Rapid Evidence Review Summary
Integration of Opioid Agonist Therapy (OAT) in Primary Care Settings

A. Background: OAT Guidelines in Primary Care Setting

In July 2018, we undertook a rapid review of the literature on primary care-based service models for treatment of opioid use disorder, with a focus on increasing or integrating OAT in primary care settings in order to increase the number of providers prescribing suxboxone.

Opioid agonist therapy (OAT) is part of the spectrum of care for people with opioid use disorder (OUD). OAT has been shown to be more effective to withdrawal management alone in terms of treatment retention, sustained abstinence from opioid use, and reduced risk of morbidity and mortality\(^1\). Buprenorphine/naloxone (Suboxone) is the recommended first-line treatment for OUD in adults, and youth ≥ 12 years with moderate/severe OUD. Methadone is the recommended second-line opioid agonist treatment if induction with buprenorphine/naloxone is contraindicated or not preferred\(^2\).

OAT guidelines released by the BC Centre on Substance Use\(^3\) indicate that regardless of type of treatment administered, opioid agonist treatment should incorporate the following components: provider-led counselling, long-term substance use monitoring (e.g., regular assessment, follow-up and urine drug tests), provision of comprehensive preventive and primary care, and referrals to psychosocial treatment interventions, psychosocial supports, and specialist care, as required. Further, these guidelines emphasize that across the spectrum of care for OUD, evidence based harm reduction practices should be offered (e.g. Take-Home-Naloxone kits, access to supervised injection sites, education on safe injecting practice etc.).

While treatment for OUD have historically been delivered outside of primary care, often in speciality facilities staffed by mental health addiction experts, there is growing recognition of the importance of increasing the capacity and access to OAT in primary care settings\(^4\). Primary care-based models for OAT have been found to be roughly equivalent in efficacy and outcomes to speciality treatment facilities in certain populations\(^5\), with the added advantage of helping to managing co-morbid health outcomes (e.g. chronic diseases)\(^6\). Primary care practitioners and care teams are encouraged to take on addiction care as part of their practice, as they are well suited to diagnosing and treating OUD and supporting long-term recovery.

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\(^{2}\) B.C. Ministry of Health & BC Centre on Substance Use. (2017). Opioid Use Disorder—Diagnosis and Management in Primary Care. Retrieved from: [https://www2.gov.bc.ca/gov/content/health/practitioner-professional-resources/bc-guidelines/opioid-use-disorder#induction](https://www2.gov.bc.ca/gov/content/health/practitioner-professional-resources/bc-guidelines/opioid-use-disorder#induction)


B. Context: OUD and OAT in Alberta

From 2016 (month) to 2017 (month), 1,288 people died from apparent accidental opioid poisoning\(^7\) in Alberta, notably rates of apparent accidental opioid drug toxicity deaths per 100,000 were three times higher among First Nations people compared to Non-First Nations people\(^8\). In Alberta, the rate of unique individuals dispensed methadone indicated for opioid dependence from community pharmacies per 100,000 increased 7% from 2016/2017 (n=4,006) to 2017/2018 (4,355).\(^9\) In addition, the rate of unique individuals dispensed buprenorphine/naloxone indicated for opioid dependence from community pharmacies per 100,000 continues to increase, as seen by the 66 per cent increase from 2016/2017 (n = 2,802) to 2017/2018 (n = 4,714).\(^2\) Overall, estimates suggest that more than 8,400 Albertans are on OAT for opioid use (2017/18), in addition there has recently been an expansion in public opioid clinics and treatment options which will serve up to 3,500 additional patients each year (triple the number of patients served in these clinics in 2017)\(^10\).

C. Overarching Model Types

Although evidence is lacking with regard to how one model of care performs compared with another, comparative research on these models may not be the most important determinant for informing further diffusion of OAT in primary care settings. Rather, the most effective model of care is likely to depend in part on the specific implementation setting, including unique characteristics of the target patient population (e.g., HIV infection, pregnant, or adolescent), what resources are available locally, expertise available, proximity to an addiction centers, geographic factors and others (Chou et al. 2016).

