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New Jersey Leads on Trauma and Behavioral Health Through Two New Initiatives

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New Jersey Department of Health, Division of HIV, STD, and TB Services (NJDHSTS) has made a multiyear commitment to addressing some of the most intractable challenges facing the most vulnerable people living with HIV (PLWH). This effort includes two initiatives: One project will work with all HIV Care and Treatment funded agencies throughout NJ to ensure that trauma is addressed in a comprehensive, compassionate and effective manner; the other project will support HIV Care and Treatment funded agencies from across the Ryan White community with a special focus on sites funded for HIV Primary Care and/or Behavioral Health Services in identifying core elements of behavioral health integration and implementing those elements.

These two projects come at a pivotal moment in HIV prevention and care when more than ever individuals can benefit from highly accurate point-of-care HIV testing technology, rapid linkage to state-of-the-art HIV care, and access to potent antiretroviral therapy (ART) which allow PLWH to reach undetectable viral loads in a matter of weeks. ART, when taken as directed, can extend lives, promote durable viral suppression, and effectively eliminate the risk of HIV transmission.[1] There is, however, a significant number of PLWH who are unable to experience the benefits now offered through HIV care and treatment because of the devastating impact that trauma, substance use, and/or mental illness has in their lives. Substantial and consistent evidence demonstrates that substance use, depression and other mental health disorders, stressful events, and trauma can negatively affect CD4 count, viral load, and clinical decline and mortality.[2]

NJDHSTS expects that through these two initiatives the gap in health outcomes for PLWH will be greatly narrowed, resulting in health systems change and better health outcomes for this population. A description of each project is presented below.

The NJ HIV Trauma Informed Care Project (NJ TIC Project)

The NJ TIC Project is a five-year initiative led by Cicatelli Associates Inc. (CAI), which aims to ensure NJ HIV Care and Treatment funded agencies have the capacity to integrate trauma informed care into the culture, environment, and delivery of HIV care and support services. PLWH are disproportionately affected by trauma exposure and its sequalae.[3] Unaddressed traumatic events have the potential to perpetuate a vicious cycle of high-risk and self-destructive behaviors and poor health outcomes.[4] There is growing recognition of the use of trauma informed approaches to the delivery of HIV services. The NJ TIC Project will utilize CAI's trauma informed model, which rests on the premise that trauma must be approached from a broader frame and that all staff (eg, clinical, mental health, drug treatment, community health workers, housing, and social services) have a role to play in addressing the issue and assisting clients.

This model is based on implementation science and is grounded in intensive engagement and work with leadership for systems integration of trauma informed care. This includes integrating trauma informed care into the culture of the organization, policies and protocols, as well as information and tracking systems. Once the organizational integration has begun CAI will train staff to screen, refer and provide psychoeducation clients. Additional important aspects of this model include developing mechanisms to support staff in working with clients to avoid burn-out and other issues associated with secondary trauma such as disengagement, losing sight of boundaries and over reactivity.

The initial stages of the NJ TIC Project were launched through a series of regional leadership kick-off meetings held in January 2018 and attended by over 65 leaders from 26 DHSTS HIV Care and Treatment funded agencies. Through a phased roll-out, the project team is currently working intensively with 12 agencies, several with mul-

tiple sites, to integrate trauma screening, education and referral systems, while simultaneously delivering on-site education sessions to all agency staff, including, but not limited to, leaders/directors, physicians, nurses, medical case managers, social workers, receptionists and security guards. An additional 14 agencies will begin these integration activities later this year.

The NJ TIC Project will provide ongoing training and technical assistance (TA) both on-site and remotely through distance learning modalities, including conference calls and webinars, etc. to help agencies integrate trauma informed care. Education and training for staff and supervisors will be provided to support integration of TIC approaches into services delivery. The project team will work with agencies to incorporate additional service options, such as individual or group psychoeducation for reducing high-risk behaviors, complementary evidence-based interventions such as motivational interviewing, and cognitive behavioral therapy/dialectical behavioral therapy, as applicable. Finally, the project will work with leadership and key personnel at each agency to establish performance and client-level measures, and track and monitor key program outcomes throughout the project.

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NJ Behavioral Health and Primary Care HIV Integration Project (NJ B-HIP)

Behavioral Health Conditions and their Impact on Living with HIV

According to the Substance Abuse Mental Health Services Administration (SAMHSA), "Behavioral health problems include substance use disorders; alcohol and drug addiction; and serious psychological distress, suicide, and mental disorders. Problems that range from unhealthy stress or subclinical conditions to diagnosable and treatable diseases such as serious mental illnesses and substance use disorders are included."[5] Alcohol/substance use and other mental health disorders affect nearly 50% of PLWH and have been associated with HIV transmission, poor prognosis, and suboptimal adherence to antiretroviral regimens.[6,7] Relative to others, PLWH are disproportionately affected by substance use and mental health disorders, prior to and after diagnosis.[7] Up to 85% of PLWH report some depression symptoms; anxiety disorders are prevalent and as high as 40% among PLWH; and current alcohol or drug use disorders are as much as six times more likely among PLWH than in the general population.[7]

Poorly coordinated or no mental health care is common among PLWH, and lack of treatment for substance use and mental health disorders is a barrier to retaining patients in HIV care.[8] Faced with these interconnected barriers, PLWH need integration of clinical HIV and behavioral health services to improve quality of life outcomes; overall physical health and mental health; and outcomes along the entire HIV Care Continuum.[9]

Screening positive for one or more behavioral health conditions requires attention from a provider experienced in treating these conditions with medication and/or other therapeutic approaches. However, even when screening occurs, mental health and substance use disorders are highly stigmatized conditions that can lead individuals to avoid seeking appropriate care, including both primary HIV care and other specialty care. Ensuring that systems of care have both the capacity and competency to provide care to PLWH is imperative to achieving positive health outcomes. Beyond capacity and competency, systems also must be accessible and appropriate for the populations served. Given the high rate of co-occurring behavioral health conditions in PLWH, medical programs for people with HIV infection are, by default, programs for people with behavioral health conditions, and all HIV care systems should have robust processes to ensure continuity of care, disease and condition education, and an ability to measure progress and track outcomes. Ensuring a comprehensive system of behavioral health care can support early identification of needed behavioral health services. Early assessment, timely referral and linkage, and ongoing support to sustain engagement in care have been shown to improve outcomes and decrease costs.[10,11]

NJ B-HIP

The NJ B-HIP project is being implemented by the Northeast/Caribbean AIDS Education and Training Center South Jersey Regional Partner at Kennedy Health Alliance. B-HIP is based

continued on next page

on peer learning and practice facilitation to provide a structured environment for HIV provider agencies to identify the core elements of an integrated behavioral health and HIV primary care approach and successfully implement those elements. Throughout the four-year initiative, NJ HIV Care and Treatment funded providers have been invited to engage with one another and a range of experts, including practice facilitation coaches, to implement and evaluate selected transformative approaches to behavioral health integration. The core elements that are identified through this process will be used as the foundation for funding integrated primary care and behavioral health services that are tailored to suit the specific needs of clinics engaged with this work and the broader vision for HIV care in NJ. Through the establishment of a state-wide community of learning, NJ B-HIP will foster cross-institutional sharing of best practices with the goal of achieving rapid uptake of evidence-informed practices.

NJ B-HIP is adapted from the Institute for Healthcare Improvement's Breakthrough Series[12] and will include face-to-face learning sessions, webinars, regional training, 1:1 coaching, and regular communication with participants. Activities will be a focused around a monthly rotation of topics relevant to the creation of the new or modified care processes, such as team case conferencing. Participant submission of quantitative and qualitative data will provide the backbone for B-HIP evaluation in addition to helping to identify feasible and worthwhile components. A novel opportunity for participating NJ HIV providers to "twin" with HIV providers with similar characteristics in other states will allow participants to work with and learn from peers who have successfully integrated behavioral health into HIV primary care services. NJ B-HIP will use a practice facilitation approach that incorporates the use of coaching, sharing of tools and, resources, technical assistance and capacity building to sites. Practice facilitation has been used effectively to support primary care practices throughout the US in redesigning their systems to be more patient centered. It has also been shown to enhance integration of behavioral health and primary care services.[13]

A kick-off webinar that previews the initiative will be held NJ HIV Care and Treatment funded providers in May and the first in-person learning session for participating agencies will be held in June 2018.

Conclusion

NJDHSTS is a national leader in developing statewide projects that directly address trauma and behavioral health for PLWH. NJDHSTS has encouraged HIV Care and Treatment funded providers to work closely with these two capacity-building initiatives. B-HIP is open to HIV Care and Treatment funded agencies from across the Ryan White community with a special focus on sites funded for HIV Primary Care and/or Behavioral Health Services; participation in the NJ TIC Project is open to all agencies receiving HIV Care and Treatment funding interested in offering trauma informed services. The projects will continue their close communication and collaboration to maximize the impact of both initiatives and to promote meaningful and measurable outcomes for clients, providers and systems. Both NJ TIC Project and B-HIP welcome inquiries and can be contacted for additional information as described below:

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Biomedical Advances in the Treatment of HIV and the Evolution of U=U

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The year 1996 is heralded as a landmark in the management and treatment of HIV. This demarcation point defines the epidemic in a very significant manner from both biomedical and psychosocial perspectives.[1] At the time, the use of a new class of antiretrovirals, protease inhibitors,[2] coupled with the proposed treatment of HIV using 3 drugs from 2 classes of antiretrovirals in combinations referred to as highly active antiretroviral therapy (HAART; now ART)[3] transformed the disease from one that was terminal to one that is manageable and chronic.[4] Within a one-year period, deaths in the United States (US) due to AIDS decreased form approximately 50,000 in 1996 to 20,000 in 1997 - a 150% decline.[5] Since that time, deaths due to AIDS have remained somewhat steady in the range of 10,000-20,000 per year. Similarly, diagnoses of AIDS for people living with HIV (PLWH) plummeted from approximately 80,000 per year at the height of the epidemic in 1993, to 60,000 in 1996, declining to approximately 40,000 in 1997,[6] a rate which has remained relatively stable since that time.[7] Globally, HIV incidence also declined after reaching an apex of 3.47 million new infections in 1996; however, deaths only began to decline after 2004 due to the more limited availability of ART in the developing world initially, and only after reaching a peak of 2 million deaths per year in the first half of the 2000's.[8]

Since those advances in the mid 1990's, new classes of HIV antiretrovirals, and easier to take antiretroviral combinations have resulted in enhancing the health and prolonging the lives of PLWH.[9] In fact, it has been postulated that most PLWH who have access of care and treatment and adhere to their regimens may expect to have normal life expectancies.[10] A 20-year-old who is detected and treated may live to their 70's if that individual adheres to treatment and maintains a healthy lifestyle, representing a 37% increase in life expectancy from the early days of ART (ie, the late 1990s).[11,12] Moreover, the chronicity of HIV disease bestowed by the advances in treatments has been a significant factor in the aging

of PLWH in the US[13] leading to the "greying of AIDS." Seventy percent of PLWH by the year 2020 are expected to be ≥50 years old.[14] Similar patterns are noted around the world including in South Africa, an epicenter of the HIV pandemic.[15]

These advances in the HIV treatment also have heralded a new era in HIV prevention. The use of HIV antiretrovirals in the form of biomedical prevention have added to our arsenal, building upon the use of condoms and syringe exchange to decrease HIV incidence. HIV antiretrovirals have provided the basis of three powerful HIV prevention strategies: pre-exposure prophylaxis (PrEP), post exposure prophylaxis (PEP), and treatment as prevention (TasP). The latter provides the underpinnings for the campaign Undetectable = Untransmittable (U=U), which posits that a PLWH with undetectable HIV viral load levels in their blood cannot transmit the virus to their sexual partners even in the absence of a barrier such as a condom.

