Published in final edited form as:

Can J Addict. 2018 June ; 9(2): 6–9. doi:10.1097/CXA.0000000000000015.

Large Variation in Provincial Guidelines for Urine Drug Screening during Opioid Agonist Treatment in Canada

Eloise Moss[4], **Jasmine McEachern, RN, MSc**[1], **Lauren Adye-White, B.Sc., BA&Sc**[1], **Kelsey C. Priest, MPH**[2,3], **Lauren Gorfinkel, B.Arts.Sc**[1], **Evan Wood, MD, PhD**[1,4], **Walter Cullen, MD**[5], and **Jan Klimas, PhD**[1,4,5]

[1]British Columbia Centres on Substance Use and Excellence in HIV/AIDS, St. Paul's Hospital, 608-1081 Burrard Street, Vancouver, BC, CANADA, V6Z 1Y6 [2]Oregon Health & Science University (OHSU)-Portland State University (PSU) School of Public Health, OHSU, 3181 SW Sam Jackson Park Road; Portland, OR 97239 [3]OHSU MD-PhD Program, School of Medicine, OHSU, 3181 SW Sam Jackson Park Road; Portland, OR 97239 [4]Department of Medicine, University of British Columbia, St. Paul's Hospital, 608-1081 Burrard Street, Vancouver, BC, CANADA, V6Z 1Y6 [5]School of Medicine, University College Dublin, Health Sciences Centre, Belfield, Dublin 4, Ireland

Abstract

Urine drug screening (UDS) is commonly used to detect or validate self-reported substance use, particularly when beginning and maintaining opioid agonist therapy (OAT). However, there is currently no summary of the published clinical practice guidelines for UDS in Canada, and no measure of the consistency with which different provinces suggest administering UDS. Therefore, we conducted a policy scan of UDS guidelines, examining the published clinical practice guidelines for each Canadian province and extracting all relevant data in March 2017. Our Canadian guideline and policy scan found that UDS frequency recommendations vary greatly among Provinces for persons receiving OAT for opioid use disorder.

Keywords

Urine drug screening; Policy Scan; Guidelines; Opioid Agonist Therapy; Review

Background

Urine drug screening (UDS) is a common tool for detecting or validating self-reported substance use.[1] Opioid agonist therapy (OAT) is the recommended evidence-based treatment for opioid use disorder (OUD).[2] OAT involves the use of full opioid agonists (i.e. methadone, slow release oral morphine [SROM] or a partial opioid agonist - buprenorphine/

Send correspondence to: Jan Klimas, PhD, MSc, B.C. Centre on Substance Use, University of British Columbia, St. Paul's Hospital, 608-1081 Burrard Street, Vancouver, B.C., V6Z 1Y6, Canada, **Tel:** (604) 687-2797, **Fax:** (604) 806-9044, jklimas@cfenet.ubc.ca.

Conflicts of Interest

No conflicts of interest declared.

naloxone) to reduce opioid use, cravings, and to prevent withdrawal and overdose. Buprenorphine/naloxone, in particular, is considered the first-line treatment for the long-term maintenance of OUD in many Canadian jurisdictions.[3] In the context of OUD treatment, UDS detects or validates the self-reported use of opioids, or other drugs, in order to monitor efficacy of treatment.[3,4] Furthermore, UDS is frequently used to monitor adherence to OAT and its potential diversion.[4]

The risks of diversion and overdose associated with methadone and SROM are greater than those for buprenorphine.[4] Due to this variance in safety profiles, the published guidelines for UDS differ for the different forms of OAT.[4] The addition of new treatment options for OAT (including SROM and iOAT) presents specific challenges for interpretation of UDS results, as it is difficult to distinguish between non-prescribed and prescribed opioids.[4] This further warrants the development of UDS guidelines specific to treatment type.

Concerns persist about the utility of UDS in clinical management of OUD and its impact on health outcomes of persons receiving OAT has not been fully examined. Systematic reviews to date have found little evidence regarding the effectiveness of UDS on patient or community health outcomes.[5] For example, our recent review of international literature,[6] found only one study eligible for inclusion, and ultimately determined the study to be at a high risk of bias. As evident by the lack of literature, guidelines for clinicians regarding utility or frequency of UDS do not come from a robust evidence base and may be derived from expert consensus, which is more disposed to inconsistency.[7] UDS can also be quite expensive, with some confirmatory tests costing as much as $119.94.[8] These concerns, together with the devastating consequences of the current Canadian and American opioid crisis, warrant assessment of consistency in recommendations on optimal scheduling of UDS in the published guidelines. Although the Board of Directors of the American Society of Addiction Medicine recently issued a Drug Testing Appropriateness Document (www.asam.org), no such assessment for UDS in Canada has been undertaken to date. Therefore, we conducted a policy scan of UDS, examining the current, published clinical practice guidelines for each Canadian province and extracting all relevant data in March 2017.

