COM-CAP
Community Opioid / Overdose Capacity Building

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RAPID REVIEW

Harm Reduction and Treatment Models for Women and Gender-Diverse Persons who Use Opioids

Published: October 2022

Key Findings

1. Harm reduction and treatment programs designed for women and gender-diverse people who use drugs described in the peer-reviewed literature varied in design and scope.(Note: 'Gender diverse' is a general term referring to gender identifies that do not fall within the woman/man gender binary and can include gender queer, non-binary, trans).

2. A number of studies focussed on pregnant and parenting (assumed cis-) women while very few studies were explicitly designed for gender-diverse persons. Programs mainly provided psychosocial support and access to health services. There was little focus on structural elements such as policy change, creating supportive environments, and strengthening community actions.

3. Structural and contextual factors influencing program development and implementation (e.g., criminalization of substance use, community engagement) were often not explicitly reported.

4. For included studies, program goals were largely met and used a wide range of outcome measures.

5. This review identifies current gaps and missed opportunities within harm reduction and treatment models designed for women and gender-diverse persons who opioids, and highlights the need to:

    - Expand the scope of program beyond the individual level to address the complex interaction of structural and social/societal factors in the context of gendered disparities;
    - Identify and remove barriers to the leadership of women and gender-diverse persons with living and lived expertise of drug use, specifically in the development and implementation of harm reduction and treatment programs.

Scope

This review is a rapid synthesis focussed on the range of harm reduction and treatment models intended to meet the unique needs of women and gender-diverse persons who use opioids.

Harm reduction services include drug-checking, safer supply, supervised consumption services/overdose prevention sites, distribution of harm reduction equipment (e.g. needles), outreach and education

programs and services.[1] Treatment services include opioid-agonist treatment (OAT), as well as other outpatient or residential services.[1]

The review was limited to people who use opioids given the increasing burden of opioid-related harms in Ontario.[2]

Background

The opioid crisis continues to be a wide-reaching and major public health issue, with persistent increases in fatal overdoses and other health and social harms.[3] Published literature suggests that people living with marginalization, discrimination, and injustices are disproportionately affected by opioid-related harms, including women and gender-diverse persons.[4]

Most of the research in this area has focussed on (assumed cis-) women.[4] One study showed that women who use substances were more likely than men to be unemployed, and more likely to report physical and psychological health complications and comorbidities.[5] Women were also more likely than men to avoid harm reduction and treatment services due to fear of interaction with the child welfare system.[6] Additionally, women who use opioids experienced gendered violence, including sexual, emotional, and physical assault, both outside and inside of harm reduction services.[7,8] Further, opioid-related deaths were almost three times as likely to be deemed suicides in women compared to men.[9]

The burden of opioid-related harms in gender-diverse people is understudied but available evidence shows that this group is also disproportionately affected compared with cis-gender and heterosexual persons.[10]

The intersection of gender with other marginalizing factors such as housing status, racialization, Indigenous status, and criminalization of drug use produces unique and significant health and social disparities. It is critical for harm reduction and treatment programs designed for marginalized groups to consider the interrelated individual, social and structural contributors to service user well-being.[11]

An analysis of harm reduction and treatment programs that have been developed and implemented specifically for women and gender-diverse persons who use opioids can identify programming gaps and highlight opportunities for future work.

This rapid review of the published literature seeks to:

- Describe the harm reduction and treatment programs that have meet the unique needs of women and gender-diverse persons who use opioids;
- Describe the contextual factors that were considered in their development and implementation; and
- Describe any process or health outcomes measured for the programs described.

Methods

A rapid review was conducted to identify and summarize peer-reviewed literature on harm reduction and treatment models designed for women and gender-diverse persons. Rapid reviews are a form of knowledge synthesis whereby certain steps of the systematic review process are omitted for timeliness.[12]

The search strategy was developed in collaboration with Public Health Ontario (PHO) Library Services. The search was conducted on February 9, 2022 in three electronic databases: MEDLINE, Embase, and PsycINFO. The search terms consisted of the following concepts: women and gender-diverse individuals, opioids, harm reduction services including supervised consumption sites, needle and syringe distribution, safer supply, and peer support programs, opioid agonist treatment, and public policy. The full search strategy is available upon request.

Important note on Language: Publications in health research continue to frequently adopt the harmful practice of limiting gender-based reporting to the woman/man binary. Furthermore, they adopt gender binary language that uses the term 'women' to imply 'cis-gender women' without clarification.[13] These considerations are relevant to this search on substance use, i.e., when the term 'women' is left unclear it could only be assumed to refer to cis-gender women. In addition, programs or research on pregnancy may focus on the term 'pregnant women' without acknowledging that pregnancy is an experience across diverse genders.

This rapid review uses the terms 'women' and 'pregnant women' to reflect the language in the included literature and to limit (re)interpretation without additional information about participants. However, gender inclusive terminology is used outside those specific summaries and wherever possible. English-language peer-reviewed articles were eligible for inclusion if they met the following criteria:

- Reviews published since 2011 to manage scope;
- Primary research published since 2020 to capture more recent evidence;
- Records published in North America, Europe, and Australia;
- Focussed on women or gender-diverse populations who use opioids; and
- Programs were specifically designed for women or gender-diverse persons.

