A new framework for methadone carries:

A person-centered evidence-based approach to take-home dosing

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- Faculty: Suzanne Latreille, Vincent Lam, Andrew McLeod, Charlotte Munro, Jennifer Wyman, Maria Zhang
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Objectives

- Describe the rationale and process for the development of a new carry framework
- Review current evidence regarding the benefits and risks of carries
- Explore a framework for discussion and decision-making regarding take-home dose initiation and titration

Preamble

- Accept the evidence for opioid agonist therapy (OAT) as both harm reduction and treatment for people with opioid use disorder (OUD)
- Strength of recommendations
  - The recommendations included in this draft were developed through focused literature searches as well as the collective experience of the group, representing prescribers, pharmacists and people with lived experience of OAT
- Intention
  - To establish a framework that provides the structure and flexibility to use clinical judgement to make individualized decisions regarding methadone carries. This document does not apply to buprenorphine or SROM take-home doses
- Next Steps
  - Review by stakeholders, synthesis of feedback

Background

- Intersecting events have prompted re-examination of previous carry guidelines:
  - the overdose crisis, related to toxic and unpredictable street supply
  - evidence arising from practice changes during COVID-19
  - the rescinding of the CPSO MMT guidelines

- Recognition of the importance of including people with lived experience in the development of treatment guidelines

Process

- Formation of the group
- Agreement on terms of reference
- Review of the literature
  - Provincial standards, Canadian 2021 OUD guidelines and CAMH 2022 OAT Guide
  - Evidence for contingency management
  - Other benefits of carries
  - Risks of methadone overdose, misuse, diversion
  - Factors associated with diversion and unintentional consumption
  - Other risks of restricted access to unsupervised doses
- Iterative process of discussion and refinement

Terms of Reference

- We hold each other in high regard
- We recognize and value the different types of experience and education that the members of this group bring.
- Our advisors with lived experience are partners in co-creating this new guidance document;
- In order to work collaboratively and equitably we ask that everyone commit to the following:

  -Assume that everyone in the group is acting in good faith

  -Be willing to listen

  -Be willing to incorporate new evidence into your worldview

  -Don't pull rank

  -Ask questions and seek clarification to make sure that information and expectations are clearly understood
- Not every recommendation may be in the final document; in the case of diverging opinions the final product will reflect the differences of opinion

Risks Associated With Methadone/Carries

- Risk of toxicity associated with methadone is greater than other prescription opioids due its long half-life and narrow therapeutic index
- Methadone becomes accessible to others when carries are improperly stored, lost, stolen, shared, traded or sold

- BC 2015-2017: methadone was associated with 7.4% (130 of 1789) of illicit drug deaths for which toxicology was available. Of the cases for which methadone was relevant, 38.5% had no methadone prescription in the 60 days prior to overdose (Crabtree, 2020).
- Ontario 2013-2016: of 524 decedents for whom methadone was detected on toxicology, 629 (87%) had no active methadone prescription at the time of death (Gomes, 2018)
- Diversion rates range from 5% to 34% of people on methadone reporting ever having sold their carries (Spent 1986, Winstock 2010, Dale-Pereira 2012, Duffy 2012, Johnson 2015).
- In Ontario, among people receiving carries prior to the pandemic, 15% reported losing or misplacing their carries, 13% reported having carries stolen, 17% reported sharing carries with others and 10% reported trading carries for food or other goods (Corace, 2021)

Effects of restricted access to take-home doses

- Missed doses
  - treatment interruption and discontinuation
    - the most common reason for seeking illicit methadone
- Difficulty managing work and personal life
- Negative impacts on quality of life through increased stress and anxiety
- Stigma at the pharmacy and being obliged to explain to employers
- Deterrent to participating in OAT

Duffy & Mackridge, 2014.

Frank et al, 2021

Anstice et al, 2009.

