



# Barriers and facilitators to providing human immunodeficiency virus pre-exposure prophylaxis decision support to black patients in Canada: A cross-sectional study

## Original Research

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## ABSTRACT

**Introduction:** Healthcare settings can build towards a specific social environment, in which Black patients can make safe and informed health decisions, including those about whether to use pre-exposure prophylaxis (PrEP). Using the conceptual framework of the self-determination theory for the guidance to identify the extent to which current HIV PrEP decision support practices from health personnels (HCP) are autonomy supportive. This identifies future developments and implementations of interventions for HCP capacity building to safely support and enhance the autonomy of Black patients who are considering using PrEP. **Methods:** Using a cross-sectional design for examining HCPs' perspectives on delivering quality PrEP usage-related decision support. Through a cross-sectional online survey of 24 HCP from 10 community-based health centres serving in Toronto, Canada, descriptive statistics were characterized in close-ended survey data and sample. Open-ended survey responses were analyzed using Q-sorting methodology. **Results:** Of the HCP, 40% were willing to provide PrEP decision support to Black-identified patients. HCP reported barriers of needing education about PrEP and available resources (96%). There's a need for more education and resources to facilitate safe decision support for Black patients for reducing PrEP uptake disparities. **Conclusion:** It is imperative that cultural humility in healthcare be upheld to provide safe and informed decision support. Solidifying a need for a uniformed definition of cultural humility (globally) since life experiences and background are equally crucial to the health status of that individual. Future research should consider a stand cultural humility to globally. Competence development among HCP can take the forms of providing training to increase cultural humility awareness, knowledge, and skills that can build towards an environment in which Black patients are provided with safe and informed information about their health to make relevant decisions.

## KEYWORDS

Black population, Decision support, Health personnel, Healthcare provider, HIV

## INTRODUCTION

Approximately 63,000 Canadians are living with HIV, with upwards of 2,000 new infections occurring in 2016 (Canada, 2019). Among these cases are a high prevalence (9,438; 15%) of persons who are recent descendants from countries in sub-Saharan Africa and

the Caribbean (Canada 2014; 2019; The Epidemiology of HIV, 2018). The province of Ontario, in Canada, accounts for the largest proportion of Canada's HIV incidence, with 38.9% of the county's new cases in 2017 (Haddad et al., 2019) African, Caribbean, and



Canadian Black (Blacks) represent only 4.7% of Ontario's population, yet account for 30% of the HIV prevalence and 25% of new infections (Canada 2014; 2019; The Epidemiology of HIV, 2018). This proves the significant health disparities towards the Black identified person residing in Canada, specifically in HIV incidences in Ontario. When unpacked further to address both race and sexual orientation, among 481 Black men who have sex with men (BMSM), living in Ontario, who constitute 18% of the population, the HIV prevalence were 38% (Nelson et al., 2019).

Comprehensive biomedical prevention strategies have the potential to contribute to narrowing racial health disparities in HIV and reduce disproportionate rates of HIV among the Black population especially BMSM. Oral HIV PrEP includes the use of anti-retroviral medication, which has been shown to be highly effective in blocking the transmission of HIV (Chou et al., 2019; Grant et al., 2010; 2014; Sidebottom et al., 2018; Thigpen et al., 2012; Van Damme et al., 2012). Despite the strong evidence for PrEP's efficacy (Chou et al., 2019; Zhabokritsky et al., 2019), use continues to be low among the Black population in Ontario.

Several factors have been reported here that may contribute to low PrEP use rates among the Black population, however, intersectionality is a consideration to capture health disparities trends that determine health outcomes among Black patients. While these include cost, prejudice/stigma, and concerns about side effects, we investigated the rates of HCP discussions of prescribing PrEP with White patients higher than with Black patients (Calabrese et al., 2018; Levy et al., 2014; Sidebottom et al., 2018; Zhabokritsky et al., 2019). During healthcare visits, HCPs play an important role as influencers who can facilitate or undermine PrEP use among Black patients. The determining factors for PrEP uptake can arise from the information HCP decide to share or withhold with their Black patients. Additional considering factors can be HCP's use of cultural humility responsive approaches during care and assessments and emphasizing strategies for freedom and choice (decision-support) to compel Black patients to use PrEP. Cultural humility is defined by the National Institutes of Health (NIH) as "a lifelong process of self-reflection and self-critique whereby the individual not only learns about another's culture, but one starts with an examination of her/his own

