criteria**

- Qualitative, quantitative, mixed methods, experimental, observational studies, systematic reviews, and government reports, dissertations, and gray literature
- Articles in English and French
- Prevalence, access to care, prevention, treatment, the care cascade (initiation of treatment, adherence to medication, and retention in care), and other HIV-related health outcomes

**Exclusion criteria**

- Other articles and websites
- Articles in other languages
- Other topics, whether related to Black people in Canada or not

**Outcomes**

The outcomes of interest are prevalence, access to care, prevention, treatment, the care cascade (initiation of treatment, adherence to medication, and retention in care), and other HIV-related health outcomes.

**Search Strategy**

We will conduct a comprehensive and exhaustive search of studies on HIV and Black people in Canada. The search strategy is shown in [Textbox 2](#).

**Textbox 2.** Search strategy outlining concepts and alternate search terms.

**Black ethnicity and racial groups**

- minority health/ or exp Minority Groups/ or minority.mp.
- minorit\*.mp.
- communit\*.mp.
- Africa\*.mp.
- Afrique.mp.
- exp Caribbean Region/ or Caribbean\*.mp.
- Black or blacks.mp.
- Black canadian\*.mp.
- Mixed race\*.mp.
- 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9

**Canadian provinces and territories**

- Canada.tw.
- Canad\*.tw.
- 11 or 12
- Newfoundland and Labrador.mp.
- Prince Edward Island.mp.
- ile du prince Edouard.mp.
- Nova Scotia\*.mp.
- la Nouvelle-ecosse.mp.
- New Brunswick.mp.
- le Nouveau-Brunswick.mp.
- Quebec\*.mp.
- le Quebec.mp.
- Ontario or Ontarian\*.mp.
- lOntario.mp.
- Manitoba\*.mp.
- le Manitoba.mp.
- Saskatchewan\*.mp.
- la Saskatchewan.mp.
- Alberta\*.mp.
- lAlberta.mp.
- British Columbia\*.mp.
- la Colombie-Britannique.mp.
- Yukon.mp. or Yukon Territory/
- Le Yukon.mp.
- Northwest Territories.mp.
- les Territoires du Nord-Ouest.mp.
- Nunavut.mp.
- le Nunavut.mp.
- Health canada.mp.
- Sante canada.mp.

- CIHR.mp.
- 14 or 15 or 16 or 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23 or 24 or 25 or 26 or 27 or 28 or 29 or 30 or 31 or 32 or 33 or 34 or 35 or 36 or 37 or 38 or 39 or 40 or 41

#### HIV

- HIV Infections/ or HIV-1/ or HIV Antigens/ or HIV Seropositivity/ or HIV Testing/ or exp HIV/ or HIV.mp. or HIV Seroprevalence/ or HIV Seronegativity/ or HIV-2/
- HIV infect\*.mp.
- seroconversion/
- 44 or 45 or 46
- 10 and 13 and 42 and 46

### Electronic Search

We will search MEDLINE, Embase, CINAHL, Web of Science, and Google Scholar from 1985 (the date HIV surveillance began in Canada) to 2023 [19]. Key terms will be searched in combination with each other. Some examples include HIV, Black, African, Caribbean, and Canada.

### Reference Lists

The list of references of the included studies will be examined for relevant articles.

### Gray Literature

We will search various government reports, dissertations, and other reports that are significant to this scoping review. Relevant organizations and authors will be contacted.

### Screening

Citations collected from the search will be collated in EndNote [20]. After updating the references and removing the duplicates, we will use the DistillerSR platform (DistillerSR Inc), literature review software, to process the articles [21]. We will first screen titles and abstracts. Only the articles that meet our eligibility criteria will be retained. Articles in languages other than English and French will be excluded, as our reviewers are fluent in those languages. Potentially relevant articles will be downloaded as full text for further screening.

A pilot of the eligibility criteria search strategy will be conducted by 2 reviewers. A sample data collection of 50 abstracts will be done to ensure consistency in the search strategy and approach. Interrater reliability will be measured using the Kappa statistic [22]. The screening will progress when there is at least 80% consensus. The process of screening will be as follows: examining titles and abstracts, analyzing full text for relevance, and then completing data extraction and quality review by 2 reviewers simultaneously.

### Data Extraction

We will extract data from the full text of included articles, including bibliometric information (author, year, and language), study design, province, source of funding, main objectives, participants, sample size, proportion of females, outcome, community involvement, outcomes reported, and key findings. We will pilot our forms on 5% of the data to ensure that they are clear and can be used consistently. All data processing (title and abstract screening, full-text screening, and data extraction) will be conducted by 2 independent reviewers. Disagreement will be resolved by consensus, and if consensus cannot be reached, a third senior reviewer will adjudicate. Agreement will be measured using the Kappa statistic [22]. Data referring to HIV prevalence in the Black community and related statistics will also be extracted. The data extraction framework is shown in [Table 1](#).



**Table 1.** Data extraction framework.

Main category and subcategory	Description
Authors	The institution where authors are based and country of primary affiliation
Lead author	The institution where author is based and country of primary affiliation
Funders	Funder country of origin
Year of publication	The year the research was published
Aims or objectives of study	Stated aim of the study
<b>Methodology</b>	
Study design: subcategory of quantitative, qualitative, or mixed methods	Study design of research within stated category (eg, cross-sectional, ethnography, etc)
Population	Eligibility criteria to participate in the study
Data collection method	Methods of data collection
Data collection and evaluation tools	Types of tools used if applicable and if developed or adapted specifically for this study
Outcome measures	Primary and secondary outcomes (where applicable), or selected measures of success (eg, how were objectives of the study measured)
Community involvement	Was the community involved in the development of methods or data collection tools (eg, key stakeholder involvement in design), co-designing activities
Data analysis	The method of data analysis
<b>Results</b>	
Reported outcomes	Key HIV outcomes or quantitative or qualitative results related to primary stated outcomes
Key findings	Summarize any key findings that report on HIV and Black people in Canada

## Ethical Considerations

This study does not require human participants. Only secondary data from publicly available sources will be used, and thus ethics approval is not required. The findings will be disseminated through a peer-reviewed manuscript, conferences, abstracts, and an MSc thesis.

## Results

We have identified 447 articles as of May 2023. A critical appraisal of the articles collected will be conducted for the extraction of relevant information. Tables and charts will be used to illustrate similarities and differences in data from various articles. Screening will start in November 2023, and we anticipate publishing the scoping review in June 2024.

## Discussion

### Overview

The current data and health information related to HIV in the Black population in Canada have not been synthesized systematically. There is a need to identify knowledge gaps in

order for future research to fill those gaps. This is significant as it can help us understand how and why the Black population in Canada continues to have disproportionately higher HIV infection rates, HIV mortality, and limited access to HIV treatments and care. The lack of HIV health policies and approaches in Canada that are focused toward disproportionately burdened communities, such as the Black community, is concerning. The results of this scoping review will have implications for the development of health policy and how HIV organizations can better support Black people in Canada. As this scoping review is conducted, data will be critically analyzed to ensure that interpretations, comparisons, and implications are reported and concluded accurately.

### Limitations

The Canada-focused approach in this study is the first limitation of this review, as the findings cannot be accurately generalized to global circumstances. However, there is potential for theoretical generalizations to Black communities in countries facing similar dilemmas. A second limitation of this review is that our eligibility criteria exclude articles that are not in English or French. There is a possibility that articles with important information will be left out of our review.

## Acknowledgments

This scoping review is being contributed towards a thesis paper for a Master of Health Research Methodology at McMaster University (TG). This review will be supervised by Dr Lawrence Mbuagbaw, an Associate Professor and Research Methods Scientist in Clinical Epidemiology and Biostatistics at McMaster University.

## Data Availability

Data sharing is not applicable to this article as no data sets were generated or analyzed during this study.

## Conflicts of Interest

None declared.

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## Abbreviations

**PRISMA-ScR:** Preferred Reporting Items for the Systematic Reviews and Meta-Analyses Extension for Scoping Reviews

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## **Chapter 3. Results**

### 3.1 Study Characteristics

The main characteristics of the studies are presented in Appendix 3. All 78 studies were published in English. The amount of publications on HIV in the Black community in Canada has increased exponentially: from two publications prior to 2000, to nine publications between 2001 – 2009, to 27 publications between 2010 – 2018, and 40 publications from 2019 – 2023. A large portion of studies were conducted in Ontario (n = 65, ~83.3%), however, four studies were Canada-wide and 13 were conducted in Alberta, Quebec, British Columbia (BC), Manitoba, and Nova Scotia. The study designs varied, but most were cross-sectional (n = 26) or qualitative (n = 14). A fair amount of studies included only Black men (n = 18), Black people generally (n = 10), Black MSM (n = 10), or Black women (n = 9). Some studies included a general cohort with other ethnicities (n = 7) and did not report the amount of Black people, but reported findings in the Black sample separately.

### 3.2 Key Outcomes and Study Results

Our results of the HIV-related outcomes demonstrated the wide array of approaches to addressing the disproportionate burden of HIV on the Black community in Canada (Appendix 3 and 4). We started off with 13 pre-defined outcomes (listed in Chapter 2), and notably, none of the studies included reported on viral load suppression. Two of the most common outcomes were pre-determined and one was created during data extraction: behaviours related to HIV transmission (n = 16), HIV-related stigma (n = 15), and knowledge about HIV (n = 15). Some articles reported on more than one key outcome and were therefore placed in multiple outcome categories. Data was analyzed and presented using the key outcomes as categories (Appendix 5). In this review, I discuss all the of pre-determined outcomes and outcomes that were reported by

more than one article for the subsequently developed categories, remaining outcomes can be found in Appendix 5.

### 3.3 Pre-Determined Categories and Results

#### *Prevalence of HIV*

Four studies reported HIV prevalence findings. Three studies were conducted in Ontario and one in Quebec. All four studies were cross-sectional observational designs. Publication dates were from 1992 to 2019. They reported that higher prevalence was found in Black men with a history of STIs (namely syphilis, HPV, and HSV-2) [26], Black people born outside of Canada when compared to those born in Canada, [27], Haitian men when compared to Haitian women [27], and Black MSM when compared to MSM from other ethnicities [28]. In one study with Haitian participants, the overall HIV prevalence was 1.3% (1.6% in men and 1.1% in women), and the HIV infection rate was two times higher in those who had travelled to Haiti in the previous five years when compared to those who had not [27].

#### *Incidence of HIV*

Three studies reported on HIV incidence, two were Canada-wide retrospective studies with general cohorts, and one was a secondary analysis with Black men in Ontario. Of the cohort studies, one study reported on HIV cases from 2009 to 2014 and the other in 2016. The secondary analysis was published in 2020. Both studies reported that the highest overall incidence of HIV was in White people (40.4% and 46.8%) when compared to Black people (21.9% and 18.1%) [29, 30]. However, when age was taken into account, the highest incidence was observed among Black infants in both studies. It is also important to note that ethnicity data were only available for about half of reported cases in 2016 [29]. Notably, in the secondary analysis

on Black men in Toronto there were differences observed in the rate of HIV infection when comparing MSW, MSM, or both (rates of 2.91%, 42.11%, and 36.59% respectively) [31].

### *Knowledge about HIV*

Fifteen articles presented findings on HIV-related knowledge. Most studies/reports were conducted in Ontario, one was Canada-wide. The designs varied (four qualitative, three reports, three cross-sectional, two mixed methods, one retrospective cohort, one secondary analysis, and one exploratory). The participants were mainly Black men and Black MSM; with African youth, women, and Black people generally also included. Publication dates spanned from 2007 to 2023. Many articles cited a need for increased HIV-related health literacy and knowledge through the use of outreach programs, support services partnering with clinics, inclusive organizations, and interventions [32-36]. HIV knowledge in Black Canadian-born people compared to African-born people was discussed in two articles [37, 38]. A cross-sectional study reported that, when Canadian-born patients living with HIV and patients born in sub-Saharan Africa (SSA) are both given an HIV knowledge test, Canadian-born patients scored higher [38]. An exploratory study expressed that the gap in HIV knowledge in African-born men may be because sex education in many African schools is discouraged [37]. Lack of HIV knowledge is also discussed as a barrier to making decisions about PrEP use [39], condom use [40], HIV care [41], and HIV testing [42]. One qualitative study highlighted that participants expressed that gaining HIV knowledge carried the risk of “destabilizing precious feelings of safety” [43].

### *Behaviours related to HIV Transmission*

Sixteen studies reported on behaviours related to HIV transmission. The majority of studies were conducted in Ontario, with one in BC, one in Quebec, and one Canada-wide. Study

designs included cross-sectional (8), secondary analysis (2), retrospective survey (2), qualitative (1), mixed methods (1), meta-analysis (1), and exploratory analysis (1). Participants included mainly Black men/MSM, as well as African youth, Black women, and general Black cohorts. Studies were published between 2006 and 2023. Several studies discussed the factors associated with condom use. One study conducted in Ontario explained that Caribbean-born Black men (when compared to American-born Black men) were more likely to use condoms [44]; while another study reported that African MSM were most likely to use condoms when compared to both Canadian-born and Caribbean-born men [45]. Less access to HIV protective measures, lower likelihood of HIV testing, and knowing their partner's HIV status were also associated with less condom use [46-48]. Lower rates of casual sex were observed in Black MSM (when compared to MSM overall); Black men who are non-immigrants, identify as Christian or Muslim, have more HIV knowledge, have Pro-Black attitudes, lower traditional masculinity scores [28, 49]. One exploratory study with African-born youth explained that it was common to assume their partner does not have HIV and asking their partner about HIV status is perceived as a lack of trust [37].

#### *Access to HIV Care*

Thirteen studies presented findings on HIV care access. Most studies were conducted in Ontario, with one in BC and one in Manitoba. The study designs included five qualitative, three cross-sectional, one scoping review, one retrospective survey, one dissertation, one exploratory, and one mixed methods. Participants in these studies were Black men/MSM, Francophone PLHIV, WLHIV, general Black cohorts, and HIV service providers. Publications spanned from 2006 to 2023. Several studies cited older age, longer time in Canada (or being born in Canada),

and having a primary care doctor as factors associated with increased access to HIV care [50-52]. Also, many studies reported that structural and organizational issues appear to be the root of limited access to HIV testing, treatment, and overall care. Lack of information, systemic racism, and insufficient number of physicians are some factors mentioned [53-55]. Language was mentioned in two studies, as there is limited access to HIV care for Francophone PLHIV and those who have difficulty speaking English [56, 57]. One qualitative study discussed the characteristics of less accessible communities in Toronto, which included: having a greater proportion of Black Canadians, a higher unemployment rate, lower educational attainment, and a greater number of female-headed households [58]. Another qualitative study highlighted shifts that occurred in HIV care access during the COVID-19 pandemic, a few participants expressed that overall support diminished during that time [59].

#### *Barriers and Facilitators to HIV Care*

Six studies reported on barriers and facilitators to care. Most studies were conducted in Ontario, with one in BC. Study designs included three qualitative, one ethnography, one cross-sectional, and one ground theory. Participants consisted mainly of Black men, however, Black MSM, Black WLHIV, general Black cohorts and migrants were also included. Publications were from 2015 to 2023. The majority of studies only reported on barriers to care; two studies reported facilitators to care. Barriers to care for men and MSM involved cultural norms, lack of HIV knowledge, negative healthcare experiences, cost of PrEP, and fear of stigmatization (and being seen at the clinic) [41, 54, 60]. Barriers for WLHIV were cost/area of living, fear of contracting COVID-19 (during the pandemic), and depression [59]. Barriers for migrants included lack of referrals from immigration medical examiners (IMEs), negative encounters with



immigration and public health service agents, lack of HIV knowledge, immigration laws and policies, stigmatizing attitudes from the Black community, and fear of being seen at the HIV clinic [61, 62]. Facilitators to care expressed by Black men and migrants were positive experiences with the Canadian healthcare system (when compared to “back home”), better training for immigration doctors, increasing health literacy, and increasing access to HIV knowledge [41, 61].

### *Use of HIV Care*

Three studies presented findings on the use of HIV care and were conducted in different provinces (Ontario, Alberta, and BC). Study designs include a secondary analysis, qualitative study, and retrospective cohort observational study. Participants were Black men, Black WLHIV, and a general cohort. Studies were published in 2012, 2022, and 2023. In the secondary analysis with Black men, four themes emerged about making HIV healthcare services ‘cool’ to increase the use: health promotion as a function of Black family systems, opportunities for health dialogue with peers, partnering heterosexual Black men within the intervention, and strengthening institutional health literacy related to Black men’s health [35]. In the general cohort retrospective study, they reported that compared to men, women tended to begin HIV care use at a younger age (32.9 versus 35.5 years old) and women were more likely to be Aboriginal/Métis (21.5%), Black (28.9%), or born outside of Canada [63]. The qualitative study with WLHIV was conducted during the COVID-19 pandemic, and through interviews they found that the majority of women did not feel that the COVID-19 pandemic impacted their ability to use HIV services (although a few felt dismissed by the decreased availability and support) [59].

### *Engagement and Retention in Care*

Two studies reported on engagement and/or retention in care, both were conducted in Ontario. One was a cross-sectional study with Black women (published in 2016), and the second was an ethnography with Black adults (published in 2022). The cross-sectional study highlighted the complexity of factors that impact patients' engagement and retention in HIV care, which affects their overall quality of life [64]. The ethnography study details how the intersection of immigration, public health, and healthcare creates barriers to engagement in care for Black people, which is exacerbated by the complex and fragmented healthcare system, lack of knowledge of the system, difficulty finding a family physician, long wait times for medical appointments, and issues accessing HIV treatment [62].

### *Initiation and Adherence to Treatment*

Three studies presented findings on initiation and/or adherence to treatment. Two studies were conducted in Ontario only, and one was conducted in Ontario, Quebec, and BC. The study designs include two ethnographies with Black adults and one prospective cohort with Black women. The studies were published in 2022 and 2023. The first ethnography highlighted that the absence of drug coverage and difficulty accessing HIV treatment impact initiation [62]. The second ethnography reported that underlying structural violence is one of the factors leading to nonadherence to antiretroviral therapy (ART) and detectable viral loads [10]. The prospective cohort reported on the association between HIV-related stigma, racial and gender discrimination, resilience, and adherence to ART [65]. Based on self-report, they found that higher stigma and gender discrimination are associated with lower levels of resilience, and higher levels of racial

discrimination is associated with greater resilience; greater resilience predicted having an ART adherence above 95% [65].

#### *CD4 Count*

One large Ontario HIV Treatment Network prospective cohort study, with a general clinical cohort, was published in 2019. They used a multivariate regression model to look at factors associated with late presentation and low CD4 counts [66]. Being African, Caribbean, and Black was associated with an increased odds of late presentation and lower CD4 count, however, there were many other predictors reported [66].

