# QUALITY IMPROVEMENT TACTICS TO DRIVE HIV PREVENTION ENGAGEMENT

HIV Prevention Improvement Activity Stakeholder Convening





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#### ViiV Healthcare

ViiV Healthcare Company (ViiV), an independent company majority-owned by GSK, is the only company 100 percent dedicated to combating, preventing, and ultimately curing HIV and AIDS. From its inception in 2009, ViiV has had a singular focus to improve the health and quality of life of people affected by this disease and has worked to address significant gaps and unmet needs in HIV care. In collaboration with the HIV community, ViiV remains committed to developing meaningful treatment and prevention advances, improving access to its HIV medicines, and supporting the HIV community to facilitate enhanced care and treatment.

#### **Discern Health**

Discern Health, part of Real Chemistry, is a consulting firm that works with clients to improve health and health care. Our focus is enhancing the value of health care services through quality-based payment and delivery models. These models align performance with incentives by rewarding physicians, hospitals, suppliers, and patients for working together to improve health outcomes and health care processes, while lowering total costs. Discern's clients include a range of organizations—pharmaceutical companies, providers, payers, policymakers, purchasers, and national thought leadership organizations—that are driving the agenda for change in health care.

## Quality Improvement Tactics to Drive HIV Prevention Engagement

## Contents

	2
Executive Summary	3
Introduction	4
Overview of the HIV Quality Landscape in MIPS	5
Gaps in the HIV Quality Landscape	6
The Stakeholder Convening	7
Key Findings from the Stakeholder Convening	7
Leverage Community-Based Organizations	7
Adopt an Integrated HIV/STI Testing Approach	8
Educate Clinicians and Patients on Prevention	10
Train All Staff in HIV Prevention	11
Minimize Remaining Barriers to HIV Prevention Efforts	12
Improvement Activity (IA) Concept Development and Refinement	12
Conclusion	
Call to Action	13
Appendix 1: Stakeholder Participants	16
References	17

## **Executive Summary**

Progress in the reduction of new human immunodeficiency virus (HIV) diagnoses has slowed in recent years<sup>1</sup> – signaling the need for enhanced HIV prevention efforts and quality tactics. Of the estimated 1.2 million Americans living with HIV in 2019, nearly 13% of those were unaware of their status.<sup>2</sup> HIV remains an issue in every region of the United States (U.S.), and gaps in prevention initiatives contribute to the increased burden of disease among marginalized and underserved populations, resulting in significant disparities in HIV rates.<sup>3</sup>

Despite support from national and state initiatives, including the National HIV/AIDS Strategy<sup>4</sup> and federal Ending the HIV Epidemic (EHE)<sup>5</sup> Initiative, significant gaps remain in ongoing HIV preventive care in clinical practice, including HIV screening and linking people with HIV to appropriate treatment.<sup>2</sup> The Centers for Disease Control and Prevention (CDC) describes the HIV Prevention and Care Continuum as an ongoing, lifelong process, including routine HIV testing, prevention, and care, and recommends all individuals, regardless of risk, be screened for HIV as a part of their routine health care.<sup>6</sup> The CDC also recommends all sexually active adults and adolescents be informed about pre-exposure prophylaxis (PrEP) for the prevention of HIV.<sup>7</sup> This knowledge is essential to link eligible individuals to appropriate preventive solutions.

PrEP reduces the risk of acquiring HIV from sex by nearly 99% if used correctly. Despite it's proven effectiveness, only 23% of those for whom PrEP is recommended received a prescription for it in 2019.<sup>8,9</sup> The disparities in PrEP prescribing are more pronounced among certain populations, with only 8% of Black/African Americans and 10% of women (sex assigned at birth) for whom PrEP was recommended in 2019, having received a prescription.<sup>10,11</sup> Both perceived and actual provider and individual barriers existing in practice contribute to the low rates of PrEP prescriptions and lack of engagement in ongoing HIV preventive care.<sup>12</sup>

One approach to addressing these barriers is to leverage the existing quality landscape to assess performance of HIV care delivery and promote improved patient outcomes. The Quality Payment Program (QPP) Merit-based Incentive Payment System (MIPS), for instance, incentivizes providers and practices to deliver high-quality care through payment adjustments based on their performance.<sup>13</sup> The MIPS Program uses quality measures, as well as Improvement Activities (IAs), to achieve this goal. While there are HIV-specific measures across the care continuum, there is a clear gap in HIV prevention quality measures and IAs.

In an effort to develop an HIV prevention specific IA, ViiV and Discern Health convened a group of seven leading stakeholders with expertise in HIV care and prevention initiatives. The stakeholders represented a variety of specialties and roles, including providers, researchers, quality experts, and patient advocates, and belonged to key health care organizations, including federal health agencies, professional medical societies, and community-based organizations. The primary objective of the meeting was to discuss and prioritize prevention activities that could lead to widespread practice transformation and improved patient outcomes. The stakeholders provided insights on activities that could be

feasibly implemented in practice that would have the highest ability to influence HIV care delivery and address disparities in HIV prevention, including but not limited to:

- Leveraging community-based organizations
- Integrating HIV/Sexually transmitted infection (STI) testing
- Elevating the importance of in-depth prevention education for clinicians and people who could benefit
- Training all staff, not just clinicians on the importance of HIV prevention and prescribing PrEP

Findings from the stakeholder convening were used to inform the development and refinement of an HIV-focused IA intended to increase practice capacity to conduct HIV prevention screening services. The IA concept includes the establishment of protocols to implement clinical decision support tools, provider and clinical staff education, and assessment and enhancement of existing HIV prevention screening policies.

## Introduction

Approximately 13% of the 1.2 million Americans living with HIV in the U.S. in 2019 were unaware of their status.<sup>2</sup> That same year, the U.S. government launched the EHE initiative with the primary goal of reducing the number of new HIV infections in the U.S. by 75% by 2025, and 90% by 2030.<sup>5</sup> Prevention is one of the four pillars of the EHE initiative, recognizing that while new infections have slowed since the beginning of the epidemic, the rate of new infections has remained relatively stable and has not declined among certain populations. The incidence of HIV continues to impact certain racial and ethnic groups at disproportional rates, with Black/African Americans (42.1 per 100,000 people) and Hispanic/Latinx Americans (21.7 per 100,000 people) accounting for the highest rates of HIV incidence in 2019.<sup>14</sup> HIV also disproportionately burdens the South with more than half of new HIV diagnoses occurring in Southern states.<sup>15</sup> There is significant progress to be made on increasing access to prevention services such as PrEP and eliminating geographical and racial/ethnic disparities in care.