In the pages that follow, the concepts of TasP and U=U are thoroughly explored. While the emphasis of this article is on biomedical prevention, it is critical to note that the use of antiretrovirals as treatment and prevention all involve human behavior. As noted in the American Psychological Association's resolution of 2012,[16] the most effective manner to enact HIV prevention is through the integration of both biomedical and behavioral approaches.

Pre-Exposure Prophylaxis (PrEP) and Post-Exposure Prophylaxis (PEP)

In 2012, the US Food and Drug Administration approved the use of a single tablet antiretroviral, tenofovir disoproxil fumarate/emtricitabine (TDF/FTC), for PrEP.[17] The use of TDF/FTC as PrEP became the first pre-exposure biomedical prevention tool available to HIV-uninfected individuals. PrEP requires the uptake of the antiretroviral daily for procure protection from HIV infection. The US Centers for Disease Control and Prevention (CDC) recommends[18] the use of PrEP as one prevention option for adults (≥ 18 years old) in the following risk groups if at substantial risk of HIV acquisition: sexually-active gay, bisexual, and other men who have sex with men (MSM), heterosexually active men and women, injection drug users (IDU). PrEP may also be explored as an option for heterosexually-active women and men in HIV-discordant couples as one of several options to protect the uninfected partner during conception and pregnancy. Although not currently part of CDC guidance updated in 2014,[19] the use of PrEP for adolescents (13-17 years old) is also an option if deemed appropriate by the provider.[20]

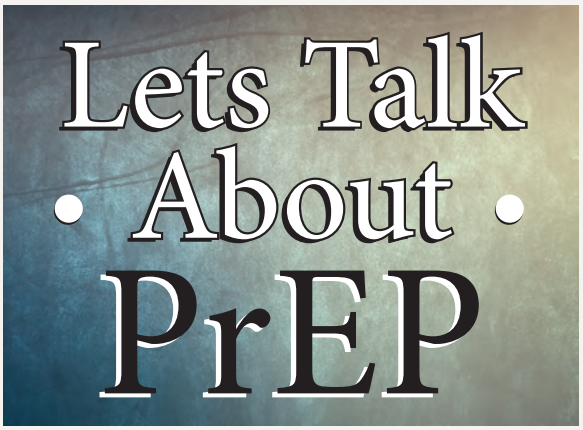
While there is a substantial body of empirical evidence to support the effectiveness of PrEP in deterring HIV infection, the pioneering results are drawn from the iPREX Trial, a randomized control study of MSM and transgender women conducted in Brazil, Ecuador, Peru, South Africa, Thailand, and the US. The data demonstrated[21] that HIV infection rates were 44% lower for men on TDF/FTC vs. placebo; in addition, for those with detectable levels of the medication in their blood, the risk of HIV acquisition was reduced by more than 90%. The effectiveness of PrEP further was supported by the Partners PrEP trial, a study of serodiscordant heterosexual couples in Kenya and Uganda in which HIV infection rate was found to be 67% lower for use of TDF alone vs. placebo, and 75% lower for TDF/FTC vs. placebo.[22] Additional evidence has been mounted via the TDF2 PrEP trial among heterosexual men and women in Botswana[23] and the Bangkok Tenofovir Study.[24]

PrEP uptake has been somewhat slow in the US although an analysis of commercially insured individuals, the weighted prevalence of persons prescribed PrEP increased significantly from 3.3 per million in 2010 to 75.4 per million in 2014.[25] However, use of PrEP remains relatively low in young MSM, a group at high risk for HIV in the US. In the P18 Cohort Study, prospective longitudinal investigation of emerging adult sexual minority men, the data reveal that awareness of PrEP is high (98%) while lifetime use is low (14%) with concerns about effectiveness and side effects associated with non-use.[26,27] Other US based studies report uptake rates of 9.7 and 12.2% among various samples of MSM.[28,29] More recently, on demand dosing has been documented in the IPERGAY Trial[30] which reported a relative reduction of 86% in HIV infections TDF/FTC group as compared to the placebo.

Post exposure prophylaxis (PEP) has a longer history than PrEP and was conceived originally as a means of controlling seroconversion of healthcare workers who may have been exposed to HIV through an occupational exposure (eg, needle stick, mucosal splash of bodily fluids). PEP involves the short-term use of specific antiretrovirals. When it is used as originally conceived to treat healthcare workers, the approach is known as occupational PEP (oPEP). However, PEP also is utilized for others who may have been exposed through sexual behavior or other means and is referred to as non-occupational PEP (nPEP).[18]

For obvious ethical reasons, there have been no randomized control trials of PEP. Evidence for the effectiveness of PEP, however, was ascertained through a case-control study[31] in which cases were defined as exposed healthcare workers who seroconverted to HIV and controls were exposed healthcare workers who did not seroconvert to HIV. Case patients were significantly less likely (OR = 0.19) than the controls to have taken zidovudine (AZT) after contact, suggesting that antiretrovirals could

prevent HIV seroconversion after exposure. CDC guidelines[18] suggest a 28-day regimen of PEP consisting of



3 antiretrovirals: TDF 300 mg/ emtricitabine (200 mg) once daily + raltegravir (RAL) 400 mg twice daily OR dolutegravir (DTG) 50 mg daily.

Treatment as Prevention (TasP)

TasP is an outgrowth and added benefit of the care and treatment of PLWH. The underlying premise of TasP is that treating PLWH with ART reduces their viral load, specifically the level of virus that can be detected in blood, semen, vaginal fluid and rectal fluid. As a result, it is near impossible for a PLWH with undetectable viral load to transmit the virus even in the absence of a protective barrier such as a condom.

Initial evidence for TasP was provided in the seminal study, HPTN 052, an investigation of the health benefits associated with the application of early treatment for those detected to be infected with HIV. HPTN 052 is a phase III, two-arm, randomized, controlled, multi-center study, which enrolled 1,763 HIV serodiscordant, mostly heterosexual couples (97%) at 13 sites in 9 countries. The couples were randomized to early ART (CD4 350-550) or delayed ART (CD4 ≤250). The data demonstrated that early initiation of ART reduced cases of onward transmission to the uninfected partner by 93% compared to delayed treatment.[32,33] A total of 8 seroconversions were detected and were found to have occurred before or right after the index partner had initiated ART and 4 cases were detected when the use of ART had failed in the index partners.[33] In light of these findings, strong support was amounted for the use of early treatment to enhance both individual and public health, providing the first glimpse of the potential of TasP to curtail the HIV epidemic.

Numerous other investigations have provided support on the potential held by TasP. The PARTNER Study[34] enrolled 1,166 HIV serodiscordant couples who reported condomless sex at 75 clinical sites in 14 European countries. Eligibility criteria included condomless sex and HIV-1 RNA load less than 200 copies/mL, and phylogenetic analysis was proposed to be utilized if an HIV-negative partner became infected to determine phylogenetically linked transmissions. The results of the investigation indicated zero documented cases of within-couple HIV transmission during condomless sex when the partner living with HIV was virally suppressed. Similar findings were supported by Opposites Attracts, a cohort study of 358 gay male HIV-serodiscordant couples in Australia, Bangkok, and Rio de Janeiro, in which couples reported almost 17,000 acts of condomless anal-intercourse.[35] No cases of HIV transmissions were detected within the dyads in the follow up period among those HIV-positive men with a viral load of <200 copies/ml and regardless of sexual position (insertive or receptive anal partner).

Further support for TasP is noted in the patterns of HIV incidence since the implementation of HAART in the mid to later 1990s. An examination of HIV incidence in British Columbia, Canada, between 1996, the year in which HAART commenced being widely implemented in North America, found an inverse relationship between HAART initiation and HIV incidence.[36] Specifically, in that timeframe, a 547% increase in the use of HAART was associated with a 52% decrease in new HIV diagnoses, associated with a reduction of 0.97 in new HIV cases for every 100 individuals on HAART. Extensions of this work have further corroborated the effectiveness of TasP.[36] Specifically, results have shown a significant decrease in undetected HIV infections from 49% in 1996 at onset of widespread HAART usage to 29% in 2011, the year in which the 34.6% of PLWH being followed had achieved viral suppression.

The findings of the aforementioned investigations posit the concept of "community viral load" defined as "an aggregate population-level biomarker of a community's viral burden over a specific time period" and is a marker of a community's level of infectiousness and transmission probability; a metric of the effectiveness of combination of HIV prevention, care, and treatment interventions and is a proxy indicator marker for HIV incidence and potential epidemic propagation.[37] The algorithm is defined as the arithmetic mean, geometric mean (the average of the base 10 logarithm), median, or sum of the highest or most recent viral load of all reported individuals living with HIV with available viral load measurements in a particular population in a given time period. It assumes that as ART uptake and adherence increases, the proportion of individuals with viral suppression, will also increase, and the amount of HIV circulating in the community will decrease, and in turn there will be a reduction in HIV transmission.

