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Preventing transitions into injection drug use: A call for gender-responsive upstream prevention

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Abstract

In 2017, there were large increases (260–500%) in overdose deaths among women in the United States across age groups (30–64 years and 55–64 years). In addition, U.S. women who inject drugs (WWID) are at increased risk for substance use-related disease transmission, bacterial infections, as well as sexual and physical violence compared to men who inject drugs. Relatedly, women face unique access barriers to substance use-related services, such as stigma and low coverage of gender-specific drug use-related services. Despite these heightened risks experienced by WWID, interventions specifically tailored to preventing women from transitioning into injection drug use have not been developed to date. As such, we advocate for the development of gender-responsive programs to prevent injection drug use initiation. This is critical to ensuring a comprehensive approach to preventing injection drug use initiation among those populations at highest risk of injection-related morbidity and mortality.

Keywords

Gender; Injection drug use; Prevention; People who use drugs; Women who use drugs

Background

North America is currently facing an opioid-related overdose epidemic; one the United States Department of Health and Human Services declared a public health emergency in 2017 (Centers for Disease Control and Prevention (CDC), 2019). In 2018 there were 67,367 overdose deaths in the United States, representing 20.7 deaths per 100,000 (Centers for Disease Control and Prevention (CDC), 2019). Furthermore, recent research has demonstrated that, between 1999 and 2017, despite a greater crude incidence of overdose

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mortality among men in the United States, there were large increases in overdose deaths among women aged 30–64 years (260% increase) and aged 55–64 years (500% increase) (VanHouten, Rudd, Ballesteros & Mack, 2019).

People who inject drugs (PWID) experience the highest risk of opioid-related overdose mortality, and are most vulnerable to overdose mortality during the first five years of their initiation of injection drug use (Vlahov et al., 2008). In addition to the risk of overdose death, PWID are also disproportionately affected by blood-borne infection from HIV and hepatitis C (HCV) (Lansky et al., 2014). While women who inject drugs (WWID) comprise roughly a quarter to a third of North American PWID, they have been found to experience riskier substance use-related trajectories than men who inject drugs (Iverson, Page, Madden & Maher, 2015; Lansky et al., 2014). Despite these greater risks, however, efforts to prevent injection drug use initiation have so far employed either a “gender-neutral”, or male-specific, lens (Collins, Mcneil & Boyd, 2019; Smith, Strathdee, Metzger & Latkin, 2017). As such, gender-specific barriers to drug-related services and interventions for women who use drugs are perpetuated. This is problematic as these services cannot be effectively employed to prevent transitions into injection initiation, or the gender-specific risks that accompany injection initiation, for women who use drugs. As outlined below, the development of effective injection initiation prevention programs must attend to the way gender shapes substance use trajectories and related harms for women.

Service access barriers for women who use drugs

Women who use drugs have been found to be more likely than men to encounter barriers that prevent them from seeking or completing substance use-related treatment (Green, 2006; Iverson et al., 2015). For example, women are more likely to report having difficulty regularly attending treatment sessions due to family responsibilities and to feel shame and embarrassment as a result of being in treatment (Green, 2006; Iverson et al., 2015). Additionally, women who use drugs are disproportionately affected by mood and anxiety disorders, which may further prevent them from seeking treatment and other drug-related services, thereby exacerbating substance use- and injection-related risks for this population (Green, 2006; Iverson et al., 2015; Tirado-Muñoz et al., 2018). Women who use drugs, including WWID, also experience high rates of intimate partner violence (IPV), as well as violence from strangers and acquaintances (Iverson et al., 2015; Tirado-Muñoz et al., 2018). Experiences of violence, or the threat of violence, has been linked to HIV- and HCV-related risk behaviors, including syringe sharing, and a reluctance to use harm reduction services (Iverson et al., 2015). This is likely due to gendered inequities that undermine women's abilities to negotiate safer drug use practices, particularly within intimate partnerships and within the context of sex work (Iverson et al., 2015). These known barriers to care for women who use drugs not only serve to exacerbate experiences of substance use-related harms, but also potentially place WWID at greater risk of providing injection initiation assistance to injection-naïve individuals. As such, it is imperative that injection initiation prevention efforts be tailored to better address the gendered nature of substance use-related risks for women who use drugs prior to injecting, as well as the gendered factors that place WWID at greater risk of assisting others in initiating injection drug use.

