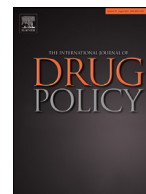




Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.



## Commentary

## COVID-19 and the opportunity for gender-responsive virtual and remote substance use treatment and harm reduction services



Melissa Perri<sup>a</sup>, Rose A. Schmidt<sup>a,b</sup>, Adrian Guta<sup>c</sup>, Nat Kaminski<sup>a,d</sup>, Katherine Rudzinski<sup>a,c</sup>, Carol Strike<sup>a,e,\*</sup>

<sup>a</sup> Dalla Lana School of Public Health, University of Toronto, Toronto, ON, Canada

<sup>b</sup> Institute for Mental Health Policy Research, Centre for Addiction and Mental Health, Toronto, ON, Canada

<sup>c</sup> School of Social Work, University of Windsor, Windsor, ON, Canada

<sup>d</sup> Canadian Association of People Who Use Drugs, Dartmouth, NS, Canada

<sup>e</sup> MAP Center for Urban Health Solutions, Li Ka Shing Knowledge Institute, St. Michael's Hospital, Unity Health Toronto, Toronto, ON, Canada

## ARTICLE INFO

## Keywords:

Gender  
Women  
Transgender  
Gender-responsive  
Harm reduction  
Spotting  
COVID-19  
Virtual and remote services

## ABSTRACT

The COVID-19 pandemic has increased the uptake of virtual and remote service delivery in the substance use field, which was previously uncommon. This swift uptake of virtual services provides an opportunity to improve service design to meet the diverse needs of women and gender-diverse people. Such services have the potential to better meet the needs of women and gender-diverse people by allowing for increased choice, control, and autonomy, enabling empowerment, facilitating greater considerations of power relations, violence, childcare responsibilities, and fostering greater inclusion of trans and non-binary people. This commentary aims to identify how virtual and remote delivery of substance use treatment and harm reduction services can be gender-responsive. We highlight the role gender transformative services play in meeting the unique needs of women and gender-diverse people who use drugs both during and after the COVID-19 pandemic. By using the unique window of opportunity COVID-19 has created to develop and deliver gender-transformative programs, we can help address the detrimental gaps in service accessibility and effectiveness that have persistently been experienced by women and gender-diverse people who use drugs.

## Introduction

Despite the contribution to increased opioid-related morbidity and mortality across North America (Centre for Disease Control and Prevention., 2021; Government of Canada, 2021), COVID-19 has also provided an opportunity to incorporate virtual and remote delivery methods into substance use services, a field that has previously been reluctant to use such practices. In many cases, technology, including telephone, texting, and videoconferencing is now being used for intake and assessment, counselling and treatment, case management, and in Canada and the United States for supervising opioid agonist treatment (OAT) administration, and prescribing safer opioid supply (Bach et al., 2020; Bandawar et al., 2018; Bertholet et al., 2020; Bruneau et al., 2020; Patton et al., 2021; Perri et al., 2021).

The rapid expansion of virtual and remote services provides an opportunity to reflect on current substance use treatment and harm re-

duction service delivery (henceforth referred to as substance use services) and adapt them in more inclusive and effective ways. The use of virtual and remote services may mitigate persistent barriers in accessing face-to-face substance use services faced by people who use drugs (Bach et al., 2020; Perri et al., 2021). For example, virtual OAT services during COVID-19 have improved access by reducing wait times and increasing the efficiency of service delivery (Crowley & Delargy, 2020; Patton et al., 2021). Additionally, during the pandemic, novel harm reduction practices such as 'spotting', a practice intended to reduce overdose risk by connecting a person who uses drugs to a 'spotter' either informally (e.g., a friend) or through a telephone service or a mobile app, have emerged (Brave Technology Cooperative, 2021; Grenfell Ministries, 2020; National Overdose Response Service., 2020; Perri et al., 2021).

When substance use services are delivered without the consideration of gender, they may unknowingly reproduce harmful power rela-

\* Corresponding author.

E-mail address: [carol.strike@utoronto.ca](mailto:carol.strike@utoronto.ca) (C. Strike).

tions and gender norms. The recent shift towards virtual and remote service delivery allows for a unique moment to more fully incorporate considerations of gender into substance use treatment and harm reduction service design, implementation, and evaluation to produce improved outcomes for women and gender-diverse people. Women, both cis<sup>1</sup> and transgender, transgender men, gender fluid, and non-binary people, sometimes termed “women and gender-diverse people,” experience structural vulnerabilities related to their gender which further intersect with race, Indigeneity, class, disability, and sexuality to produce unique needs (Collins et al., 2019; Collins et al., 2020; Perri et al., 2021). Issues such as violence, the criminalization of substance use, fear of child apprehension, and limited inclusion of cultural safety contribute to reduced attendance by women and gender-diverse people in substance use services (Women and Harm Reduction International Network., 2020).

For decades, scholars and activists have called for the integration of gender-responsive frameworks within substance use treatment and harm reduction services (Collins et al., 2019; Ettore, 1992; Freestone et al., 2021). Gender responsiveness can be viewed as a continuum from gender unequal to gender transformative (Greaves et al., 2014). Gender-specific services acknowledge gender norms, roles, and relations and include accommodations such as the provision of childcare at women’s services (March et al., 1999; Pederson et al., 2014; Robinson et al., 2019). Gender-transformative services go a step further and challenge the existing patriarchal structures such as the distribution of power and resources that lead to gendered inequities in the first place (Pederson et al., 2014; Robinson et al., 2019). The effective design and delivery of gender-transformative services to women and gender-diverse people will require a transformation of existing ideologies which are embedded in substance use services, which are inherently beneficial to cisgender men. An example of such gender transformative services includes programming designed and delivered by representative staff.

