

# Preexposure Prophylaxis and Patient Centeredness: A Call for Holistically Protecting and Promoting the Health of Gay Men

American Journal of Men's Health

2016, Vol. 10(5) 353–358

© The Author(s) 2016

Reprints and permissions:

sagepub.com/journalsPermissions.nav

DOI: 10.1177/1557988316658288

ajmh.sagepub.com

 SAGE



Jonathan M. Snowden, PhD<sup>1</sup>, Maria I. Rodriguez, MD, MPH<sup>1</sup>,  
Skyler D. Jackson, MS<sup>2</sup>, and Julia L. Marcus, PhD, MPH<sup>3</sup>

## Abstract

Preexposure prophylaxis has transformed HIV prevention, becoming widespread in communities of gay and bisexual men in the developed world in a short time. There is a broad concern that preexposure prophylaxis will discourage condom use among gay men (i.e., “risk compensation”). This commentary argues for broadening the focus on gay men’s health beyond sexual health to address the holistic health and well-being of gay men. Gay men may benefit from being offered candid, nonjudgmental health promotion/HIV prevention messages not requiring condom use for anal sex. Lessons can be drawn from the family planning movement, which has undergone a similar shift in focus. The principle of patient centeredness supports such a shift in gay men’s health toward the goal of providing men with the knowledge to evaluate various prevention approaches according to the specifics of their life circumstances and health needs. Bringing more nuance to discussions of sexual risk and sexual pleasure could facilitate more universally healthy attitudes regarding sex among gay men, in turn enabling healthier decisions more compatible with men’s own values and preferences.

## Keywords

HIV/AIDS, sexual health, gay, risk factors, sexually transmitted diseases/infections

## Introduction

In the time since studies initially demonstrated the efficacy of antiretroviral therapy as preexposure prophylaxis (PrEP) to prevent sexual transmission of the human immunodeficiency virus (HIV; Baeten et al., 2012; Grant et al., 2010), the landscape of HIV prevention has changed dramatically. The topic of PrEP has elicited debate and controversy, even long before it was a reality. The numerous critiques of PrEP as a prevention modality include the possibility that PrEP will discourage the use of condoms (Cassell, Halperin, Shelton, & Stanton, 2006), the mainstay of HIV-prevention efforts directed toward gay men for the past three decades. The potential for this PrEP-related “risk compensation” or “risk disinhibition” has become an active area of research in its own right (Liu et al., 2013; Marcus et al., 2013).

The holistic health of gay men would be better served by adopting a more nuanced attitude toward condom use and its role in the set of diverse techniques that gay men employ to protect their sexual health. More broadly, it is time to reevaluate the centrality of HIV prevention in

public health messaging directed toward gay men. Lessons can be drawn from the field of family planning to argue that decreasing the focus on sex as a mechanism of disease transmission, and condoms as the best tool to combat this disease, could increase the sexual health, satisfaction, and well-being of gay men.

## The Changing Landscape of HIV Prevention

After proof of efficacy, the move toward broader PrEP access has been gradual, from the Centers for Disease Control and Prevention’s (CDC) interim guidelines on

<sup>1</sup>Oregon Health & Science University, Portland, OR, USA

<sup>2</sup>University of Maryland, College Park, MD, USA

<sup>3</sup>Kaiser Permanente Northern California, Oakland, CA, USA

### Corresponding Author:

Jonathan M. Snowden, Department of Obstetrics & Gynecology, Oregon Health & Science University, 3181 SW Sam Jackson Park Road, Mail Code L-466, Portland, OR 97239, USA.

Email: snowden@ohsu.edu

PrEP use in 2011, through U.S. Food and Drug Administration approval in 2012. In particular, since the CDC's promotion of PrEP use in specific U.S. populations at elevated risk for HIV infection in 2014 (U.S. Public Health Service & CDC, 2014), PrEP use has become widespread in some communities of gay and bisexual men in the developed world (Volk et al., 2015). Recent behavioral surveillance data from San Francisco have suggested that as much as 10% of men who have sex with men (MSM) were already using PrEP as of 2014 (Chen, Snowden, McFarland, & Raymond, 2016). The increasing uptake of PrEP among MSM provides new opportunities to study its effectiveness in community settings. Perhaps more important, the present moment in HIV prevention provides an opportunity to reflect on the past, present, and future of HIV prevention and health promotion among gay men.

