The Preventative Power of HIV PrEP

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Contents

MA-UNB-NA-US-00168 FEBRUARY 2025

1. Introduction

Sexual health encompasses many factors, including sexual orientation, gender identity, sexual expression, relationships, pleasure and reducing the risk of acquiring human immunodeficiency virus (HIV) and other sexually transmitted infections.[1] The sexual health of an individual is fundamental to their overall health and well-being.

> **Sexual health … requires a positive and respectful approach to sexuality and sexual relationships, as well as the possibility of having pleasurable and safe sexual experiences, free of coercion, discrimination and violence. – World Health Organization[1]**

HIV acquisition can have consequences for sexual health.[1] Although the number of annual new HIV diagnoses in the United States has decreased from the height of the HIV epidemic in the mid-1980s,[2] there are still approximately 38,000 new HIV diagnoses per year, far more than government-prescribed national goals for Ending the HIV Epidemic in the United States (EHE).[2,3] Without intervention, an estimated 400,000 more people will be newly diagnosed with HIV in the United States over the next decade, despite the availability of tools to prevent HIV.[3]

As a result of improved antiretroviral therapies, people with HIV who are receiving treatment and who achieve and maintain virologic suppression can live long and healthy lives and will not transmit HIV to HIV-negative partners through sex.[3] This is sometimes referred to as '**Undetectable equals Untransmittable**' or 'U=U'.[4] Despite the advances in HIV treatment, almost half (43%) of new HIV transmissions in the United States in 2016 were from people diagnosed with HIV who were not receiving follow-up care, defined as those who had taken an HIV blood test in the year of the study.[5] This highlights the need for broader HIV screening and implementation of other and more innovative HIV prevention options.

Antiretroviral therapy is the medicine used for HIV treatment and prevention. If taken as prescribed, it reduces the amount of HIV in the blood (also called viral load) to a very low level, keeping the immune system working and preventing illness.[6] An undetectable viral load is when the amount of HIV in the blood is so low that it cannot be detected by standard laboratory tests. People with an undetectable viral load cannot transmit HIV through sex.[6,7]

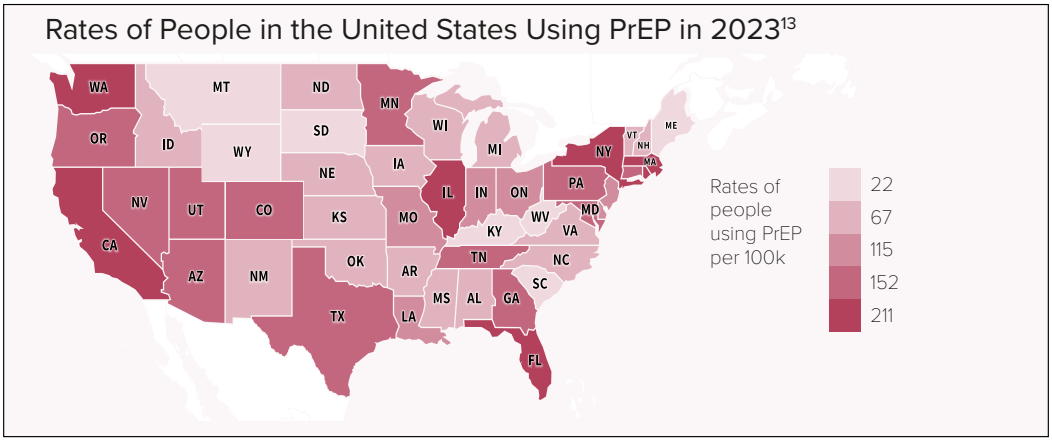
The goal of the Ending the HIV Epidemic in the United States (EHE) initiative is to reduce the number of HIV acquisitions in the United States by:[3]

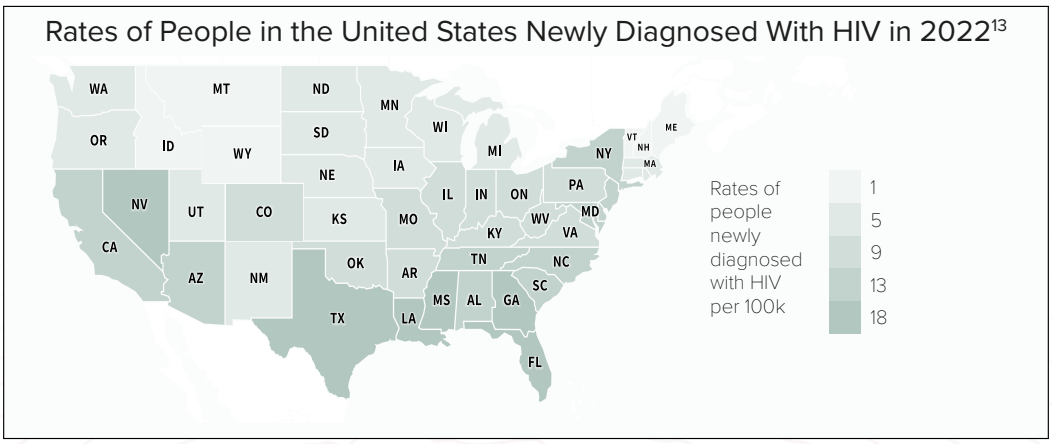
HIV acquisition and subsequent transmission can be prevented using tools such as **HIV pre-exposure prophylaxis (PrEP)**.[3] PrEP is a highly effective tool for preventing HIV when taken as prescribed. For example, daily oral PrEP reduces the risk of acquiring HIV from sex by up to 99% when taken consistently.[8,9] Despite the availability of highly effective HIV prevention tools, progress toward EHE is slow, and many people are still not getting the preventive care they need.

Of the estimated 1.2 million people in the United States who could benefit from PrEP, only 36% had a PrEP prescription in 2022.[4] There are equity gaps in PrEP use by race, ethnicity, sex, age and geography, and the gaps are widening over time.[10–12]

Longstanding **systemic health and social inequities**, including discrimination, stigma, systemic racism and distrust of the healthcare system, have led to inequities in HIV prevention and treatment outcomes.[14] Health disparities may arise from a variety of factors, such as a person's economic situation or where they live, as well as characteristics including race, ethnicity, gender and sexuality.[15,16] Healthcare systems can be complex and confusing to navigate, placing an additional burden on individuals seeking healthcare.[17]

This resource presents an overview of the current state of the HIV epidemic in the United States and the role of PrEP in HIV prevention. Despite the availability of PrEP, it remains an underutilized HIV prevention tool. Here, the potential barriers to PrEP use and targeted interventions to overcome these barriers are discussed. This resource aims to narrow equity gaps in uptake and use of PrEP by raising awareness of this tool among healthcare professionals (HCPs).