beliefs and cultural identities" (Sufrin, 2019). To date, HCPs' perceptions of PrEP decisional needs of Black patients, and the views and expectations regarding their role in meeting the decisional needs of Black patients have been understudied. The purpose of this study was to examine HCPs' perspectives on what factors influence their perspectives of decision support to Black patients who are considering whether to use PrEP.

### **Conceptual Framework**

This study was guided by the Self-Determination Theory (SDT) which contends that humans inherently have natural inclinations towards health-protective activities (Deci & Ryan, 2012; Nelson et al., 2015; Ng et al., 2012; Patrick et al., 2012), through the fulfilments of the three basic human psychological needs; autonomy (self-governance, including patients' safe and informed decision making), competency (having a sense of that one can attain a goal, such as medication adherence), and relatedness (one's connection to others, like trust with HCP). According to SDT, the fulfilment of all mentioned psychological needs in one's social environment helps to facilitate the internalization of motivation for pro-health behaviours, which can include HIV prevention behaviours such as the use of PrEP.

Consistent with SDT, we conceptualized the healthcare setting as a specific social environment in which patients contemplate and make health decisions, including decisions about whether to use PrEP. Our operating proposition in using SDT were that healthcare environments would be optimized for safe and informed PrEP use decision-making among Black patients. This would be carried out through HCPs' decisions to support stemming attitudes, expectations, beliefs, and behaviours toward providing HIV care. The aim of the study is to provide healthcare providers non-contingent resources and skills that enabled patients (Black) to achieve PrEP-related adherence goals while facilitating connection and trust with Black patients.

### **METHODS**

#### **Design**

A cross-sectional online survey was conducted in 2018. A non-probability sample of 24 health



personnel (i.e., nurses, social workers, non-licensed personnel, and physicians) employed in organizations that offered PrEP services were included. Although 24 is a modest sample size, similar size samples can be found in earlier HIV research studies. Specifically, samples with sizes ranging from 20-30 have been used and included underrepresented groups (Creswell, 2018).

Participants were selected based on their direct involvement in providing any component(s) of the PrEP care continuum, including 1) identifying individuals at risk of contracting HIV, 2) increasing and enhancing HIV risk awareness, 3) facilitating PrEP access, 4) prescribing PrEP, and 5) supporting PrEP adherence (Nunn et al., 2017). All participants were recruited through their place of employment which had established sexual health clinics that served Black patients. These organizations include family health teams, community health centres, sexual health clinics, and the AIDS Service Organizations. Study participants were recruited from organization located in Black communities or organizations that service Black identified persons (services specifically for Blacks identified persons).

Participants were invited to complete a screening eligibility form during the on-site training meetings. Trained study team members attended on-site staff meetings to explain the purpose of the study and what participation entailed. Study team members obtained written informed consent from all health personnel who were eligible and interested to participate.

### **Procedure**

All study procedures were approved by the Unity Health Toronto's Research Ethics Board.

Participants were sent a survey link and unique login information through email to self-administer a brief questionnaire. Participants were first asked basic demographic questions such as education level, age, length of time in the profession, gender, and occupation. Participants were then asked about their perspectives for the decision support needs of Black patients using the Barriers & Facilitators to Implementing Decision Support for Values-Sensitive Decisions tool (Stacey, 2004).

This 33-item statement measured health personnel's attitudes towards patient's participation in decision-making, their perceived role in supporting patients, and factors that influenced the provision of decision support. This measure has 7 levels of agreements. Questions focused on factors influencing health personnel providing decision support to callers/patients facing more complex health decisions. Examples of questions are "most [health personnel] are sensitive to the influence that their personal preferences can have on callers/patients' decision", and "most [health personnel] feel their clinical judgement is too constrained by protocols". This 33-item measure asked participants to indicate their level of agreement (i.e., agree, disagree, neutral) in the online survey.

