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PRESIDENT'S MESSAGE

Dear Members of MPhA,

I want to start by thanking the membership for trusting me to lead our Executive Committee during the upcoming year. I plan to put in the time and effort to do the best I can for our organization. We've recently announced the consolidation of our districts from 9 to 5 districts in an effort to make it easier to lead each district. This decision has long been considered, and our Executive Committee thought it was time to take action on this idea to make our organization leaner and more functional. This move should also make it easier to build a grassroots network within our organization - though this will be a longer term goal of these changes.

Another goal that our organization has long considered is how to best consolidate the voices and efforts of the various groups that represent our profession within our state. At MPhA, we've done our best to partner with other state pharmacy groups when working towards mutual goals. Recently, we have worked on the Medicaid Reimbursement rate freeze issue with other state pharmacy organizations, and we hope to continue to find productive, mutually beneficial issues as we approach the upcoming legislative session. As I think further out from our short-term goals as an organization, I cannot help but reflect on this issue that continuously emerges and must be solved - why do we have so many different organizations to represent the needs of pharmacists in MS?

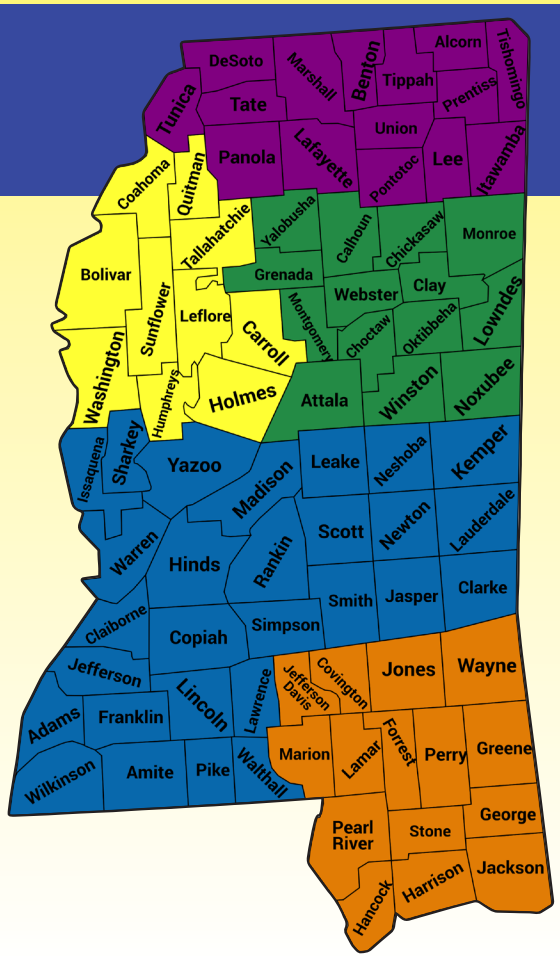
Regarding our various national organizations, it is advantageous to have more specialized groups with which to be involved. But within our state, I am of the opinion that having an umbrella organization that represents the combined voices of our state's pharmacists is a preferred way to most productively invest our efforts. This organization would maintain academies or some distinctions within it to cater to different identities and practice areas. I think this makes for stronger representation in government affairs, a greater variety of educational opportunities, and a better pool of contacts for networking. It also may make it easier to streamline and run our organizations; we won't have as much duplication of work for multiple organizations and can put forth a stronger effort for a combined organization.

Conversations about this have been going on for quite some time, though we have never quite been able to gain traction in this effort. This is partly why I wanted to open my term as President with this topic. If our membership is not behind this effort, it won't be accomplished. I would like for you to reach out to any members of our Executive Committee with your thoughts on this topic. If you are a member of multiple state organizations, please reach out to the Executive Committee of those other organizations as well with your thoughts concerning this topic. I'd like to see our profession continue to move forward, and I think combining our voices and efforts is the most effective way to move in this direction.

I'm looking forward to a phenomenal year at MPhA, and I hope to have the opportunity to see many of you throughout this year.

With Thanks,

Peyton Herrington, PharmD, AAHIVP
(president@mspharm.org)- for any desired email responses



DISTRICTS REALIGNED

GET TO KNOW YOUR DISTRICT

We are excited to announce that we are realigning and streamlining our districts throughout the state. Previously, we had nine districts where several districts were without a chair for an extended period of time. Our goal is to create districts that have strong leadership to, in turn, create higher attendance at district events. It is our hope that, by consolidating our districts, we will build up networking more easily.

Visit our website to connect with your District Chair.
www.mspharm.org/districts

Districts

- **D-1: North Mississippi,** Peter Ross
- **D-2: Delta,** Bob Wilbanks
- **D-3: East Central Mississippi,** Eddie Rutherford
- **D-4: Central Mississippi,** Tera McDivitt & Sam Daniels
- **D-5: Coastal,** Rhonda Dunaway

EXECUTIVE DIRECTOR'S MESSAGE

The newly installed officers of the MPhA Executive Committee, led by President Peyton Herrington, are off to a great start this year. We have consolidated 9 MPhA districts into 5 and are very appreciative of the following individuals for stepping up to be district chairman: District 1 North MS, Peter Ross; District 2 Delta, Bob Wilbanks; District 3 East Central MS, Eddie Rutherford; District 4 Central MS, Tera McDivitt and Sam Daniels; and District 5 Coast, Rhonda Dunaway. We would also like to thank those who have volunteered to serve as Committee Chairs; Jonethan Morris, Government Affairs; Jordan Ballou, Membership; Anna Touchstone, Education; Regan McIntosh, New Practitioner; and Wilma Wilbanks, Nominations and Awards.

From the Government Affairs Committee, SB 2750 regarding the revision of the definition of a written protocol has been implemented and the MS Board of Pharmacy has updated Regulation 36 and will be sending the update out soon. SB 2799, The Medicaid Technical Amendments Bill, has gone into effect and we have already seen dramatic NADAC increases on medications, while pharmacies are still being reimbursed at the NADAC as of July 1st, 2021. As time goes on, we are going to see many more NDCs with an increased NADAC that will put pharmacies being reimbursed below cost. I can assure you that I and our Lobbyist, Mark Baker, are working diligently with the legislature to try and get this fixed as soon as possible.

Along with Vice President, Buddy Ogletree, I enjoyed the invite and opportunity to speak to the incoming P3 class at the UM School of Pharmacy in Jackson and appreciate the continued relationship MPhA has with the UM School of Pharmacy. We have the virtual MPhA Consultant Seminar coming up in September and already have a great turnout of registered participants. As always, we enjoy working with other MS State Pharmacy Associations and will be partnering up with MSHP to help with the fall Residency Showcase. Be on the lookout for emails concerning our District Dinner Meetings this Fall along with our Last Chance Seminar in December for you procrastinators.