Peer-reviewed literature search results were divided into two sets. Each set was screened for inclusion by title and abstract by separate single reviewers, and discussed with two other team members. Remaining articles received full-text review, and the final list of articles was verified for inclusion or exclusion by two other team members.

Critical appraisal of the methodology and quality of included articles was not conducted due to time constraints.

One research team member extracted relevant data from all included articles and summarized its content. All extracted content was reviewed by another team member.

Programs identified in included studies were analyzed using two frameworks - Public Health Agency of Canada's Determinants of Health[14] and the Ottawa Charter of Health Promotion:[15]

- From the original list of twelve determinants of health[14], themes were merged, deleted and/or renamed to describe the specific context of programs for women and gender-diverse persons who use opioids.
- For the purposes of this rapid review, harm reduction and treatment programs were described using the following adapted determinants of health: 1) Essential Resources; 2) Access to health services; 3) Psychosocial supports; 4) Culture; and 5) Safety.
- The Ottawa Charter for Health Promotion describes five components of health promotion action which were used to analyze the programs from included studies: 1) Build healthy public policy; 2) Create supportive environments; 3) Strengthen community action; 4) Develop personal skills; and 5) Reorient health services.[15]

Results

Description of the Literature

A total of 1155 articles were retrieved from the peer-reviewed literature search. After title and abstract screening, 50 full text records were reviewed for eligibility. There were 22 studies identified which met inclusion criteria. Common reasons for exclusion were: participants were not women or gender-diverse persons who use drugs, programs were not designed for women or gender-diverse persons who use drugs, programs were outside the scope of harm reduction and treatment, or no intervention was described.

Twelve studies were conducted in the United States, four in Canada, three in multiple countries, two in Europe, and one in Australia.

Research designs included nine qualitative studies, five quantitative analyses of observational studies, four randomized control trials, three meta-analyses, and one mixed methods study.

Appendix A provides a full description of the 22 included articles.[16-37] The table summarizes each article by author, year of publication, study design, participants, program description, outcome measures, findings and contextual factors.

Intervention Characteristics

PARTICIPANT DESCRIPTION

Most studies described programs designed for women who use opioids (n=21). These included pregnant women only (n=4), non-pregnant women (n=1), women with unspecified pregnancy status (n=7), parenting women (n=3), and mixed groups (n=6). Only one study explicitly included transgender and non-binary women in "women-only" spaces.[18] Another study by Willging et al described programs specifically designed for 'lesbian, gay, bi-sexual, transgender and queer (LGBTQ) persons."[36]

PROGRAM DESCRIPTION

Table 1 presents a description of the programs designed for women and gender-diverse persons who use opioids.

Table 1. Program descriptions

Determinant of Health	Program Supports
Essential resources	• Food • Clothing and hygiene products • Housing • Transportation
Access to health services	• Prenatal care • Primary health care for children • Developmental pediatrics • Reproductive health care • Mental health care • General medical care • Screening and treatment for sexually transmitted and blood borne infections • Referral to health professionals OAT
Psychosocial supports	• On-site support staff • Parenting programs • Child care • Support for interaction with child welfare • Referral to social services • Job training • Case management • Accompaniment to probation/parole appointments • Screening and brief intervention • Brief motivational interviewing • Counselling (individual, group, family) • Cognitive behavioural therapy • Digital storytelling • Health education (general and substance-use specific)
Safety	• Violence and trauma support • Women-only spaces (transgender and non-binary inclusive)
Culture	• Indigenous programming • Spiritual care • Cultural programming e.g., art and music therapy • Peer advocate-delivered programming

Program settings included community treatment clinics (n=5), harm reduction settings (n=3), other community-based organizations (n=3), correctional facilities (n=2), transitional housing (n=1), residential treatment centres (n=1), home-based (n=1), and mixed sites e.g., inpatient and outpatient medical facilities (n=6). Programs included single (n=8) or multiple components (n=14).

The majority of programs offered psychosocial supports (n=19) and access to health services (n=11). Fewer programs provided service users with essential resources (n=6), culturally-informed programming (n=5), or addressed specific service user safety concerns (n=4).

Comprehensive and integrated services care were commonly offered either through the co-location of services or team-based interdisciplinary care.

