Policy analysis


Jelani Kerr\textsuperscript{a, b, *}, Trinidad Jackson\textsuperscript{c}

\textsuperscript{a} Department of Health Promotion and Behavioral Sciences, School of Public Health and Information Sciences, University of Louisville, 485 E. Gray St., Louisville, KY 40202, United States
\textsuperscript{b} Sociology, Anthropology, and Criminology, School of Arts and Sciences, University of Windsor, 401 Sunset Ave., Windsor, ON N9B 3M, Canada
\textsuperscript{c} Office of Public Health Practice, School of Public Health and Information Sciences, University of Louisville, 1300 W. Muhammad Ali Blvd., Louisville, KY 40203, United States

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\textbf{A B S T R A C T}

The relationship between drug policy and HIV vulnerability is well documented. However, little research examines the links between racial/ethnic HIV disparities via the Drug War, sexual risk, and stigma. The Drug War HIV/AIDS Inequities Model has been developed to address this dearth. This model contends that inequitable policing and sentencing promotes sexual risks, resource deprivation, and ultimately greater HIV risk for African-Americans. The Drug War also socially marginalizes African Americans and compounds stigma for incarcerated and formerly incarcerated persons living with HIV/AIDS. This marginalization has implications for sexual risk-taking, access to health-promoting resources, and continuum of care participation. The Drug War HIV/AIDS Inequities Model may help illuminate mechanisms that promote increased HIV vulnerability as well as inform structural intervention development and targeting to address racial/ethnic disparities.

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\textbf{I n t r o d u c t i o n}

HIV/AIDS disproportionately affects African American communities. HIV rates among African American males and females are approximately seven and nineteen times higher than rates for White males and females, respectively (Prejean et al., 2011). Behaviour, however, does not fully explain these differences and social determinants are increasingly recognised as drivers of HIV disparities (Dean & Fenton, 2010). Moreover, although uptake of new prevention technologies (e.g. pre-exposure prophylaxis) and “treatment as prevention” approaches are emerging as important strategic priorities to address HIV, these tactics may have limited effectiveness if not accompanied by efforts to understand structural contexts that influence disparities (Golub, Operario, & Gorbach, 2010). One of the most notable social determinants affecting African Americans, drug policy and its consequences for African American communities, is an increasingly recognised accelerant of racial/ethnic HIV disparities in the U.S. Despite this, there is a need for models to examine the role and various mechanisms by which drug policy impacts HIV vulnerability among African Americans. Understanding this is crucial for elucidating the causes of these disparities in HIV rates and for informing intervention development to allay high HIV rates. As such, the Drug War HIV/AIDS Inequities Model is introduced to address this gap in the literature.

Scholars have highlighted the underpinnings and deleterious effects of modern drug policy on communities of colour (Alexander, 2010; Drucker, 2013; Travis, Western, & Redburn, 2014). Inequitable criminal justice policies and practices escalated by a collection of “get tough on crime policies” including the Drug War has continued the legacy of legally sanctioned oppression against African Americans in the U.S. This oppression began with the Transatlantic Slave Trade, solidified itself within the fabric of American society during slavery, and persisted with “Jim Crow” laws that economically and socially deprived African Americans (Alexander, 2010). Today, racial castes are often maintained through inequitable policing and sentencing of African Americans who are commonly poor and resource-deprived. There are numerous negative after-effects associated with mass
incarceration including unfavourable economic outcomes, disrupted family structures, and negative health-related outcomes (Alexander, 2010; Drucker, 2013; Travis et al., 2014). Research has suggested that an adverse byproduct of the Drug War and mass incarceration (massive escalation of imprisonment, particularly of African Americans that often live in poor neighbourhoods of concentrated disadvantaged) furthers exacerbation of the HIV burden among African Americans (Adimora & Schoenbach, 2002; Blankenship, Smoyer, Bray, & Mattocks, 2005; Lichtenstein, 2009).

Previous research has examined HIV and the Drug War with a focus on transmission vectors involving drug use in general and injection drug use (IDU) in particular (Blankenship et al., 2005). Such research explores the intersection of substance use behaviour and how criminal justice approaches to address this behaviour increase HIV risk. These studies also explore the legislative subversion of evidence-based risk-reduction approaches such as needle exchange and condom distribution in prisons (Blankenship et al., 2005). Although this research increases understanding of the role of drug policy in facilitating HIV risk, there is less research exploring the Drug War’s impact on African-American HIV vulnerability beyond substance use (Blankenship et al., 2005).

There are several mechanisms by which the Drug War facilitates HIV disparities that are unrelated to actual drug use; however, studies examining them remain disconnected in the research literature. Furthermore, there are few models used to understand the Drug War’s impact on HIV vulnerability and its contributions to racial/ethnic HIV/AIDS disparities. To address these deficits, this study develops the Drug War HIV/AIDS Inequities Model and examines the multiple pathways by which the Drug War increases HIV vulnerability for African Americans. These pathways include (1) sexual networking, (2) resource deprivation, and (3) social marginalization. This study seeks to examine HIV vulnerability as a result of drug policy and enforcement that is independent of drug use behaviour to highlight the importance of this social determinant on HIV disparities. The study begins by providing a historical perspective on the Drug War, then discusses the impact of the Drug War on mass incarceration of African Americans, explores the effects of Drug War related mass incarceration on HIV vulnerability, and concludes with the Drug War’s impact on social marginalization and HIV vulnerability. The study introduces various figures and mechanisms by which drug policy impacts HIV vulnerability, discusses them in detail, and integrates the individual figures and mechanisms into the Drug War HIV/AIDS Inequities Model.