### 3.4 Subsequently Developed Categories and Results

#### *HIV-related Stigma*

Fifteen studies presented findings on HIV-related stigma. The majority of the studies were conducted in Ontario; however, some were conducted in Alberta, BC, Quebec, and Nova Scotia. The study designs included six cross-sectional, four qualitative, three mixed methods, one prospective cohort, and one retrospective cohort. Participants were primarily Black women but also included Black MSM, Black men, immigrants from SSA, Black church congregants, Black youth, and general cohorts. Publications spanned from 2008 to 2023. Three studies reported HIV-related stigma concerning the gay community, including the belief that HIV is a disease of gay men and experiences of marginalization within the gay communities, HIV healthcare organizations, and Canada overall [67-69]. The association between stigma, racial/gender discrimination, and depression was highlighted through several results. Findings reported that HIV-related stigma scores were positively associated with higher depression scores, 1/3 of Black HIV-positive women in the study reported moderate to severe depression (which was five times

higher than the rate of depression among Canada’s general population of women), and social support and resilient coping did not moderate the impact on HIV-related stigma or discrimination on depression [65, 70, 71]. Discussions of stigma throughout the immigration process were detailed in two studies as participants recalled experiences of emotional distress during the immigration medical exams and HIV testing [68, 72]. Black mothers living with HIV experienced stigmatization from their family members due to their inability to breastfeed [73, 74]. Some studies found that HIV-related stigma increased vulnerability to HIV infection by introducing barriers to care, such as fear of being seen at the clinic [53, 54]. Various studies measured the participants’ HIV-related stigma and found that scores were higher in Black men and women when compared to other ethnicities, Muslim youth when compared to non-Muslim and Caribbean youth, older Black people when compared to younger Black people, people with lower HIV knowledge, people living in poorer neighbourhoods, and those who reported higher levels of disagreement with same-sex relationships [75-77]. Two studies reported on themes for responding to HIV-related stigma, these included: faith-based organizations and leaders, public health education, collaboration and empowerment to support decision-making, and interventions focused on increasing HIV knowledge which will also decrease stigma [36, 54].

### *Intersectionality*

Four studies reported on intersectionality, a lens that examines how various social identities (e.g. race, gender, sexual orientation, health status) interact to shape individuals’ health outcomes [78]. All four studies were conducted in Ontario, and one was also conducted in Quebec and BC. Study designs include an ethnography, prospective cohort, retrospective survey, and mixed methods. Participants were mainly Black women but also included Black men and

Black adults generally. Publications dates were in 2019, 2022, and 2023. Intersectionality was discussed in different ways for each study. A mixed methods study reported unique challenges that result from the intersectionality of motherhood, culture, living with HIV, and infant feeding [74]. An ethnography discussed how the intersection of immigration, public health, and the healthcare legislative framework created barriers to care for Black people [62]. A retrospective survey detailed the intersection of behavioural, demographic, and structural factors that are associated with HIV testing [47]. A prospective cohort study highlighted the intersection of HIV stigma, racial discrimination, and gender discrimination in relation to ART adherence [65].

### *HIV Prevention*

Four articles, conducted in Ontario, reported on HIV prevention. Three were qualitative studies and one was an organizational report. Participants were mainly general Black cohorts but also included Black women and HIV service providers. The articles were published in 2007, 2008, 2012, and 2022. HIV prevention was discussed in the context of access to preventative services and programs, PrEP use, and HIV preventative intervention models. Two articles reported a need to increase access to HIV prevention services for Black people and Black MSM [79, 80]. A qualitative study reported that participants identified several factors that are crucial to their decision to use PrEP: the ‘where and how’ to access PrEP, the cost of PrEP, and whether public and private health insurance will cover the cost [39]. Another qualitative study discussed that many current HIV preventive intervention models were perceived by Black women as irrelevant to them, requiring them to individually combat powerful structural forces/social pressures, and requiring them to protect themselves at the cost of alienation from traditional bastions of support [81].

### *HIV Testing*

Three studies, conducted in Ontario, presented findings on HIV testing. Study designs included a cross-sectional, prospective cohort, and secondary analysis. Participants were Black men, Black MSM, and Black PLHIV. Publication dates were 2014, 2020, and 2022. Two studies reported characteristics of participants who were more likely to have tested for HIV. The cross-sectional study reported that younger men were less likely to have tested when compared to older men and African and Caribbean-born men were less likely to have tested when compared to Canadian-born men [82]. The prospective cohort found that participants without prior testing accounted for 71.6% of HIV/AIDS diagnoses during the study (75% men, 25% women), and diagnoses were fairly evenly distributed between Black and White men [83]. The secondary analysis discussed indicators of those who had been tested, which included age, number of past sexual partners, and past STIs [31].

### *Resilience*

Two studies, conducted in Ontario, reported findings on resilience. Study designs include a qualitative and retrospective cohort study, with all participants being Black men. Publication dates were 2022 and 2023. Both studies reported factors that contribute to resilience in Black men. The qualitative study reported that resilience to HIV emerges from bonding with other men, support from their family and community, and self-confidence and determination [84]. The retrospective cohort study found that support from institutional services, the development of trust with service providers, and strong connections with their local AIDS service organization all helped lead to resilience in HIV-positive Black men [85].

## **Chapter 4. Discussion**

### 4.1 Midstream and Downstream Factors

Using Figure 1 as a guideline, we note that the current research landscape for HIV in the Black community in Canada is largely discussed in the context of midstream and downstream factors. In this case, midstream factors include HIV knowledge, behaviours related to HIV transmission, HIV prevention, and resilience. Downstream factors include medical interventions, treatments, and HIV care. Out of the 78 articles included in this review, 61 articles discussed midstream- and/or downstream-level factors in the key findings. It is important to highlight, however, that interventions and policies may belong at more than one of the three levels.

Research on midstream factors may take on a social-level approach to addressing HIV in the Black community in Canada. This can be illustrated through investigating the impact of the social environment (e.g. HIV education, housing stability, transportation, and employment) and HIV-related behaviours (e.g. drug uses, sexual behaviours, and injection). Although discussions of HIV knowledge were extensive, there was no evidence comparing knowledge between Black and non-Black people in Canada; such information may provide insight on any disparities and gaps in health education. Additionally, no articles discussed HIV transmission through sharing needles or injection drug use in the Black community; information on this could highlight communities in Canada that may benefit from interventions such as safe injection sites.

Articles focused on downstream factors can adopt clinical-level approaches to addressing HIV. Examining disease (e.g. HIV diagnosis and comorbidities) and mortality trends (e.g. mortality related to HIV) in the Black community in Canada provides insight on the biomedical burden of HIV. Although incidence and prevalence of HIV was investigated by a number of articles, the data was limited and therefore could not be pooled. Also, there is a need

to understand why there is high incidence of neonatal acquisition of HIV in the Black community in Canada, when compared to non-Black communities, as it is unclear if this is a reflection of gaps in obstetrical care or other forms of care. Additionally, HIV care and treatment was discussed extensively, but not in comparison to other ethnic/racial communities. Such information would be helpful to understand if access is different in the Black community when compared to non-Black communities. Lastly, one article discussed CD4 count using a multivariable regression model and found specific characteristics associated with a higher odds of late diagnosis. It would be helpful to have information on whether the HIV infections are Canadian acquired or reflect barriers to testing and care among immigrants and refugees.

Therefore, although the research landscape is widely midstream and downstream-level focused, there remains important gaps in comparing outcomes in Black and non-Black communities, producing adequate data that can be pooled, and identifying where HIV infections are acquired. Future research at these levels could focus on filling these gaps, as this information helps inform interventions and policies.

#### 4.2 Upstream Factors and Structural Violence

Upstream factors include HIV-related stigma, intersectionality, and policy. Research on upstream factors may take on a structural-level approach to addressing HIV in the Black community in Canada. This can be illustrated through examining HIV-related policies (e.g. health policy and public policy), inequities (e.g. racial, class, gender, and immigration status), and institutions (e.g. governmental, educational, religious, cultural, and criminal justice system). Upstream factors were discussed in the key findings of 29 articles, ‘structural violence’ was discussed in one article, and potential upstream-level approaches were cited in two articles in this review.



The impact of intersectionality (the intersection of social identities and/or structural factors) on access to care, engagement in care, HIV knowledge, and behavioural factors was evident. In some cases racial and gender discrimination was discussed in combination with HIV-related stigma, leading to depression and fear of being identified and mistreated at HIV care services [62, 65, 70, 79]. Immigrant status was associated with limited access to care, decreased likelihood of HIV testing, and fear of being seen at an HIV center [41, 47, 51, 62, 72, 78, 86]. Full-time employment was associated with a higher likelihood of testing for HIV [47]. One ethnography study found that the intersection of social and structural inequities creates structural violence through constraining Black peoples' engagement and retention in HIV care and ART adherence [10]. Notably, religious affiliation (in this case, Christians and Muslims) was associated with higher likelihood of HIV testing and lower rates of behaviours related to HIV transmission [49, 52, 87].

Although HIV-related stigma and intersectionality were mentioned in the key findings of many articles, HIV-related policy was not among the key findings reported. This gap may be a reflection of a lack of race-based/ethnicity-based data, which makes it difficult to create targeted health policies. Ensuring that health policies take into account intersecting social identities, cultural differences, the historical mistrust in healthcare systems among Black communities, accessibility issues, and other factors is a major obstacle that will require extensive research.

The first approach offered by Etowa et al. (2022) included several components: faith-based organizations and leaders, public health education, and collaboration/empowerment to support decision-making. The second solution offered by Palangi et al. (2015) cited from the facilitators mentioned by participants was better training for medical doctors and immigration doctors. Unfortunately, in both cases, structural forces are not approached with structural

solutions. Although they are aimed towards improving the experiences and health behaviours of Black people in Canada, they do not address the root causes of structural violence. Combatting dynamic structural forces and social pressures with individual-level solutions is not sufficient in the battle against structural violence.

It is also important to highlight the interconnectedness of upstream factors, the broad implications of structural violence, and how these challenges may impact the research landscape. Factors such as financial status, housing stability, and food insecurity interact and compound the difficulties faced by the Black community in Canada. There is a need to develop research projects that comprehensively examine the interconnectedness of upstream factors in context of various health issues. Doing so will provide a means to improving health equity, as this knowledge is crucial for creating strategies that ensure all individuals have equitable opportunity to achieve optimal health. Also, current health policies and practices that seem harmless can perpetuate health inequities in various communities. Research is needed to understand how structural violence functions in various communities, how intersecting identities influence experiences of structural violence, and what policy changes need to be made to address these issues.

#### 4.3 Deviations from Published Protocol

Overall, we followed the protocol methodology closely. However, there are deviations worth mentioning. Firstly, an expert health science librarian, Neera Bhatnagar, developed our search strategy and provided guidance on the selection of databases. Secondly, after searching Google Scholar we included the first 200 articles from the search results. Thirdly, we included scoping review articles in our review. Fourthly, in addition to the pre-defined HIV outcome

categories, we developed five new categories based on the patterns in the key findings. When more than one article reported a key finding, we created a new category. We produced the following categories: HIV-related stigma, intersectionality, HIV prevention, HIV testing, and resilience. Lastly, during the screening process, a similar scoping review was published on HIV in Black MSM in Canada [18]. After our full-text screening, 67 articles were retained and we added 11 relevant articles from that scoping review.

#### 4.4 Study Strengths and Limitations

There are some limitations of our scoping review that are worth mentioning. Firstly, the methodology itself has inherent limitations due to the breadth rather than depth of information [88]. This method was appropriate, however, given our research objective was to summarize the evidence on HIV in the Black community in Canada. Secondly, our search had minimal restrictions (English/French language and publication date) and included five well-known scientific databases and a grey literature database (Google Scholar). Although including both peer-reviewed and grey literature provides a balanced view of available evidence [89]; scoping reviews do not assess the methodological rigor of articles [12]. However, we decided that the benefits outweigh the costs in this case since providing a comprehensive snapshot of the current research landscape is one of our main objectives.

A key strength of our review is the innovative approach we use to examine the current research landscape on HIV in the Black community in Canada. Also, our scoping review uses rigorous methodology and a comprehensive search strategy.

## **Chapter 5. Conclusion**

### 5.1 Research Gaps and Future Considerations

Research gaps are observed at all three levels (upstream, midstream, and downstream) and include, but are not limited to: data that can be pooled for incidence and prevalence, comparisons in HIV knowledge between Black and non-Black communities, HIV transmission through needles, differences in access to care between Black and non-Black communities, structural issues and solutions to addressing HIV-related stigma, and the perpetuation of structural violence in the context of HIV research. It is unclear how factors at all three levels may interact with each other and create complex challenges, future research may address this. There are also gaps in methodology, as the most common design was a cross-sectional study design. More longitudinal and mixed methods designs may better capture the complexities of structural factors and their impact on HIV care and outcomes. More research is also needed to evaluate the effectiveness of HIV-related current policies and practices on reducing HIV disparities. Additionally, more data from Black populations outside Ontario is needed. Although Ontario has the largest Black population, the Prairies have the fastest growing population [90], which needs to be accounted for through future research.

The growing research landscape on HIV in the Black community in Canada is evident. Current research reports are a wide array of outcomes but only report potential solutions at the midstream and downstream levels. We recommend that future research focus on developing upstream/structural-level solutions to disparities in access to HIV care, knowledge, testing, ART adherence, engagement and retention in care, HIV stigma, behavioural factors, and other HIV outcomes.

## 5.2 Conclusion

The majority of studies were conducted in Ontario (~83.3%), thus more research is needed in the remaining provinces. More research is needed to understand the upstream factors that contribute to HIV disparities, including structural issues. Future research should focus on evaluating current health policies and practices; and developing policies and practices that address the root causes of HIV disparities. The burden of HIV and its consequences are not shared equally across racial and ethnic groups in Canada. The dynamics of this burden span across all three levels of factors (upstream, midstream, and downstream). Research on HIV in the Black community in Canada report on a wide range of outcomes with generally consistent findings in various Black populations across Canada. The three most prominent outcomes include behaviours related to HIV transmission, HIV stigma, and access to HIV care. Although structural factors are mentioned in many articles, there are few that offer approaches to eliminating the disproportionate burden. There is a need for more research addressing structural forces with structural solutions.

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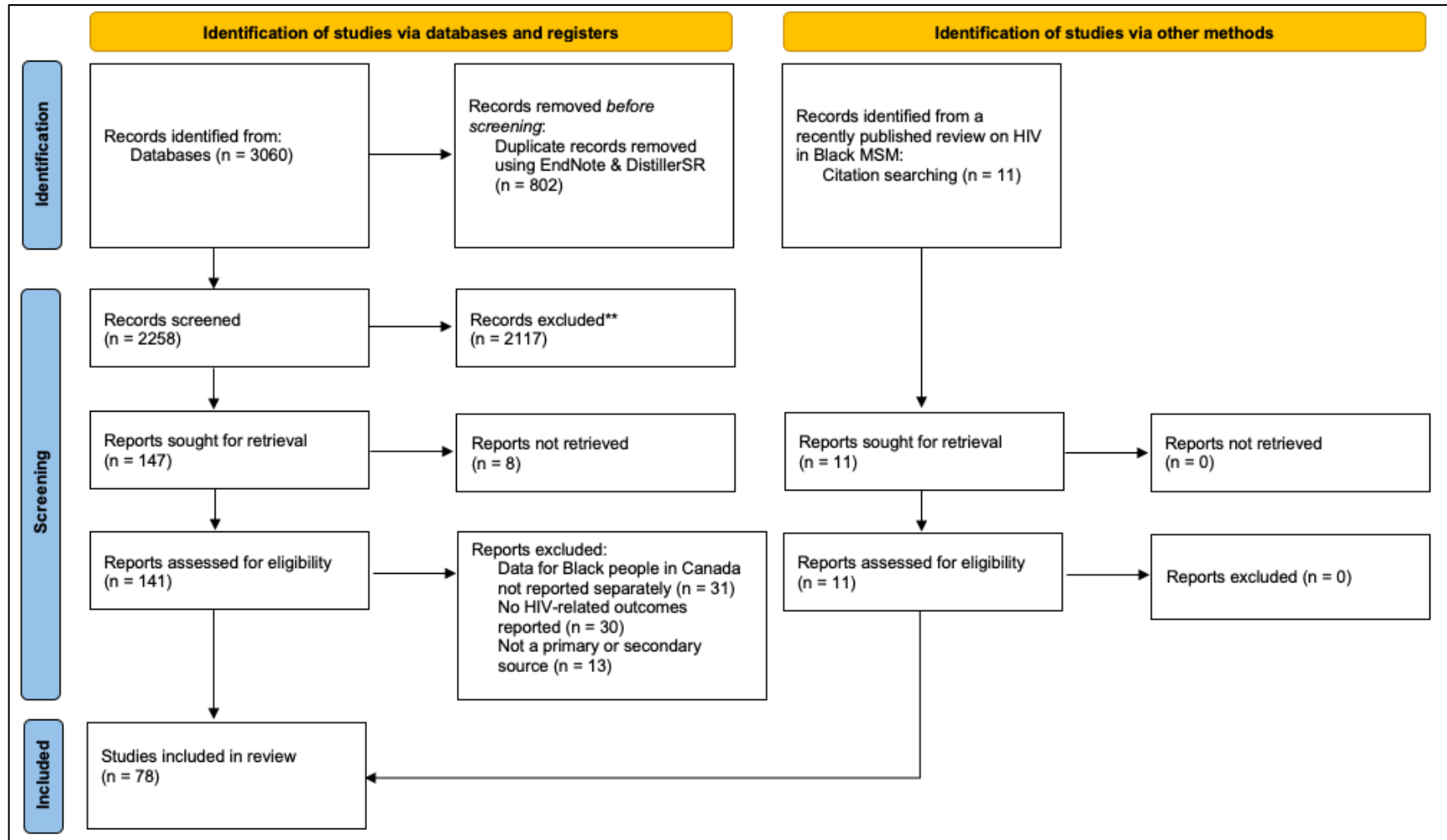


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**Chapter 7. Appendices**

**Appendix 1. Prisma flow diagram**



**Appendix 2.** Characteristics of the included studies

First Author, Year	Location	Study Design	Sample	Outcomes	Key Findings
Absalom, 2020 [91]	Ontario (Toronto, Ottawa)	Qualitative	21 (Black MSM)	Access to HIV care	Black MSM expressed: <ol style="list-style-type: none"> <li>1. Limited access to HIV interventions</li> <li>2. Lack of connections to preventative interventions</li> <li>3. Experiences of racial and sexual discrimination in HIV services</li> </ol>
Adrien, 1999 [27]	Quebec (Montreal)	Cross-sectional observational	5,039 (Haitians)	Prevalence of HIV	<ol style="list-style-type: none"> <li>1. HIV prevalence was 1.3% (1.6% in men and 1.1% in women).</li> <li>2. Lower among those born in Canada or who had resided in Canada longer.</li> <li>3. Among subjects who had travelled to Haiti in the previous 5 years was 2.0%, twice the rate of those who had not.</li> </ol>
Ajiboye, 2022 [39]	Ontario (Toronto)	Qualitative	29 (Black)	HIV Prevention  Knowledge about HIV	<ol style="list-style-type: none"> <li>1. Participants identified several factors contributing to difficulty in decision making regarding PrEP: <ul style="list-style-type: none"> <li>• inadequate knowledge and unrealistic expectations,</li> <li>• lack of clarity about personal values, and</li> <li>• issues of support and resources</li> </ul> </li> <li>2. Participants identified information the following as crucial to their decision making on PrEP: <ul style="list-style-type: none"> <li>• ‘where and how’ to access PrEP,</li> <li>• the cost of PrEP, and</li> <li>• whether public and private health insurance will cover it,</li> </ul> </li> </ol>
Amibor, 2012 [79]	Ontario (Greater Toronto Area)	Qualitative	7 (HIV service providers)	HIV Prevention	Four Themes regarding barriers associated with accessing HIV-prevention services: <ol style="list-style-type: none"> <li>1. Cultural Competence and Sensitivity among Service Providers: a lack of cultural competence and poor identification with the communities being served.</li> <li>2. Stigma: the fears of being identified by other</li> </ol>