- **Essential resources:** Often, programs aimed to address the essential living needs of women who use opioids and experience precarious housing[16,19,31], food insecurity[31], living in poverty[21], unemployment[19], or interactions with the legal system.[17,19] For example, women who use opioids were more likely to participate in a home-based intervention for children with developmental delay if their own needs for housing, transportation, and material goods were met.[29] These needs are rooted in structural dynamics of power such as sexism, racism, and classism. Harvey et al (2012) describe how co-existing poverty and mental health issues create barriers as women who use drugs navigate parenthood.[21]

- **Access to health services:** Several programs facilitated access to preventive health care, including mammograms and cervical screening[27,37], immunizations[21], care for physical and mental co-morbidities[21], and sexual health care among women who use opioids.[27] Programs also provided reproductive health services, such as contraception and prenatal care.[22,27] Services for parenting women included pediatric health care.[22] Access to clinical services was often enhanced when they were located where women who use opioids were already present e.g., treatment and harm reduction sites.[21,22,27,37] OAT was offered in various settings and often integrated with other services and supports.[20,22,24,25,34,37]

- **Psychosocial supports:** The majority of programs addressed opportunities to provide social, emotional and psychological support for participants. For example, some programs offered parenting courses for parenting or pregnant women,[21,22,26,29,31] and support for those who avoid seeking services for fear that this may negatively impact access to their child(ren).[18,26,29,35] Other programs provided brief counselling for women who use opioids and experiencing incarceration, with a focus on exploring their specific needs after release.[17,19] A digital storytelling workshop for pregnant women and women with children who have used opioids aimed to reduce stigma by facilitating connections and story sharing among participants.[28] A number of records also described programs that included a component of empowerment among women and gender-diverse persons who use opioids through educational groups. For example, Jones at al (2021) demonstrated a significant increase in knowledge after pregnant and parenting women attended 14 weekly sessions about various topics related to substance use and recovery.[23] Participants strongly agreed that the sessions were highly effective.[23]

- **Safety:** Women who use opioids reported frequently experiencing violence, including sexual assault and physical assault, in harm reduction spaces[16,35,] transitional housing and shelter spaces.[16] In this context, building trusting relationships was described as an important component of services.[21] Using non-judgmental, relational[26], trauma-informed, and harm reduction practices were program characteristics that enhanced the experience of safety and trust among women and gender-diverse persons.[31] Programs that offered women-only spaces aimed to address specific experiences of gendered-, race-based, and structural violence.[16] Most often, these services provided a designated space for women, and in one case offered opening hours for women only to access harm reduction supplies. Only one study described a women-only space explicitly inclusive of trans and non-binary persons.[18]

- **Culture:** Few records described the inclusion of culturally-informed programs. We identified programs that included providing Indigenous cultural programming onsite for Indigenous women to engage or re-engage with cultural practices[16,31], the use of art and music therapy at a residential treatment site[37], and hiring LGBTQ peer support workers to deliver services to LGBTQ adults.[36] Participants noted that shared lived experience with program staff contributed to a less stigmatizing environment and promoted service user recruitment.[18,28]

STRUCTURAL AND CONTEXTUAL FACTORS

Several structural and contextual factors may have contributed to reported program development, implementation and outcomes. However, the studies infrequently provided robust information about these issues.

- **Criminalization of opioid use:** The criminalization of opioid use directly impacted the rates of arrests and incarceration of women who use opioids in two studies, e.g., drug charges.[17,19] Related stigma around opioid use emerged as a cross-cutting issue in the literature, and particularly increased fear of child apprehension among parenting women who use opioids.[18,29,35] Discriminatory laws and policies created fear and mistrust, resulting in avoidance of health and social services.[38]

- **Organizational funding and governance:** Lago et al reported that nested levels of trust and distrust experienced by people who use drugs, in the context of experiences of harm and stigmatization, can create tension in accessing harm reduction services.[39] However, none of the included articles explicitly referenced how program funding and governance influenced the acceptability and uptake of programs.

- **Community engagement and leadership:** In keeping with the guiding principle of "Nothing About Us Without Us", meaningful community engagement during the planning and implementation stages of harm reduction and treatment programs is foundational to this work.[40] People with living and lived expertise of drug use should have leadership in shaping harm reduction and treatment programs.[40] Women and gender-diverse staff with living and lived expertise of drug use participated in the delivery of some programs in their roles as peer advocates and peer support workers.[18,22,28,30,36] However, only one study explicitly stated that community members were included in the study design.[16]

- **Program staff:** Harm reduction service providers are trained "to convey acceptance and support individuals to become experts in their own lives."[41] When supporting women and gender-diverse populations who use drugs, it is particularly important for program staff to create safe spaces with an understanding of the harms this population faces.[41] Participants expressed mixed satisfaction with the attitudes and demeanour of harm reduction and treatment providers. While some participants reported that "walk-in care, trusted providers were facilitators to accessing the program"[27], others reported that "negative attitudes of staff prevent engagement in services."[21]

- **Participant lived experiences:** Torchalla et al highlighted that "multiple and continuing forms of adversities and trauma" are common for pregnant and postpartum women who use drugs.[42] Furthermore, the impacts of programs or interventions are closely tied to their current and past lived experiences; e.g., Zhou et al highlighted that "social factors like housing, food, and income are important to a woman's recovery."[37] Begun et al also reported that "although many incarcerated women are serious about their intentions to seek help upon release, the many competing demands for basic needs at community re-entry are difficult to overcome."[17] Willging at al highlighted the role of intersectionality when they noted that "poverty exacerbated by minority stress of being LGBTQ."[36]

OUTCOME MEASURES

Table 2 describes the process or health outcomes reported in included articles. Given the diversity of programs, outcome measures varied widely.