The HIV care continuum is a model that depicts the phases of care and services from diagnosis to viral suppression.<sup>16</sup> In addition to the care continuum for people with HIV, an essential part of a comprehensive strategy against HIV is prevention. There are key sexual health services that can be utilized in primary care settings and across the patient care journey to improve HIV prevention efforts in clinical practice and link individuals who are vulnerable to HIV to appropriate services. These services include.<sup>17,18</sup>

- HIV testing with linkage to care, if needed
- STI testing and treatment
- PrEP awareness and needs assessment
- Sexual health guidance and counselling (e.g., medication adherence, behavioral changes, knowledge of partner's status, risk-reduction counselling, etc.)
- Ongoing prevention support

The CDC recommends that everyone between 13 to 64 years of age be tested for HIV at least once as part of their routine health care. Furthermore, individuals more vulnerable to HIV, including but not limited to gay, bisexual, and other men who have sex with men (MSM)

and persons who inject drugs, should be tested at least annually and sometimes more frequently.<sup>19</sup> According to The American College of Obstetricians and Gynecologists (ACOG), all pregnant people should be tested for HIV pre-pregnancy and as early in pregnancy as possible.<sup>20</sup> Repeat testing during the third trimester is recommended for some. Other specialty medical societies including the American Academy of Family Physicians (AAFP) and the U.S. Preventive Services Task Force (USPSTF) recommend universal HIV screening for those 15 to 65 years of age, including additional screening for younger adolescents and older adults who are at increased risk.<sup>21,22</sup> Despite guidance from leading agencies and organizations, less than 40% of people in the U.S. have ever been tested for HIV.<sup>23</sup>

PrEP is one of the strongest tools in the arsenal for HIV prevention, as it has proven to reduce the risk of sexually acquired HIV by nearly 99% when used correctly.9 Oral PrEP has been available for a decade and has significantly enhanced HIV prevention efforts, yet disparities in care and other social determinants of health have led to low rates of PrEP use among certain populations.<sup>24</sup> To be most effective, daily oral PrEP requires high levels of adherence.<sup>25,26</sup> This can be a challenge in vulnerable populations who may be impacted by substance use disorders, mental health conditions, social determinants of health like housing insecurity, and in those who must exert effort to conceal their medication use due to fear of stigma or reprisal.<sup>24</sup> These factors can negatively impact referrals and linkage to HIV preventive care among vulnerable populations and have contributed to disparities in access to HIV prevention. In 2019, only 23% of the 1.2 million people in the U.S. for whom PrEP is recommended were given a prescription.<sup>27</sup> Although Black, Hispanic, and Latinx populations experience higher rates of HIV diagnosis compared to other racial and ethnic groups, one study found that only about 1 in 5 Black, Hispanic, or Latinx people who tested negative for HIV and were eligible for PrEP received a referral.<sup>28</sup> Additionally, despite gay, bisexual, and other MSM representing the highest proportion of Americans diagnosed with HIV, lack of awareness or misgivings about PrEP have contributed to low PrEP utilization among this group.<sup>29,30</sup> In one study among Black/African American MSM and transgender women who have sex with men, PrEP awareness was nearly 39%, while actual use was less than 5%.<sup>31</sup> Furthermore, one national cohort of MSM showed that barriers exist along a cascade with more than one-half of PrEP-eligible participants failing to reach the contemplation stage (e.g., willing and self-identified as appropriate candidates) of PrEP adoption.32

Despite national initiatives to improve HIV prevention activities and reduce disparities in care, missed opportunities for HIV prevention remain.<sup>33</sup> The goal of this convening was to understand key prevention opportunities and prioritize activities that could be used by accountability programs to drive improvements in HIV prevention and PrEP use.

## **Overview of the HIV Quality Landscape in MIPS**

The U.S. health care system is transitioning away from a fee-for-service system toward value-based care, a system that links payment to quality and value, rather than volume of services performed, encouraging payers, providers, patients, and policymakers to focus on meaningfully measuring and reporting quality of care.

The QPP MIPS is a Medicare quality improvement incentive program for eligible clinicians that determines payment adjustments using a composite performance score. Performance

in each MIPS category is used to calculate a final score of 0 to 100, which determines positive or negative payment adjustments.<sup>34</sup>

MIPS has four performance categories with associated weights of the final score that determines the payment adjustment to eligible clinicians and their practices (Fig. 1):

- Quality (30%)<sup>35</sup>
- Cost (30%)<sup>36</sup>
- Promoting Interoperability (25%)<sup>37</sup>
- IAs (15%)<sup>38</sup>

IAs are discreetly defined actions or programs intended to enhance a structure or process of a practice in order to improve the clinical practice or care delivery and lead to improved patient outcomes.<sup>39</sup>



Quality measures are tools that help quantify healthcare processes, outcomes, organization structure, etc., and assess performance for providing high-quality care.<sup>40</sup> MIPS contains a robust set of quality measures<sup>41</sup> across the HIV care continuum (Fig. 2):



Figure 2: MIPS HIV Quality Measures

#### Gaps in the HIV Quality Landscape

Using quality measurement is a tactic to improve appropriate PrEP utilization and prevention activities; however, there is a notable gap in current HIV prevention quality measures. For instance, there are no HIV-specific measures associated with follow-up visits/screenings for high-risk individuals, PrEP eligibility screening, prescribing and adherence, or referral measures.

In addition to the gaps in HIV prevention measures, there is also a notable gap in IAs to help guide practice transformation for HIV prevention. There are currently no IAs that are associated with HIV prevention, with screening and prevention of STIs being a gap area as a whole on the IA Inventory. IAs can help practices work towards providing better care for patients and achieving higher quality measure rates. The implementation of an IA focused on HIV preventive care is one way to systematically enhance practice capacity for HIV care delivery and address prevention gaps in the HIV quality landscape.

## The Stakeholder Convening

To fill the gap in HIV prevention IAs, ViiV and Discern Health convened a group of leading stakeholders on March 11, 2022, to discuss and prioritize prevention activities that could lead to widespread practice transformation and improved patient outcomes. Seven stakeholders participated from across a variety of specialties and roles, including providers, researchers, quality experts, and patient advocates who specialize in providing care, conducting research, and advocating on behalf of people with HIV or those vulnerable to HIV acquisition. Several stakeholders were from leading public and private health care organizations, including federal health agencies, professional medical societies and organizations, and community-based organizations (see Appendix 1 for a list of contributing stakeholders).

Discussions focused on HIV IAs that had the most potential for widespread practice transformation and improved patient outcomes. Additionally, the meeting provided a venue to contextualize HIV prevention activities including barriers to providing HIV screening and testing, accessing appropriate services, understanding the level of effort needed and potential challenges to implement HIV prevention activities within a clinic or practice, and the feasibility of HIV prevention efforts.