Adapted from Sullivan *et al.* 2020.[13] AIDSVu.org was developed by the Rollins School of Public Health at Emory University in partnership with Gilead Sciences, Inc.

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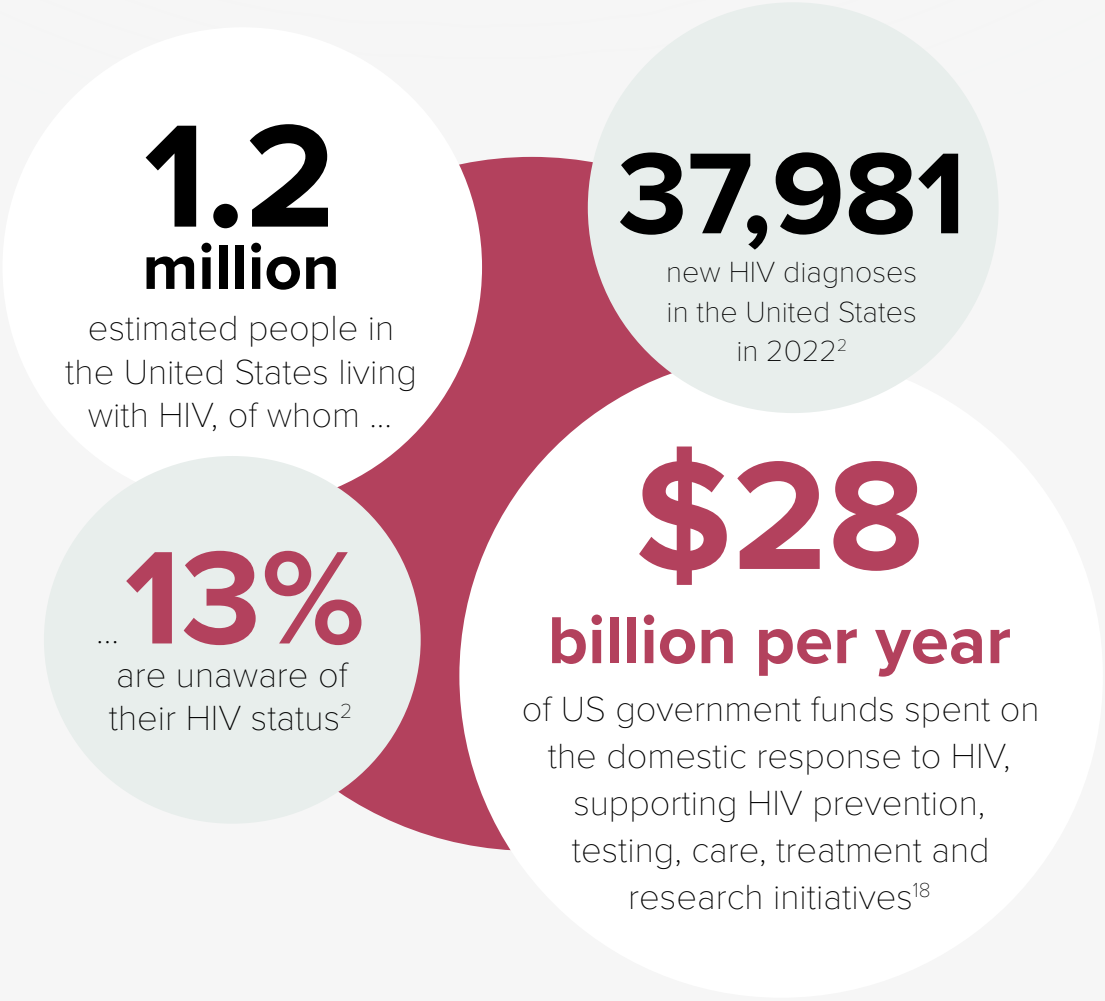
2. State of the HIV Epidemic in the United States

Key Facts



Progress in Ending the HIV Epidemic in the United States

National HIV prevention and care efforts have led progress from an estimated peak of 130,000 HIV acquisitions per year in the mid-1980s to an estimated **31,800 in 2022**.[2,19] However, progress in reducing new HIV transmissions has slowed in recent years, and not all groups of people are benefiting equally from preventive interventions.[19]

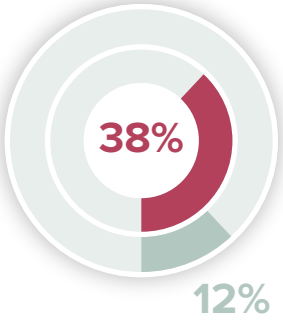
Disparities in HIV Care

HIV has a disproportionately large impact among certain populations, with disparities by **race, ethnicity, sex, gender, region, sexual orientation and age**.

Estimates of New HIV Diagnoses in the United States by Subgroup

Centers for Disease Control and Prevention (CDC) 2022

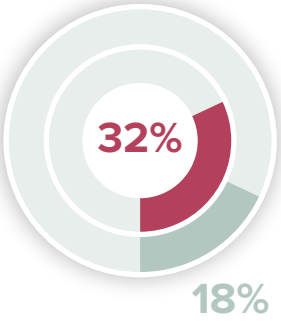
Race, Ethnicity, Sex and Gender



Black/African American people

make up **12%** of the population ...

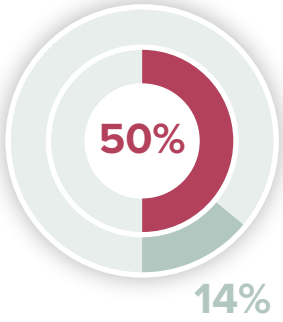
... but account for **38%** of new HIV diagnoses[2]



Latine people[a]

make up **18%** of the population ...

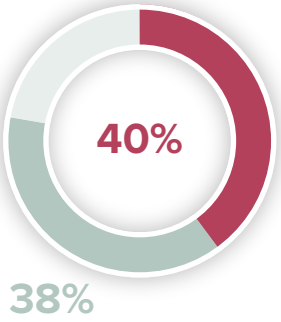
... but account for **32%** of new HIV diagnoses[2]



Black women[b]

make up **14%** of women ...

... but account for **50%** of new HIV diagnoses among women (18% of new HIV diagnoses were in women overall)[2,20]

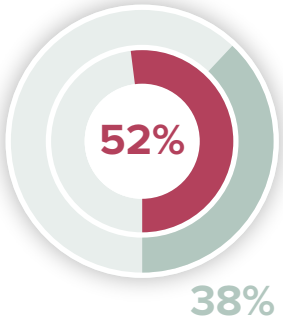


Of **Transgender people** newly diagnosed with HIV ...