					<p>members of the community while accessing care.</p> <ol style="list-style-type: none"> <li>3. Realities of the Social Determinants of Health: Several determinants were described, which were reiterated in some form or another by the participants.</li> <li>4. Insufficient Resource Allocations: lack of resources, which typically translated into the under-funding, under-staffing of, and the poor geographical distribution of services.</li> </ol>
Andany, 2011 [92]	Ontario	Cross-sectional observational	778 (121 Black)	Presence of lipodystrophy	<ol style="list-style-type: none"> <li>1. Regarding the presence of lipodystrophy, there was no difference between Blacks, Whites, and Other ethnicities.</li> <li>2. For males, all ethnicities had statistically similar rates of lipodystrophy and central lipohypertrophy, but there was a trend for Whites (61%) and Others (53%) to report higher levels of lipodystrophy than Blacks (48%).</li> <li>3. For females, there were no statistically significant ethnic differences in the rates of lipodystrophy, peripheral lipoatrophy, and central lipohypertrophy. However, there was a trend for Black women (57%) to report more central lipohypertrophy when compared with White (36%) and Other women (42%).</li> </ol>
Antabe, 2021 [93]	Ontario (London)	Qualitative	37 (Black men)	Access to HIV care	<ol style="list-style-type: none"> <li>1. Structural factors that limit heterosexual ACB men’s access to preventive health care services: <ul style="list-style-type: none"> <li>• limited awareness of HIV risks and service availability,</li> <li>• disconnect with health care spaces, and</li> <li>• issues of stigma both within and outside the ACB community.</li> </ul> </li> </ol>
Antabe, 2022a [84]	Ontario (Toronto, London, Ottawa, Windsor)	Qualitative	210 (Black men)	Resilience	<ol style="list-style-type: none"> <li>1. Resilience to HIV emerges from: <ul style="list-style-type: none"> <li>• bonding with other men,</li> <li>• family and community,</li> <li>• self-confidence and self-determination</li> </ul> </li> </ol>
Antabe, 2022b	Ontario	Secondary	69 (Black	Knowledge about	Four themes on making health services ‘cool’:

[35]	(Toronto)	analysis	men)	HIV Use of HIV care	<ol style="list-style-type: none"> <li>1. health promotion as a function of Black family systems;</li> <li>2. opportunities for healthy dialogue among peers through non-judgmental interaction;</li> <li>3. partnering heterosexual Black men in intervention design; and</li> <li>4. strengthening institutional health literacy related to Black men’s health.</li> </ol>
Antabe, 2023 [85]	Ontario (London)	Retrospective cohort observational	30 (Black men)	Resilience	<p>Resilience in HIV+ men:</p> <ol style="list-style-type: none"> <li>1. PLHIV used health and institutional services as protective assets. For instance, a participant living with HIV recounted how with the help of some agencies, he accepted the realities of his HIV serostatus and initiated treatment.</li> <li>2. ACB men receiving these services may over time develop trust and establish friendship with service providers, which helps them in overcoming stress and depression associated with living with HIV.</li> <li>3. Participants proposed measures mainly focused on improving their connection to ASOs which they considered valuable to accessing information and other useful resources, such as testing, that can build their capacity to adequately respond to HIV.</li> </ol>
Baidoobonso, 2013 [40]	Ontario (London)	Mixed methods	188 (Black)	Knowledge about HIV	<p>Barriers that prevented women from HIV protection:</p> <ol style="list-style-type: none"> <li>1. Need for love or acceptance in the context of sexual and marital relationships,</li> <li>2. Lack of empowerment among manifested into lack of ability to negotiate condom use,</li> <li>3. Intimate partner violence, and abuse in general, and</li> <li>4. Ignorance about HIV.</li> </ol> <p>For ACB men, service providers mentioned:</p> <ol style="list-style-type: none"> <li>1. Barriers related to the expression of masculinity, such as believing that they cannot control themselves sexually, and</li> <li>2. Cultural norms and beliefs dictating that they not disclose information, and that they were expected to be knowledgeable about everything.</li> </ol>

Baidoobonso, 2014 [48]	Ontario (London)	Secondary analysis	125 (Black)	Behaviours related to HIV transmission	Regarding HIV-related factors: <ol style="list-style-type: none"> <li>1. Knowing one’s partner’s HIV status was associated with less frequent condom use, and</li> <li>2. Reporting more frequent exposure to HIV prevention messages was associated with more frequent condom use.</li> </ol>
Black Coalition for AIDS Prevention (Black CAP), 2007 [32]	Ontario (Toronto)	Annual Organizational Report		Knowledge about HIV	<ol style="list-style-type: none"> <li>1. Outreach program increased HIV awareness.</li> </ol>
Black CAP, 2015 [33]	Ontario (Toronto)	Annual Organizational Report		Knowledge about HIV	<ol style="list-style-type: none"> <li>1. Outreach programs for MSM increased awareness about HIV, testing, and access to services.</li> </ol>
Black CAP, 2020 [34]	Ontario (Toronto)	Annual Organizational Report		Knowledge about HIV	<ol style="list-style-type: none"> <li>1. The ‘Many Men, Many Voices’ program created to provide culturally-based HIV education and increase access to PrEP.</li> <li>2. Support services increased food access, financial stability, and employment.</li> <li>3. Partnerships with local clinics and online resources were created to further support Black MSM.</li> </ol>
Blot, 2014 [50]	Ontario (London)	Dissertation	188 (Black)	Access to HIV care	Two main factors of influence with regard to access to care: <ol style="list-style-type: none"> <li>1. Older age, and</li> <li>2. Length of time in Canada.</li> </ol> <p>Additional factors included having a primary care provider, and the inappropriate fear of contagion of HIV/AIDS.</p> <ul style="list-style-type: none"> <li>• Those with a primary care provider were more likely to have heard of RHAC compared to those who did not have one. (This is reassuringly different from what the literature suggests on ACB community members’ interactions with primary care</li> </ul>

					providers)
Blot, 2017 [51]	Ontario (Middlesex- London)	Exploratory	188 (Black)	Access to HIV care	In bivariate analysis, factors associated with access: <ol style="list-style-type: none"> <li>1. Participants older than 50 years of age were approximately two and a half times as likely to have been to RHAC compared to those younger than 30 years of age</li> <li>2. Canadian-born ACB people were 77% less likely to have been to RHAC compared to recent immigrants</li> <li>3. Participants born in Canada were 76% less to have been to RHAC compared to immigrants who had been in the country for 5 years or less</li> </ol>
Bourgeois, 2017 [29]	Canada	Retrospective survey	2,344 (General cohort)	Incidence of HIV	<ol style="list-style-type: none"> <li>1. Distribution of HIV cases in 2016 with a known race/ethnicity were White (40.4%), followed by Black (21.9%) and Indigenous (21.2%).</li> <li>2. Distribution of perinatally-exposed infants (from 1984 to 2016): 49.8% were reported as Black, 23.8% as White and 17.8% as Indigenous.</li> </ol> <p>Of note, however, ethnicity data were available in only about half of reported cases.</p>
Caprara, 2013 [94]	Ontario (Toronto)	Retrospective cohort observational	141 (Pregnant women living with HIV)	Proportion of Black pregnant women living with HIV	<ol style="list-style-type: none"> <li>1. Majority of women were from Afro-Caribbean countries and had recently immigrated to Canada.</li> <li>2. There was a statistically significant trend in increasing numbers of women of Black ethnicity over the study period (may be a reflection of increasing immigration)</li> </ol>
Chiavetta, 1992 [95]	Ontario (Toronto)	Cross-sectional observational	853 (483 Caribbean)	Prevalence of HIV	<ol style="list-style-type: none"> <li>1. Eleven subjects (2.3%) of Caribbean origin were confirmed to be positive for anti-HTLV I/II.</li> <li>2. All anti-HTLV I/II-positive subjects were negative for anti-HIV and HBsAg, and four (36.4%) were positive for antibody to HBsAg and to hepatitis B core antigen.</li> </ol>
Crichlow, 2016 [67]	Ontario (Toronto), Nova Scotia (Halifax)	Qualitative	19 (Black MSM)	HIV-related Stigma  Knowledge about	Black MSM expressed: <ol style="list-style-type: none"> <li>1. Experiences of stigma in gay communities, in HIV healthcare organizations, and in Canada overall.</li> <li>2. A need for more HIV-related health literacy to</li> </ol>



				HIV	reduce HIV risk
dela Cruz, 2020 [72]	Alberta	Mixed methods	8 (immigrants from SSA living with HIV)	HIV-related stigma	Thematic categories from interview data: <ol style="list-style-type: none"> <li>1. Experiences of HIV-related emotional distress during the IME,</li> <li>2. Varied experiences of HIV testing during the IME,</li> <li>3. Inconsistent patterns of linkage to medical care, psychosocial supports, and</li> <li>4. Engagement in the HIV care cascade</li> </ol>
Djiadeu, 2020a [56]	Manitoba (Winnipeg), Ontario (Ottawa, Toronto)	Scoping Review	2 studies (Black Francophone PLHIV)	Access to HIV care	<ol style="list-style-type: none"> <li>1. HIV and mental health services in the city of Winnipeg had minimal Francophone staff: leading to the use of unqualified interpreters, appointment rescheduling, and long waiting lists.</li> <li>2. African Francophone health service providers described the situation as critical.</li> </ol> <p>Three main themes:</p> <ol style="list-style-type: none"> <li>1. Social context of HIV care access in French,</li> <li>2. Language and cultural sensitivity and diversity, and</li> <li>3. Emerging reality in Canada’s ACB Francophone communities.</li> </ol>
Djiadeu, 2020b [31]	Ontario (Toronto)	Secondary analysis	460 (Black men)	Incidence of HIV  HIV testing	<ol style="list-style-type: none"> <li>1. Rate of HIV infection in MSW, MSM, or both (2.91%, 42.11%, 36.59% respectively).</li> <li>2. The CART method identified the number of male partners (6 or higher) as the best predictor of current HIV infection.</li> <li>3. The best indicators of those who had been tested for HIV was: age, number of past sexual partners and past STIs.</li> </ol>
Etowa, 2020 [73]	Ontario (Ottawa)	Cross-sectional observational	89 (Black women)	HIV-related Stigma	<ol style="list-style-type: none"> <li>1. The average HIV-related stigma score was highest in Miami, followed by Ottawa and Port Harcourt.</li> <li>2. A statistically significant mean difference in HIV-related stigma between mothers living with HIV in the two North American cities and those in the African city.</li> <li>3. Mothers living with HIV in Ottawa and Miami experienced greater levels of HIV-related stigma compared with those residing in Port Harcourt.</li> </ol>

<p>Etowa, 2022a [44]</p>	<p>Ontario (Ottawa, Windsor)</p>	<p>Cross-sectional observational</p>	<p>430 (Black men)</p>	<p>Knowledge about HIV  Behaviours related to HIV transmission</p>	<p>Factors associated with having HIV and STIs:</p> <ol style="list-style-type: none"> <li>1. Among condom users, Black Caribbeans had higher odds of being diagnosed with HIV, with the corresponding odds being lower among Black Americans.</li> <li>2. Those with no/pre-high school education had higher odds of being diagnosed with HIV when compared with those who had completed university.</li> <li>3. Landed immigrants/permanent residents who were condom non-users had lower odds of HIV.</li> <li>4. Having more than 5 casual partners showed higher odds of STI diagnosis among condom users.</li> </ol> <p>About 70.20% did not have good knowledge of HIV, 68.10% had positive attitude towards condom use, and 62.82% were not regular condom user.</p>
<p>Etowa, 2022b [53]</p>	<p>Ontario (Toronto, Ottawa)</p>	<p>Mixed methods</p>	<p>107 (Black)</p>	<p>Access to HIV care  HIV-related Stigma</p>	<ol style="list-style-type: none"> <li>1. HIV-related stigma increases vulnerability to HIV infection by reducing access to HIV prevention/testing, and introducing barriers to treatment, care, and support for people living with HIV.</li> <li>2. Provider-related issues (e.g. lack of information/training) and organizational issues (e.g. systemic racism) continue to represent major barriers to HIV testing and treatment.</li> </ol>
<p>Etowa, 2022c [74]</p>	<p>Ontario (Ottawa)</p>	<p>Mixed methods</p>	<p>11 (Black women)</p>	<p>Behaviours related to HIV transmission  HIV-related Stigma  Intersectionality</p>	<ol style="list-style-type: none"> <li>1. Although breastfeeding is an important aspect of the Black motherhood experience, many mothers adhered to the recommended feeding practices (ie. formula-feeding) to prevent their babies from contracting HIV; and expressed regret</li> <li>2. Black mothers living with HIV dealt with family members' negative perceptions due to their inability to breastfeed.</li> <li>3. Findings demonstrate the challenges that result from the intersectionality of motherhood, culture, living with HIV, and infant feeding.</li> </ol>

<p>Etowa, 2022d [54]</p>	<p>Ontario (Ottawa)</p>	<p>Qualitative</p>	<p>63 (Black men)</p>	<p>Access to HIV care  Barriers and facilitators to care  HIV-related Stigma</p>	<p>Concerns expressed by ACB men:</p> <ol style="list-style-type: none"> <li>1. Privacy was compromised during service delivery (e.g. HIV clinics are usually situated in open places where people could see those visiting the clinic).</li> <li>2. Long wait times and insufficient physicians.</li> <li>3. Limited opportunities for employment and upward financial mobility (e.g. left with little option but to take on low-skilled jobs to survive).</li> <li>4. Stigma in their access to HIV-related care services (e.g. isolation of a PLHIV from other patients at a hospital).</li> </ol> <p>Themes for responding to HIV stigma include:</p> <ol style="list-style-type: none"> <li>1. Faith-based organizations and leaders,</li> <li>2. Public health education,</li> <li>3. Collaboration and empowerment to support decision making.</li> </ol>
<p>Etowa, 2023 [96]</p>	<p>Ontario (Toronto, Ottawa, London, Windsor)</p>	<p>Mixed methods</p>	<p>866 (Black men)</p>	<p>Knowledge about HIV</p>	<p>Three most common misconceptions (% of men who believed them):</p> <ol style="list-style-type: none"> <li>1. People are likely to get HIV by deep kissing, if their partner has HIV (40.1%)</li> <li>2. Taking a test for HIV one week after having sex will tell a person if she or he has HIV (31.6%)</li> <li>3. A person cannot get HIV from oral sex (25%)</li> </ol> <p>Factors that contributed to more HIV misconceptions:</p> <ol style="list-style-type: none"> <li>1. Discrimination,</li> <li>2. Negative condom attitudes, and</li> <li>3. Sexual debut at an older age.</li> </ol> <p>Factors that contributed to less HIV misconceptions:</p> <ol style="list-style-type: none"> <li>1. Being born in Canada,</li> <li>2. Higher education, and</li> <li>3. Being more resilient.</li> </ol>
<p>Forbes, 2012 [97]</p>	<p>Canada</p>	<p>Retrospective cohort observational</p>	<p>2,692 (Pregnant women and infants)</p>	<p>Births in women living with HIV</p>	<ol style="list-style-type: none"> <li>1. Overall proportion of white women declined (47% in period 1 to 25% in period 2), whereas the proportion of black (35 to 48%) and aboriginal (14 to 20%) women increased.</li> <li>2. Aboriginal and black women made up 3.8% and 2.5% of the overall Canadian population (at the time of this study), yet they represented 19% and</li> </ol>

					<p>46%, respectively, of the HIV-infected pregnant women in this study.</p> <p>3. As a reflection of immigration in Ontario and Quebec: Approximately 60% of mothers in those provinces were black women from Africa and the Caribbean</p>
<p>Gardezi, 2008 [68]</p>	<p>Ontario (Toronto)</p>	<p>Qualitative</p>	<p>104 (Black)</p>	<p>HIV-related Stigma</p>	<p>Themes mentioned in focus groups:</p> <ol style="list-style-type: none"> <li>1. Compared to HIV, other issues seem to be more prominent for Black Canadians (e.g. racism, intergenerational conflict, unemployment, issues with Black youth in the school, and immigration issues)</li> <li>2. HIV-positive participants experience multiple forms of stigma, (e.g. the immigration process affects how African and Caribbean people experience/respond to HIV in Canada).</li> <li>3. Women’s sexual health (including violence/abuse, issues negotiating condom use, and the familial pressure or cultural expectations).</li> <li>4. Silence in African and Caribbean communities was a recurring theme (sex, sexuality and physical or psychological health issues were rarely discussed in their homes or communities).</li> <li>5. Caribbean participants discussed the belief that HIV is a “gay disease”.</li> <li>6. The assumption that HIV does not infect people who are following their religion (e.g. a Somali woman said, “Muslim woman, she’s allowed to touch only her husband ... So they [will] say ‘you are Muslim, how come you get this disease?’”)</li> </ol>
<p>George, 2012 [69]</p>	<p>Ontario (Toronto)</p>	<p>Qualitative</p>	<p>175 (Black MSM)</p>	<p>HIV-related Stigma</p>	<p>Black MSM expressed:</p> <ol style="list-style-type: none"> <li>1. Experiencing HIV-related stigma, even when they do not have HIV</li> <li>2. The need for services addressing intersecting stigmas (ie. racially and sexually-related stigma)</li> <li>3. Marginalization within the gay community</li> </ol>
<p>George, 2013</p>	<p>Ontario (Toronto)</p>	<p>Cross-sectional</p>	<p>168 (Black</p>	<p>Behaviours</p>	<ol style="list-style-type: none"> <li>1. Inconsistent condom use varied by place of birth:</li> </ol>

[45]		observational	MSM)	related to HIV transmission	<p>Canadian-born men and Caribbean-born men were less likely to consistently use condoms than African-born men.</p> <ol style="list-style-type: none"> <li>2. A multiple regression analysis revealed that being born in Africa favoured condom use.</li> <li>3. Inconsistent condom use was higher when participants' sexual partner was non-black.</li> <li>4. Variables not associated with inconsistent condom use: previous sexually transmitted infections, sex with women, sex while travelling, and drug use.</li> </ol>
George, 2014 [82]	Ontario (Toronto)	Cross-sectional observational	168 (Black MSM)	HIV testing	<ol style="list-style-type: none"> <li>1. Younger men were less likely to have tested for HIV, when compared to older men.</li> <li>2. African and Caribbean-born men were less likely to have tested for HIV, when compared to Canadian-born men</li> </ol>
Husbands, 2006 [46]	Ontario (Toronto)	Cross-sectional observational	175 (Black MSM)	Behaviours related to HIV transmission	<ol style="list-style-type: none"> <li>1. 39.3% had sex with HIV-negative men, 36.4% with men of unknown status</li> <li>2. 61.5% reported always using condoms, 41.7% reported using condoms consistently</li> <li>3. Main reason for not using protection during sex was access to prevention methods</li> </ol>
Husbands, 2020a [36]	Ontario (Toronto, Mississauga, Ottawa)	Retrospective cohort observational	173 (Black church congregants)	<p>Knowledge about HIV</p> <p>HIV-related Stigma</p>	<ol style="list-style-type: none"> <li>1. Mean HIV knowledge scores increased from baseline to follow-up (after use of PRAISE intervention).</li> <li>2. Congregants who were exposed to all three intervention components achieved a significant reduction in stigma compared with those who were exposed to one or two components.</li> <li>3. Except for baseline knowledge score, none of the predictors in the multi-variable model significantly impacted congregants' knowledge score after intervention exposure.</li> </ol>
Husbands, 2020b [55]	Ontario (London, Toronto)	Qualitative	14 (Black men)	Access to HIV care	<p>Themes mentioned about access to HIV programs and services:</p> <ol style="list-style-type: none"> <li>1. Availability and accessibility,</li> <li>2. Marginalization and exclusion,</li> </ol>