The community viral load paradigm was empirically evidenced in San Francisco[38] between 2004 and 2008

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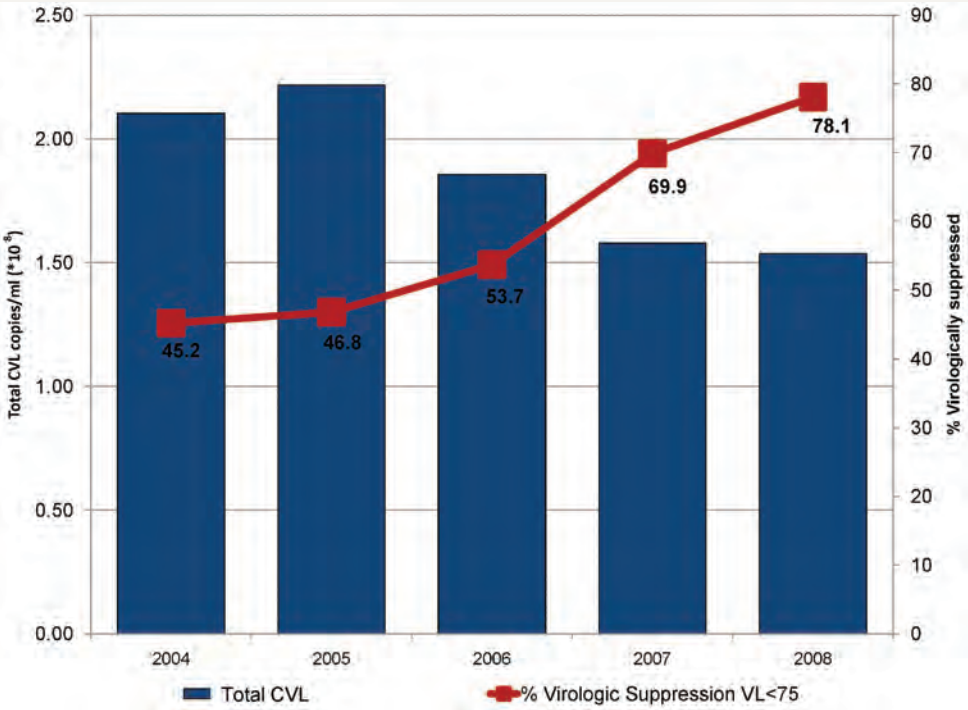
Figure 1:



Das M, Priscilla LC, Glenn-Milo Santos, et al. Decreases in community viral load are accompanied by reductions in new HIV infections in San Francisco. PLoS One. 2010;5(6). https://search.proquest.com/docview/1292193445?accountid=13626. doi: http://dx.doi.org/10.1371/journal.pone.0011068.

when a mean viral load reduction of 10,000 copies/ml was associated with an 84% reduction in new detected cases of HIV (Figure 1). These patterns of decreased HIV incidence in light of HAART and viral suppression are reported in a cohort study since the implementation of HAART in 1996, and within a context where there has been exceptionally high HAART uptake and viral suppression (98%).[39] Globally, and using ecological data, a strong negative association has been detected between ART uptake and HIV incidence.[40] The relative levels of unsuppressed viremia have also provided a basis for explaining the significantly higher HIV incidence in Black and Hispanic gay, bisexual and other MSM ages 13-29 due to racial matching of sexual partners and higher levels of unsuppressed virus in communities of color.[41,42]

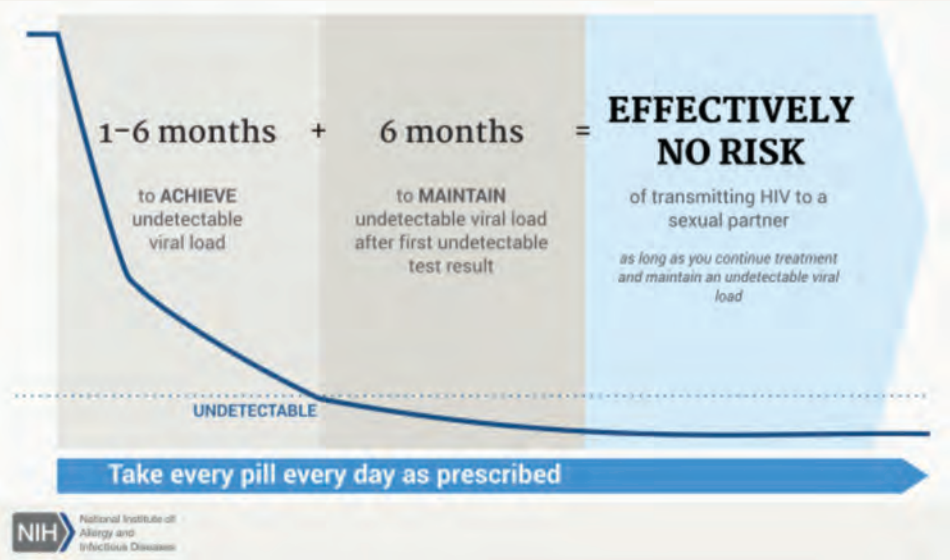
Building on the availability of multiple forms of biomedical prevention, the Partners Demonstration Project[40] utilized both the tenets of TasP and PrEP in serodiscordant heterosexual couples in Kenya and Uganda. Couples initiating ART at enrollment in the study were offered PrEP for 6 months; for those couples in which ART was not initiated at enrollment, PrEP was continued for 6 months after ART was initiated. Overall, 20% utilized PrEP alone, 33% PrEP + ART, and 39% ART alone. A total of 4 seroconversions were detected or observed in the overall cohort, associated with a 95% reduction in the number of seroconversions expected had none of the interventions been implemented.

In light of these findings, it is also critical to bear in mind temporal factors associated with HIV viral suppression. Generally, 1-6 months after the initiation of treatment, viral suppression is achieved. Maintenance of viral suppression for an additional 6-month period renders a PLWH effectively uninfectious[43] (see Figure 2). It must also be noted that intermittent use of ART and poorer rates of adherence will result in viral rebound and disease progression[44] and in effect undermine the efficacy of TasP.

Undetectable Equals Untransmittable (U=U)

The extant literature on TasP and robust evidence for its effectiveness provides the basis for the U=U

Figure 2: 10 Things to Know About Viral Suppression



(https://www.niaid.nih.gov/news-events/10-things-know-about-hiv-suppression)

prevention messaging which has emerged over the last several years. The U=U prevention message originated through the work of the Prevention Access Campaign, a non-profit New York City-based organization led by Bruce Richman. The Prevention Access Campaign "is a health equity initiative to end the dual epidemics of HIV and HIV-related stigma by empowering people with and vulnerable to HIV with accurate and meaningful information about their social, sexual, and reproductive health."[45] The U=U initiative was founded on the consensus statement issued on July 21, 2016, and was formulated by leading HIV scientists, clinicians, educators, and advocates, including Robert Grant who led the PREX trail, and who constitute the founding board of the organization. The statement issued on July 21, 2016, reads as follows:

PLWH on ART with an undetectable viral load in their blood have a negligible risk of sexual transmission of HIV. Depending on the drugs employed it may take as long as 6 months for the viral load to become undetectable. Continued and reliable HIV suppression requires selection of appropriate agents and excellent adherence to treatment. HIV viral suppression should be monitored to assure both personal health and public health benefits.

To date, the statement has been endorsed by over 600 organizations across 75 countries globally including the CDC which issued a statement of support of U=U on September 27, 2017,[46] in recognition of Gay Men's HIV/AIDS Awareness Day:

Scientific advances have shown that ART preserves the health of PLWH. We also have strong evidence of the prevention effectiveness of ART. When ART results in viral suppression, defined as less than 200 copies/ml or undetectable levels, it prevents sexual HIV transmission. Across three different studies, including thousands of couples and many thousand acts of sex without a condom or pre-exposure prophylaxis (PrEP), no HIV transmissions to an HIV-negative partner were observed when the HIV-positive person was virally suppressed. This means that people who take ART daily as prescribed and achieve and maintain an undetectable viral load have effectively no risk of sexually transmitting the virus to an HIV-negative partner.

The consensus statement issued by the Prevention Access Campaign, the support of the U=U efforts globally, and the endorsement of U=U by the CDC serve as significant catalysts in the de-stigmatization of HIV and as powerful recognitions of the effectiveness of ART in curtailing the HIV epidemic. However, historically the U=U effort lags almost a decade behind what is often referred to as "the Swiss Statement" of January 2008[47] which was the first to recognize the potential held by TasP. The statement, like the U=U statement, did not differentiate between vaginal and anal sex, indicating the following in suggesting the non-infectiousness of virally suppressed individuals:

A PLWH not suffering from any other STD and adhering to antiretroviral therapy (ART) with a completely suppressed viremia (hereinafter "effective ART") does not transmit HIV sexually, i.e., he/she cannot pass on the virus through sexual contact.

This statement is valid provided that:

- *the PLWH fully complies with the ART;*
- *the viral load has been non-detectable for at least 6 months;*
- *the PLWH does not have any other sexually transmitted disease.*[47]

In my own work and teaching, I have posed the following question to my students for over a decade in my HIV prevention course: "Imagine you are out one evening and hoping to meet someone. You meet 2 people. One indicates that they are HIV-negative the other indicates they are living with HIV but in care and on treatment. You have an intention of using barrier for sex. Who is the safer choice?"[48] The point of this exercise has been and still is to have students think about the power of TasP and how human beings make decisions about their health.

As is the case with almost any health intervention or recommendation, be it vaccination for HPV, PrEP prescription, or smoking cessation among many others, there is often a hesitation or resistance to the ideas and/or policy recommendation put forth and individuals must be prepared to adopt and implement change as is succinctly delineated in the transtheoretical model or stage of change.[49] In effect, it is incumbent on healthcare providers to be well versed on the mythologies, misconceptions, and misunderstandings that may surround the concept of U=U, as well as for PrEP[27,50] and other science-based recommendations. Otherwise, such misunderstandings may function as impediments to uptake and understanding effective prevention and care.

Specifically, healthcare providers must work in tandem with clients to understand the mechanics of TasP and the meaning of U=U. Such messaging to clients includes conversations about the importance of adherence and maintaining regular and consistent appointments with healthcare providers. In addition, it is essential that PLWH understand that viral blips[52] do occur and that viral rebound will only occur if adherence is consistently suboptimal, not resulting from just one or a few missed doses[53] but rather when adherence is continually suboptimal.[54] All of these matters further speak to the need to envelope the biomedical approach in healthcare delivery with care that considers and addresses the social and emotional well-being of the PLWH.[55]

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Ultimately, TasP confers benefits to the individual health of the PLWH. This is evidenced both in terms of the overall physical health as well as the psychosocial health. U=U is an effective approach to countering the stigma that has too long been associated with being HIV-positive. Moreover, this messaging works to counter antiquated HIV criminalization laws[56,57] that exist in the majority of US states and which fail to account for the biomedical advances of the last two decades.[58]