## Key Findings from the Stakeholder Convening

During the convening, the stakeholders provided insights on several activities that could be implemented in practice that would have the highest likelihood to influence HIV care delivery and address disparities in HIV prevention. These included but were not limited to, opportunities to leverage community-based organizations to reach vulnerable populations, integrate HIV and STI screening processes, promote staff education on HIV screening and PrEP, and implement capacity-building efforts within provider groups to better identify and screen people who could benefit. The following initiatives were prioritized as having the highest ability to influence care:

#### Leverage Community-Based Organizations

In addition to traditional screening in the provider's office, stakeholders suggested innovative means to increase rates of HIV prevention screening, such as leveraging community-based organizations (CBOs). As discussed above, HIV prevalence is overrepresented among marginalized populations (e.g., Black and Latino MSM), and for HIV prevention efforts to be impactful, it is essential that health communications are designed with these unique populations in mind. CBOs or AIDS service organizations (ASOs) are often staffed by individuals from the community they serve and play an integral role in HIV prevention and other health promotional efforts through their connection and familiarity with that community. Historically, CBOs arose out of a need for care and advocacy among sexual minority populations, communities often overlooked and stigmatized by mainstream healthcare systems. These organizations gained momentum at the onset of the HIV epidemic through their collaboration with public health researchers to push for treatment delivery and innovation and remain a cornerstone of health provision for populations seeking care and avoidance of traditional settings in which they may face stigma or discrimination.<sup>42</sup>

CBOs may provide an array of prevention services such as syringe service programs (SSPs), HIV counselling and testing, and referrals to additional social services. Furthermore, they have demonstrated the ability to provide culturally sensitive care, gain the trust of community members, and improve patient outcomes. For instance, in one study conducted in 2017 on a national HIV linkage, re-engagement, and retention program, program staff reported that partnerships between providers and social services organizations, like ASOs, were key to linking people with HIV to appropriate care.<sup>43</sup>

There is an opportunity for providers and clinics seeking to increase HIV prevention screening and to both attract and keep people who could benefit in their care to partner with CBOs and ASOs in their communities. Almost 90% of the CDC's HIV prevention funding is distributed directly to state and local health departments, CBOs, and other organizations aimed at strengthening HIV prevention.<sup>44</sup> Through CDC funding to establish localized EHE plans, CBOs are required to focus on linking newly-diagnosed people to care within one week, and establish local peer-driven networks of Black and Latinx PrEP users.<sup>45</sup> As these entities are already adept at partnerships, primary care clinics could leverage CBOs' existing relationships and community trust to conduct various activities. Such activities may include working to strengthen referrals to providers and linkage to care systems, establish peer educator or navigator programs to accompany patients on their visits with physicians, and ensure people from marginalized communities obtain appropriate and culturally competent care.

#### Adopt an Integrated HIV/STI Testing Approach

A consensus among stakeholders was the need to normalize HIV testing, diagnosis, and treatment. Stakeholders noted a key barrier to achieving this normalization in clinical practice is the lack of patients who are tested for HIV during routine sexual health screenings in primary care settings. Less than 30% of people in the U.S. who were at high risk of acquiring HIV from 2016 to 2017 received a test, and less than 35% of people living in jurisdictions with high disease prevalence who are recommended for annual HIV testing by the CDC were screened.<sup>46</sup> Stakeholders noted that people vulnerable to HIV do not always seek HIV testing during routine sexual health screenings or when obtaining tests for other STIs.

From 2014 to 2016, more than 75% of people at high risk for HIV acquisition were not offered an HIV test during their primary care visit resulting in missed opportunities for HIV testing.<sup>47</sup> All stakeholders agreed that integrated HIV/STI screening and testing would have a positive impact on HIV prevention care delivery, as it would support a more holistic approach to sexual health screenings and help reduce the likelihood of missed opportunities. Indeed, integrated testing is in alignment with the "status-neutral" approach developed by the New York City Department of Health and Mental Hygiene, a paradigm shift in care delivery enforcing that not only should all aspects of the care continuum be addressed (e.g., HIV prevention and care services, social determinants of health), but that HIV prevention be embedded into routine care (Fig 3).<sup>48</sup>



Figure 3: Status-Neutral Approach to HIV

Source: The White House. 2021. National HIV/AIDS Strategy for the United States 2022–2025. Washington, DC. https://hivgovprod-v3.s3.amazonaws.com/s3fspublic/NHAS-2022-2025.pdf. Accessed July 16, 2022

Additionally, the CDC urges integrated, routine HIV screening as a standard of care in clinical practice. Offering routine HIV screening regardless of perceived risk, gender, age, race, ethnicity, or sexual orientation is the first step to prevention, as outlined in the CDC's HIV Prevention Care Continuum (Fig 4).<sup>6</sup> This model promotes access to ongoing prevention services, including routine testing for those who remain at risk for HIV acquisition.

Routine sexual health discussions are a proactive strategy to increase rates of HIV and STI screenings during medical visits, and are recommended by the CDC, as they provide patients with comprehensive, quality care regardless of the reason for a medical visit.49 Although integrated HIV/STI screening allows providers to assess patient risk, offer HIV/STI testing at the point of care, and provide timely

Figure 4: CDC HIV Prevention and Care Continuum



Source: Centers for Disease Control and Prevention (CDC). 2021. Integrating routine HIV screening into your practice.. <u>https://www.cdc.gov/stophivtogether/library/topics/testing/brochures/cdc-lsht-testing-brochure-integrating-routine-screening-provider.pdf</u>. Accessed August 23, 2022.

preventive care such as PrEP or risk-reduction counselling, comprehensive, routine sexual health screening is not a common practice among providers. Findings from a study conducted by the CDC revealed that training physicians on integrated sexual health history taking improved sexual health screenings and increased documentation of routine HIV/STI screenings.<sup>50</sup> Additionally, the physicians noted several benefits, including improvements to quality-of-care delivery regardless of gender, enhanced patient-provider communication on sexual health, and opportunities to counsel patients about safe sexual health practices

and prevention tactics. Implementing integrated HIV/STI policies and procedures into practice has the potential to significantly impact comprehensive sexual health solutions and is recommended in the U.S. STI National Strategic Plan as a holistic approach to scale up HIV prevention services.<sup>51</sup>

#### Educate Clinicians and Patients on Prevention

Increasing provider and patient knowledge of HIV prevention activities was discussed by stakeholders as an essential component of improving practice capacity for preventive care. Stakeholders noted that key barriers to effective delivery of HIV prevention services include lack of training and confidence to conduct discussions on sexual history, lack of integrated HIV/STI testing approaches, and lack of awareness of proven HIV prevention interventions and messaging such as PrEP and Treatment as Prevention (TasP). Among members of the HIV community, TasP is more commonly known as Undetectable = Untransmittable (U=U). U=U is a messaging campaign meant to increase awareness of people with HIV who have achieved and are maintaining an undetectable viral load through adherence to appropriate antiretroviral therapy and cannot transmit HIV through sex. The campaign has been adopted by the U.S. Federal Government to continue guiding prevention efforts.<sup>52</sup> Increasing provider awareness of TasP/ U=U was noted by stakeholders as an important preventive method to engage people with HIV in treatment.

