Transgender People and HIV Prevention: What We Know and What We Need to Know, a Call to Action

The Harvard community has made this article openly available. Please share how this access benefits you. Your story matters

Citation

Published Version
doi:10.1097/QAI.0000000000001086

Citable link
http://nrs.harvard.edu/urn-3:HUL.InstRepos:29002737

Terms of Use
This article was downloaded from Harvard University’s DASH repository, and is made available under the terms and conditions applicable to Other Posted Material, as set forth at http://nrs.harvard.edu/urn-3:HUL.InstRepos:dash.current.terms-of-use#LAA
Transgender People and HIV Prevention: What We Know and What We Need to Know, a Call to Action

Kenneth H. Mayer, MD,* Beatriz Grinsztejn, MD, PhD,† and Wafaa M. El-Sadr, MD, MPH, MPA‡

Abstract: Transgender people have been disproportionately affected by HIV, particularly transgender women. Their increased vulnerability to HIV is due to multiple issues, including biological (eg, increased efficiency of HIV transmission through receptive anal sex), epidemiological (eg, increased likelihood of having HIV-infected partners), structural (eg, social stigma limiting employment options), and individual factors (eg, internalized stigma leading to depression and substance use and risk-taking behaviors). There have been limited culturally appropriate HIV prevention interventions for transgender people, with many key prevention studies (eg, the iPrEx PrEP study) enrolling transgender women in a study focusing on men who have sex with men. This has resulted in limited understanding of the optimal ways to decrease transgender people’s risk for HIV acquisition. The current supplement of JAIDS is designed to review what is known about HIV prevention for transgender people and to highlight new insights and best practices. The study reviews recent epidemiologic data, the pharmacology of hormonal agents, and several recent multi-component interventions designed to address the lived experience of transgender people. Additionally, the study reviews the work going on at the NIH to address transgender health and the requisite issues that need to be addressed in order to conduct optimal clinical trials. The ultimate hope is that the information distilled in this supplement will inform investigators, clinicians, and public health officials in order to design further research to develop optimal prevention interventions for transgender people and to implement these interventions in ways that are culturally congruent and health promoting.

Key Words: HIV prevention, transgender, HIV/AIDS

Since the earliest days of the AIDS epidemic, it has been recognized that transgender women have had disproportionately higher rates of HIV infections and AIDS-related mortality.1 Transgender women and men constitute less than 1 percent of the general population in the US, but in many epidemiologic studies, HIV prevalence has been in the double digits for transgender women, with wide variations depending on how the population was recruited.2,3 Much less is known about transgender men and HIV, but several studies have documented that a significant number may identify as “gay,” and/or engage in sexual and drug-using behaviors that increase their risk for HIV acquisition.4,5 Thus, one of the early challenges to adequately understand the dynamics of HIV transmission for transgender people has been their relatively low representation in the general population, but distinctively increased burden of HIV disease.

Individual factors that potentiate the HIV epidemic in transgender women include engaging in receptive anal intercourse6 and a high likelihood of having partners who may be at increased risk for HIV.7 Internalized transphobic stigma may result in depression and substance use, which also potentiate HIV risk taking.6–10 For many years, epidemiologic studies did not distinguish transgender women from cisgender men who have sex with men in the composite acronym “MSM,” because they were perceived to have common risk for HIV acquisition through anal sex, complicating optimal understanding of the epidemiology of HIV among transgender individuals, and their specific HIV prevention needs. This has been a disservice to transgender women, in particular, because the social and structural factors that increase the susceptibility of transgender women to HIV differ substantially from those of cisgender men who have sex with men. For example, in many cultures, transgender individuals are recognized as having a distinct gender minority status, eg, hijra in India and katoy in Thailand, as well as 2-spirit individuals in Native American populations11–13. However, this recognition as a distinct social grouping has also been associated with unique manifestations of stigma, including challenges to maintaining an adequate livelihood, resulting in poverty.14 Thus in many settings, transgender individuals have been forced to rely on sex work to survive, further exacerbating their risk for HIV.7

From the *Fenway Health/Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA; †Fundação Oswaldo Cruz-FIOCRUZ, Rio de Janeiro, Brazil; and ‡ICAP at Columbia University Mailman School of Public Health, New York City, NY.

Funding for the work on this article was provided by NIH and NIAID grants 3UM1AI069480-06S1 (Clinical Trial Unit for HIV Prevention and Microbicide Research), UM1 AI068619 (HPTN Leadership and Operations Center), and UM1AI069476-08 (The Fio Cruz Therapeutic and Prevention HIV/AIDS Clinical Trials Unit).

The authors have no conflicts of interest to disclose. Correspondence to: Kenneth H. Mayer, MD, 1340 Boylston Street, Boston, MA 02215 (e-mail: kmayer@fenwayhealth.org).

Copyright © 2016 Wolters Kluwer Health, Inc. All rights reserved. This is an open access article distributed under the terms of the Creative Commons Attribution-NonCommercial-NoDerivatives License 4.0 (CC BY-NC-ND), which permits downloading and sharing the work provided it is properly cited. The work cannot be changed in any way or used commercially.
addition, the category “MSM” has often not included trans-
gender men who have sex with men, stymying knowledge of
HIV risks in this potentially at-risk group.

