


# The Opioid Overdose Epidemic and the Urgent Need for Effective Public Health Interventions That Address Men Who Use Drugs Alone

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North America is amid an overdose crisis that is showing no signs of slowing down. In 2017, there were 10.9 opioid-related deaths per 100,000 individuals in the United States (Ahmad, Rossen, Spencer, Warner, & Sutton, 2018). In Canada, data from the first half of 2018 show a rate of 11.2 opioid-related deaths per 100,000 individuals (Government of Canada, 2018) and as high as 31 deaths per 100,000 individuals in the province of British Columbia (BC Coroners Service, 2019). The public health response to the opioid overdose epidemic has been challenging, given the proliferation of illicit fentanyl and fentanyl-adulterated drugs across the continent (Ciccarone, 2017; Fairbairn, Coffin, & Walley, 2017). Given the reality of a poisoned illicit drug market, there has been a variety of public health interventions implemented in various settings to address the overdose crisis, including naloxone training and distribution (Bardwell, Fleming, Collins, Boyd, & McNeil, 2019; Sherman et al., 2009; Tobin, Clyde, Davey-Rothwell, & Latkin, 2018), drug checking programs (Bardwell & Kerr, 2018; Krieger et al., 2018; Peiper et al., 2019; Tupper, McCrae, Garber, Lysyshyn, & Wood, 2018), and supervised injection sites (Boyd et al., 2018; Kral & Davidson, 2017; Strike & Watson, 2019; Wallace, Pagan, & Pauly, 2019).

While the scale-up of these interventions has shown some promise in responding to overdoses in community settings (i.e., at the street level), there is an urgent need to address drug overdoses that occur in housing environments (e.g., emergency shelters, supportive housing, private market housing; Bardwell, Boyd, Kerr, & McNeil, 2018; Davidson et al., 2003). For example, a longitudinal study of opioid overdoses in New York City identified that 75% of overdose deaths occurred in a home (Siegler, Tuazon, Bradley O'Brien, & Paone, 2014). Similarly, in the Canadian context, the majority of opioid overdose deaths in British Columbia involve men who are using drugs alone indoors (BC Coroners Service, 2019). These

findings suggest that targeted overdose response interventions in housing environments generally, and those for men specifically, should be key priorities. Unfortunately, there are very few housing-based interventions despite the clear and outstanding need (Bardwell, Collins, McNeil, & Boyd, 2017).

There is ample research on the ways in which gender role socialization (e.g., notions and expectations of manhood, masculinities) affects men's health and well-being (Gough & Robertson, 2010). Masculinity has been defined as a social construct that places men at the top of the gender hierarchy, shapes norms and behaviors based on this hierarchy, and varies across space and time (Kimmel, Hearn, & Connel, 2005). Socially-constructed masculine characteristics include rationality, strength, dominance, risk-taking, machoism, and heroism. The effects of masculinity have been reported to undermine health service access and related outcomes. For example, studies have identified how health promotion programs lack a "manly appeal" and are in contrast to gendered norms and expectations of independence and self-reliance (Sharp et al., 2018). Research on pain has demonstrated that some men perceive the experience of pain as unmanly (Gough & Robertson, 2010). Men's reluctance to disclose experiences of pain and suffering, and consequently delay seeking the required medical attention, are a result of gender socialization and can lead men to

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self-diagnose rather than seek professional care (Gough & Robertson, 2010). Additionally, research on health and safety for men in high-risk occupations has reported how notions of masculinity frame how risk is perceived, normalized, and accepted by men (Stergiou-Kita et al., 2015). These examples demonstrate some of the ways in which masculinity impacts the health outcomes of men specifically.

However, less is known about how masculinities affect drug use. A 1998 qualitative study of drug use and street survival on the United States–Mexican border investigates machismo and hypermasculinity among men who inject drugs. This study highlights how structural factors such as institutionalized racism and poverty influence machismo attitudes and behaviors among men and how social status is gained via violence and drug use (Quintero & Estrada, 1998). A more recent qualitative study on recreational drug use among men in Ireland investigates the gendered practices, expectations, and beliefs regarding drug use and how masculinity frames men's practices. This study demonstrates how using drugs within drug user circles was associated with machoism and how drug use initiation was part of men's socialization and belonging (Darcy, 2018). Though, the ways in which gender role socialization affects overdose risk and related public health interventions, in general, and using drugs alone, specifically, remain to be examined.