Brief history

Before explication of this model, it is important to provide a historical perspective of the Drug War. Law enforcement has been used to enforce institutional racism throughout American history (Alexander, 2010; Blackmon, 2009; Reichel, 1988). Slave patrols monitored the behaviour of the African American workforce of the south, policemen were the first line of labour acquisition for debt peonage (a post-thirteenth amendment approach to reinstating de facto slavery wherein African Americans were arbitrarily charged with crimes [often vagrancy], levied exorbitant penalties, and compelled to work for little money), and police provided formal resistance to civil rights protests in many jurisdictions (Alexander, 2010; Blackmon, 2009; Reichel, 1988). Criminal justice reforms such as “three-strikes” policies, extended sentences, and, of most interest to this study, Drug War policy and subsequent policing practices and sentencing continues a form of African American disenfranchisement (Alexander, 2010). However, unlike the reforms that occurred before the 1980s, the Drug War has significantly contributed to mass incarceration of African Americans that contributes to striking HIV disparities.

Although some form of national prohibition against substance use has been implemented in the U.S. since the early 20th century, the Drug War came to greater prominence in the 1980’s under the Reagan regime. This multifaceted approach coupled a robust social norming campaign (i.e. the “Just Say No” campaign) with sweeping legislation that escalated penalties for possession and distribution of illicit substances. This legislation, particularly the Anti-Drug Abuse Act, financially supported and incentivized increased policing and prosecution of drug crimes. It also established new mandatory minimums for prison sentences based on drug type and quantity. According to the Executive Office of the President (as cited by Beckett, 1997) federal spending on drug enforcement increased substantially as FBI antidrug funding increased by a factor of almost 12 ($8 million–$95 million) between 1980–1984. Similarly, according to the U.S. Office of National Drug Policy Drug Enforcement Agency (1992) spending increased from $86 million to $1 billion between 1981–1991 (as cited by Beckett, 1997).

Mass incarceration has escalated substantially since the 1980s and these policies have contributed to it (Travis et al., 2014). Approximately 1.5 million people in the U.S. are in prison and the incarceration rate is the highest among all Organization for Economic Cooperation and Development (OECD) countries (Organization for Economic Cooperation and Development, 2010). The U.S. prison population has expanded approximately 400% and the incarceration rate has escalated nearly 5-fold (from 133 per 100,000 to 612 per 100,000) from 1980–2014 (Cahanal, Parsons, US Bureau of Justice Statistics, & Westat inc., 1987; Carson, 2015). In comparison, the incarceration rate only tripled in the previous 100 years prior to Reagan’s reforms (Cahanal et al., 1987). These increases are significantly attributable to drug policy, as the national arrest rate for drug possession increased 122% overall and 205% for African Americans, specifically (Synder, 2011). The incarceration rate for drug offenses has increased at twice the rate of other crimes (Travis et al., 2014). Recent data indicates that approximately 46% (N=85,124) of federal inmates are incarcerated for drug crimes (Federal Bureau of Prisons, 2016). Between 1980 and 2009, the arrests rates for drug possession and drug sale/manufacture for African Americans was 3 and 4 times higher (respectively) than the rates for Whites (Synder, 2011). High incarceration rates persist in the U.S. as these policies have continued, and in some aspects escalated, through successive federal administrations with few notable modifications.

The Drug War and Criminal Justice Consequences for African Americans

The Drug War and police practices

At this point it is beneficial to introduce the Drug War HIV/AIDS Inequities Model. Drawing upon critical race theory (a theoretical perspective that recognises the integration of racism into American society and institutions), this model emphasizes institutional racism within a legal framework. Overall, this model posits that Drug War era criminal justice reformations have increased HIV vulnerability among African American individuals and communities by exacerbating sexual risks, resource deprivation, social marginalization, and precarious access to health-promoting resources. Disproportionate policing and sentencing of African Americans are explored as starting points of this model.

As highlighted in Fig. 1, the Drug War has helped increase over-policing in communities of colour. Passage of the Anti-Drug Abuse Act led to increased surveillance of African American communities. Despite similar rates of illicit drug use and distribution between African Americans and Whites (Floyd et al., 2010; Substance Abuse and Mental Health Services Administration, 2014), the arrest rate for drug possession is three times higher for African Americans.
Mandatory minimum sentencing has been critiqued as an ineffective crime deterrent that increases recidivism risk (Mauer, 2010). In more recent years there have been modifications to these sentencing approaches as 29 states have repealed mandatory minimums and the institution of “safety valve” provisions have given federal judges greater sentencing discretion. Despite these changes, fewer African Americans (35%) incarcerated under mandatory minimum sentences received safety valve relief compared to Whites (47%), Hispanic (56%), and other races/ethnicities (59%; United States Sentencing Commission, 2011). Mandatory minimums were reduced to advisory guidelines after the 2005 Supreme Court decision of United States v. Booker. However, evidence suggests the emergence of a “race effect” in sentencing and greater judicial latitude has translated into longer sentences for African Americans (United States Sentencing Commission, 2006). Thus, sentencing disparity and its effects on mass incarceration of African Americans remains a concern despite reform.

Mass incarceration and HIV vulnerability

HIV vulnerability in prison

Fig. 2 (pathway 2a) delineates the relationship between mass incarceration of African Americans and increased exposure to HIV risk factors. More specifically, large numbers of African Americans in correctional facilities increases HIV vulnerability due to greater HIV prevalence in these environments and restricted access to effective prevention devices.