### **Adopting a Holistic Approach to Gay Men's Health**

In its first decades, the HIV epidemic had profound impacts on medical, social, and political dimensions of life in the United States and around the globe. The toll of human suffering was enormous. Although HIV infection is now considered a manageable chronic disease with adequate health care access in developed world settings (Marcus et al., 2016; May et al., 2014), it is important to note there are still too many people without access to these lifesaving medications (Hall et al., 2013; Hill & Pozniak, 2015). As well, in the United States and increasingly around the world, there is recognition that specific "most at-risk populations" have disproportionately borne the burden of HIV infection and associated morbidity and mortality. MSM (including gay men, bisexual men, and nongay/bisexual-identified MSM) are central among these at-risk populations (UNAIDS/World Health Organization [WHO], 2011). Perhaps no community in the developed world has been more socially transformed by HIV than the gay community. The HIV epidemic catalyzed dramatic political and social changes among gay men; the broader lesbian, gay, bisexual, and transgender community; and how the rest of American society understands lesbian, gay, bisexual, and transgender people (Andriote, 1999).

Until 5 years ago, sexual health and especially HIV infection have been the focus of public health research on and messaging directed toward gay men (Boehmer, 2002; Coulter, Kenst, Bowen, & Scout, 2014). In light of the continuing integration of the gay community into the fabric of U.S. life, and also the scientific advances that have transformed the sequelae and natural history of HIV infection, it is time to reevaluate the centrality of HIV

prevention in public health messaging directed toward gay men. Existing gay men's health research has also amply examined mental health, substance use, and discrimination/bullying (Herek & Garnets, 2007; Mueller, James, Abrutyn, & Levin, 2015; Stall et al., 2001), including how these factors relate to sexual behavior and risk of HIV infection (Parsons, Grov, & Golub, 2012). In the past 5 years, research has documented important disparities between sexual minority men and their heterosexual counterparts in other areas of health (e.g., cardiovascular health, endocrine function, inflammation, and all-cause mortality; Cochran, Bjorkenstam, & Mays, 2016; Everett, Rosario, McLaughlin, & Austin, 2014; Hatzenbuehler, McLaughlin, & Slopen, 2013).

These recent findings on gay men's health and identity highlight that, more than just a set of sexual practices, gay men can be understood in relation to specific family structures, communities, and a set of shared experiences. The great diversity within the gay community (e.g., among cisgender and transgender men, between racial minority men and White men; Rowniak & Chesla, 2013; Sarno, Mohr, Jackson, & Fassinger, 2015; White & Stephenson, 2014) prevents assuming a homogenous "gay experience." There are also meaningful differences between gay men, bisexual men, and other nongay-identified MSM (Siegel, Schrimshaw, Lekas, & Parsons, 2008). Nonetheless, the commonalities that connect gay men (and, in some cases, bisexual men) highlight the importance of advancing gay men's health research beyond sexual health and mental health. The sincere desire to protect gay men's sexual health should not come at the expense of the diverse needs, risks, and resiliencies of this community. This commentary focuses on the health of gay men, while recognizing the even more pressing knowledge gaps in bisexual and transgender men's health, which demand to be addressed (Coulter et al., 2014).

### **Patient Centeredness in Sexual Health Promotion**

Once the etiology of HIV transmission was definitively identified, encouraging condom use for anal sex has been the centerpiece of HIV prevention efforts directed toward the gay community. Although there are other factors that are crucial to the effectiveness of condoms for preventing HIV among gay men (e.g., condom-compatible lubricant), and other strategies have become common in practice (e.g., choosing partners of the same HIV status or basing sexual choices on undetectable viral load; Holt et al., 2015; Snowden, Raymond, & McFarland, 2009), condoms remain the core recommended HIV-prevention modality for gay men. This is evident both in common

parlance (e.g., “safe” or “protected” sex being used to mean sex with a condom) as well as in policy and clinical discussion of PrEP use (e.g., the CDC guideline that PrEP be used only as a backstop against mistakes [i.e., failure to use a condom] and condom breakage; U.S. Public Health Service & CDC, 2014).