While TasP/ U=U is a means to prevent HIV transmission by those living with HIV, it is imperative to enhance provider knowledge of PrEP as a powerful tool for the prevention of HIV acquisition by those vulnerable to HIV.8 Despite evidence of PrEP's effectiveness at preventing HIV, many people who are vulnerable to HIV do not use PrEP or are unaware of PrEP for prevention.<sup>53</sup> Stakeholders cited several barriers that contribute to the low rates of PrEP use and prescribing. Most notably, barriers include lack of awareness of PrEP among people who could benefit, lack of training and education for providers on the use of PrEP and PrEP adherence, hesitancy to initiate HIV prevention discussions, as well as inability to identify people who would most likely benefit from PrEP. One survey of primary care providers in multiple sites throughout the South found that providers with HIV-related training were more likely to be familiar with PrEP and to have ever prescribed PrEP than those not having received training.<sup>54</sup> In the updated 2021 guidelines on PrEP for Prevention of HIV Infection in the U.S., the CDC recommends informing all sexually active adults and adolescents about PrEP, regardless of perceived risk status.55 The guidelines also recommend that clinicians evaluate all adults and adolescents who are sexually active or who are injecting drugs and offer to prescribe PrEP for those at substantial ongoing risk of HIV acquisition.<sup>56</sup> Additionally, the guidelines support prescribing PrEP to those who ask for it but do not feel comfortable disclosing to their healthcare provider why they are vulnerable to infection.

Although PrEP discussions and evaluations are recommended by evidence-based guidelines as a standard of care in practice, clinicians report lack of education and training as key barriers to PrEP conversations and prescribing, indicating a need to improve provider education to increase prescription rates.<sup>57</sup> Several studies among primary care providers have found higher PrEP prescription rates, increased comfort in initiating HIV prevention discussions, and greater intention to prescribe PrEP in the future following HIV prevention education interventions.<sup>12</sup> Additionally, physicians noted the need for enhanced sexual

health history training and educational interventions for a range of health care providers, including physicians, physician assistants, nurses, medical students, and clinical office staff.<sup>50</sup> This sentiment was echoed by the physicians at the convening and is further discussed below. Implementing educational interventions across clinical staff to improve provider and people who could benefit awareness of PrEP, provider knowledge of PrEP use, and comfortability in prescribing PrEP is one approach to improving practice capacity and enhancing HIV preventive care.

#### Train All Staff in HIV Prevention

Stakeholders strongly emphasized the need for all clinic staff that engage with patients to be trained in HIV prevention and non-stigmatizing language and behavior. Patients interact with multiple staff members (e.g., front desk associates, medical assistants) throughout their visit, and each may vary in their comfort level of the personal health information they are

willing to share. HIV-related stigma, whether implicit or explicit, is felt by patients and can impact their comfort and willingness to seek HIV prevention services or treatment for people with HIV. More than a quarter of U.S. patients report feeling stigma within their healthcare settings, including avoidant behavior from physicians and staff members, as well as extreme measures such as clinicians or staff wearing masks, protective suits, or double-gloving when in the presence of someone with HIV or those suspected of having HIV.58,59,.60

Clinic staff play a vital role in reducing stigma and other discriminatory behaviors and fostering a non-judgmental, supportive environment. To cultivate this environment, practices should provide training to clinic staff on principles such as effective HIV prevention strategies,

#### Other Stakeholder Suggestions

Several other initiatives and tactics were discussed by stakeholders as having potential to influence HIV prevention care delivery, including:

- Patient-centered protocol changes:
  - Processes to manage pregnant people with HIV to reduce vertical transmission
  - o Improved EHR tools for sexual history taking
- Provider education:
  - Training for medical students and existing providers on sexual history taking
  - Encouraging providers to conduct sexual history taking using evidence-based tools
- Innovative care delivery and payment:
  - PrEP delivery in non-traditional settings (e.g., syringe service programs)
  - Streamlined PrEP delivery (e.g., same-day starts, home testing and/or drop-in testing, refills by mail)
  - Affordable medications and/or public financing mechanisms that do not require navigation of assistance programs to cover costs
  - Innovative service delivery models (e.g., flexible hours and scheduling, off-site/community-based services, virtual and digital tools)

patient privacy, and HIV testing as a harm reduction approach. Additionally, staff that are trained in appropriate, non-stigmatizing behaviors, use proper pronouns, and are effective at providing knowledgeable responses to those who may be in need of HIV prevention services can improve the likelihood that patients will want to return to the clinic and therefore remain in care.

## **Minimize Remaining Barriers to HIV Prevention Efforts**

Stakeholders cited administrative challenges such as time constraints as a major provider barrier, as well as more personal reasons such as provider discomfort in facilitating discussions on sexual health and history or injection drug use as the most significant potential barriers faced by providers.

Over the last decade providers have shared concerns regarding the pressure of highvolume and complex patient loads, compliance with payment models or other incentives, and the administrative demands from electronic health records (EHR) and other paperwork.<sup>61</sup> During a typical primary care visit, a provider may only be able to spend around 15 minutes with a patient to discuss an average of six medical concerns.<sup>62</sup> One potential way to create more efficient clinical workflow processes around HIV prevention is to embed HIV screening reminders into EHRs, which have been shown to increase rates of screening up to twofold or more in multiple settings through passive prompting.<sup>63</sup> EHR reminders or clinical decision prompts can address not only potential time constraints but also lack of provider knowledge or awareness of the importance of HIV and other STI screening and testing. After implementation of an EHR alert across a regional health system, the screening for Hepatitis C virus and HIV increased from 3.2% to 22.7% and 6.2% to 11.3%, respectively.<sup>64</sup>

Other areas such as provider and patient discomfort are significant challenges to address for improving HIV prevention screening rates. In a survey of providers across 19 publiclyfunded community health centers, over one-third of respondents reported wanting to know that their patients are open to being tested and requested more information on patient receptiveness to HIV testing.<sup>65</sup> While these numbers are encouraging, there is more progress to be made regarding provider awareness and willingness to deliver prevention services. Further exacerbating the gaps in HIV prevention in clinical settings include barriers to patients seeking therapy, such as stigma, discrimination, potential accidental disclosure fears, and lack of comfort in discussing personal information with their provider.<sup>66,67</sup> More providers offering HIV screening may mitigate some patient barriers to testing, including patient discomfort with discussing HIV. In a survey conducted among 266 patients in a public primary care clinic, 65% reported wanting their providers to offer HIV testing, and over half (59%) of those who did want their physician to offer a test said they would be likely to accept a test if their provider recommended it.68 Implementation of EHR prompts, provider education, and refining current individual practice policies for HIV prevention screening are key tactics that have demonstrated meaningful results to increasing HIV prevention screening service delivery, and have informed the development of the HIV Prevention IA.

# Improvement Activity (IA) Concept Development and Refinement

During the convening, the stakeholders prioritized concepts that had the greatest potential to influence HIV prevention care delivery and would be most impactful to addressing gaps in the HIV quality landscape. These concepts were used to develop the below IA, which ViiV submitted to CMS in June 2022. The goal of the IA is to increase practice capacity to conduct HIV prevention screening services through the establishment of protocols to

implement clinical decision support tools, enhance provider and clinical staff education, and improve and refine existing HIV prevention policies.