					<ol style="list-style-type: none"> <li>3. Racism,</li> <li>4. Supporting Black men.</li> </ol> <p>Participants from iSpeak expressed:</p> <ol style="list-style-type: none"> <li>1. Readiness to be involved in community responses to HIV among Black people in Ontario.</li> <li>2. Personal challenges that HIV presents and creative strategies to mobilize appropriate care.</li> <li>3. Engaging each other, and their female counterparts, in empowering relationships to promote health and critical health literacy.</li> <li>4. Openness to engaging with healthcare professionals and others who may help them manage their health (but they also carefully weigh the social risks and personal benefits associated with disclosure).</li> </ol>
Husbands, 2021  [98]	Ontario (Toronto, Ottawa)	Cross-sectional observational	18 (Black church congregants)	Experiences in Black PRAISE intervention	<p>Impact of the Black PRAISE intervention:</p> <ol style="list-style-type: none"> <li>1. Reflections on the importance of HIV and Black PRAISE in their church.</li> <li>2. Effective community engagement on HIV-related stigma.</li> </ol> <p>Challenges participants faced:</p> <ol style="list-style-type: none"> <li>1. Understanding their faith in the context of HIV.</li> <li>2. Translating beliefs about stigma reduction into practice.</li> </ol> <p>Perspectives on the future of Black PRAISE and stigma reduction:</p> <ol style="list-style-type: none"> <li>1. Providing a biblical foundation,</li> <li>2. Promoting opportunities for continued learning, and</li> <li>3. Facilitating partnerships with local organizations and capacity building.</li> </ol>
Hwang, 2012  [63]	Alberta (Calgary)	Retrospective cohort observational	2,394 (general cohort)	Use of HIV care	<ol style="list-style-type: none"> <li>1. Compared with men, women tended to present at a younger age (32.9 versus 35.5 years of age).</li> <li>2. Women were more likely to be Aboriginal/Métis (21.5%), Black (28.9%), or born outside of Canada (36.6%).</li> </ol>
Kaukinen, 2006	Ontario (Toronto)	Cross-sectional observational	244 (HIV service)	Access to HIV care	Characteristics of the less accessible communities (north-western and eastern areas) in Toronto:

[58]			providers)		<ol style="list-style-type: none"> <li>1. Greater proportion of black Canadians,</li> <li>2. Higher levels of unemployment,</li> <li>3. Lower levels of high school completion, and</li> <li>4. Greater numbers of female-headed households.</li> </ol> <p>This suggests an unequitable distribution of HIV-related services across Toronto neighbourhoods, potentially leaving these communities vulnerable and underserved.</p>
Kerr, 2018 [75]	Ontario (Windsor)	Cross-sectional observational	495 (Black youth)	HIV-related Stigma	<p>Using ANOVA, stigma scores were:</p> <ol style="list-style-type: none"> <li>1. Significantly different by ethno-religious groups (African Muslim youth demonstrated significantly higher stigma than African non- Muslim and Caribbean youth).</li> <li>2. Significantly higher for males than females.</li> <li>3. Not different in stigma by immigration status.</li> </ol> <p>Multivariate ordinary least squares regression showed:</p> <ol style="list-style-type: none"> <li>1. Poorer neighborhood quality and less knowledge are associated with higher stigma scores.</li> <li>2. More experiences of discrimination are trending towards a statistically significant positive association with stigma.</li> </ol>
Kerr, 2021 [76]	Ontario	Cross-sectional observational	316 (Black church congregants)	HIV-related Stigma	<ol style="list-style-type: none"> <li>1. Individuals with higher HIV-related stigma scores reported: more disagreement with same-sex relationships, greater religiosity, older age, lack of PLHIV contact, and more time in Canada.</li> <li>2. Individuals lacking PLHIV contact reported greater concern over occasional PLHIV encounters and heightened endorsement of PLHIV discrimination.</li> </ol>
Konkor, 2019 [47]	Ontario (London)	Retrospective survey	156 (Black men)	Behaviours related to HIV transmission  Intersectionality	<p>Of the heterosexual ACB men:</p> <ol style="list-style-type: none"> <li>1. 75% reported using a condom during their most recent intercourse</li> <li>2. 47% did not know the HIV status of their regular female sexual partners</li> <li>3. 56% reported having one sexual partner</li> <li>4. 58% being single</li> </ol> <p>Behavioural, demographic and structural factors were significantly associated with testing for HIV:</p> <ol style="list-style-type: none"> <li>1. Those who used condoms during their last sexual</li> </ol>

					<p>intercourse were less likely to test for HIV.</p> <ol style="list-style-type: none"> <li>2. Having multiple sexual partners was associated with higher odds of testing for HIV.</li> <li>3. Respondents who are full-time employed were more likely to test.</li> <li>4. Immigrants were more likely to test for HIV than Canadian men.</li> <li>5. Those with college education, high school and below and reported ever experiencing discrimination were less likely to test for their HIV status.</li> </ol>
Konkor, 2020 [78]	Ontario (London)	Cross-sectional observational	155 (Black men)	Access to HIV care	<ol style="list-style-type: none"> <li>1. Difficulty accessing healthcare was associated with about 44% (model 1) and 35% (model 2) lower odds of testing for HIV after accounting for behavioural and demographic variables</li> <li>2. Having trouble accessing healthcare was significantly associated with 19% (model 3) and only 5% (model 4) lower odds of testing for HIV after accounting for the effect of structural factors</li> </ol>
Konkor, 2021a [87]	Ontario (Toronto, Ottawa, London, Windsor)	Retrospective survey	879 (Black men)	Behaviours related to HIV transmission	<p>Heterosexual ACB men who reported earlier first sexual intercourse tended to be:</p> <ol style="list-style-type: none"> <li>1. Younger age groups, compared with the older age cohorts.</li> <li>2. Residing in Toronto, Ottawa, and London, compared with those in Windsor.</li> <li>3. Reporting four or more concurrent sexual partners.</li> </ol> <p>On the contrary, being an immigrant, a Christian or Muslim were associated with delayed sexual debut.</p>
Konkor, 2021b [57]	Ontario (Toronto, Ottawa, London, Windsor)	Retrospective survey	600 (Black men)	Access to HIV care	<p>Higher likelihood of experiencing difficulties accessing HIV-related healthcare was associated with:</p> <ol style="list-style-type: none"> <li>1. Living in Windsor, London and Toronto, when compared with Ottawa.</li> <li>2. Increase on the discrimination scale.</li> <li>3. Not having a family doctor.</li> <li>4. Being older than 50 years, when compared with those younger than 20 years.</li> <li>5. A high school education or lower, and those with</li> </ol>



					<p>college education, when compared with their counterparts who attained university education.</p> <p>6. Difficulty with the English language.</p> <p>Lower likelihood of experiencing difficulties accessing HIV-related healthcare was associated with:</p> <ol style="list-style-type: none"> <li>1. Being single or in a relationship.</li> <li>2. Having full-time or part-time employment.</li> <li>3. Earning over \$100,000 a year.</li> </ol>
Konkor, 2022 [52]	Ontario (Toronto, Ottawa, London, Windsor)	Cross-sectional observational	879 (Black men)	Access to HIV care	<p>Men less likely to engaging in HIV testing were:</p> <ol style="list-style-type: none"> <li>1. Canadian born (second-generation immigrants), when compared with their first-generation immigrant counterparts.</li> <li>2. Younger, when compared with Older participants.</li> <li>3. Higher on the ‘masculinity’ measurement scale.</li> <li>4. Less likely to have a sexual partner.</li> <li>5. More likely to be Muslim, when compared to Christians or those who identified as belonging to other religions.</li> </ol>
Lee-Foon, 2022 [60]	Ontario (Toronto)	Ground Theory	22 (Black MSM)	Barriers and facilitators to care	<p>Participants’ responses revealed:</p> <ol style="list-style-type: none"> <li>1. Ineffective PrEP dissemination efforts at institutions (e.g. sexual healthcare clinics)</li> <li>2. Clinics focused on young, racialized sexual and gender minority populations.</li> <li>3. Factors that impeded their knowledge of and willingness to use PrEP, including: <ul style="list-style-type: none"> <li>• Cost</li> <li>• PrEP use concerns</li> <li>• PrEP stigma</li> <li>• Low socio-economic status</li> </ul> </li> </ol>
Lewis-Peart, 2007 [80]	Ontario (Toronto)	Organizational Report		HIV Prevention	<ol style="list-style-type: none"> <li>1. Interventions are needed for Black MSM</li> <li>2. HIV testing and prevention programs are needed for young Black MSM</li> <li>3. HIV prevention messaging need to recognize Black MSM and address social constructs (ie. masculinity)</li> </ol>
Liu, 2007	Ontario	Cross-sectional	2,438	Behaviours	<ol style="list-style-type: none"> <li>1. Higher prevalence of HIV in Black MSM when</li> </ol>

[28]		observational	(General MSM)	related to HIV transmission  Prevalence of HIV	<p>compared to some other ethnic groups.</p> <ol style="list-style-type: none"> <li>In Toronto, approximately 25-30% of MSM had at least 10 casual partners, except Black MSM (14.1%).</li> <li>In Toronto, 6% of Black MSM engaged in UAI with either a casual partner, HIV-positive regular partner, or unknown HIV status regular partner in the past six months.</li> </ol>
Logie, 2013 [70]	Ontario (Toronto, Ottawa, Niagara falls, Kitchener, Hamilton)	Cross-sectional observational	173 (Black women)	HIV-related Stigma	<p>Results revealed that HIV-related stigma, gender discrimination, and racial discrimination were significantly correlated with one another and, with depression:</p> <ol style="list-style-type: none"> <li>1/3 of HIV-positive ACB women in Ontario, reported moderate/severe depression (5 times higher than the rate of depression among Canada’s general population of women).</li> <li>HIV-related stigma was associated with higher depression scores.</li> <li>Social support and resilient coping did not moderate the impact of HIV-related stigma, racial discrimination, or gender discrimination on depression (it partially mediated the effect of HIV-related stigma on depression).</li> </ol>
Logie, 2016 [64]	Ontario (Toronto, Ottawa, Niagara falls, Kitchener, Hamilton)	Cross-sectional observational	173 (Black women)	Retention in care  Engagement in care	<p>Extending beyond satisfaction with care to highlight the complexity of factors that constitute HIV engagement in and continuity of care, that in turn may contribute to QOL. Results indicated:</p> <ol style="list-style-type: none"> <li>Age was not significantly associated with any variables.</li> <li>Income was associated with significantly higher overall QOL scores.</li> <li>Overall HIV Engagement in and Continuity of Care Scale (HECCS) scores were significantly and positively correlated with overall QOL scores.</li> </ol>
Logie, 2017 [71]	Ontario (Toronto, Ottawa, Niagara falls, Kitchener,	Cross-sectional observational	173 (Black women)	HIV-related Stigma	<p>Structural equation model results:</p> <ol style="list-style-type: none"> <li>HIV-related stigma was positively correlated with racial discrimination and depression, and negatively correlated with social support and QOL.</li> </ol>

	Hamilton)				<ol style="list-style-type: none"> <li>2. Racial discrimination was positively correlated with depression, and negatively correlated with social support and QOL.</li> <li>3. Depression was negatively correlated with social support and QOL, and social support positively correlated with QOL.</li> </ol>
Loutfy, 2012 [77]	Ontario (Toronto)	Cross-sectional observational	1,026 (general cohort)	HIV-related Stigma	<ol style="list-style-type: none"> <li>1. Women had significantly higher median total stigma scores.</li> <li>2. White women had lower median total stigma scores than Black, Aboriginal, and Asian/Latin-American/Un- specified women.</li> <li>3. Black men had significantly higher total stigma scores than Aboriginal, Asian/Latin-American/Unspecified, and White men.</li> </ol>
Luginaah, 2022 [42]	Ontario (Ottawa, Toronto, Windsor, and London)	Cross-sectional observational	829 (Black men)	Knowledge about HIV  Behaviours related to HIV transmission	<p>Higher likelihood of HIV testing (within the last 12 months) was significantly associated with:</p> <ol style="list-style-type: none"> <li>1. Increase in HIV transmission knowledge.</li> <li>2. Having two or more concurrent sexual partners.</li> <li>3. Knowing their regular female sexual partner’s HIV status to be negative.</li> </ol> <p>Lower likelihood of HIV testing (within the last 12 months) was significantly associated with:</p> <ol style="list-style-type: none"> <li>1. Sexual debut between the ages of 16 and 20 years.</li> <li>2. Reporting to have never had sex.</li> </ol>
Malama, 2023 [65]	Ontario, Quebec, British Columbia	Prospective cohort observational	1,422 (415 Black women)	HIV-related Stigma  Intersectionality  Adherence to medication	<p>Intersection between HIV stigma and racial/gender discrimination indicated:</p> <ol style="list-style-type: none"> <li>1. Association between racial discrimination and having an undetectable viral load.</li> <li>2. Higher levels of HIV-related stigma and gender discrimination were associated with lower levels of resilience, and higher levels of racial discrimination were associated with greater self-reported resilience.</li> <li>3. Greater resilience at the wave 2 predicted both having an ART adherence above 95% and having an undetectable viral load at wave 3.</li> </ol>

McKay, 2023 [59]	British Columbia	Qualitative	18 (Black WLWHIV)	Access to HIV care  Use of HIV care  Barriers and facilitators to care	Themes that emerged from interviews: <ol style="list-style-type: none"> <li>1. Virtual care service delivery was impersonal or inadequate, and made participants feel like they were not sufficiently assessed by care providers.</li> <li>2. Majority of participants did not feel that the COVID-19 pandemic impacted their ability to utilize HIV services (a few felt dismissed by the decreased availability and support).</li> <li>3. Barriers to accessing care included: <ul style="list-style-type: none"> <li>• affordability (cost of living),</li> <li>• geography,</li> <li>• fear of COVID when accessing health services, and</li> <li>• depression</li> </ul> </li> </ol>
Millett, 2012 [99]	Quebec (Montreal), Ontario (Toronto, Ottawa)	Meta-analysis	194 studies (7 from Canada; MSM)	Behaviours related to HIV transmission	When comparing Black MSM with White MSM, Black MSM were just as likely to: <ol style="list-style-type: none"> <li>1. Test HIV positive in Canada,</li> <li>2. Engage in UAI with main or casual partners,</li> <li>3. Report serodiscordant UAI, UAI with HIV-positive partners, or UAI while using drugs or alcohol.</li> </ol> Black MSM were less likely to: <ol style="list-style-type: none"> <li>4. Use drugs, or</li> <li>5. Have a high income.</li> </ol>
Nelson, 2019 [26]	Ontario (Toronto)	Cross-sectional observational	487 (Black men)	Prevalence of HIV	<ol style="list-style-type: none"> <li>1. Syphilis was the only bacterial infection associated with increased odds of HIV infection.</li> <li>2. Genital warts (from HPV) and genital ulcers (from HSV-2) were associated with greatly increased odds of HIV infection.</li> <li>3. Self-reported history of having an “other STI” was associated with 20-fold increased odds of HIV infection.</li> <li>4. Logistic regression models of current HIV infection did not reveal significant interactions with syphilis, genital warts, genital ulcers, etc.</li> </ol>
Newman, 2008	Ontario (Toronto)	Qualitative	26 (Black women)	HIV Prevention	Findings suggest that many current HIV preventative intervention models: <ol style="list-style-type: none"> <li>1. May be perceived as irrelevant or requiring them</li> </ol>

[81]					<p>individually to combat powerful structural forces (e.g. sexism, racism, and AIDS stigma) and to face social pressures (culture, religion, or family-based).</p> <ol style="list-style-type: none"> <li>2. Require individuals to protect themselves at the cost of alienation from traditional bastions of support.</li> </ol>
Ngobi, 2020 [61]	Ontario (Ottawa/Gatineau)	Cross-sectional observational	20 (Migrants)	Barriers and facilitators to care	<p>Assessing HIV testing was split into three categories:</p> <ol style="list-style-type: none"> <li>1. “Barriers” – obstacles experienced at multiple levels (e.g. lack of HIV information related to approachability and fear).</li> <li>2. “Enablers” – opportunities facilitating access to HIV testing services at various levels (e.g. knowledge, being responsible, peace of mind).</li> <li>3. “Abilities” – participants’ capacities shaped by determinants at multiple levels (e.g. health literacy and ability to obtain HIV information).</li> </ol>
Odger, 2019 [100]	Manitoba (Winnipeg)	Ethnography	6 (African migrant youth)	Sexual health messaging	<p>Three trajectories of sexual health messaging encountered by youth from Eritrea, Ethiopia, Kenya, Mauritius, and Rwanda who had been living in Manitoba (&lt;6 years):</p> <ol style="list-style-type: none"> <li>1. Ubiquity of events and racialized bodies – immigration shaped the concept of sexual health, and the visibility of specific issues (i.e. HIV/AIDS, pregnancy, STIs).</li> <li>2. Key moments in their lives that illustrate how risk is actively made in concrete events along trajectories.</li> <li>3. How sexual health messages targets particular bodies and perceived through the experiences and perspectives of young newcomers in the city of Winnipeg.</li> </ol>
Odhiambo, 2022a [62]	Ontario (Toronto)	Ethnography	35 (Black adults)	<p>Initiation of treatment</p> <p>Engagement in care</p> <p>Barriers and</p>	<p>Immigrants identified the barriers to timely initial linkage to care and assessment:</p> <ol style="list-style-type: none"> <li>1. Mandatory HIV testing practices under IME policy (e.g. absence of consent/counselling, lack of referrals by IME panel physicians, and troubling encounters with immigration and public health state agents).</li> </ol>

				<p>facilitators to care</p> <p>Intersectionality</p>	<p>2. Difficulty finding an HIV specialist, booking appointments, and long wait times.</p> <p>Mapping the cascade spectrum revealed how the intersection of immigration, public health, and healthcare legislative frameworks creates barriers to engagement in care for Black people:</p> <ol style="list-style-type: none"> <li>1. Complex and fragmented healthcare system and a lack of knowledge of the system.</li> <li>2. Absence of drug coverage and difficulty accessing HIV treatment.</li> <li>3. Difficulty finding a family physician and long wait times scheduling an appointment to manage comorbidities.</li> </ol>
<p>Odhiambo, 2022b</p> <p>[86]</p>	<p>Ontario (Toronto)</p>	<p>Dissertation</p>	<p>35 (Black adults)</p>	<p>Experiences in institutional care</p>	<p>Findings revealed a disturbing separation between government guidelines, ethical HIV testing practices, and Black people’s experiences undergoing IME:</p> <ol style="list-style-type: none"> <li>1. Black immigrants were often tested for HIV without informed consent and pre and post-test counselling.</li> <li>2. Panel physicians did not make referrals and connect Black immigrants diagnosed with HIV to care.</li> <li>3. Limited healthcare providers with adequate HIV knowledge and cultural competence to provide quality healthcare to Black people.</li> <li>4. Black people lacked knowledge of the organization of Canada’s healthcare system.</li> <li>5. Black people experienced a lack of power through inadequate consultation time, comprehensive healthcare, and exclusion from the decision-making processes.</li> </ol>
<p>Odhiambo, 2023</p> <p>[10]</p>	<p>Ontario</p>	<p>Ethnography</p>	<p>35 (Black adults)</p>	<p>Adherence to medication</p>	<ol style="list-style-type: none"> <li>1. Inequities in structural and SDOH (e.g. food insecurity, financial and housing instability, homelessness, etc.) intersect to constrain engagement/retention in HIV healthcare and ART adherence.</li> <li>2. Black people perceived as ‘nonadherent to ART’ and maintain detectable viral loads are considered “bad” patients.</li> </ol>