There has been a dearth of guidance on how to deliver remote and virtual substance use services in gender-transformative ways. Below, we explore five considerations that we believe service planners and practitioners of innovative virtual and remote substance use services can examine in their own work to better incorporate gender-transformative elements. We come to this work as a group of interdisciplinary researchers, service providers, and advocates, with lived/living experiences of drug use and sexual and gender diversity. Although much of this work is currently theoretical, we believe that such shifts in service delivery can better enable the engagement of women and gender-diverse people while mitigating concerns associated with in-person services such as violence, navigating unsafe personal relationships, fears of being reported to child welfare agencies, lack of childcare and other constraints on single parents, and the limited availability of trans specific services. The integration of trauma-informed practice into virtual and remote services is also considered.

### *Providing violence-free spaces*

Women often experience harassment, physical violence, sexual exploitation, and victimization by peers at in-person substance use services, which can result in the avoidance of such services (Boyd, 2019; Boyd et al., 2018; Boyd et al., 2020; Boyd & MacPherson, 2018). Trans and non-binary people also report being subjected to stigma, discrimination, and physical/sexual violence by both peers and service providers in substance use services (Bauer & Scheim, 2015). For example, research by Collins et al. (2020) reports that women in their study used substances alone in order to avoid the risk of violence present at overdose prevention sites. Due to threats of violence, discrimination, and harassment,

<sup>1</sup> Cis gender refers to someone whose gender identity is congruent with their sex assigned at birth.

women and gender-diverse people may choose to use drugs alone. Although using alone provides people with more control over the environment in which they use, it increases their risk of drug-related overdose and morbidity (Collins et al., 2020).

Controlling, violent, or exploitive relationships among peers or partners can also influence how women and gender-diverse people use drugs (Canadian HIV/AIDS Legal Network., 2020; Collins et al., 2020; Shirley-Beavan et al., 2020). For example, women who inject drugs are often described as being “second on the needle,” passive, and last recipients of injections when using with partners or in groups, all of which increase the risk of HIV, Hepatitis C and B (Falk et al., 2020; Gibson & Hutton, 2021; Tuchman, 2015). Remote and virtual substance use services can contribute to women’s and gender-diverse people’s sense of empowerment to use drugs safely and can act as a way to further assert their agency within potentially coercive or negative relationships (Schmidt et al., 2018). Even within supportive relationships, virtual and remote harm reduction services can aid women in contributing to substance use safety planning with their partners (e.g., safe injection practices and the integration of other harm reduction practices) (Rance et al., 2018). Virtual and remote delivery can also provide more private and confidential services as women and gender-diverse people can access services from their homes and avoid the risk of being witnessed accessing an in-person site. Virtual and remote services can empower women and gender-diverse people to use drugs in locations that they deem safe, assuming individuals have access to such spaces to begin with. In a recent evaluation by Perri et al., participants described overdose response communication services which occur informally (e.g., among friends) and formally (e.g., within organizations) as helpful to mitigate instances of violence, stigmatization, and discrimination they would normally face when accessing in-person overdose prevention services (Perri et al., 2021). The potential to provide increased confidentiality through access to substance use services in private locations can address issues such as gendered violence and stigmatization. This may be particularly important for women and gender-diverse people who live in small communities and remote regions with stringent abstinence-based ideologies or policies (Boyd, 2019; Boyd et al., 2018; Canadian HIV/AIDS Legal Network., 2020; Collins et al., 2019).

### *Accommodating childcare and family responsibilities*

The most commonly cited barrier to accessing substance use services for women is fear of child apprehension and child welfare involvement (Wolfson et al., 2021). Research highlights that even within gender-specific in-person harm reduction programs, such as Vancouver’s women’s only overdose prevention site, the engagement of women and gender-diverse people who are pregnant or have children is not equitable (Boyd et al., 2020). Women can experience stigma relating to child care on an individual (e.g., mistrust of child welfare laws and systems), interpersonal (e.g., losing relationships with children), institutional (e.g., stigmatizing ideologies embedded within institutions), and population levels (e.g., societal discrimination associated with child welfare engagement) (Wolfson et al., 2021). Navigating child custody and welfare systems can be traumatic for women and gender-diverse people who use drugs given the constant “struggle and heartbreak” faced within these systems (Boyd, 2019; Boyd et al., 2018; Boyd et al., 2020; Shirley-Beavan et al., 2020). This is particularly true for Indigenous people because child welfare and foster care replicate and extend experiences of colonialization (Boyd et al., 2020; Wolfson et al., 2021).

As described above, the use of remote harm reduction services facilitates privacy and confidentiality for women and gender-diverse people who use drugs and care for children. Participants engaged in toll-free overdose response lines, for example, have expressed that being able to use informal “spotting” instead of in-person overdose prevention services increased confidentiality and decreased instances of institutional and interpersonal stigma for people who use drugs (Perri et al., 2021).

The ability of remote harm reduction services to foster privacy and confidentiality by allowing women and gender-diverse people to access services in locations and methods of their choice (e.g., phone call vs video) also has the potential to increase client trust and minimize fear of child apprehension.

Appropriate and adequate child care is also a significant barrier for women to engage in substance use treatment (Wolfson et al., 2021). Childcare is a particular issue when trying to access residential, or in-patient treatment, as parents with dependent children, most often women must place their children in the care of others to attend treatment. In the United States, the Adoption and Safe Families Act of 1997 and the associated shortened timeframe for establishing permanency for the child have demonstrated how the timelines for reunification, childhood development, and attachment often conflict with the timelines of addiction recovery (Hanson et al., 2019). Substance use treatment services that are offered in the homes of women with children have demonstrated high rates of retention, positive treatment outcomes, and low rates of out-of-home child placements (Crane et al., 2019; Hanson et al., 2019). The expansion of virtual and remote delivery of services can provide more options for people to attend treatment services from home. Patton et al. (2021) describe a hybrid telemedicine program addressing substance use and prenatal care that was created out of necessity during COVID-19. The flexibility of this delivery model allowed clients with complex lives to access services more easily without the need for transportation, childcare, or other logical concerns which lead to a significantly lower no-show rate for appointments in the hybrid model (from 34% of visits to 10%) (Patton et al., 2021).