In a systematic review article of primary care models for OAT\(^11\), authors reported that coordinated care models (with non-physician team members helping manage patient appointments and lab results) were among the most common delivery structures studied. This article found that key factors associated with successful programs included integrated clinical teams with support staff who were often advanced practice clinicians (nurses and/or pharmacists) as clinical care managers. However, it should be noted that most studies in this review report patient retention as their primary outcome, further consideration should also be paid to other program outcomes including; opioid use, adherence, safety, treatment satisfaction and patient engagement in care.

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A variety of review articles and reports\textsuperscript{12,13,14} characterize diverse OAT models based on broad overarching features, further details regarding primary care OAT models are presented in Table 1. While models reviewed were implemented in the United States, those models with most relevance to implementation in Alberta were prioritized.


\textsuperscript{13} Lagisetty et al. 2017

Table 1: OAT Primary Care Models

<table>
<thead>
<tr>
<th>Model Type:</th>
<th>Characteristics</th>
<th>Considerations</th>
<th>Advantages</th>
<th>Examples and References*</th>
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</thead>
<tbody>
<tr>
<td>Coordinated Care Model</td>
<td>In a primary care clinic, two different types of HCP actively communicate to share care responsibilities (e.g. nurse case manager, or pharmacist plus a physician).</td>
<td>Level of training and specific-tasks by non-physician providers can vary widely.</td>
<td>Utilization of a skilled non-physician to offload physician burden.</td>
<td>(Roll et al, 2015)(^{15}) (Alford et al., 2007)(^{16})</td>
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<td>Coordinated Care Model-Nurse Manager</td>
<td>The nurse care manager performs patient screening, intake, education, observes and supports induction, follow-up, maintenance, stabilization and ongoing medical management with the physician and team.</td>
<td>Requires additional training for nurse managers.</td>
<td>Utilization of skilled non-physician to offload prescribing physician burden, and an emphasis on provider training.</td>
<td>Massachusetts nurse care manager model: <a href="http://www.mass.gov/eohhs/gov/departments/dph/stop-addiction/get-help-types-of-treatment.html">http://www.mass.gov/eohhs/gov/departments/dph/stop-addiction/get-help-types-of-treatment.html</a></td>
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<tr>
<th>Model Type: Coordinated Care Model-Project Extension for Community Healthcare Outcomes (ECHO)</th>
<th>Characteristics</th>
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<td></td>
<td>The prescribing physician confirms the OUD diagnosis and appropriateness of OAT and co-manages the patient with the nurse care manager.</td>
<td>Requires strong connections between university health systems and primary care clinics. Strong emphasis on educational and outreach components.</td>
<td>Helpful in rural settings, allows for mentorship for OAT prescribing providers including an internet based, audiovisual network for provider education.</td>
<td>(LaBelle et al., 2016)¹⁷ (Alford et al., 2011)¹⁸</td>
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<tr>
<th>Model Type: Coordinated Care Model- Southern Oregon Model</th>
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<td></td>
<td>An informal network of rural primary care clinics that focus on OAT delivery. This model utilizes regular meeting of regional stakeholders and</td>
<td>Relies on provider training and collaboration as well as regional health network support.</td>
<td>Well suited for rural health providers. Grass roots, community-based effort</td>
<td>(McConnell et al., 2016)¹⁹</td>
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<tr>
<td><strong>Primary Care Model</strong></td>
<td>primary care providers for education and development of practice standards around opioid prescribing for chronic pain and OUD treatment.</td>
<td>Depending on setting, limited capacity for psychosocial services and care coordination/integration.</td>
<td>which may promote buy-in from clinicians and community to overcome stigma and resistance to OAT use.</td>
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<td><strong>Shared Care Model</strong></td>
<td>Speciality services (e.g. hospital, rapid access addiction clinic, public or private OAT clinic) lead the medication induction process and then later “hand off” patients to primary care providers that offer OAT.</td>
<td>Requires connections with community primary care providers that offer OAT.</td>
<td>Helpful for patients without a regular health care provider.</td>
<td><a href="http://www.providencehealthcare.org/rapid-access-addiction-clinic-raac">http://www.providencehealthcare.org/rapid-access-addiction-clinic-raac</a> (Kahan et al., 2009)</td>
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<td><strong>Shared Care Model - Hub and Spoke</strong></td>
<td>Experts at “hubs”, (specialized drug treatment centers) serve most clinically complex patients, stabilize patients newly starting OAT. After stabilization, some patients are transferred to the “spokes”, which are primary care providers who initiate and continue prescribing for less complex patients.</td>
<td>Requires strong connections between “hubs” and “spokes”. Might not be feasible in areas with significant geographic distance between “hubs” and “spokes”.</td>
<td>-Designed to coordinate addition treatment with medical care and counselling supported by community health teams and services. -Facilitates knowledge sharing and education</td>
<td><a href="https://www.pcpcc.org/initiative/vermont-hub-and-spokes-health-homes">https://www.pcpcc.org/initiative/vermont-hub-and-spokes-health-homes</a> <a href="http://www.healthvermont.gov/adap/documents/HUBSPOKEBriefingDocV122112.pdf">http://www.healthvermont.gov/adap/documents/HUBSPOKEBriefingDo cV122112.pdf</a> <a href="http://www.leg.state.vt.us/reports/2014ExternalReports">http://www.leg.state.vt.us/reports/2014ExternalReports</a></td>
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<td>opportunities for primary care providers.</td>
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**Other Models**