In addition to expanding the focus of gay men’s health beyond sexual health, it is also time to reevaluate how centrally condom use figures into the HIV-prevention messages delivered to gay men. The extremely high efficacy of PrEP has now been demonstrated across more than one method of dosing (e.g., continuous and episode-based) and setting (e.g., placebo-controlled and open-label studies; Grant et al., 2014; Liu et al., 2016; McCormack et al., 2016; Molina et al., 2015; Volk et al., 2015). Furthermore, although no biomedical prevention strategy, including PrEP, is 100% effective, the complete prevention of HIV and/or other sexually transmitted infections may not be the only goal that gay men adopt in approaching their sexual decision making, or even the primary goal. For population health researchers, HIV elimination is certainly and justifiably the central goal. As patient centeredness and the values and perspectives of individual people become more central to researching, designing, and evaluating preventive and therapeutic approaches (Epstein, Fiscella, Lesser, & Stange, 2010; Porche, 2014), caution is needed in assuming that researchers’ and providers’ preferences are the same as those of the populations they study and serve.

It is possible that, on weighing the individual risks as well as the benefits of various sexual decisions and HIV/sexually transmitted infection prevention techniques, a gay man will make the informed and rational decision to use PrEP and have anal sex without a condom. The potential risks associated with this choice are clear (Clement & Hicks, 2016). Perhaps less evident in the health research literature are the potential benefits of such a choice. Benefits include sharing a level of intimacy and closeness with a partner that is not possible with a barrier (Bauermeister, Carballo-Diequez, Ventuneac, & Dolezal, 2009; Grant & Koester, 2016). We are all as humans entitled to that level of intimacy. There is more agreement among health researchers that condomless anal sex is acceptably low risk for men in mutually exclusive, HIV-concordant, monogamous relationships (Kippax et al., 1997). This nuance around risk and safety should now be extended to different types of relationships and sexual encounters.

## What Can Be Learned From Family Planning

Others have noted parallels between the PrEP paradigm and family planning health services (Haberer et al., 2015; Myers & Sepkowitz, 2013). The family planning movement has

gone through a similar shift in focus. The family planning movement arose from the combination of two separate schools of thought that coalesced in the mid-1960s around the shared goals of birth spacing and limiting family size (CDC, 2000). This was a hybrid of the pioneering work of Margaret Sanger and others, which focused on women’s rights and prevention of unintended pregnancy, with neo-Malthusians who emphasized population control (Sinding, 2000). The modern family planning movement recognizes the importance of meeting the varied sexual and reproductive health needs of diverse populations that include adolescents, unmarried couples, and men (Casey et al., 2016; Rodriguez, Say, & Temmerman, 2014).

Family planning activists and researchers acknowledge a need to not simply prevent unintended pregnancy, but to promote sexual and reproductive health and rights through supporting individual choice (WHO, 2014). The goal is to provide individuals with the knowledge to evaluate and compare the suitability of various approaches for their specific needs and preferences, and to choose the approach or approaches that work best for their lives. In particular, there is an emphasis on providing access to methods that may be controlled by the receptive sexual partner (e.g., long-acting methods and/or some hormonal methods in the case of contraception, and PrEP in the case of HIV prevention), which empower the partner most immediately at risk for unintended pregnancy and HIV infection in a way that condoms arguably do not. Importantly, the shared goal of preventing unintended pregnancy does not lead to one method being universally advocated for. Researchers, health care providers, and public health professionals who work on gay men’s health should adopt similarly nuanced thinking and messaging in describing men’s options to them, and supporting them in making informed choices that work for their lives.

This analogy is not perfect. Unintended pregnancy is not HIV infection, and PrEP is not contraception. However, while acknowledging these differences, it is important to consider the parallels and what they imply. One parallel is that a central purpose of sex—whether between men or between a man and a woman—is often to achieve pleasure (Grant & Koester, 2016; WHO, 2006). Although the goals of preventing unintended pregnancy and preventing HIV infection are important, and are frequently the focus for health researchers, they are often only ancillary goals to people who are having sex.