Modern drug policy has helped increase the number of African American males in correctional facilities. Approximately 1 in 3 African American males are expected to go to prison if incarceration trends persist (Bonczar & US Bureau of Justice Statistics, 2003). The imprisonment rate for Black males is 2724 per 100,000 compared to 465 per 100,000 for White males (Carson, 2015). Drug offenders comprise approximately 50% of the federal prison population (Carson, 2015) and despite equivalent levels of drug use and distribution (Floyd et al., 2010; Substance Abuse and Mental Health Services Administration, 2014) approximately 52% of African Americans are in federal prison due to drug charges compared to 40% of Whites (Carson, 2015). Also concerning, the
incarceration rate for African Americans for drug offenses in state prisons (256.2 per 100,000) is ten times greater than the incarceration rate for whites (25.3 per 100,000; Fellner, 2009). These figures highlight the racially disparate impact of drug policy despite racially equivalent engagement in drug offense.

The model posits that disproportionate entry and maintenance of African Americans in correctional facilities may place them at greater HIV vulnerability given a myriad of factors that can facilitate heightened transmission. First, HIV prevalence in prison is about three times higher (1.5% of prison population) than the general population (at Maruschak, 2009), and 20–26% of persons living with HIV report incarceration in the past year (Hammett, Harmon, & Rhodes, 2002). Persons with an incarceration history are approximately 6 times more likely to have an HIV diagnosis (Adimora et al., 2006). Although the majority of transmissions occur outside of jail or prison (Blankenship & Smoyer, 2013; Macher, Kibble, & Wheeler, 2006), incidence in prison is relatively low (0.0–0.4 per 100 person years), and HIV incidence is lower among the continuously incarcerated (0.08 per 100 person years) than recidivist (2.92 per 100 person years), meta-analysis suggests that incidence rates in studies with predominately African American incarcerated samples (3.05 per 100 person years) are higher than incidence rates in studies with predominately White incarcerated samples (1.79 per 100 person years; Gough et al., 2010). Additionally, considerable percentages of inmates report illicit drug use (50%; Seal et al., 2008), sexual activity (17%; Seal et al., 2008), and sexual victimization (4%; Beck et al., 2013). Furthermore, African American persons living with HIV/AIDS (PHA) jail entrants are more likely to be at advanced HIV-disease stage (Stein et al., 2013), and lack health insurance (Stein et al., 2013). Given increased HIV prevalence, individuals engaging in risk behaviours (i.e., unprotected sex, injection drug use, needle sharing, tattooing) in correctional facilities are at increased vulnerability of HIV acquisition (Harawa & Adimora, 2008). Thus HIV vulnerability associated with incarceration may impact overall HIV vulnerability for African Americans.

Access to prevention mechanisms while incarcerated are often precarious as several state laws prohibit the distribution of condoms and clean syringes (Blankenship et al., 2005), despite the engagement of risk behaviours during incarceration. These findings indicate that African Americans are at greater HIV vulnerability due to Drug War policies that facilitate disproportionate policing, inequitable sentencing, and placement within environments with high HIV prevalence and restricted access to preventive services. More research on this topic should be conducted given the dearth of longitudinal studies on this topic and the need for increased pre-entry and pre-exit HIV testing in correctional facilities.

Mass incarceration and sexual networks

Fig. 2 (pathway 2b) delineates relationships between mass incarceration of African Americans and heightened sexual risks in African American communities. These sexual risks are both individual (i.e., behavioural) and structural (i.e., sexual network factors) and increase HIV vulnerability. The Drug War HIV/AIDS Inequities Model posits that mass incarceration of African Americans impacts the availability of viable partners, increases sexual risks, and ultimately increases HIV vulnerability. The specific pathways are further discussed.

First, incarceration disrupts monogamous relationships and promotes turnover within sexual networks (Adimora & Schoenbach, 2013; Friedman, Cooper, & Osborne, 2009). This undermines the protective benefit of monogamy against HIV (Adimora & Schoenbach, 2013; Friedman et al., 2009). Second, the shortage of eligible male partners within the African American selection pool results in lower marriage and higher divorce rates. This also undermines the protective effects of monogamy (Adimora & Schoenbach, 2005). Third, the resulting low sex ratio from mass incarceration facilitates sexual concurrency (overlapping of sexual partnerships) in the African American community (Adimora & Schoenbach, 2005; Green et al., 2012). While there is some dispute regarding the magnitude of concurrency’s effect on HIV rates (Aral, 2010), some studies suggests that concurrency contributes to faster spread of HIV (Doherty, Shiboski, Ellen, Adimora, & Padian, 2006; Morris & Kretzschmar, 1995), increased HIV prevalence (Morris et al., 2009) and rapid viral exposure to sexual network participants (Morris, Goodreau, & Moody, 2007). It should be noted, however, that more longitudinal studies should be performed to test the relationships of pathway 2b.