Providing alternatives for women and gender-diverse people to access substance use services in person may also reduce the risks of being “outed” to child welfare agencies by peers and service providers. The added security provided by using phone, text, or application-based interactions can foster agency among these groups to decide whether or not they want to disclose that they care for children. The use of virtual and remote services can be further tailored to address concerns regarding child apprehension for women and gender-diverse people through connecting these groups to relevant health and social services, and offering counselling relating to parenting and relationship skills and/or specific to the trauma associated with child welfare engagement (Hanson et al., 2019; Patton et al., 2021).

#### *The inclusion of trans and non-binary people*

Gender-based discrimination and transmisogyny are forms of oppression faced by trans women and trans feminine people associated with their gender identity and femininity (Sojka, 2017), and produce specific and disproportionate drug-related harm for trans and non-binary people compared to cisgender people (Campbell & Herzberg, 2017; Lyons et al., 2016). Trans women may avoid substance use treatment and harm reduction services because of institutional forms of oppression faced (e.g., feeling they have to “pass” in order to feel safe in such spaces) (Boyd et al., 2018; Boyd et al., 2020; Lombardi, 2007; Matsuzaka, 2018). Additionally, trans and non-binary people may not be represented within the limited women’s substance use spaces that exist (Boyd et al., 2018; Matsuzaka, 2018). There are very few trans-specific substance use treatment services, which tend to be located in urban areas, and the authors know of no trans-specific harm reduction services in Canada. The small proportion of the population that identifies as trans and the limited demand for trans and gender-diverse people specific services is often used as a justification for not expanding trans-specific services, particularly in rural and remote areas.

Scholars have described the emancipatory possibility of virtual options for trans and gender non-conforming people given their ability to facilitate power and solidarity among community members in spaces where these groups are commonly isolated (Cuboniks, 2018). When accessing virtual and remote substance use services, trans and

gender-diverse people can decide how and if they are seen, by whom, when, and where. The use of digital options for substance use treatment may facilitate access for trans and gender-diverse people given pre-existing distrust and fear associated with using such services in person (Collins et al., 2019; Lyons et al., 2016; Wolfson et al., 2021). The remote delivery of services may mitigate the discomfort and violence associated with transmisogyny and may promote the use by trans women of women-specific services that are in alignment with their gender. Virtual substance use treatment can also bring together people from across a larger geographic area to access tailored services provided by a culturally competent service provider, or to participate in trans-specific individual or group programming that would otherwise be difficult to deliver. The benefits of remote delivery of services including telehealth options for trans people have been substantiated in health care services. For example, Kaplan, highlighted how the use of telehealth consultations during COVID-19 facilitated access for their trans clients and helped address ongoing barriers associated with health care such as geographic availability, transportation inaccessibility, structural stigmatization, heteronormativity, racism, and trauma faced by these groups (Kaplan, 2021). These barriers were alleviated for trans clients as telehealth consultations allowed access to health services from locations deemed safe by them, enabling clients to avoid navigating in-person health care systems which have been reported as harmful for these groups (Safer et al., 2016). While the number of transgender people in certain jurisdictions is small and may therefore limit the availability of tailored services, efforts are needed to create and/or work with existing organizations that provide culturally appropriate services to transgender and gender-diverse people to enhance harm reduction services and supports.

#### *Transforming gender relations*

Women’s drug use is seen as less socially acceptable and is more stigmatized than cis-men’s use, and women are often harshly judged for diverging from socially acceptable ‘feminine’ behaviours (Klee et al., 2002). Experiences of stigma and violence faced by women and gender-diverse people who use drugs are driven by wider societal ideologies surrounding gender and femininity. Feminist and gender theory scholars have highlighted how systems like substance use services can perpetuate harm and inequality through reproducing social norms and gender-based power relations (Ettore, 1992; Klee et al., 2002). Concepts relating to femininity such as motherhood, reproduction, passivity, and caregiving become embedded within institutions and form the way in which systems are developed (Ettore, 2012; Koyama, 2003; Wilchins, 2004). For women and gender-diverse people, gendered ideologies shape interactions and expectations within substance use services, and work to limit bodily autonomy.

Boyd and colleagues provide an example of how societal expectations surrounding femininity facilitate unique harms and marginalization within harm reduction services and substance use treatment for women and gender-diverse people who use drugs (Boyd et al., 2018). These authors described how women and gender-diverse people identified overdose prevention sites as ‘masculine’ spaces (Boyd et al., 2018). Within these sites, participants felt that they were expected by peer workers and by male peers to “behave” in gendered ways such as taking care of men who used the service (e.g., assisting them to leave the site) or assisting service providers in cleaning the site (Boyd et al., 2018). These experiences reduced the likelihood of women using the sites and exacerbated risk of drug-related harms (Boyd et al., 2018).

Virtual and remote services offer an opportunity to challenge existing gender norms by redistributing resources to focus specifically on the needs of women and gender-diverse people. The gendered stereotypes embedded within substance use and harm reduction services can be challenged through the integration of women and gender-diverse people with lived/living expertise in the delivery and evaluation of ser-

vices (Deitzer et al., 2018; Holzhauser et al., 2020). This integration will not only improve agency and autonomy over how services are designed and implemented for women and gender-diverse people but also have the potential to improve broader structural barriers to care (e.g., employment and income security) of these groups. The Women, Co-occurring Disorders, and Violence Study (WCDVS) demonstrated the importance of including women with lived experiences throughout all aspects of the design, implementation, and evaluation of comprehensive, trauma-informed treatment programs for women with a history of violence and trauma who had substance use and mental health concerns (Cocozza et al., 2005). However, despite this evidence, consumers of services are not always consulted and their contributions need to be ensured to avoid further harm to these groups.

Providing alternatives to in-person harm reduction services can challenge normative notions of women and gender-diverse people who use drugs as passive recipients of care and facilitate autonomy and decision-making over overdose prevention service engagement. For example, providing education on how to inject drugs safely and independently, coupled with virtual overdose prevention services like spotting can also empower women and gender-diverse people to use drugs outside of potential power imbalanced relationships of intimate partners. Additionally, limiting interactions with in-person harm reduction and substance use treatment services will minimize experiences of gendered practices (e.g., caring for others) faced by women and gender-diverse people.