The survey asked a series of questions related to an individual's self-perceived role in patients' decision-making, factors that influence whether and how to provide decision support to Black patients, and their expectations about Black patients' roles in making decisions for themselves. Participants were then asked to list, in ranked order, starting with the highest priority, their top three: (a) barriers to their provision of decision support to patients, (b) barriers that make it difficult for Black patients to obtain support in making their decision about whether to use HIV PrEP and (c) factors that would enable them to provide of PrEP decision support to Black patients. This portion of the survey only accepted free-text responses for groups a, b, and c. Participants were not given answer choices to select from in this section.

### **Analysis**

Descriptive statistics were used to summarize demographic data, using frequencies and proportions. Data from the survey were collapsed from seven response anchors into three response categories to adjust for small cell sizes. Likert-type response anchors, such as strongly agree, agree, and mildly agree were recorded as "agree". Strongly disagree, disagree, and mildly disagree were recorded as "disagree".

Qualitative data generated from the free text response items from groups a, b, and c, that were stated above (related to decision support) were examined and subjected to qualitative content analysis using a Q- sorting methodology (Akhtar-



Danesh et al., 2008; Gallagher & Porock, 2010; Powers & Knapp, 2009). We used Q sorting as our method of qualitative analysis because it allows for identifying subjective viewpoints that have not been well understood to act towards any implementation of evidence-based practice for health care (Tiernon et al., 2017).

Responses from the participants were placed on a single index card (one response per card). Each card was color-coded based on the specific group that generated that response (i.e., group a, b or c). Additionally, each response card was numbered to indicate the priority rank that were assigned by the participant (1st, 2nd, or 3rd). For each question group, the response cards were organized further into subgroups based on their priority rank designation. For example, all the first ranked responses for group 'a' were arranged into a pile; the second and third-ranked responses for group 'a' were arranged together into its own single pile. Starting with the priority ranked card pile, individual cards were collapsed into smaller sub-group-piles by identifying statements with overlapping conceptual meanings. Discrepancies in interpretation were discussed between the first author and the last author until a resolution were reached. After all response cards were sorted into smaller distinctions, two analysts characterized the overall content of the cards into major topic categories. They continued this card content analysis for the remaining two question groups (i.e. groups b and c). The two analysts arrived at a consensus of the subgroups for each of the group questions. The subgroups were concluded upon final analysis (Tables 5 & 6).

## RESULTS

A total of 24 HCPs participated in this study. [Table 1](#) summarizes the demographic characteristics of the sample, including the distribution of their occupations. [Table 2](#) displays the distributions of participants' involvement across the PrEP care continuum. At least half of the participants were female, between 30-39 years of age, had more than two years of professional work experience at their organization.

With the perspectives on decision support needs of Black patients ([Table 3](#)), we found that 66% of HCP disagree with the assumption that Black patients

prefer HCP to decide for the patient about whether to use HIV PrEP. Also shown was that 75% of the HCP believe that supporting Black patients who are deciding whether to use HIV PrEP will increase patients' involvement in making these decisions. In addition, over 90% of HCPs concluded that supporting Black patients making decisions about whether to use HIV PrEP will stimulate them to ask more questions than they would have otherwise asked.

Secondly, the perspectives on providing decision support to Black patients ([Table 4](#)), we found the level of agreement HCP had for supporting the decision to use PrEP for Black-identified patients. More than 80% expressed not having enough training in orientation to feel prepared for supporting Black patients facing decisions about whether to use HIV PrEP. Also, 66% of HCP are not familiar with the novel decision support system of Healthwise Knowledge Base (2007) decision point to facilitate PrEP delivery to Black patients. It was shown that over 95% of HCP acknowledged a need to enhance their knowledge about supporting Black patients with making decisions about whether to use HIV PrEP.

Furthermore, priority ranking of the barriers and facilitators to PrEP decision support ([Table 5](#)), we found that HCP encounter 3 highly ranked barriers in, chronological order; lack of capacity or experience working with Black patients, lack of knowledge about available resources for PrEP and how to access them, and adequate time. The highly ranked necessity for HCP to provide decision support are to enhance the capacity for working with Black patients.