Qualitative studies generally explored user satisfaction with the program, or barriers and facilitators to participating in the intervention. Both participants and service providers were interviewed in these evaluations.

Quantitative studies exploring outcomes were specific to the goals of the programs e.g., maternal and neonatal health outcomes after treatment programs during pregnancy[24,34], or change in experiences within the justice system after completing programs that offered psychosocial support during incarceration.[19]

Table 2. Areas of focus and outcome indicators

Focus	Outcome indicator
Participant priorities	• Needs and concerns as expressed by participants • e.g., women-only spaces "that allow for drug use, including smoking, and that attend to women's specific experiences of gendered, race-based, and structural violence"[16]; finding safe, affordable housing; controlling drug use; finding employment; gaining custody of children; completing education; acceptance of loss/death
Participant engagement	• Service user perceptions about their level of service utilization • "Ability for expression and agency [and] reciprocal relations of care"[18]
Participant satisfaction	Participant feedback about: • Participant feedback about: • Feasibility • Acceptability • Appropriateness • Impact of services/programs • Barriers and facilitators to using services • Ability to share stories and build understanding of life circumstances to reduce shame • Experience of stigma by women who used substances
Program outcomes	• Program completion rates • Length of stay in program • Uptake of services and supports
Substance use outcomes	• Substance use rates • Relapse rates • Knowledge retention about substance use information
Social outcomes	• Quality of mother-child interactions • Proportion of participants' children in the foster system • Change in criminal record/arrest history
Health outcomes	• Pre- and peri-natal indictors e.g., gestational age at booking, mode of delivery, number of prenatal care visits • Neonatal indicators e.g., gestation age at delivery; birth weight; head circumference; length; admission rates and length of stay in high acuity units; neonatal abstinence syndrome rates, scoring and treatment; toxicology screens; birth complications; perinatal mortality

Discussion

Using an adapted framework of the determinants of health demonstrated that programs designed for women and gender-diverse persons who use opioids frequently offered psychosocial supports and access to health services. While service users endorsed the benefit of these programs, there was a gap in supporting access to essential resources, and providing culturally-, and safety-informed programming. This may reflect the over-medicalization of substance use.[43] Service users were more engaged in relational, trauma-informed, and culturally-safe programming that offered support with basic needs. The literature also supported the importance of intentional program design that comprehensively addressed all of the determinants of health, recognizing that supporting people who use drugs means supporting the complex facets of living experiences that have direct impacts on substance use.

Programs for women and gender-diverse persons for use opioids were limited in types of services. In applying the Ottawa Charter for Health Promotion framework[15], most programs identified in the literature address the development of personal skills (e.g., strengthening personal resilience with counselling[22]) and reorientation of health services (e.g., co-locating sexual health services at needle exchange programs).[27] No programs specifically targeted health promotion public policy or supportive natural and built environments for women and gender-diverse persons who use opioids. While some programs included peer support groups,[18,36] no programs focussed on community engagement or collective action as their primary goal. This finding highlights the gap in programs that are informed by the structural, social and intersectional experiences of women and gender-diverse persons who use opioids.

Many studies focussed on programs for pregnant and parent women, but none spoke to gender diverse pregnancy or parenting. It should be considered whether the larger number of programs designed for these sub-populations compared to non-pregnant women or gender-diverse persons are reflective of societal overarching view of women as biological mothers. These programs may further marginalize these groups from an over-medicalized approach without fulsome consideration of other roles and identities that contribute to intersectionality. Although multiple studies in this review focused on parenting, there is a persistent gap in services for women and gender diverse people who use drugs and are parenting despite the unique barriers and challenges they face.[22,29] This highlights the importance of programs for women and gender-diverse persons who use opioids being collaboratively developed and implemented by persons with lived expertise of drug use to more meaningfully address service gaps.

The harms of colonialism, medicalization and experimentation, and general organizational mistrust are important contextual considerations that were not accounted for in the literature. The magnitude of these factors can negatively impact the acceptability of programs funded and delivered by various government agencies, health care organizations, academic centres, community groups, and other stakeholders.[39,44]

Leadership from people who use drugs is not only critical for trust-building and removing barriers, but is also key in designing and implementing impactful supports and services. The leadership of people who use drugs in implementing responsive and impactful practices that centre their well-being, health, and rights have been repeatedly documented. This includes extensive dissemination of their knowledge in collaboration with health organizations despite historical and ongoing harms they have experienced.[45] Despite that, the work of people who use drugs has been undervalued by research and they have been excluded from the research process.[45,46] These realities highlight the importance of grounding this work in community and re-examining the flawed approaches that can underlie research and 'evidence' production.

Limitations

Our search strategy limited results to studies published in peer-reviewed journals. As such, the advocacy work of community-based organizations would not have been captured in this rapid review.