When I consider my own path of coming off of methadone, carries were not a part of my story. In fact, because of my inability to qualify for carries, I now recognize how these "observed" doses were barriers to me having a life, having a job, having a life that led me to want to live without drugs. In many ways, I came to accept that I was going to die while in active addiction. Observed doses meant that I could not accept work out of town, it meant that I could not spend time with family at Christmas without using. Without the responsibility of take-home doses I did not have stability, and with the guidelines that were necessary for me to qualify for carries I was unable to ever achieve that stability.

Contingency Management & Substance Use (Voucher Based)

Voucher-based reinforcement therapy is associated with higher rates of abstinence from substance use, including specifically for people on OAT

- Lussier et al, 2006: meta-analysis of studies conducted between 1991–2004 found that voucher-based reinforcement therapy was associated with higher rates of abstinence
- Metrebian et al,2021: For people on methadone, CM for on-time attendance at appointments was associated with higher rates of abstinence from heroin than treatment as usual; CM for abstinence was not
- Bolivar et al, 2021: Systematic review and meta-analysis, for people on MOUD CM was associated with increased abstinence from illicit opioids and treatment retention

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Contingency Management with Carries

Literature on take-home medication doses as contingency management is less clear

- limited in quantity and quality
- often based on small cohorts and short-term follow-up

- Stitzer (1992): 8/25 had an increase vs 7/25 decrease in negative UDS over 6 months
- Chutuape (1999): 29 patients over 12 weeks, those receiving contingency management had a larger but not statistically significant reduction in + UDS
- Preston (2002): 110 patients over 12 weeks, no significant difference in self-reported use or opioid-negative samples over 12 weeks
- Rogers (2008): 78 patients over 12 months; in patients who could earn up to 3 carries per week after three consecutive negative samples, both carries and vouchers increased abstinence; carries and vouchers together had more impact than carries alone
- Gerra (2011): 300 patients over 12 months (181 completed); no significant difference in percentage of people with negative UDS between CM and daily witnessed with Sunday carries

Benefits of Contingency Management Apart from Abstinence

- Improved retention in treatment (Gerra,2011)
- New vocational or social activities, decreased time spent in clinic-related activities, positive ratings of the quality of the helping alliance (King, 2006)
- Increased engagement in non-drug related activities (Rogers, 2008)

Benefits of Carries during the Pandemic

- Walters et al, 2022
  - Allowed for better life balance, daily responsibilities (e.g. being on time for work, more time to focus on parenting), less money spent on gas, fewer missed doses

- Corace et al, 2022:
  - increased openness and improved relationships between prescribers and prescription recipients, reduced COVID risk, saved time and money

- Gomes et al, 2022:
  - lower risks of opioid-related overdose, discontinuation of OAT, and treatment interruption among people who previously had daily observed doses of methadone

Ontario COVID-19 OAT Guidance

Pre-COVID-19 "Carry Level"	"Carry Ladder" during COVID-19 community transmission	Nomenclature
0 and unsuitable for carries	No carries	COV-0
0 and suitable for carries	Only non-consecutive carries (up to 3 per week) *	COV-3
1	Up to 2 consecutive carries (up to 4 per week) *	COV-4
2	Up to 3 consecutive carries (up to 5 per week) *	COV-5
3	Up to 6 carries per week	COV-6
4	Up to 1 to 2 weeks	COV-13
5 or 6	Up to 2 to 4 weeks**	COV-27***

* No clear UDS required.

Lam V et al, 2020.