And lastly, I appreciate all of the hard work put in by pharmacists across the state as we continue to deal with COIVD-19. Pharmacists in hospitals, retail, long term care, and all practice sites in between are struggling with staffing shortages among many other issues and you continue to make sure that your patients receive the correct medication regimens with sound counseling. MPhA is also having discussions with the MS department of Health on how we can work together to get monoclonal antibody therapy to our citizens as quickly and efficiently as possible.

As always, I'm thankful to be our Association's Executive Director and look forward to working with you to advance our profession.

Beau Cox, PharmD

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GET INVOLVED

The 2021-2022 year will be led by a new team of Committee Chairs. Each chair has taken on the role of growing, advocating, and educating our membership. Visit our website to Get Involved with one or more of our committees. Thank you to our new Chairs for diligently working for the greater good of not only MPhA but also pharmacists across Mississippi.

Anna Touchstone
Education

Jonethan Morris
Government Affairs

Regan McIntosh
New Practitioner

Jordan Ballou
Membership

Wilma Wilbanks
Awards

PRE-EXPOSURE PROPHYLAXIS: A KEY COMPONENT IN THE EFFORT TO END HIV

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GOAL:

Much knowledge has been gained in recent years related to å(PrEP) is a component that has the potential to dramatically impact the rates of new HIV infections around the world. The goal of this article is to educate pharmacists about PrEP, to identify barriers to treatment, and to highlight roles where pharmacists can engage in the provision of PrEP-related care.

Target audience: Pharmacists

OBJECTIVES:

1. Describe current HIV statistics and groups most impacted in the US.
2. Define the term PrEP and describe therapies utilized.
3. Identify barriers impacting the utilization of PrEP.
4. Discuss pharmacists' roles in PrEP therapy.

Disclosure: Authors of this article have no disclosures concerning possible financial or personal relationships with commercial entities that may have a direct or indirect interest in the subject matter of this article.

HIV BACKGROUND

Human immunodeficiency virus (HIV) is a virus that attacks the human immune system, thereby inhibiting a person's ability to fight infection. HIV is a single-stranded RNA virus that preferentially replicates in CD4+ T-cells of a human host's immune system.1 After integration into the host's genome, HIV may remain latent or its genetic material may undergo active transcription to be replicated and virions produced by the host's own CD4+ cells.[2] As the virus continues replicating within host CD4+ cells, the CD4+ cell membranes undergo lysis or breakdown.[2,3,4] Depletion of these immune cells leaves the host immunocompromised and susceptible to opportunistic infections as well as malignancy as the disease progresses.[1] Advanced HIV infection resulting in CD4+ cell counts <200 cells/mm^3 is diagnosed as acquired immune deficiency syndrome, or AIDS.

HIV can be spread through sexual contact, through blood or blood products, and from mother to child either during pregnancy, childbirth, or through breast milk.[2] Transmission occurs when fluids from an infected human come in contact with a mucous membrane, damaged tissue, or direct bloodstream of another person. Sexual intercourse is the most common route of HIV transmission.[2] Risk of sexual transmission via oral sex is generally regarded as minimal compared to condomless anal sex, which has the greatest risk of sexual transmission of HIV, with a risk-per-act of 138 per 10,000 exposures.[2] Damage to the thin tissue in the lining of the rectum makes anal sex the riskiest type of sex for transmitting HIV.[5] However, HIV can also be spread during heterosexual vaginal intercourse, and transmission risk is greater among women with infected male partners than vice versa.[2] It should be noted that presence of other sexually-transmitted infections, particularly with organisms causing ulcerative lesions such as Treponema pallidum, Haemophilis ducreyi, and herpes simplex virus increase the risk of infection. Increased risk of infection when other sexually transmitted infections are present is largely attributable to easy entry of the virus into the host bloodstream through

damaged tissue.[2] Infections secondary to needle-sharing in intravenous drug use are less common than sexual transmission, with a risk- per-act of 63 per 10,000 exposures.[2] Infection from needle sticks, while possible, is even less probable and has a risk-per-act of 23 per 10,000 acts.[2]

Although growing increasingly treatable with the use of antiretroviral therapy, human immunodeficiency virus (HIV) remains a public health concern. In 2018, an estimated 1.2 million individuals in the United States were infected with HIV.[5] Of these 1.2 million people, approximately 14% were unaware that they were infected.[5] In the United States alone, it is conservatively estimated that over 500,000 individuals have died from complications of HIV infection.[1] Although HIV can affect anyone, some people are more susceptible to HIV infection in the U.S based on their sexual orientation, race, ethnicity, gender, age, geography, and intersectionality between these different factors. Gay or bisexual men who have sex with men (MSM) are the population most affected by HIV. Male-to-Male sexual contact accounted for 65% of new HIV diagnoses in the US and dependent areas in 2019 compared to heterosexual contact which accounted for 23% of new HIV diagnoses the same year.[5] Incidence rates of HIV infection are not proportionate throughout the country. Southern states have been found to have the highest rates of new HIV infections in the U.S.[5] Although composing only 38% of the U.S. population in 2018, 51% of new HIV infections in the United States were diagnosed in this region.[6] The South also accounts for nearly half of the deaths, 47%, among adults and adolescents diagnosed with HIV in the U.S.[6] Specifically, Mississippi has one of the highest rates of people living with HIV in the U.S. In 2018, the national prevalence of HIV was 375 per 100,000 individuals, while in Mississippi the prevalence was 381 per 100,000 individuals.[7] In Hinds County, Mississippi, the estimated rate of people living with HIV in 2018 was 1,171 of every 100,000 individuals.[7] Furthermore, minority populations shoulder much of the disease burden in this region. African Americans had the highest incidence of HIV diagnoses in 2018 followed by Hispanic/Latinx and Whites.[5] The Centers for Disease Control and Prevention reported in 2018 that African American individuals living in the southern states disproportionately represent new HIV infections, accounting for over half of all new HIV diagnoses.[8] In Mississippi, approximately 73.8% of all new infections are comprised of African American individuals.[7] Even though White race is the majority population in Mississippi at 56.5%, compared to African American and Hispanic/Latinx at 37.4% and 3.4% respectively, the rates of African American and Hispanic/Latinx men living with HIV diagnoses in Mississippi are 5.5 and 3.2 times higher than White men, respectively.[7] The rates of African American women and Hispanic/Latinx females living with HIV diagnoses in Mississippi is 9.4 and 4.8 times higher than White women, respectively.[7] Disproportionate rates of infection indicate a greater need for preventative action among these groups.