Information on the self-reported gender identity of participants was extremely limited. This data was infrequently collected with only two included studies including this information.[18,36] Since gender identity was not explicitly characterized in the majority of included studies, it is unknown to what extent these results reflect the lived expertise of gender-diverse persons who use opioids.

While we grouped 'women' with 'gender diverse people', it is important to emphasize the unique experiences and needs of both, and the added layers of marginalization experienced by the latter. The literature didn't allow for room or tools to provide a detailed focus on services for gender diverse people; it is important to acknowledge this gap in our review and caution readers from making strong generalizations about the needs of gender diverse people from the included studies. Rather, we recommend learning from the various strategies and processes outlined in these discussions, which often call for taking the lead from people who use drugs since they are the experts in their own experiences.

Conclusion

Women and gender-diverse persons who use opioids have unique experiences Programs specifically designed for this population that were identified in the peer-reviewed literature frequently offered psychosocial supports and access to health services most commonly. Essential resources, culturally-, and safety-informed programming were less commonly provided. The presentation of contextual factors including the criminalization of opioid use, program funding and governance, community engagement, staff skills and participant demographics was limited in the included studies. These represent a gap in programs accounting for structural, social, and intersectional experiences.

Given the heterogeneity of approaches used and outcomes measured, it was difficult to meaningfully compare programs.

Overall, these findings contribute to an increased understanding about the range of harm reduction and treatment programs specifically designed for women and gender-diverse persons who use opioids from the peer-reviewed literature. Since evidence suggests that these groups are disproportionately impacted by opioid-related harms[9], policies and programs tailored to their needs and experiences are required to mitigate these harms.

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Appendix A: Summary of included articles

Authors (Year)	Design	Participants	Program description	Outcome measures	Findings
Bardwell et al. (2021)[9]	Qualitative study	Women attending a transitional housing service in Surrey, BC, Canada (n=32)	• Type: Harm reduction • Women-only "transitional housing and drop-in service" with "two designated drug use rooms on each floor" • Access to drug-related equipment, kitchen, social areas • Support staff on site • Indigenous-specific programming	N/A	• Women wanted women-only spaces "that allow for drug use, including smoking, and that attend to women's specific experiences of gendered, race-based, and structural violence" • Smoking spaces in harm reduction services was an expressed need for women. It allowed for socializing and overdose prevention (group setting).
Begun et al. (2011)[10]	RCT	Women incarcerated in either Milwaukee County's Criminal Justice Facility or the House of Correction who screened positive for alcohol or other substance use in Milwaukee, USA (n=537)	• Type: Harm reduction • Women randomly assigned to screening and brief intervention protocol – screening interview (AUDIT-12) and the provision of personalized feedback on screening results delivered in a one 60- to 90-minute motivational interview format versus treatment as usual (resource folder provided about treatment, supportive services, housing, clothing and healthcare)	Engagement with alcohol or other drug treatment services, and level of reported substance use two months after release from jail	• Mean AUDIT-12 scores for both the intervention and TAU groups decreased significantly from initial to 2-month follow-up score, but mean reduction in AUDIT-12 scores was significantly greater for intervention group than observed for the TAU group • 47% of women at follow-up sought treatment after release (51.7% of intervention group sought treatment compared to 43.8% of TAU group). Receiving the jail in-reach intervention was not a significant predictor or engaging in any type of treatment, including self-help groups

Authors (Year)	Design	Participants	Program description	Outcome measures	Findings
Boyd et al. (2020)[11]	Qualitative study	Women living in downtown eastside Vancouver, Canada, who use drugs (n=45)	• Type: Harm reduction • SisterSpace: SCS in non-institutionalized setting, providing non-overdose prevention supplies (e.g., food, feminine hygiene products), "women-only (transgender and non-binary inclusive)"	N/A	• Mean AUDIT-12 scores for both the intervention and TAU groups decreased • Increased participant engagement and "increased ability for expression and agency [and] reciprocal relations of care"
Cigrang at al. (2020)[12]	Quantitative analysis of program data	Women incarcerated in the Montgomery County Jail with a current/past arrest for at least one drug offence and self-reported history of exchanging sex for drugs or money in Dayton, Ohio, USA (n=91)	• Type: Harm reduction • 2-visit, brief, in-jail motivational interviewing: • Visit 1- reflective listening, reflection of change talk, and summarizing using MI style about top 3 participant-identified concerns women could have leaving jail; participant completed screening measures • Visit 2 – participant given feedback on screening measures using MI-style; completed change plan worksheet with interviewer	Arrest history (change in number of recorded arrests in the 12 months pre- and post-release)	• Top participant concerns: finding safe, affordable housing (54%), controlling drug use (46%), finding employment (27%), gaining custody of children (23%), completing education (19%), better acceptance of loss/death (15%) • Decline in the number of arrests prior to vs following incarceration