**One Stop Shop Model**
- Based in an existing mental health clinic, this model provides integrated care for HIV and hepatitis C infection, OAT, mental health, primary care and needle exchange.
- Developed in response to HIV infection in rural Indiana due to needle sharing.
- Requires rapid training of willing local providers and required state and federal resources for outbreak response.
- Reproducibility of this model in other settings has not been assessed.
- May be useful for rapid deployment in areas with specific OUD and HIV outbreaks.
- (Conrad et al., 2015)

**Multi-disciplinary Model**
- Two physician disciplines working closely together within the same clinic (e.g. addiction psychiatry and internal medicine)
- May be costly and not feasible in all settings.
- Can promote more comprehensive behavioural health counseling in addition to
- (Fiellin et al., 2002)

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<td>Emergency Department Initiation of OAT</td>
<td>This model focuses on emergency department (ED) physician identification of OUD and initiation of OAT followed by instructions for continuation of home induction, stabilization doses and connection to primary care for ongoing management.</td>
<td>Requires strong connections with primary care clinics that offer OAT. Requires ED to be trained in OAT prescribing.</td>
<td>Promising for areas with high prevalence of OUD, and overdose. Helpful for patients who do not regularly access a primary care physician that offers OAT.</td>
<td>(D’Onofrio et al. 2015)23</td>
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*includes grey and published literature

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D. Key Model Components:

Within each model type there are differences in key components which are tailored in order to ensure relevance within local context. Key components for consideration are outlined below:

**Care coordination:** A core component of successful OAT models were those that involved an integration/coordination of patient care in order to manage issues related to OUD, as well as any, psychological, medical and primary care needs. Models of care that used a designated non-physician staff member (e.g. nurse) in the integration/coordination role, were found to help reduce the burden on the physicians while increasing practice efficiency and permitting more patients to be effectively and safely treated.

**Psychosocial Treatment Interventions and Supports:** Varying modalities for the delivery of these supports has been reported in primary care models. While deemed important by providers, and supported by best practice guidelines, relatively few studies have evaluated the comparative effectiveness of different psychosocial interventions given as a component of OAT in primary care based settings. In a review of different trials of psychosocial interventions there were no clear differences in outcomes between the different interventions. This is consistent with outcomes of different types of psychotherapy in general. Various modalities of psychosocial treatment/support reported in various models included; regular brief counselling by a physician, psychologist led behavioural counseling, nurse led behavioural counseling, referral to off-site psychological services, referral to community and social support services, onsite individual and group counselling, onsite licensed clinical social worker with experience in pain and addiction, onsite peer supported counselling, health promotion, individual and family support and others.

**Educational and outreach:** Although the education and outreach component was not as well-defined in some models, this was viewed as critical for reducing stigma associated with OAT, increasing the pool of prescribing physicians, and increasing uptake, particularly in settings in which stigma is still high. In a survey of physicians, providers felt that this stigma was rooted in a general lack of training and understanding, which emphasized the need for education for physicians, other health care providers and even the community regarding the effectiveness of OAT. Education was also viewed as critical for improving standards and quality of care. A number of approaches to education and outreach were described, including a Web-based learning network and educational resources, internet-based mentoring by more experienced physicians, meetings of community stakeholders, in-person educational sessions with patient and clinician educational sessions, and others.