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Assumptions Underlying New Approach to Carry Management

- Access to carries has substantial (maybe greater) benefits beyond reducing substance use
- Clinical judgement can be used to assess suitability for carries
- Fewer carries are associated with lower risks than greater numbers of carries
- Non-consecutive carries are associated with lower risks than consecutive carries
- When care is patient-centered and not decided exclusively by urine results, people on methadone can be more open with their providers

Principles

- **Smaller numbers of carries** (e.g. up to 3, non-consecutive) can be used to assist with maintaining treatment and building stability outside of a CM framework
- **Larger numbers of carries** (4 or more) should be reserved for people with greater stability
- Assessment of suitability for carries should be based on the person's ability to keep carries safe and take them appropriately. This is connected to a person's overall stability.
- The criteria offered are a **guide for decision making** that is intended to be individualized; a framework is necessary so that both prescribers and people on methadone have shared understanding of expectations

"Some" – smaller numbers of carries – 1-3

"More" – larger numbers of carries – 4-6

Criteria

- Ability to store carries safely
- Amount of time on methadone
- Current mental health status
- Stability
- Frequency of missed doses
- Frequency of missed appointments
- Recent substance use patterns
- Urine drug test results

Ability to Store Carries Safely

Background:

- Potency and long half-life of methadone pose significant risks to those without tolerance
- Methadone poses additional risks to children
- Living on the street or in a shelter does not provide necessary safeguards for safe storage

Expectations:

- Consistent and safe place to stay
- Locking device
- Stored out of sight and reach of others
- Discussion regarding the risks of unintentional methadone ingestion and diversion
- Document assurance that medication can be safely stored

Amount of Time on Methadone

Background:

- The first weeks and months of treatment are typically associated with withdrawal, cravings and less controlled substance use. A person in withdrawal could be more likely to overuse their carries while also having less tolerance to methadone
- Regular assessment by prescriber/pharmacist is required
- Time for education, building communication, relationship, expectations

Suggested Expectation:

- No carries for the first 4 weeks
- After 4 weeks eligible for “some” carries
- After 12 weeks eligible for “more” carries

Mental Health Concerns

Background:

- Conditions that impair a person's ability to understand instructions or exercise judgement create risks for the safe management of carries

Expectation:

- In order to receive any carries, a person should not be acutely suicidal, psychotic, or cognitively impaired

Stability

Background:

- Stability is reflected in an individual's living situation, relationships, management of their daily activities (such as work, school, childcare, training, volunteering, appointments), community connections and progress toward mutually determined goals
- The relationship between social stability and substance use is not necessarily consistent; some people can be quite stable while using substances

Expectation:

- People who are unstable or whose stability is unknown should not receive carries
- People who are developing stability may be eligible for "some" carries
- Higher numbers of carries are typically appropriate for people with consistent stability

Frequency of Missed Doses

Background:

- Frequent missed doses can be dangerous due to loss of tolerance, for which doses would usually be reduced
- Frequent missed doses can lead to withdrawal symptoms, which could cause a person to consume their carries too quickly

Expectation:

- To receive carries, an individual should generally not miss doses on a regular basis
- An individual may receive a small number of carries if they do not miss more than 2 doses/week
- An individual receiving higher number of carries should miss doses rarely, e.g. less than 1/week

Frequency of Missed Appointment

Background:

- Appointments are key to the assessment of stability, safety, risks and benefits that contribute to decisions about carries
- Attending appointments is one marker of stability

Expectation:

- To receive carries, an individual should be attending a majority of appointments,
  e.g. 3 out of 4

Recent Substance Use Patterns

Background:

- Not all substance use puts the individual or community at increased risk with regard to carry management. The pattern of substance use is more important than the specific substance being used.
- Individuals who experience memory loss due to blackouts when using substances are at increased risk of overdose and may be unable to keep carries safe from others.
- Frequent (i.e., weekly or monthly) overdoses indicate ongoing high-risk substance use, which is not compatible with carries.
- Injection use of any substance is associated with increased risks of overdose and higher rates of risk-taking than other modes of use.
- Intoxication or sedation at an appointment is a sign of substance use that is not occurring in the context of overall stability.
- Factors associated with diversion include heavy alcohol use, current illicit substance use, personal use of illicit methadone and injection drug use while in treatment – not heroin use.