Disproportionate targeting and incarceration of African Americans not only impacts HIV vulnerability among the incarcerated, it also increases vulnerability within the larger African American community. Communities with greater male incarceration tend to have higher HIV/AIDS rates (Johnson & Raphael, 2009). As pathway 2b illustrates, mass incarceration removes numerous African American males from communities and the resulting sex ratio imbalance alters sexual networking dynamics (Adimora & Schoenbach, 2002, 2013). Sex ratio imbalance increases propensity for riskier sex behaviour, as the paucity of African American males elevates the likelihood of unprotected sex with riskier partners that increases the number of males with multiple sex partners (Green et al., 2012; Pouget, Kershaw, Nicolai, Ickovics, & Blankenship, 2010). As highlighted by pathway 2b, this scarcity in the selection pool mitigates individuals’ (particularly African American women’s) ability to negotiate risk-reduction practices (i.e., condom use, monogamy) with partners (Adimora & Schoenbach, 2005). Communities with high incarceration rates also demonstrate greater likelihood of unprotected sex with riskier partners (Green et al., 2012), more partners (Pouget et al., 2010), and sexual concurrency (Pouget et al., 2010).

The relationship between mass incarceration and sexual networks is delineated in pathway 2b. An uneven sex ratio translates into riskier partners and dissonant relationships. As African American women increasingly experience gains in education and entry into higher status professions, the pool of eligible African American male partners of commiserate socioeconomic status is contracting. African American women may modify partner selection processes given limits of the selection pool. Most notably, African American women are more likely to develop more dissonant (partnerships between higher and lower risk people) intimate relationships (Laumann & Youm, 1999). While individuals typically pursue partnerships with individuals of similar characteristics (i.e., race, education, religion, age, socioeconomic status) (Adimora & Schoenbach, 2013; Laumann, 1994), African American women are more likely to select partners of lower socioeconomic status, prior incarceration history, and greater HIV risk (e.g., illicit drug use, greater concurrency) than African American males (Doherty, Schoenbach, & Adimora, 2009).

In addition to structural factors that facilitate higher risk partnerships, a history of incarceration is associated with increased engagement of riskier sexual acts for ex-offenders and their partners at the individual level (pathway 2c). Cross-sectional studies suggest that incarceration is an independent correlate of HIV risk (Khan et al., 2009; Rogers et al., 2012; Khan et al., 2011, 2013), although more longitudinal research should be performed to disentangle relationships between incarceration, drug use, and sexual risk behaviours. Nevertheless, available evidence indicates that persons with a history of incarceration are at increased risk of transactional sex (sex in exchange for goods or services; Khan et al., 2008; Ricks, Crosby, & Terrell, 2015), unprotected sex (Ricks et al., 2015), using drugs or alcohol before sex (Ricks et al., 2015), sexual
concurrency (Khan et al., 2009), partner concurrency (having a partner with two or more sexual relationships; Knittel, Snow, Griffith, & Morenoff, 2013), higher numbers of partners (Rogers et al., 2012), and sex with a STI/HIV positive partner (Khan et al., 2011). Some scientists have argued that sexual risks are heightened among illicit drug users with a history of incarceration compared to those without one (Khan et al., 2009). Persons with substance abuse dependency incarcerated on drug charges are often not provided effective treatment options, including drug replacement therapy and effective psychotherapy and thus, are at greater risk of continuing substance abuse behaviours and recidivism (Drucker, 2013). This also increases HIV risks given the high levels of association between substance use and sexual risk behaviour. Thus, incarceration is associated with behaviours that increase risk for acquiring HIV as delineated by the dashed lines of pathway 2c.

Female partners of incarcerated males may seek other sex partners and demonstrate more permissive attitudes towards extra-relational sexual partnerships (Davey-Rothwell, Villarroel, Grieb, & Latkin, 2013). Having a partner with an incarceration history is associated with multiple sexual partnerships (Davey-Rothwell et al., 2013; Khan et al., 2008), higher numbers of partners (Rogers et al., 2012), transactional sex (Davey-Rothwell et al., 2013), sex under the influence of drugs and alcohol (Davey-Rothwell et al., 2013), sex with a STI/HIV positive partner (Khan et al., 2011), and having an STI (Rogers et al., 2012). Thus, more permissive attitudes towards sexual risks among partners of incarcerated, greater sexual risk behaviour, and partnership disruption are by-products of mass incarceration that accelerate HIV vulnerability for African Americans.

The Drug War and social marginalization

The Drug War, resource deprivation, and HIV

Fig. 3 highlights the deleterious effects of social marginalization and stigma on HIV vulnerability. The figure explicates the effects of various types of social marginalization and demonstrates the direct and indirect pathways of impacting HIV vulnerability. Social marginalization is preceded by over-policing and disproportionate sentencing, as these factors engender and increase exposure to conditions and social environments wherein Drug War victims are more likely to experience social marginalization. This social marginalization formally restricts individuals from health promoting resources and facilitates HIV-related stigma that undermines HIV prevention and treatment.

The relationship between economic disadvantage and HIV vulnerability has been well-established. Heightened poverty and precarious access to safe and healthy living environments, healthcare, and consistent housing increase HIV vulnerability (Aidalala, Cross, Stall, Harre, & Sumartojo, 2005; Centers for Disease Control and Prevention, 2015). These challenges are exacerbated among African Americans of offender status—many of whom already come from socioeconomically disadvantaged backgrounds.

