

# Physician communication in injectable opioid agonist treatment: collecting patient ratings with the Communication Assessment Tool

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## Background

Long acting oral opioids meet the treatment needs of a majority of people with opioid use disorder [1,2]. There is also substantial evidence to support the effectiveness of treatment with injectable diacetylmorphine (pharmaceutical grade heroin: DAM) and hydromorphone (a recently licensed treatment for opioid use disorder in Canada: HDM) [3,4]. These medications are being expanded in Canada, and are being considered for expansion in other countries [5,6]. Armed with evidence to support iOAT as effective, emphasis is now placed on investigating other aspects of care that could be important to improving patients' treatment engagement such as patient-physician communication.

## Objectives

- 1) To collect and report on patient ratings of communication with their physicians in iOAT;
- 2) To test the association of patient characteristics with ratings of physician communication.

## Methods

**Participants and setting:** Participants (n=121) were patients receiving treatment for opioid use disorder with hydromorphone (an opioid analgesic) or diacetylmorphine (medical grade heroin) in an injectable opioid agonist clinic in the Downtown Eastside of Vancouver, Canada.

**Outcome Measure:** Ratings of physician communication were collected using the 14-item Communication Assessment Tool.

**Analysis:** Items were dichotomized and associations were explored using univariate and multivariable logistic regression models for each of the 14 items.

## Results

Patients' ratings of physician communication were lower than reported in other populations (Table 2). In nearly all of the 14 multivariable models, participants with more physical health problems and with lower scores for treatment drug liking had lower odds of rating physician communication as excellent (Table 3).

**Table 1. Participant demographic, health, substance use, and treatment profiles**

Participant Characteristic	N=121 Mean ±SD/ N(%)
<b>Demographics</b>	
Age	48.40 ± 9.12
Ethnicity (Indigenous) (a)	35(28.93)
Gender (Woman)	37(30.58)
<b>Health status</b>	
Physical health Score (c)	24.51 ± 11.42
Mental health Score (d)	8.99 ± 8.14
Health related quality of life score (e)	83.64±18.34
<b>Street substance use</b>	
Lifetime years injecting heroin (f)	14.93 ± 8.73
Days of street opioid use in prior month	5.28 ± 9.19
Days of street stimulant use in prior month (g)	10.52 ± 12.12
Days injecting street drugs in prior month	8.02 ± 10.84
<b>Treatment access and experience</b>	
Lifetime number of oral OAT attempts (f)(h)	4.75±3.19
Average prescribed iOAT dose in prior month (i)(j)	162.75 ± 80.16
Average prescribed total daily dose in prior month (i)(j)	595.00±277.77
Perceived good treatment effects on last dose received (k)	75.75 ± 25.15
Number of days with a missed iOAT session in prior month (l)	9.12 ± 9.66

**Footnote:**  
SD= standard deviation; OAT= opioid agonist treatment; iOAT= injectable opioid agonist treatment; DAM= diacetylmorphine  
(a) Indigenous ancestry refers self-reported First Nations, Inuit or Metis ancestry.  
(b) Non-stable housing is single resident occupancy hotel rooms with restrictions or couch surfing. Street housing is defined as outdoor, vehicles or in public places.  
(c) Physical health score is derived from the Opiate Treatment Index (OTI), a 51-item scale of prior month health symptoms from 9 domains, with a higher score indicating poorer health. The gynaecological items (n=2) were excluded given this domain was not applicable to men and thus the score ranges from 0-49.  
(d) The psychological health score is derived from the Maudsley Addiction Profile, a 10-item scale of prior month psychological health symptoms, with a higher score indicating poorer health.  
(e) Quality of life was measured using the Euro-quo1 (EQ-SD) with Canadian weights scores range from 0 to 1; higher scores are indicative of better health status.  
(f) Lifetime years injecting heroin and treatment attempts were reported at baseline in the SALOME clinical trial, prior to receiving any treatment with iOAT.  
(g) Street stimulant use refers to prior month use of cocaine (injected cocaine powder or smoked crack cocaine), or use of crystal methamphetamine (injected or smoked).  
(h) Lifetime number of attempts at oral methadone and oral buprenorphine were self-reported. These variables were combined to sum total oral OAT attempts prior to receiving iOAT.  
(i) These variables are derived from the Crosstown Clinic's clinical database. This database tracks each dose (drug type and amount) prescribed and received by participants and each session attended.  
(j) Dose is presented in diacetylmorphine equivalents, with a ratio of 2:1 of DAM to HDM.  
(k) Perceived "good" effects are derived from the Visual Analog Scale. Participants are asked to rate the good effects from their most recent dose from 0 to 100, 100 being the best and 0 being the worst.  
(l) Number of days with missed iOAT session refers to number of days in prior 30 that participants engaged in treatment missed any treatment session.