... **40%** were Black[2]

... **38%** were Latine[2]

Region

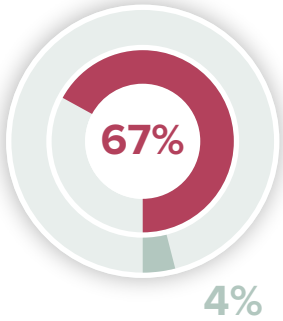


People living in Southern states

make up **38%** of the population ...

... but account for **52%** of new HIV diagnoses[2,20]

Sexual Orientation

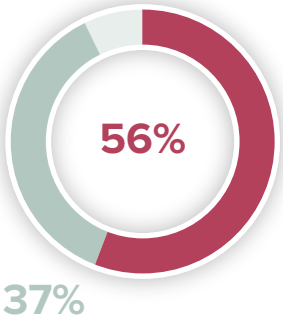


MSM/SGL men

make up **4%** of the population ...

but account for **67%** of new HIV diagnoses[2,22,23]

Age



People aged 13–34 years

accounted for **56%** of new HIV diagnoses[2]

People aged 25–34 years

accounted for **37%** of new HIV diagnoses[2]

[a]There are many terms that can be used to describe Hispanic, Latino, Latinx and Latine identities. For the purposes of this resource, we have used 'Latine'.
[b]Assigned female sex at birth.
MSM, men who have sex with men; SGL, same gender loving.

MA-UNB-NA-US-00168 FEBRUARY 2025

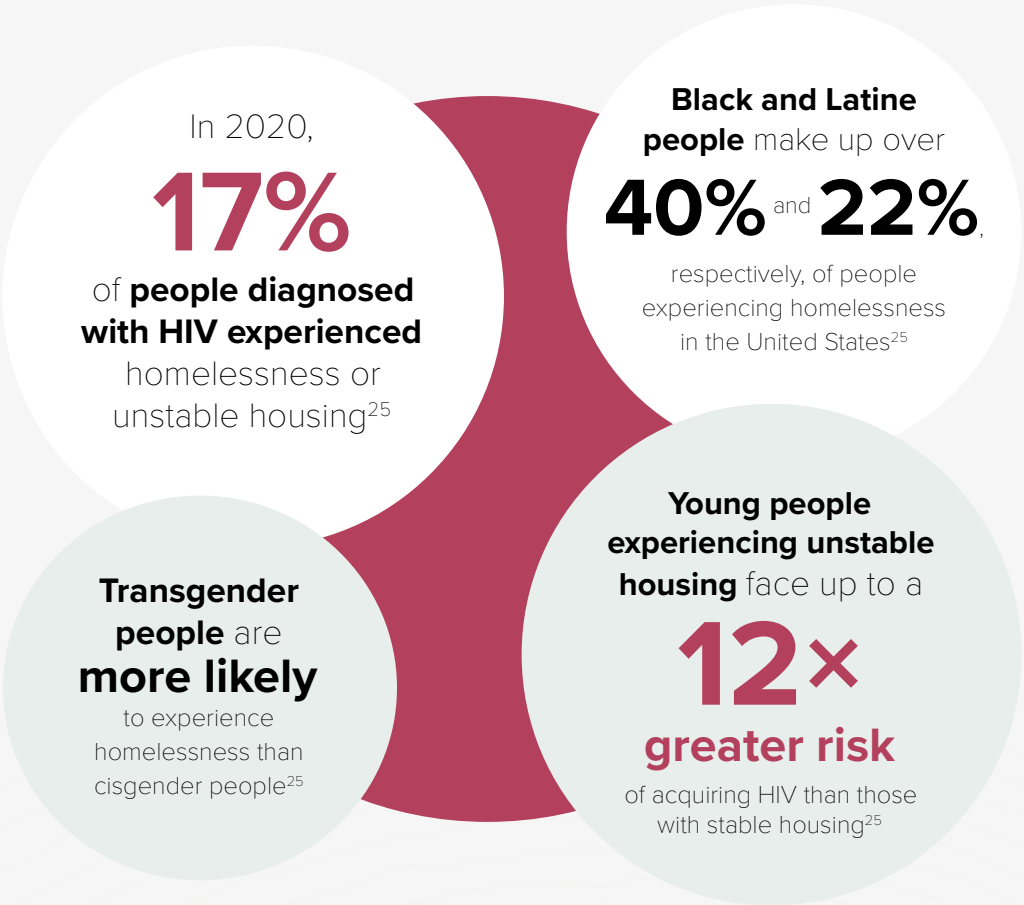
Intersectionality

Intersectionality and social determinants of health faced by people with HIV can have a negative impact on HIV outcomes.

Intersectionality describes the interconnected nature of social categorizations, such as race, ethnicity, gender and sexuality. Although each may cause disparities on its own, they can also overlap to deepen systems of discrimination.[15]

Social determinants of health, also known as social drivers of health, are the nonmedical factors that influence health outcomes. They include income and social protection, education, unemployment and job security, food security, housing, basic amenities and the environment, access to affordable healthcare services, exposure to trauma and mental health.[16,24]

Intersectionality Can Be Seen in People Experiencing Homelessness or Unstable Housing, Which Can Increase the Risk of HIV Acquisition



3. Role of PrEP in HIV Prevention

What is PrEP?

PrEP is a medication that lowers the chances of getting HIV from sex when taken as prescribed.[8] PrEP can be taken as a pill or as an injection.[8] As of December 2024, there are three PrEP medication formulations approved by the US Food and Drug Administration: two are oral medicines and the other is a long-acting injectable formulation.[8] Of these, there are some PrEP options approved for women.[26]

PrEP Effectiveness

PrEP is a highly effective tool for preventing HIV when taken as prescribed.[8] Oral PrEP **reduces the risk of acquiring HIV from sex by up to 99%** when taken as prescribed.[8,9] PrEP uptake is associated with reduced HIV diagnosis rates. For example, in the United States, between 2012 and 2021, states with the highest levels of PrEP coverage (the proportion of PrEP users among people with an indication for PrEP) observed an 8% decrease in estimated annual HIV diagnosis rates. In contrast, states with the lowest levels of PrEP coverage saw small increases (2%) in HIV diagnosis rates.[27]