There is now ample research documenting the worry and fear that some gay men experience when considering and practicing anal sex (Starks, Rendina, Breslow, Parsons, & Golub, 2013). Although some level of worry is universal to all people, the legacy of the HIV epidemic affects gay men in particular ways, and has added particular resonance—and stigma—specifically to the act of anal sex. Without abandoning discussions of anal sex and

HIV risk, this commentary proposes a more holistic approach toward gay men's health. Bringing more nuance to discussions of sexual risk and sexual pleasure could facilitate more universally healthy attitudes regarding sex among gay men. This might in turn enable healthier decisions more compatible with men's own values and preferences. Thus, broadening the discussion of gay men's sexual health is a step closer toward achieving the WHO's (2006) definition of sexual health as a "state of physical, emotional, mental and social well-being in relation to sexuality, . . . not merely the absence of disease, dysfunction or infirmity."

## Conclusions

Given the disproportionate burden of the HIV epidemic that continues to be borne by gay men—particularly gay and bisexual men of African descent (Millett, Jeffries, et al., 2012; Millett, Peterson, et al., 2012)—preventing HIV must remain part of the public health messaging delivered to gay men. Without vigilance, PrEP itself may exacerbate such racial/ethnic disparities in HIV infection among gay men, especially given that it requires access to and trustful engagement in the health care system. Condoms have been and will continue to be an integral part of many men's HIV-prevention strategies. However, it is now important to consider the potential benefits of incorporating candid, nonjudgmental discussion of HIV-prevention techniques not requiring condom use for anal sex into health promotion messaging for gay men. These messages should not replace discussions of HIV prevention and condom use, but they may serve to broaden the scope of how gay men understand their health, their sexuality, and themselves. Such an approach is not without health risks but it also has potential benefits for the health and broader well-being of gay men.

## Declaration of Conflicting Interests

The author(s) declared the following potential conflicts of interest with respect to the research, authorship, and/or publication of this article: JLM is supported by a research grant from Kaiser Permanente Northern California Community Benefit (Grant Number CN-14-2036-H) and has been supported by a research grant to her institution from Merck. All other authors have no competing interests to declare.

## Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: JMS is supported by the *Eunice Kennedy Shriver* National Institute of Child Health and Human Development (Grant Number K99 HD079658-02). MIR is a Women's Reproductive Health Research fellow supported by the *Eunice Kennedy Shriver* National Institute of Child Health and Human Development

(Grant Number 1K12HD085809). SDJ is supported by the Mental Health and Substance Abuse Services Fellowship, funded by the federal Substance Abuse and Mental Health Services Administration.