Recent Substance Use Patterns

Expectation:

- People who use substances in higher risk ways that impact their health and well-being, including those who have blackouts or frequent overdoses, or attend appointments intoxicated or sedated, are not eligible for carries
- People who use substances can be eligible for “some” carries if they use in ways that do not impact their health, well-being or safety. This could include occasional injection drug use, but should not include recent overdoses (i.e. in the last month)
- Higher numbers of carries are typically reserved for people who don’t use substances or use infrequently in lower risk ways which don’t impact their overall stability, with no injection use and no overdoses

Urine Drug Test Results

Background:

UDTs confirm that prescribed medication is being taken, screen for non-prescribed/illicit substance use during treatment, and detect the presence of other substances, including substances the person may be unaware they have been exposed to.

- UDTs should be conducted with clear expectations of frequency and purpose of testing.
- UDTs should not be supervised, and should not be a requirement to receive a prescription renewal
- UDTs should reflect the person's self-report of substance use/abstinence. When urine results and self-reports align, trust and communication are supported.

Expectations:

- People whose urine shows evidence of tampering or the absence of methadone will not receive carries
- People whose UDTs are + for EDDP and and other substances consistent with their self-reported use can receive “some” carries
- People receiving higher numbers of carries are expected to have UDTs generally negative for unprescribed benzodiazepines, opioids or stimulants

Process/Expectations

- Assessment of the criteria relevant to take-home doses occurs in the course of regular visits to review OAT dose, efficacy, management of triggers, harm-reduction, physical and mental health, social function/risks and goals.
- There is no specific “weighting” of the criteria, but safe storage is required for any level of carries
- The clinician will consider other relevant issues (e.g. proximity to pharmacy, pharmacy hours, transportation, work and/or school schedules, family caregiving responsibilities, vacations, unexpected situations or emergencies) and factor them in with the other criteria in decision making.
- Examples of other exceptional situations/special consideration include post-incarceration, or people escaping partner violence who would be at risk attending a known pharmacy daily

Process/Expectations

- Carries can be increased at 2-4 week intervals as the individual consistently meets criteria within the range or to move to the next range.
- Carries will be paused or reduced when a person is having difficulty meeting criteria, either within the same range or down a range. Clinical judgement and knowledge of the person's circumstances help to inform how quickly carries can be resumed.
- Situations that warrant returning immediately to witnessed doses include:,
  - Lost or stolen carries
  - Evidence of tampering
  - Evidence of diversion

- More than 6 carries requires the highest level of stability and is usually reserved for people who have had 6 carries for at least 6 months
- Moving between providers does not warrant reducing carry numbers provided there has not been a change in overall clinical stability

Carry Agreements

- Discussions about carry expectations should take place in a manner consistent with patient-centered care and review the factors associated with both increases and potential decreases in carries

- A carry agreement should be used with each patient and reviewed verbally as well as signed.

Pharmacy Issues

- Clear expectations and communication between prescribers, pharmacists and people on OAT are important to support safe carry dispensing and management
- Examples:
  - Consider writing that if the patient misses an observed dose on a day they were supposed to pick up carries, the next dose will be observed
  - Carries should not be dispensed if the person has missed 2 consecutive observed doses
  - When patients are admitted to hospital, the prescriber and community pharmacist should be informed. Patients should be told to return unused carries to the pharmacy after a hospital admission
  - Inform patients using multiple pharmacies that they should pick up a receipt from the pharmacy to demonstrate that they have not missed doses
- Let the pharmacist know how to reach you in case of questions