Authors (Year)	Design	Participants	Program description	Outcome measures	Findings
Greig et al. (2012)[13]	Retrospective cohort study	Cases: Pregnant women on a Methadone Substitution Program (MSP) whose antenatal care and delivery was at St. Thomas' Hospital in London, UK (n=44) Controls: Non-MSP mothers matched for age, parity and delivery date (n=88)	• Type: Treatment • Methadone substitution under the supervision of the Liaison Antenatal Drugs and Alcohol Service (LANDS) Clinic – a multidisciplinary specialist service for pregnant women with problematic substance use	• Pre- and peri-natal: profiles, pregnancy details and mode of delivery • Neonatal: gestation age at delivery, birth weight, head circumference, admission rates and length of stay on Special Care Baby Unit plus Neonatal Abstinence Syndrome (NAS) rates, scoring and treatment	• Women enrolled in MSP tended to book later (19.4 +/ 9 weeks) than non-MSP women (17 +/- 9.3 weeks); late bookers tended to have smaller babies • Spontaneous vaginal delivery was the most common mode of delivery for both groups (88.2% methadone group and 69.3% control group) • The MSP group had a significantly lower average gestational age, more babies born prematurely, lower median birth weight and lower head circumferences • 40.9% required admission to the SCBU (27.3% for NAS which was lower than for other studies (90%)
Harvey et al. (2012)[14]	Qualitative study	Health care professionals providing pharmacotherapy and case management at opioid treatment	• Type: Treatment • Prenatal and early childhood health care services, coordinated by a nurse, and offered through opioid treatment services: child development assessments, parenting support,	N/A	• Key components of success were building a trusting relationship (initiating contact in the antenatal period, having the nurse engage with the service user during medical appointments, providing home visits), continuity of care, a multidisciplinary approach, and providing staff supervision and support

Authors (Year)	Design	Participants	Program description	Outcome measures	Findings
		clinics in NSW, Australia (n=58)	immunisations, playgroups, referrals to allied health professionals		
Jones et al. (2021)[15]	Program evaluation	Pregnant women with OUD in NC, USA (n=57)	• Type: Treatment • Participants must remain abstinent and participate in counseling, opioid substitution, prenatal care, peer support, parenting training • Optional services: housing in transitional facility, transportation, childcare, psychiatry, spiritual care, job training, general medical care	Percent of program graduates who remain drug-free Percent of program graduate's children who stay out of the foster system	• 50% of participants stayed in the program for 12 to 18 months • Of the 57 women admitted to the program, 18 graduated the program, of which 11 completed a post-graduation survey. "Eight reported not using illicit substances since completing the program." All respondents "remained outside of the criminal justice system [and] foster care system." • Possible selection bias.
Jones et al. (2021)[16]	Program evaluation	Pregnant and parenting women enrolled in SUD treatment in NC, USA (n=51)	• Type: Treatment • Attendance at 14 90-minute weekly group sessions on different topics related to substance use and recovery	Pre- and post-test session scores about extent of: endorsement of factual statement around topic; learning something important; and effective recovery support	• Significant pre- to post-session increased in session-specific knowledge for all 14 sessions. • Participants strongly agreed that the sessions provided high levels of learning and were considered highly effective.

Authors (Year)	Design	Participants	Program description	Outcome measures	Findings
Milligan et al. (2011)[17]	Meta-analysis	Pregnant or parenting women with substance use issues (K = 11; 3 RCTs and 8 quasi-experimental studies)	• Type: Treatment • Participation in integrated programs (on-site pregnancy-, parenting-, or child-related services with substance use treatment within a single agency/treatment program), non-integrated programs, or those not in treatment	Birth outcomes (e.g., birth weight, gestational age, % low birth weight, % birth complications, % born prematurely, % admitted to NICU, number of live births, number of prenatal care visits, length of hospital stay, Apgar scores, positive toxicology screens	• There were better birth outcomes (higher birth weights, larger head circumferences, fewer birth complications, negative toxicology screens at birth) for women participating in integrated programs than no treatment (n=6) • Compared to non-integrated programs, women in integrated programs (n=5) attended more prenatal visits and their infants were less likely to be born prematurely
Milligan et al. (2011)[18]	Meta-analysis	Pregnant or parenting women with problematic substance use [K = 9: 3 length of stay studies (1 RCT and 2 quasi-experimental studies), and 6 treatment completion studies (2 RCTs and 4 quasi-experimental studies)]	• Type: Treatment • Participation in an integrated versus non-integrated treatment program i.e., including at least one substance use treatment and at least one child treatment service (e.g., prenatal care, child care or parenting classes)	Length of stay Treatment completion	• Integrated programs for women with substance abuse issues and their children may be associated with a small advantage over non-integrated programs in terms of length of stay. • The mean number of days for treatment was significantly greater for women in integrated programs than for women in non-integrated programs (small effect size). • There was a trend towards higher levels of treatment completion for women in integrated programs than for women in non-integrated programs (small effect size, statistically non-significant).