					<ul style="list-style-type: none"> <li>• structural violence shaping health work of retention in care and adherence to ART</li> </ul>
Ojukwu, 2023 [101]	British Columbia	Cross-sectional observational	21,834 (African Canadian youth)	Behaviours related to HIV transmission	<ol style="list-style-type: none"> <li>1. African Canadian adolescents generally have low rates of HIV-risky behaviours.</li> <li>2. Rates of condomless sex and sex due to the influence of alcohol increased from 2003 to 2018.</li> <li>3. Of the sexually active in 2018, approximately 50% had 2 or more partners and condomless sex at last intercourse.</li> <li>4. Significant predictors of risk HIV behaviours included unsafe neighbourhood, perceived racism and sexism.</li> </ol>
Omorodion, 2007 [37]	Ontario (Windsor)	Exploratory	25 (African youth)	<p>Knowledge about HIV</p> <p>Behaviours related to HIV transmission</p>	<ol style="list-style-type: none"> <li>1. Young African men tended to have multiple sexual partners and such risky behaviours increased their vulnerability to HIV. <ul style="list-style-type: none"> <li>• Despite widespread awareness, many women continued to have unprotected sexual intercourse with such male partners.</li> </ul> </li> <li>2. Sex education in schools made Canadians more educated about HIV/AIDS (in contrast with many African countries where sex education in schools is discouraged).</li> <li>3. Universal access to healthcare was reduces HIV risks.</li> <li>4. ‘African culture’ discouraged or prohibited women from negotiating sex or discussing sex matters with sex partners.</li> <li>5. Asking their partner about their HIV status would be perceived as a lack of trust. <ul style="list-style-type: none"> <li>• It was common to assume that partners were not infected with STIs and/or HIV.</li> </ul> </li> </ol>
Omorodion, 2022 [49]	Ontario (Ottawa, Windsor)	Secondary analysis	366 (Black men)	Behaviours related to HIV transmission	<p>Factors associated with casual sex partnership:</p> <ol style="list-style-type: none"> <li>1. Men who live in Windsor were less likely to have at least one casual sex partner than those in Ottawa.</li> <li>2. Odds of casual sex partnership by men born in Canada was lower than for men born elsewhere.</li> </ol>

					<ol style="list-style-type: none"> <li>3. Men who reported Christianity as their religion were less likely to engage in casual sex than those who did not report Christianity.</li> <li>4. Higher HIV knowledge score lowered the odds of engaging in a casual sex relationship.</li> <li>5. Pro-Black community attitudes reduced the odds of casual sex relationship.</li> <li>6. High traditional masculinity scores increased the odds of casual sex.</li> </ol>
Orser, 2022 [83]	Ontario (Ottawa)	Prospective cohort observational	67 (36 Black PLHIV)	HIV testing	<p>When concurrent HIV/AIDS diagnoses were:</p> <ol style="list-style-type: none"> <li>1. Examined according to sex and ethnicity, 81.3% of AIDS diagnoses among females were in Black women and 45.1% of diagnoses among males were in Black men.</li> <li>2. Grouped according to population-specific risk factors, 50.7% were ACB, 26.8% were heterosexual from non-HIV endemic regions.</li> </ol> <p>Persons without prior HIV testing accounted for 71.6% of concurrent HIV and AIDS diagnoses during the study period:</p> <ol style="list-style-type: none"> <li>1. 75% were males and were fairly evenly distributed between White and Black men.</li> <li>2. 25% were female, most notably, Black women from HIV endemic regions.</li> </ol>
Palangi, 2015 [41]	Ontario	Qualitative	8 (Black men)	<p>Knowledge about HIV</p> <p>Barriers and facilitators to care</p>	<p>Barriers to HIV care included:</p> <ol style="list-style-type: none"> <li>1. Lack of HIV programs and insufficient HIV knowledge as factors influencing individuals' susceptibility to HIV.</li> <li>2. Lack of respect from agency staffs at certain organizations.</li> <li>3. Immigration laws and policies (ie. gaining legal status and having access to healthcare).</li> <li>4. Being denied medication and healthcare because they did not have proper refugee documents.</li> <li>5. Stigmatizing attitudes toward HIV positive people within the ACB community.</li> <li>6. Extreme fear regarding the social consequences of being seen by someone in their community.</li> </ol>



					<p>Facilitators to HIV care included:</p> <ol style="list-style-type: none"> <li>1. Positive experiences with the healthcare system in Canada when compared to “back home”.</li> <li>2. Better training for medical doctors, particularly, immigration doctors.</li> </ol>
Remis, 2013 [102]	Ontario (Greater Toronto Area)	Prospective cohort observational	417 (Black women)	Prevalence of STIs and viral infections in HIV-positive/negative women	<p>Summary of prevalence of bacterial STIs among HIV-positive and HIV-negative women:</p> <ol style="list-style-type: none"> <li>1. All viral pathogens were more prevalent in HIV-positive women and most differences were statistically significant.</li> <li>2. Vaginal HPV infection was detected in 50.8% of HIV-positive and 22.6% of HIV-negative women.</li> <li>3. HSV-2 infection was more frequent in HIV-positive (86.3%) than HIV-negative (46.6%).</li> <li>4. BV was not associated with HIV status. However, HIV-negative women reporting sex in the previous six months had a higher prevalence of BV than those who did not.</li> </ol>
Tomas, 2015 [30]	Canada	Retrospective cohort observational	2,391 (General cohort of HIV cases)	Incidence of HIV	<p>From 2009 to 2014:</p> <ol style="list-style-type: none"> <li>1. Reported HIV cases were 46.8% White, 19.2% Aboriginal, and 18.1% Black.</li> <li>2. Among males, the majority of cases were White (54.8%), followed by Aboriginal (14.0%) and Black (12.6%).</li> <li>3. Among females, there were similar proportions observed in Black (35.3%) and Aboriginal (35.3%), followed by White (21.8%).</li> <li>4. Race/ethnicity distribution in infants revealed over half (54.1%) were Black, one fifth (19.6%) were Aboriginal, and about one fifth (18.5%) were White.</li> </ol>
Tulloch, 2012 [38]	Canada	Cross-sectional observational	214 (Black adults)	<p>Knowledge about HIV</p> <p>Behaviours related to HIV transmission</p>	<ol style="list-style-type: none"> <li>1. Overall, participants answered correctly to <math>13.6 \pm 3.6</math> of the 18 questionnaire items (75.5% correct) on the HIV Knowledge Questionnaire.</li> <li>2. Using ANCOVA, revealed that Canadian-born patients living with HIV scored higher than sub-Saharan African-born patients and college students.</li> </ol>

					<ol style="list-style-type: none"> <li>Canadian-born patients living with HIV reported having more sexual partners than college students; SSA-born participants did not differ significantly from the other groups.</li> </ol>
<p>Vrancken, 2017</p> <p>[103]</p>	Alberta	Retrospective cohort observational	1,146 (general PLHIV)	Epidemiological characteristics of the most common HIV-1 subtypes	<ol style="list-style-type: none"> <li>Epidemics of subtypes A and C were more common in Black people, but subtype B circulated mostly among Caucasians and First Nations.</li> <li>Irrespective of subtype, about 25-33% of infections among Black people are of foreign origin. <ul style="list-style-type: none"> <li>May be connected to Africa as a prominent location for subtypes A and C</li> </ul> </li> </ol>
<p>Williams, 2008</p> <p>[43]</p>	Ontario (Toronto)	Qualitative	23 (Women)	<p>Knowledge about HIV</p> <p>Behaviours related to HIV transmission</p>	<p>Themes discussed included:</p> <ol style="list-style-type: none"> <li>Risks associated with getting an HIV test (e.g. learning they were infected).</li> <li>Educational experiences carried the risk of destabilizing precious feelings of safety from HIV.</li> <li>Women in the Black communities did not perceive themselves as at risk for HIV.</li> <li>Speculation that vaccine dissemination would be accompanied by HIV education and testing for the virus (risks associated with the introduction of vaccines).</li> </ol>
<p>Wilton, 2019</p> <p>[66]</p>	Ontario	Prospective cohort observational	1,819 (general clinical cohort)	CD4 count	<p>Using a multivariable regression model, characteristics associated with higher odds of late diagnosis included:</p> <ol style="list-style-type: none"> <li>Older age at diagnosis/presentation,</li> <li>African, Caribbean and Black race/ethnicity,</li> <li>Indigenous race/ethnicity,</li> <li>Female sex,</li> <li>Being a male (not MSM, however)</li> </ol>
<p>Worthington, 2013</p> <p>[104]</p>	Alberta (Calgary)	Cross-sectional observational	41 (African immigrants)	HIV service needs and priorities	<p>Five gender-related themes emerged:</p> <ol style="list-style-type: none"> <li>Factors (e.g. under-employment, alcoholism) that led to “families breaking down”,</li> <li>Different sexual standards for men and women (e.g. cultural acceptance of multiple sexual partners for men)</li> <li>Condom use</li> </ol>

					<ol style="list-style-type: none"> <li>4. Infidelity (women more frequently discussed this issue)</li> <li>5. A need for partner dialogue around sex and HIV</li> </ol>
Zhabokritsky, 2019  [105]	Ontario (Toronto)	Cross-sectional observational	424 (Men)	Behaviours related to HIV transmission	<p>Reasons for non-acceptance of PrEP:</p> <ol style="list-style-type: none"> <li>1. Concerns about PrEP side effects (45%)</li> <li>2. Low self-perceived risk for acquiring HIV (38%).</li> <li>3. Inefficacy of PrEP (3%) and concerns around high pill burden (2%)</li> </ol>

**Appendix 3.** Summary characteristics of the included studies [n = 78 (%)].

Characteristics		All studies (n = 78)	Behaviours related to HIV transmission (n = 16)	Knowledge about HIV (n = 15)	HIV-related stigma (n = 15)
Year of publication	1992 – 2000	2 (2.5)			
	2001 – 2009	9 (11.5)	4 (25.0)	3 (20.0)	1 (6.7)
	2010 – 2018	27 (34.6)	4 (25.0)	5 (33.3)	6 (40.0)
	2019 – 2023	40 (51.3)	8 (50.0)	7 (46.7)	8 (53.3)
Province	Ontario	65 (83.3)	14 (87.5)	14 (93.3)	14 (93.3)
	Alberta	4 (5.1)			1 (6.7)
	Canada-wide	4 (5.1)	1 (6.3)	1 (6.7)	
	Quebec	3 (3.8)	1 (6.3)		1 (6.7)
	British Columbia	3 (3.8)	1 (6.3)		1 (6.7)
	Manitoba	2 (2.5)			
	Nova Scotia	1 (1.3)		1 (6.7)	1 (6.7)
Study design	Cross-sectional	26 (33.3)	8 (50.0)	3 (20.0)	6 (40.0)
	Qualitative	14 (17.9)	1 (6.3)	4 (26.7)	4 (26.7)
	Retrospective cohort	7 (8.9)		1 (6.7)	1 (6.7)
	Mixed methods	5 (6.4)	1 (6.3)	2 (13.3)	3 (20.0)
	Retrospective survey	4 (5.1)	2 (12.5)		
	Prospective cohort	4 (5.1)			1 (6.7)
	Report	4 (5.1)		3 (20.0)	
	Secondary analysis	4 (5.1)	2 (12.5)	1 (6.7)	
	Ethnography	3 (3.8)			
	Dissertation	2 (2.6)			
	Exploratory	2 (2.6)	1 (6.3)	1 (6.7)	
Ground theory	1 (1.3)				

	Scoping review	1 (1.3)			
	Meta-analysis	1 (1.3)	1 (6.3)		
Participant description	Black men	18 (23.0)	5 (31.3)	5 (33.3)	1 (6.7)
	Black	10 (12.8)	1 (6.3)	5 (33.3)	2 (13.3)
	Black MSM	10 (12.8)	2 (12.5)	1 (6.7)	2 (13.3)
	Black women	9 (11.5)	1 (6.3)		5 (33.3)
	General cohort (including other ethnicities)	7 (8.9)	2 (12.5)		1 (6.7)
	Youth (Black, African)	4 (5.1)	2 (12.5)	1 (6.7)	1 (6.7)
	Adults (Black)	4 (5.1)	1 (6.3)	1 (6.7)	
	Immigrants (African, Caribbean)	3 (3.8)			1 (6.7)
	Black church members	3 (3.8)		1 (6.7)	2 (13.3)
	Pregnant women and infants	3 (3.8)			
	HIV service providers	2 (2.6)			
	Haitians	1 (1.3)			
	Caribbean	1 (1.3)			
	Francophone	1 (1.3)			
	Men	1 (1.3)	1 (6.3)		
	Women	1 (1.3)	1 (6.3)	1 (6.7)	

**Appendix 4. Studies categorized by outcome.**

**PRE-DETERMINED:**

**Prevalence of HIV (5)**

Adrien, 1999	Quebec (Montreal)	Cross-sectional observational	5,039 (Haitians)	Prevalence of HIV	<ol style="list-style-type: none"> <li>HIV prevalence was 1.3% (1.6% in men and 1.1% in women).</li> <li>Lower among those born in Canada or who had resided in Canada longer.</li> <li>Among subjects who had travelled to Haiti in the previous 5 years was 2.0%, twice the rate of those who had not.</li> </ol>
Chiavetta, 1992	Ontario (Toronto)	Cross-sectional observational	853 (483 Caribbean)	Prevalence of HIV	<ol style="list-style-type: none"> <li>Eleven subjects (2.3%) of Caribbean origin were confirmed to be positive for anti-HTLVII.</li> <li>All anti-HTLV-I/II-positive subjects were negative for anti-HIV and HBsAg, and four (36.4%) were positive for antibody to HBsAg and to hepatitis B core antigen.</li> </ol>
Liu, 2007	Ontario	Cross-sectional observational	2,438 (General MSM)	Behaviours related to HIV transmission Prevalence of HIV	<ol style="list-style-type: none"> <li>Higher prevalence of HIV in Black MSM when compared to some other ethnic groups.</li> <li>In Toronto, approximately 25-30% of MSM had at least 10 casual partners, except Black MSM (14.1%).</li> <li>In Toronto, 6% of Black MSM engaged in UAI with either a casual partner, HIV-positive regular partner, or unknown HIV status regular partner in the past six months.</li> </ol>
Nelson, 2019	Ontario (Toronto)	Cross-sectional observational	487 (Black men)	Prevalence of HIV	<ol style="list-style-type: none"> <li>Syphilis was the only bacterial infection associated with increased odds of HIV infection.</li> <li>Genital warts (from HPV) and genital ulcers (from HSV-2) were associated with greatly increased odds of HIV infection.</li> <li>Self-reported history of having an “other STI” was associated with 20-fold increased odds of HIV infection.</li> <li>Logistic regression models of current HIV infection did not reveal significant interactions with syphilis, genital warts, genital ulcers, etc.</li> </ol>

**Incidence of HIV (2)**

Bourgeois, 2017	Canada	Retrospective survey	2,344 (General cohort)	Incidence of HIV	<ol style="list-style-type: none"> <li>Distribution of HIV cases in 2016 with a known race/ethnicity were White (40.4%), followed by Black (21.9%) and Indigenous (21.2%).</li> <li>Distribution of perinatally-exposed infants (from 1984 to 2016): 49.8% were reported as Black, 23.8% as White and 17.8% as Indigenous.</li> </ol> <p>Of note, however, ethnicity data were available in only about half of reported cases.</p>
Djiaedu, 2020b	Ontario (Toronto)	Secondary analysis	460 (Black men)	Incidence of HIV HIV testing	<ol style="list-style-type: none"> <li>Rate of HIV infection in MSW, MSM, or both (2.91%, 42.11%, 36.59% respectively).</li> <li>The CART method identified the number of male partners (6 or higher) as the best predictor of current HIV infection.</li> <li>The best indicators of those who had been tested for HIV was: age, number of past sexual partners and past STIs.</li> <li></li> </ol>
Tomas, 2015	Canada	Retrospective cohort observational	2,391 (General cohort of HIV cases)	Incidence of HIV	<p>From 2009 to 2014:</p> <ol style="list-style-type: none"> <li>Reported HIV cases were 46.8% White, 19.2% Aboriginal, and 18.1% Black.</li> <li>Among males, the majority of cases were White (54.8%), followed by Aboriginal (14.0%) and Black (12.6%).</li> <li>Among females, there were similar proportions observed in Black (35.3%) and Aboriginal (35.3%), followed by White (21.8%).</li> <li>Race/ethnicity distribution in infants revealed over half (54.1%) were Black, one fifth (19.6%) were Aboriginal, and about one fifth (18.5%) were White.</li> </ol>

**Knowledge about HIV (15)**

Ajiboye, 2022	Ontario (Toronto)	Qualitative	29 (Black)	HIV Prevention Knowledge about HIV	<ol style="list-style-type: none"> <li>Participants identified several factors contributing to difficulty in decision making regarding PrEP: <ul style="list-style-type: none"> <li>inadequate knowledge and unrealistic expectations,</li> <li>lack of clarity about personal values, and</li> <li>issues of support and resources</li> </ul> </li> <li>Participants identified information the following as crucial to their decision making on PrEP: <ul style="list-style-type: none"> <li>‘where and how’ to access PrEP,</li> <li>the cost of PrEP, and</li> <li>whether public and private health insurance will cover it,</li> </ul> </li> </ol>
Antabe, 2022b	Ontario (Toronto)	Secondary analysis	69 (Black men)	Knowledge about HIV	<p>Four themes on making health services ‘cool’:</p> <ol style="list-style-type: none"> <li>health promotion as a function of Black family systems;</li> <li>opportunities for healthy dialogue among peers through non-judgmental interaction;</li> </ol>