Criteria	No Carries	Some Carries (1-3)	More Carries (4-6)
Ability to store carries securely	Living on the street or in a shelter. Unable to store carries in a manner that prevents inappropriate use.	Consistent and safe living environment. Able to store carries in a manner that prevents or discourages inappropriate use. Locking device	
Amount of time on methadone	<4 weeks	>4 weeks	>12weeks
Current mental health condition	Acute psychosis, suicidality, intoxication	No acute psychosis, suicidality, intoxication or sedation	
Stability	Unstable or unknown	Less/developing stability	Consistent stability
Missed doses	Frequent	Infrequent, 2/week at most	Rare, less than one /week
Missed appointments	Frequent	Infrequent, attends at least 3 out of 4 appointments	
Recent substance use patterns	Higher-risk, impacting health or wellbeing. Regular overdoses.	Lower risk, not impacting stability, health, safety. No blackouts/memory loss. Rare overdoses, none x 1/12	Lower risk, not impacting stability, health, safety. No blackouts/memory loss. Rare overdoses, none x 3/12 No injection use
UDS results	Negative for methadone or indicative of tampering	Positive for methadone Consistent with self-reported substance use	Generally negative for unprescribed benzodiazepines, stimulants or opioids

Case Discussions

Case 1 - Jim

- 28yo male working in construction
- Restarted methadone 4 weeks ago, dose currently at 70mg.
- Dose is still feeling low
- Missing 1-2 doses/week because of challenges getting to the pharmacy before or after work (gets a ride with others).
- Wondering when he can start to get carries

- What else do you want to know?

Jim

- Lives with his girlfriend and her 7 yo.
- Mental health is stable.
- Working, sometimes includes over time/weekends
- Missing 1-2 doses/week
- Attending appointments in person –difficult to take so much time away from work so attending weekly, which slows his rate of titration.
- Goal is not to use opioids. Stopped using all opioids for the last week. Doesn't drink. Not impacting work, appts, no ODs or near ODs.
- UDS shows EDDP. Was consistent with self-reported fentanyl use for the first 3 weeks; is negative for opioids and all other substances at this appointment

- Ability to store carries securely
- Amount of time on methadone
- Current mental health concern
- Stability
- Frequency of missed doses
- Frequency of missed appointments
- Recent substance use patterns
  - Higher vs lower risk: impacts on health, safety, stability
  - Intoxication/sedation at appts
  - Blackouts/memory loss
  - IVDU
- UDS

Jim continued

Has now been on methadone for 4 months. Dose 110mg; Has had 3 non-consecutive carries for 8 weeks.

- Working 6 days most weeks. Still living with GF and her son. Hasn't made it to get his blood work done, but everything seems to be going well.
- Sometimes misses a dose because of work. Usually not more than once a week.
- Reports drinking 2-4 beer on weekend nights, cocaine one night of the weekend.
- UDS every 2 weeks with appointments over past 2 months – shows EDDP, no other opioids, + cocaine about every other sample.

- Ability to store carries securely
- Amount of time on methadone
- Current mental health concern
- Stability
- Frequency of missed doses
- Frequency of missed appointments
- Recent substance use patterns
  - Higher vs lower risk: impacts on health, safety, stability
  - Intoxication/sedation at appts
  - Blackouts/memory loss
  - IVDU
- UDS results

Jim continued

Has been on methadone for 9 months. Dose 110mg; Has had 6 carries for 3 months

- Working 6 days most weeks; picks up at the pharmacy on Sundays.
- Relationship ended; living with friends for now
- Sometimes misses a dose if he's late for the pharmacy hours or doesn't have funds; typically once every 2 weeks
- Reports using fentanyl every week or 2 for the last month and a half; smokes Saturdays with friends. Goal is to stop. No IVDU.
- No other substance use
- UDS monthly with appointments – shows EDDP and fentanyl

- Ability to store carries securely
- Amount of time on methadone
- Current mental health concern
- Stability
- Frequency of missed doses
- Frequency of missed appointments
- Recent substance use patterns
  - Higher vs lower risk: impacts on health, safety, stability
  - Intoxication/sedation at appts
  - Blackouts/memory loss
  - IVDU
- UDS results

Case 2 - Kelly

- 35yo woman on methadone for 6 years
- Dose 90mg, Carries 0
- Had carries in the past but they were removed due to intermittent cocaine and opioid use and unstable housing
- Under the COVID-19 OAT guidance received 3 carries/week and managed them without any issues; appreciated the carries and opportunity not to go to the pharmacy daily
- After the lockdowns were lifted, MD returned to usual carry practices and she went back to 0 carries
- Children live with their dad. Sees them on weekends and once during the week at her mother's house, but don't stay with her. She would be able to stay where they are on Saturday nights and extend her visit but wouldn't make it to the pharmacy by noon on Sunday and would therefore miss a dose.