#### Proposed HIV Prevention Improvement Activity Concept

Activity Title: Improving Practice Capacity for Human Immunodeficiency Virus (HIV) Prevention Services

Activity Description: Establish policies and procedures to improve practice capacity to increase HIV prevention screening and linkage to appropriate prevention resources through <u>one or more</u> of the following activities with the goal of increasing capacity to expand HIV prevention screening, improve HIV prevention education and awareness, and reduce disparities in pre-exposure prophylaxis (PrEP) uptake:

- Implement EHR prompts or clinical decision support tools to increase appropriate HIV prevention screening
- Require that providers and designated clinical staff take part in at least one educational opportunity that includes components on the importance and application of HIV prevention screening and PrEP initiation in clinical practice
- Assess and refine current policies for HIV prevention screening, including integrated HIV/STI testing processes, universal HIV screening, and PrEP initiation

#### Conclusion

To end the HIV epidemic, it is critical all individuals receive proper HIV prevention care. There continues to be a higher burden of disease among marginalized and underserved populations, and across certain regions of the U.S. For instance, the South leads the nation in highest rates of new HIV diagnoses by region at 15.2 per 100,000 people compared to 9.2 per 100,000 people in the West.<sup>69</sup> These increasingly disparate rates across the U.S. call for enhanced and timely prevention initiatives to drive successful and impactful change in these communities. Gaps in provider and practice capacity to accurately identify people vulnerable to HIV and provide them with essential preventive care, including routine screening, timely referrals, and appropriate therapy such as PrEP, reveal key areas of need for improved processes at the point of care. With development of innovative therapies to reach the needs of broader patient populations and recent national support to end the HIV epidemic, prevention is an essential standard in HIV care. The development of an HIV prevention IA focused on building practice capacity could have the potential to significantly influence HIV prevention care delivery, address gaps in the HIV quality landscape, and reduce disparities in HIV care.

Findings from the convening have implications beyond the development of an IA. These insights, particularly those related to approaches standardizing HIV prevention as routine health care, addressing provider and clinical staff barriers through education and training, and establishing policies and procedures, like engagements with CBOs and integrated sexual health screenings, can be used to drive practice transformation to improve patient outcomes and ensure all people receive equitable HIV care across the continuum.

### Call to Action

The MIPS IA inventory is established through a yearly rulemaking process, specifically the Medicare Physician Fee Schedule. The HIV Prevention IA, submitted for CMS consideration

in June 2022, will be addressed in the Proposed Rule to be released in the summer of 2023. If selected by CMS, the HIV Prevention IA will be available starting in calendar year (CY) 2024.

While we await CMS's consideration of inclusion and the potential implementation of the HIV Prevention IA, there are a number of actions that HIV stakeholders, such as clinicians, professional medical societies, policymakers, CBOs, and ASOs can take to advocate for the delivery of high-quality HIV prevention services:

#### While the IA is being Considered by CMS for Inclusion - Now until July 2023

- Implement workflow, administrative, and educational interventions in your own practice. This paper highlights significant gaps in HIV prevention care delivery and evidence-based interventions to address unmet needs. In advance of CMS's decision on the inclusion of the IA in July 2023, implementing the activities (e.g., EHR prompts or clinical decision support tools, education requirements for clinicians and staff, and assessment of current policies for HIV prevention screening) in your own practice will ensure that not only are patients receiving high-quality HIV prevention, but that your practice will be prepared to report on the IA if and when it is implemented in CY2024.
- Share this white paper widely with colleagues and professional networks. This document highlights gaps in HIV prevention care delivery in the clinical setting, as well as areas for improvement in the HIV quality landscape. While clinicians may be familiar with quality measures and the MIPS Program, many may not realize how the existing quality infrastructure can be leveraged to promote improved care outcomes. Share this paper with your networks to gather momentum for the HIV Prevention IA and to demonstrate the opportunity to advocate for the inclusion of performance measurement tools to enhance HIV prevention.
- Advocate for the use of existing HIV quality measures. There are a number of HIVspecific quality measures already developed and included in MIPS, such as screening and viral load suppression measures. These quality measures assess the impact of HIV prevention and care delivery and are useful for providing system-level benchmarks to understand where gaps in services exist, as well as incentivize providers to deliver high-quality HIV prevention and care services. Stakeholders can promote their use among colleagues and leadership as one of the 6 quality measures submitted to meet MIPS requirements and/or other quality programs (e.g., State Medicaid Managed Care requirements).

## If CMS includes the IA in the Proposed Rule for Consideration– *Decision to be announced July 2023*

• Advocate for the inclusion of the HIV Prevention IA in the 2024 MIPS Program. In July 2023, CMS will accept comments from stakeholders on the proposed IA Inventory, which may or may not include the HIV Prevention IA. If the IA is not included in the proposed inventory, stakeholders can draft a formal comment letter calling for inclusion based on existing evidence and proposed interventions to meet unmet needs in HIV prevention. If the IA is included in the proposed inventory, stakeholders should submit a formal comment letter supporting the inclusion of the

HIV Prevention IA. These comment letters can be on behalf of individual stakeholders, organizations, or on behalf of a broader selection of organizations or specialty societies.

## If the IA is Approved for Inclusion in the MIPS Program – *Implementation of IA January 2024*

- Uptake the HIV Prevention IA in your practice and foster leadership buy-in for practice transformation. Provider practices select 2 to 4 IAs to report on. Provider stakeholders should encourage their colleagues and leadership to not only uptake the HIV Prevention IA, but to implement all 3 tactics within the IA for the most impactful change.
- Promote the use of the HIV Prevention IA among your colleagues and professional networks. Promote the HIV Prevention IA to your colleagues outside of your immediate practice, as well as professional societies of which you are a member, to encourage wide usage of the IA across diverse clinical practice settings.

## Appendix 1: Stakeholder Participants

Name	Affiliation
Ada D. Stewart, MD, FAAFP	Board Chair, American Academy of Family Physicians (AAFP)
Carole Treston, RN, MPH, ACRN, FAAN	Chief Nursing Officer, Association of Nurses in AIDS Care
Erin Lambie Alston, MS, MPH	Manager, Health Policy, American College of Obstetricians and Gynecologists (ACOG)
Gustavo Morales	Director of Access to Care, Latino Commission on AIDS
Maria Lopes, MD, MS	Independent Consultant
Panelist 6*	Anonymous
Panelist 7*	Anonymous

Stakeholders were offered compensation for their time and participation in the convening.

\*Another panelist participated and provided individual approvement of this IA but is unable to publicly endorse through their affiliation.

## References

<sup>1</sup> Centers for Disease Control and Prevention (CDC). 2019. CDC data confirm: Progress in HIV prevention has stalled. <u>https://www.hiv.gov/blog/cdc-data-confirm-progress-hiv-prevention-has-stalled</u>. Accessed July 19, 2022. <sup>2</sup> HIV.gov. HIV Basics: U.S. Statistics. 2019. <u>https://www.hiv.gov/hiv-basics/overview/data-and-</u>

trends/statistics#:~:text=Living%20with%20HIV,which%20this%20information%20is%20available. Accessed August 16, 2022.