A history of incarceration is a “negative credential” that sanctions social and legal employment discrimination. One of the byproducts of the Drug War and subsequent mass incarceration is greater numbers of African Americans with poor employment prospects. Incarceration history translates into a 13–23% decline in employment and 40% reduction in annual income (Raphael, 2007; Schmitt & Warner, 2010; Pew Charitable Trusts, 2010). Some industries formally exclude ex-convicts by refusing licensures for people with criminal offenses. Other employers screen out offenders during the hiring process. These challenges are especially concerning for African Americans, as Whites are often privileged in hiring practices independent of qualification or criminal history (Bertrand & Mullainathan, 2004; Pager, 2003). For example, Whites are more likely to receive job interviews over equally qualified African American candidates (Bertrand & Mullainathan, 2004). Also, Whites with a criminal history have a similar likelihood of receiving a job interview as African Americans without one (Bertrand & Mullainathan, 2004; Pager, 2003). African Americans also experience wage-gaps even while possessing similar education levels as Whites (Black, Haviland, Sanders, & Taylor, 2006).

Further, formal stigmatization materializes in the form of federal policies disqualifying offenders from various social protections (i.e. public housing, Section 8 benefits, Electronic Benefit Transfer [EBT] vouchers). These economic challenges are compounded by civil forfeiture procedures (a judicial action of charging property with a crime that often results in confiscation of resources) and exorbitant fees associated with court, probation, pretrial detention, and late fees (Alexander, 2010). These structures restrict access to legal options for a consistent, livable income and compounding sources of economic deprivation perpetuates long-standing poverty which ultimately increases HIV vulnerability. Given these challenges, African American PHA with a history of incarceration may have more precarious access to HIV/AIDS treatments or the structures that promote optimal health behaviours.

In terms of the Drug War model, Fig. 3 demonstrates the increased vulnerability of stigmatized individuals based on economic challenges resulting from social marginalization. Social marginalization promotes resource deprivation, which in turn, increases sexual risks (pathway 3a1) and undermines continuum of care participation (pathway 3a2). The relationship between resource deprivation and sexual risks are demonstrated in Fig. 3, pathway 3a1. Being incarcerated increases risks of transactional sex (Khan et al., 2008). Given the increased poverty risk associated with the Drug War, persons who are impacted by this policy may be at increased risk of engaging in survival sex (transactional sex as a means to assuage resource deprivation). Individuals experiencing economic hardship and

Fig. 3. The Drug War HIV/AIDS Inequities Model; stigma, social marginalization, and HIV vulnerability.
insecure housing access are more likely to engage in survival sex (Busen & Engebretson, 2008; Dunkle, Wingood, Camp, & DiClemente, 2010; Milburn, Rotheram-Borus, Rice, Mallet, & Rosenthal, 2006; Zerger, Strehlow, & Gundlapalli, 2008). Survival sex increases HIV risk as it has been associated with unprotected intercourse (Haley, Roy, Leclerc, Boudreau, & Boivin, 2004), higher risk (IDU or HIV positive) partners (Haley et al., 2004), more partners (Dunkle et al., 2010; Marshall, Shannon, Kerr, Zhang, & Wood, 2010), and increased STI risk (Busen & Engebretson, 2008; Walls & Bell, 2011). In short, resource deprivation associated with the Drug War diminishes the uptake of effective prevention and treatment strategies.

The Drug War HIV/AIDS Inequities Model suggests that resource deprivation impedes optimal participation in the HIV continuum of care (pathway 3a2). As noted before, incarceration impedes one’s ability for formal employment and access to social protections. The results of these restrictions, particularly homelessness and economic deprivation, inhibits facets of continuum of care participation (Beck et al., 2013; Wu, Woody, Yang, Pan, & Blazer, 2011). Precarious access to housing reduces regular access to care, decreases healthcare utilization, and undermines adherence to medication (Chen et al., 2013; Leaver, Bargh, Dunn, & Hwang, 2007). Similarly, greater economic disadvantage and precarious healthcare access has been associated with poorer care engagement, and less adherence to antiretroviral therapy (Kleeberger et al., 2001; Mugavero, Amico, Horn, & Thompson, 2013; Muthulingam, Chin, Hsu, Scheer, & Schwarcz, 2013).

Stigma

HIV-related stigma is a priority concern among scientists, policymakers, and the HIV community. Historically, HIV has disproportionately affected marginalized people. Many of these individuals carry multiple identities that are subject to differing stigmas (i.e. homophobia, transphobia, stigma against injection drug users, stigma against sex workers, discrimination/racism; Logie, James, Tharao, & Loutfy, 2011). Attitudes towards offenders may be included within this list of stigmas (Earnshaw, Bogart, Dovidio, & Williams, 2013). Quixotically, this topic has been scarcely explored in connection with HIV despite disproportionate PHA representation in the criminal justice system. Of the few studies examining this topic, Brinkley-Rubinstein (2015) highlights the myriad of stigma-associated challenges (e.g. difficulty with community reintegration, internalized negative self-perception) that formerly incarcerated African American PHA experience (Brinkley-Rubinstein, 2015). This compounding of stigmas may present a troubling barrier to combatting HIV/AIDS as HIV-related stigma impedes all major facets of the public health HIV response. More specifically, stigma inhibits optimal prevention (i.e. condom use) and treatment behaviour (Brown, Macintyre, & Trujillo, 2003; Mahajan et al., 2008). This is especially troubling given the national emphasis on reducing HIV transmission and continuum of care participation (White House Office of National AIDS Policy, 2010). It should be noted, however, that disentangling HIV-related stigma from other forms of social marginalization is a methodological and measurement challenge. Nevertheless, people affected by HIV-related stigma and offender status stigma may have greater difficulty accessing a more favourable quality of life and treatment. This topic requires further exploration given the paucity of literature.