In 2019, the US Department of Health and Human Services (HHS) proposed the Ending the HIV Epidemic: A Plan for America[9] initiative, which aimed to reduce incident HIV infections in the US by 75% in five years and 90% within 10 years, respectively. The initiative was designed to increase utilization of four key components in 48 counties across the US, plus Washington, D.C., and San Juan, Puerto Rico, with the highest number of new HIV diagnoses in 2016 and 2017. Notably, Mississippi was included as one of the seven states which were declared as focus areas for this initiative based on a high proportion of HIV diagnoses in rural areas .[10] The four key components included in the Ending the HIV Epidemic: A Plan for America initiative include diagnosis, treatment, prevention and response. These components are expanded upon below:

- **Diagnose** all people with HIV as early as possible;
- **Treat** people with HIV rapidly and effectively to reach sustained viral suppression;
- **Prevent** new HIV transmission by using proven interventions, including the use of pre- exposure prophylaxis (PrEP);
- **Respond** quickly to potential HIV outbreaks to get needed prevention and treatment services to people who need them.

While all four components of the program are valuable, prevention may be viewed as the most important component to ending HIV.[11] Preventing the spread of HIV is a multi-faceted process that has traditionally occurred through educational, diagnostic, and behavior modification strategies. For individuals with HIV, proper treatment with antiretroviral therapy (ART) is considered a form of prevention. This is sometimes referred to as 'Treatment as Prevention'. When taken as prescribed, ART therapy can reduce the HIV viral load to very low or undetectable levels. One benefit of maintaining low viral loads is that it

helps prevent the transmission of HIV to others.[5] Because approximately 40% of new infections are caused by individuals that are unaware of their HIV status[12], timely testing is a crucial first-step in combating HIV spread. The Centers for Disease Control and Prevention (CDC) recommends HIV testing for all individuals between 13 and 64 years at least once, and recommends annual testing for the following groups:

- MSM,
- Individuals with multiple sex partners,
- Individuals with HIV-positive partners,
- Individuals with tuberculosis or hepatitis,
- Individuals who have received treatment for at least one sexually-transmitted infection,
- People who exchange sexual services for goods,
- Any person who has had sex with someone whose sexual history they are unaware of.[12]

Other strategies for preventing HIV transmission from sex include the proper use ofcondoms or choosing abstinence.[13] For individuals who use intravenous drugs, risk of HIV can be limited by refusal to share injectable drug equipment or by using bleach to clean shared materials.[14] More recently, pre-exposure prophylaxis (PrEP) is being advocated as a more- effective method of preventing HIV infection than previous programs even among those who continue risky behaviors.

PREP THERAPY

PrEP involves the use of antiretroviral medications on a routine basis by individuals that are HIV negative but are at high-risk of contracting HIV.[15] While the mechanism of action for HIV prevention with these medications is not well understood, one potential explanation is that antiretroviral medications inhibit action of HIV reverse transcriptase enzymes and prevent viral genome integration into the host genome. Without integration into the host genome, HIV cannot replicate within the cell, and cannot establish an infection within the host. PrEP therapy is indicated for adults and adolescents weighing at least 35 kg who are at high-risk of contracting HIV.[16] A list of groups indicated for PrEP therapy is available in Table 1.

Table 1. Groups indicated for PrEP therapy.16

Adolescents (≥35 kg) and adults who have had **anal or vaginal sex** in the past 6 months and…
· Have a sexual partner with HIV, · Have not consistently used a condom, or · Have been diagnosed with a sexually-transmitted infection in the last 6 months.
Adolescents (≥35 kg) and adults who **inject drugs** and…
· Have an injection partner with HIV, or · Share needles, syringes, or other equipment to inject drugs.
Adults who have been prescribed **post-exposure prophylaxis** and…
· Report continued risk behavior, or · Have used multiple courses of post-exposure prophylaxis

Currently, there are only two Food and Drug Administration (FDA) approved medications for use as PrEP in the US market, Truvada® (emtricitabine [FTC]/ tenofovir disoproxil fumarate [TDF]) and Descovy® (emtricitabine [FTC]/tenofovir alafenamide [TAF]). Truvada® was the first PrEP medication to be approved in the U.S. in 2012 followed by Descovy® in 2019. Most recently, a generic formulation of emtricitabine/tenofovir disoproxil fumarate became available in 2020. These medications have been proven to be safe and highly effective by rigorous clinical trials at preventing HIV when taken regularly and are available as oral tablets approved for once-daily dosing.[17] FTC/TDF has been found to be highly efficacious in preventing HIV in MSM, heterosexuals, transwomen and people who inject drugs (PWID) weighing > 35 kgs and having a creatinine clearance (CrCl) of more than 60 ml/min.[17] Although generally considered safe and effective, TDF has been associated with some adverse effects involving impairment of kidney functioning and decrease of bone density.[17] Descovy®, which contains TAF, the more stable prodrug of tenofovir, is approved for daily dosing by the FDA only among MSM and transgender women who have a creatinine clearance rate of ≥30ml/min.[17]

Descovy® has also been found to be highly effective at preventing HIV and has been demonstrated to be non-inferior to Truvada® in the DISCOVER Trial.[18] In this trial, Descovy® showed improved bone mineral density and renal outcomes compared to Truvada®, which has been attributed to its formulation with TAF instead of TDF.[18] However, Descovy® has not been studied in cisgender women

Table 2. Summary of PrEP Medications

Medication	FDA Approval	Indications	Contradictions
TDF-FTC (Truvada®)	2012 **generic - 2020*	MSM and Trans Women, Heterosexuals, Cisgender Women, People Who Inject Drugs (PWID), Adolescents	Not recommended CrCl < 60 ml/min
TAF-FTC (Descovy®)	2019	MSM and Trans Women, Effectiveness for other populations not established	Not recommended CrCl < 30 ml/min
Long-acting Injection (Cabotegravir)	Breakthrough Therapy designation by FDA in November 2020	TBD*	TBD*
Vaginal ring (Dapivirine)	Pipeline	TBD*	TBD*
Implantable / long-acting oral (Islatravir)	Pipeline	TBD*	TBD*
Long-acting Injection (Lenacapavir)	Pipeline	TBD*	TBD*