## References

- Andriote, J.-M. (1999). *Victory deferred: How AIDS changed gay life in America*. Chicago, IL: University of Chicago Press.
- Baeten, J. M., Donnell, D., Ndase, P., Mugo, N. R., Campbell, J. D., Wangisi, J., . . . Celum, C. (2012). Antiretroviral prophylaxis for HIV prevention in heterosexual men and women. *New England Journal of Medicine*, *367*, 399-410.
- Bauermeister, J. A., Carballo-Dieguez, A., Ventuneac, A., & Dolezal, C. (2009). Assessing motivations to engage in intentional condomless anal intercourse in HIV risk contexts ("bareback sex") among men who have sex with men. *AIDS Education and Prevention*, *21*, 156-168.
- Boehmer, U. (2002). Twenty years of public health research: Inclusion of lesbian, gay, bisexual, and transgender populations. *American Journal of Public Health*, *92*, 1125-1130.
- Casey, F. E., Sonenstein, F. L., Astone, N. M., Pleck, J. H., Dariotis, J. K., & Marcell, A. V. (2016). Family planning and preconception health among men in their mid-30s: Developing indicators and describing need. *American Journal of Men's Health*, *10*, 59-67.
- Cassell, M. M., Halperin, D. T., Shelton, J. D., & Stanton, D. (2006). Risk compensation: The Achilles' heel of innovations in HIV prevention? *British Medical Journal*, *332*, 605-607.
- Centers for Disease Control and Prevention. (2000). Achievements in public health, 1900-1999: Family planning. *Journal of the American Medical Association*, *283*, 326-327, 331.
- Centers for Disease Control and Prevention. (2011). Interim guidance: Preexposure prophylaxis for the prevention of HIV infection in men who have sex with men. *Morbidity and Mortality Weekly Report*, *60*, 65-68.
- Chen, Y. H., Snowden, J. M., McFarland, W., & Raymond, H. F. (2016). Pre-exposure prophylaxis (PrEP) use, seroadaptation, and sexual behavior among men who have sex with men, San Francisco, 2004-2014. *AIDS and Behavior*. Advance online publication. doi:10.1007/s10461-016-1357-2
- Clement, M. E., & Hicks, C. B. (2016). Syphilis on the rise: What went wrong? *Journal of the American Medical Association*, *315*, 2281-2283.
- Cochran, S. D., Bjorkenstam, C., & Mays, V. M. (2016). Sexual orientation and all-cause mortality among US adults aged 18 to 59 years, 2001-2011. *American Journal of Public Health*, *106*, 918-920.
- Coulter, R. W., Kenst, K. S., Bowen, D. J., & Scout. (2014). Research funded by the National Institutes of Health on the health of lesbian, gay, bisexual, and transgender populations. *American Journal of Public Health*, *104*, e105-e112.
- Epstein, R. M., Fiscella, K., Lesser, C. S., & Stange, K. C. (2010). Why the nation needs a policy push on patient-centered health care. *Health Affairs*, *29*, 1489-1495.