#### *Becoming trauma-informed*

Given the high rates of violence and traumatic events experienced by women and gender-diverse people who use drugs, it is important to incorporate principles of trauma-informed practice into gender-responsive services (Schmidt et al., 2018; The Jean Tweed Centre, 2013). Trauma-informed practice is a systemic approach to service delivery that aims to avoid traumatizing and re-traumatizing people who seek services by consciously avoiding replicating experiences of control and oppression (Nathoo et al., 2018; Schmidt et al., 2018). In addition to being developed with an awareness of the pervasiveness and the impacts of trauma, principles of trauma-informed practice include 1) choice, collaboration, and connection, 2) safety and trustworthiness, and 3) strengths based and skill building (Nathoo et al., 2018; Schmidt et al., 2018). The development of new virtual and remote services during the COVID-19 pandemic provides an opportunity to further integrate the above trauma-informed practice principles in substance use services, but virtual and remote services also require particular mindfulness in certain areas (e.g., accessibility of technology) when trying to operate in a trauma-informed way.

Virtual and remote services provide opportunities to extend women's and gender-diverse people's agency over how and if they engage in treatment services and harm reduction practices, which can enhance choice and foster a sense of control and empowerment. Formal and informal "spotting" can empower individuals to consume substances in the location of their choice while being monitored remotely by methods such as phone, video call, or text (Perri et al., 2021), as well as increase their autonomy to choose their overdose response plan (e.g., who is contacted in case of an overdose). Integrating women and gender-diverse people within the delivery of remote and virtual services can also foster interpersonal connections, safety, and trustworthiness, and expand social networks and support.

The increase in telehealth-based and other virtual services has increased the flexibility and range of choices available to women and gender-diverse people—particularly as in-person services also begin to resume. The use of telemedicine to provide access to services such as OAT fills a gap for women and gender-diverse people who have faced persistent barriers in accessing face-to-face substance use treatment by providing more medication initiation, continuation, and dos-

ing options compared with before the COVID-19 pandemic (Bach et al., 2020; Patton et al., 2021; Perri et al., 2021). The use of virtual OAT services and accompanied longer duration of 'carries' implemented in many areas during COVID-19 has improved access and retention in OAT (Crowley & Delargy, 2020; Patton et al., 2021). People who use drugs have long highlighted how restrictions on take-home doses of OAT, and the high levels of surveillance and control reduce people's ability to stay in methadone programs. These prevalent forms of surveillance and control are particularly harmful for women and gender-diverse people given structural stigma surrounding gendered roles, parenting, and substance use. Women and gender-diverse people face both hierarchal (from institutions) and lateral (from partners and peers) forms of surveillance which inhibit their ability to safely and effectively engage with these forms of services. For example, lateral surveillance from partners may create challenges in meeting specific appointment times for women and gender-diverse people and can intersect with hierarchal surveillance which would lead providers to reprimand individuals for not being "compliant" with appointment standards. It is key for trauma-informed virtual and remote harm reduction and addiction services to consider how all these factors may relate to one another and shape dis/advantages for women and gender-diverse people.

When restrictions on take-home doses of methadone were loosened during the COVID-19 pandemic to facilitate physical distancing, retention of methadone improved without increased negative outcomes like overdose (Gomes et al., 2022). The shift in the delivery of these services will allow women and gender-diverse people to navigate experiences of surveillance and control while also providing potential opportunities to improve overall stability and well-being (e.g., reconnect with family members or friends given the flexibility offered by virtual methadone services).

Applying trauma-informed practices to virtual and remote delivery of services is necessary and timely. COVID-19 has added additional stressors to people's daily lives which may disproportionately impact people with past experiences of violence and trauma (Gerber et al., 2020). Research on trauma-focused telemental health has demonstrated that these services increase safety and collaboration, key features of trauma-informed services, and do not have significantly different acceptability, outcomes, or retention rates compared to in-person services (Gilmore et al., 2016; Morland et al., 2020). The implementation of remote trauma-informed substance use services can enable women and gender-diverse people to be away from individuals they find threatening (e.g. current or past intimate partners who may trigger their trauma symptoms). As discussed by Gilmore and colleagues, the implementation of a post-traumatic stress intervention for military sexual trauma through teleconferencing enabled women to avoid engaging with populations that triggered anxiety and fear, improving the effectiveness of the intervention (Gilmore et al., 2016). However, specific considerations around safety and trustworthiness may be more difficult to establish through virtual and remote service delivery than through in-person methods (Levy et al., 2021). Taking time to establish boundaries and therapeutic bonds will require attention and specific strategies such as: providing space for clients to share experiences and concerns about receiving virtual services and when on camera allowing clients to see service providers body language (Gerber et al., 2020; Levy et al., 2021).

#### **Considerations and concerns**

Despite the potential for virtual and remote harm reduction services, we recognize that they have unique limitations. We recognize that all technology can be used in ways which undermine agency and that historically, technology has been used in gendered ways to surveil and control women (e.g., influence how women act within society) (Mason & Magnet, 2012; Monahan, 2009). Research has shown that surveillance of women through technology can occur both from broader systems

and from peers. Mason and Magnet speak to how perpetrators leverage technology like Spyware or Facebook to stalk or further harm women (Mason & Magnet, 2012). Similarly, Facebook has been increasingly incorporated into criminal justice-related surveillance practices and may therefore increase harm to women and gender-diverse people who use drugs (Mason & Magnet, 2012). Moving beyond this, it is important to recognize the oppressive and discriminatory design of technology and how intersecting forms of identity can magnify surveillance and related harms for groups of women and gender-diverse people who use drugs (French et al., 2020). The relevant history of technology for women must be acknowledged in advancing conversations surrounding virtual and remote substance use services to avoid the reproduction of harm to women and gender-diverse people. Data security and privacy regulations applicable to virtual services must also be considered. As discussed by Van Draanen and colleagues, ensuring that law enforcement agencies are unable to access any data which may be produced through the use of technology is essential in maximizing comfort and minimizing harm for people who use drugs (Van Draanen et al., 2022). Incorporating procedures of consent (e.g., asking if clients prefer having video cameras on or off during consultations) can help minimize harm relating to data security and privacy (Van Draanen et al., 2022).