Intersectional gender- and substance use-related stigma exacerbate existing barriers

Scientific literature has identified stigma as a critical barrier to treatment utilization for people with substance use disorders (Kulesza, Larimer & Rao, 2013). Furthermore, substance use-related stigma can prevent individuals from disclosing their substance use to health care providers, which can have detrimental effects on their health (Kulesza et al., 2013). Experiences of substance use-related stigma have also been found to negatively impact psychological well-being, which can further serve as a barrier to accessing services and care, and is positively associated with injection-related risk behaviors, like sharing syringes, which further compounds PWID's risk of HIV and HCV (Kulesza et al., 2013).

Women who use drugs, however, have been found to experience an even greater burden of substance use-related stigma compared to their male counterparts (Kulesza et al., 2013), and this intersection of gender- and substance use-related stigmas can further amplify barriers to service access for women. For example, women who use drugs exhibit higher levels of internalized substance use-related stigma compared to men who use drugs, likely stemming from gendered social norms and societal expectations that women be primary caregivers within substance use-related social networks, and which further exacerbates substance use and injection-related harms for this population (Iverson et al., 2015; Kulesza et al., 2013). Furthermore, past research has highlighted that women who use drugs are often not viewed as a “policy or funding priority” within healthcare service settings (Myers, Carney & Wechsberg, 2016). This intersectional stigma and omission from the policy and funding discussion can result in an important lack of gender-responsive treatment for women who use drugs and further reinforces their vulnerability to substance use-related harms (e.g., HIV and HCV) as well as their risk of providing injection initiation assistance (Myers et al., 2016).

Gender-specific injection drug use initiation processes

Additionally, the scientific literature indicates that gender shapes injection drug use initiation processes. For example, research suggests that WWID are more likely to have been assisted in their initiation into injection drug use by a male intimate partner/spouse whereas men are more likely to have been assisted by a casual acquaintance (Iverson et al., 2015). In such cases, women may be at high risk of acquiring blood borne pathogens (i.e., HIV and HCV), bacterial infections, and physical harm due to the existence of gendered social norms dictating that men be responsible for drug acquisition and preparation, the increased rates of equipment sharing observed in these initiation events, and women being more likely to be injected after the person assisting them with initiation (Iverson et al., 2015). Research from the United Kingdom also highlights women-specific injection initiation experiences during which women felt coerced or forced to inject, in part due to their male partner's inability to afford or obtain enough drugs to combat the couple's increasing tolerance (Simmons, Rajan & McMahon, 2012).

Despite this documented vulnerability of women who use drugs, however, qualitative and mixed methods studies from San Diego, USA and Tijuana, Mexico have highlighted that

there are complex gendered power dynamics in injection initiation events within intimate partnerships (Meyers, 2020; Meyers et al., 2019). Within these partnerships, women may experience agency in injection initiation processes through active requests for, or the provision of, injection initiation assistance (Meyers et al., 2019). Recent research has also suggested, however, that there are geo-cultural differences in these injection initiation-related gendered power dynamics. For example, WWID in Tijuana have been found to be less likely to provide injection initiation assistance, but more likely to assist other women when they do provide this assistance, compared to men who inject drugs in this setting (Meyers, 2020). Additionally, there is evidence suggesting that some women who use drugs are able to gain autonomy through their ability to inject themselves, engage in drug dealing, and provide injection assistance to others (Meyers et al., 2019; Tuchman, 2015). This highlights that women's experiences of vulnerability and agency can be nuanced and dynamic within injection initiation events and vary across geographic contexts.

In summary, though there are instances in which women experience autonomy with injection initiation events, women who use drugs are also exposed to risk within injection initiation processes and, consequently, are disproportionately vulnerable to HIV, HCV, and bacterial infections as well as physical and sexual violence. Furthermore, intersectional gender- and substance use-related stigma create significant barriers for women who use drugs and WWID to access drug-related services and amplify women's vulnerability to substance use-related harms. Given what is known regarding these gender-specific processes within substance use, as well as the substance use-related consequences women face, a recent call has been made to develop gender-responsive harm reduction efforts for WWID (Collins et al., 2019). We argue, however, that it is also imperative that efforts be directed upstream towards the development of gender-responsive prevention programs that focus on reducing the transition from non-injection to injection drug use for women.

Current injection drug use initiation prevention efforts

At present, two intervention-based approaches have been found to effectively target and reduce transitions into drug injecting: (1) the behavioral interventions Break the Cycle and Change the Cycle and (2) opioid agonist treatments (OATs); however, the preventive effectiveness of these interventions has yet to be tested at the population-level.