Before continuing, it is beneficial to provide a brief discourse on stigma. For this model, we draw upon the work of Goffman (1963), Logie et al. (2011), and Earnshaw and Chaudoir (2009) to explain the role of stigma in HIV vulnerability. Stigma has been described as a process of social devaluation of others that manifests in status loss and unjust treatment (Goffman, 1963). Stigma can occur at multiple levels: (1) individual (i.e. attitudes, beliefs, and behaviours), (2) community (i.e. community norms), and (3) structural (i.e. policy, organizational practice; Campbel & Deacon, 2006; Heren, 2007; Logie et al., 2011; Mahajan et al., 2008; Parker & Aggleton, 2003; Sumartojo, 2000). For individuals belonging to stigmatized groups, the stigmatization process operates through three mechanisms: (1) enacted stigma (the degree to which individuals experience personally-mediated prejudice and unjust treatment due to their inclusion within a stigmatized group), (2) anticipated stigma (the degree to which stigmatized persons expect future prejudice and discrimination) and (3) internalized stigma (the degree to which individuals adopt negative beliefs about themselves because of their inclusion within a stigmatized group; Earnshaw & Chaudoir, 2009). Conversely, non-stigmatized individuals may distance themselves from these groups through three mechanisms: (1) prejudice (negative emotions [fear, anger, disgust] towards these groups), (2) stereotypes (personal beliefs about groups applied to individuals), and (3) discrimination (behavioural manifestations and inequitable treatment based on prejudice; Earnshaw & Chaudoir, 2009).

The Drug War HIV/AIDS Inequities Model emphasizes stigma/social marginalization that persons with a history of incarceration and PHA with a history of incarceration may experience at the structural (e.g. hiring practices/legal prohibitions for social protections), anticipated (e.g. fear of negative reactions with HIV status disclosure), and internalized (sexual risks as a coping mechanism) dimensions. This experienced stigma is preceded by prejudice, stereotypes, and discrimination (the stigmatizing mechanism of the unaffected; Earnshaw & Chaudoir, 2009). Fig. 3 (pathways 3b1–3b3) highlight the direct relationships between social marginalization and various factors (sexual risks, continuum of care participation, and inhibited HIV prevention) that increase HIV vulnerability. The Drug War HIV/AIDS Inequities Model suggests that social marginalization increases sexual risks, reduces continuum of care participation, and undermines effective prevention efforts.

Stigma and sexual practices

Social marginalization increases sexual risks (pathway 3b1). For example, experiencing racial discrimination is associated with greater sexual risk-taking (Diaz, Ayala, & Bein, 2004). Experiencing homophobia is associated with increased odds of unprotected anal intercourse among HIV positive and HIV negative men (Jeffries, Marks, Lauby, Murrill, & Millet, 2013). In another example highlighting social marginalization and sexual risks, African Americans experience community disadvantage, which in turn, reduces self-efficacy and hope and subsequently increases risk behaviours (Bolland, 2003; Kogan, Brody, Chen, & DiClemente, 2011). Factors facilitated by mass incarceration, particularly lack of employment and traumatic stress, produce hopelessness (Kagan et al., 2012), inhibited self-regulation (Kogan et al., 2011), and unsafe sex (Bolland, 2003; Kogan et al., 2011). These, in turn, increase HIV risk. Social marginalization may also facilitate maladaptive coping mechanisms, including drug and sexual risks that may increase HIV vulnerability (Emlet, Fredriksen-Goldsen, Kim, & Hoy-Ellis, 2015; Folkman, Chesney, Pollack, & Phillips, 1992; Kelly, Bimbi, Izienicki, & Parsons, 2009; Martin, Pryce, & Leeper, 2005; Semple, Patterson, & Grant, 2004; Simbayi et al., 2007).

Social marginalization, stigma, and continuum of care participation

Stigma affects mental health, quality of life, and HIV treatment for currently and formerly incarcerated PHA (Brinkley-Rubinstein, 2015; Brinkley-Rubinstein & Turner, 2013; Derlega, Winsted, Gamble, Kelkar, & Khunghlawn, 2010). PHA in prison report
elevated levels of PHA stereotyping, poor understanding of HIV transmission vectors among inmates, inaccurate beliefs regarding HIV, threats based on HIV status, and physical abuse (Derlega et al., 2010). Disclosure of HIV status is less frequent in these environments, access to antiretroviral therapy may be inhibited, and adherence to medications is challenging (Brinkley-Rubinstein & Turner, 2013). Strategic priorities for addressing HIV emphasize maintenance in care and medication adherence to improve survival prospects, reduce viral load, and reduce likelihood of transmission. As pathway 3b2 suggests, stigma, particularly within correctional facilities, is a significant impediment to continuum of care participation and realizing the benefits associated with care utilization (Derlega et al., 2010).

Recent findings highlight the importance of offender and HIV-related stigma on the vulnerability of African American male PHA with a history of incarceration (Brinkley-Rubinstein, 2015). Not only do these individuals experience stigma associated with their HIV status and incarceration history, the concurrent experiences of these stigmas have implications for medical service uptake (Brinkley-Rubinstein, 2015). For these individuals, an HIV diagnosis may lead to enacted stigma experiences and anticipated stigma within prison that not only affect quality of life, but also disincentivizes adherence (Brinkley-Rubinstein & Turner, 2013). Paradoxically, leaving correctional facilities means means disrupting a consistent source of care and seeking it in communities where they may also be stigmatized (Brinkley-Rubinstein, 2015). For example, ex-offenders may travel greater distances to receive treatment in communities wherein they are less likely to be recognized or they may forego treatment altogether (Brinkley-Rubinstein, 2015). Thus, depending on context (within correctional facilities or after release from them), stigma based on HIV status and ex-offender status may both undermine continuum of care participation (Pathway 3b2). Strategies to redress stigma within and outside of correctional facilities are necessary to improve care-engagement.