TBD* = To be determined upon approval

having receptive vaginal intercourse or PWID.[19] Descovy® has been associated with mild weight gain.[19] Nausea, diarrhea, headache, stomach issues and fatigue are other commonly occurring side effects among people taking either Descovy or Truvada.[17,18] Although PrEP therapy has been shown to be highly effective at preventing HIV infection, adherence is critical to the effectiveness. Studies have found that PrEP can reduce the risk of acquiring HIV from sex by approximately 99% and from injection drug use by 74%, but effectiveness was highly associated to the degree of adherence.[20] Highlighting the importance of adherence, studies evaluating drug concentrations among MSM and corresponding reductions in HIV acquisition showed risk reductions of 76% for 2 doses per week, 96% for 4 doses per week, and 99% for 7 doses per week, respectively.[21]

Apart from daily dosing, PrEP has also been studied in "on-demand" or "event-driven" regimens among MSM in the IPERGAY trial.[22] On-demand PrEP was studied as a "2-1-1" schedule, which involves taking two tablets 2-24 hours before sexual activity, one tablet 24 hours after the first dose, and another tablet 24 hours after the second dose.23 However, on-demand PrEP dosing is currently not a part of CDC's guideline for people at risk of HIV and has not been studied in heterosexuals, adolescents or transgender people.[23]

Other promising PrEP therapies are in the drug development pipeline. Cabotegravir, a long-acting injectable, received "Breakthrough Therapy" designation from the FDA in November 2020.[24] "Breakthrough Therapy" designation is a process designed to expedite the development and approval of drugs where preliminary evidence indicates substantial advantages over currently available therapies used to treat serious conditions. In May 2021, the manufacturer announced the initiation of a rolling submission of a new drug application (NDA) with the FDA for the prevention of HIV.[25] Cabotegravir, administered intramuscularly every 8 weeks, was shown to be highly effective in reducing HIV risk and statistically superior to Truvada® in preventing HIV.[26] Initial studies were conducted in MSM and transgender women and additional studies included women at increased risk of acquiring HIV.[25,26] However, use among other populations, including adolescents and pregnant/breastfeeding women, has not been examined. Another PrEP product in the pipeline, dapivirine, had its NDA accepted for review by the FDA in March 2021.[27] Dapivirine is a monthly vaginal ring designed to reduce the risk of HIV infection through vaginal sex.[27] Another long-acting injectable capsid inhibitor, lenacapavir, is being studied as a potential PrEP option for administration every six months. Studies are currently planned involving women, MSM, and persons of trans experience.[28] Lastly, multiple formulations of a first-in-class investigational nucleoside reverse transcriptase translocation inhibitor, islatravir, are being evaluated

for use in HIV prevention.[29] One formulation of the drug being studied is a small, removable yearly implant, while another formulation under investigation is a once monthly oral option.[29,30] Both formulations are in the early phases of development. Table 2 provides a summary of approved and investigational PrEP medications.

With the high level of efficacy and limited side effects associated with PrEP use, one may expect a high rate of utilization. However, recent research has shown that only a small portion of Americans who could benefit from PrEP have received it. Among individuals in the US living with HIV, 1 in 7 is unaware of their HIV status.[31] A large portion of individuals infected with HIV are capable of unknowingly transmitting HIV to others through unprotected sex or sharing of needles. Data from 2015 showed that of the approximately 1.2 million Americans who could have benefited from PrEP, only 90,000 prescriptions were filled through commercial pharmacy plans, which constitute 85-90% of all PrEP prescriptions.[32] More alarming are the low proportions of PrEP-eligible African American and Hispanic/Latinx individuals across America who were prescribed PrEP. Of the potential 500,000 African American and 300,000 Hispanic/Latinx individuals who were eligible to receive PrEP, only 7,000 and 7,600, respectively, were prescribed PrEP through a commercial pharmacy plan.[32] Even though the number of individuals receiving PrEP in the US is low, the numbers are improving. In 2016, 77,000 people were prescribed PrEP in the US indicating a 73% year-over-year increase in persons prescribed PrEP since 2012.[33]

BARRIERS TO ACCESS

For medications that could have a tremendous impact on eliminating HIV, underutilization of these drugs is an enormous problem. Multiple factors have been identified as influencing PrEP underutilization.

Financial Barriers

The cost of PrEP medication may prevent some high-risk individuals from receiving care, and access to adequate insurance coverage can be a driving factor. For those with insurance, patient deductibles, copayments, monthly premiums, coinsurance, and prescribing criteria can all restrict access to PrEP.[34] Geographic disparities in access to PrEP have been highlighted in previous research, which found that health plans in the South were 16 times more likely to have prior authorization (PA) requirements compared to plans in the Northeast.[35] This is concerning as southern states have the highest number of annual new HIV diagnoses, and PA requirements may act as a deterrent to PrEP access. This highlights the need for focus on healthcare policies which enable access to PrEP. In December 2019 the U.S. Preventive Services Task Force (USPSTF) issued a "Grade A" recommendation for PrEP indicating that they found high certainty of benefit from PrEP use and encouraged health plans to provide PrEP at zero cost- sharing.[36] Under Section 2713 of the Affordable Care Act, nearly all private health insurers are required to provide PrEP at no cost-sharing to the patient beginning no later than the 2021 plan year.[36] This landmark recommendation holds promise towards making PrEP accessible to those with the greatest need. Costs of paying for not only PrEP therapy but also medical visits and labs required to remain on PrEP are frequently cited as barriers to PrEP use.[37] Lab monitoring is required every 3 months therefore prescriptions should be written for only 90 days to ensure adequate monitoring is occurring. With more than 12% of the southern population being uninsured, healthcare costs may impede access and uptake of PrEP.[37] Additionally, lack of individual health insurance has been directly linked to discontinuation of PrEP by MSM in the South.[37]

Access to Providers

Access to PrEP in the South is also limited by the proximity of patients to PrEP-prescribing healthcare providers.[37] The South has the highest proportion of PrEP-eligible individuals living at least a 60 minute drive away from a provider willing to prescribe PrEP.[37] One study conducted in an African American community found that 38% of participants lived more than 60 minutes away from a PrEP provider.[39] Because the South is heavily rural and communities often have limited access to healthcare services, people in rural areas are generally underserved for HIV preventive services and are less likely to use PrEP.[37]