Authors (Year)	Design	Participants	Program description	Outcome measures	Findings
Motz et al. (2019)[19]	Description of a community-based program	Mothers with substance use issues and their children aged 0 to 6 years in Toronto, Ontario, Canada (n not explicitly stated)	• Type: Harm reduction • Community-based program offering individual support, group sessions, case management, daily meals, food and clothing donations, accompaniment to probation and parole appointments, parenting programs, prenatal street outreach, child-minding	Goal to support time management, readiness for change, safety and capacity in relationships	• "A large part of the success of [this intervention] has been based on the fact that it is a small, community-based, relational program." Using a developmental-relational approach helps build trust and support women who use substances.
Owens et al. (2020)[20]	Qualitative evaluation	Women who inject drugs in Seattle, WA, USA (n=15 clients and 13 staff)	• Type: Harm reduction • Reproductive services at a needle exchange program (short- and long-acting contraception, sexually transmitted disease testing, and cervical cancer screening)	Patient satisfaction, program uptake, barriers and facilitators to using services	• The authors used the interviews with clients exploring barriers and facilitators to address these factors in the implementation of the program. There was high demand expressed in pre-intervention interviews, but relatively low uptake.
Paterno et al. (2020)[21]	Qualitative evaluation	Pregnant women and women with children with OUD in a rural community setting, MA, USA (n=3)	• Type: Treatment • Digital storytelling: "creative, workshop-based activity that facilitates connectedness among participants"	N/A	• Storytelling workshop helped reduce stigma experienced by women in recovery from substance use.
Peacock-Chambers	Qualitative study	Mothers in recovery from	• Type: Treatment • "Early Intervention": a home-based intervention for	N/A	• Fear of losing custody kept mothers from participating in the intervention.

Authors (Year)	Design	Participants	Program description	Outcome measures	Findings
et al. (2020)[22]		opioid use disorder in MA, USA (n=28)	children with developmental delay		• Although the intervention was focused on kids, mothers felt more engaged in the program when their needs were addressed (housing, diapers, transportation, emotional support). • Ability to share stories and build understanding of her life's circumstances helped reduce shame.
Rinehart et al. (2021)[23]	RCT	Non-pregnant women recruited from four OUD treatment programs in Denver, CO, USA (n=119)	• Type: Treatment • Randomization to two peer-led education sessions on long-acting reversible contraception or usual care	Participant engagement in the intervention Scheduling a family planning appointment Long-acting reversible contraceptive method uptake	• Participant satisfaction with the sessions were high. • Six months after the intervention, more participants who attended the education session had attended a family planning appointment (36% vs. 14%). • There was no significant difference on use of contraception.
Rutman et al. (2020)[24]	Mixed methods program evaluation	Women with substance use or women with substance use with children in Canada (n=8 programs)	• Type: Harm reduction • Variety of services provided, including food, transportation, housing, child welfare support, individual and group therapy, violence and trauma support, primary care, child care, child assessment, parenting	How programs deliver services and how clients use and engage in services and whether or not they feel the services have made a difference to them.	• Cultural programming and direct links to supportive housing were offered by several programs. • Women appreciated services that met non-drug needs like meals, housing. • Wrap-around health and social services in one location were appreciated by participants.

Authors (Year)	Design	Participants	Program description	Outcome measures	Findings
			programming, peer support, cultural programming		• Access to trauma-informed individual and group counselling on site was appreciated. • Indigenous cultural programming facilitated engagement of re-engagement with cultural practices
Shapiro et al. (2022)[25]	Quantitative study	Pregnant women misusing opioids prescribed for pain but not meeting criteria for OUD in South Carolina, USA (n=20)	• Type: Harm reduction • Open-label, 8-week clinical trial of CBT for chronic pain and shared-decision making for prescription opioid reduction; weekly CBT sessions followed by client assessment of opioid dose/pill counts and symptoms of pain/worsening opioid misuse/withdrawal; clients given option to continue prescription at same dose or decrease dose	Change in opioid misuse, daily opioid MED and pain ratings using baseline/weekly assessments for 8 weeks and at 6-8 weeks postpartum with standardized tools e.g., Behaviour Problems Inventory	• Significant reduction in opioid misuse, average daily opioid dose, worst pain ratings, and pain interference in general activity, both from baseline to post-treatment, as well as from baseline to follow-up at 6-8 weeks postpartum. • No significant reduction in average pain ratings over time. • Observed reduction in pain interference in work was only significant from baseline to follow-up at 6-8 weeks postpartum. • Observed reduction in depression symptoms was only significant from baseline to posttreatment.
Slesnick et al. (2016)[26]	RCT	Mothers with at least one biological child in their care seeking outpatient treatment at a community treatment centre for SUD, and one child 8-16 years old	• Type: Treatment • Families randomly assigned to office- or home-based Family Systems Therapy (EBFT, n=123), or Women's Health Education (WHE, n=60 mothers only)	Mothers' substance use (alcohol, marijuana, cocaine and opioid with Form-90) assessed at baseline then 3, 6, 12 and 18	• All mothers showed decreased alcohol, cannabis, cocaine, and opioid use over time. • Mothers receiving EBFT showed decreased frequency of alcohol, cannabis, and cocaine use at a faster rate compared to mothers in WHE.