Taking a Sexual Health History and HIV Testing in the Clinic

Taking a **nonjudgmental**, **inclusive sexual history** that covers health, well-being and pleasure should be routine and a normalized part of a medical history. To identify the sexual health needs of their clients, clinicians should not limit sexual history assessments to those with selected characteristics (e.g. young, unmarried persons, men who have sex with men [MSM]/same gender loving [SGL] men, or women seeking contraception) because new HIV diagnoses and sexually transmitted infections occur in all adult and adolescent age groups, both married and unmarried persons, both sexes and all genders.[28]

According to the CDC PrEP guidelines, clinicians can introduce the topic of sexual health by stating that taking a brief sexual history is routine practice for all patients, explaining that this information is necessary for the provision of individually appropriate sexual healthcare, and closing by reaffirming the confidentiality of patient information.[28]

The New York State Department of Health (NYSDOH) AIDS Institute GOALS framework provides considerations and talking points to help to guide HCPs in sexual health discussions with clients, including tips for starting a conversation.[29]

Components of the GOALS framework are:

1. **G**iving a short introduction to sexual health
2. **O**ffering opt-out HIV testing
3. **A**sking an open-ended sexual health question to put the focus on the client
4. **L**istening for relevant information
5. **S**uggesting a course of action.

The CDC testing guidelines recommend **opt-out HIV testing** for all people in all healthcare settings,[30] and the US Preventive Services Task Force recommends HIV testing in all adolescents and adults aged 15–65 years.[31] People aged 55 years and older are more likely to be diagnosed late with HIV than those younger than 55 years, reflecting the need for routine screening of all individuals, including asymptomatic older adults.[32]

Once a test result is available, the client's needs should be assessed and they should be linked to appropriate services **whether their HIV test result is positive or negative**. People who receive a negative HIV test result should be offered tools that prevent HIV, including PrEP, condoms and sexual health and harm reduction services.[33] This guidance, often referred to as the status-neutral approach, emphasizes high-quality care to engage and retain people in HIV treatment and prevention services, starting with the HIV test as the entry point to care.[34]

CDC Guideline Recommendations for PrEP

All sexually active adults and adolescents should be informed about PrEP for prevention of HIV acquisition.

Patients who request PrEP should be offered it, even when no specific risk behaviors are elicited.

– CDC[28]

The CDC guidelines offer recommendations for:[28]

- Selecting appropriate regimens for PrEP, including considerations for gender, age, renal and bone safety and intermittent dosing
- Assessing indications for PrEP, including questions to help to identify sexual behaviors that increase the likelihood of HIV exposure
- Considering the epidemiological context of the individual (e.g. sexual activity in communities with a high HIV prevalence is more likely to result in exposure to HIV and indicates a greater need for PrEP than similar sexual activity in communities with a low HIV prevalence)
- Initiating and monitoring people on PrEP, including recommendations for the use of rapid, point-of-care HIV testing before initiating PrEP
- Offering PrEP to women seeking to conceive, and to pregnant or breastfeeding women whose sexual partner has HIV.

US Preventive Services Task Force Recommendation for PrEP

The US Preventive Services Task Force gives PrEP a **grade A recommendation**, stating that HCPs should "prescribe PrEP using effective antiretroviral therapy to persons who are at increased risk of HIV acquisition to decrease the risk of acquiring HIV".[35] Grade A recommendations are "services that the Task Force most highly recommends implementing for preventive care". Examples of other grade A recommendations include screening for cervical and colorectal cancer, and blood pressure measurements to screen for hypertension.[36]

The grade A recommendation for PrEP means that most private health insurance and Medicaid programs are **required to cover PrEP services without cost-sharing**, for example copays or deductibles, although prior authorization may be required.[37]

PrEP Prescribers

Although any licensed medical prescriber can provide PrEP, 50% of people receiving PrEP were prescribed by 2.2% of PrEP providers in the United States in 2019.[38] Most PrEP prescribers were physicians (68%), followed by nurse practitioners (21%) and physician assistants (9%).[38] Primary care providers (including general practice, family medicine, internal medicine, preventive medicine, obstetrics and gynecology, and pediatrics) were the largest proportion of PrEP prescribers in 2019 (87%), highlighting the essential role of primary care for PrEP uptake.[38]

Some people may not have access to or feel comfortable visiting primary care physicians or may not feel comfortable discussing sexual health with their healthcare providers. Therefore, alternative avenues for learning about PrEP and potentially accessing PrEP may be explored, such as:[39]

- Community outreach programs
- Telehealth
- Pharmacies
- Urgent care centers (access can vary by location)
- Mobile clinics.

4. Stigma and Barriers to PrEP Uptake and Continuous PrEP Use

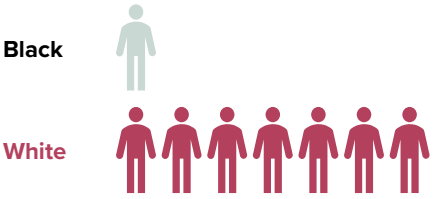
Equity Gaps in PrEP Utilization

In the United States, there are substantial equity gaps in PrEP use by race, ethnicity, sex, age and region.[10]

Equity gaps in PrEP utilization are widening over time.[10,11] However, HCPs can help to close these gaps.

Equity Gaps in PrEP Use Relative to the Epidemic Need

Race and Ethnicity



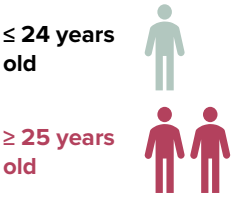
White people were **~7× more likely** to be using PrEP[a]

White people were **~4× more likely** to be using PrEP[a]

Sex

Men were **~2.5× more likely** to be using PrEP[b]

Age



People ≥ 25 years old were **~2× more likely** to be using PrEP[c]

Region

White people living in the Northeast were **~2× more likely** to be using PrEP[b]

[a]2021 data.[10,11] This was despite the fact that Black and Latine people are disproportionately affected by HIV (in 2022, 38% and 32% of new HIV diagnoses occurred in Black and Latine people, respectively, despite accounting for an estimated 12% and 18% of the US population, respectively).[2]
[b]2021 data.[10]
[c]2017 data.[12]

Effect of Social Determinants of Health on PrEP Use

Social and economic determinants of health, such as **access to health insurance, stable employment, housing, education, food and transportation, can be barriers to PrEP uptake**.[40] US counties with a high proportion of uninsured residents were associated with an unmet need for PrEP based on the local HIV prevalence. Conversely, PrEP uptake was greater in counties with high median household incomes than in those with lower median household incomes.[41] Women who were eligible for PrEP in the United States reported lack of transportation, costs and difficulty finding the time to attend a PrEP visit as barriers to accessing PrEP.[42]