Conclusions

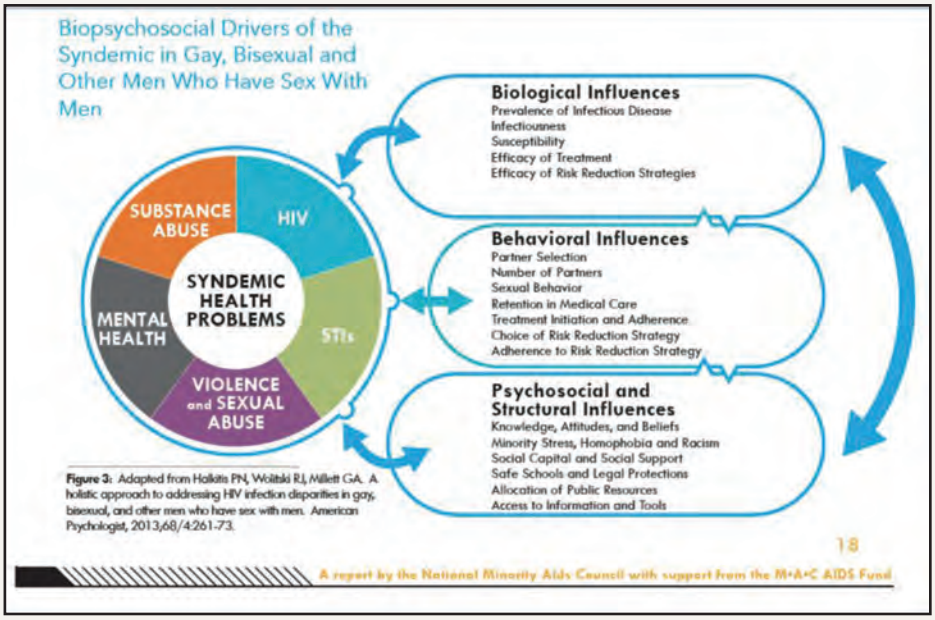
The advances facilitated by biomedical prevention in the forms of TasP, PrEP, and PEP have served as foundations for efforts enacted by governments and organizations to bring an end to new HIV infections. Specifically, strategies such as the New York State Blueprint for Ending the Epidemic proposes that the elimination of the disease is situated in part on the testing and identification of HIV infection and the delivery of treatment and care to PLWH.[59,60] In addition, the benefits of TasP which bestow U=U as possible are critical elements of the UNAIDS 90-90-90 strategy which proposes the following: "By 2020, 90% of all PLWH will know their HIV status. By 2020, 90% of all people with diagnosed HIV infection will receive sustained ART. By 2020, 90% of all people receiving ART will be virally suppressed."[61] These proposals align with current efforts associated with the test and treat strategy[62] which seek to reduce unsuppressed HIV viremia.

Despite the great promise held by these biomedical advances and the U=U campaign , the elimination of HIV is dependent in great part on human behavior, namely behaviors that involve access to care, obtaining medications either in the form of ART, PrEP, or PEP, and adhering to these treatments. As is evidenced from the HIV care continuum[63] identification of HIV and engagement in care and treatment is less than ideal in the US. In fact as data on the care continuum were first being collected, some 25% of PLWH were not virally suppressed.[64] Moreover, 18% of those infected were undiagnosed and 45% of those diagnosed not retained in care contribute to approximately 94% of seroconversions.[64] More recent data indicate an uptick in these indicators with 85% of Americans diagnosed and 49% virally suppressed.[65]

In light of the multiple benefits achieved through the uptake of and adherence to ART, achieving viral suppression is one of the main initiatives of the New Jersey (NJ) Department of Health HIV Planning Group.[66] Because NJ does not require the reporting of all results, comparison of HIV indicators to national rates are more challenging. However, one analysis of data on known PLWH in NJ[67] indicate a higher proportion of suppressed viral load than the national rates at approximately 58%; putting NJ on par with many of the northeast states, higher than the national rate.[68] However, both in NJ and nationally, viral suppression varies along geographic region, as well as key demographic lines including gender, race/ethnicity, and age.

The promise held by biomedical prevention and U=U will not be fully realized until HIV disease is viewed as more than just a medical phenomenon. Efforts to eradicate HIV cannot rely on pharmaceuticals alone. A biopsychosocial paradigm which recognizes that the disease is directed in equal parts by biological, behavioral/psychological, and social/structural factors must direct how we undertake both HIV prevention[69-71] (see Figure 3) and care.[72-74] A 3-pronged approach (CITE), one that addresses the multiple factors that drive HIV and that harnesses an integrated approach to HV prevention that marry biomedical advances with behavioral strategies, and the efforts to curtail social injustices and promote equity

Figure 3:



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will be the most powerful tool in bringing an end to HIV and for addressing all health challenges.[75] The power resides with combined strategies akin to ART, which we now use to treat HIV. Attacking HIV on multiple fronts will yield the most effective results for individual and populations infected with and affected by HIV.

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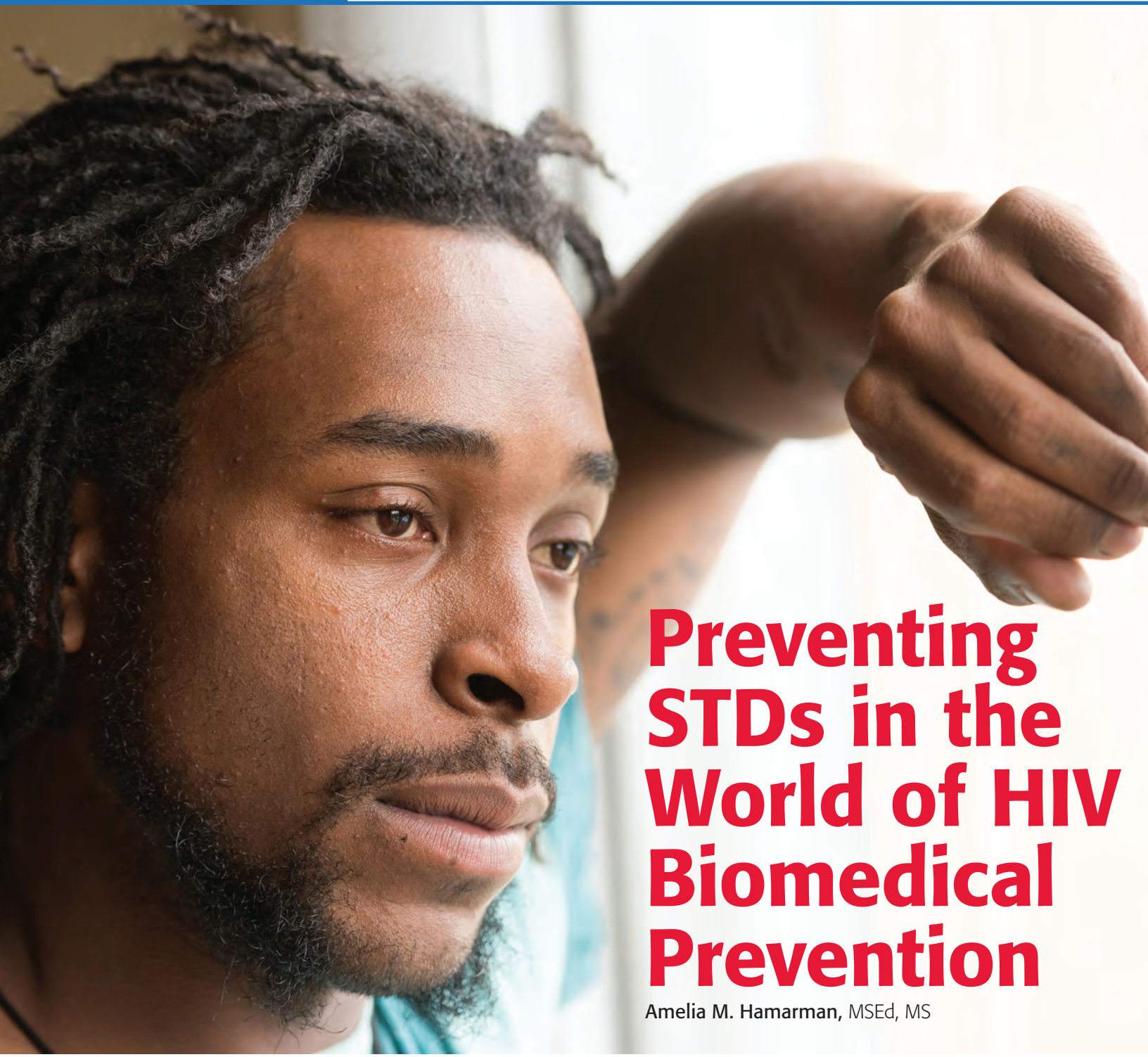

Preventing STDs in the World of HIV Biomedical Prevention

Amelia M. Hamarman, MSEd, MS

HIV Biomedical Interventions and STD Risk

Biomedical advances have effectively changed the landscape of HIV prevention allowing those living with HIV to prevent from passing their infection to sexual partners, and allowing those at higher risk for becoming infected with HIV options to significantly lower their risk of seroconversion. When antiretroviral therapy (ART) results in viral suppression to undetectable levels, the sexual transmission of HIV is prevented.[1] Preexposure prophylaxis (PrEP) for HIV prevention in high-risk individuals has been similarly groundbreaking and has been proven to be highly effective in preventing HIV infection among high-risk men who have sex with men (MSM), heterosexual discordant couples, injection drug users and others at increased risk for HIV.[1]

Concerns have been raised that perceptions of decreased HIV transmission risk resulting from biomedical interventions will lead to riskier sex-

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ual behaviors and, in turn, increase the transmission of other sexually transmitted diseases (STDs).[2] While evidence of this concern is lacking, the fact of the matter is that risk factors for HIV do mirror those for other STDs, and thus populations who have historically been most at risk for the sexual transmission of HIV are also at an increased risk for other STDs including syphilis, chlamydia, and gonorrhea. The expansion of biomedical interventions to decrease HIV transmission present opportunities for increased access to patients at risk for STD infections, and create a valuable public health opportunity to intervene with these individuals and populations to reduce the transmission of STDs as well as HIV.

Increasing STD Rates

STD rates have increased to unprecedented levels across the United States (US) and in New Jersey (NJ). In 2016, more than two million cases of chlamydia, gonorrhea and syphilis were reported in the US, the highest number ever reported.[3] Between 2011 and 2015, nationwide, reported cases of chlamydia increased by 8%, gonorrhea cases by 23%, and primary and secondary syphilis cases by 72%.[4] In 2016, MSM accounted for over 80% of primary and secondary syphilis cases in which the sex of partner(s) was identified.[3]

Increases in NJ STD cases mirror those seen nationwide. Between 2012 and 2016, overall reported STDs increased by 27%. This includes an increase of 29% in chlamydia and a 12% increase in gonorrhea. A very large increase of 132% was seen in reportable cases of primary and secondary syphilis during this time with the most profound increases in Hispanic populations (194%) and reported MSMs (411%).[5]

Congenital syphilis is an emerging health crisis across the country, including NJ. After several years with no confirmed cases in NJ, there were 12 confirmed cases in 2016, and preliminary data suggests the same for 2017. Not surprisingly, this trend mirrors increasing syphilis rates in women nationally which increased by 31% between 2012 and 2016.[5]

These increases require a call to action for the public health and healthcare sectors to leverage access to higher risk populations and individuals to impact these rates and reverse this trend.

Opportunities for Providers

Given the overlap of risk factors for HIV and other STDs, opportunities for providers to take a more comprehensive approach to patients' sexual health are readily present, and this is reflected in clinical guidance provided by CDC. For example, CDC's guidelines for clinical providers on the provision of PrEP includes assessment of patients' bacterial STD status and history as part of the overall evaluation of their risk for HIV.[1] Such assessment is important not only for determining appropriateness of PrEP, but also should be used in the appraisal of a patient's overall health and determination of appropriate actions and interventions. The PrEP Provider guidelines also recommend STD screening for sexually active adults and adolescents every six months, and a section on reducing HIV risk behaviors is also applicable to STD risk behaviors including: video-based interventions, client-centered counseling and reducing or eliminating injection drug use.[1] Since the risk of STD transmission increases with any drug or alcohol use, counseling should include use of all drugs and alcohol, not just injectable drugs.