Break the cycle/CHANGE the cycle

Behavioral interventions have been developed with the aim of reducing the prevalence of injection initiation by focusing on PWID's role in exposing others to injecting (Werb et al., 2018). One such behavioral intervention, Break the Cycle, seeks to engage PWID in counselor-led education and training sessions that are geared towards raising PWID's awareness of how exposure to injecting can elicit desire to begin injecting among individuals who have not injected (Werb et al., 2018). Additionally, an adaptation of the Break the Cycle intervention, Change the Cycle, was developed and assessed in Canada (Strike et al., 2014), and a randomized controlled trial of Change the Cycle is also currently ongoing in California (Bluthenthal, Kral, and Strike: NIDA R01 DA038965) (Werb et al., 2018).

Both the Break the Cycle and Change the Cycle behavioral interventions have demonstrated effectiveness in preventing transitions into injection drug use through reducing PWID's provision of injection initiation assistance (Des Jarlais et al., 2019; Strike et al., 2014; Werb et al., 2018). These interventions, however, have been designed with a "gender neutral approach," and the influence of gender on the effectiveness of these programs has not been investigated (Des Jarlais et al., 2019; Strike et al., 2014). As such, greater research is needed to assess how gender may moderate the effect of this intervention on the injection initiation processes of its recipients. If differences are identified, it is likely that this intervention will need to be adapted to better address gender-specific injection initiation processes for women who use drugs.

Treatment as prevention

The concept of treatment as prevention (TasP) was initially developed for HIV prevention. Highly active antiretroviral treatment (HAART) can reduce HIV viral load in infected individuals to undetectable levels; once undetectable, HIV effectively becomes untransmittable to others (Cohen, McCauley & Gamble, 2013; Metzger, Woody & O'Brien, 2010). Similarly, existing research demonstrates that OAT for opioid use disorder among PWID is associated with 40–60% fewer instances of injection and syringe-sharing events across cross-sectional and longitudinal studies of PWID (Metzger et al., 2010; Springer et al., 2015). This suggests the potential for a TasP approach to prevent injection-related risk behaviors and the concomitant HIV transmission that can accompany these risk behaviors. TasP has also been further expanded, with treatment for substance dependence hypothesized to be a potential intervention for the prevention of transitions into injection drug use (Werb et al., 2016).

The current gold standard for treating opioid use disorders are OATs, like methadone and buprenorphine (Mittal et al., 2019, 2017). Furthermore, OAT enrolment has been associated with a lower likelihood of PWID providing injection initiation assistance to injection-naïve individuals in both San Diego and Vancouver (Mittal et al., 2019, 2017), suggesting that providing effective, evidence-based treatment for opioid use disorders could potentially reduce the risk of PWID assisting others into injection drug use initiation and reduce the risk of injection-naïve individuals initiating injection drug use. Further research is required to determine causality in this instance, while significant barriers to OAT remain, particularly for women who use drugs, including WWID (Springer et al., 2015).

Improving injection drug use initiation prevention efforts

PReventing Injecting by Modifying Existing Responses (PRIMER) is a multisite longitudinal study that pools data from cohorts of PWID across six cities; San Diego, USA, Tijuana, Mexico, Vancouver, Canada, and Paris, Marseille, and Bordeaux, France (Werb et al., 2016). PRIMER seeks to understand the structural contexts and factors that may influence the risk that PWID facilitate initiating injection drug use (Werb et al., 2016). This study adds valuable information to the extant literature by investigating the gendered and culturally specific pathways for providing injection initiation assistance. This is critical for the development of effective gender-responsive prevention programs that target the transition from non-injection to injection drug use (Werb et al., 2016). As such, these findings provide

an important foundation critical for the development of gender-responsive injection initiation prevention efforts, particularly for WWID.

Gender Responsive Treatments (GRTs) have shown preliminary effectiveness in improving treatment outcomes within substance dependence facilities for women who use drugs (Greenfield et al., 2007). GRTs have been defined, more specifically, as treatment modalities that take into account the unique needs and concerns of women who use drugs (e.g., family responsibilities, increased levels of substance use-related stigma, histories of trauma, etc.) (Greenfield et al., 2007). One experimental pilot study of a GRT program for incarcerated women demonstrated that those in the GRT condition had greater reductions in substance use and were more likely to remain in residential aftercare 12 months after their release when compared to their control condition counterparts (Greenfield et al., 2007). Despite this evidence that GRT programs can be effective for women who use drugs, and the fact that some gender-responsive OAT services exist (e.g. 21% of North Carolina's publicly funded OAT services contain women-specific programs) (Klaman, Lorvick & Jones, 2019), there are still relatively few gender-responsive OAT services, and no gender-responsive injection initiation interventions, in operation across the country.