Among MSM/SGL men, PrEP users were more likely to have a 4-year college degree or higher than PrEP nonusers, highlighting the role of social determinants as barriers to PrEP uptake.[43] Furthermore, among MSM/SGL men, those without health insurance had a lower likelihood of current PrEP use than those with health insurance.[43]

The Affordable Care Act's Medicaid expansion, which includes coverage for PrEP, has increased coverage to nearly all adults with annual incomes of up to $20,783 (138% of the Federal Poverty Level for an individual in 2024).[37,44,45] To date, 10 states (mostly in the South) have not adopted the expansion.[46]

About half of all adults in the United States will experience at least one traumatic event in their lives.[47] Trauma exposure is associated with mental health conditions, such as depression and anxiety, which in turn are linked to poor HIV treatment and prevention outcomes.[48] For example, depression and anxiety can be barriers to seeking care and to PrEP adherence.[49] In a randomized study of Black MSM/SGL men and Transgender women attending a community clinic in Harlem, New York City, NY, depressive symptoms were negatively associated with adherence to PrEP.[50]

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Stigmatization of and Discrimination Against People Who Use PrEP

Social stigma, both related directly to PrEP and more generally surrounding HIV/acquired immune deficiency syndrome (AIDS), may act as a barrier to PrEP use.[51] Internal stigma can also act as a barrier to PrEP use; for example:

- Women reported expecting hostile reactions from male partners upon disclosure of PrEP use, including accusations of infidelity and the introduction of mistrust in their relationships[52]
- Young Black and Latine MSM/SGL men feared being perceived as HIV-positive if their PrEP use was disclosed.[53]

Social and internal stigma may be overcome by **community-driven engagement and education initiatives**. For example, training beauty salon stylists about PrEP improved PrEP knowledge, awareness and trust among Black cisgender women who visited their salons.[54]

Implicit bias by HCPs, including assumptions about who might benefit from PrEP and client behaviors, may affect decisions about PrEP.[51] Some HCPs reported concerns that PrEP use could lead to risk compensation, for example an increased frequency of condomless sex, and were reluctant to prescribe PrEP.[51]

Training HCPs about PrEP is essential to address commonly reported knowledge gaps and to support their progression to confidently recommend PrEP. HCPs currently recommending PrEP said that they prefer training that:[55]

- Discusses protocols for initiating and monitoring PrEP (90%)
- Reviews guidelines for client eligibility (85%)
- Uses case presentations of actual clients (75%)
- Includes roleplay about how to talk about PrEP (59%).

Training resources for addressing stigma and implicit bias in the healthcare setting can be found on the AIDS Education and Training Center website.

Reference to third-party website provided for information purposes only. Gilead Sciences, Inc., does not endorse or review the content of this site. Other sites with similar resources may be available.

Case Study

Client

A 28-year-old Latine cisgender man who lives with his partner in New York City, NY, an area with a high HIV prevalence,[56] and has been receiving oral PrEP for the past 6 months.

Scenario and Outcome

The client's partner discovered his PrEP pills. Consequently, the partner's misunderstanding about the purpose of PrEP led them to doubt the client's HIV status. The client decided to stop using PrEP in an attempt to convince his partner that he was HIV-negative.

Potential Interventions

- Public education campaigns for PrEP.
- Regular contact by clinics with those lost to follow-up (e.g. through text messaging) to provide opportunities for reengagement in care.[57]
- Provider training to help to identify and resolve PrEP stigma, including training sessions run at provider organizational meetings, especially those held by racial and ethnic minority associations.
- Provider and client consideration of whether a different PrEP option, such as an injection, may allow for more discretion surrounding PrEP use.[58]

Importance of Creating a Supportive and Affirming Environment for People Who Disclose PrEP Use

Distrust of HCPs is a barrier to PrEP use.[51] Feelings of distrust may arise because of **experienced and anticipated discrimination from HCPs**.[51] Educational interventions targeted at HCPs may increase the knowledge of PrEP and alleviate concerns regarding PrEP safety.[51] Positively framed messaging approaches in the clinic, which highlight the benefits of PrEP for health promotion rather than for risk reduction, may increase client receptiveness to PrEP.[59]

Case Study

Client

A 22-year-old Black cisgender woman who lives in Baltimore, MD, an area with a high HIV prevalence.[60] She was seeking to initiate birth control but had feelings of distrust surrounding her healthcare and was initially reluctant to share personal information with her provider.

Provider

Although the provider occasionally discusses sexual health with their clients, they lack the confidence to initiate discussions surrounding HIV testing and PrEP. They also have a lack of knowledge of HIV rates in the region.

Scenario and Outcome

There was a missed opportunity during the visit to discuss PrEP and the behaviors that increase the likelihood of HIV acquisition. After attending a training session, the provider was more comfortable initiating sexual health discussions, which in turn improved the client–provider relationship and encouraged the client to be more open about her sexual health concerns.

Potential Interventions

- Provider training on normalizing and initiating PrEP discussions during routine healthcare visits.
  - Guidance from the CDC and the NYSDOH AIDS Institute GOALS framework describes techniques for introducing PrEP discussions with clients.[28,29]
  - Asking "Is there anything we haven't covered that you would like to cover?" can give clients an opportunity to speak their mind openly.
- Provider use of interactive maps from the CDC, AIDSVu or other locally available resources to increase their understanding of HIV epidemiology in their region.[13,61]

Stigma and Reduced PrEP Persistence

Persistence represents the duration of time a person remains on a prescribed medication.[62]

PrEP persistence was 41% from initiation to year 2 in a study of PrEP prescriptions at a national pharmacy chain.[63] **Stigma can act as a barrier to PrEP persistence**.[64] For example, some users of PrEP expressed concerns about being seen taking PrEP pills by family and friends.[65] Other barriers to PrEP persistence include cost and access barriers, as well as an individual's low perceived susceptibility for acquiring HIV.[66]

Interventions to Increase PrEP Use

- Provide HCP training on guideline recommendations to increase confidence in discussing HIV and PrEP.[51]
- Educate HCPs on how implicit biases may affect their assumptions about clients and their willingness to prescribe PrEP.[67]
- Enable client access to cost-saving programs, including signposting of PrEP funding support services and resources.[68]
- Simplify the same-day clinic and follow-up experience for clients.[69]
- Develop personal reminder systems to improve appointment attendance.[69]
- Implement digital interventions (e.g. mobile apps, social media and artificial intelligence [AI] chatbots) that address stigma and may improve PrEP-related outcomes.[70]
- Include prompts/questions related to PrEP use and sexual health history in electronic health records.
- Use automated algorithms on electronic health records to efficiently identify people engaged in the healthcare system who might benefit from PrEP.[71]
- Offer different PrEP options, including long-acting injections, which may allow for more discretion surrounding the use of PrEP.[58]

MA-UNB-NA-US-00168 FEBRUARY 2025

5. Impact of PrEP on the Ending the HIV Epidemic Goals

Importance of Preventive Measures

PrEP is another tool in the prevention toolbox, just like statins are used for lowering cholesterol, seatbelts are used in cars for reducing the risk of injury in a crash, the contraceptive pill is used for preventing pregnancy and mammograms are used for breast cancer screening. It is important that HCPs feel as confident discussing PrEP as they do other preventive measures. A **brief sexual health discussion** during a clinic visit could have a large impact on the health of the client.