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				Use of HIV care	<ol style="list-style-type: none"> <li>partnering heterosexual Black men in intervention design; and</li> <li>strengthening institutional health literacy related to Black men's health.</li> </ol>
Baidoobonso, 2013	Ontario (London)	Mixed methods	188 (Black)	Knowledge about HIV	<p>Barriers that prevented women from HIV protection:</p> <ol style="list-style-type: none"> <li>Need for love or acceptance in the context of sexual and marital relationships,</li> <li>Lack of empowerment among manifested into lack of ability to negotiate condom use,</li> <li>Intimate partner violence, and abuse in general, and</li> <li>Ignorance about HIV.</li> </ol> <p>For ACB men, service providers mentioned:</p> <ol style="list-style-type: none"> <li>Barriers related to the expression of masculinity, such as believing that they cannot control themselves sexually, and</li> <li>Cultural norms and beliefs dictating that they not disclose information, and that they were expected to be knowledgeable about everything.</li> </ol>
Black Coalition for AIDS Prevention (Black CAP), 2007	Ontario (Toronto)	Annual Organizational Report		Knowledge about HIV	<ol style="list-style-type: none"> <li>Outreach program increased HIV awareness.</li> </ol>
Black CAP, 2015	Ontario (Toronto)	Annual Organizational Report		Knowledge about HIV	<ol style="list-style-type: none"> <li>Outreach programs for MSM increased awareness about HIV, testing, and access to services.</li> </ol>
Black CAP, 2020	Ontario (Toronto)	Annual Organizational Report		Knowledge about HIV	<ol style="list-style-type: none"> <li>The 'Many Men, Many Voices' program created to provide culturally-based HIV education and increase access to PrEP.</li> <li>Support services increased food access, financial stability, and employment.</li> <li>Partnerships with local clinics and online resources were created to further support Black MSM.</li> </ol>
Crichlow, 2016	Ontario (Toronto), Nova Scotia (Halifax)	Qualitative	19 (Black MSM)	HIV-related Stigma Knowledge about HIV	<p>Black MSM expressed:</p> <ol style="list-style-type: none"> <li>Experiences of stigma in gay communities, in HIV healthcare organizations, and in Canada overall.</li> <li>A need for more HIV-related health literacy to reduce HIV risk</li> </ol>
Etowa, 2022a	Ontario (Ottawa, Windsor)	Cross-sectional observational	430 (Black men)	Knowledge about HIV Behaviours related to HIV transmission	<p>Factors associated with having HIV and STIs:</p> <ol style="list-style-type: none"> <li>Among condom users, Black Caribbeans had higher odds of being diagnosed with HIV, with the corresponding odds being lower among Black Americans.</li> <li>Those with no/pre-high school education had higher odds of being diagnosed with HIV when compared with those who had completed university.</li> <li>Landed immigrants/permanent residents who were condom non-users had lower odds of HIV.</li> <li>Having more than 5 casual partners showed higher odds of STI diagnosis among condom users.</li> </ol> <p>About 70.20% did not have good knowledge of HIV, 68.10% had positive attitude towards condom use, and 62.82% were not regular condom user.</p>
Etowa, 2023	Ontario (Toronto, Ottawa, London, Windsor)	Mixed methods	866 (Black men)	Knowledge about HIV	<p>Three most common misconceptions (% of men who believed them):</p> <ol style="list-style-type: none"> <li>People are likely to get HIV by deep kissing, if their partner has HIV (40.1%)</li> <li>Taking a test for HIV one week after having sex will tell a person if she or he has HIV (31.6%)</li> <li>A person cannot get HIV from oral sex (25%)</li> </ol> <p>Factors that contributed to more HIV misconceptions:</p> <ol style="list-style-type: none"> <li>Discrimination,</li> <li>Negative condom attitudes, and</li> <li>Sexual debut at an older age.</li> </ol> <p>Factors that contributed to less HIV misconceptions:</p> <ol style="list-style-type: none"> <li>Being born in Canada,</li> <li>Higher education, and</li> <li>Being more resilient.</li> </ol>
Husbands, 2020a	Ontario (Toronto, Mississauga, Ottawa)	Retrospective cohort observational	173 (Black church congregants)	Knowledge about HIV HIV-related Stigma	<ol style="list-style-type: none"> <li>Mean HIV knowledge scores increased from baseline to follow-up (after use of PRAISE intervention).</li> <li>Congregants who were exposed to all three intervention components achieved a significant reduction in stigma compared with those who were exposed to one or two components.</li> <li>Except for baseline knowledge score, none of the predictors in the multi-variable model significantly impacted congregants' knowledge score after intervention exposure.</li> </ol>
Luginaah, 2022	Ontario (Ottawa, Toronto, Windsor, and London)	Cross-sectional observational	829 (Black men)	Knowledge about HIV Behaviours related	<p>Higher likelihood of HIV testing (within the last 12 months) was significantly associated with:</p> <ol style="list-style-type: none"> <li>Increase in HIV transmission knowledge.</li> <li>Having two or more concurrent sexual partners.</li> <li>Knowing their regular female sexual partner's HIV status to be negative.</li> </ol>

				to HIV transmission	Lower likelihood of HIV testing (within the last 12 months) was significantly associated with: 1. Sexual debut between the ages of 16 and 20 years. 2. Reporting to have never had sex.
Omorodion, 2007	Ontario (Windsor)	Exploratory	25 (African youth)	Knowledge about HIV  Behaviours related to HIV transmission	1. Young African men tended to have multiple sexual partners and such risky behaviours increased their vulnerability to HIV. • Despite widespread awareness, many women continued to have unprotected sexual intercourse with such male partners. 2. Sex education in schools made Canadians more educated about HIV/AIDS (in contrast with many African countries where sex education in schools is discouraged). 3. Universal access to healthcare reduces HIV risks. 4. 'African culture' discouraged or prohibited women from negotiating sex or discussing sex matters with sex partners. 5. Asking their partner about their HIV status would be perceived as a lack of trust. • It was common to assume that partners were not infected with STIs and/or HIV.
Palangi, 2015	Ontario	Qualitative	8 (Black men)	Knowledge about HIV  Barriers and facilitators to care	Barriers to HIV care included: 1. Lack of HIV programs and insufficient HIV knowledge as factors influencing individuals' susceptibility to HIV. 2. Lack of respect from agency staffs at certain organizations. 3. Immigration laws and policies (ie. gaining legal status and having access to healthcare). 4. Being denied medication and healthcare because they did not have proper refugee documents. 5. Stigmatizing attitudes toward HIV positive people within the ACB community. 6. Extreme fear regarding the social consequences of being seen by someone in their community. Facilitators to HIV care included: 1. Positive experiences with the healthcare system in Canada when compared to "back home". 2. Better training for medical doctors, particularly, immigration doctors.
Tulloch, 2012	Canada	Cross-sectional observational	214 (Black adults)	Knowledge about HIV  Behaviours related to HIV transmission	1. Overall, participants answered correctly to 13.6 ± 3.6 of the 18 questionnaire items (75.5% correct) on the HIV Knowledge Questionnaire. 2. Using ANCOVA, revealed that Canadian-born patients living with HIV scored higher than sub-Saharan African-born patients and college students. 3. Canadian-born patients living with HIV reported having more sexual partners than college students; SSA-born participants did not differ significantly from the other groups.
Williams, 2008	Ontario (Toronto)	Qualitative	23 (Women)	Knowledge about HIV  Behaviours related to HIV transmission	Themes discussed included: 1. Risks associated with getting an HIV test (e.g. learning they were infected). 2. Educational experiences carried the risk of destabilizing precious feelings of safety from HIV. 3. Women in the Black communities did not perceive themselves as at risk for HIV. 4. Speculation that vaccine dissemination would be accompanied by HIV education and testing for the virus (risks associated with the introduction of vaccines).

**Behaviours related to HIV transmission (16)**

Baidooobonso, 2014	Ontario (London)	Secondary analysis	125 (Black)	Behaviours related to HIV transmission	Regarding HIV-related factors: 1. Knowing one's partner's HIV status was associated with less frequent condom use, and 2. Reporting more frequent exposure to HIV prevention messages was associated with more frequent condom use.
Etowa, 2022a	Ontario (Ottawa, Windsor)	Cross-sectional observational	430 (Black men)	Knowledge about HIV  Behaviours related to HIV transmission	Factors associated with having HIV and STIs: 1. Among condom users, Black Caribbean had higher odds of being diagnosed with HIV, with the corresponding odds being lower among Black Americans. 2. Those with no/pre-high school education had higher odds of being diagnosed with HIV when compared with those who had completed university. 3. Landed immigrants/permanent residents who were condom non-users had lower odds of HIV. 4. Having more than 5 casual partners showed higher odds of STI diagnosis among condom users. About 70.20% did not have good knowledge of HIV, 68.10% had positive attitude towards condom use, and 62.82% were not regular condom user.
Etowa, 2022c	Ontario (Ottawa)	Mixed methods	11 (Black women)	Behaviours related to HIV transmission	1. Although breastfeeding is an important aspect of the Black motherhood experience, many mothers adhered to the recommended feeding practices (ie. formula-feeding) to prevent their babies from contracting HIV; and expressed regret Black mothers living with HIV dealt with family members' negative perceptions due to their inability to breastfeed. 2.



				HIV-related Stigma Intersectionality	3. Findings demonstrate the challenges that result from the intersectionality of motherhood, culture, living with HIV, and infant feeding.
George, 2013	Ontario (Toronto)	Cross-sectional observational	168 (Black MSM)	Behaviours related to HIV transmission Intersectionality	1. Inconsistent condom use varied by place of birth: Canadian-born men and Caribbean-born men were less likely to consistently use condoms than African-born men. 2. A multiple regression analysis revealed that being born in Africa favoured condom use. 3. Inconsistent condom use was higher when participants' sexual partner was non-black. 4. Variables not associated with inconsistent condom use: previous sexually transmitted infections, sex with women, sex while travelling, and drug use.
Husbands, 2006	Ontario (Toronto)	Cross-sectional observational	175 (Black MSM)	Behaviours related to HIV transmission	1. 39.3% had sex with HIV-negative men, 36.4% with men of unknown status 2. 61.5% reported always using condoms, 41.7% reported using condoms consistently 3. Main reason for not using protection during sex was access to prevention methods
Konkor, 2019	Ontario (London)	Retrospective survey	156 (Black men)	Behaviours related to HIV transmission Intersectionality	Of the heterosexual ACB men: 1. 75% reported using a condom during their most recent intercourse 2. 47% did not know the HIV status of their regular female sexual partners 3. 56% reported having one sexual partner 4. 58% being single Behavioural, demographic and structural factors were significantly associated with testing for HIV: 1. Those who used condoms during their last sexual intercourse were less likely to test for HIV. 2. Having multiple sexual partners was associated with higher odds of testing for HIV. 3. Respondents who are full-time employed were more likely to test. 4. Immigrants were more likely to test for HIV than Canadian men. 5. Those with college education, high school and below and reported ever experiencing discrimination were less likely to test for their HIV status.
Konkor, 2021a	Ontario (Toronto, Ottawa, London, Windsor)	Retrospective survey	879 (Black men)	Behaviours related to HIV transmission	Heterosexual ACB men who reported earlier first sexual intercourse tended to be: 1. Younger age groups, compared with the older age cohorts. 2. Residing in Toronto, Ottawa, and London, compared with those in Windsor. 3. Reporting four or more concurrent sexual partners. On the contrary, being an immigrant, a Christian or Muslim were associated with delayed sexual debut.
Liu, 2007	Ontario	Cross-sectional observational	2,438 (General MSM)	Behaviours related to HIV transmission Prevalence of HIV	1. Higher prevalence of HIV in Black MSM when compared to some other ethnic groups. 2. In Toronto, approximately 25-30% of MSM had at least 10 casual partners, except Black MSM (14.1%). 3. In Toronto, 6% of Black MSM engaged in UAI with either a casual partner, HIV-positive regular partner, or unknown HIV status regular partner in the past six months.
Luginaah, 2022	Ontario (Ottawa, Toronto, Windsor, and London)	Cross-sectional observational	829 (Black men)	Knowledge about HIV Behaviours related to HIV transmission	Higher likelihood of HIV testing (within the last 12 months) was significantly associated with: 1. Increase in HIV transmission knowledge. 2. Having two or more concurrent sexual partners. 3. Knowing their regular female sexual partner's HIV status to be negative. Lower likelihood of HIV testing (within the last 12 months) was significantly associated with: 1. Sexual debut between the ages of 16 and 20 years. 2. Reporting to have never had sex.
Millett, 2012	Quebec (Montreal), Ontario (Toronto, Ottawa)	Meta-analysis	194 studies (7 from Canada; MSM)	Behaviours related to HIV transmission	When comparing Black MSM with White MSM, Black MSM were just as likely to: 1. Test HIV positive in Canada, 2. Engage in UAI with main or casual partners, 3. Report serodiscordant UAI, UAI with HIV-positive partners, or UAI while using drugs or alcohol. Black MSM were less likely to: 1. Use drugs, or 2. Have a high income.
Ojukwu, 2023	British Columbia	Cross-sectional observational	21,834 (African Canadian youth)	Behaviours related to HIV transmission	1. African Canadian adolescents generally have low rates of HIV-risky behaviours. 2. Rates of condomless sex and sex due to the influence of alcohol increased from 2003 to 2018. 3. Of the sexually active in 2018, approximately 50% had 2 or more partners and condomless sex at last intercourse. 4. Significant predictors of risk HIV behaviours included unsafe neighbourhood, perceived racism and sexism.
Omorodion, 2007	Ontario (Windsor)	Exploratory	25 (African youth)	Knowledge about HIV	1. Young African men tended to have multiple sexual partners and such risky behaviours increased their vulnerability to HIV. • Despite widespread awareness, many women continued to have unprotected sexual intercourse with such male

				Behaviours related to HIV transmission	<p>partners.</p> <ol style="list-style-type: none"> <li>Sex education in schools made Canadians more educated about HIV/AIDS (in contrast with many African countries where sex education in schools is discouraged).</li> <li>Universal access to healthcare was reduces HIV risks.</li> <li>'African culture' discouraged or prohibited women from negotiating sex or discussing sex matters with sex partners.</li> <li>Asking their partner about their HIV status would be perceived as a lack of trust. <ul style="list-style-type: none"> <li>It was common to assume that partners were not infected with STIs and/or HIV.</li> </ul> </li> </ol>
Omorodion, 2022	Ontario (Ottawa, Windsor)	Secondary analysis	366 (Black men)	Behaviours related to HIV transmission	<p>Factors associated with casual sex partnership:</p> <ol style="list-style-type: none"> <li>Men who live in Windsor were less likely to have at least one casual sex partner than those in Ottawa.</li> <li>Odds of casual sex partnership by men born in Canada was lower than for men born elsewhere.</li> <li>Men who reported Christianity as their religion were less likely to engage in casual sex than those who did not report Christianity.</li> <li>Higher HIV knowledge score lowered the odds of engaging in a casual sex relationship.</li> <li>Pro-Black community attitudes reduced the odds of casual sex relationship.</li> <li>High traditional masculinity scores increased the odds of casual sex.</li> </ol>
Tulloch, 2012	Canada	Cross-sectional observational	214 (Black adults)	Knowledge about HIV Behaviours related to HIV transmission	<ol style="list-style-type: none"> <li>Overall, participants answered correctly to <math>13.6 \pm 3.6</math> of the 18 questionnaire items (75.5% correct) on the HIV Knowledge Questionnaire.</li> <li>Using ANCOVA, revealed that Canadian-born patients living with HIV scored higher than sub-Saharan African-born patients and college students.</li> <li>Canadian-born patients living with HIV reported having more sexual partners than college students; SSA-born participants did not differ significantly from the other groups.</li> </ol>
Williams, 2008	Ontario (Toronto)	Qualitative	23 (Women)	Knowledge about HIV Behaviours related to HIV transmission	<p>Themes discussed included:</p> <ol style="list-style-type: none"> <li>Risks associated with getting an HIV test (e.g. learning they were infected).</li> <li>Educational experiences carried the risk of destabilizing precious feelings of safety from HIV.</li> <li>Women in the Black communities did not perceive themselves as at risk for HIV.</li> <li>Speculation that vaccine dissemination would be accompanied by HIV education and testing for the virus (risks associated with the introduction of vaccines).</li> </ol>
Zhabokritsky, 2019	Ontario (Toronto)	Cross-sectional observational	424 (Men)	Behaviours related to HIV transmission	<p>Reasons for non-acceptance of PrEP:</p> <ol style="list-style-type: none"> <li>Concerns about PrEP side effects (45%)</li> <li>Low self-perceived risk for acquiring HIV (38%).</li> <li>Inefficacy of PrEP (3%) and concerns around high pill burden (2%)</li> </ol>

**Access to HIV care (13)**

Absalom, 2020	Ontario (Toronto, Ottawa)	Qualitative	21 (Black MSM)	Access to HIV care	<p>Black MSM expressed:</p> <ol style="list-style-type: none"> <li>Limited access to HIV interventions</li> <li>Lack of connections to preventative interventions</li> <li>Experiences of racial and sexual discrimination in HIV services</li> </ol>
Antabe, 2021	Ontario (London)	Qualitative	37 (Black men)	Access to HIV care	<ol style="list-style-type: none"> <li>Structural factors that limit heterosexual ACB men's access to preventive health care services: <ul style="list-style-type: none"> <li>limited awareness of HIV risks and service availability,</li> <li>disconnect with health care spaces, and</li> <li>issues of stigma both within and outside the ACB community.</li> </ul> </li> </ol>
Blot, 2014	Ontario (London)	Dissertation	188 (Black)	Access to HIV care	<p>Two main factors of influence with regard to access to care:</p> <ol style="list-style-type: none"> <li>Older age, and</li> <li>Length of time in Canada.</li> </ol> <p>Additional factors included having a primary care provider, and the inappropriate fear of contagion of HIV/AIDS.</p> <ul style="list-style-type: none"> <li>Those with a primary care provider were more likely to have heard of RHAC compared to those who did not have one. (This is reassuringly different from what the literature suggests on ACB community members' interactions with primary care providers)</li> </ul>
Blot, 2017	Ontario (Middlesex-London)	Exploratory	188 (Black)	Access to HIV care	<p>In bivariate analysis, factors associated with access:</p> <ol style="list-style-type: none"> <li>Participants older than 50 years of age were approximately two and a half times as likely to have been to RHAC compared to those younger than 30 years of age</li> <li>Canadian-born ACB people were 77% less likely to have been to RHAC compared to recent immigrants</li> <li>Participants born in Canada were 76% less to have been to RHAC compared to immigrants who had been in the country for</li> </ol>