For those already living with HIV, CDC's Sexually Transmitted Disease Treatment Guidelines, 2015, include specific recommendations for screening people living with HIV for different STDs.[6] In general, recommendations are to screen for STDs all patients newly diagnosed with HIV at their first HIV evaluation and then at least annually, but more frequent screenings may be appropriate for those who engage more frequently in risky behaviors.[6]

In addition to standard screenings for both HIV-infected and HIV-uninfected individuals, the following actions can help to reduce the risk of patients for acquiring an STD or passing one along to partners:

Talk to patients about their sexual practices

This is an essential piece of HIV prevention and care that also addresses other STDs. While this may begin as an uncomfortable conversation, if done respectfully and without judgment, having these discussions throughout a patient's ongoing treatment can foster trust between a patient and provider and lead to important opportunities for further assessment of risk and appropriate screenings, and risk-reduction counseling and education.[7] Assumptions should never be made about patients' risk factors. Please see the article in this issue of NJ HIVLinks: *Sexual Health History Taking Tips and Resources.*

Conduct 3-Site screening

For MSMs, the 2015 STD Treatment Guidelines recommend pharyngeal and anal screening for gonorrhea and chlamydia in addition to standard urine test that will only detect urethral infections.[6] The NJ Department of Health (DOH) recommends three-site testing for all PrEP patients and all NJ PrEP counselors are trained to advise patients to ask their providers for this. For people living with HIV, all are recommended to have STD screening for gonorrhea, chlamydia, syphilis, and trichomonas for cis-women.

Screen pregnant patients

All pregnant patients should at least be screened for HIV, syphilis and hepatitis B at the first prenatal visit.

Screening is essential not only for the health of the patient, but to prevent transmission to the fetus by medical intervention. A sexual history should be taken throughout pregnancy and rescreening for any STDs, including HIV, performed as indicated by patient history and CDC Treatment Guidelines.[6] Given increasing rates of congenital syphilis, providers should consider rescreening early in the third trimester and at the time of delivery for any patient who may have increased risks, including living in area with higher syphilis prevalence.

Assess transgender patients' risk individually

Much diversity exists among transgender individuals in terms of anatomy, sexual behaviors, and risk for HIV and other STDs.[6] Providers should be aware of their patients' current anatomy, sexual practices and behavioral history. In general, screening, prevention and care for HIV and other STDs should not differ for transgender patients. CDC recommends that all transgender people be screened at last once for HIV and any additional screenings should be based on a risk assessment that includes the patients' sexual history with accurate anatomy specific behavior.[8] Open-ended questions that do not assume anatomy or sex of partners will likely yield the most useful information.[8]

Treat patients immediately

If a patient is diagnosed with an STD, immediate treatment is essential for protecting the health of the patient as well as preventing further spread of the infection. Proper diagnosis and staging (syphilis) is crucial to ensure appropriate treatment. Follow-up with patients is also essential to ensure effective treatment. Patients being treated for a bacterial STD should be advised to abstain from all sexual activity until all partners have been effectively treated.

Although antimicrobial resistant gonorrhea has been increasing, most cases of suspected treatment failure are usually due to reinfection.[6] Nevertheless, additional testing should be conducted and any case of suspected resistance reported to the NJ DOH STD Program.

Screen and treat all sex partners

To prevent reinfection and the continued spread of disease, an STD-infected patient's sex partner(s) should also be tested and treated. It is important that patients understand the risks of reinfection, and be encouraged and supported to inform their partners about the infection as well as resources for testing. Patients, particularly those diagnosed with syphilis, should be informed that they may be contacted by a representative of the DOH for confidential follow-up and assistance with partner notification. Patients should be encouraged to cooperate with these efforts.

Immediately report all reportable STDs to the NJ DOH, STD Program

In NJ, all healthcare providers are required to report all cases of reportable STDs within 24 hours.[7] NJ DOH Disease Intervention Specialist (DIS) investigate cases and provide partner services to help patients and their

partners to get tested and treated. Providing any information requested by DIS who contact your office will benefit the investigation. Information about reporting STDs in NJ can be found at http://www.nj.gov/health/hivstdtb/stds/

Get support for PrEP

The NJ DOH has PrEP counselors located throughout the state that can link patients to PrEP providers, and support PrEP providers by providing patients with ongoing counseling, including STD education and information, and linkage to appropriate services. More information can be found at http://www.nj.gov/health/hivstdtb/.

Conclusion

Addressing patients' sexual risks is an essential piece of caring for their overall health, but it is only one facet. By embracing opportunities to address overlapping concerns and risk factors, providers can make an impact on health outcomes not just of their patients, but of the larger communities in which we all live.

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Sexual Health History Taking Tips and Resources

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Recently a group of seasoned clinicians with at least 15-20 years of professional experience in healthcare fields throughout our organization were informally discussing experiences with education and training on sexual health, specifically on conducting sexual health histories with patients. Without exception, not one of us in this group could clearly remember the details of being taught or practicing taking a comprehensive sexual health history in our undergraduate or graduate programs. Vague recollections of being taught about sexually transmitted diseases (STDs) and pregnancy prevention emerged from the discussion. This apparently isn't so unique. Shindel and Parish[1] conducted a review of the literature on sexual health education of medical students and found wide variation in both the quantity and quality of education on this topic in North American medical schools. They similarly found that many of the existing sexual health education programs were focused on prevention of unwanted pregnancy and sexually transmitted infections. There was limited exposure to topics such as sexual function and dysfunction, female sexuality, abortion, and sexual minority groups. Smith and Baron[2] found that nurses and other healthcare providers were often reluctant to initiate a discussion about sexual health with their patients because of numerous barriers, including knowledge, time, and confidence.

The US Centers for Disease Control and Prevention, National Center for HIV Viral Hepatitis STD and TB Prevention developed A Guide to Taking a Sexual History[3] in 2011 and updated in 2014. A Guide to Taking a Sexual History offers a helpful framework and specific guidelines for discussion of sexual health issues with every patient. It emphasizes the need to conduct a sexual health history during a patient's initial visit, during routine preventive exams, and when signs of STDs are present. Several additional points are highlighted such as the need to include a sexual health history even if a patient is not currently sexually active, to ask additional questions that are appropriate to each patient's individual situation or circumstances, and to address discomfort with talking about sex(including the number and gender[s] of partners and sexual practices) by routinizing these conversations and stressing with patients that this is an important part of a regular exam with all patients.

This guide is based upon a premise that there are five "P"s of sexual health. The five "P"s stand for:

- **Partners**
- **Practices**
- **Protection from STDs**
- **Past history of STDs**
- **Prevention of pregnancy**

Partners

Special considerations when addressing Partners include:

- In order to assess the risk of contracting an STD, it is important to determine the number and gender of sex partners and to remember to NEVER make assumptions about the patient's sexual orientation.
- If only one sex partner is noted over the last 12 months, be certain to inquire about the length of the relationship. Ask about the partner's risk factors, such as current or past sex partners or drug use.
- If more than one partner is noted in the last 12 months, be certain to explore for more specific risk factors, such as condom use (or non-use) and partner risk factors.

Examples of ways to have a dialogue with patients about their partners:

- **Are you currently sexually active? (Are you having sex?)**
- **If no, have you ever been sexually active?**
- **In recent months, how many sex partners have you had?**
- **In the past 12 months, how many sex partners have you had?**
- **Are your sex partners men, women, or both?**
- **If a patient answers "both" repeat first two questions for each specific gender**.

Practices

Special considerations when addressing Practices include:

- If a patient has had more than one sex partner in the past 12 months or has had sex with a partner who has other sex

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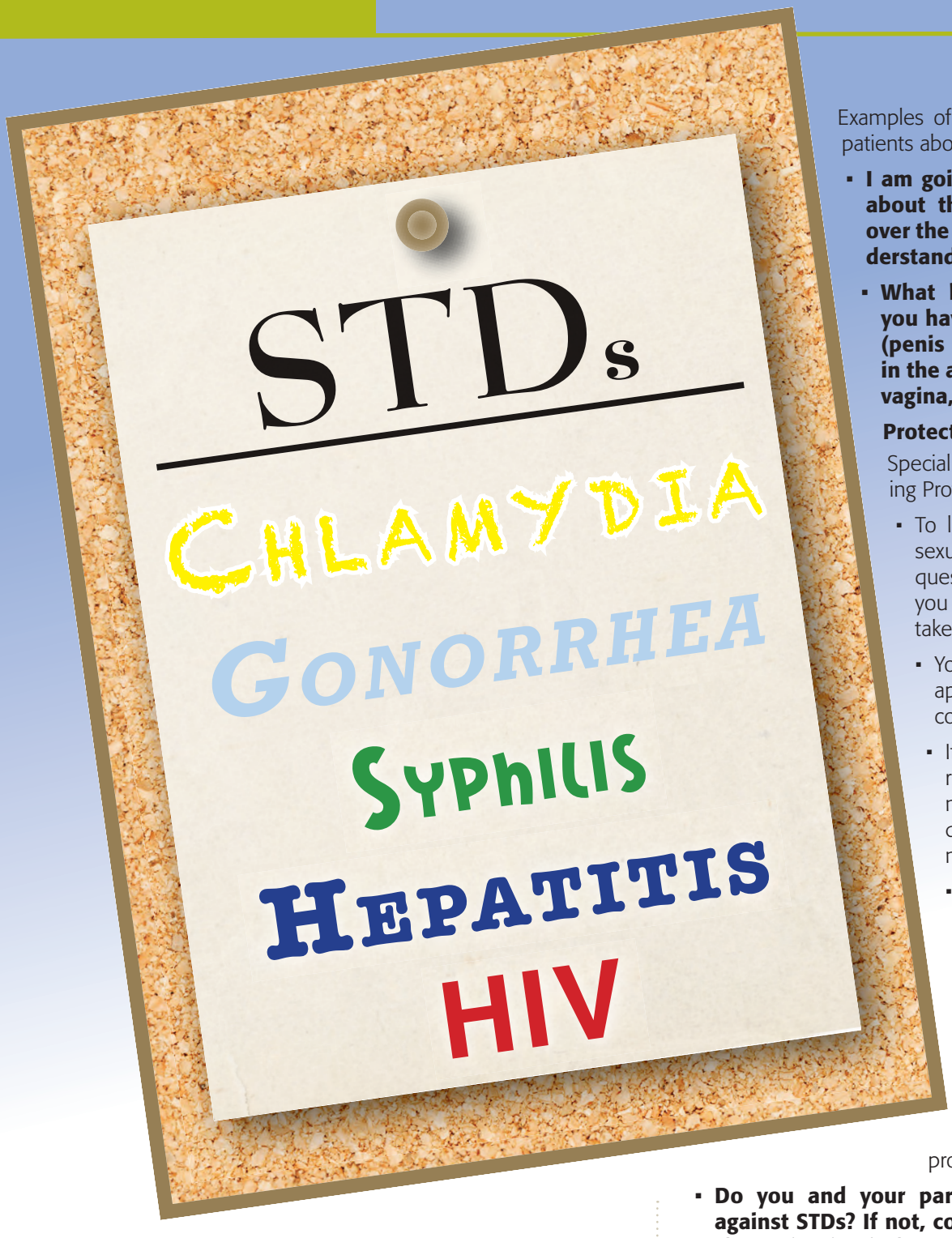

partners, you may want to explore further his or her sexual practices and condom use.