Policy Scan of Guidelines for Urine Drug Screening in Canadian Provinces

All provinces, except Prince Edward Island, explicitly address UDS in their methadone guidelines (Table). The definition of UDS is relatively stable across provinces; however, the provincial guidelines recommend different frequency of UDS for patients on OAT. During initial methadone maintenance therapy (MMT) stabilization, Alberta, BC, Manitoba, Ontario and Quebec recommend weekly or biweekly screenings, while Nova Scotia recommends one to four times per month.[9] The initial screenings frequently co-occur with each province's recommended schedule of physician visits for patients starting MMT. When patients reach a stable MMT dose, provincial guidelines' recommendations become varied with respect to screening frequency. British Columbia (BC), New Brunswick, Newfoundland and Labrador, and Ontario's guidelines recommend testing most frequently (once per month);[10–13] whereas, Alberta, Manitoba, and Saskatchewan recommend once every three months,[14–16] and the Quebec guidelines recommend testing as needed. Newfoundland and

Labrador and Nova Scotia guidelines recommend testing one to four times per month for the first six weeks or throughout treatment, respectively.[9,10]

Compared to MMT, there are far fewer provincial guidelines and recommendations regarding UDS frequency for patients receiving buprenorphine/naloxone. Most of the provincial methadone practice guidelines allude to guidelines created by the Centre for Addiction and Mental Health (CAMH) which provides recommendations on take-home dosing, UDS, and other practices specific to buprenorphine.[10,13] The CAMH guideline recommends UDS testing at each appointment, unless there is a clinically justifiable reason for more or less frequent checks.[17] The previous BC guideline recommends UDS for patients at least monthly, until a stable dose is reached.[11] Finally, the Quebec guideline recommends random testing based on the frequency that the clinician believes is appropriate, although twice per month is suggested for the first two months.

Newly published guidelines in BC (in effect June 5, 2017) for patients on OAT provide different recommendations for UDS frequency based on the type of medication received[3]. For patients prescribed methadone, UDS is recommended once a month during initiation and dose escalation if the patient discloses current substance use, or more frequently if the patient states that they are abstinent or would prefer take-home doses. The guideline recommends random and scheduled UDS for patients receiving take-home doses of OAT. For patients on methadone, they recommend at least eight random tests per year, but only four for patients on buprenorphine/naloxone. If safety is a concern, physicians should conduct UDS for their patients more frequently. The federalised guidelines note that it is important to re-evaluate patients who do not comply with scheduled or random UDS, as there may be a risk of relapse, misuse, or diversion.[18]

In summary, the urine drug screening (UDS) frequency recommendations vary among Provinces for persons receiving OAT for OUD. Future research on UDS in Canada should establish whether a common set of recommendations is needed and whether quality of these should be assessed and reported. UDS guidelines need to be specific to the opioid agonist/partial agonist (e.g., methadone, SROM, and buprenorphine/naloxone) used due to their varying risks. Separate UDS guidelines for alternative OAT methods (e.g. SROM and iOAT) will need to be developed due to their specific analytical limitations. Finally, with the emergence of new illicit opioids, such as Fentanyl and its analogues, the screening panels require modification.

Acknowledgments

Source of Funding: The study was supported by the US National Institutes of Health (R25DA037756). This research was undertaken, in part, thanks to funding from the Canada Research Chairs program through a Tier 1 Canada Research Chair in Inner City Medicine that supports Dr. Evan Wood. A European Commission grant (701698) supported Dr. Jan Klimas. Kelsey C. Priest has a Ruth L. Kirschstein National Research Service Award from the National Institute on Drug Abuse (F30 DA044700). We thank Emily Wagner, Jessica Jun and all staff of the B.C. Centre on Substance Use, as well as Dr. Rolando Barrios, Jane Porter, and Dr. Michael Norbury of Vancouver Coastal Health Authority.