Ending the HIV Epidemic Goals

The goal of the EHE initiative is to reduce the number of HIV acquisitions in the United States by at least **75% by 2025** and by at least **90% by 2030**.[3] A key strategy for achieving this goal is preventing new HIV acquisitions using tools such as PrEP.[3] Between 2019 and 2022, PrEP use increased from 23% to 36%.[4] Increasing access to PrEP and breaking down other barriers to PrEP use in the communities where it is needed most will help progression toward the EHE goal. **HCPs can make an impactful contribution to achieving these goals**.

Case Study

Client

A 36-year-old white cisgender man who lives alone in Phoenix, AZ, an area with a high HIV prevalence.[72]

Scenario and Outcome

The client was attending a sexual health clinic, seeking testing for sexually transmitted infections. The provider used the appointment as an opportunity to briefly raise the topic of PrEP with the client, who expressed a willingness to learn more about preventive options for HIV.

Potential Interventions

- HCP education on the CDC PrEP guidelines, which state that all sexually active adults and adolescents should be informed about PrEP for the prevention of HIV acquisition.[28]
- Utilization of the NYSDOH AIDS Institute GOALS framework, which is designed to streamline sexual history conversations and to elicit the most useful information for identifying an appropriate clinical course of action.[29]

6. Conclusion: Moving From Words to Action

Why Do We Need to Act?

- Despite having the tools to prevent HIV, progress in ending the HIV epidemic is slow.
- Systemic health and social inequities have led to disparities in HIV prevention outcomes.
- Only a small fraction of people who could benefit from HIV prevention tools have a prescription for PrEP.

What Are the Barriers to Uptake and Consistent Use of PrEP?

- Inequities, including discrimination, stigmatization, systemic racism and distrust of the healthcare system, act as barriers to PrEP use.
- People who may benefit from PrEP often have overlapping social determinants of health, and this intersectionality may deepen systems of discrimination.
- Provider biases about those who may benefit from PrEP can lead to under-prescribing, particularly in underserved groups.
- People vulnerable to acquiring HIV may have difficulties accepting the risk in their behaviors.

You Have a Role to Play in Ending the HIV Epidemic

Each of us has a role to play in EHE. This is a call to action for HCPs of all types across the healthcare landscape to:

- If you are a provider, consider recommending PrEP, as appropriate, and offer PrEP to those who ask for it
- Educate all sexually active adults and adolescents about PrEP as an HIV prevention option
- Understand the epidemiology of HIV in your region; for example by using interactive maps from the CDC, AIDSVu or other locally available resources[13,61]
- Alleviate discomfort with taking a sexual history through consistent practice
- Offer HIV testing to all sexually active adults and adolescents
- Treat all people requesting or using PrEP with respect, and affirm and support PrEP use
- Create a welcoming healthcare environment for people enquiring about or using PrEP
- Consider how mental and emotional health might create barriers to PrEP uptake for clients
- Educate colleagues about PrEP as an HIV prevention option
- Ensure that your healthcare system has adequate infrastructure to provide care
- Be educated on the appropriate language to describe PrEP to your clients
- Consider the nonmedical barriers to PrEP use and persistence, including clients' social determinants of health.