Therefore, in isolation, HIV-related stigma is a notorious barrier to optimal treatment and prevention. HIV-related stigma not only reduces condom use (pathway 3b1; Brown et al., 2003; Garcia et al., 2015), it also reduces uptake of novel, effective prevention technologies such as pre-exposure prophylaxis (pathway 3b3) (Garcia et al., 2015). Stigma is also a significant impediment to HIV testing (Brown et al., 2003; Mahajan et al., 2008), treatment (Chesney & Smith, 1999; Mahajan et al., 2008), linkage to care, (Cerva, 2013; Zanoni & Mayer, 2014), retention in care (Cerva, 2013; Zanoni & Mayer, 2014), medication adherence (Katz et al., 2013; Vanable, Carey, Blair, & Littlewood, 2006), and quality healthcare for PHA (Prachakul, Grant, & Keltner, 2007; Sayles, Ryan, Silver, Sarkisian, & Cunningham, 2007) (pathway 3b2). Stigma-related impediments to treatment and prevention undermine PHA survival prospects as well as the potential for reducing transmission risk and community viral load within highly affected communities.

Conclusion and future directions

Using the scientific literature from various disciplines, we organized the Drug War HIV/AIDS Inequities Model to serve as a tool for framing the relationship between policy, criminal justice practice, and HIV-related factors (stigma, sexual-networking, care-engagement, and risk behaviour) that impact HIV vulnerability and disparities. The model can not only guide intervention development to remediate racial/ethnic HIV disparities at various points of intervention, but also improve the effectiveness of HIV risk reduction strategies of national interest (e.g. continuum of care engagement). Additionally, aspects of this model can be tested with both longitudinal and cross-sectional data to determine relative strengths of pathways. Others have called for research focusing on the impact of incarceration on HIV risk behaviour, estimations of the percentage of HIV among men attributable to incarceration, and the penetration, as well as effectiveness, of post-release services (Harawa & Adimora, 2008). Doing so could identify efficiencies in intervention approaches. Put another way, identifying relationships of greatest strength and relevance could inform policymakers about where to best direct funds in order to achieve the best outcomes at optimal cost-efficiency.

Racial/ethnic HIV disparities is a topic of national concern and while this disproportionate burden has been attributed to economic disenfranchisement (Kalichman et al., 2015), stigma (Logie et al., 2011; National Alliance for State and Territorial AIDS Directors, 2014), and racism (Logie et al., 2011), the rising racialized HIV epidemic in the 1980’s and the simultaneous prosecution of the Drug War in the context of policing, incarceration, sexual behaviour, and intersectional stigma warrants further exploration. Alleviating African American HIV burden requires substantial change in drug policy, policing, and sentencing. The Drug War HIV/AIDS Inequities Model may illuminate mechanisms by which inequities occur as well as identify areas where targeting of these approaches can be addressed.

As highlighted by the policy, practice, and sexual risk behaviour facets of this model, reducing HIV vulnerabilities associated with the Drug War requires targeted interventions at structural and individual levels. At the structural level, one of the most expedient strategies to address the Drug War is revision of drug enforcement and sentencing practices that have helped spur mass incarceration. In line with this, the American Academy of Sciences recommends that state and federal governments consider reexamining the use of mandatory minimum sentences, particularly for minor offenses (Travis et al., 2014). This has potential for reducing the number of prisoners within correctional facilities as well as normalizing sex ratios in affected communities. As highlighted in pathways 2b and 2b1, addressing uneven sex ratios in African American communities could reduce the likelihood of dissorative partnerships as well as alter the dynamics of sexual negotiation in a manner that would facilitate safer sex and less concurrency.

In line with this model’s presentation of the Drug War as an “upstream” (social determinant) factor, legalization of some illicit substances may serve as a measure to not only reduce mass incarceration but also to increase revenue after regulation and taxation. Nevertheless, modifying enforcement and sentencing of drug crimes has received bipartisan support for its potential to impact at least two important domains: (1) alleviating unfavorable social and legal outcomes among disadvantaged communities, and (2) assuaging the exorbitant fiscal costs associated with mass incarceration. Given research suggesting dubious effectiveness of drug-related arrests in reducing drug use prevalence, policymakers should consider alternative approaches to addressing drug use and addiction (Friedman et al., 2011). An added potential long-term benefit may be the reduction in HIV disparities as many of African Americans would not enter the correctional system nor experience the deleterious after-effects that increase HIV vulnerability.

Modifications of sentencing and enforcement, even if sentences are modified for the incarcerated, would have limited effect for stigmatized individuals affected by the Drug War who are already within communities. As delineated in the Drug War HIV/AIDS Inequities Model, social marginalization associated with offender status impacts access to resources necessary for a reasonably decent health status. This economic deprivation has implications for sexual risks and continuum of care participation. As such, restorative justice techniques have potential for alleviating the social and economic burdens propagated upon communities disproportionately targeted by Drug War and, by extension, improve the health status of ex-offender PHA and reduce HIV
risks behaviour. Some restorative justice measures may include expungement of low level drug offenses in order to improve access to jobs and resources for persons with a history of incarceration. Affirmative action policies may also help redress criminal justice inequities and improve the economic vitality of individual African Americans, which in turn, serves as a structural intervention with potential to mitigate HIV vulnerability. Economic stimulus within these affected communities, education and job training programmes, and effective diversion programmes to prevent recidivism among the formerly incarcerated may also improve economic outcomes.