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A core component of the Hub and Spoke model [as outlined in Table 1] involved outreach to prescribers in the community to increase the number of trained prescriber physicians. Furthermore, the ECHO model of care, that links primary care clinics in rural areas with a university health system, provides mentorship for providers, including an Internet-based, audiovisual network for provider education and provides free prescription training several times per year. ECHO staff also provide patient education 1-to-1 or in group settings.

**Medication dispensing:** This varies widely as dependent on OAT medication, primary care model type, as well as regulatory guidelines. Some models integrate daily-dispensed OAT medications in primary care settings for the duration of patient care, however, multiple models have pharmacists supervise dispensing of OAT (buprenorphine or methadone)\(^{29,30}\). As indicated by British Columbia’s diagnosis and management of OUD in primary care guidelines, once a stable dose is achieved, patients can be transferred to receive daily dispensed doses at a community pharmacy or prescribed take-home doses (1-2 week supply), at clinician discretion.

**Treatment monitoring:** Most interventions noted that they used urine drug screening as a tool to monitor adherence to medication and drug misuse. To encourage patient retention, low threshold models do not automatically suspend patients for failing screening for illicit substance\(^{31}\). Further, OUD treatment guidelines indicate that given the chronic nature of OUD, relapse is common, and patients should not be asked to leave treatment if they do relapse\(^{32}\).

**Induction type:** Twenty-nine studies included in the systematic review by Lagissetty et al. 2017 supervised patient induction in primary care, with frequent appointments and supervised medication dosing. Some home inductions have proved successful for select patients and can make treatment more convenient for patients and providers, this model of induction can also increase patient autonomy.

### E. Barriers to Implementing OAT in Primary Care

There exist a number of barriers which can hinder the diffusion of OAT in primary care settings in Alberta. A variety of studies have reported that complex regulatory frameworks can hinder the ability of health care provider to prescribe treatment. Currently in Alberta, physicians are able to prescribe buprenorphine-naloxone (Suboxone) to patients following registration with the Triplicate Prescription Program (TPP). Completion of an online prescribing course is recommended by the CPSA. In order to prescribe methadone, physicians require methadone approval from the College of Physicians and Surgeons, as well as specific education and training\(^{33}\). In addition, Alberta nurse practitioners (NPs) can also now prescribe buprenorphine-naloxone (Suboxone) to patients to treat an addiction to opioids. NPs


\(^{32}\) B.C. Ministry of Health & BC Centre on Substance Use. (2017). Opioid Use Disorder-Diagnosis and Management in Primary Care. Retrieved from: [https://www2.gov.bc.ca/gov/content/health/practitioner-professional-resources/bc-guidelines/opioid-use-disorder-induction](https://www2.gov.bc.ca/gov/content/health/practitioner-professional-resources/bc-guidelines/opioid-use-disorder-induction)

must be registered to prescribe TPP listed drugs and also complete necessary training. In studies, the better utilization of NPs and pharmacists in patient management has been seen as an enabler in OAT diffusion, however training and regulatory requirements are barriers\textsuperscript{34}.

Beyond the need for reductions in regulatory barriers in prescribing practices, persistent stigmatization of people with OUD, including engrained perceptions of addiction as moral failing, and not as chronic health condition, can impede the willingness of primary care providers to integrate OAT into practice\textsuperscript{35,36}. Further, stigmatization of OAT and OUD amongst other patients, law enforcement, policymakers, and community members can also significantly impede the implementation of this treatment option.

There also exist barriers to implementation in terms of institutional support, and the provision of adequate staffing support. In a study conducted by Walley et al. (2008), physicians in Massachusetts who were waivered to prescribe buprenorphine were surveyed\textsuperscript{37}. This study found that of the 235 that answered the survey, 66\% had prescribed at least once, and 34\% had never prescribed buprenorphine. Of the non-prescribers, the following barriers were reported (in descending order of importance); insufficient office support, insufficient nursing support, lack of institutional support, insufficient staff knowledge, low demand for services, and payment issues. Of the physicians who were already prescribing buprenorphine in their office-based practices, the biggest barriers (in descending order of importance), included: were payment issues, insufficient nursing support, insufficient office support, insufficient institutional support, and pharmacy issues. This study emphasizes the importance of sponsored training for physicians, resources and staffing for coordination and integration of care, provision of non-physician staff with expertise in OUD, as well as offloading burden from prescribing physician.