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					5 years or less
Djiadeu, 2020a	Manitoba (Winnipeg), Ontario (Ottawa, Toronto)	Scoping Review	2 studies (Black Francophone PLHIV)	Access to HIV care	<p>1. HIV and mental health services in the city of Winnipeg had minimal Francophone staff: leading to the use of unqualified interpreters, appointment rescheduling, and long waiting lists.</p> <p>2. African Francophone health service providers described the situation as critical.</p> <p>Three main themes:</p> <ol style="list-style-type: none"> <li>1. Social context of HIV care access in French,</li> <li>2. Language and cultural sensitivity and diversity, and</li> <li>3. Emerging reality in Canada's ACB Francophone communities.</li> </ol>
Etowa, 2022b	Ontario (Toronto, Ottawa)	Mixed methods	107 (Black)	Access to HIV care HIV-related Stigma	<ol style="list-style-type: none"> <li>1. HIV-related stigma increases vulnerability to HIV infection by reducing access to HIV prevention/testing, and introducing barriers to treatment, care, and support for people living with HIV.</li> <li>2. Provider-related issues (e.g. lack of information/training) and organizational issues (e.g. systemic racism) continue to represent major barriers to HIV testing and treatment.</li> </ol>
Etowa, 2022d	Ontario (Ottawa)	Qualitative	63 (Black men)	Access to HIV care Barriers and facilitators to care HIV-related Stigma	<p>Concerns expressed by ACB men:</p> <ol style="list-style-type: none"> <li>1. Privacy was compromised during service delivery (e.g. HIV clinics are usually situated in open places where people could see those visiting the clinic).</li> <li>2. Long wait times and insufficient physicians.</li> <li>3. Limited opportunities for employment and upward financial mobility (e.g. left with little option but to take on low-skilled jobs to survive).</li> <li>4. Stigma in their access to HIV-related care services (e.g. isolation of a PHA from other patients at a hospital).</li> </ol> <p>Themes for responding to HIV stigma include:</p> <ol style="list-style-type: none"> <li>1. Faith-based organizations and leaders,</li> <li>2. Public health education,</li> <li>3. Collaboration and empowerment to support decision making.</li> </ol>
Husbands, 2020b	Ontario (London, Toronto)	Qualitative	14 (Black men)	Access to HIV care	<p>Themes mentioned about access to HIV programs and services:</p> <ol style="list-style-type: none"> <li>1. Availability and accessibility,</li> <li>2. Marginalization and exclusion,</li> <li>3. Racism,</li> <li>4. Supporting Black men.</li> </ol> <p>Participants from iSpeak expressed:</p> <ol style="list-style-type: none"> <li>1. Readiness to be involved in community responses to HIV among Black people in Ontario.</li> <li>2. Personal challenges that HIV presents and creative strategies to mobilize appropriate care.</li> <li>3. Engaging each other, and their female counterparts, in empowering relationships to promote health and critical health literacy.</li> <li>4. Openness to engaging with healthcare professionals and others who may help them manage their health (but they also carefully weigh the social risks and personal benefits associated with disclosure).</li> </ol>
Kaukinen, 2006	Ontario (Toronto)	Cross-sectional observational	244 (HIV service providers)	Access to HIV care	<p>Characteristics of the less accessible communities (north-western and eastern areas) in Toronto:</p> <ol style="list-style-type: none"> <li>1. Greater proportion of black Canadians,</li> <li>2. Higher levels of unemployment,</li> <li>3. Lower levels of high school completion, and</li> <li>4. Greater numbers of female-headed households.</li> </ol> <p>This suggests an inequitable distribution of HIV-related services across Toronto neighbourhoods, potentially leaving these communities vulnerable and underserved.</p>
Konkor, 2020	Ontario (London)	Cross-sectional observational	155 (Black men)	Access to HIV care	<ol style="list-style-type: none"> <li>1. Difficulty accessing healthcare was associated with about 44% (model 1) and 35% (model 2) lower odds of testing for HIV after accounting for behavioural and demographic variables</li> <li>2. Having trouble accessing healthcare was significantly associated with 19% (model 3) and only 5% (model 4) lower odds of testing for HIV after accounting for the effect of structural factors</li> </ol>
Konkor, 2021b	Ontario (Toronto, Ottawa, London, Windsor)	Retrospective survey	600 (Black men)	Access to HIV care	<p>Higher likelihood of experiencing difficulties accessing HIV-related healthcare was associated with:</p> <ol style="list-style-type: none"> <li>1. Living in Windsor, London and Toronto, when compared with Ottawa.</li> <li>2. Increase on the discrimination scale.</li> <li>3. Not having a family doctor.</li> <li>4. Being older than 50 years, when compared with those younger than 20 years.</li> <li>5. A high school education or lower, and those with college education, when compared with their counterparts who attained university education.</li> <li>6. Difficulty with the English language.</li> </ol> <p>Lower likelihood of experiencing difficulties accessing HIV-related healthcare was associated with:</p>

					<ol style="list-style-type: none"> <li>1. Being single or in a relationship.</li> <li>2. Having full-time or part-time employment.</li> <li>3. Earning over \$100,000 a year.</li> </ol>
Konkor, 2022	Ontario (Toronto, Ottawa, London, Windsor)	Cross-sectional observational	879 (Black men)	Access to HIV care	<p>Men less likely to engaging in HIV testing were:</p> <ol style="list-style-type: none"> <li>1. Canadian born (second-generation immigrants), when compared with their first-generation immigrant counterparts.</li> <li>2. Younger, when compared with Older participants.</li> <li>3. Higher on the ‘masculinity’ measurement scale.</li> <li>4. Less likely to have a sexual partner.</li> <li>5. More likely to be Muslim, when compared to Christians or those who identified as belonging to other religions.</li> </ol>
McKay, 2023	British Columbia	Qualitative	18 (Black WLWHIV)	<p>Access to HIV care</p> <p>Use of HIV care</p> <p>Barriers and facilitators to care</p>	<p>Themes that emerged from interviews:</p> <ol style="list-style-type: none"> <li>1. Virtual care service delivery was impersonal or inadequate, and made participants feel like they were not sufficiently assessed by care providers.</li> <li>2. Majority of participants did not feel that the COVID-19 pandemic impacted their ability to utilize HIV services (a few felt dismissed by the decreased availability and support).</li> <li>3. Barriers to accessing care included: <ul style="list-style-type: none"> <li>• affordability (cost of living),</li> <li>• geography,</li> <li>• fear of COVID when accessing health services, and</li> <li>• depression</li> </ul> </li> </ol>

**Barriers and facilitators to care (6)**

Etowa, 2022d	Ontario (Ottawa)	Qualitative	63 (Black men)	<p>Access to HIV care</p> <p>Barriers and facilitators to care</p> <p>HIV-related Stigma</p>	<p>Concerns expressed by ACB men:</p> <ol style="list-style-type: none"> <li>1. Privacy was compromised during service delivery (e.g. HIV clinics are usually situated in open places where people could see those visiting the clinic).</li> <li>2. Long wait times and insufficient physicians.</li> <li>3. Limited opportunities for employment and upward financial mobility (e.g. left with little option but to take on low-skilled jobs to survive).</li> <li>4. Stigma in their access to HIV-related care services (e.g. isolation of a PHA from other patients at a hospital).</li> </ol> <p>Themes for responding to HIV stigma include:</p> <ol style="list-style-type: none"> <li>1. Faith-based organizations and leaders,</li> <li>2. Public health education,</li> <li>3. Collaboration and empowerment to support decision making.</li> </ol>
Lee-Foon, 2022	Ontario (Toronto)	Ground Theory	22 (Black MSM)	Barriers and facilitators to care	<p>Participants’ responses revealed:</p> <ol style="list-style-type: none"> <li>1. Ineffective PrEP dissemination efforts at institutions (e.g. sexual healthcare clinics)</li> <li>2. Clinics focused on young, racialized sexual and gender minority populations.</li> <li>3. Factors that impeded their knowledge of and willingness to use PrEP, including: <ul style="list-style-type: none"> <li>• Cost</li> <li>• PrEP use concerns</li> <li>• PrEP stigma</li> <li>• Low socio-economic status</li> </ul> </li> </ol>
McKay, 2023	British Columbia	Qualitative	18 (Black WLWHIV)	<p>Access to HIV care</p> <p>Use of HIV care</p> <p>Barriers and facilitators to care</p>	<p>Themes that emerged from interviews:</p> <ol style="list-style-type: none"> <li>1. Virtual care service delivery was impersonal or inadequate, and made participants feel like they were not sufficiently assessed by care providers.</li> <li>2. Majority of participants did not feel that the COVID-19 pandemic impacted their ability to utilize HIV services (a few felt dismissed by the decreased availability and support).</li> <li>3. Barriers to accessing care included: <ul style="list-style-type: none"> <li>• affordability (cost of living),</li> <li>• geography,</li> <li>• fear of COVID when accessing health services, and</li> <li>• depression</li> </ul> </li> </ol>
Ngobi, 2020	Ontario (Ottawa/Gatineau)	Cross-sectional observational	20 (Migrants)	Barriers and facilitators to care	<p>Accessing HIV testing was split into three categories:</p> <ol style="list-style-type: none"> <li>1. “Barriers” – obstacles experienced at multiple levels (e.g. lack of HIV information related to approachability and fear).</li> <li>2. “Enablers” – opportunities facilitating access to HIV testing services at various levels (e.g. knowledge, being responsible, peace of mind).</li> <li>3. “Abilities” – participants’ capacities shaped by determinants at multiple levels (e.g. health literacy and ability to obtain</li> </ol>

					HIV information).
Odhiambo, 2022a	Ontario (Toronto)	Ethnography	35 (Black adults)	Initiation of treatment Engagement in care Barriers and facilitators to care Intersectionality	Immigrants identified the barriers to timely initial linkage to care and assessment: 1. Mandatory HIV testing practices under IME policy (e.g. absence of consent/counselling, lack of referrals by IME panel physicians, and troubling encounters with immigration and public health state agents). 2. Difficulty finding an HIV specialist, booking appointments, and long wait times. Mapping the cascade spectrum revealed how the intersection of immigration, public health, and healthcare legislative frameworks creates barriers to engagement in care for Black people: 1. Complex and fragmented healthcare system and a lack of knowledge of the system. 2. Absence of drug coverage and difficulty accessing HIV treatment. 3. Difficulty finding a family physician and long wait times scheduling an appointment to manage comorbidities.
Palangi, 2015	Ontario	Qualitative	8 (Black men)	Knowledge about HIV Barriers and facilitators to care	Barriers to HIV care included: 1. Lack of HIV programs and insufficient HIV knowledge as factors influencing individuals' susceptibility to HIV. 2. Lack of respect from agency staffs at certain organizations. 3. Immigration laws and policies (ie. gaining legal status and having access to healthcare). 4. Being denied medication and healthcare because they did not have proper refugee documents. 5. Stigmatizing attitudes toward HIV positive people within the ACB community. 6. Extreme fear regarding the social consequences of being seen by someone in their community. Facilitators to HIV care included: 1. Positive experiences with the healthcare system in Canada when compared to "back home". 2. Better training for medical doctors, particularly, immigration doctors.

**Use of HIV care (3)**

Antabe, 2022b	Ontario (Toronto)	Secondary analysis	69 (Black men)	Knowledge about HIV Use of HIV care	Four themes on making health services 'cool': 1. Health promotion as a function of Black family systems; 2. Opportunities for healthy dialogue among peers through non-judgmental interaction; 3. Partnering heterosexual Black men in intervention design; and 4. Strengthening institutional health literacy related to Black men's health.
Hwang, 2012	Alberta (Calgary)	Retrospective cohort observational	2,394 (general cohort)	Use of HIV care	1. Compared with men, women tended to present at a younger age (32.9 versus 35.5 years of age). 2. Women were more likely to be Aboriginal/Métis (21.5%), Black (28.9%), or born outside of Canada (36.6%).
McKay, 2023	British Columbia	Qualitative	18 (Black WLWHIV)	Access to HIV care Use of HIV care Barriers and facilitators to care	Themes that emerged from interviews: 1. Virtual care service delivery was impersonal or inadequate, and made participants feel like they were not sufficiently assessed by care providers. 2. Majority of participants did not feel that the COVID-19 pandemic impacted their ability to utilize HIV services (a few felt dismissed by the decreased availability and support). 3. Barriers to accessing care included: <ul style="list-style-type: none"> <li>• affordability (cost of living),</li> <li>• geography,</li> <li>• fear of COVID when accessing health services, and</li> <li>• depression</li> </ul>

**Engagement and Retention in care (2)**

Logie, 2016	Ontario (Toronto, Ottawa, Niagara falls, Kitchener, Hamilton)	Cross-sectional observational	173 (Black women)	Retention in care Engagement in care	Extending beyond satisfaction with care to highlight the complexity of factors that constitute HIV engagement in and continuity of care, that in turn may contribute to QOL. Results indicated: 1. Age was not significantly associated with any variables. 2. Income was associated with significantly higher overall QOL scores. 3. Overall HIV Engagement in and Continuity of Care Scale (HECCS) scores were significantly and positively correlated with overall QOL scores.
Odhiambo, 2022a	Ontario (Toronto)	Ethnography	35 (Black adults)	Initiation of treatment Engagement in care Barriers and facilitators to care	Immigrants identified the barriers to timely initial linkage to care and assessment: 1. Mandatory HIV testing practices under IME policy (e.g. absence of consent/counselling, lack of referrals by IME panel physicians, and troubling encounters with immigration and public health state agents). 2. Difficulty finding an HIV specialist, booking appointments, and long wait times. Mapping the cascade spectrum revealed how the intersection of immigration, public health, and healthcare

				Intersectionality	legislative frameworks creates barriers to engagement in care for Black people: <ol style="list-style-type: none"> <li>1. Complex and fragmented healthcare system and a lack of knowledge of the system.</li> <li>2. Absence of drug coverage and difficulty accessing HIV treatment.</li> <li>3. Difficulty finding a family physician and long wait times scheduling an appointment to manage comorbidities.</li> </ol>
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**Initiation and Adherence of Treatment (3)**

Odhiambo, 2022a	Ontario (Toronto)	Ethnography	35 (Black adults)	Initiation of treatment Engagement in care Barriers and facilitators to care Intersectionality	Immigrants identified the barriers to timely initial linkage to care and assessment: <ol style="list-style-type: none"> <li>1. Mandatory HIV testing practices under IME policy (e.g. absence of consent/counselling, lack of referrals by IME panel physicians, and troubling encounters with immigration and public health state agents).</li> <li>2. Difficulty finding an HIV specialist, booking appointments, and long wait times.</li> </ol> Mapping the cascade spectrum revealed how the intersection of immigration, public health, and healthcare legislative frameworks creates barriers to engagement in care for Black people: <ol style="list-style-type: none"> <li>1. Complex and fragmented healthcare system and a lack of knowledge of the system.</li> <li>2. Absence of drug coverage and difficulty accessing HIV treatment.</li> <li>3. Difficulty finding a family physician and long wait times scheduling an appointment to manage comorbidities.</li> </ol>
Odhiambo, 2023	Ontario	Ethnography	35 (Black adults)	Adherence to medication	<ol style="list-style-type: none"> <li>1. Inequities in structural and SDOH (e.g. food insecurity, financial and housing instability, homelessness, etc.) intersect to constrain engagement/retention in HIV healthcare and ART adherence.</li> <li>2. Black people perceived as ‘nonadherent to ART’ and maintain detectable viral loads are considered “bad” patients.                 <ul style="list-style-type: none"> <li>• structural violence shaping health work of retention in care and adherence to ART</li> </ul> </li> </ol>
Malama, 2023	Ontario, Quebec, British Columbia	Prospective cohort observational	1,422 (415 Black women)	HIV-related Stigma Intersectionality Adherence to medication	Intersection between HIV stigma and racial/gender discrimination indicated: <ol style="list-style-type: none"> <li>1. Association between racial discrimination and having an undetectable viral load.</li> <li>2. Higher levels of HIV-related stigma and gender discrimination were associated with lower levels of resilience, and higher levels of racial discrimination were associated with greater self-reported resilience.</li> <li>3. Greater resilience at the wave 2 predicted both having an ART adherence above 95% and having an undetectable viral load at wave 3.</li> </ol>

**CD4 count (1)**

Wilton, 2019	Ontario	Prospective cohort observational	1,819 (general clinical cohort)	CD4 count	Using a multivariable regression model, characteristics associated with higher odds of late diagnosis included: <ol style="list-style-type: none"> <li>1. Older age at diagnosis/presentation,</li> <li>2. African, Caribbean and Black race/ethnicity,</li> <li>3. Indigenous race/ethnicity,</li> <li>4. Female sex,</li> <li>5. Being a male (not MSM, however)</li> </ol>
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**OTHER:**

**HIV-related Stigma (15)**

Crichlow, 2016	Ontario (Toronto), Nova Scotia (Halifax)	Qualitative	19 (Black MSM)	HIV-related Stigma Knowledge about HIV	Black MSM expressed: <ol style="list-style-type: none"> <li>1. Experiences of stigma in gay communities, in HIV healthcare organizations, and in Canada overall.</li> <li>2. A need for more HIV-related health literacy to reduce HIV risk</li> </ol>
dela Cruz, 2020	Alberta	Mixed methods	8 (immigrants from SSA living with HIV)	HIV-related stigma	Thematic categories from interview data: <ol style="list-style-type: none"> <li>1. Experiences of HIV-related emotional distress during the IME,</li> <li>2. Varied experiences of HIV testing during the IME,</li> <li>3. Inconsistent patterns of linkage to medical care, psychosocial supports, and</li> <li>4. Engagement in the HIV care cascade</li> </ol>
Etowa, 2020	Ontario (Ottawa)	Cross-sectional observational	89 (Black women)	HIV-related Stigma	<ol style="list-style-type: none"> <li>1. The average HIV-related stigma score was highest in Miami, followed by Ottawa and Port Harcourt.</li> </ol>

					<ol style="list-style-type: none"> <li>2. A statistically significant mean difference in HIV-related stigma between mothers living with HIV in the two North American cities and those in the African city.</li> <li>3. Mothers living with HIV in Ottawa and Miami experienced greater levels of HIV-related stigma compared with those residing in Port Harcourt.</li> </ol>
Etowa, 2022b	Ontario (Toronto, Ottawa)	Mixed methods	107 (Black)	Access to HIV care HIV-related Stigma	<ol style="list-style-type: none"> <li>1. HIV-related stigma increases vulnerability to HIV infection by reducing access to HIV prevention/testing, and introducing barriers to treatment, care, and support for people living with HIV.</li> <li>2. Provider-related issues (e.g. lack of information/training) and organizational issues (e.g. systemic racism) continue to represent major barriers to HIV testing and treatment.</li> </ol>
Etowa, 2022c	Ontario (Ottawa)	Mixed methods	11 (Black women)	Behaviours related to HIV transmission HIV-related Stigma Intersectionality	<ol style="list-style-type: none"> <li>1. Although breastfeeding is an important aspect of the Black motherhood experience, many mothers adhered to the recommended feeding practices (ie. formula-feeding) to prevent their babies from contracting HIV; and expressed regret.</li> <li>2. Black mothers living with HIV dealt with family members' negative perceptions due to their inability to breastfeed.</li> <li>3. Findings demonstrate the challenges that result from the intersectionality of motherhood, culture, living with HIV, and infant feeding.</li> </ol>
Etowa, 2022d	Ontario (Ottawa)	Qualitative	63 (Black men)	Access to HIV care Barriers and facilitators to care HIV-related Stigma	<p>Concerns expressed by ACB men:</p> <ol style="list-style-type: none"> <li>1. Privacy was compromised during service delivery (e.g. HIV clinics are usually situated in open places where people could see those visiting the clinic).</li> <li>2. Long wait times and insufficient physicians.</li> <li>3. Limited opportunities for employment and upward financial mobility (e.g. left with little option but to take on low-skilled jobs to survive).</li> <li>4. Stigma in their access to HIV-related care services (e.g. isolation of a PHA from other patients at a hospital).</li> </ol> <p>Themes for responding to HIV stigma include:</p> <ol style="list-style-type: none"> <li>1. Faith-based organizations and leaders,</li> <li>2. Public health education,</li> <li>3. Collaboration and empowerment to support decision making.</li> </ol>
Gardezi, 2008	Ontario (Toronto)	Qualitative	104 (Black)	HIV-related Stigma	<p>Themes mentioned in focus groups:</p> <ol style="list-style-type: none"> <li>1. Compared to HIV, other issues seem to be more prominent for Black Canadians (e.g. racism, intergenerational conflict, unemployment, issues with Black youth in the school, and immigration issues)</li> <li>2. HIV-positive participants experience multiple forms of stigma, (e.g. the immigration process affects how African and Caribbean people experience/respond to HIV in Canada).</li> <li>3. Women's sexual health (including violence/abuse, issues negotiating condom use, and the familial pressure or cultural expectations).</li> <li>4. Silence in African and Caribbean communities was a recurring theme (sex, sexuality and physical or psychological health issues were rarely discussed in their homes or communities).</li> <li>5. Caribbean participants discussed the belief that HIV is a "gay disease".</li> <li>6. The assumption that HIV does not infect people who are following their religion (e.g. a Somali woman said, "Muslim woman, she's allowed to touch only her husband ... So they [will] say 'you are Muslim, how come you get this disease?')</li> </ol>
George, 2012	Ontario (Toronto)	Qualitative	175 (Black MSM)	HIV-related Stigma	<p>Black MSM expressed:</p> <ol style="list-style-type: none"> <li>1. Experiencing HIV-related stigma, even when they do not have HIV</li> <li>2. The need for services addressing intersecting stigmas (ie. racially and sexually-related stigma)</li> <li>3. Marginalization within the gay community</li> </ol>
Husbands, 2020a	Ontario (Toronto, Mississauga, Ottawa)	Retrospective cohort observational	173 (Black church congregants)	Knowledge about HIV HIV-related Stigma	<ol style="list-style-type: none"> <li>1. Mean HIV knowledge scores increased from baseline to follow-up (after use of PRAISE intervention).</li> <li>2. Congregants who were exposed to all three intervention components achieved a significant reduction in stigma compared with those who were exposed to one or two components.</li> <li>3. Except for baseline knowledge score, none of the predictors in the multi-variable model significantly impacted congregants' knowledge score after intervention exposure.</li> </ol>
Kerr, 2018	Ontario (Windsor)	Cross-sectional observational	495 (Black youth)	HIV-related Stigma	<p>Using ANOVA, stigma scores were:</p> <ol style="list-style-type: none"> <li>1. Significantly different by ethno-religious groups (African Muslim youth demonstrated significantly higher stigma than African non-Muslim and Caribbean youth).</li> </ol>