Health Literacy

Combined with a scarcity of primary PrEP providers and high poverty rates, rural areas in the South have lower health literacy rates.[37] One of the major barriers to PrEP uptake is a lack of knowledge and awareness of PrEP in high-risk populations such as communities in the South, persons who inject drugs (PWID), and African American MSM.[36,40,41] Many PrEP-eligible individuals do not have adequate knowl-

edge about PrEP and why preventative measures are important. In a narrative review of barriers to the use of PrEP in the United States, several studies noted that populations at high-risk for HIV lacked awareness of PrEP.[40]

Risk Perception

Low perception of HIV risk is another barrier to PrEP use. Multiple studies have shown that individuals at high-risk of being infected with HIV perceive themselves as low-risk.[40] In addition to low perceived HIV risk among those engaged in high-risk behaviors, healthcare providers may be inadequately identifying individuals at high-risk. Studies have shown providers are often uncomfortable discussing and providing PrEP with patients.[42,43]

PrEP Stigma

Stigma exists around both HIV status and PrEP use. Stigma may stem from the history of HIV in the U.S. and its historic association with the gay community, which has long been marginalized in the U.S.[44] Both HIV and PrEP use may be perceived as markers of one's sexuality and engagement in 'risky' behavior.[44,45] Additionally, the dual indications of PrEP medications for HIV treatment and prophylaxis may create confusion among patient populations, and stigma may lead to hesitancy of PrEP use. For instance in a focus group study of African American MSM, one participant noted, "I'm gonna be honest. I had a partner that was on PrEP, and I judged him, and I thought that he was HIV positive. But he wasn't, and he was just taking it himself just if anything was to happen."[44] PrEP use can also be perceived as a marker of being 'out' with one's sexuality and identifying with the gay community. Many younger MSMs are uncomfortable with others knowing their sexuality.[45] Among younger MSM individuals who use PrEP, there is fear of PrEP use being discovered by parents, family members, or friends, and of the individual being 'outed' as MSM instead of the individual being able to personally disclose that information on their own terms.[45]

Bias and Medical Mistrust within Healthcare

Provider bias and mistrust in the healthcare system can prevent some high-risk individuals from receiving PrEP. Racial and ethnic bias is well documented within the U.S. healthcare system.[46,47] Mistrust in the healthcare system is especially prevalent among minority communities. Events such as the Tuskegee Syphilis Study and other established incidents of discrimination against minorities in the past have had lasting impacts on relationships between the healthcare community and minority groups. [48] In healthcare settings, where individuals should feel heard and protected, many high-risk patients report experiencing stigma and fear of judgement. Furthermore, stigma may be more prevalent depending on cultural norms of the geographic region. Stigma around sexual activity and HIV in the South may be tied to stigma around PrEP use.[37] Approximately 31.2% of African American MSM participants in a study in Southeastern U.S. reported experiencing racial identity-based or sexual orientation-based healthcare discrimination.[49] In an evaluation of PrEP awareness between participants in Jackson, Mississippi and Boston, Massachusetts, not one participant from Jackson had heard about PrEP or the term "pre-exposure prophylaxis" from a healthcare provider compared to several participants from Boston.[41] In healthcare settings both with and without a trusted provider, MSM anticipate homophobia and homonegativity based on prior experiences.[44] Participants reported feeling mistreated, talked down to, or feeling like they were perceived as 'nasty'.[44] Existing homophobia and racism within healthcare settings prevent candid discussions of sexual behavior and potentially limit recommendation and use of PrEP.[50] A continuous provider-patient relationship in which the provider and setting is sex-positive, culturally sensitive, and nonjudgmental establishes trust and confidence in provider's recommendations for PrEP.

THE PHARMACIST'S ROLE

Pharmacists represent an underutilized source for increasing knowledge and improving uptake of PrEP therapy. It has been shown that pharmacist inclusion as part of the clinical team in HIV practice sites has been associated with improved patient outcomes.[51] It is well known that pharmacists are some of the most trusted and accessible healthcare providers.[52,53] Outside of a clinic setting, community pharmacists have the potential to significantly impact HIV PrEP care. Pharmacies are open extended hours, and patients can have a conversation with a pharmacist without scheduling an appointment. It is estimated that patients visit a pharmacy up to ten times more frequently than their primary care provider.[51] Pharmacists have access to prescription records and experience selling and counseling on sexual health products, and are in a prime position to identify and engage patients who

may benefit from PrEP therapy.[54] Pharmacists filling prescriptions for medications used in the treatment of sexually transmitted infections (STIs) or other products related to sexual health may have opportunities to consult with patients regarding PrEP and other risk-reduction practices.[55] Pharmacists can also aid in addressing potential financial barriers associated with PrEP therapy. Pharmacists may provide support by identifying copay assistance cards or enrolling patients in patient assistance programs. Gilead, the manufacturer of both Truvada® and Descovy®, offers patient assistance for individuals who do not have insurance and a copay assistance program for individuals with insurance to offset out-of-pocket costs.[56] For individuals who have insurance but are denied coverage, Gilead also offers assistance to provide medications. For patients already taking PrEP, pharmacists can be engaged in adherence monitoring to ensure therapy is optimally utilized. With the data linking the level of risk reduction to medication blood concentration levels, adherence to PrEP therapy has been shown to be vital to its effectiveness.[21] While multiple states are in the process of considering granting pharmacists the authority to prescribe PrEP medications, California and Colorado have already granted pharmacists prescriptive authority for these medications.[57] In states where pharmacist do not have prescriptive authority established, pharmacists can engage in collaborative drug therapy agreements (CDTAs) with medical providers enabling pharmacists to more closely manage patients taking PrEP therapy. During the 2021 Mississippi legislative session, Senate Bill 2750 was approved revising the definition of "written guideline or protocol" in the Pharmacy Practice Act deleting the requirement to have a protocol agreement on each patient.[58] This revision makes it easier for prescribers and pharmacists in a retail setting to engage in a written guideline or protocol creating more opportunities for pharmacists to be involved in managing PrEP therapy.

Communication – People First Language

Because there is a stigma associated with HIV and any products or practices associated with it, including PrEP, it is important for healthcare providers to be mindful of how they discuss these topics. Since the beginning of the AIDS/HIV epidemic there has been research and discussion on how to address stigma through communication. One way is through People First Language. People First Language puts the person before their condition or sexual orientation and respects people for who they are.[59] For instance, calling someone an "HIV-positive person" puts their condition first rather than describing them as a person who has HIV. Some people may not use People First Language to describe themselves as "HIV-positive" or "living with HIV". It is okay to allow others to define themselves as they wish; however as healthcare professionals, it is important to be mindful of the language we use to describe others.[54] Pharmacists should incorporate People First Language into their routine vocabulary as a means of connecting with patients and de-stigmatizing HIV.