- Asking about other sex practices will guide the assessment of patient risk, risk-reduction strategies, the determination of necessary testing, and the identification of anatomical sites from which to collect specimens for STD testing.

Examples of ways to have a dialogue with patients about their sexual practices:

- **I am going to be more explicit here about the kind of sex you've had over the last 12 months to better understand if you are at risk for STDs.**
  - **What kind of sexual contact do you have or have you had? Genital (penis in the vagina)? Anal (penis in the anus)? Oral (mouth on penis, vagina, or anus)?**

Protection from STDs

Special considerations when addressing Protection from STDs include:

- To learn more about the patient's sexual practices, use open-ended questions. Based on the answers, you may discern which direction to take the dialogue.
  - You will need to determine the appropriate level of risk-reduction counseling for each patient.
  - If a patient is in a monogamous relationship that has lasted for more than 12 months, risk-reduction counseling may not be needed.
    - However, in other situations, you may need to explore the subjects of abstinence, monogamy, condom use, the patient's perception of his or her own risk and his or her partner's risk, and the issue of testing for STDs.

Examples of ways to have a dialogue with patients about protection from STDs:

- **Do you and your partner(s) use any protection against STDs? If not, could you tell me the reason? If so, what kind of protection do you use?**
- **How often do you use this protection? If "sometimes," in what situations or with whom do you use protection?**
- **Do you have any other questions, or are there other forms of protection from STDs that you would like to discuss today?**

Past history of STDs

Special considerations when addressing past history of STDs include:

- A history of prior STDs may place your patient at greater risk now.

Examples of ways to have a dialogue with patients about their past history of STDs:

- **Have you ever been diagnosed with an STD? When? How were you treated?**
  - **Have you had any recurring symptoms or diagnoses?**
  - **Have you ever been tested for HIV, or other STDs? Would you like to be tested?**
  - **Has your current partner or any former partners ever been diagnosed or treated for an STD? Were you tested for the same STD(s)?**
- **If yes, when were you tested? What was the diagnosis? How was it treated?**

Prevention from pregnancy

Special considerations when addressing prevention from pregnancy include:

- Based on partner information from the prior section, you may determine that the patient is at risk of becoming pregnant or of fathering a child. If so, first determine if a pregnancy is desired.
- Questions should also be gender appropriate.

Examples of ways to have a dialogue with patients about prevention from pregnancy:

- **Are you currently trying to conceive or father a child?**
- **Are you concerned about getting pregnant or getting your partner pregnant? Are you using contraception or practicing any form of birth control? Do you need any information on birth control?**

Completing the history and continuing the dialogue with patients who may need more information and have questions:

- **What other things about your sexual health and sexual practices should we discuss to help ensure your good health?**
- **What other concerns or questions regarding your sexual health or sexual practices would you like to discuss?**

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Additional resources:
Ask, Screen, Intervene

The US Centers for Disease Control and Prevention, the Health Resources and Services Administration, the National Institutes of Health, and the HIV Medicine Association of the Infectious Disease Society of America, created this modular course which is designed for care providers of persons living with HIV and promotes the use of the clinical encounter for the prevention of HIV/STD transmission. The curriculum was updated in 2011 and 2013 to reflect current state of prevention efforts with persons living with HIV.

https://effectiveinterventions.cdc.gov/en/HighImpactPrevention/PublicHealthStrategies/AskScreenIntervene.aspx

A Provider's Guide - National Coalition for Sexual Health: This guide was created to help primary care providers (physicians, physician assistants, nurse practitioners, and nurse-midwives) learn how to better incorporate sexual health discussions and recommended preventive sexual health services into an adult or adolescent wellness visit.

https://nationalcoalitionforsexualhealth.org/tools/for-healthcare-providers/document/ProviderGuide.pdf

The Proactive Sexual Health History: This paper outlines several successful strategies to integrate sexual health care into practice.

https://www.aafp.org/afp/2002/1101/p1705.pdf

Sexual health history taking toolkit with samples of sexual health history forms:

This resource is targeted to clinicians, nurses, medical assistants and any reproductive health care staff who interview clients to obtain a sexual history. The toolkit contains videos, a sexual health history-taking guide, sample history forms and questions to ask.

http://www.cardeaservices.org/resourcecenter/sexual-history-taking-toolkit

MSM-Sexual Health History Taking: This basic sexual history tool can be used by clinicians as a guide to determine the patient's risk for STDs. This history can be taken by the clinician as part of the history and physical, or done by the patient as a self-administered questionnaire.

http://nnptc.org/wp-content/uploads/SS_02_MSM-Sexual-History-Taking.pdf

Collecting sexual orientation and gender identity data in the Electronic Health Record:

https://www.lgbthealtheducation.org/wp-content/uploads/Collecting-Sexual-Orientation-and-Gender-Identity-Data-in-EHRs-2016.pdf

A tool from the Sexuality Information and Education Council of the United States (SIECUS) on **how to take an inclusive sexual history to meet the needs of all youth including lesbian, gay, bisexual, transgender, queer, and questioning (LGBTQ) youth:**

http://www.siecus.org/index.cfm;jsessionid=855EB0DA849A85334062BE9DD94A24A4.cfusion?fuseaction=document.viewDocument&documentid=582&documentFormatId=682&vDocLinkOrigin=1&CFID=28763178&CFTOKEN=794e9ea19d87b4da-A2C49928-1C23-C8EB-80F83E95B9EDA325

Health Literacy: What Every Clinician Should Know

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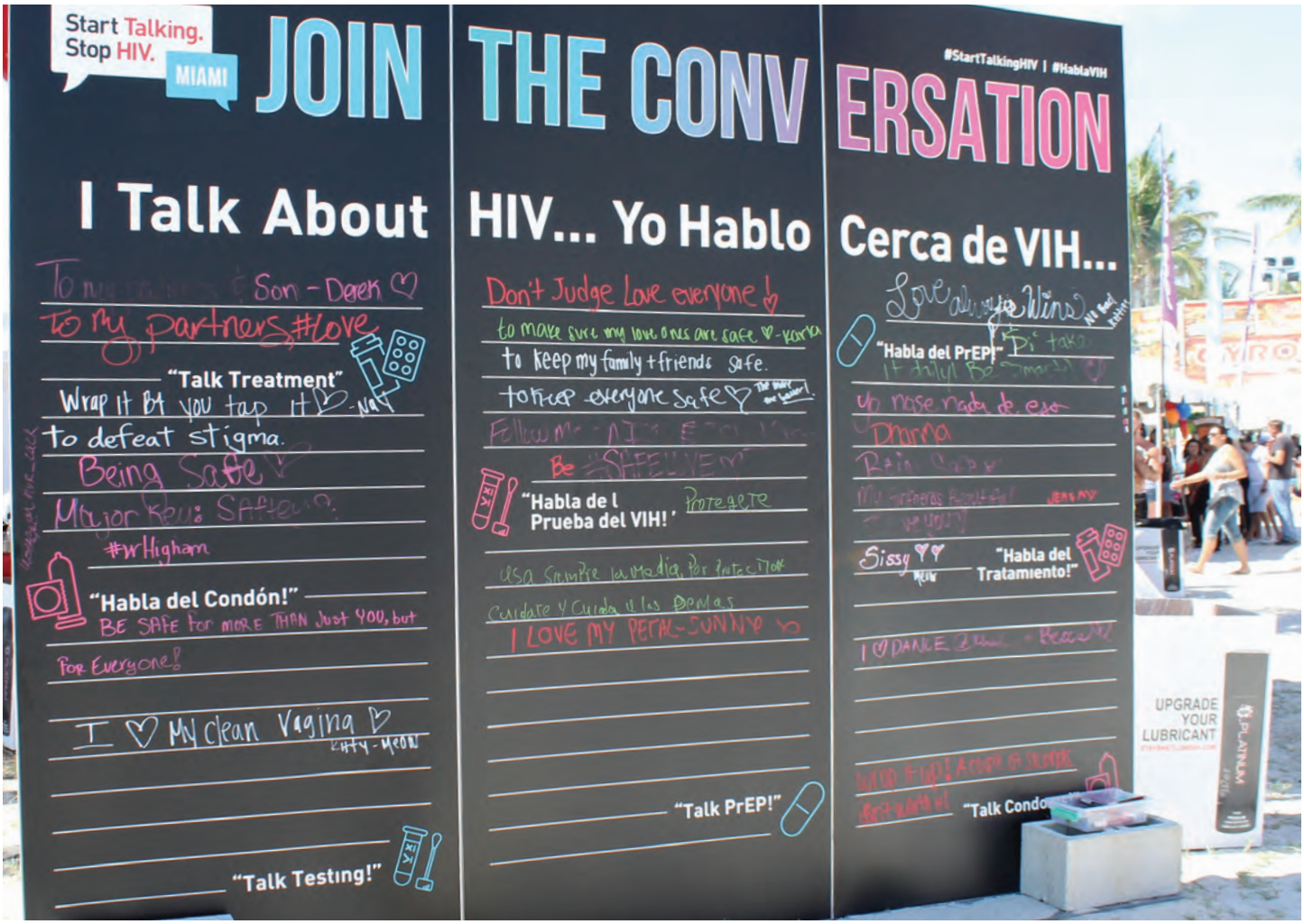
Scholars initially described health literacy as the ability to perform basic reading and numerical tasks required to function in a healthcare environment.[1] Over time, the definition of health literacy evolved to include the wide range of skills and competencies needed to seek out, comprehend, evaluate, and use health information resources to make informed health decisions, reduce health risks, and increase quality of life.[2,3] People seek health information from a variety of resources including television, newspapers, books, magazine articles, healthcare providers, and now, the internet. Electronic health literacy, or ehealth, the ability to navigate the internet and use web-based health information for self-care, has evolved into an important component of health literacy.[4,5] Health literacy for people with HIV (PLWH) is the ability to use reliable health information from a multitude of sources to make decisions about self-care, understand disease processes, adhere to medication regimens, decrease the risk of opportunistic infections, and manage the symptoms of HIV and co-morbidities. These complex tasks require a high level of health literacy proficiency.