<sup>3</sup> Centers for Disease Control and Prevention (CDC). Status of HIV in the U.S. 2021.

https://www.cdc.gov/hiv/policies/strategic-priorities/mobilizing/status-of-hiv.html#hiv-transmission. Accessed August 16, 2022.

<sup>4</sup> The White House. 2021. National HIV/AIDS Strategy for the United States 2022–2025. Washington, DC. <u>https://hivgov-prod-v3.s3.amazonaws.com/s3fs-public/NHAS-2022-2025.pdf</u>. Accessed July 16, 2022.

<sup>5</sup> Centers for Disease Control and Prevention (CDC). Ending the HIV Epidemic in the U.S. (EHE).

https://www.cdc.gov/endhiv/index.html. Accessed July 19, 2022.

<sup>6</sup> Centers for Disease Control and Prevention (CDC). Integrating routine HIV screening into your practice. 2021. <u>https://www.cdc.gov/stophivtogether/library/topics/testing/brochures/cdc-lsht-testing-brochure-integrating-routine-screening-provider.pdf</u>. Accessed July 19, 2022.

<sup>7</sup> Centers for Disease Control and Prevention: US Public Health Service: Preexposure prophylaxis for the prevention of HIV infection in the United States—2021 Update: a clinical practice guideline.

https://www.cdc.gov/hiv/pdf/risk/prep/cdc-hiv-prep-guidelines-2021.pdf. Accessed July 16, 2022.

<sup>8</sup> Centers for Disease Control and Prevention (CDC). Pre-exposure prophylaxis (PrEP). 2022.

https://www.cdc.gov/hiv/risk/prep/index.html#:~:text=Pre%2Dexposure%20prophylaxis%20(or%20PrEP,use%20b y%20at%20least%2074%25. Accessed July 19, 2022.

<sup>9</sup> Centers for Disease Control and Prevention (CDC). Monitoring selected national HIV prevention and care objectives by using HIV surveillance data—United States and 6 dependent areas, 2019. HIV Surveillance Supplemental Report 2021;26 (No. 2). <u>https://www.cdc.gov/hiv/pdf/library/reports/surveillance/cdc-hiv-surveillance-report-vol-26-no-2.pdf</u>. May 2021. Accessed August 11, 2022.

<sup>10</sup> Centers for Disease Control and Prevention (CDC). HIV and African American People: PrEP Coverage. 2019. <u>https://www.cdc.gov/hiv/group/racialethnic/africanamericans/prep-coverage.html</u>. Accessed July 16, 2022. <sup>11</sup> Centers for Disease Control and Prevention (CDC). HIV and Women: PrEP Coverage. 2021.

https://www.cdc.gov/hiv/group/gender/women/prep-coverage.html. Accessed August 16, 2022.

<sup>12</sup> Pleuhs B, Quinn KG, Walsh JL, et al. (2020). Health care provider barriers to HIV pre-exposure prophylaxis in the United States: a systematic review. AIDS Patient Care STDS. 2020 Mar;34(3):111-123. Accessible at: https://pubmed.ncbi.nlm.nih.gov/32109141/.

<sup>13</sup> Centers for Medicare and Medicaid Services (CMS). Quality Payment Program. Traditional MIPS overview. 2022. <u>https://qpp.cms.gov/mips/traditional-</u>

mips#:~:text=MIPS%20was%20designed%20to%20tie,reduce%20the%20cost%20of%20care. Accessed July 15, 2022.

<sup>14</sup> HIV.gov. U.S. Statistics. Jun. 2021. <u>https://www.hiv.gov/hiv-basics/overview/data-and-trends/statistics</u>. Accessed July 16, 2022.

<sup>15</sup> Centers for Disease Control and Prevention (CDC). HIV in the United States by Region: HIV Diagnoses. 2022. <u>https://www.cdc.gov/hiv/statistics/overview/diagnoses.html</u>. Accessed August 16, 2022.

<sup>16</sup> HIV.gov. HIV Care Continuum. 2021. <u>https://www.hiv.gov/federal-response/policies-issues/hiv-aids-care-continuum</u>. Accessed July 16, 2022.

<sup>17</sup> Centers for Disease Control and Prevention (CDC). Integrating Routine HIV Screening into Your Practice. 2021. <u>https://www.cdc.gov/stophivtogether/library/topics/testing/brochures/cdc-lsht-testing-brochure-integrating-routine-screening-provider.pdf</u>. Accessed July 16, 2022.

<sup>18</sup> The White House. 2021. National HIV/AIDS Strategy for the United States 2022–2025. Washington, DC... <u>https://hivgov-prod-v3.s3.amazonaws.com/s3fs-public/NHAS-2022-2025.pdf</u>. Accessed July 16, 2022.

<sup>19</sup> Centers for Disease Control and Prevention (CDC). Getting Tested. 2022. <u>https://www.cdc.gov/hiv/basics/hiv-testing/getting-tested.html</u>. Accessed August 16, 2022.

<sup>20</sup>The American College of Obstetricians and Gynecologists (ACOG). Prenatal and Perinatal Human Immunodeficiency Virus Testing – Committee Opinion. 2018. <u>https://www.acog.org/clinical/clinical-guidance/committee-opinion/articles/2018/09/prenatal-and-perinatal-human-immunodeficiency-virus-testing</u>. Accessed August 8, 2022.

<sup>21</sup> American Academy of Family Physicians (AAFP). Human Immunodeficiency Virus (HIV) Screening, Adolescents and Adults. 2022. <u>https://www.aafp.org/family-physician/patient-care/clinical-recommendations/all-clinical-recommendations/hiv-</u>

screening.html#:~:text=The%20AAFP%20supports%20the%20United,risk%20should%20also%20be%20screened. Accessed August 8, 2022.

<sup>22</sup> U.S Preventive Services Task Force (USPSTF). Human Immunodeficiency Virus (HIV) screening. 2019. <u>https://www.uspreventiveservicestaskforce.org/uspstf/recommendation/human-immunodeficiency-virus-hiv-infection-screening</u>. Accessed July 16, 2022.

<sup>23</sup> Centers for Disease Control and Prevention (CDC). Most Americans have never had an HIV test, new data show.
2019. <u>https://www.cdc.gov/nchhstp/newsroom/2019/NHTD-2019-press-release.html</u>. Accessed July 16, 2022.

<sup>24</sup> Mayer KH, Agwu A, Malebranche D. Barriers to the wider use of pre-exposure prophylaxis in the United States: a narrative review. Adv Ther 37, 1778–1811 (2020). Accessible at: <u>https://pubmed.ncbi.nlm.nih.gov/32232664/</u>.

<sup>25</sup> Centers for Disease Control and Prevention (CDC). Preexposure Prophylaxis for the Prevention of HIV Infection in the United States – 2021 Update. 2021 <u>https://www.cdc.gov/hiv/pdf/risk/prep/cdc-hiv-prep-guidelines-2021.pdf</u>. Accessed August 16, 2022.