Remote substance use services are not universal and therefore many people will not have access, availability, or knowledge of them, inhibiting their ability to engage and potentially furthering digital inequality. Women and gender-diverse people without technical requirements such as a smartphone or reliable high-speed internet could be further marginalized. Similarly, women and gender-diverse people who experience homelessness or who live in crowded or unstable housing may also face issues related to access. Health inequalities could be exacerbated as the people without access to virtual services may be the ones who need them the most. Beyond these factors, it is important to recognize that without adequate resources and support, the implementation of virtual and remote services may further inequities for women and gender-diverse people (e.g., unpaid work). Research demonstrates that caring work most often done by women is underpaid. This theme is consistent with research showing that peer workers within harm reduction settings face compounded inequities relating to underpay, lack of benefits, employment insecurity, and employment related stress (Kolla & Strike, 2019; Mamdani et al., 2021).

In addition, the shift to virtual and remote harm reduction and addiction treatment services will not address underlying policies that leave parents fearful that coming forward for services will lead to child apprehension. Adaptations must be made to such policies to ensure women and gender-diverse people who use drugs and care for children can access the services they require in a safe and effective manner (Du Rose, 2015). Finally, the shift to virtual and remote services may exacerbate experiences of isolation among women and gender-diverse people, which has been a major outcome of the COVID-19 pandemic for people who use drugs (Roe et al., 2021). Some of these issues can be mitigated by advocating for increased funding to support staff of these services and to purchase items such as phones for clients. However, in conversations with front line harms reduction services providers, we have heard that many attempts to distribute technology (e.g., cell phones) during COVID-19 to facilitate access were undermined when such technology was frequently lost or stolen (Personal communication H. Gohil, August 2021). This is a particular issue with clients experiencing instability such as homelessness. In addition, providers must embed outreach engagement within these service models for communities who may not have access to or knowledge of virtual and remote services.

While we have highlighted virtual and remote services in this paper, this is not to detract from the need for and importance of onsite and in-person substance use services for women and gender-diverse people who use drugs. To meet the diverse needs of women and gender-diverse people who use drugs, both virtual and in person services must mo-

bilize resources to consider and further integrate gender in their development, implementation, and evaluation (Collins et al., 2019). The uptake of virtual and remote services may remove some of the challenges experienced by women and gender-diverse people in person but as highlighted, may not change the experiences if those delivering these services continue practices that are hostile, unsupportive, stigmatizing, gender blind, or not trauma-informed. Finally, the overall structural vulnerability of women and gender-diverse people who use drugs must be advanced through improving access to steady employment, education, health care, and housing. This will allow us to see broader advancements in gender equity and improvements in health and social outcomes for women and gender-diverse people. On a broader level, uptake of virtual and remote gender-transformative services creates the potential for innovative and inclusive policy changes within the harm reduction sector globally, which is currently limited. A report published by Harm Reduction International for example, points to the need for harm reduction services and policy for women but lacks to mention transgender or non-binary people (Harm Reduction International, 2020). The current harm reduction 'movement' on a global scale needs, in general, to continue to push for programming and policy that reflects and integrates the unique needs and perspectives of women and gender-diverse people.

## Conclusion

The ongoing COVID-19 pandemic and associated recovery efforts have brought gender to the forefront of health and social policy globally (UN Women, 2020; World Health Organization, 2020). COVID-19 has presented an opportunity for substance use services to become innovative, accessible, and effective to more people who use drugs. By accounting for their needs and preferences during service design/redesign, and implementation, remote and virtual harm reduction services can enable women and gender-diverse people to access services when, where, and how they want. This manuscript does not advocate for a one size fits all harm reduction policy and program approach. Such an approach is unlikely to meet the needs of all individuals. We also acknowledge that we as a group cannot represent all perspectives in this paper and we believe that further research is needed with diverse women and sexual and gender-diverse people to better understand these issues and how best to address them. By using this unique window of opportunity to develop and deliver tailored and gender-transformative programs, we can help address the detrimental gaps in service accessibility and effectiveness persistently experienced by women and gender-diverse people who use drugs.

## Funding

No funding was received for this paper.

## Ethics approval

The authors declare that they have obtained ethics approval from an appropriately constituted ethics committee/institutional review board where the research entailed animal or human participation.

## Declarations of Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

## Appendix 1



Fig. 1. Gender Responsive Continuum<sup>1</sup>.

<sup>1</sup>© 2013 BC Centre of Excellence for Women's Health; Reprinted with permission.