To address the conundrum of developing culturally
tailored programs that are effective in decreasing HIV inci-
dence for transgender individuals, the first fundamental is
having an appropriate understanding of the epidemiology of
behaviors and risks with specific types of partners in the diverse
cultures where transgender people live. However, the social
convention of referring to “transgender people” is problematic
since identity, behavior, and risk do not necessarily map in
a uniform manner. For example, epidemiologic studies suggest
that some transgender women are at particularly high risk for
HIV because of anal intercourse and sex work.2,11,14 But, many
of the studies to date that inform these presumptions have
recruited potential participants for the purpose of HIV pre-
vention research, which could lead to inherent biases due to
taking (ie, only recruiting in risky venues). For transgender
men, the literature is limited with some studies suggesting
lower HIV risks, whereas other studies have suggested elevated
risk compared with cisgender men in the same communities.4,15
Some transgender men who are assigned a female sex at birth
may subsequently identify as “gay” and therefore also engage
in anal intercourse, as well as frontal/vaginal intercourse if
preoperative, and be at risk for HIV.4,8,15,16 It is extremely
important that in the design of prevention programs or research
for transgender people, there is an appreciation of the
heterogeneity of transgender people, and that interventions
are culturally tailored to the needs of specific communities.

Over the past decade, there has been an increased
awareness that the appropriate use of antiretroviral drugs can
be highly effective in decreasing HIV transmission globally.17
Early initiation of antiretroviral therapy is not only beneficial
to the health of people living with HIV but can significantly
reduce the risk of HIV transmission.18 Multiple studies have
also indicated that the use of pre-exposure prophylaxis (PrEP)
by HIV-uninfected individuals can significantly decrease HIV
acquisition.19 However, to date, the benefits of these impor-
tant prevention approaches have not been manifested among
transgender women and men in many parts of the world.
Because of high levels of social stigma and often structural
violence, transgender people have not been able to avail
themselves of available testing, prevention, care, and treat-
ment services.20,21 In addition, the use of PrEP presumes that
individuals are comfortable with discussing their sexual
behaviors with health providers, in settings where health care
system transphobia is common.22,23 The only PrEP study that
recruited a sufficient number of transgender women was the
iPrEx study, in which there was no benefit found for
transgender women using prophylactic medication, likely
due to small number of such participants.24 But, through
careful analysis of the 21 transgender women who became
HIV-infected among those who participated in iPrEx, it was
evident that these transgender women were not adherent to
study medication because none of them had detectible drug in
the blood at the time of infection.25

Future PrEP and treatment as prevention studies for
transgender women should address the factors that may lead
to suboptimal adherence in this population, including, where
possible, the need to provide comprehensive medical and
primary care services that integrate hormonal and surgical care
with antiretroviral management, and address individual issues,
such as depression, substance use, economic, and housing
instability, and the structural drivers of these syndemic
conditions. Where “one-stop” care is not feasible, it is
incumbent on local clinicians and programs to identify
appropriate referrals and to optimize the local standard of care.
Questions remain as to whether the supraphysiologic doses of
hormones that transgender people may use to medically affirm
their sex could be interacting with antiretroviral medication and
attenuating the benefits of PrEP.26–28 There are no data at
present to suggest that high doses of feminizing or masculin-
ing hormones would negate the benefit of daily oral tenofovir
and emtricitabine for PrEP, but this area has not been
sufficiently studied and new work is underway to fully address
the issue of whether hormonal medication could interact with
medications used for PrEP. Addition, it is critical that every
effort be made to establish comprehensive services that meet
the unique needs of this population, including availability of
responsive and sensitive providers. Involvement of transgender
individuals in the design of such services and research efforts is
fundamental to their success.

This Journal supplement has been developed to provide
information on the state of the HIV epidemic among trans-
gender individuals and to inform the way forward in responding
to this public health challenge. The supplement builds on
a workshop sponsored by the HIV Prevention Trials Network
in June, 2015. In the first article, Dr. Tonia Poteat et al29
review the global epidemiology of HIV and syndemic con-
ditions among transgender individuals. Dr. Peter Anderson
et al30 discuss available information about the interaction
between exogenous hormones and antiretroviral drugs. The
article contributed by Dr. Robert Grant et al31 delineates
what has been learned from the iPrEx study about trans-
gender women’s participation in one of the first PrEP studies
and discusses new directions for further research in this area.
Dr. Sari Reisner et al32 discuss a holistic framework for
understanding the optimal health needs of transgender people
so that they can avoid HIV acquisition, and that if
they become infected, how they can live healthy and
productive lives. Dr. Robert Garofalo et al33 discuss behavioral interventions that are evidence based and are
socially congruent for transgender women to optimize HIV
protection. Dr. Rona Siskind et al34 who coordinated
a trans-NIH working group on sexual and gender minority
issues, discuss the efforts underway at the NIH to ensure that
ongoing and future clinical trials are sensitive to the realities
of the people being studied. Dr. Jim Hughes et al35
discusses statistical considerations in the evaluation of
HIV prevention interventions in populations that are not
highly represented in the general population but whose risk
for HIV acquisition and transmission is high. Last but
certainly not least, Dr. Jerome Singh et al36 discusses the
ethical considerations for conducting research among trans-
gender individuals given frequently coprevalent societal
stigma and structural violence.

The intent of this supplement is to frame the issues of
importance in developing a more holistic approach to the

development of HIV prevention interventions for transgender individuals. To conduct optimal research, many of the underlying social and structural issues need to be addressed. Transgender individuals need to achieve civic equality in all societies so that they will be comfortable disclosing their status and participating in research in an environment that they feel is just and beneficial. Their involvement in the design of research studies and programs is fundamental. In addition, resources need to be available to allow transgender individuals to achieve their full potential and not to have to rely on transactional behaviors for survival in an adversarial environment. Thus, although this special issue is focused on issues that may inform the conduct of future research, it is also a clarion call for social justice for transgender individuals so they can be fully empowered members of their societies and avail themselves of the benefits of the new advances in HIV prevention and care.

ACKNOWLEDGMENTS

The authors would like to acknowledge Mary Childs for assistance in the preparation of this article, and Phaedrea Watkins for assistance in the development of this special issue and for organizing the HPTN workshop where this and other articles were initially presented.

REFERENCES