MA-UNB-NA-US-00168 FEBRUARY 2025

7. References

1. World Health Organization. Sexual health. 2024. Available from: https://www.who.int/health-topics/sexual-health (Accessed June 3, 2024).
2. HIV.gov. US statistics. 2024. Available from: https://www.hiv.gov/hiv-basics/overview/data-and-trends/statistics/ (Accessed May 10, 2024).
3. HIV.gov. EHE overview. 2024. Available from: https://www.hiv.gov/federal-response/ending-the-hiv-epidemic/overview/ (Accessed May 10, 2024).
4. HIV.gov. Key EHE strategies. 2024. Available from: https://www.hiv.gov/federal-response/ending-the-hiv-epidemic/key-strategies (Accessed May 10, 2024).
5. Li Z, Purcell DW, Sansom SL *et al.* Vital signs: HIV transmission along the continuum of care - United States, 2016. *MMWR Morb Mortal Wkly Rep* 2019;68:267–72.
6. HIV.gov. HIV treatment overview. 2023. Available from: https://www.hiv.gov/hiv-basics/staying-in-hiv-care/hiv-treatment/hiv-treatment-overview (Accessed June 24, 2024).
7. National Institute of Allergy and Infectious Disease. HIV language guide. 2024. Available from: https://aidsnet.org/wp-content/uploads/2024/06/NIAID-HIV-Language-Guide.pdf (Accessed October 28, 2024).
8. Centers for Disease Control and Prevention. PrEP. 2024. Available from: https://www.cdc.gov/stophivtogether/hiv-prevention/prep.html (Accessed December 9, 2024).
9. Centers for Disease Control and Prevention. Preventing HIV with PrEP. 2024. Available from: https://www.cdc.gov/hiv/prevention/prep.html#cdc_prevention_health-prep-effectiveness (Accessed December 9, 2024).
10. Sullivan PS, DuBose SN, Castel AD *et al.* Equity of PrEP uptake by race, ethnicity, sex and region in the United States in the first decade of PrEP: a population-based analysis. *Lancet Reg Health Am* 2024;33:100738.
11. Sullivan P, Whitby S, Hipp P *et al.* Trends in PrEP inequity by race and census region, United States, 2012–2021 [abstract]. Presented at AIDS, July 29 – August 2, 2022, Montréal, Canada.
12. Siegler AJ, Mouhanna F, Giler RM *et al.* The prevalence of pre-exposure prophylaxis use and the pre-exposure prophylaxis-to-need ratio in the fourth quarter of 2017, United States. *Ann Epidemiol* 2018;28:841–9.
13. Sullivan PS, Woodyatt C, Koski C *et al.* A data visualization and dissemination resource to support HIV prevention and care at the local level: analysis and uses of the AIDSVu public data resource. *J Med Internet Res* 2020;22:e23173.
14. Centers for Disease Control and Prevention. HIV prevention in the United States: mobilizing to end the epidemic. 2021. Available from: https://stacks.cdc.gov/view/cdc/103438/cdc_103438_DS1.pdf (Accessed June 3, 2024).
15. Womankind Worldwide. Glossary. Intersectionality. 2024. Available from: https://www.womankind.org.uk/glossary/intersectionality/ (Accessed June 3, 2024).
16. World Health Organization. Social determinants of health. 2024. Available from: https://www.who.int/health-topics/social-determinants-of-health#tab=tab_1 (Accessed June 3, 2024).
17. Griese L, Berens EM, Nowak P *et al.* Challenges in navigating the health care system: development of an instrument measuring navigation health literacy. *Int J Environ Res Public Health* 2020;17:5731.
18. HIV.gov. Federal HIV budget. 2024. Available from: https://www.hiv.gov/federal-response/funding/budget/ (Accessed May 10, 2024).
19. Centers for Disease Control and Prevention. Status of HIV in the US. 2021. Available from: https://stacks.cdc.gov/view/cdc/103438 (Accessed August 15, 2024).
20. United States Census Bureau. National population by characteristics: 2020-2024. 2024. Available from: https://www.census.gov/data/tables/time-series/demo/popest/2020s-national-detail.html (Accessed August 15, 2024).
21. United States Census Bureau. United States population growth. 2024. Available from: https://www.census.gov/popclock/data_tables.php?component=growth (Accessed June 24, 2024).
22. Truong N, Perez-Brumer A, Burton M *et al.* What is in a label? Multiple meanings of 'MSM' among same-gender-loving Black men in Mississippi. *Glob Public Health* 2016;11:937–52.
23. Grey JA, Bernstein KT, Sullivan PS *et al.* Estimating the population sizes of men who have sex with men in US states and counties using data from the American Community Survey. *JMIR Public Health Surveill* 2016;2:e14.
24. Kirkbride JB, Anglin DM, Colman I *et al.* The social determinants of mental health and disorder: evidence, prevention and recommendations. *World Psychiatry* 2024;23:58–90.
25. Centers for Disease Control and Prevention. Issue brief: the role of housing in ending the HIV epidemic. 2024. Available from: https://stacks.cdc.gov/view/cdc/127257 (Accessed May 31, 2024).
26. Centers for Disease Control and Prevention. PrEP is for women. 2022. Available from: https://www.cdc.gov/stophivtogether/library/topics/prevention/brochures/cdc-lsht-prevention-brochure-prep-is-for-women-patient.pdf (Accessed May 31, 2024).
27. Sullivan P, DuBose S, Brisco K *et al.* Association of state-level PrEP coverage and state-level HIV diagnoses, US, 2012-2021 [abstract]. Presented at the Conference on Retroviruses and Opportunistic Infections, March 3–6, 2024, Denver, Colorado.
28. Centers for Disease Control and Prevention. Preexposure prophylaxis for the prevention of HIV infection in the United States. 2021. Available from: https://stacks.cdc.gov/view/cdc/112360 (Accessed May 10, 2024).
29. New York State Department of Health AIDS Institute. GOALS framework for sexual history taking in primary care. 2019. Available from: https://cdn.hivguidelines.org/wp-content/uploads/20230104115829/NYSDOH-AI-GOALS-Framework-for-Sexual-History-Taking-in-Primary-Care_1-4-2023_HG.pdf (Accessed September 4, 2024).
30. Branson BM, Handsfield HH, Lampe MA *et al.* Revised recommendations for HIV testing of adults, adolescents, and pregnant women in health-care settings. *MMWR Recomm Rep* 2006;55:1–17.
31. US Preventive Services Task Force. Human immunodeficiency virus (HIV) infection: screening. 2019. Available from: https://www.uspreventiveservicestaskforce.org/uspstf/recommendation/human-immunodeficiency-virus-hiv-infection-screening (Accessed 20 May, 2024).