## References

- Bach, P., Robinson, H., Sutherland, C., & Brar, R. (2020). Innovative strategies to support physical distancing among individuals with active addiction. *Lancet Psychiatry*, 7(9), 1–2.
- Bandawar, M., Narasimha, V. L., & Chand, P. (2018). Use of digital technology in addiction disorders. *Indian Journal of Psychiatry*, 60(4), S534–S540.
- Bauer, G. R., & Scheim, A. I. (2015). *Transgender people in Ontario, Canada: Statistics to inform human rights policy*. Retrieved from London, Ontario.
- Bertholet, N., Schmutz, E., Grazioli, V. S., Faouzi, M., McNeely, J., Gmel, G., ... Cunningham, J. A. (2020). Smartphone-based secondary prevention intervention for university students with unhealthy alcohol use identified by screening: Study protocol of a parallel group randomized controlled trial. *Trials*, 21(191), 1–8.
- Boyd, J., Collins, A. B., Mayer, S., Maher, L., Kerr, T., & McNeil, R. (2018). Gendered violence and overdose prevention sites: A rapid ethnographic study during an overdose epidemic in Vancouver, Canada. *Addiction*, 113(12), 2261–2270. [10.1111/add.14417](https://doi.org/10.1111/add.14417).
- Boyd, J., Lavalley, J., Czechaczek, S., Mayer, S., Kerr, T., Maher, L., & McNeil, R. (2020). Bed bugs and beyond": An ethnographic analysis of North America's first women-only supervised drug consumption site. *International Journal of Drug Policy*, 78(102733), 1–10. [10.1016/j.drugpo.2020.102733](https://doi.org/10.1016/j.drugpo.2020.102733).
- Boyd, S. (2019). Gendered drug policy: Motherisk and the regulation of mothering in Canada. *International Journal of Drug Policy*, 68, 109–116. [10.1016/j.drugpo.2018.10.007](https://doi.org/10.1016/j.drugpo.2018.10.007).
- Brave Technology Cooperative. (2021). *We are brave*. Retrieved from <https://static1.squarespace.com/static/5ae19ee7f9392f31975dcd5/t/6019a9aeddb3b2f22fd90413f/1612294583244/Brave+Coop+Overview++27+Jan+2021++email.pdf>.
- Bruneau, J., Rehm, J., Wild, T. C., Wood, E., Sako, A., Swansburg, J., & Lam, A. (2020). *Telemedicine support for addiction services: National rapid guidance document*. Retrieved from Montreal, Quebec: <https://crism.ca/wp-content/uploads/2020/05/CRISM-National-Rapid-Guidance-Telemedicine-V1.pdf>.
- Boyd, S., & MacPherson, D. Vancouver Area Network of Drug Users. (2018/19). Community engagement the harms of drug prohibition: Ongoing resistance in Vancouver's downtown eastside. *BC Studies*, (200), 87–96.
- Campbell, N., & Herzberg, D. (2017). Gender and critical drug studies: An introduction and an invitation. *Contemporary Drug Problem*, 44(4), 251–264. [10.1177/0091450917738075](https://doi.org/10.1177/0091450917738075).
- Canadian HIV/AIDS Legal Network. (2020). *Gendering the scene: Women, gender-diverse people, and harm reduction in Canada*. Retrieved from Canada: Centre for Disease Control and Prevention. (2021). Provisional drug overdose death counts. Retrieved from <https://www.cdc.gov/nchs/nvss/vsrr/drug-overdose-data.htm#data-tables>.
- Cocozza, J. J., Jackson, E. W., Hennigan, K., Morrissey, J. P., Reed, B. G., Falot, R., & Banks, S. (2005). Outcomes for women with co-occurring disorders and trauma: Program-level effects. *Journal of Substance Abuse Treatment*, 28(2), 109–119. [10.1016/j.jsat.2004.08.010](https://doi.org/10.1016/j.jsat.2004.08.010).
- Collins, A. B., Bardwell, G., McNeil, R., & Boyd, J. (2019). Gender and the overdose crisis in North America: Moving past gender-neutral approaches in the public health response. *International Journal of Drug Policy*, 69, 43–45. [10.1016/j.drugpo.2019.05.002](https://doi.org/10.1016/j.drugpo.2019.05.002).
- Collins, A. B., Boyd, J., Czechaczek, S., Hayashi, K., & McNeil, R. (2020). (Re)shaping the self: An ethnographic study of the embodied and spatial practices of women who use drugs. *Health & Place*, 63(102327), 1–10. [10.1016/j.healthplace.2020.102327](https://doi.org/10.1016/j.healthplace.2020.102327).
- Collins, A. B., Boyd, J., Hayashi, K., Cooper, H. L. F., Goldenberg, S., & McNeil, R. (2020). Women's utilization of housing-based overdose prevention sites in Vancouver, Canada: An ethnographic study. *International Journal of Drug Policy*, 76, Article 102641. [10.1016/j.drugpo.2019.102641](https://doi.org/10.1016/j.drugpo.2019.102641).
- Collins, A. B., Boyd, J., Hayashi, K., Cooper, H. L. F., Goldenberg, S., & McNeil, R. (2020). Women's utilization of housing-based overdose prevention sites in Vancouver, Canada: An ethnographic study. *International Journal of Drug Policy*, 76(102641), 1–9. [10.1016/j.drugpo.2019.102641](https://doi.org/10.1016/j.drugpo.2019.102641).