					<ol style="list-style-type: none"> <li>2. Significantly higher for males than females.</li> <li>3. Not different in stigma by immigration status.</li> </ol> <p>Multivariate ordinary least squares regression showed:</p> <ol style="list-style-type: none"> <li>1. Poorer neighborhood quality and less knowledge are associated with higher stigma scores.</li> <li>2. More experiences of discrimination are trending towards a statistically significant positive association with stigma.</li> </ol>
Kerr, 2021	Ontario	Cross-sectional observational	316 (Black church congregants)	HIV-related Stigma	<ol style="list-style-type: none"> <li>1. Individuals with higher HIV-related stigma scores reported: more disagreement with same-sex relationships, greater religiosity, older age, lack of PLHIV contact, and more time in Canada.</li> <li>2. Individuals lacking PLHIV contact reported greater concern over occasional PLHIV encounters and heightened endorsement of PLHIV discrimination.</li> </ol>
Logie, 2013	Ontario (Toronto, Ottawa, Niagara falls, Kitchener, Hamilton)	Cross-sectional observational	173 (Black women)	HIV-related Stigma	<p>Results revealed that HIV-related stigma, gender discrimination, and racial discrimination were significantly correlated with one another and, with depression:</p> <ol style="list-style-type: none"> <li>1. 1/3 of HIV-positive ACB women in Ontario, reported moderate/severe depression (5 times higher than the rate of depression among Canada’s general population of women).</li> <li>2. HIV-related stigma was associated with higher depression scores.</li> <li>3. Social support and resilient coping did not moderate the impact of HIV-related stigma, racial discrimination, or gender discrimination on depression (it partially mediated the effect of HIV-related stigma on depression).</li> </ol>
Logie, 2017	Ontario (Toronto, Ottawa, Niagara falls, Kitchener, Hamilton)	Cross-sectional observational	173 (Black women)	HIV-related Stigma	<p>Structural equation model results:</p> <ol style="list-style-type: none"> <li>1. HIV-related stigma was positively correlated with racial discrimination and depression, and negatively correlated with social support and QOL.</li> <li>2. Racial discrimination was positively correlated with depression, and negatively correlated with social support and QOL.</li> <li>3. Depression was negatively correlated with social support and QOL, and social support positively correlated with QOL.</li> </ol>
Loutfy, 2012	Ontario (Toronto)	Cross-sectional observational	1,026 (general cohort)	HIV-related Stigma	<ol style="list-style-type: none"> <li>1. Women had significantly higher median total stigma scores.</li> <li>2. White women had lower median total stigma scores than Black, Aboriginal, and Asian/Latin-American/Un- specified women.</li> <li>3. Black men had significantly higher total stigma scores than Aboriginal, Asian/Latin-American/Unspecified, and White men.</li> </ol>
Malama, 2023	Ontario, Quebec, British Columbia	Prospective cohort observational	1,422 (415 Black women)	HIV-related Stigma Intersectionality Adherence to medication	<p>Intersection between HIV stigma and racial/gender discrimination indicated:</p> <ol style="list-style-type: none"> <li>1. Association between racial discrimination and having an undetectable viral load.</li> <li>2. Higher levels of HIV-related stigma and gender discrimination were associated with lower levels of resilience, and higher levels of racial discrimination were associated with greater self-reported resilience.</li> <li>3. Greater resilience at the wave 2 predicted both having an ART adherence above 95% and having an undetectable viral load at wave 3.</li> </ol>

**Intersectionality (4)**

Etowa, 2022c	Ontario (Ottawa)	Mixed methods	11 (Black women)	Behaviours related to HIV transmission HIV-related Stigma Intersectionality	<ol style="list-style-type: none"> <li>1. Although breastfeeding is an important aspect of the Black motherhood experience, many mothers adhered to the recommended feeding practices (ie. formula-feeding) to prevent their babies from contracting HIV; and expressed regret</li> <li>2. Black mothers living with HIV dealt with family members’ negative perceptions due to their inability to breastfeed.</li> <li>3. Findings demonstrate the challenges that result from the intersectionality of motherhood, culture, living with HIV, and infant feeding.</li> </ol>
Konkor, 2019	Ontario (London)	Retrospective survey	156 (Black men)	Behaviours related to HIV transmission Intersectionality	<p>Of the heterosexual ACB men:</p> <ol style="list-style-type: none"> <li>1. 75% reported using a condom during their most recent intercourse</li> <li>2. 47% did not know the HIV status of their regular female sexual partners</li> <li>3. 56% reported having one sexual partner</li> <li>4. 58% being single</li> </ol> <p>Behavioural, demographic and structural factors were significantly associated with testing for HIV:</p> <ol style="list-style-type: none"> <li>1. Those who used condoms during their last sexual intercourse were less likely to test for HIV.</li> <li>2. Having multiple sexual partners was associated with higher odds of testing for HIV.</li> </ol>



					<ol style="list-style-type: none"> <li>3. Respondents who are full-time employed were more likely to test.</li> <li>4. Immigrants were more likely to test for HIV than Canadian men.</li> <li>5. Those with college education, high school and below and reported ever experiencing discrimination were less likely to test for their HIV status.</li> </ol>
Malama, 2023	Ontario, Quebec, British Columbia	Prospective cohort observational	1,422 (415 Black women)	HIV-related Stigma  Intersectionality  Adherence to medication	Intersection between HIV stigma and racial/gender discrimination indicated: <ol style="list-style-type: none"> <li>1. Association between racial discrimination and having an undetectable viral load.</li> <li>2. Higher levels of HIV-related stigma and gender discrimination were associated with lower levels of resilience, and higher levels of racial discrimination were associated with greater self-reported resilience.</li> <li>3. Greater resilience at the wave 2 predicted both having an ART adherence above 95% and having an undetectable viral load at wave 3.</li> </ol>
Odhiambo, 2022a	Ontario (Toronto)	Ethnography	35 (Black adults)	Initiation of treatment  Engagement in care  Barriers and facilitators to care  Intersectionality	Immigrants identified the barriers to timely initial linkage to care and assessment: <ol style="list-style-type: none"> <li>1. Mandatory HIV testing practices under IME policy (e.g. absence of consent/counselling, lack of referrals by IME panel physicians, and troubling encounters with immigration and public health state agents).</li> <li>2. Difficulty finding an HIV specialist, booking appointments, and long wait times.</li> </ol> Mapping the cascade spectrum revealed how the intersection of immigration, public health, and healthcare legislative frameworks creates barriers to engagement in care for Black people: <ol style="list-style-type: none"> <li>1. Complex and fragmented healthcare system and a lack of knowledge of the system.</li> <li>2. Absence of drug coverage and difficulty accessing HIV treatment.</li> <li>3. Difficulty finding a family physician and long wait times scheduling an appointment to manage comorbidities.</li> </ol>

**HIV prevention (4)**

Ajiboye, 2022	Ontario (Toronto)	Qualitative	29 (Black)	HIV Prevention  Knowledge about HIV	<ol style="list-style-type: none"> <li>1. Participants identified several factors contributing to difficulty in decision making regarding PrEP:                             <ul style="list-style-type: none"> <li>• inadequate knowledge and unrealistic expectations,</li> <li>• lack of clarity about personal values, and</li> <li>• issues of support and resources</li> </ul> </li> <li>2. Participants identified information the following as crucial to their decision making on PrEP:                             <ul style="list-style-type: none"> <li>• ‘where and how’ to access PrEP,</li> <li>• the cost of PrEP, and</li> <li>• whether public and private health insurance will cover it,</li> </ul> </li> </ol>
Amibor, 2012	Ontario (Greater Toronto Area)	Qualitative	7 (HIV service providers)	HIV Prevention	Four Themes regarding barriers associated with accessing HIV-prevention services: <ol style="list-style-type: none"> <li>1. Cultural Competence and Sensitivity among Service Providers: a lack of cultural competence and poor identification with the communities being served.</li> <li>2. Stigma: the fears of being identified by other members of the community while accessing care.</li> <li>3. Realities of the Social Determinants of Health: . Several determinants were described, which were reiterated in some form or another by the participants.</li> <li>4. Insufficient Resource Allocations: lack of resources, which typically translated into the under-funding, under-staffing of, and the poor geographical distribution of services.</li> </ol>
Lewis-Peart, 2007	Ontario (Toronto)	Organizational Report		HIV Prevention	<ol style="list-style-type: none"> <li>1. Interventions are needed for Black MSM</li> <li>2. HIV testing and prevention programs are needed for young Black MSM</li> <li>3. HIV prevention messaging need to recognize Black MSM and address social constructs (ie. masculinity)</li> </ol>
Newman, 2008	Ontario (Toronto)	Qualitative	26 (Black women)	HIV Prevention	Findings suggest that many current HIV preventative intervention models: <ol style="list-style-type: none"> <li>1. May be perceived as irrelevant or requiring them individually to combat powerful structural forces (e.g. sexism, racism, and AIDS stigma) and to face social pressures (culture, religion, or family-based).</li> <li>2. Require individuals to protect themselves at the cost of alienation from traditional bastions of support.</li> </ol>

**HIV testing (3)**

Djiadeu, 2020b	Ontario (Toronto)	Secondary analysis	460 (Black men)	Prevalence of HIV HIV testing	<ol style="list-style-type: none"> <li>1. Rate of HIV infection in MSW, MSM, or both (2.91%, 42.11%, 36.59% respectively).</li> <li>2. The CART method identified the number of male partners (6 or higher) as the best predictor of current HIV infection.</li> <li>3. The best indicators of those who had been tested for HIV was: age, number of past sexual partners and past STIs.</li> </ol>
George, 2014	Ontario (Toronto)	Cross-sectional observational	168 (Black MSM)	HIV testing	<ol style="list-style-type: none"> <li>1. Younger men were less likely to have tested for HIV, when compared to older men.</li> <li>2. African and Caribbean-born men were less likely to have tested for HIV, when compared to Canadian-born men</li> </ol>
Orser, 2022	Ontario (Ottawa)	Prospective cohort observational	67 (36 Black PLHIV)	HIV testing	<p>When concurrent HIV/AIDS diagnoses were:</p> <ol style="list-style-type: none"> <li>1. Examined according to sex and ethnicity, 81.3% of AIDS diagnoses among females were in Black women and 45.1% of diagnoses among males were in Black men.</li> <li>2. Grouped according to population-specific risk factors, 50.7% were ACB, 26.8% were heterosexual from non-HIV endemic regions.</li> </ol> <p>Persons without prior HIV testing accounted for 71.6% of concurrent HIV and AIDS diagnoses during the study period:</p> <ol style="list-style-type: none"> <li>1. 75% were males and were fairly evenly distributed between White and Black men.</li> <li>2. 25% were female, most notably, Black women from HIV endemic regions.</li> </ol>

**Resilience (2)**

Antabe, 2022a	Ontario (Toronto, London, Ottawa, Windsor)	Qualitative	210 (Black men)	Resilience	<ol style="list-style-type: none"> <li>1. Resilience to HIV emerges from: <ul style="list-style-type: none"> <li>• bonding with other men,</li> <li>• family and community,</li> <li>• self-confidence and self-determination</li> </ul> </li> </ol>
Antabe, 2023	Ontario (London)	Retrospective cohort observational	30 (Black men)	Resilience	<p>Resilience in HIV+ men:</p> <ol style="list-style-type: none"> <li>1. PLHIV used health and institutional services as protective assets. For instance, a participant living with HIV recounted how with the help of some agencies, he accepted the realities of his HIV serostatus and initiated treatment.</li> <li>2. ACB men receiving these services may over time develop trust and establish friendship with service providers, which helps them in overcoming stress and depression associated with living with HIV.</li> <li>3. Participants proposed measures mainly focused on improving their connection to ASOs which they considered valuable to accessing information and other useful resources, such as testing, that can build their capacity to adequately respond to HIV.</li> </ol>

**Remaining outcomes (9)**

Andany, 2011	Ontario	Cross-sectional observational	778 (121 Black)	Presence of lipodystrophy	<ol style="list-style-type: none"> <li>1. Regarding the presence of lipodystrophy, there was no difference between Blacks, Whites, and Other ethnicities.</li> <li>2. For males, all ethnicities had statistically similar rates of lipodystrophy and central lipohypertrophy, but there was a trend for Whites (61%) and Others (53%) to report higher levels of lipodystrophy than Blacks (48%).</li> <li>3. For females, there were no statistically significant ethnic differences in the rates of lipodystrophy, peripheral lipoatrophy, and central lipohypertrophy. However, there was a trend for Black women (57%) to report more central lipohypertrophy when compared with White (36%) and Other women (42%).</li> </ol>
Caprara, 2013	Ontario (Toronto)	Retrospective cohort observational	141 (Pregnant women living with HIV)	Proportion of Black pregnant women living with HIV	<ol style="list-style-type: none"> <li>1. Majority of women were from Afro-Caribbean countries and had recently immigrated to Canada.</li> <li>2. There was a statistically significant trend in increasing numbers of women of Black ethnicity over the study period (may be a reflection of increasing immigration)</li> <li>3.</li> </ol>
Forbes, 2012	Canada	Retrospective cohort observational	2,692 (Pregnant women and infants)	Births in women living with HIV	<ol style="list-style-type: none"> <li>1. Overall proportion of white women declined (47% in period 1 to 25% in period 2), whereas the proportion of black (35 to 48%) and aboriginal (14 to 20%) women increased.</li> <li>2. Aboriginal and black women made up 3.8% and 2.5% of the overall Canadian population (at the time of this study), yet they represented 19% and 46%, respectively, of the HIV-infected pregnant</li> </ol>

					<p>women in this study.</p> <ol style="list-style-type: none"> <li>3. As a reflection of immigration in Ontario and Quebec: Approximately 60% of mothers in those provinces were black women from Africa and the Caribbean</li> <li>4.</li> </ol>
Husbands, 2021	Ontario (Toronto, Ottawa)	Cross-sectional observational	18 (Black church congregants)	Experiences in Black PRAISE intervention	<p>Impact of the Black PRAISE intervention:</p> <ol style="list-style-type: none"> <li>1. Reflections on the importance of HIV and Black PRAISE in their church.</li> <li>2. Effective community engagement on HIV-related stigma.</li> </ol> <p>Challenges participants faced:</p> <ol style="list-style-type: none"> <li>1. Understanding their faith in the context of HIV.</li> <li>2. Translating beliefs about stigma reduction into practice.</li> </ol> <p>Perspectives on the future of Black PRAISE and stigma reduction:</p> <ol style="list-style-type: none"> <li>1. Providing a biblical foundation,</li> <li>2. Promoting opportunities for continued learning, and</li> <li>3. Facilitating partnerships with local organizations and capacity building.</li> </ol>
Odhiambo, 2022b	Ontario (Toronto)	Dissertation	35 (Black adults)	Experiences in institutional care	<p>Findings revealed a disturbing separation between government guidelines, ethical HIV testing practices, and Black people's experiences undergoing IME:</p> <ol style="list-style-type: none"> <li>1. Black immigrants were often tested for HIV without informed consent and pre and post-test counselling.</li> <li>2. Panel physicians did not make referrals and connect Black immigrants diagnosed with HIV to care.</li> <li>3. Limited healthcare providers with adequate HIV knowledge and cultural competence to provide quality healthcare to Black people.</li> <li>4. Black people lacked knowledge of the organization of Canada's healthcare system.</li> <li>5. Black people experienced a lack of power through inadequate consultation time, comprehensive healthcare, and exclusion from the decision-making processes.</li> </ol>
Odger, 2019	Manitoba (Winnipeg)	Ethnography	6 (African migrant youth)	Sexual health messaging	<p>Three trajectories of sexual health messaging encountered by youth from Eritrea, Ethiopia, Kenya, Mauritius, and Rwanda who had been living in Manitoba (&lt;6 years):</p> <ol style="list-style-type: none"> <li>1. Ubiquity of events and racialized bodies –immigration shaped the concept of sexual health, and the visibility of specific issues (i.e. HIV/AIDS, pregnancy, STIs).</li> <li>2. Key moments in their lives that illustrate how risk is actively made in concrete events along trajectories.</li> <li>3. How sexual health messages targets particular bodies and perceived through the experiences and perspectives of young newcomers in the city of Winnipeg.</li> </ol>
Remis, 2013	Ontario (Greater Toronto Area)	Prospective cohort observational	417 (Black women)	Prevalence of STIs and viral infections in HIV-positive/negative women	<p>Summary of prevalence of bacterial STIs among HIV-positive and HIV-negative women:</p> <ol style="list-style-type: none"> <li>1. All viral pathogens were more prevalent in HIV-positive women and most differences were statistically significant.</li> <li>2. Vaginal HPV infection was detected in 50.8% of HIV-positive and 22.6% of HIV-negative women.</li> <li>3. HSV-2 infection was more frequent in HIV-positive (86.3%) than HIV-negative (46.6%).</li> <li>4. BV was not associated with HIV status. However, HIV-negative women reporting sex in the previous six months had a higher prevalence of BV than those who did not.</li> </ol>
Vrancken, 2017	Alberta	Retrospective cohort observational	1,146 (general PLHIV)	Epidemiological characteristics of the most common HIV-1 subtypes.	<ol style="list-style-type: none"> <li>1. Epidemics of subtypes A and C were more common in Black people, but subtype B circulated mostly among Caucasians and First Nations.</li> <li>2. Irrespective of subtype, about 25-33% of infections among Black people are of foreign origin. <ul style="list-style-type: none"> <li>• May be connected to Africa as a prominent location for subtypes A and C</li> </ul> </li> </ol>
Worthington, 2013	Alberta (Calgary)	Cross-sectional observational	41 (African immigrants)	HIV service needs and priorities	<p>Five gender-related themes emerged:</p> <ol style="list-style-type: none"> <li>1. Factors (e.g. under-employment, alcoholism) that led to “families breaking down”,</li> <li>2. Different sexual standards for men and women (e.g. cultural acceptance of multiple sexual partners for men)</li> <li>3. Condom use</li> <li>4. Infidelity (women more frequently discussed this issue)</li> <li>5. A need for partner dialogue around sex and HIV</li> </ol>