CONCLUSION

In approximately 40 years since the discovery of HIV, experts have gained much knowledge and understanding about the disease. Through this greater understanding and the development of effective pharmacologic therapies, HIV can now be viewed as a chronic illness that, with appropriate treatment, can be effectively managed and prevented. Prevention is seen by many as the key component in the response to HIV. Although highly effective preventive treatments are available, uptake of these therapies has been limited. Several barriers to increasing uptake of PrEP therapy have been identified. Addressing these barriers through programs aimed at improving the utilization of PrEP therapy among high-risk populations need to be developed and implemented before we can hope to end the HIV epidemic in the US. Pharmacists can play a pivotal role in increasing knowledge and awareness of PrEP, increasing uptake, and improving outcomes associated with PrEP therapy.

REFERENCES:

1. Anderson PL, Yager J, Fletcher CV. Human Immunodeficiency Virus Infection. In: DiPiro JT, Yee GC, Posey LM, Haines ST, Nolin TD, Ellingrod V, eds. Pharmacotherapy: A Pathophysiologic Approach, 11e. McGraw-Hill Education; 2020. Accessed February 5, 2020. accesspharmacy.mhmedical.com/content.aspx?aid=1164179826
2. Fauci AS, Folkers GK, Lane HC. Human Immunodeficiency Virus Disease: AIDS and Related Disorders. In: Jameson JL, Fauci AS, Kasper DL, Hauser SL, Longo DL, Loscalzo J, eds. Harrison's Principles of Internal Medicine, 20e. McGraw-Hill Education; 2018. Accessed April 23, 2021. accesspharmacy.mhmedical.com/content.aspx?aid=1159622505
3. Cummins NW, Badley AD. Mechanisms of HIV-associated lymphocyte apoptosis: 2010. Cell Death Dis. 2010;1(11):e99-e99. doi:10.1038/cddis.2010.77
4. Cummins NW, Badley AD. Making sense of how HIV kills infected CD4 T cells: implications for HIV cure. Molecular and Cellular Therapies. 2014;2(1):20. doi:10.1186/2052-8426-2-20
5. HIV Basics. CDC. Published August 4, 2021. Accessed August 12, 2021. https://www.cdc.gov/hiv/basics/statistics.html
6. HIV in the United States by Region. Centers for Disease Control and Prevention. Published October 26, 2020. Accessed June 16, 2021. https://www.cdc.gov/hiv/statistics/overview/geographicdistribution.html
7. Mississippi 2018. AIDSVu. Accessed September 9, 2020. http://aidsvu.org/local-data/united-states/south/mississippi/
8. HIV In the Southern United States. CDC; 2019. https://www.cdc.gov/hiv/pdf/policies/cdc-hiv-in-the-south-issue-brief.pdf

REFERENCES CONTINUED:

9. Fauci AS, Redfield RR, Sigounas G, Weahkee MD, Giroir BP. Ending the HIV Epidemic: A Plan for the United States. JAMA. 2019;321(9):844. doi:10.1001/jama.2019.1343
10. Federal Response: Ending-the-HIV-Epidemic. HIV.gov. Published July 2, 2020. Accessed September 9, 2020. https://www.hiv.gov/federal-response/ending-the-hiv-epidemic/overview
11. Poku NK. HIV Prevention: The Key to Ending AIDS by ß2030. Open AIDS J. 2016;10:65-77. doi:10.2174/1874613601610010065
12. HIV Testing. CDC. Published June 9, 2020. Accessed July 7, 2021. https://www.cdc.gov/hiv/testing/index.html
13. Protect Yourself During Sex. CDC. Published May 20, 2021. Accessed July 7, 2021. https://www.cdc.gov/hiv/basics/hiv-prevention/protect-yourself-during-sex.html
14. Protect Yourself If You Inject Drugs. CDC. Published April 21, 2021. Accessed July 7, 2021. https://www.cdc.gov/hiv/basics/hiv-prevention/inject-drugs.html
15. Pre-Exposure Prophylaxis (PrEP). CDC. Published December 13, 2019. Accessed February 17, 2020. https://www.cdc.gov/hiv/risk/prep/index.html
16. Deciding to Take PrEP. CDC. Published May 13, 2021. Accessed July 7, 2021. https://www.cdc.gov/hiv/basics/prep/prep-decision.html
17. Antiretroviral Drugs for Treatment and Prevention of HIV Infection in Adults: 2018 Recommendations of the International Antiviral Society–USA Panel. JAMA Network. Accessed April 26, 2021. https://jamanetwork-com.umiss.idm.oclc.org/journals/jama/article-abstract/2688574
18. Mayer KH, Molina J-M, Thompson MA, et al. Emtricitabine and tenofovir alafenamide vs emtricitabine and tenofovir disoproxil fumarate for HIV pre-exposure prophylaxis (DISCOVER): primary results from a randomised, double-blind, multicentre, active-controlled, phase 3, non-inferiority trial. The Lancet. 2020;396(10246):239-254. doi:10.1016/S0140-6736(20)31065-5
19. Spiegel HML. DISCOVER: much accomplished, but not yet for all. The Lancet. 2020;396(10246):214-215. doi:10.1016/S0140-6736(20)31530-0
20. Riddell J, Amico KR, Mayer KH. HIV Preexposure Prophylaxis: A Review. JAMA. 2018;319(12):1261-1268. doi:10.1001/jama.2018.1917
21. Anderson PL, Glidden DV, Liu A, et al; iPrEx Study Team. Emtricitabine-tenofovir concentrations and pre-exposure prophylaxis efficacy in men who have sex with men. Sci Transl Med. 2012;4(151):151ra125.
22. Molina J-M, Capitant C, Spire B, et al. On-Demand Preexposure Prophylaxis in Men at Risk for HIV-1 Infection. N Engl J Med. 2015;373(23):2237-2246. doi:10.1056/NEJMoa1506273
23. On-Demand PrEP. CDC. Published May 13, 2021. Accessed July 7, 2021. https://www.cdc.gov/hiv/basics/prep/on-demand-prep.html
24. ViiV Healthcare receives FDA Breakthrough Therapy Designation for investigational, long-acting cabotegravir for HIV prevention. Accessed July 7, 2021. https://viivhealthcare.com/en-gb/media/press-releases/2020/november/viiv-healthcare-receives-fda-breakthrough-therapy-designation-fo/
25. ViiV Healthcare initiates rolling submission of new drug application with US FDA for long-acting cabotegravir for prevention of HIV. Accessed June 22, 2021. https://viivhealthcare.com/en-gb/media/press-releases/2021/may/viiv-healthcare-initiates-rolling/
26. Injectable cabotegravir highly successful at preventing HIV infection in women. Accessed April 26, 2021. https://www.catie.ca/en/catienews/2020-11-27/injectable-cabotegravir-highly-successful-preventing-hiv-infection-women
27. IPM's New Drug Application for Dapivirine Vaginal Ring to Reduce HIV Risk in Women Accepted for Filing by US Food and Drug Administration. Published March 2, 2021. Accessed April 26, 2021. https://www.ipmglobal.org/content/ipm%E2%80%99s-new-drug-application-dapivirine-vaginal-ring-reduce-hiv-risk-women-accepted-filing-us
28. New PrEP Studies: Long-Acting HIV-1 Capsid Inhibitor Lenacapavir Every 6 Months. Accessed August 11, 2021. https://natap.org/2021/HIV/021021_01.htm
29. Markowitz M, Grobler JA. Islatravir for the treatment and prevention of infection with the human immunodeficiency virus type 1. Curr Opin HIV AIDS. 2020;15(1):27-32. doi:10.1097/COH.0000000000000599
30. Islatravir Shows Promise for Once-Monthly Oral PrEP. POZ. Published January 26, 2021. Accessed June 22, 2021. https://www.poz.com/article/islatravir-shows-promise-oncemonthly-oral-prep
31. Estimated HIV incidence and prevalence in the United States, 2010–2016. HIV Surveillance Supplemental Report 2019;24(No. 1). CDC. http://www.cdc.gov/hiv/library/reports/hiv-surveillance.html. Published February 2019. Accessed April 22, 2020. 24(1):89.
32. 2018 CROI PrEP Press Release. CDC. Published April 25, 2019. Accessed February 23, 2020. https://www.cdc.gov/nchhstp/newsroom/2018/croi-2018-PrEP-press-release.html
33. Mapping PrEP: First Ever Data on PrEP Users Across the U.S. AIDSVu. Published March 6, 2018. Accessed November 13, 2020. https://aidsvu.org/prep/
34. Kay ES, Pinto RM. Is Insurance a Barrier to HIV Preexposure Prophylaxis? Clarifying the Issue. Am J Public Health. 2020;110(1):61-64. doi:10.2105/AJPH.2019.305389
35. McManus KA, Powers S, Killelea A, Tello-Trillo S, Rogawski McQuade E. Regional Disparities in Qualified Health Plans' Prior Authorization Requirements for HIV Pre-exposure Prophylaxis in the United States. JAMA Netw Open. 2020;3(6):e207445. doi:10.1001/jamanetworkopen.2020.7445
36. Bland S. USPSTF Recommendation for PrEP: Reflections on Insurance Coverage and HIV Prevention for Older Adults. O'Neill Institute. Published June 12, 2019. Accessed July 7, 2021. https://oneill.law.georgetown.edu/uspstf-recommendation-for-prep-reflections-on-insurance-coverage-and-hiv-prevention-for-older-adults/
37. Sullivan PS, Mena L, Elopre L, Siegler AJ. Implementation Strategies to Increase PrEP Uptake in the South. Curr HIV/AIDS Rep. 2019;16(4):259-269. doi:10.1007/s11904-019-00447-4
38. Brinkley-Rubinstein L, Peterson M, Arnold T, et al. Knowledge, interest, and anticipated barriers of pre-exposure prophylaxis uptake and adherence among gay, bisexual, and men who have sex with men who are incarcerated. PLoS One. 2018;13(12):e0205593. doi:10.1371/journal.pone.0205593
39. Ojikutu BO, Bogart LM, Higgins-Biddle M, et al. Facilitators and Barriers to Pre-Exposure Prophylaxis (PrEP) Use among Black Individuals in the United States: Results from the National Survey on HIV in the Black Community (NSHBC). AIDS Behav. 2018;22(11):3576-3587. doi:10.1007/s10461-018-2067-8
40. 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(5):1778-1811. doi:10.1007/s12325-020-01295-0
41. Cahill S, Taylor SW, Elsesser SA, et al. Stigma, medical mistrust, and perceived racism may affect PrEP awareness and uptake in black compared to white gay and bisexual men in Jackson, Mississippi and Boston, Massachusetts. AIDS Care. 2017;29(11):1351-1358. doi:10.1080/09540121.2017.1300633
42. Carter GA, Jayawardene W, Agley J, et al. Development of a 10-Item Tool to Identify Advanced Practice Nurse Readiness to Prescribe Pre-exposure Prophylaxis. J Assoc Nurses AIDS Care. 2019;30(3):312-320. doi:10.1097/JNC.0000000000000038
43. Turner L, Roepke A, Wardell E, et al. Do You PrEP? A Review of Primary Care Provider Knowledge of PrEP and Attitudes on Prescribing PrEP. J Assoc Nurses AIDS Care. 2018;29(1):83-92. doi:10.1016/j.jana.2017.11.002
44. Quinn K, Bowleg L, Dickson-Gomez J. "The fear of being Black plus the fear of being gay": The effects of intersectional stigma on PrEP use among young Black gay, bisexual, and other men who have sex with men. Soc Sci Med. 2019;232:86-93. doi:10.1016/j.socscimed.2019.04.042
45. Quinn K, Dickson-Gomez J, Zarwell M, et al. "A gay man and a doctor are just like, a recipe for destruction": How racism and homonegativity in healthcare settings influence PrEP uptake among young Black MSM. AIDS Behav. 2019;23(7):1951-1963. doi:10.1007/s10461-018-2375-z
46. Hall WJ, Chapman MV, Lee KM, et al. Implicit Racial/Ethnic Bias Among Health Care Professionals and Its Influence on Health Care Outcomes: A Systematic Review. Am J Public Health. 2015;105(12):e60-76. doi:10.2105/AJPH.2015.302903
47. Maina IW, Belton TD, Ginzberg S, et al A decade of studying implicit racial/ethnic bias in healthcare providers using the implicit association test. Soc Sci Med. 2018;199:219-229. doi:10.1016/j.socscimed.2017.05.009
48. Scharff DP, Mathews KJ, Jackson P, et al. More than Tuskegee: understanding mistrust about research participation. J Health Care Poor Underserved. 2010;21(3):879-897. doi:10.1353/hpu.0.0323
49. Maksut, J. L., Eaton, L. A., Siembida, E. J., Fabius, C. D., & Bradley, A. M. (2018). Health Care Discrimination, Sex Behavior Disclosure, and Awareness of Pre-Exposure Prophylaxis Among Black Men Who Have Sex With Men. Stigma and Health, 3(4), 330–337. https://doi.org/10.1037/sah0000102
50. Km M, Ds K, D Z, et al. Culturally Competent Sexual Healthcare as a Prerequisite for Obtaining Preexposure Prophylaxis: Findings from a Qualitative Study. LGBT health. doi:10.1089/lgbt.2016.0068
51. Farmer EK, Koren DE, Cha A, et al. The Pharmacist's Expanding Role in HIV Pre-Exposure Prophylaxis. AIDS Patient Care and STDs. 2019;33(5):207-213. doi:10.1089/apc.2018.0294
52. Myers JE, Farhat D, Guzman A, Arya V. Pharmacists in HIV Prevention: An Untapped Potential. Am J Public Health. 2019;109(6):859-861. doi:10.2105/AJPH.2019.305057
53. Pharmacists Top Most Trusted Professions in Gallup Poll. Drug Topics. Accessed June 23, 2021. https://www.drugtopics.com/view/pharmacists-top-most-trusted-professions-gallup-poll
54. Schafer JJ, Gill TK, Sherman EM, et al. ASHP Guidelines on Pharmacist Involvement in HIV Care. Am J Health Syst Pharm. 2016;73(7):468-494. doi:10.2146/ajhp150623
55. Gonsalves L, Hindin MJ. Pharmacy provision of sexual and reproductive health commodities to young people: a systematic literature review and synthesis of the evidence. Contraception. 2017;95(4):339-363. doi:10.1016/j.contraception.2016.12.002
56. Medication Access | Gilead. Accessed August 11, 2021. https://www.gilead.com/purpose/medication-access
57. Straube T. Oregon Bill Allowing Pharmacists to Prescribe PrEP and PEP Passes House. POZ. Published May 7, 2021. Accessed August 11, 2021. https://www.poz.com/article/oregon-bill-allowing-pharmacists-prescribe-hiv-prevention- prep-pep-passes-house
58. SB 2750 - History of Actions/Background. Accessed June 30, 2021. http://billstatus.ls.state.ms.us/2021/pdf/history/SB/SB2750.xml
59. Why Language Matters: Facing HIV Stigma in Our Own Words. The Well Project. Published April 15, 2021. Accessed July 1, 2021. https://www.thewellproject.org/hiv-information/why-language-matters-facing-hiv-stigma-our-own-words