Public health communication strategies specific to the overdose crisis have largely consisted of messaging that targets individual drug use behaviors. These include warnings about fentanyl-contaminated street drugs and encouraging people who use drugs (PWUD) to moderate their use by starting with a small amount of drugs and to never use drugs alone (British Columbia Centre for Disease Control, 2015). However, research has been critical of the potential of such warnings to change individual drug use behaviors (Kerr, Small, Hyshka, Maher, & Shannon, 2013). Moreover, this type of public health messaging fails to consider and address the larger socio-structural contexts that create overdose risks for PWUD, including gender socialization. For example, is using smaller amounts of drugs considered less masculine? Does health promotion on drug use lack a manly appeal or is it antithetical to masculine attitudes regarding independence and self-reliance?

There is minimal research on the social and structural conditions that influence individuals (of all genders) to use drugs alone. Some research suggests that using alone is a way for PWUD to hide their use from others due to the stigma and shame associated with drug use (Bardwell, Boyd, Kerr, & McNeil, 2018; Rhodes et al., 2007). Other studies suggest that PWUD hide their use due to the criminalization of drugs and the heightened risks associated with using drugs in public, including intimidation

and arrests from police (Small, Kerr, Charette, Schechter, & Spittal, 2006). Further, given that many PWUD live in poverty with minimal secure income, and given the cultural convention of sharing drugs when using in the presence of other PWUD, many individuals will use alone in order to derive as much as possible from their limited resources (Moore, 2004). These studies importantly illuminate contextual factors that frame using alone and associated risks and highlight the limitations of conventional overdose prevention messaging. Still, it remains unclear as to why the majority of those who have died of opioid overdoses while using alone are men.

Some research demonstrates that naloxone (i.e., a medication that blocks the effects of opiates) programs have been an effective response to overdose in some housing environments (Bardwell et al., 2019; Bardwell, Kerr, Boyd, & McNeil, 2018); however, naloxone is ineffective when individuals are using drugs alone, as it requires another person to administer it. Further, recent evidence has indicated that while many individuals receive naloxone kits and related training, most individuals do not carry naloxone on a regular basis (Tobin et al., 2018). Additionally, drug checking programs (i.e., technologies that allow individuals to identify the contents of their drugs) have been useful in some settings, as they have the potential to promote informed decisions and change in drug use behavior, such as using less than usual (Peiper et al., 2019). However, studies on drug checking are limited and it is not known how effective these interventions would be in housing environments, nor how gender would affect the use of these technologies. These demonstrate critical gaps in the public health response that warrant immediate attention.

Given the lack of research in this area, studies are urgently needed to understand the gendered social and structural conditions that lead men to use drugs alone, particularly during an overdose crisis, marked by a toxic illicit drug market. For example, how do gendered dynamics, attitudes, and beliefs impact men's decisions not to carry naloxone or utilize drug checking services? Are there gendered dimensions that limit men from using life-saving services such as supervised injection sites and instead use drugs alone elsewhere? Do attitudes regarding manliness or the normalization and acceptance of risk lead men to use drugs alone? How can public health move beyond "don't use alone" messaging toward more effective communications that target men specifically? Would men access safe supply (i.e., prescription opioids) housing-based interventions?

Data from the British Columbia Coroner's Service continues to demonstrate that the majority of opioid overdose deaths are occurring indoors among men who use drugs alone. Given this growing evidence, public health authorities must prioritize targeted interventions for men

who use drugs alone as they are the most at risk of overdose death. Additionally, to more effectively address the opioid overdose crisis, there is a critical need for in-depth ethnographic and qualitative research with the potential to unpack existing epidemiological findings and better understand the gendered social and structural conditions that create overdose risk for men, including how these intersect with other axis of inequality such as race and class. Without such an understanding, too many men will continue to be lost to preventable overdose death.

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