Kelly

- Living with a partner in a shared house
- Depression and anxiety – longstanding, relatively stable, no suicidal thinking/psychosis. Has a prescription for lorazepam from a psychiatrist.
- On ODSP; sees her kids as scheduled, close with one of her siblings, in regular touch. Attends meetings with her probation officer from previous shoplifting charges.
- Never misses a dose or appointment
- Reports using occasional HM tabs. Doesn't inject.
- UDS + EDDP, + BZD, + FYL for the last 4 weeks

- Ability to store carries securely
- Amount of time on methadone
- Current mental health concern
- Stability
- Frequency of missed doses
- Frequency of missed appointments
- Recent substance use patterns
  - Higher vs lower risk: impacts on health, safety, stability
  - Intoxication/sedation at appts
  - Blackouts/memory loss
  - IVDU
- UDS results

Kelly Continued

- Kim's dose was increased to address withdrawal symptoms and cravings and her SSRI was adjusted
- Her substance use reduced but didn't stop; UDTs were mostly clear
- Started with 1 carry for Sundays, increased to 3 non-consecutive carries over 3 months; doing well, with no difficulty managing carries.
- Started working cleaning houses, early and long hours. Missing about 1 appt in 4 and 2 doses/week ? because of work.
- Experiencing worry and anxiety about family situation; no MDE/mental health risks
- Reports using less cocaine, no opioids
- Urine samples are being done every second week with visits
- + EDDP, cocaine approx. every fourth sample
- Can she have more carries to make it easier to get to work?

- Ability to store carries securely
- Amount of time on methadone
- Current mental health concern
- Stability
- Frequency of missed doses
- Frequency of missed appointments
- Recent substance use patterns
  - Higher vs lower risk: impacts on health, safety, stability
  - Intoxication/sedation at appts
  - Blackouts/memory loss
  - IVDU
- UDS results

Kelly Continued

- Kim was increased to 4 carries; dose is 120mg and adequate and she seemed to be doing well, with no difficulty managing carries.
- You receive a note from the pharmacy that Kim missed 2 consecutive doses; she misses an appointment, and then comes in looking tired and unwell, not sedated. She says she and her partner were fighting; she was kicked out of her house and didn't have a way to get to the pharmacy from where she was staying. Was in withdrawal after missing 2 doses, used fentanyl and had a near OD. Friends supported her and used naloxone but didn't call 911. She doesn't have a great memory for what happened.
- She's now staying with friends farther from the pharmacy. Doesn't know how long she'll be there. Still trying to work so she can get rent together.

- Ability to store carries securely
- Amount of time on methadone
- Current mental health concern
- Stability
- Frequency of missed doses
- Frequency of missed appointments
- Recent substance use patterns
  - Higher vs lower risk: impacts on health, safety, stability
  - Intoxication/sedation at appts
  - Blackouts/memory loss
  - IVDU
- UDS

Kelly Continued

- Kelly's carries were stopped because of high-risk substance use (near OD, memory loss,) and concerns about safe storage
- Two weeks later she is now staying with a family member in a safe environment; she still has her locked box.
- She is upset but not experiencing any acute mental health concerns
- She has attended the pharmacy daily with effort
- She is not using any unprescribed opioids, benzodiazepines or stimulants
- Her UDS is + for EDDP and BZDs and negative for any other substances

Thoughts? Questions?

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