Lastly, barriers to Black patients receiving decision support for PrEP ([Table 6](#)) we identified barriers that HCPs believed made it difficult for Black patients to receive decision support. It is shown that HCPs identified that the most prominent barrier that Black-identified patients faced in receiving PrEP were due to HCP deficits.

## DISCUSSION AND IMPLICATIONS

The purpose of this study was to explore decision support from HCPs perspectives to provide further insight key factors that are essential to decision support of PrEP usage among Black patients in Canada. Our study findings suggested that decision support from HCPs is more than a knowledge gap. The



data suggests that provision of PrEP decision support to Black patients requires a basic comfort level and cultural humility gap for being able to provide decision support to Black patients. Similar to the National Health Institute's definition of cultural humility, its essence and nature can be further expressed as a process of self-awareness, openness, and being egoless in order to incorporate self-reflection and critique after an interaction with "diverse individuals" (Foronda et al., 2016)

Achieving cultural humility can present itself as mutual empowerment, partnerships, respect, optimal care, and lifelong learning among HCP engagement dyads in the clinical space (Chang et al., 2012; Foronda et al., 2016). Considering comfort levels and cultural humility as additional influential barriers for HCP, is consistent with a study that underscores this pattern among internal medicine (IM) residents (across four U.S. programs); that are eligible to provide PrEP. although 96% of IM residents had heard of PrEP, only 25% had prior training to provide PrEP to patients, however future research should investigate the effects of HCPs comfort levels in the clinical space providing HIV care the Black patients. Unfortunately, this study excluded the lenses of racial and ethnic classifications when expressing their lack of comfort for providing PrEP care (Terndrup et al., 2019).

Research regarding improving HCP capacity to provide HIV services to Black populations is crucial, especially when considering that previous studies have provided evidence of discrimination in HIV clinical spaces (Algarin et al., 2020; Brincks et al., 2019; Cressman et al., 2020; Irvin et al., 2014; McCree et al., 2021, pp. 2018–2019). These studies have hinted towards the additional barriers, such as low comfort levels or cultural competence, that may be linked to racial discrimination. Hence, expressed by numerous HIV treatment studies HPTN 061--Not addressing gaps for providing HIV care to Black patients can result in discontinuation in the engagement of the HIV care continuum. This undermines the global goal of ending the AIDS epidemic (90-90-90: An Ambitious Treatment Target to Help End the AIDS Epidemic, n.d.). Thus, because our study applied the lenses of race, culture, and ethnicity to capture HCPs' decision support approaches, future studies should investigate clinical

policies; that to which allow the flourishing of cultural humility among those giving HIV care.

Healthcare providers' lack of capacity in working with this population of interest, which underscores the gaps for appropriate HIV care continuum engagements. As this is a specialized area of care, identifying the gaps in these treatment spaces can begin to address weaknesses in current healthcare policies. Allowing more appropriate healthcare policies amendments that are grounded and reflective of cultural humility, is promising for providing decision support for Black identified persons in the clinical space. Future policies that can direct and support HCPs' future interpretive approaches in the clinical space, can reveal the logic of inquiry to mitigate minoritized negative experiences (HIV Care Continuum, 2021).

The findings of this study demonstrate that HCP have identified several barriers that prevent them from providing PrEP decision support to at-risk Black patients. This study contributes to the literature by addressing the various perspectives that HCP have towards providing PrEP decision support to Black patients. In addition, the findings contribute to identifying factors that hinder PrEP uptake in Canada as earlier studies were conducted in the U.S. and, there are very limited research reported from Canada on these issues. Findings from our study suggest that HCP are aware of the gap for providing decision support for Black patients, and struggle with how to effectively address this matter. Furthermore, most HCPs disagreed with removing decision autonomy from Black patients and instead supported shared responsibility for making decisions about whether to use HIV PrEP ([Table 3](#)). Enhancing the autonomy of Black patients is a crucial step in PrEP decision support, as it addresses one of the three basic human psychological needs required to optimize health identified in the SDT.