Future directions

There are currently two interventional approaches that have promise for reducing transitions into injection drug use: (1) the Break the Cycle/Change the Cycle behavioral interventions and (2) OAT services (Des Jarlais et al., 2019; Mittal et al., 2019, 2017). Despite the wealth of research demonstrating that women have unique substance use-related trajectories and consequences, injection initiation prevention programs tailored directly towards women are still scarce. This is likely due to the structural-level drug policies and stigma that exclude women who use drugs from funding and policy discussions (Collins et al., 2019; Myers et al., 2016). As such, we recommend that injection initiation prevention programs adopt gender-responsive approaches to adequately address the needs and concerns of women who use drugs and to prevent subsequent transitions into injection drug use.

Given what is known regarding internalized substance use-related stigma for women who use and inject drugs (Myers et al., 2016), we recommend that existing interventions addressing HIV-related stigma among healthcare professionals be adapted to address intersectional stigma within drug-related service settings as a potential method for preventing transitions into drug injecting, particularly for women who use drugs (Batey et al., 2016; Kulesza, Watkins, Ober, Osilla & Ewing, 2017; Myers et al., 2016). One such intervention, the *Finding Respect and Ending Stigma around HIV* (FRESH) workshop, adapted and piloted in Alabama, USA, involves bringing together healthcare workers and people living with HIV in informational and stigma-reducing activities in order to reduce HIV-related stigma among healthcare professionals and improve HIV stigma-related positive coping among people living with HIV (Batey et al., 2016). This intervention could be adapted to prevent injection drug use initiation among injection-naïve women by applying positive coping strategies for women who use drugs at risk of injection initiation, while also connecting them with healthcare providers to retain them in services that may delay or eliminate an eventual injection initiation event. As such, an adaptation of FRESH could also

reduce the risk that WWID assist others in injection initiation events by increasing the capacity of service providers to enroll and retain WWID in treatment such as OAT, which has been shown to be protective against injection drug use initiation assistance provision.

Gender-focused suggestions for injection initiation prevention efforts tailored for women who use drugs include adapting existing behavioral interventions, like Break the Cycle and Change the Cycle, to be couple-focused. Past couple-focused interventions designed to reduce the risk of disease transmission among PWID populations, like Project Connect II, have proven to be effective, and demonstrate that intimate partnerships can also be an important source of support, care, and injection-related risk reduction for WWID (El-Bassel et al., 2014; Rance, Rhodes, Bryant & Treloar, 2018). Consequently, existing behavioral interventions aimed at reducing transitions into injection should also consider intimate partnerships a critical site for intervening, particularly for women who use drugs, and should incorporate informational, communication, and technical skill building sessions targeting injection initiation events within intimate partnerships.

Additionally, it is recommended that injection initiation prevention efforts create women-specific spaces for women who use drugs. Scientific literature has found women-only drug treatment programs and risk reduction efforts are associated with improved outcomes (e.g., greater treatment completion, reduced substance use, reduced mental health symptoms, improved self-reported health, and reduced HIV-risk behaviors), likely due to the increased autonomy women have over their own behavior in these settings (Grella, 2008; Smith et al., 2017). This is further supported by accounts from women accessing Sister-Space, a women-only supervised consumption facility in Vancouver, Canada, in which women reported feeling safe from the gendered stigma and violence they may encounter in other mixed-gender harm reduction services (Boyd et al., 2020). As such, it is crucial that injection initiation prevention programs, like OAT, be expanded to incorporate women-specific spaces and strategies that account for ways social roles and expectations affect how women navigate substance use and treatment services, and their gendered-system-level consequences (i.e., incarceration, child protective services involvement, etc.) (Auerbach & Smith, 2015).

Lastly, injection initiation prevention programs that are trauma-informed and are tailored for specific populations of women, such as those that have co-occurring psychiatric disorders (e.g., mood or anxiety disorders) are recommended (Green, 2006). It has been hypothesized that gender-responsive drug-related services will be even more effective when tailored towards specific subpopulations of women who use drugs; for example women who use drugs diagnosed with PTSD (Green, 2006; Grella, 2008). As such, existing behavioral interventions, like Break the Cycle and Change the Cycle, and treatment efforts, like OAT services (Des Jarlais et al., 2019; Volkow, Frieden, Hyde & Cha, 2014), will likely need to incorporate informational and skill building sessions, as well as referral systems, to help women cope with, and access services for, co-occurring disorders. We, therefore, recommend that injection initiation prevention programs be designed to serve a variety of subpopulations of women who use drugs, including those with a history of trauma and mental health needs, to ensure effectiveness.

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