- Everett, B. G., Rosario, M., McLaughlin, K. A., & Austin, S. B. (2014). Sexual orientation and gender differences in markers of inflammation and immune functioning. *Annals of Behavioral Medicine, 47*, 57-70.
- Grant, R. M., Anderson, P. L., McMahan, V., Liu, A., Amico, K. R., Mehrotra, M., . . . Glidden, D. V. (2014). Uptake of pre-exposure prophylaxis, sexual practices, and HIV incidence in men and transgender women who have sex with men: A cohort study. *Lancet Infectious Diseases, 14*, 820-829.
- Grant, R. M., & Koester, K. A. (2016). What people want from sex and preexposure prophylaxis. *Current Opinion in HIV and AIDS, 11*, 3-9.
- Grant, R. M., Lama, J. R., Anderson, P. L., McMahan, V., Liu, A. Y., Vargas, L., . . . Glidden, D. V. (2010). Preexposure chemoprophylaxis for HIV prevention in men who have sex with men. *New England Journal of Medicine, 363*, 2587-2599.
- Haberer, J. E., Bangsberg, D. R., Baeten, J. M., Curran, K., Koechlin, F., Amico, K. R., . . . O'Reilly, K. (2015). Defining success with HIV pre-exposure prophylaxis: A prevention-effective adherence paradigm. *AIDS, 29*, 1277-1285.
- Hall, H. I., Frazier, E. L., Rhodes, P., Holtgrave, D. R., Furlow-Parmley, C., Tang, T., . . . Skarbinski, J. (2013). Differences in human immunodeficiency virus care and treatment among subpopulations in the United States. *JAMA Internal Medicine, 173*, 1337-1344.
- Hatzenbuehler, M. L., McLaughlin, K. A., & Slopen, N. (2013). Sexual orientation disparities in cardiovascular biomarkers among young adults. *American Journal of Preventative Medicine, 44*, 612-621.
- Herek, G. M., & Garnets, L. D. (2007). Sexual orientation and mental health. *Annual Review of Clinical Psychology, 3*, 353-375.
- Hill, A., & Pozniak, A. (2015). HIV treatment cascades: How can all countries reach the UNAIDS 90-90-90 target? *AIDS, 29*, 2523-2525.
- Holt, M., Lea, T., Mao, L., Zablotska, I., Prestage, G., & de Wit, J. (2015). Brief report: HIV prevention by Australian gay and bisexual men with casual partners: The emergence of undetectable viral load as one of a range of risk reduction strategies. *Journal of Acquired Immune Deficiency Syndromes, 70*, 545-548.
- Kippax, S., Noble, J., Prestage, G., Crawford, J. M., Campbell, D., Baxter, D., & Cooper, D. (1997). Sexual negotiation in the AIDS era: Negotiated safety revisited. *AIDS, 11*, 191-197.
- Liu, A. Y., Cohen, S. E., Vittinghoff, E., Anderson, P. L., Doblecki-Lewis, S., Bacon, O., . . . Kolber, M. A. (2016). Preexposure prophylaxis for HIV infection integrated with municipal- and community-based sexual health services. *JAMA Internal Medicine, 176*, 75-84.
- Liu, A. Y., Vittinghoff, E., Chillag, K., Mayer, K., Thompson, M., Grohskopf, L., . . . Buchbinder, S. P. (2013). Sexual risk behavior among HIV-uninfected men who have sex with men participating in a tenofovir preexposure prophylaxis randomized trial in the United States. *Journal of Acquired Immune Deficiency Syndromes, 64*, 87-94.
- Marcus, J. L., Chao, C. R., Leyden, W. A., Xu, L., Quesenberry, C. P., Jr., Klein, D. B., . . . Silverberg, M. J. (2016). Narrowing the gap in life expectancy between HIV-infected and HIV-uninfected individuals with access to care. *Journal of Acquired Immune Deficiency Syndromes*. Advance online publication. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/27028501/#>
- Marcus, J. L., Glidden, D. V., Mayer, K. H., Liu, A. Y., Buchbinder, S. P., Amico, K. R., . . . Grant, R. M. (2013). No evidence of sexual risk compensation in the iPrEx trial of daily oral HIV preexposure prophylaxis. *PLoS ONE, 8*(12), e81997.
- May, M. T., Gompels, M., Delpech, V., Porter, K., Orkin, C., & Kegg, S., . . . U.K. Collaborative HIV Cohort Study. (2014). Impact on life expectancy of HIV-1 positive individuals of CD4+ cell count and viral load response to antiretroviral therapy. *AIDS, 28*, 1193-1202.
- McCormack, S., Dunn, D. T., Desai, M., Dolling, D. I., Gafos, M., Gilson, R., . . . Gill, O. N. (2016). Pre-exposure prophylaxis to prevent the acquisition of HIV-1 infection (PROUD): Effectiveness results from the pilot phase of a pragmatic open-label randomised trial. *Lancet, 387*, 53-60.
- Millett, G. A., Jeffries, W. L., IV, Peterson, J. L., Malebranche, D. J., Lane, T., Flores, S. A., . . . Heilig, C. M. (2012). Common roots: A contextual review of HIV epidemics in black men who have sex with men across the African diaspora. *Lancet, 380*, 411-423.
- Millett, G. A., Peterson, J. L., Flores, S. A., Hart, T. A., Jeffries, W. L., IV, Wilson, P. A., . . . Remis, R. S. (2012). Comparisons of disparities and risks of HIV infection in black and other men who have sex with men in Canada, UK, and USA: A meta-analysis. *Lancet, 380*, 341-348.
- Molina, J. M., Capitant, C., Spire, B., Pialoux, G., Cotte, L., Charreau, I., . . . Delfraissy, J. F. (2015). On-demand preexposure prophylaxis in men at high risk for HIV-1 infection. *New England Journal of Medicine, 373*, 2237-2246.
- Mueller, A. S., James, W., Abrutyn, S., & Levin, M. L. (2015). Suicide ideation and bullying among US adolescents: Examining the intersections of sexual orientation, gender, and race/ethnicity. *American Journal of Public Health, 105*, 980-985.
- Myers, J. E., & Sepkowitz, K. A. (2013). A pill for HIV prevention: Déjà vu all over again? *Clinical Infectious Diseases, 56*, 1604-1612.
- Parsons, J. T., Grov, C., & Golub, S. A. (2012). Sexual compulsivity, co-occurring psychosocial health problems, and HIV risk among gay and bisexual men: Further evidence of a syndemic. *American Journal of Public Health, 102*, 156-162.
- Porche, D. J. (2014). Patient-centered men's health. *American Journal of Men's Health, 8*, 5.
- Rodriguez, M. I., Say, L., & Temmerman, M. (2014). Family planning versus contraception: What's in a name? *Lancet Global Health, 2*, e131-e132.
- Rowniak, S., & Chesla, C. (2013). Coming out for a third time: Transmen, sexual orientation, and identity. *Archives of Sexual Behavior, 42*, 449-461.