- Crane, D., Marcotte, M., Applegate, M., Massatti, R., Hurst, M., Menegay, M., ... Williams, S. (2019). A statewide quality improvement (QI) initiative for better health outcomes and family stability among pregnant women with opioid use disorder (OUD) and their infants. *Journal of Substance Abuse Treatment*, 102, 53–59. [10.1016/j.jsat.2019.04.010](https://doi.org/10.1016/j.jsat.2019.04.010).
- Crowley, D., & Delargy, I. (2020). A national model of remote care for assessing and providing opioid agonist treatment during the COVID-19 pandemic: A report. *Harm Reduction Journal*, 17(49), 1–5. [10.1186/s12954-020-00394-z](https://doi.org/10.1186/s12954-020-00394-z).
- Cuboniks, L. (2018). *The xenofeminist manifesto: A politics for alienation*. Brooklyn, New York: Verso.
- Deitzer, J. R., Leban, L., & Copes, H. (2018). The times have changed, the dope has changed": Women's cooking roles and gender performances in shake methamphetamine markets. *Criminology*, 57(2), 1–21. [10.1111/1745-9125.12200](https://doi.org/10.1111/1745-9125.12200).
- Du Rose, N. (2015). *The governance of female drug users: Women's experiences of drug policy* (1st ed.). Britol University Press, Policy Press.
- Ettore, E. (1992). *Women and substance use*. Rutgers University Press.
- Ettore, E. (2012). Embodied deviance, gender, and epistemologies of ignorance: Re-visioning drugs use in a neurochemical, unjust world. *Substance Use & Misuse*, 50, 794–805. [10.3109/10826084.2015.978649](https://doi.org/10.3109/10826084.2015.978649).
- Falk, M. V., Stromdahl, S., Ekstrom, A. M., Kaberg, M., Karlsson, N., Dahlborn, H., & Hammarberg, A. (2020). A qualitative study of facilitators and barriers to participate in a needle exchange program for women who inject drugs. *Harm Reduction Journal*, 17(84), 1–10.
- Freestone, J., Mooney-Somers, J., & Hudson, S. (2021). The sector is ready, and the community needs Australian alcohol and other drug treatment services to ask about sexuality and gender identity. *Drug and Alcohol Review*. [10.1111/dar.13367](https://doi.org/10.1111/dar.13367).
- French, M., Guta, A., Gagnon, M., Mykhalovskiy, E., Roberts, S. L., Goh, S., ... McKelvey, F. (2020). Corporate contact tracing as a pandemic response. *Critical Public Health*, 32(1), 48–55. [10.1080/09581596.2020.1829549](https://doi.org/10.1080/09581596.2020.1829549).
- Gerber, M. R., Elisseeu, S., Sager, Z. S., & Keith, J. A. (2020). Trauma-informed telehealth in the COVID-19 era and beyond. *Federal Practitioner*, 37(7), 302–308.
- Gibson, K., & Hutton, F. (2021). Women Who Inject Drugs (WWID): Stigma, gender and barriers to Needle Exchange Programmes (NEPs). *Contemporary Drug Problem*, 48(3), 276–296.
- Gilmore, A. K., Davis, M. T., Grubaugh, A., Resnick, H., Birks, A., Denier, C., ... Acierno, R. (2016). Do you expect me to receive PTSD care in a setting where most of the other patients remind me of the perpetrator?": Home-based telemedicine to address barriers to care unique to military sexual trauma and veterans affairs hospitals. *Contemporary Clinical Trials*, 48, 59–64. [10.1016/j.cct.2016.03.004](https://doi.org/10.1016/j.cct.2016.03.004).
- Gomes, T., Campbell, T. J., Kitchen, S. A., Garg, R., Bozinoff, N., Men, S., ... Wyman, J. (2022). Association between increased dispensing of opioid agonist therapy take-home doses and opioid overdose and treatment interruption and discontinuation. *Journal of the American Medical Association*, 327(9), 846–855. [10.1001/jama.2022.1271](https://doi.org/10.1001/jama.2022.1271).
- Government of Canada (2021). *Apparent opioid and stimulant toxicity deaths surveillance of opioid- and stimulant-related harms in Canada*. Retrieved from <https://health-infobase.canada.ca/src/doc/SRHD/UpdateDeathsMarch2021.pdf>.
- Greaves, L., Pederson, A., & Poole, N. (2014). *Making it better: Gender transformative health promotion*. Canadian Scholars' Press.
- Grenfell Ministries. (2020). Grenfell ministries at a glance Retrieved from <https://www.grenfellministries.org>
- Hanson, K. E., Duryea, E. R., Painter, M., Vanderploeg, J. J., & Saul, D. H. (2019). Family-based recovery: An innovative collaboration between community mental health agencies and child protective services to treat families impacted by parental substance use. *Child Abuse Review*, 28(1), 69–81. [10.1002/car.2545](https://doi.org/10.1002/car.2545).
- Harm Reduction International. (2020). *Global state of harm reduction 2020*. Retrieved from London, England