Two-thirds of HCP agreed that they would prefer clear step-by-step approaches to provide PrEP decision support for Black patients. A suggestion is having healthcare institutions provide HCP training for decision support through the system of Healthwise Knowledge Base (2007; Nelson et al., 2020). This can guide HCP who struggle in recognizing when Black patients are having difficulties making decisions about whether to use PrEP ([Table 4](#)).





In addition, participants reported that healthcare settings are not conducive to facilitating discussion on PrEP decision support with Black patients. Time emerged as a major determinant of decision support in the results. The majority of HCP reported feeling pressured to keep patient visits short and thus were unable to develop decision support skills ([Table 4](#)).

It is often the lack of adequate time during routine consultations (which includes PrEP assessment and decision support) in HCP's schedule that can have negative consequences (Burnett et al., 2011; Howie et al., 1991; Irving et al., 2017; Tai-Seale et al., 207). Time constraints have been identified as a key barrier to PrEP uptake and provision in previous studies (Chou et al., 2019; Grant et al., 2010; 2014). With the support of healthcare institutions, HCP' should strategically allocate time in their routine consultations to initiate PrEP discussions, increase PrEP awareness and knowledge to provide decision support to Black patients (Chou et al., 2019).

From the results, the majority of HCP believe that Black patients preferred to make their own decision about whether to use PrEP after seriously considering their HCP's opinions. From the study results, we identified the desire HCP have towards meeting the psychological needs of Black patients to optimize well-being. However, HCPs' lack of awareness of personal biases and prejudices is a major barrier to providing decision support to Black patients and can inhibit any enhancement of capacity building which is a top barrier for providing decision support to Black patients ([Table 5](#)). The information HCP choose to share or withhold with their patients, the use of cultural humility responsive approaches, and the emphasis of freedom and choice (decision support) are all mediated by HCP internal biases and prejudices. Thus, building capacity to adequately serve and provide PrEP decision support to Black patients must be improved. According to the World Health Organization, capacity building involves actions towards 'advancement of knowledge and skills among practitioners; the expansion of support and infrastructure for health promotion in organizations, and the development of cohesiveness and partnerships for health in communities to improve health (Smith et al., 2006).

The relationship and relevance of training, experience, knowledge base and competence towards sexual health have been documented in several studies (Canada 2014; 2019; The Epidemiology of HIV, 2018). These studies demonstrated that HCPs' knowledge, confidence, and competence correlate with readiness and willingness to provide decision support and prescribe PrEP (Haddad et al., 2019; Nelson et al., 2019). Our study findings in conjunction with those from prior studies, highlight several strategies and interventions that might be instrumental in enhancing HCPs' readiness and willingness to provide decision support and initiate PrEP. Continuous education and training interventions that provide information on PrEP safety could reduce HCP's concerns and boost their confidence in providing decision support and meeting Black patients' needs. Since this is a cross sectional study, generalizability is a challenge that may not be representative of the study population. In addition, causation cannot be determined from participants. Future studies should further investigate the various outcomes produced in this study to draw causal conclusion regarding HCP response for barrier and facilitators of PrEP decision support among Black patients.

Healthcare providers' lack of capacity in working with this Black patient demonstrates significant gaps in appropriate engagement with the HIV care continuum. As this is a specialized area of care, highlighting the gaps in these treatment spaces can identify weaknesses in current healthcare policies, allowing room for more appropriate healthcare policies amendments that are grounded in cultural humility for providing decision support to Black patients. Ongoing issues of anti-Black racism and decades of negative impacts from healthcare institutions have determined the living circumstances and health choices of Black populations (Ramos et al., 2019). Moreover, these approaches and outlooks have translated into health outcomes, presenting as the health issues and treatments that Black populations face, including HIV. Hence, future policies that can direct and support cultural humility in HCPs' work in the PrEP decision support, and which mitigate negative experiences amongst Black patients, are sorely needed to drastically prevent new HIV infections in this population (HIV Care Continuum, 2021).