32. HIV.gov. HIV screening and diagnosis in the older person. 2024. Available from: https://clinicalinfo.hiv.gov/en/guidelines/hiv-clinical-guidelines-adult-and-adolescent-arv/special-populations-hiv-and-older (Accessed October 8, 2024).
33. The White House. National HIV/AIDS strategy for the United States 2022–2025. 2021. Available from: https://files.hiv.gov/s3fs-public/NHAS-2022-2025.pdf (Accessed May 31, 2024).
34. Centers for Disease Control and Prevention. Status neutral HIV prevention and care. 2023. Available from: https://stacks.cdc.gov/view/cdc/129024 (Accessed August 15, 2024).
35. U.S. Preventive Services Task Force. Prevention of acquisition of HIV: preexposure prophylaxis. 2023. Available from: https://www.uspreventiveservicestaskforce.org/uspstf/recommendation/prevention-of-human-immunodeficiency-virus-hiv-infection-pre-exposure-prophylaxis (Accessed 20 May, 2024).
36. U.S. Preventive Services Task Force. A & B recommendations. 2024. Available from: https://www.uspreventiveservicestaskforce.org/uspstf/recommendation-topics/uspstf-a-and-b-recommendations (Accessed 20 May, 2024).
37. Centers for Disease Control and Prevention. Clinical guidance for PrEP. 2024. Available from: https://www.cdc.gov/hivnexus/hcp/prep/index.html (Accessed September 4, 2024).
38. Zhu W, Huang YA, Kourtis AP *et al.* Trends in the number and characteristics of HIV pre-exposure prophylaxis providers in the United States, 2014-2019. *J Acquir Immune Defic Syndr* 2021;88:282–9.
39. World Health Organization. Differentiated and simplified pre-exposure prophylaxis for HIV prevention. 2022. Available from: https://www.who.int/publications/i/item/9789240053694 (Accessed June 3, 2024).
40. Harrison SE, Paton M, Muessig KE *et al.* "Do I want PrEP or do I want a roof?": social determinants of health and HIV prevention in the southern United States. *AIDS Care* 2022;34:1435–42.
41. Doherty R, Walsh JL, Quinn KG *et al.* Association of race and other social determinants of health with HIV pre-exposure prophylaxis use: a county-level analysis using the PrEP-to-need ratio. *AIDS Educ Prev* 2022;34:183–94.
42. Teitelman AM, Tieu HV, Flores D *et al.* Individual, social and structural factors influencing PrEP uptake among cisgender women: a theory-informed elicitation study. *AIDS Care* 2022;34:273–83.
43. Kota KK, Mansergh G, Stephenson R *et al.* Sociodemographic characteristics of HIV pre-exposure prophylaxis use and reasons for nonuse among gay, bisexual, and other men who have sex with men from three US cities. *AIDS Patient Care STDS* 2021;35:158–66.
44. HIV.gov. Pre-exposure prophylaxis. 2024. Available from: https://www.hiv.gov/hiv-basics/hiv-prevention/using-hiv-medication-to-reduce-risk/pre-exposure-prophylaxis (Accessed October 8, 2024).
45. Center on Budget and Policy Priorities. Medicaid expansion: frequently asked questions. 2024. Available from: https://www.cbpp.org/research/health/medicaid-expansion-frequently-asked-questions-0 (Accessed May 20, 2024).
46. KFF. Status of state medicaid expansion decisions: interactive map. 2024. Available from: https://www.kff.org/affordable-care-act/issue-brief/status-of-state-medicaid-expansion-decisions-interactive-map/ (Accessed June 24, 2024).
47. National Institute of Mental Health. Post-traumatic stress disorder (PTSD). 2024. Available from: https://www.nimh.nih.gov/health/statistics/post-traumatic-stress-disorder-ptsd (Accessed October 28, 2024).
48. LeGrand S, Reif S, Sullivan K *et al.* A review of recent literature on trauma among individuals living with HIV. *Curr HIV/AIDS Rep* 2015;12:397–405.
49. Miller SJ, Harrison SE, Sanasi-Bhola K. A scoping review investigating relationships between depression, anxiety, and the PrEP care continuum in the United States. *Int J Environ Res Public Health* 2021;18:11431.
50. Colson PW, Franks J, Wu Y *et al.* Adherence to pre-exposure prophylaxis in Black men who have sex with men and Transgender women in a community setting in Harlem, NY. *AIDS Behav* 2020;24:3436–55.
51. Mayer KH, Agwu A, Malebranche D. Barriers to the wider use of pre-exposure prophylaxis in the United States: a narrative review. *Adv Ther* 2020;37:1778–811.
52. Goparaju L, Praschan NC, Warren-Jeanpiere L *et al.* Stigma, partners, providers and costs: potential barriers to PrEP uptake among US women. *J AIDS Clin Res* 2017;8:730.
53. Andrade EA, Stoukides G, Santoro AF *et al.* Individual and health system factors for uptake of pre-exposure prophylaxis among young Black and Latino gay men. *J Gen Intern Med* 2023;38:2768–74.
54. Randolph SD, Johnson R, Jeter E *et al.* UPDOs protective styles, a multilevel intervention to improve pre-exposure prophylaxis uptake among Black cisgender women: pretest-posttest evaluation. *J Assoc Nurses AIDS Care* 2023;34:459–68.
55. Rao S, Reed AE, Parchem B *et al.* Optimizing provider preexposure prophylaxis (PrEP) training: a cross-sectional analysis of recommendations from providers across the PrEP implementation cascade. *AIDS Behav* 2022;26:218–31.
56. AIDSVu. Understanding the current HIV epidemic in New York City, NY. 2024. Available from: https://map.aidsvu.org/profiles/city/new-york-city-ny/overview (Accessed August 15, 2024).
57. Johnson KA, Levy M, Brosnan H *et al.* Texting lost-to-follow-up PrEP patients from a San Francisco sexual health clinic. *Prev Sci* 2022;23:1448–56.
58. Stephenson R, Rogers E, Mansergh G *et al.* Intimate partner violence and preferences for pre-exposure prophylaxis (PrEP) modes of delivery among a sample of gay, bisexual, and other men who have sex with men. *AIDS Behav* 2022;26:2425–34.
59. Golub SA, Gamarel KE, Lelutiu-Weinberger C. The importance of sexual history taking for PrEP comprehension among young people of color. *AIDS Behav* 2017;21:1315–24.
60. AIDSVu. Understanding the current HIV epidemic in Baltimore, MD. 2024. Available from: https://map.aidsvu.org/profiles/city/baltimore-md/overview (Accessed August 15, 2024).
61. Centers for Disease Control and Prevention. AtlasPlus: maps. 2024. Available from: https://gis.cdc.gov/grasp/nchhstpatlas/maps.html (Accessed June 24, 2024).
62. Cramer JA, Roy A, Burrell A *et al.* Medication compliance and persistence: terminology and definitions. *Value Health* 2008;11:44–7.

63. Coy KC, Hazen RJ, Kirkham HS *et al*. Persistence on HIV preexposure prophylaxis medication over a 2-year period among a national sample of 7148 PrEP users, United States, 2015 to 2017. *J Int AIDS Soc* 2019;22:e25252.

64. Khosropour CM, Riley T, Healy E *et al*. Persistence in a pharmacist-led, same-day PrEP program in Mississippi: a mixed-methods study. *BMC Public Health* 2023;23:1130.

65. Golub SA. PrEP stigma: implicit and explicit drivers of disparity. *Curr HIV/AIDS Rep* 2018;15:190–7.

66. D'Avanzo P, Shourya S, Brin M *et al*. Identifying key factors to PrEP initiation and persistence among YMSM through focus groups and surveys in two high-priority settings. *AIDS Educ Prev* 2024;36:33–47.

67. Dubov A, Krakower DS, Rockwood N *et al*. Provider implicit bias in prescribing HIV pre-exposure prophylaxis (PrEP) to people who inject drugs. *J Gen Intern Med* 2023;38:2928–35.

68. Rowe K, Theodore DA, Zucker J *et al*. Lost2PrEP: understanding reasons for pre-exposure prophylaxis and sexual health care disengagement among men who have sex with men attending a sexual health clinic at a large urban academic medical center in New York City. *AIDS Patient Care STDS* 2022;36:153–8.

69. Serota DP, Rosenberg ES, Lockard AM *et al*. Beyond the biomedical: preexposure prophylaxis failures in a cohort of young Black men who have sex with men in Atlanta, Georgia. *Clin Infect Dis* 2018;67:965–70.

70. Lee JJ, Li Verdugo J, Xiao AY *et al*. Digital interventions to enhance PrEP uptake and adherence through stigma reduction. *Curr HIV/AIDS Rep* 2023;20:458–69.

71. Krakower DS, Gruber S, Hsu K *et al*. Development and validation of an automated HIV prediction algorithm to identify candidates for pre-exposure prophylaxis: a modelling study. *Lancet HIV* 2019;6:e696–e704.

72. AIDSVu. Understanding the current HIV epidemic in Phoenix, AZ. 2024. Available from: https://map.aidsvu.org/profiles/city/phoenix-az/overview (Accessed August 15, 2024).

MA-UNB-NA-US-00168 FEBRUARY 2025