Proficient health literacy is limited in the adult population of the United States (US); only 12% of adults demonstrate proficient health literacy.[6,7] In addition, 35% of US adults have basic or below basic health literacy, limiting their ability to comprehend and act

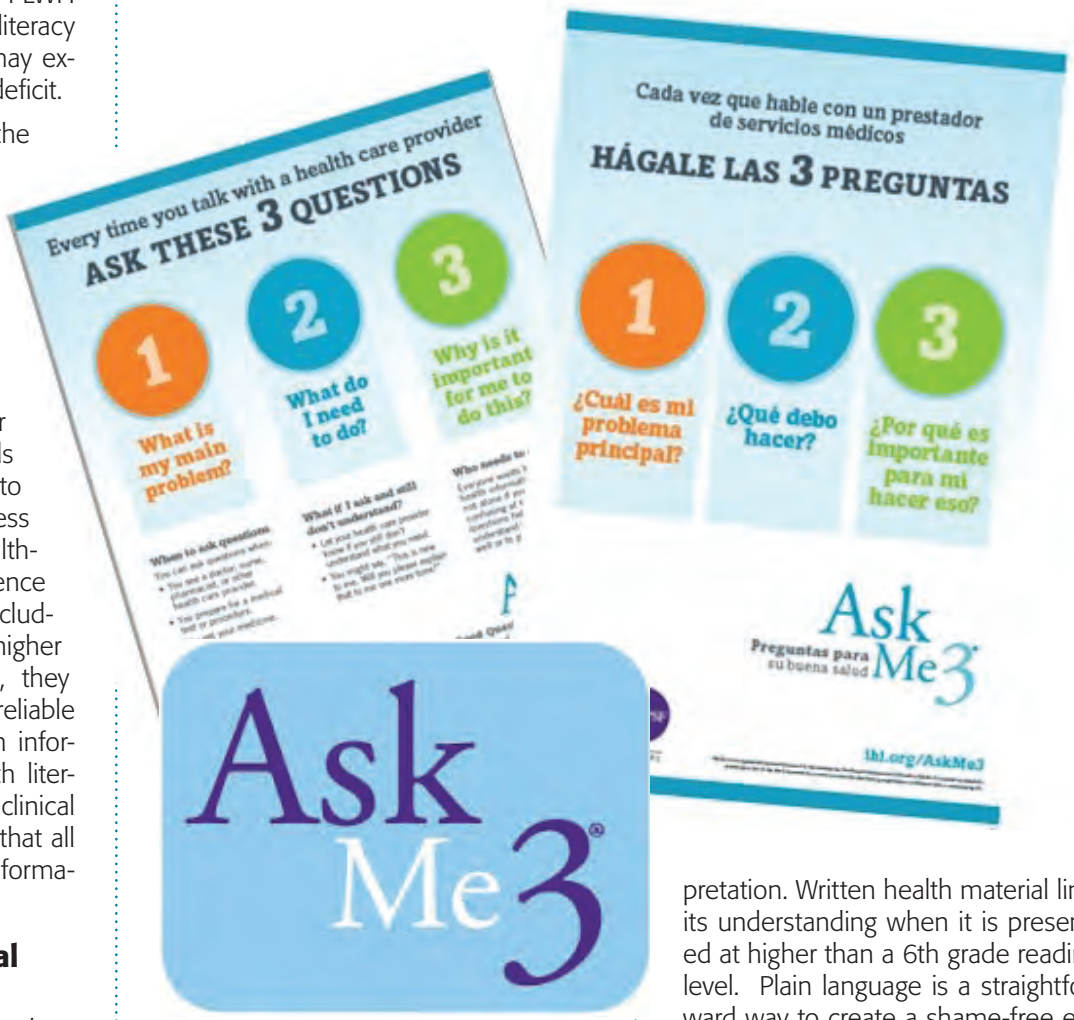


on complex health information.[7] Of those with basic or below health literacy, research indicates that 19% use the internet for health information.[7] However, only 6% of US adults have proficient electronic literacy skills.[6] As internet technology becomes further integrated into our complex healthcare system, the effect of this deficit will become more profound. PLWH who have inadequate health literacy or lack ehealth literacy skills may experience a health knowledge deficit.

Limited health literacy affects the ability of PLWH to manage their disease, ultimately resulting in poorer health outcomes. Limited health literacy is associated with less HIV knowledge and greater misinformation about treatment protocols.[8] PLWH and limited health literacy or lacking ehealth literacy skills are less likely to be adherent to antiretroviral therapy, have less interactions with their healthcare providers, and experience greater disease severity, including lower CD4 counts and higher viral loads.[8-10,12-14] In addition, they are more likely to believe unreliable internet sources of HIV health information.[13,14] Incorporating health literacy universal precautions into clinical practice is one way to ensure that all patients understand health information.

Health Literacy Universal Precautions

Health literacy universal precautions are health literacy skills that a clinician uses to minimize the risk of miscommunication by simplifying messages and confirming comprehension of health information. It assumes that all patients may have difficulty comprehending health information. Universal precaution skills include plain language, teach-back, *ask me 3*, and open-ended questions. Two websites that provide information and resources on health literacy universal precautions and how to use them are the Community Health Network (http://www.chnnyc.org/training-education/health-literacy-initiative) and the Agency for Health Research and Quality (https://www.ahrq.gov/professionals/quality-patient-safety/quality-resources/tools/literacy-toolkit/healthlittoolkit2-tool4.html).



Plain language

Clinicians may inadvertently thwart patients' understanding of health information by focusing on information they want patients **to know** and not on what patients **need to do** to take care of their health. Frequently, health information is provided at an educational level that does not match the patients' skills, knowledge, and experience. For example, use of medical terminology or jargon when talking with a patient creates a barrier to understanding for many patients. Clinicians are often unaware of cultural differences in language and word meanings that can lead to misinterpretation. Written health material limits understanding when it is presented at higher than a 6th grade reading level. Plain language is a straightforward way to create a shame-free environment for all patients and ensure that communication between the clinician and patient is effective.

Plain language should be used with all patients and not just those with limited health literacy or low English proficiency. Plain Language is the use of concise and simple speech or writing to ensure the listener or reader understands health care information

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as quickly and completely as possible. Clinicians should avoid jargon and use everyday examples to explain medical terms. Plain language strategies include:

- Avoiding the use of medical terminology to describe treatments, effects of medications, and health problems
- Using one or two syllable words when possible
- Giving information in small chunks
- Using visual aids or props when appropriate
- Explaining a medical term in a simple sentence or in a few words
- Limiting key messages to no more than 3-5 "need to do"
- Eliminating "nice to know" messages

Learn more about Plain Language at: http://www.plainlanguage.gov.

Teach-back and Ask Me 3

One way to incorporate plain language in clinical practice is the use of *Teach-back*. This is a technique to assess a patient's understanding of his or her health condition, diagnosis, treatment plan, instructions for medication administration, or other health care instructions. After providing the health information, the clinician asks the patient to explain it in their own words; if the patient understands, he or she can "teach-back" the information correctly. If the patient is unable to "teach-back" the information, the clinician can explain once more and check again. The responsibility for ensuring clear communication is on the clinician. Patients should view teach-back as the clinician verifying that an easy to understand explanation was provided, not as a test for the patient. Teach-back can stimulate dialogue with patients, uncover patients' health beliefs, improve the understanding of disease and treatment, and increase patient satisfaction. A *Teach-back Toolkit* can be found at: http://www.teachbacktraining.org/.

A variation of the *Ask Me 3* program can be used to coach patients when they are having difficulty teaching back health information by asking the following questions:

- What is your main problem?
- What do you need to do about it?
- Why is it important for you to do this?

Clinicians can teach patients to ask these 3 questions using the pronouns "my" "me, "and "I" instead of "your"

and "you" in the questions. *Ask me 3* is a technique that patients can use at each clinic visit to verify their understanding of health information. It is sponsored by the Institute for Healthcare Improvement (IHI), which provides complimentary materials and resources (http://www.npsf.org/?page=askme3).

Ending the Visit

An important health literacy universal precaution skill for clinicians is ending the visit with assurances that the dialogue can continue. Questions that require a yes or no answer, such as, "Do you understand?" or "Does that make sense?" should be avoided at the end of the visit. Rather than ask patients if they have any questions, which usually elicits the response "no," it is more helpful to encourage questions. For example, a clinician could end a visit with the following statement: "I bet a lot of questions have been on your mind as we've talked. Tell me 1 or 2 questions you've been thinking about." If the patient has no further questions, he or she should be reminded that the discussion can continue at the next visit and encouraged to bring questions at that time.

Helping Patients Find Reliable Internet Information: eHealth Literacy

Use of reliable internet health information improves self-care in PLWH through increased understanding of treatment plans, disease processes, and improvements in adherence practices.[16] However, the research provides evidence that even PLWH and high health literacy cannot tell the difference between commercial websites, government websites, research institutions or the difference between advertisements and real information.[13,14] In addition, there are many HIV information websites that do not provide current information, present anecdotal information as fact, and do not have expert review.[15] To help patients find reliable internet health information, clinicians can recommend HIV health websites that end with .gov (eg, HIV.gov), .edu, or .org, and sites with a HON (Honesty on the Net) designation.

Conclusion

Health literacy is a person's ability to understand and use health information to make healthy choices. Health literacy is also the capacity of clinicians to communicate effectively so patients can make informed health decisions. Most patients do not have a high level of health literacy and clinicians overestimate their ability to communicate health information. These barriers have a significant impact on health outcomes in PLWH; detrimental health choices may result from the inability to recognize and use reliable health information. Clinicians can use health literacy universal precautions, teach-back, *Ask Me 3*, open-ended questions, and suggestions for reliable HIV health information websites to mitigate the health literacy disconnect and improve health outcomes for PLWH.

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The Importance of Housing for People Living with or at Risk for HIV

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The role of stabilized housing in treatment efficacy is one that the healthcare community understands to be vital. There are studies that point to the correlation between unstable housing and higher risk behaviors; studies that indicate improved housing situations lead to improved health outcomes; and studies that conclude and highlight the importance of sustainable housing for individuals living with chronic illness.[1-3] As community health professionals, many of us know firsthand the impact that housing has on an individual's ability to adhere to treatment, maintain adequate nutrition, and seek help. Why, then, is "housing" too often forgotten when conducting health assessments and recommending a treatment plan? Why are there not more tools and intentional pathways for healthcare professionals to address homelessness or housing instability with their patients? As it turns out, "housing" is one of the most complicated basic needs to meet. If only we could write a prescription for "safe housing."