## CONCLUSION

More focus on an upstream approach for mitigating health disparities among Black patient/persons seeking HIV care is need now more than ever; especially given the current events that highlight racially perpetuated health disparities. The result of this study also demonstrates that gaps in clinical spaces for delivering HIV care; these gaps in care have likely been exacerbated by the COVID-19 pandemic (both in-person and virtually). Improving HCPs' PrEP decision support capacity for Black patients will need new healthcare policies that are fixated on 'threading the common good' to achieve optimal HIV care engagement. Within the healthcare treatment space, understanding barriers and facilitators, including those related to HCPs' cultural humility and comfort levels discussing PrEP with their Black patients, can illuminate strategies and pathways for more holistic HIV health care delivery.

Creating an environment where both HCP and patient can engage with one another safely and openly, and where HCP are held accountable in providing quality PrEP decision support, can be established by healthcare policies that determine the decision support approaches given to the patient from the HCP. It is imperative that cultural humility and comfort levels be considered as part of evaluating HCPs' 'common good' integration with the care they provide. Meaning, higher accountability to HCPs to provide decision support of PrEP for Black identified persons in complementary for culturally providing humility care to Black patients. This will inform the directions for future patient-HCP engagement. The urgency of the matter is palpable as these patient populations are already experiencing numerous societal vulnerabilities in health.

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**Table 1. Participant Characteristics**

Characteristic	Category	% (n)
Age †	Under 29	20.8 (5)
	30 to 39	50.0 (12)
	40 to 49	16.7 (4)
	50 to 59	8.3 (2)
Gender	Male	37.5 (9)
	Female	58.3 (14)
	Other	4.2 (1)
Education Completed	College Diploma	4.2 (1)
	Undergraduate University Degree	33.3 (8)
	Graduate University Degree – Medical School	37.5 (9)
	Graduate University Degree - Other	25.0 (6)
Length of time in Profession	Less than 2 years	8.3 (2)
	2 to 5 years	33.3 (8)
	6 to 10 years	29.2 (7)
	11 to 15 years	8.3 (2)
	16 to 20 years	12.5 (3)
	20 to 25 years	8.3 (2)
Position in Organization	Nurse	25.0 (6)



	Nurse Practitioner	4.2 (1)
	Physician	37.5 (9)
	Social Worker	4.2 (1)
	Other †	29.2 (7)
Length of Employment at Organization	Less than 2 years	41.7 (10)
	More than 2 years	58.3 (14)
Employment Type	Full-time	75 (18)
	Regular Part-time	25 (6)
† One participant did not indicate age		
‡ Other included: Community Health Worker, HIV Point of Care Tester, Physician Assistant, POC Testing Coordinator, Prevention Coordinator, Support Worker		



**Table 2. Areas of Involvement**

	<b>% (n)</b>
1. Identifying individuals at highest risk for contracting HIV	100 (24)
2. Increasing HIV risk awareness among those individuals	100 (24)
3. Enhancing PrEP awareness	100 (24)
4. Facilitating PrEP access	83.3 (20)
5. Linking to PrEP care	70.8 (17)
6. Prescribing PrEP	50 (12)
7. PrEP Clinical Management	66.7 (16)
8. Retaining individuals in PrEP care	70.8 (17)
9. Supporting PrEP Adherence	83.3 (20)





**Table 3. Decision Support: Provider Perspectives on Clients**

Item †	Disagree	Neutral	Agree
	% (n)	% (n)	% (n)
1. Most Black patients prefer to make the decision about whether to use HIV PrEP on their own.	37.5 (9)	33.3 (8)	29.2 (7)
2. Most Black patients prefer to make the decision about whether to use HIV PrEP after seriously considering their Health personnel's (HCPs) opinion.	8.3 (2)	25.0 (6)	66.70 (16)
3. Most Black patients prefer to share the responsibility for making decisions about whether to use HIV PrEP with their HCP.	16.7 (4)	29.2 (7)	54.2 (13)
4. Most Black patients prefer their HCPs make the decision about whether to use HIV PrEP after seriously considering their opinion.	41.7 (10)	41.7 (10)	16.7 (4)
5. Most Black patients prefer their HCP to make the decision about whether to use HIV PrEP for them.	66.7 (16)	25.0 (6)	8.3 (2)
6. HCPs supporting Black patients who are deciding whether to use HIV PrEP will increase patients' involvement in making these decisions.	0.0 (0)	25.0 (6)	75.0 (18)
7. A physician-patient discussion about HIV PrEP is improved when a patient comes prepared.	4.2 (1)	20.8 (5)	75.0 (18)
8. HCPs supporting Black patients making decisions about whether to use HIV PrEP will stimulate them to ask more questions than they would have otherwise asked.	4.2 (1)	4.2 (1)	91.7 (22)
9. Most Black patients are aware that they can get support to prepare for making decisions about whether to use HIV PrEP by visiting a sexual health clinic.	45.8 (11)	20.8 (5)	33.3 (8)



