Optimizing Opioid Agonist Treatment for Youth: Findings from a Multi-Phase and Multi-Methods Study

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Background

- Opioid agonist treatment (OAT) is a safe and effective treatment that has been recommended for youth with opioid use disorder (OUD) (1-2).
- However, emerging research indicates that youth (ages 12-24 years) are significantly less likely to receive OAT compared to adults as they experience unique barriers that impact the quality of OAT delivery (3-6).
- This leaves youth at major risk of opioid-related harms, which is especially worrisome in the context of the ongoing drug toxicity crisis.

Objective & Research Questions

This multi-phase and multi-methods study aims to identify the optimal principles, characteristics, settings, and outcomes of a youth-centered OAT model of care.

Phase 1 Research Questions:

1) What treatment interventions and health-related services have been investigated in empirical literature for youth using unregulated opioids in Canada and the US?

2) What are the characteristics of those evidence-based interventions?

3) What outcomes have been described or selected to measure intervention efficacy/effectiveness?

Phase 2 Research Question:

1) What are the optimal principles, characteristics, settings, and outcomes for a youth-centered OAT model of care?

Methods

Phase 1 Design, Methods, Analysis

- Scoping review methods summarized peer-reviewed literature of evidence-based interventions and health-related services for youth (ages 12-25) who use unregulated opioids in North America (7-8).
- Search conducted in Medline, Embase, Cochrane Central Register of Controlled Trials, PsycINFO, and CINAHL.
- PICO eligibility criteria: Population = youth aged 12-25 years who met criteria for OUD; Intervention = any intervention or health-related service delivered in inpatient, outpatient or virtual settings; Comparator = any; Outcomes = at least one health-related outcome.
- Screening process: Two stage screening (title/abstract, full-text) conducted by two reviewers.
- Data extraction into templates and described in tabular and graphical summaries.
- Directed content analysis (9) of adaptable characteristics and settings and outcomes of evidence-based interventions following the Consolidated Framework for Implementation Research (CFIR) (10).

Phase 2 Design, Methods, Analysis

- Semi-structured expert interviews conducted n=16 participants, including youth, caregivers, service providers, and decision/policy-makers with youth OAT expertise.
- Interviews validate the scoping review findings and gather recommendations for a youth-centered OAT model of care in BC, including its principles, characteristics, settings, and outcomes.
- Directed content analysis following CFIR, as for Phase 1 (10).

Phase 1 Scoping Review Results

Table 1. Overview of studies included in the scoping review

<table>
<thead>
<tr>
<th>Overall</th>
<th>N=25</th>
</tr>
</thead>
<tbody>
<tr>
<td>Publication year</td>
<td>N (%)</td>
</tr>
<tr>
<td>2015 - 2018</td>
<td>8 (32)</td>
</tr>
<tr>
<td>2019 - 2023</td>
<td>19 (76)</td>
</tr>
<tr>
<td>Geographical location</td>
<td></td>
</tr>
<tr>
<td>Canada</td>
<td>8 (32)</td>
</tr>
<tr>
<td>United States</td>
<td>17 (68)</td>
</tr>
<tr>
<td>Study design</td>
<td></td>
</tr>
<tr>
<td>Controlled trial</td>
<td>7 (28)</td>
</tr>
<tr>
<td>Observational study</td>
<td>9 (36)</td>
</tr>
<tr>
<td>Case series/case report</td>
<td>5 (20)</td>
</tr>
<tr>
<td>Qualitative study</td>
<td>4 (16)</td>
</tr>
<tr>
<td>Study sample</td>
<td></td>
</tr>
<tr>
<td>Adolescents</td>
<td>5 (20)</td>
</tr>
<tr>
<td>Young adults</td>
<td>4 (16)</td>
</tr>
<tr>
<td>Adolescents and young adults</td>
<td>11 (44)</td>
</tr>
<tr>
<td>Youth and adults</td>
<td>1 (4)</td>
</tr>
<tr>
<td>Intervention type</td>
<td></td>
</tr>
<tr>
<td>Pharmacological</td>
<td>12 (48)</td>
</tr>
<tr>
<td>Non-pharmacological</td>
<td>9 (36)</td>
</tr>
<tr>
<td>Combined</td>
<td>10 (40)</td>
</tr>
<tr>
<td>Target substance type</td>
<td></td>
</tr>
<tr>
<td>Opioids only</td>
<td>15 (60)</td>
</tr>
<tr>
<td>Opioids and other substance(s)</td>
<td>10 (40)</td>
</tr>
</tbody>
</table>