- Holzhauser, C. G., Hildebrandt, T., Epstein, E., McCrady, B., Hallgren, K. A., & Cook, S. (2020). Mechanisms of change in female-specific and gender-neutral cognitive behavioral therapy for women with alcohol use disorder. *Journal of Consulting and Clinical Psychology, 88*(6), 541–553. [10.1037/ccp0000492](https://doi.org/10.1037/ccp0000492).
- Kaplan, B. (2021). Access, equity, and neutral space: telehealth beyond the pandemic. *Annals of Family Medicine, 19*(1), 1–4.
- Klee, H., Jackson, M., & Lewis, S. (2002). *Drug misuse and motherhood*. London: Routledge.
- Kolla, G., & Strike, C. (2019). 'It's too much, I'm getting really tired of it': Overdose response and structural vulnerabilities among harm reduction workers in community settings. *International Journal of Drug Policy, 74*, 127–135.
- Koyama, E. (2003). The Transfeminist Manifesto. In C. R. Mccann, S. K. Kim, & E. Ergun (Eds.), *Feminist theory reader- Local and global perspectives* (5th ed., pp. 83–90).
- Levy, S., Mason, S., Russon, J., & Diamond, G. (2021). Attachment-based family therapy in the age of telehealth and COVID-19. *Journal of Marital and Family Therapy, 47*(2), 440–454. [10.1111/jmft.12509](https://doi.org/10.1111/jmft.12509).
- Lombardi, E. (2007). Substance use treatment experiences of transgender/transsexual men and women. *Journal of LGBT Health Research 3*(2), 1–12. [10.1300/J463v03n02\\_b5](https://doi.org/10.1300/J463v03n02_b5).
- Lyons, T., Krusi, A., Pierre, L., Smith, A., Small, W., & Shannon, K. (2016). Experiences of trans women and two-spirit persons accessing women-specific health and housing services in a downtown neighborhood of Vancouver, Canada. *LGBT Health, 3*(5), 373–378. [10.1089/lgbt.2016.0060](https://doi.org/10.1089/lgbt.2016.0060).
- Mamdani, Z., McKenzie, S., Pauly, B., Cameron, F., Conway-Brown, J., Edwards, D., ... Buxton, J. (2021). Running myself ragged": Stressors faced by peer workers in overdose response settings. *Harm Reduction Journal, 18*(18), 1–19.
- March, C., Smyth, I., & Mukhopadhyay, M. (1999). *A guide to gender-analysis frameworks*. Retrieved from <https://www.ndi.org/sites/default/files/GuidetoGenderAnalysisFrameworks.pdf>
- Mason, C., & Magnet, S. (2012). Surveillance studies and violence against women. In *Surveillance and Society: 10* (pp. 105–118).
- Matsuzaka, S. (2018). Transgressing gender norms in addiction treatment: Transgender rights to access within gender-segregated facilities. *Journal of Ethnicity in Substance Abuse, 17*(4), 420–433.
- Monahan, T. (2009). Dreams of control at a distance: Gender, surveillance, and social control. *Cultural Studies <-> Critical Methodologies, 9*(2), 286–305. [10.1177/1532708608321481](https://doi.org/10.1177/1532708608321481).
- Morland, L. A., Mackintosh, M. A., Glassman, L. H., Wells, S. Y., Thorp, S. R., Rauch, S. A. M., ... Acierno, R. (2020). Home-based delivery of variable length prolonged exposure therapy: A comparison of clinical efficacy between service modalities. *Depression and Anxiety, 37*(4), 346–355. [10.1002/da.22979](https://doi.org/10.1002/da.22979).
- Nathoo, T., Poole, N., & Schmidt, R. (2018). *TraumaInformed practice and the opioid crisis: A discussion guide for health care and social service providers*. Retrieved from Vancouver, BC:
- National Overdose Response Service. (2020). National Overdose Response Service (NORS). No judgement. Just love. Retrieved from <https://www.nors.ca/>.
- Patton, E. W., Saia, K., & Stein, M. D. (2021). Integrated substance use and prenatal care delivery in the era of COVID-19. *Journal of Substance Abuse Treatment, 124*, Article 108273. [10.1016/j.jsat.2020.108273](https://doi.org/10.1016/j.jsat.2020.108273).
- Pederson, A., Greaves, L., & Poole, N. (2014). Gender-transformative health promotion for women: A framework for action. *Health Promotion International, 30*(1), 1–11. [10.1093/heapro/dau083](https://doi.org/10.1093/heapro/dau083).
- Perri, M., Guta, A., Gagnon, M., Bonn, M., Leece, P., Bayoumi, A. M., ... Strike, C. (2021). Developing a digital health strategy for people who use drugs: Lessons from COVID-19. *SAGE Digital Health, 7*(1-6). [10.1177/20552076211028404](https://doi.org/10.1177/20552076211028404).
- Perri, M., Kaminski, N., Bonn, M., Kolla, G., Guta, A., Bayoumi, A. M., ... Strike, C. (2021). A qualitative study on overdose response in the era of COVID-19 and beyond: How to spot someone so they never have to use alone. *Harm Reduction Journal, 18*(85), 1–9. [10.1186/s12954-021-00530-3](https://doi.org/10.1186/s12954-021-00530-3).
- Perri, M., Metheny, N., Matheson, F. I., Potvin, K., & O'Campo, P. (2021). Finding opportunity in the COVID-19 crisis: Prioritizing gender in the design of social protection policies. *Health Promotion International, 1*–11. [10.1093/heapro/daab045](https://doi.org/10.1093/heapro/daab045).
- Rance, J., Rhodes, T., Fraser, S., Bryant, J., & Treloar, C. (2018). Practices of partnership: Negotiated safety among couples who inject drugs. *Health & Place, 22*(1), 3–19.
- Robinson, H., Eckhoff, S., & Quay, I. (2019). *Gender marker guidance*. Retrieved from [https://insights.careinternational.org.uk/images/in-practice/Gender-marker/CARE-Gender-Marker-Guidance\\_new-colors1.pdf](https://insights.careinternational.org.uk/images/in-practice/Gender-marker/CARE-Gender-Marker-Guidance_new-colors1.pdf).
- Roe, L., Proudfoot, J., Teck, J. T. W., Irvine, R. D. G., Frankland, S., & Bal-dacchino, A. (2021). Isolation, solitude and social distancing for people who use drugs: An ethnographic perspective. *Frontiers in Psychiatry, 11*(623032), 1–7.
- Safer, J. D., Coleman, E., Feldman, J., Garofalo, R., Hembree, W., Radix, A., & Sevelius, J. (2016). Barriers to health care for transgender individuals. *Current Opinion in Endocrinology, Diabetes and Obesity, 23*(2), 168–171. [10.1097/MED.0000000000000227](https://doi.org/10.1097/MED.0000000000000227).
- Schmidt, R., Poole, N., Greaves, L., & Hemsing, N. (2018). *New terrain: Tools to integrate trauma and gender informed responses into substance use practice and policy*. Retrieved from Vancouver, BC:
- Shirley-Beavan, S., Roig, A., Burke-Shyne, N., Daniels, C., & Csak, R. (2020). Women and barriers to harm reduction services: A literature review and initial findings from a qualitative study in Barcelona, Spain. *Harm Reduction Journal, 17*(78), 1–13. [10.1186/s12954-020-00429-5](https://doi.org/10.1186/s12954-020-00429-5).
- Sojka, C. (2017). Transmisogyny. In *The SAGE encyclopedia of psychology and gender* (pp. 1727–1731). California
- The Jean Tweed Centre. (2013). *Trauma matters: Guidelines for trauma-informed practices in women's substance use services*. Retrieved from
- Tuchman, E. (2015). Women's injection drug practices in their own words: A qualitative study. *Harm Reduction Journal, 12*(6), 1–8.
- Women, U. N. (2020). *Insights to action—Gender equality in the wake of COVID-19*. Retrieved from United States
- Van Draanen, J., Satti, S., Morgan, J., Gaudette, L., Knight, R., & Ti, L. (2022). Using passive surveillance technology for overdose prevention: Key ethical and implementation issues. *Drug and Alcohol Review, 41*, 406–409.
- Wilchins, R. (2004). *Queer theory, gender theory: An instant primer United States*. Turnaround Publisher Service LTD.
- Wolfson, L., Schmidt, R., Stinson, J., & Poole, N. (2021). Examining barriers to harm reduction and child welfare services for pregnant women and mothers who use substances using a stigma action framework. *Health & Social Care in the Community, 29*(3), 589–601.
- Wolfson, L., Schmidt, R. A., Stinson, J., & Poole, N. (2021). Examining barriers to harm reduction and child welfare services for pregnant women and mothers who use substances using a stigma action framework. *Health & Social Care in the Community, 10.1111/hsc.13335*.
- Women and Harm Reduction International Network. (2020). *Mapping harm reduction services for women who use drugs. North America region. WHRIN survey results 2020*. Retrieved from <https://drive.google.com/file/d/16-PXq6YujLkonVA9LWzZEM0cAAohxPfb/view>.
- World Health Organization. (2020). *Gender and COVID-19* (WHO/2019-nCoV/Advocacy\_brief/Gender/2020.1). Retrieved from