In 1965, Dr. Jack Geiger and Kent Gibson, both healthcare mavericks did just that, but related to food.[4] They opened the Delta Community Health Center in Mound Bayou, Mississippi, with funding from the US Office of Economic Opportunity. Their clinic set out to address the health needs of impoverished rural communities. At that time, the Mississippi Delta community was facing a crisis of malnutrition due to inadequate access to food. In a part of the country where farming had been a means of work, income, and food, suddenly, mechanization of farming had left large swaths of workers jobless. The Delta community was also facing significant inequities and health disparities, as evidenced by the fact that out of every 1,000 African American children born alive in the area, 56 died before their first birthday, mostly because of malnutrition. Dr. Geiger believed that no health issue should be treated in isolation of the whole person and their circumstances. He believed that social determinants of health must be considered. As a strategy to address food insecurity, he creatively tapped into the health center's pharmaceutical budget and wrote prescriptions for food – fresh vegetables, meats, dairy, grains. These prescriptions could be taken to the local grocer who would provide the food and receive reimbursement from the clinic. This prescription also included enough food for the other children in the home and their mother. Because of this innovative practice of writing grocery prescriptions, the infant mortality rate in this area of the Delta community was reduced by half.

Similarly, social determinants and the inequities that sustain the divide between those with access and those without play out clearly in the intersection of HIV and homelessness. From the days that the very first antiretroviral medications were prescribed, advances in the treatment of HIV has led to significantly better outcomes– fewer deaths and longer, active lives. We now are in the position to effectively end HIV transmission. Innovative medical care, social outreach programs, and strategically planned community-based solutions have made it possible to reach this stage in the virtual eradication of the virus. However, when the very practical and socially-based factors are not addressed, when homelessness, housing instability, and food deserts continue, effective treatment and disease prevention methods are not enough to bring us to zero new infections.

New Jersey HIVLinks Spring 2018
HIV, STD, and TB news and information for health professionals

Chronic illness management (ie, HIV treatment adherence) is difficult for the homeless patient, and unstable food and medical resources almost always accompany unstable housing. There are also many reasons why an individual or family faces homelessness or housing instability. These reasons are, in large part, what makes it so difficult for our healthcare system to address something as difficult as the topic of helping the homeless. Poverty, substance use, unmanaged mental health issues, domestic violence, and, increasingly, immigration status are some of the most common contributors to homelessness, and they are often co-occurring. The connection between HIV and housing is multi-faceted.[5,6] In some cases, homelessness is a contributing factor to engagement in HIV-acquiring risk behaviors; and, knowledge of an individual's HIV status can sometimes lead to homelessness or housing instability.

Homeless young people, particularly those who are LGBTQI-identifying, live at the intersection of multiple social and health risk factors putting them at high-risk for HIV infection.[7,8] The frequent exchange of sex for money, drugs, or a place to stay; the high rate of substance use; the untreated or undiagnosed mental health issues and depression; and the unaddressed trauma faced by those living transiently, all converge on high risk behaviors such as infrequent condom use and/or pre-exposure prophylaxis therapy. The link between being unstably housed and the risk of HIV infection is well-defined.

Equally as clear, is the line drawn from an individual living with HIV and the risk of becoming homeless, particularly when underserved populations combine with social factors that create an unsupportive and hostile environment. When a newly diagnosed young adult discloses her status, and is suddenly faced with the trauma of social and emotional abandonment, stigma, physical violence, and loss of support, this can lead to homelessness as well as dropping out of healthcare.

Prescription for Housing

One thing is clear from a review of the available data. Housing is healthcare for people living with HIV (PLWH). There are many forms of housing and their suitability varies in terms of availability and cost. Just as with disease, the same course of treatment is not applicable to all people. The housing needs and parameters of an individual depends on factors such as income, location, and accessibility; and to fully address the scope of maintaining stable housing, psychosocial considerations such as not causing re-traumatization and ensuring an individual is not isolated from their support system are just as important. If an individual of trans-experience is placed in a shelter where they have been discriminated against, we cannot expect that individual to stay in housing and care even if the alternative is to sleep on the streets. The right placement is one that is informed and strategically aligned with a person's individual needs.

Permanent Supportive Housing (resources, opportunities, successes)

The more widely available forms of housing for homeless PLWH (and their families) include permanent supportive housing. This type of housing couples affordable housing with support services, usually through the services of a case manager. Permanent supportive housing can be site-based, such as a group of adjacent apartments; homes clustered at a single site with supportive services on-site; or scattered-site where apartments or homes are located throughout the community and tenants are expected to meet regularly with support staff either through home visits or at an office. As is typical of most subsidized housing opportunities, residents pay one-third of their income towards rent, and supportive services are offered but participation is not mandatory.

The New York State Department of Health has launched an innovative program to provide permanent supportive housing to homeless Medicaid patients.[9] The Medicaid rede-

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sign team has made an investment of $641 million over seven years to house the homeless. In a May 2017 overview, Jason Helgerson, Medicaid Director in the Office of Health Insurance Program, presented early key findings including:

- A 40% reduction in inpatient days
- A 26% reduction in emergency department visits
- A 44% reduction in patients with inpatient substance use rehab admissions
- A 27% reduction in patients with inpatient psychiatric admissions
- Through strategic prioritization, the top decile of enrollees had average Medicaid savings of $23,000–$52,000 per person per year (varied by program)
- A 15% reduction in overall Medicaid health expenditures9

HOPWA - HUD

The Housing Opportunities for Persons with AIDS (HOPWA) Program is a federal resource that specifically addresses the housing needs of PLWH. Under the HOPWA Program, US Department of Housing and Urban Development (HUD) provides grants to local communities, states, and nonprofit organizations for projects that benefit low-income PLWH and their families. In 2017, HUD awarded a total of $8,741,067 to New Jersey entities including the State of New Jersey (NJ) and the cities of Newark, NJ, and Patterson, NJ.[10]

HUD Section 8 Housing Choice Vouchers

This resource for housing is not HIV-specific. However, Section 8 vouchers have played a prominent role in the stable housing of low-income PLWH and their families. To create housing targeted to the HIV-impacted population, entities awarded Section 8 vouchers may have special "project-based" subsidies – meaning, they were awarded vouchers that stay with the project or program and can be used for specific populations, such as PLWH.

In 1994, the NJ Housing Mortgage and Finance Agency (NJHMFA) created the first statewide "Scattered-site AIDS Housing Program" by developing 64 units of housing in four major cities: Patterson, Newark, Trenton, and Camden.11 NJHMFA partnered with HIV service providers to manage the properties and provide support services to the residents. The provider agencies received project-based vouchers through Section 8. Today, the AIDS Resource Foundation for Children, as one of the original partnering agencies on this project, continues to house PLWH through this subsidy, providing homes and support to 80 households.

State Rental Assistance Program (SRAP) Vouchers

Administered through the NJ Department of Community Affairs, SRAP vouchers are subsidies that are offered to low-income elderly individuals, families, or households where the head of household is permanently disabled.

Other Forms of Housing

Transitional Housing: These programs usually consist of housing for a specific target population and are time-limited, typically up to 24 months. The idea is that during the time in a transitional program, the resident can address their barriers to successful independent living. These barriers include a wide array of challenges such as adjusting to life after incarceration, learning to lead a sober life, leaving an abusive relationship, and many other situations. Transitional programs can vary greatly regarding structure, participation in services, financial contributions toward rent or savings, and in the provision of in-house or referral support services. A visit to the transitional home with an overview of the rules is highly recommended prior to an individual's intake into the facility.

Affordable Housing: The HUD definition of affordable housing is "housing for which the occupant(s) is/are paying no more than 30 percent of his or her income for gross housing costs, including utilities."[12] Affordable housing developments often consist of a mix of market-rate apartments and affordable "set-aside" units. Residents who qualify for the affordable units will pay, at most, a third of their income toward rent. A 45-unit apartment building might have a set-aside of five units of affordable housing as part of an agreement for incentives such as tax credits, zoning variances, grant funds, or other financing. The concept is that the market rate units generate enough revenue to subsidize the affordable units.

Emergency Housing: Emergency shelters and hotels are another tool in the effort to engage or re-engage homeless PLWH into healthcare and treatment. Emergency housing can be the stabilizer that keeps a vulnerable person in care or reconnects someone who was lost to care. NJ has implemented an innovative program to house all homeless PLWH and families as soon as they present themselves and to connect them to a case manager to begin working on transitioning them from emergency housing to something more appropriate based on the patient needs.

Group homes, drug treatment programs, halfway houses, single room occupancy buildings, domestic violence shelters and other population-specific housing make up the remainder of the tapestry of housing options for vulnerable populations. Although these options are very helpful in transitioning an individual into longer-term housing solutions, they can vary greatly in terms of quality and availability.

To maximize the existing housing resources and identify the gaps, it is necessary to coordinate the integration of HIV housing options with local, county, and state-level systems. The NJ Department of Health Division of HIV, STD, and TB Services has initiated this effort through the funding of a statewide HIV Housing Collaborative. The AIDS Resource Foundation for Children (ARFC), the largest HIV housing provider in the state, leads the Collaborative with membership from over 20 HIV service providers across NJ. The ARFC has been providing a mix of transitional and permanent supportive housing in NJ since 1986. The work of the Housing Collaborative includes the provision of emergency housing, capacity building for HIV service providers, and an assessment of the housing resources and needs across the state. To join the collaborative or to get more information contact: Kevin Zealand, by email kzealand@aidsresource.org or by phone (973) 643-0400 ext. 762.

Just as Dr. Geiger saw plainly how to address the problem of malnutrition (prescribe food!) in the Mississippi Delta, any treatment regimen for a PLWH must include stable housing. To reach a goal of zero new HIV infections, an organized focus on housing as treatment is required.

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NJDOH-DHSTS The New Jersey AIDS Drug Distribution Program (ADDP) and Social Media for Agencies, Centers and Academic Institutions http://hpcpsdi.rutgers.edu/training/main.php

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  Perinatal HIV Hotline: (888) 448-8765
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AIDSinfo: a service of the US Department of Health and Human Services, offers access to the latest, federally approved HIV/AIDS medical practice guidelines, HIV treatment and prevention clinical trials, and other research information. http://www.aidsinfo.nih.gov/

US National Institutes of Health: a registry and results database of publicly and privately supported clinical studies conducted around the world. http://clinicaltrials.gov

US Centers for Disease Control and Prevention (CDC): http://www.cdc.gov/hiv/default.html

Health Resources and Services Administration (HRSA): http://www.hrsa.gov

FDA MedWatch: (800) FDA-1088; Subscribe to **e-bulletin:** www.fda.gov/medwatch/elist.htm

Center for Quality Improvement and Innovation: no-cost, technical assistance for Ryan White funded grantees to improve the quality of HIV care nationwide. www.nationalqualitycenter.org

TARGET Center: technical assistance and training resources for the Ryan White community. www.careacttarget.org

New Jersey Department of Health–Division of HIV, STD, and TB Services (NJDOH-DHSTS) (609) 984-5874 ▪ www.state.nj.us/health/aids
- NJ HIV/AIDS statistical reports, regulations, forms, and links to HIV care, prevention programs, and training
- New Jersey rapid testing site: www.state.nj.us/health/aids/rapidtesting
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