Phase 2 Preliminary Expert Interview Results

Figure 3. Recommended for youth-centered OAT model of care

Figure 1. Directed content analysis of intervention characteristics, settings, and service provider characteristics

- **Adaptable Characteristics**
  - Pharmacological interventions: Induction/tapering schedules and dosing, Medication decision-making processes, Maintenance dosages, Non-pharmacological interventions: Choice of treatment-as-usual, Mandatory vs. voluntary treatment, Combined interventions: Duration of treatment delivery

- **Service Delivery Settings**
  - Studies predominantly conducted in community-based outpatient substance use programs, Few studies conducted in residential substance use treatment centres, youth-specific settings (e.g., pediatric hospital), school settings or general outpatient settings

- **Service Provider Characteristics**
  - Interventions delivered by a range of service providers, most common were counselors, nurses, physicians, psychologists
  - One study described a multidisciplinary team
  - No studies described peer involvement

Conclusions & Policy Implications

- The scoping review identifies areas for future research on OAT among youth, such as longitudinal studies of OAT patterns and outcomes and the relative effectiveness of non-pharmacological interventions.
- Preliminary findings from the expert interviews corroborate the importance of the adaptable characteristics that were identified in the scoping review.
- The expert interviews extend the review’s findings by identifying three new characteristics of a youth-centered OAT model: (1) low-barrier service delivery settings, (2) relationships with youth; and (3) alignment of treatment/services and outcomes with youth’s goals.
- Policies and settings that can promote youth-centered OAT are needed; e.g., multisectoral investment in low barrier settings, multidisciplinary teams, and goal-based outcome measurement.
- Guidelines developed through this project can be used by policy makers and service providers to improve the quality of OAT for youth in BC.

References


Figure 2. Directed content analysis of outcomes used to measure intervention efficacy/effectiveness

- **Pharmacological alone**
  - Subsistence Use
    - Primary Outcomes
      - Treatment Engagement
        - Health or Social Outcomes
          - Sulf-ficacy
            - Adverse events
              - Perceptions of helpfulness

- **Non-pharmacological alone**
  - Combination
    - Secondary Outcomes

- **Pharmacological and Non-pharmacological**
  - Substance Use

Figure 3. Recommended for youth-centered OAT model of care

- **Layer comprehensive services**
  - Top to tail, mental health, substance use, and primary care services based on youth’s needs.

- **Alignment with youth’s goals**
  - Continuously checking on goals as theory-driven, other interventions (e.g., therapeutic gains, social/mental health gains, etc.)
    - Family involvement: treatment planning and direction making, & service appointments.

- **Getting to know youth’s treatment goals and needs**
  - Access to individual and family-based building a good working relationship.
    - Family involvement, for improved engagement.

- **Prioritize relationships with youth**
  - Towards an individual and family-based approach.
    - Family involvement, for improved engagement.

- **Low barrier settings**
  - A youth with access to high quality care, 
    - Family involvement, for improved engagement.

“Providing support and connection, whether or not a youth is like staying with it [OAT], or continually falling off and continually coming back in. I think if we’re consistent in our care and support, that really shows a lot and it allows us to know that like we support them whether or not they’re continually taking their OAT, or their goal is sobriety or their goal isn’t right...I would say also that checking in on their goals, because often goals change.”

– Peer support worker with personal OAT experience

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This research takes place on the stolen, traditional, and ancestral lands of the Coast Salish Peoples, including the territories of the xʷməθkwəy̓əm (Musqueam), Sḵwx̱wú7mesh (Squamish), and Sel̓ílwaṭe First (Tsleil- wattsut) Nations. The authors have no conflicts of interest to declare.