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1. HIV can be spread through all of the following except:
   a. Sexual contact b. Blood or blood products
   c. Kissing d. Childbirth

2. The most common route of HIV transmission is through:
   a. Sexual intercourse b. IV drug use / needle sharing
   c. Childbirth d. Accidental needle stick

3. The US Department of Health and Human Services' initiative, Ending the HIV Epidemic: A Plan for America, is composed of four key components. Which of the following is NOT a key component?
   a. Diagnosis b. Treatment
   c. Engagement d. Prevention

4. What region of the US has the highest rates of new HIV infections?
   a. North b. South
   c. East d. West

5. Which of the following medications is currently approved for HIV PrEP use in the United States?
   a. Tenofovir Disoproxil Fumarate/Emtricitabine
   b. Islatravir
   c. Dapivirine
   d. Cabotegravir

6. Which of the following statements is FALSE concerning Descovy® (TAF/FTC)?
   a. Descovy® can be used in CrCl >30 ml/min
   b. Descovy® showed improved bone mineral density outcomes compared to Truvada®
   c. Descovy® is approved for use as HIV PrEP in cisgender women.
   d. Descovy® has been associated with weight gain.

7. Which of the following is NOT a commonly reported side effect with PrEP medication?
   a. Nausea b. Fatigue
   c. Headache d. Insomnia

8. Of the approximately 1.2 million people infected with HIV in U.S., approximately _____ were unaware that they were infected.
   a. 7% b. 14%
   c. 23% d. 28%

9. Which of the following PrEP dosing schedules is currently included as a part of CDC's guideline for PrEP use among people at risk of HIV?
   a. Daily Oral
   b. "On-demand" (2-1-1 schedule) oral dosing
   c. Once weekly oral dosing
   d. Once monthly oral dosing

10. HIV prevalence in Mississippi is _____ the national average.
    a. Above b. Below
    c. The same as d. Unknown as compared to

11. Coinfection with another sexually transmitted infection _____ the risk of contracting HIV.
    a. Decreases b. Increases
    c. Does not change d. Has unknown impact on

12. The CDC does NOT recommend annual testing for which of the following groups?
    a. People who have received treatment for at least one sexually-transmitted infection
    b. Children whose mothers are living with HIV
    c. Sexual partners of individuals living with HIV
    d. Any person who has had sex with someone whose sexual history they do not know

13. PrEP has been found to reduce the risk of acquiring HIV from sex by up to _____
    a. 25% b. 50%
    c. 74% d. 99%

14. Which of the following creates barriers for PrEP utilization?
    a. Lack of knowledge and awareness of PrEP
    b. Stigma of PrEP and HIV
    c. Lack of individual health insurance
    d. All of the above

15. Which of the following is a reason why HIV and PrEP are stigmatized?
    a. There is complete understanding and acceptance of HIV and PrEP in our society
    b. They are perceived as markers of sexuality and 'risky' behavior
    c. The dual indication of PrEP for HIV treatment and prevention is generally well understood by the population
    d. All healthcare providers create a safe space to discuss sex and sexuality

16. What additional barrier(s) do Southern, rural populations experience to PrEP access?
    a. Low health literacy rates
    b. High percentage of the population being uninsured
    c. Limited proximity to PrEP-prescribing healthcare providers
    d. All of the above

17. What are some root causes of medical mistrust that potentially limits PrEP use?
    a. Racism
    b. Homophobia/homonegativity
    c. Both A & B
    d. None of the above

18. The South has the highest proportion of PrEP-eligible individuals living at least _____ minutes away from a provider willing to prescribe PrEP.
    a. 30 b. 45
    c. 60 d. 90

19. The primary goal of the Ending the HIV Epidemic: A Plan for America9 initiative is to reduce incident HIV infections in the US by _____within 10 years.
    a. 50% b. 60%
    c. 75% d. 90%

20. Which of the following ways can pharmacists be involved in managing PrEP therapy?
    a. Adherence monitoring
    b. Inclusion as part of a clinical team at HIV-practice sites
    c. Consulting with patients regarding PrEP and other risk-reduction practices
    d. All of the above

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