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## HIV in Transgender Communities: Syndemic Dynamics and a Need for Multicomponent Interventions

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### Abstract

Transgender communities are among the groups at highest risk for HIV infection in the United States. Using syndemic theory, we examine how HIV risk in transgender communities is embedded in multiple co-occurring public health problems, including poor mental health, substance use, violence and victimization, discrimination, and economic hardship. Although safer sex counseling and testing programs are essential platforms for HIV intervention, these modalities alone may be insufficient in reducing new infections. Multicomponent interventions are necessary to respond to the complex, interacting syndemic factors that cumulatively determine HIV vulnerability in transgender individuals.

### INTRODUCTION

Transgender is an umbrella term referring to the population of individuals whose gender identity differs from the gender assigned at birth. Researchers have described a state of emergency related to HIV in the transgender community.<sup>1-3</sup> To date, there exist no efficacious HIV prevention interventions for transgender individuals. The lack of research reflects, in part, the challenges in studying this population. For example, no reliable estimates exist of the size of the transgender population, many transgender individuals wish to be hidden, and assessing transgender identity and gender history remains difficult.<sup>3</sup> We argue that the lack of progress in HIV prevention for transgender people is also due to the complexity of the epidemic in this community, attributable to multiple co-occurring public health problems that determine their HIV risk.

### EPIDEMIOLOGICAL STUDIES

A systematic review by Herbst and colleagues identified 29 studies reporting biological or behavioral HIV data in transgender communities,<sup>4</sup> of which 22 reported HIV prevalence data on transgender women (or male-to-female transgenders) and 5 reported data on transgender men (or female-to-male transgenders). Meta-analysis of biological data estimated 28% HIV seroprevalence in transgender women, with extremely high

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seroprevalence (56%) in African Americans. Meta-analysis of self-report data estimated 12% HIV and 21% prevalence of any other sexually transmitted infection (STI) in transgender women; STIs commonly assessed include gonorrhea, chlamydia, herpes, syphilis, trichomoniasis, hepatitis B and C. Compared to biological findings, lower self-reported HIV prevalence might reflect unknown infection or unwillingness to disclose. Two studies reported HIV incidence in transgender women: 7.8 infections per 100 person-years in a San Francisco study and 3.4 infections per 100 person-years in a Los Angeles study.<sup>5,6</sup> Meta-analysis of data from transgender men was not conducted; only 1 study in transgender men reported HIV seroprevalence (2%),<sup>7</sup> and 4 studies in transgender men found low self-reported HIV infection (0%–3%).<sup>4</sup> Another study of transgender women in New York City, released following the Herbst et al meta-analysis, found high HIV seroprevalence in African American and Hispanic transgender women (48% and 50%, respectively) compared with white transgender women (4%).<sup>8</sup> High prevalence of syphilis and hepatitis B were also detected in African American (15% and 36%) and Hispanic (36% and 22%) transgender women.

Multiple HIV behavioral risk factors have been identified, based mostly on studies of transgender women. Risk behaviors for transgender women include multiple partners, unprotected receptive anal intercourse, commercial sex, sex under the influence of alcohol and drugs, and needle use for injecting drugs and gender-related hormones or silicone.<sup>7,9,10</sup> In several studies, African American and Hispanic transgender women report greater risk behaviors compared with white and Asian and Pacific Islander transgender women.<sup>4</sup> Few studies have examined behavioral risk factors in transgender men, but there is emerging evidence of unprotected penetrative sex between transgender men and biological men.<sup>11</sup>

### HIV-Related Syndemics in Transgender Communities

Syndemic theory has been a useful framework for understanding the determinants of HIV disparities in high-risk populations.<sup>12,13</sup> Syndemic refers to the concentration within a specific population of multiple co-occurring epidemics interacting and reinforcing one another and ultimately giving rise to other health problems.<sup>14</sup> Merrill and colleagues have described how epidemics of substance abuse and violence facilitated a subsequent HIV epidemic in inner-city Hartford,<sup>15</sup> and Stall and colleagues have examined the epidemics of substance use, mental health, and childhood abuse in MSM as interacting drivers of the domestic HIV epidemic in MSM.<sup>16</sup> Similarly, data from studies of transgender populations in the United States reveal syndemic dynamics that facilitate sexual risk behaviors and HIV transmission.