References

1. Moeller KE, Kissack JC, Atayee RS, Lee KC. Clinical Interpretation of Urine Drug Tests: What Clinicians Need to Know About Urine Drug Screens. Mayo Clin Proc. 2017; 92(5):774–796. [PubMed: 28325505]
2. British Columbia Centre on Substance Use & CIHR Canadian Research Initiative on Substance Misuse. A Guideline for the Management of Opioid Use Disorder. 2017. Retrieved from http://wwwbccsuca/wp-content/uploads/2017/02/BC-OUD-Guidelines_FINALpdf
3. British Columbia Centre on Substance Use & the Canadian Research Initiative in Substance Misuse. A Guideline for the Clinical Management of Opioid Use Disorder. Vancouver, BC: BC-CSU; 2017.
4. Barthwell AG. Clinical and Public Health Considerations in Urine Drug Testing to Identify and Treat Substance Use. Subst Use Misuse. 2016; 51(6):700–710. [PubMed: 27071006]
5. Dupouy J, Memier V, Catala H, Lavit M, Oustric S, Lapeyre-Mestre M. Does urine drug abuse screening help for managing patients? A systematic review. Drug Alcohol Depend. 2014; 136:11–20. [PubMed: 24417964]
6. McEachern J, Adye-White L, Priest KC. , et al. Urinalysis frequency and health outcomes for persons on opioid agonist therapy: A policy and literature review. NIDA International Forum; June 8–11; 2018; San Diego, CA.
7. Baker J, Lovell K, Harris N. How expert are the experts? An exploration of the concept of ‘expert’ within Delphi panel techniques. Nurse Res. 2006; 14(1):59–70. [PubMed: 17100214]
8. Health BCMo. Schedule of Fees for the Laboratory Services Outpatient. 2017
9. College of Physicians and Surgeons of Nova Scotia. Methadone Maintenance Treatment Handbook. Retrieved from https://wwwcpsnsnsca/Portals/0/PDFprograms/Methadone%20Maintenance%20Treatment%20Handbookpdf
10. College of Physicians & Surgeons of Newfoundland and Labrador. Methadone Maintenance Treatment Standards and Guidelines. 2016. Retrieved from https://wwwcpsnlca/web/files/Methadone%20Maintenance%20Treatment%20Standards%20and%20Guidelines%20-%20September%2010%202016pdf
11. College of Physicians and Surgeons of British Columbia. Methadone and Buprenorphine: Clinical Practice Guideline for Opioid Use Disorder. 2016. Retrieved from https://wwwcpsbcca/files/pdf/MBMT-Clinical-Practice-Guidelinepdf
12. New Brunswick Addiction Services. Methadone Maintenance Treatment Policies and Procedures. 2009. Retrieved from https://wwwgnbca/0378/pdf/methadone_policies-epdf
13. The College of Physicians & Surgeons of Ontario. Methadone Maintenance Treatment: Program Standards and Clinical Guidelines. 2011. Retrieved from http://wwwcpsoonca/uploadedFiles/members/MMT-Guidelinespdf
14. College of Physicians & Surgeons of Manitoba. Manitoba Methadone & Buprenorphine Maintenance: Recommended Practice. 2014. Retrieved from http://wwwcphmca/uploaded/web/Guidelines/CPSM%20Manitoba%20Methadone%20&%20Buprenorphine%20Maintenance%20-%20Recommended%20Practice%20pdf
15. College of Physicians and Surgeons of Alberta. Alberta Methadone Maintenance Treatment: Standards and Guidelines for Dependence. 2014. Retrieved from http://cpsaca/wp-content/uploads/2015/06/alberta-mmt-standards-guidelinespdf?x91570
16. College of Physicians and Surgeons of Saskatchewan. Methadone Guidelines and Standards for the Treatment of Opioid Addiction/Dependence. 2015. Retrieved from https://wwwcpsskca/imis/Documents/Programs%20and%20Services/Methadone/SK-Methadone-Guidelines-2015-Mar-FINALpdf
17. Centre for Addiction and Mental Health. Buprenorphine/Naloxone for Opioid Dependence: Clinical Practice Guideline. 2011. Retrieved from https://wwwcpsoonca/uploadedFiles/policies/guidelines/office/buprenorphine_naloxone_gdlns2011pdf
18. Bruneau J, Ahamad K, Goyer M-È, et al. Management of opioid use disorders: a national clinical practice guideline. Canadian Medical Association Journal. 2018; 190(9):E247–E257. [PubMed: 29507156]

Table 1

Summary of Guidelines for Urine Drug Screening (UDS) During Methadone Treatment Across across Canadian Provinces as of March 2017

Province	Treatment stage	Schedule of UDTs
British Columbia	Titration	1-2/week
	Stabilization/maintenance	Monthly
Alberta	Stabilization	Weekly
	<3 to 6 mo.	Monthly
	6- to 12 mo.	Every 3 mo.
Saskatchewan	Initiation	At least 1 UDT before initiation
	Stabilization	At every visit
	Maintenance	At least every 3 mo.
Manitoba	Early stabilization (0-2 weeks)	At least 1 UDT before patient is initiated; usually 1-2/week
	Maintenance (6+ weeks)	For stable patients and those receiving carries, every 3 mo. minimum
Ontario	Titration	1-2/week
	Initial stabilization (up to 6 weeks)	Weekly
	Maintenance	Progress from weekly to monthly
Quebec	Titration/stabilization	Weekly
	Maintenance	1-2/mo. for 3 mo. 1/mo. from 4-12 mo. As needed >12 mo.
Newfoundland and Labrador	Induction (0-2 weeks) and stabilization (2-6 weeks)	Prior to initiation; 1-4 times/mo. random collection schedule preferred (if fixed schedule, weekly recommended)
	Maintenance (>6 weeks)	At least monthly
New Brunswick	0-6 mo.	Weekly
	6-12 mo. (if stable)	2/month
	>12 mo.	1/month
Nova Scotia	Induction, stabilization, maintenance	Prior to initiation; 1-4 times/mo. random collection schedule preferred
Prince Edward Island	See take-home dosing policy for Ontario	