10. Most Black patients are aware that they can get support to prepare for making decisions about whether to use HIV PrEP by visiting online resources provided by the drug manufacturer.	62.5 (15)	20.8 (5)	16.7 (4)
11. Most Black patients should be referred to online resources in preparation for making decisions about whether to use HIV PrEP.	41.7 (10)	25.0 (6)	33.3 (8)
12. Most HCPs are able to support Black patients making decisions about whether to use HIV PrEP most of the time (at least 66% of the time).	41.7 (10)	16.7 (4)	41.7 (10)
† 7-point scale ranging from Strongly Disagree (1) to Strongly Agree (7)			



**Table 4. Health personnel perspectives on *delivering PrEP to black patients***

Item <sup>†</sup>	Disagree	Neutral	Agree
	% (n)	% (n)	% (n)
1. Most HCPs need to enhance their knowledge about supporting Black patients with making decisions about whether to use HIV PrEP.	0.0 (0)	4.2 (1)	95.8 (23)
2. Most HCPs are confident in their ability to support Black patients with making decisions about whether to use HIV PrEP.	50.0 (12)	29.2 (7)	20.8 (5)
3. HCPs have access to good ‡ resources to support Black patients with making decisions about whether to use HIV PrEP.	54.2 (13)	16.7 (4)	29.2 (7)
4. For Black patients making decisions about whether to use HIV PrEP, most HCPs are confident in guiding patients in the steps for making a decision.	54.2 (13)	16.7 (4)	29.2 (7)
5. There are too few visits about whether to use HIV PrEP for most HCPs to develop their decision support skills.	29.2 (7)	12.5 (3)	58.3 (14)
6. Most HCPs find it difficult to recognize Black patients having difficulty making decisions about whether to use HIV PrEP.	12.5 (3)	29.2 (7)	58.3 (14)
7. Most HCPs are familiar with the Healthwise Knowledge Base decision points	66.7 (16)	25.0 (6)	8.30 (2)



8. Most HCPs are sensitive to the influence that their personal preferences can have on Black patients' decisions about whether to use HIV PrEP.	62.5 (15)	12.5 (3)	25.0 (6)
9. Most HCPs receive enough training in orientation to feel prepared for supporting Black patients facing decisions about whether to use HIV PrEP.	87.5 (21)	4.20 (1)	8.30 (2)
10. Most HCPs would identify a need to participate in continuing education about supporting Black patients with making decisions about whether to use HIV PrEP.	29.2 (7)	12.5 (3)	58.3 (14)
11. Most HCPs feel constant pressure to minimize visit length.	12.5 (3)	8.3 (2)	79.2 (19)
12. Most HCPs feel confident in their ability to manage differences between what the HCP or physician thinks is a "good" decision and what the patient prefers.	8.3 (2)	25.0 (6)	66.7 (16)
13. Most HCPs need to enhance their ability to support Black patients in handling conflicting views about the decision about whether to use HIV PrEP from significant others.	4.2 (1)	12.5 (3)	83.3 (20)
14. Most HCPs would prefer to have a clear step by step approach to use for supporting Black patients about whether to use HIV PrEP.	8.3 (2)	25.0 (6)	66.7 (16)
15. Sending written information to Black patients would enhance the decision support provided by HCPs.	20.8 (5)	29.2 (7)	50.0 (12)



16. Most HCPs validate Black patients' views/values associated with the decision about whether to use HIV PrEP.	37.5 (9)	29.2 (7)	33.3 (8)
17. Most HCPs feel their clinical judgement is too constrained by protocols.	45.8 (11)	25.0 (6)	29.2 (7)
†7-point scale ranging from Strongly Disagree (1) to Strongly Agree (7).			
‡Understandable, evidence-based, accurate, up-to-date, balanced information on benefits and harms, non-biased.			