Mental health problems are frequently reported in transgender communities. Studies have shown high rates of depression, emotional distress, loneliness, and social isolation in transgender populations.<sup>3,10</sup> Results from meta-analysis revealed 54% of transgender individuals surveyed had suicidal thoughts and 31% had attempted suicide.<sup>4</sup> Mental health problems can undermine motivations to practice safer sex behavior and can increase motivations for engaging in unprotected sex as a means for cognitive escape, emotional release, and feelings of love and intimacy.<sup>17-19</sup>

High rates of alcohol and drug use in transgender communities, including injection drug use (IDU), are also reported. In a San Francisco study, 34% of transgender women reported lifetime IDU and 18% reported past-6-month IDU, and 18% of transgender men reported lifetime IDU and 4% reported past-6-month IDU.<sup>7</sup> Other drugs commonly used include marijuana, cocaine, crack, and methamphetamine, though within-group differences are observed. For example, in San Francisco cocaine and crack use were higher among African American transgender women than among transgender women in other ethnic groups, and methamphetamine use was higher in Asian and Pacific Islander transgender women.<sup>9</sup>

Substance use before or during sex compromises cognitive or behavioral abilities to use condoms and is an independent predictor of unprotected receptive anal sex in transgender women.<sup>9</sup>

Transgender women and men may be at increased risk for violence and victimization, including physical and sexual abuse. A national review of data from survey research, police reports, and social service records highlights multiple forms of violence that transgender people experience throughout their lifetimes.<sup>20</sup> Abuse may begin in adolescence or childhood, when transgender individuals begin to express atypical gender characteristics.<sup>21,22</sup> Violence and victimization directly and indirectly lead to HIV risk. Forced sex confers likelihood of exposure for HIV/STI transmission, and other forms of physical violence can contribute to mental health problems and substance use, which increase the likelihood for sexual risk behaviors.

Studies have reported high levels of poverty, unemployment, and homelessness in transgender women and men.<sup>3,4,10</sup> These outcomes likely stem from general stigma and job and housing discrimination against individuals whose transgender identity is exposed. Indeed, a goal for many transgender women and men is the ability to “pass” and receive affirmation as their desired gender,<sup>10,19</sup> which manifests in the capacity to blend into mainstream society unnoticed. Some individuals have a difficult time passing due to physical characteristics that call attention to their transgender status, and these individuals may be more prone to stigma and discrimination and to ensuing syndemics of mental health, substance use, and violence that facilitate HIV risk.

### **Social and Structural Conditions for Syndemics in Transgender Communities**

As noted, the syndemic dynamics described here reflect social and structural conditions that govern the treatment of transgender individuals. Because sex and gender are basic organizational principals in most societies, including contemporary US society, deviation from prescribed sex and gender dichotomies is reprimanded at nearly every level of social life. Consequently, transgender individuals experience a developmental life course characterized by cumulative stigma, alienation, and internalized stress.<sup>23,24</sup> Studies of transgender youth have documented unsupportive and frequently hostile family members and peers.<sup>21,22</sup> This adversity extends and augments into adulthood, manifesting in explicit discrimination, denial of opportunities, exposure to violence, and frequently unresponsive legal systems. Structural inequalities for transgender individuals are particularly salient in the health care system. Multiple studies report, among transgender communities, limited access to health services, inappropriate or nonexistent care protocols and facilities for transgender clients, and untrained and often discriminatory health providers and staff.<sup>25,26</sup>

### **Not Just Testing and Condoms: Need for Multicomponent Interventions**

Recognition of multiple co-occurring epidemics and challenging social and structural conditions calls into question the feasibility of standard HIV prevention approaches for addressing the needs of transgender women and men. Dominant paradigms in HIV prevention include testing and counseling, informational and motivational training to improve condom use and encourage partner reduction, and other approaches that focus on safer sex as the primary or sole outcome. Syndemic analysis of the determinants of HIV risk in transgender communities—particularly in transgender women, who have been the focus of most prior studies reviewed here—reveals that more complex prevention approaches are warranted. Indeed, prior research has suggested that transgender women are highly aware of their HIV-related sexual risk behaviors but that HIV prevention is simply a low priority compared to other immediate concerns.<sup>19</sup>

Multicomponent interventions are necessary to mitigate the HIV syndemics dynamics in transgender communities. Several recent papers have called for the development of multicomponent HIV interventions that recognize and address interactions among, for example, substance use, mental health, poverty, and HIV risk.<sup>27</sup> Ickovicks has described the benefit of “bundling” HIV prevention services with other health/social services to achieve meaningful improvements in public health.<sup>28</sup> In order for multiple services to form a meaningful bundle, they must be complementary, synergistic in their health benefit, cost-effective, and accepted by target audiences. HIV testing and behavioral–motivational risk reduction counseling offer platforms for bundling other intervention foci and modalities, which might include transgender support groups, brief substance use counseling and treatment referrals, brief mental health counseling and referrals, life skills coaching and training, and other programs that correspond to recognized transgender syndemic dynamics. Intervention components must also consider developmental trajectories in transgender identity, including the needs of adolescents and young adults as well as prevention needs that might differ according to gender transformation procedures. Enhancing sensitive and appropriate channels of care and establishing linkages between care services are essential to this multicomponent approach.

The science of multicomponent HIV prevention intervention for transgender and other high-risk populations is still in its infancy. Condoms and testing alone cannot reduce the burden of HIV infection and AIDS in transgender individuals and other high-risk populations. Major efforts must be invested in developing and testing complex, population-focused interventions.<sup>27</sup> For transgender communities, the capacity to respond to HIV syndemic dynamics can be a matter of life and death.<sup>2</sup>

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