Authors (Year)	Design	Participants	Program description	Outcome measures	Findings
		in a "large Midwestern city", USA (n=183)		months postbaseline Mother-child interactions with video-recorded mother-child interaction task at baseline, 6 and 18 months postbaseline	• For alcohol use, mothers' increased relatedness was associated with a decreased likelihood of alcohol use. • For opioid use, children's increased relatedness was associated with mothers' less frequent use of opioid. • Compared with other substances, opioid use showed a different pattern of change, and also a different pattern of association with mother–child autonomy and relatedness behaviors.
Terplan et al. (2018)[27]	Systematic review	Pregnant women enrolled in opioid detoxification programs (K=15 observational studies in Canada, Europe and Australia)	• Type: Treatment • Detoxification as the primary treatment for OUD • Heterogeneous comparison groups (n=9) • Setting: inpatient (n=9), residential (n=2), incarcerated (n=3) • Modality: Pharmacotherapy (n=14), primarily methadone or buprenorphine, one study used clonidine and phenobarbital • Follow-up: primarily to delivery	Maternal: Detox completion, drug use Birth: Demise, IUGR, preterm birth, Neonatal: NAS, Length of stay	• Recommend pharmacotherapy over detoxification for opioid use disorder in pregnancy as a result of low detoxification completion rates, high rates of relapse, and limited data regarding the effect of detoxification on maternal and neonatal outcomes beyond delivery • Overall poor to fair quality of evidence with high risk of bias prevent the interpretation of pregnancy outcomes after detoxification • Completion rates varied widely (9-100%) • Relapse rates varied from 0 to 100% • One maternal death from opioid overdose reported by one study • No increase in fetal demises, preterm birth between detox and comparison group

Authors (Year)	Design	Participants	Program description	Outcome measures	Findings
					• Variable NAS treatment rates (0 to 100%) with variable treatment thresholds
Varma Falk et al. (2020)[28]	Qualitative study	Women who inject drugs participating in a needle exchange program in Sweden (n=20)	• Type: Harm reduction • Needle exchange program, also offering blood-borne infection testing, naloxone pick-up, counselling, referrals to social services, treatment of HIV, cervical cancer screening	Barriers and facilitators to using needle exchange program	• Facilitators: respectful staff, multidisciplinary approach with wraparound services • Barriers: fear of losing custody of kids, fear of male partner violence, previous negative experiences with staff
Willging et al. (2018)[29]	RCT	LGBTQ over 18 years of age with a DSM-4 axis I mental health diagnosis (30% had substance use disorder) in rural NM, USA (n=47)	• Type: Harm reduction • • Randomized to experimental group (LGBTQ peer advocate intervention: peer support groups, peer education, treatment referrals, risk behaviour counselling) or control group (given LGBTQ-focused support resources: a list of service providers and advocacy organizations plus LGBTQ-affirmative book and video)	Feasibility, acceptability, appropriateness of intervention Brief Symptom Inventory, Alcohol and drug consumption, social support survey	• Peer support workers were well received by the participants and participation in the program reduced social isolation. • Participants reported increased ability to assert themselves in personal, professional, and therapeutic relationships and increased engagement in treatment. • There was no change in frequency of substance use.

Authors (Year)	Design	Participants	Program description	Outcome measures	Findings
Zhou et al. (2021)[30]	Case study	Women with SUD attending a residential treatment center in RI, USA (n not explicitly stated)	• Type: Treatment • Residential treatment: individual and group therapy, art and music therapy, psychiatric and primary care, case management	N/A	• Integration of primary care into residential treatment facilitated medical care for women while in treatment (referral for colposcopy, treatment of HCV) as well as linkage to primary care once out of treatment

Citation

Ontario Agency for Health Protection and Promotion (Public Health Ontario). Rapid review: harm reduction and treatment models for women and gender-diverse persons who use opioids. Toronto, ON: King's Printer for Ontario; 2022.

Disclaimer

Community Opioid/Overdose Capacity Building

Community Opioid/Overdose Capacity Building (COM-CAP), started in 2019, is a four-year project funded by Health Canada's Substance Use and Addiction Program. The goal of COM-CAP is to support community-led responses to opioid/overdose-related harms in communities across Ontario. The supports focus on strengthening the knowledge, skills, and capacity of the key stakeholders involved.

- The Ontario College of Art & Design University (OCAD U) - Health Design Studio
- University of Toronto- Strategy Design and Evaluation Initiative
- Black Coalition for AIDS Prevention
- Chatham-Kent Public Health
- NorWest Community Health Centres
- Drug Strategy Network of Ontario
- The Ontario Network of People Who Use Drugs

PHO collaborates with external partners in developing COM-CAP products. Production of this document has been made possible through funding from Health Canada. These materials and/or the views expressed herein do not necessarily reflect the views of Health Canada.

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