**Table 5. Barriers and facilitators to providing PrEP decision support by healthcare staff occupation**

<b>Barriers</b>	<b>Nurses (n =7)</b>	<b>Physicians (n =9)</b>	<b>Social Worker (n =1)</b>	<b>Physician Assistant (n =1)</b>	<b>Non-Licensed Personnel (n =6)</b>
Time	6 (85.7%)	5 (55.5%)	0	0	0
Lack of experience working with Black patient	4 (57.1%)	5 (55.5%)	1 (100%)	0	4 (66.6%)
Knowledge about PrEP	3 (42.8%)	2 (22.2%)	1 (100%)	1 (100%)	2 (33.3%)
Costs of Medication	1 (14.2%)	4 (44.4%)	0	1 (100%)	1 (16.6%)
Concern about patient ability to adhere	0	0	0	1 (100%)	1 (16.6%)
Lack of knowledge about available resources for PrEP and how to access them	1 (14.2%)	7 (77.7%)	0	0	3 (50.0%)
Ability to create an environment that is safe engage in discussion related to sexual behaviour	2 (28.5%)	2 (22.2%)	1 (100%)	0	2 (33.3%)
<b>Facilitators</b>					
More time in appointment	4 (57.1%)	4 (44.4%)	0	0	1 (16.6%)



Establishing rapport with patients	1 (14.2%)	2 (22.2%)	0	0	1 (16.6%)
Enhance capacity for working with Black patients	3 (42.8%)	2 (22.2%)	1 (100%)	0	5 (83.3%)
Patients coming prepared with knowledge about their risks and PrEP <sup>1</sup>	0	4 (44.4%)	0	0	0
More education about PrEP for health personnels	2 (28.5%)	4 (44.4%)	0	1 (100%)	2 (33.3%)
Knowledge about available resources for PrEP and how to access them <sup>1</sup>	3 (42.8%)	4 (44.4%)	0	0	2 (33.3%)
Online resources/reference tools	1 (14.2%)	2 (22.2%)	1 (100%)	0	0
Knowing that costs of PrEP will be covered	0	2 (22.2%)	0	1 (100%)	0
Working within a team of HCPs who are knowledgeable about PrEP	0	0	0	0	2 (33.3%)



Knowing that patient can/will be compliant with PrEP care protocol	0	1 (11.1%)	0	0	1 (16.6%)
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**Table 6. Perceived barriers to Black patients receiving PrEP decision support**

Perceived barriers that make it difficult for Black patients to receive decision support	Occupation				
	Nurses (n =7)	Physicians (n =9)	Social Worker (n =1)	Physician Assistant (n =1)	Non-Licensed Personnel (n =6)
Reduced access to health personnel	4 (57.1%)	5 (55.5%)	0	1 (100%)	2 (33.3%)
Knowledge deficit	2 (28.5%)	2 (22.2%)	0	0	2 (33.3%)
In adequate support network	2 (28.5%)	3 (33.3%)	0	0	0
Systemic discrimination	4 (57.1%)	0	0	0	0
Cost	1 (14.2%)	5 (55.5%)	0	1 (100%)	3 (50.0%)
Potential side effects	1 (14.2%)	1 (11.1%)	0	0	0
Inability to adhere to protocols	1 (14.2%)	2 (22.2%)	0	1 (100%)	1 (16.6%)
Literacy	0	2 (22.2%)	0	0	0



Reduced to accessibility to PrEP resources	1 (14.2%)	2 (22.2%)	0	0	5 (83.3%)
Stigma	2 (28.5%)	2 (22.2%)	1 (100%)	0	2 (33.3%)