Additionally, the Drug War HIV/AIDS Inequities Model posits that stigma also affects continuum of care engagement. This warrants stigma-reduction approaches both inside correctional facilities and outside of them. Interventions inside corrections should focus on decreasing HIV-related stigma against PHA that is promoted by the uninfected. Community interventions should address stereotypes, prejudice, and discrimination against PHA and persons with a history of incarceration.

Drawing upon Friedman and Rossi’s (2011) work on dialectics and HIV, neoliberal policies may exacerbate HIV risk across the globe compared to countries utilizing more egalitarian social welfare schemes (Friedman & Rossi, 2011). In line with this, the emerging industry of correctional privatization raises concern about further incentivizing mass incarceration by powerful special interests. As such, it behoves AIDS activists, public health associations, and criminal justice reform activists to focus on and perhaps collaborate to address mass incarceration in the interest of HIV reduction.

As delineated in the beginning of the model, drug-arrest disparities indicate bias and over-policing of African American communities. The role of implicit bias—the unconscious ascriptions of characteristics of groups and individuals based on salient traits—should also be considered in policing and sentencing practices and how this affects subsequent negative HIV-related outcomes. Some argue that implicit bias is naturally occurring and interventions to address this should focus on raising personal awareness of these biases and being mindful of counter-stereotypes associated with biases (Dovidio, Gaertner, Kawakami, & Hodson, 2002; Dovidio, Kawakami, & Gaertner, 2002). It may therefore be beneficial to improve screening and training of police officers, prosecutors, and judges to mitigate racial bias and criminal justice procedures. Additionally, although sentencing bias is a complex quandary, a readily available intervention within the established legal system is implementation of curricula to increase awareness of systemic racial and implicit bias in sentencing within the legal profession’s training venues. Such intervention should be used to foster intentionality in thought and behaviour to address implicit bias and long-term commitment to changing biased thought processes (Boysen, 2010). Although more evaluation studies utilizing this tactic should be conducted, this approach may have potential for reducing African American involvement in the criminal justice system and subsequently reduce HIV vulnerability.

The Drug War HIV/AIDS Inequities Model posits that structural factors influence sexual risks and healthcare utilization behaviours. More specifically, social determinants help shape sexual networks, which in turn, impacts risk for discordant partnerships, sexual concurrency, and preventive behaviour. Social determinants also impact individual uptake of care-engagement and biomedical prevention techniques. While it is important to recognise the shortcomings of intervention approaches that seek to address behavioural risk, it is also necessary to promote best-practices to

Fig. 4. The Drug War HIV/AIDS Inequities Model.
educate individuals about HIV transmission, increase safer sex behaviour, and promote testing, counselling, and prompt linkage and maintenance in care.

Reducing disparities also necessitates mitigating HIV vulnerability for offenders and ex-offenders. Several measures can help reduce vulnerability including (1) increasing access to preventive tools (i.e. condoms) to reduce the risk of HIV transmission in prison, (2) greater linkage to care as incarcerated PHA transition out of prison (3) increased access to educational, housing, and economic assistance programmes in order to mitigate resource deprivation (4) programming to foster sexual risk reduction among the incarcerated, formerly incarcerated, and their partners (i.e. proven effective sex education programming, greater implementation of CDC Diffusion of Effective Behavioural Interventions in community settings, culturally tailored risk reduction mass media messaging), and (5) stigma reduction efforts to reduce social marginalization within and outside of prison. Effective stigma reduction approaches include efforts to increase HIV transmission knowledge (Brown et al., 2003), collaborations with faith communities for stigma reduction programming (Lindley, Coleman, Gaddist, & White, 2010), and favourable representation of PHA in mass media (O'Leary et al., 2007).

Despite the innovation of the development of this model, this study has limitations. As this model is theoretical, there remains the need for empirical research for validation and modification. Also, there may be feedback mechanisms within the processes described in this model and thus the paths are not always unidirectional. For example, risk of incarceration increases for individuals who have been to jail or prison (Druczer, 2013; Travis et al., 2014). However, if communities are over-policed and its members receive longer sentences, then it is likely that cyclical feedback mechanism is being produced. While these processes may exist and more research should investigate them, these topics are beyond the scope of this paper. Moreover, this model should be tested using longitudinal designs to examine the validity of variable pathways. For example, it is unknown whether the exposure of incarceration increases risk behaviour or whether individuals who frequently engage in high risk behaviour are more likely to be both incarcerated and acquire HIV. Furthermore, more research should be conducted to determine the relative importance of individual pathways. Finally, this study does not quantify the impact of drug charges and incarceration associated with drug charges on HIV incidence and community HIV rates in African American communities. More research, especially longitudinal studies, should be conducted to address this (Fig. 4).

Conclusion

The Drug War HIV/AIDS Inequities Model posits that inequitable criminal justice practices facilitate HIV vulnerability through mechanisms that increase sexual risks and stigma. Policy and social interventions to reduce HIV risks associated with policing, incarceration, and post-incarceration have the potential to reduce racial/ethnic HIV disparities, particularly for African Americans. Future studies should test the Drug War HIV/AIDS Inequities Model, inform modifications when needed, and apply it within social and criminal justice settings.

References


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