- Sarno, E. L., Mohr, J. J., Jackson, S. D., & Fassinger, R. E. (2015). When identities collide: Conflicts in allegiances among LGB people of color. *Cultural Diversity & Ethnic Minority Psychology, 21*, 550-559.
- Siegel, K., Schrimshaw, E. W., Lekas, H. M., & Parsons, J. T. (2008). Sexual behaviors of non-gay identified non-disclosing men who have sex with men and women. *Archives of Sexual Behavior, 37*, 720-735.
- Sinding, S. W. (2000). The great population debates: How relevant are they for the 21st century? *American Journal of Public Health, 90*, 1841-1845.
- Snowden, J. M., Raymond, H. F., & McFarland, W. (2009). Prevalence of seroadaptive behaviours of men who have sex with men, San Francisco, 2004. *Sexually Transmitted Infections, 85*, 469-476.
- Stall, R., Paul, J. P., Greenwood, G., Pollack, L. M., Bein, E., Crosby, G. M., . . . Catania, J. A. (2001). Alcohol use, drug use and alcohol-related problems among men who have sex with men: The Urban Men's Health Study. *Addiction, 96*, 1589-1601.
- Starks, T. J., Rendina, H. J., Breslow, A. S., Parsons, J. T., & Golub, S. A. (2013). The psychological cost of anticipating HIV stigma for HIV-negative gay and bisexual men. *AIDS and Behavior, 17*, 2732-2741.
- UNAIDS and WHO Working Group on Global HIV/AIDS and STI Surveillance. (2011). *Guidelines on surveillance among populations most at risk for HIV*. Retrieved from [http://files.unaids.org/en/media/unaids/contentassets/documents/epidemiology/2011/20110518\\_Surveillance\\_among\\_most\\_at\\_risk.pdf](http://files.unaids.org/en/media/unaids/contentassets/documents/epidemiology/2011/20110518_Surveillance_among_most_at_risk.pdf)
- U.S. Food and Drug Administration. (2012). *FDA approves first drug for reducing the risk of sexually acquired HIV infection*. Silver Spring, MD: Author.
- U.S. Public Health Service & Centers for Disease Control and Prevention. (2014). *Preexposure prophylaxis for the prevention of HIV infection in the United States-2014: A clinical practice guideline*. Retrieved from <https://www.cdc.gov/hiv/pdf/prepguidelines2014.pdf>
- Volk, J. E., Marcus, J. L., Phengrasamy, T., Blechinger, D., Nguyen, D. P., Follansbee, S., & Hare, C. B. (2015). No new HIV Infections with increasing use of HIV pre-exposure prophylaxis in a clinical practice setting. *Clinical Infectious Diseases, 61*, 1601-1603.
- White, D., & Stephenson, R. (2014). Identity formation, outness, and sexual risk among gay and bisexual men. *American Journal of Men's Health, 8*, 98-109.
- World Health Organization. (2006). *Defining sexual health: Report of a technical consultation on sexual health, 28-31 January 2002, Geneva*. Retrieved from [http://www.who.int/reproductivehealth/publications/sexual\\_health/defining\\_sexual\\_health.pdf](http://www.who.int/reproductivehealth/publications/sexual_health/defining_sexual_health.pdf)
- World Health Organization. (2014). *Ensuring human rights in the provision of contraceptive information and services: Guidance and recommendations*. Retrieved from [http://apps.who.int/iris/bitstream/10665/102539/1/9789241506748\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/102539/1/9789241506748_eng.pdf)