<sup>26</sup> FDA.gov. FDA Approves First Injectable Treatment for HIV Pre-Exposure Prevention. December 20, 2021. <u>https://www.fda.gov/news-events/press-announcements/fda-approves-first-injectable-treatment-hiv-pre-exposure-prevention</u>. Accessed July 8, 2022.

<sup>27</sup> Centers for Disease Control and Prevention (CDC). Monitoring selected national HIV prevention and care objectives by using HIV surveillance data—United States and 6 dependent areas, 2019. HIV Surveillance Supplemental Report 2021;26(No. 2). <u>https://www.cdc.gov/hiv/pdf/library/reports/surveillance/cdc-hiv-surveillance-report-vol-26-no-2.pdf</u>. Published May 2021. Accessed August 11, 2022.

<sup>28</sup> Kuehn BM. Low PrEP awareness, referrals for Black, Hispanic, and Latino people. *JAMA*. 2021;326(18):1786. Accessible at: <u>https://pubmed.ncbi.nlm.nih.gov/34751702/</u>.

<sup>29</sup> Eaton LA, Driffin DD, Bauermeister J, et al. Minimal awareness and stalled uptake of pre-exposure prophylaxis (PrEP) among at risk, HIV-negative, Black men who have sex with men. AIDS Patient Care STDS. 2015 Aug;29(8):423-9. Accessible at: https://pubmed.ncbi.nlm.nih.gov/26083143/.

<sup>30</sup> Klein, H, & Washington, TA. Why more men who have sex with men are not using PrEP-The role played by lack of interest in learning more about PrEP. *Journal of gay & lesbian social services, 32*(1), 99–114. (2020). Accessible at: <a href="https://doi.org/10.1080/10538720.2019.1681339">https://doi.org/10.1080/10538720.2019.1681339</a>.

<sup>31</sup> Eaton, LA, Matthews DD, Driffin DD, et al. A multi-US city assessment of awareness and uptake of pre-exposure prophylaxis (PrEP) for HIV prevention among black men and transgender women who have sex with men. Prev Sci . 2017 Jul;18(5):505-516. Accessible at: <u>https://pubmed.ncbi.nlm.nih.gov/28101813/</u>.

<sup>32</sup> Parsons, JT, Rendina HJ, Lassiter JM, et al. Uptake of HIV Pre-Exposure Prophylaxis (PrEP) in a National Cohort of Gay and Bisexual Men in the United States. J Acquir Immune Defic Syndr. 2017 Mar 1;74(3):285-292. Accessible at: <a href="https://pubmed.ncbi.nlm.nih.gov/28187084/">https://pubmed.ncbi.nlm.nih.gov/28187084/</a>.

<sup>33</sup> Centers for Disease Control and Prevention (CDC). Status of HIV in the U.S. 2021.

https://www.cdc.gov/hiv/policies/strategic-priorities/mobilizing/status-of-hiv.html#hiv-treatment. Accessed July 8, 2022.

<sup>34</sup> Centers for Medicare and Medicaid Services (CMS). Reporting Options Overview. 2022.

https://qpp.cms.gov/mips/reporting-options-overview. Accessed July 15, 2022.

<sup>35</sup> Centers for Medicare and Medicaid Services (CMS). Quality Payment Program. Quality Measures Requirements. 2022. <u>https://qpp.cms.gov/mips/quality-requirements</u>. Accessed July 15, 2022.

<sup>36</sup> Centers for Medicare and Medicaid Services (CMS). Quality Payment Program. Cost Requirements. 2022. <u>https://qpp.cms.gov/mips/cost</u>. Accessed July 15, 2022. <sup>37</sup> Centers for Medicare and Medicaid Services (CMS). Quality Payment Program. Promoting Interoperability Requirements. 2022. <u>https://qpp.cms.gov/mips/promoting-interoperability</u>. Accessed July 15, 2022.

<sup>38</sup> Centers for Medicare and Medicaid Services (CMS). Quality Payment Program. Improvement Activities Requirements. 2022. <u>https://qpp.cms.gov/mips/improvement-activities</u>. Accessed July 15, 2022.

<sup>39</sup> Physician Advocacy Institute. The Physician Advocacy Institute's Medicare Quality Payment Program (QPP) Physician Education Initiative: 2022 Improvement Activities Category Overview. 2022. <u>http://www.physiciansadvocacyinstitute.org/Portals/0/assets/docs/MIPS-</u>

Pathway/Improvement%20Activities%20Overview.pdf?ver=95TbSPyV6DvkEtuQ9\_JkYA%3D%3D#:~:text=Improvem ent%20activities%20are%20activities%20that,are%20eligible%20for%20MIPS%20credit. (Accessed July 15, 2022). <sup>40</sup> Centers for Medicare and Medicaid Services (CMS). Quality Measures. 2022.

https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/QualityMeasures

<sup>41</sup> Healthmonix. 2022 MIPS Quality Measures. 2022. <u>https://healthmonix.com/mips-quality-measures-2022/</u>. Accessed July 15, 2022.

 <sup>42</sup> Mayer KH, Bradford JB, Makadon HJ, et al. Sexual and gender minority health: what we know and what needs to be done. Am J Public Health. 2008 Jun;98(6):989-95. Accessible at: <u>https://pubmed.ncbi.nlm.nih.gov/18445789/</u>.
<sup>43</sup> Maulsby, C., Sacamano, P., Jain, K. M., Enobun, B., Brantley, M. L., Kim, H. Y., Riordan, M., Werner, M., A2C Implementation Team, & Holtgrave, D. R. (2017). Barriers and Facilitators to the Implementation of a National HIV Linkage, Re-Engagement, and Retention in Care Program. *AIDS education and prevention : official publication of the International Society for AIDS Education, 29*(5), 443–456. <u>https://doi.org/10.1521/aeap.2017.29.5.443</u>.
<sup>44</sup> Centers for Disease Control and Prevention (CDC). Funding Communities for HIV Prevention. 2021.

<u>https://www.cdc.gov/hiv/policies/strategic-priorities/mobilizing/funding-communities.html</u>. Accessed July 8, 2022. <sup>45</sup> Centers for Disease Control and Prevention (CDC). HIV and Hispanic/Latino People: What CDC is Doing. 2021.

https://www.cdc.gov/hiv/policies/strategic-priorities/mobilizing/funding-communities.html. Accessed August 16, 2022.

<sup>46</sup> Centers for Disease Control and Prevention (CDC). CDC Press Release: Most Americans Have Never Had an HIV Test, New Data Show. 2019. <u>https://www.cdc.gov/media/releases/2019/p0627-americans-hiv-test.html</u>. Accessed July 8, 2022.

<sup>47</sup> Centers for Disease Control and Prevention (CDC). Benefits of Routine Screening. 2022. https://www.cdc.gov/hiv/clinicians/screening/benefits.html. Accessed July 8, 2022.

<sup>48</sup> Myers JE, Braunstein SL, Xia Q, et al. Redefining prevention and care: a status-neutral approach to HIV. Open Forum Infect Dis. 2018 May 2;5(6):ofy097. Accessible at: <u>https://pubmed.ncbi.nlm.nih.gov/29977957/</u>.

<sup>49</sup> Centers for Disease Control and Prevention (CDC). A Guide to Taking a Sexual History. (n/a). <u>https://www.cdc.gov/std/treatment/sexualhistory.pdf</u>. Accessed August 17, 2022.

<sup>50</sup> Lanier Y, Castellanos T, Barrow RY, et al. Brief sexual histories and routine HIV/STD testing by medical providers. AIDS Patient Care STDS. 2014 Mar;28(3):113-20. Accessible at: <u>https://pubmed.ncbi.nlm.nih.gov/24564387/</u>.

<sup>51</sup> U.S. Department of Health and Human Services. Sexually Transmitted Infections: National Strategic Plan for the United States 2021 – 2025. <u>https://www.hhs.gov/sites/default/files/STI-National-Strategic-Plan-2021-2025.pdf</u>. Accessed August 16, 2022.

<sup>52</sup> HIV.gov. "I am a Work of ART: Joins the Thousands of Participants of the AIDS 2022 Conference in Montreal, Canada. 2022. <u>https://www.hiv.gov/blog/i-am-work-art-joins-thousands-participants-aids-2022-conference-montreal-canada</u>. Accessed August 16, 2022.

<sup>53</sup> Yang C, Johnsen L, Thimm M, et al. Awareness of and interest in pre-exposure prophylaxis among patients receiving services at public sexually transmitted disease clinics in a urban setting. J Health Care Poor Underserved. 2021; 32(1): 537–549. Accessible at: <u>https://pubmed.ncbi.nlm.nih.gov/33678712/</u>.

<sup>54</sup> Henny KD, Duke CC, Geter A, et al. HIV-related training and correlates of knowledge, HIV screening and prescribing of nPEP and PrEP among primary care providers in southeast United States, 2017. AIDS Behav. 2019 Nov;23(11):2926-2935. Accessible: <u>https://pubmed.ncbi.nlm.nih.gov/31172333/</u>.

<sup>55</sup> Centers for Disease Control and Prevention. Preexposure Prophylaxis for the Prevention of HIV Infection in the United States – 2021 Update. A Clinical Practice Guidelines. <u>https://www.cdc.gov/hiv/pdf/risk/prep/cdc-hiv-prep-guidelines-2021.pdf</u>. Accessed August 16, 2022.

<sup>56</sup> Centers for Disease Control and Prevention: US Public Health Service: Preexposure prophylaxis for the prevention of HIV infection in the United States—2021 Update: a clinical practice guideline.

https://www.cdc.gov/hiv/pdf/risk/prep/cdc-hiv-prep-guidelines-2021.pdf. Accessed August 8, 2022.

<sup>57</sup> Clement ME, Seidelman J, Wu J, et al. (2018). An educational initiative in response to identified PrEP prescribing needs among PCPs in the Southern U.S. AIDS Care. 2018 May;30(5):650-655. Accessible at: https://pubmed.ncbi.nlm.nih.gov/28971705/.

<sup>58</sup> Sayles JN, Ryan GW, Silver JS, et al. Experiences of social stigma and implications for healthcare among a diverse population of HIV positive adults. J Urban Health. 2007;84:814–828. Accessible at: https://pubmed.ncbi.nlm.nih.gov/17786561/.

<sup>59</sup> Stringer KL, Turan B, McCormick L, et al. HIV-related stigma among healthcare providers in the deep south. AIDS Behav. 2016 Jan;20(1):115-25. Accessible at: <u>https://pubmed.ncbi.nlm.nih.gov/26650383/</u>.

<sup>60</sup> Blake BJ, Jones Taylor GA, Reid P, Kosowski M. Experiences of women in obtaining human immunodeficiency virus testing and healthcare services. J Am Acad Nurse Pract. 2008 Jan;20(1):40-6. Accessible at: <a href="https://pubmed.ncbi.nlm.nih.gov/18184164/">https://pubmed.ncbi.nlm.nih.gov/18184164/</a>.

<sup>61</sup> The Physicians Foundation. 2016 Survey of America's Physicians: Practice Patterns & Perspectives. 2016. <u>https://physiciansfoundation.org/wp-content/uploads/2018/01/Biennial Physician Survey 2016.pdf</u>. Accessed August 23, 2022.

<sup>62</sup> Tai-Seale M, McGuire TG, Zhang W. Time allocation in primary care office visits. Health Serv Res. 2007 Oct;42(5):1871-94. Accessible at: <u>https://pubmed.ncbi.nlm.nih.gov/17850524/</u>.

<sup>63</sup> Kershaw C, Taylor JL, Horowitz G, et al. Use of an electronic medical record reminder improves HIV screening. BMC Health Serv Res. 2018 Jan 10;18(1):14. Accessible at: <u>https://pubmed.ncbi.nlm.nih.gov/29316919/</u>.
<sup>64</sup> Tapp H, Ludden T, Shade L, et al. Electronic medical record alert activation increase hepatitis C and HIV screening rates in primary care practices within a large healthcare system. Prev Med Rep. 2020 Jan 7;17:101036. Accessible at: <u>https://pubmed.ncbi.nlm.nih.gov/31970042/</u>.

<sup>65</sup> Arya M, Phillips AL, Street RL Jr, Giordano TP. Physician preferences for physician-targeted HIV testing campaigns. J Int Assoc Provid AIDS Care. 2016 Nov;15(6):470-476. Accessible at: https://pubmed.ncbi.nlm.nih.gov/27000130/.

<sup>66</sup> Levy ME, Wilton L, Phillips G 2nd, et al. Understanding structural barriers to accessing HIV testing and prevention services among Black men who have sex with men (BMSM) in the United States. AIDS Behav. 2014 May;18(5):972-96. . Accessible at: <u>https://pubmed.ncbi.nlm.nih.gov/24531769/</u>.

<sup>67</sup> Calabrese SK, Mayer KH. Stigma impedes HIV prevention by stifling patient-provider communication about U = U. J Int AIDS Soc. 2020 Jul;23(7):e25559. Accessible at: <u>https://pubmed.ncbi.nlm.nih.gov/32686324/</u>.

<sup>68</sup> Baumann KE, Hemmige V, Kallen MA, et al. Whether patients want it or not, physician recommendations will convince them to accept HIV testing. J Int Assoc Provid AIDS Care. 2018 Jan-Dec;17:2325957417752258. Accessible at: <u>https://pubmed.ncbi.nlm.nih.gov/29380668/.</u>

<sup>69</sup> Centers for Disease Control and Prevention (CDC). HIV in the United States and Dependent Areas. 2021. <u>https://www.cdc.gov/hiv/statistics/overview/ataglance.html</u>. Accessed August 16, 2022.