**Table 2. Communication Assessment Tool item scores**

Communication Assessment Tool Item	Proportion of Excellent Scores	Average Scores Mean ± SD
1. Greeted me in a way that made me feel comfortable	55 (45.5)	3.96 ± 1.21
2. Treated me with respect	67 (55.4)	4.16 ± 1.15
3. Showed interest in my ideas about my health	59 (48.8)	3.91 ± 1.33
4. Understood my main health concerns	53 (44.2)	3.86 ± 1.29
5. Paid attention to me (looked at me, listened carefully)	58 (47.9)	3.96 ± 1.26
6. Let me talk without interruptions	58 (48.3)	4.00 ± 1.22
7. Gave me as much information as I wanted	54 (44.6)	3.82 ± 1.34
8. Talked in terms I could understand	54 (44.6)	4.12 ± 0.98
9. Checked to be sure I understood everything	51 (42.5)	3.76 ± 1.35
10. Encouraged me to ask questions	43 (35.4)	3.52 ± 1.43
11. Involved me in decisions as much as I wanted	47 (38.9)	3.70 ± 1.38
12. Discussed next steps, including any follow-up plans	49 (40.5)	3.74 ± 1.35
13. Showed care and concern	57 (47.1)	3.95 ± 1.28
14. Spent the right amount of time with me	52 (43.3)	3.94 ± 1.18

**Footnote:**  
Response options for each CAT item range from 1-5, including poor (1), fair (2), good (3), very good (4), and excellent (5).  
The denominator for Questions 4,6,9,14 is 120 (1 missing response for each item among 4 different participants)

**Table 3. Multivariable logistic regression models for predictors of excellent physician communication**

CAT Item	Gender <sup>(a)</sup>	Age <sup>(b)</sup>	Ethnicity <sup>(c)</sup>	Physical Health	Drug Liking
	<b>3.04</b>	1.11	0.44	<b>0.74</b>	<b>1.21</b>
1. Greeted me in a way that made me feel comfortable	<b>(1.14-8.13)</b>	(0.88-1.41)	(0.16-1.22)	<b>(0.61-0.89)</b>	<b>(1.02-1.44)</b>
	2.27	1.22	0.93	<b>0.73</b>	<b>1.19</b>
2. Treated me with respect	<b>(0.88-5.85)</b>	(0.96-1.54)	(0.36-2.44)	<b>(0.61-0.88)</b>	<b>(1.01-1.40)</b>
	<b>3.10</b>	1.23	0.91	<b>0.75</b>	<b>1.23</b>
3. Showed interest in my ideas about my health	<b>(1.18-8.12)</b>	(0.97-1.56)	(0.34-2.42)	<b>(0.62-0.90)</b>	<b>(1.04-1.46)</b>
	1.65	1.14	0.65	<b>0.80</b>	<b>1.27</b>
4. Understood my main health concerns	<b>(0.65-4.20)</b>	(0.90-1.45)	(0.24-1.78)	<b>(0.67-0.96)</b>	<b>(1.06-1.53)</b>
	1.69	1.20	0.86	<b>0.79</b>	<b>1.17</b>
5. Paid attention to me (listened carefully)	<b>(0.69-4.17)</b>	(0.95-1.51)	(0.34-2.21)	<b>(0.66-0.94)</b>	<b>(1.00-1.38)</b>
	<b>2.82</b>	1.16	1.04	<b>0.71</b>	<b>1.23</b>
6. Let me talk without interruptions	<b>(1.07-7.45)</b>	(0.91-1.47)	(0.39-2.79)	<b>(0.58-0.86)</b>	<b>(1.04-1.46)</b>
	2.06	<b>1.29</b>	0.78	<b>0.79</b>	---
7. Gave me as much information as I wanted	<b>(0.84-5.05)</b>	<b>(1.01-1.64)</b>	(0.30-2.06)	<b>(0.66-0.95)</b>	---
	1.67	1.19	0.78	<b>0.72</b>	---
8. Talked in terms I could understand	<b>(0.68-4.14)</b>	(0.93-1.51)	(0.29-2.09)	<b>(0.59-0.86)</b>	---
	1.70	1.15	1.05	<b>0.74</b>	<b>1.28</b>
9. Checked to be sure I understood everything	<b>(0.66-4.37)</b>	(0.90-1.46)	(0.39-2.84)	<b>(0.61-0.89)</b>	<b>(1.07-1.54)</b>
	<b>2.92</b>	1.26	0.68	<b>0.74</b>	<b>1.25</b>
10. Encouraged me to ask questions	<b>(1.07-7.97)</b>	(0.97-1.63)	(0.23-2.00)	<b>(0.61-0.90)</b>	<b>(1.03-1.51)</b>
	<b>3.36</b>	1.17	0.57	<b>0.76</b>	<b>1.29</b>
11. Involved me in decisions as much as I wanted	<b>(1.23-9.06)</b>	(0.92-1.50)	(0.20-1.65)	<b>(0.63-0.91)</b>	<b>(1.06-1.55)</b>
	<b>2.77</b>	1.15	0.63	<b>0.82</b>	<b>1.38</b>
12. Discussed next steps, including any follow-up plans	<b>(1.04-7.35)</b>	(0.91-1.47)	(0.22-1.77)	<b>(0.68-0.98)</b>	<b>(1.12-1.68)</b>
	2.41	1.00	0.52	<b>0.80</b>	<b>1.40</b>
13. Showed care and concern	<b>(0.91-6.38)</b>	(0.79-1.27)	(0.19-1.43)	<b>(0.66-0.96)</b>	<b>(1.15-1.70)</b>
	1.98	1.09	0.49	<b>0.79</b>	<b>1.26</b>
14. Spent the right amount of time with me	<b>(0.77-5.12)</b>	(0.86-1.38)	(0.18-1.35)	<b>(0.66-0.94)</b>	<b>(1.05-1.50)</b>

**Footnote:** CAT= communication assessment tool  
Presented data are odds ratios and 95% confidence intervals; Bolded odds ratios and confidence intervals indicate significance p<0.05  
Gender, age, and ethnicity were forced into each model  
Drug liking score was not significant for models for items 7,8, reflected by ---  
(a) Odds ratios for gender refer to women compared to men  
(b) To improve the interpretation of findings, age was rescaled. Every one-unit increase in age represents a 5-year increase in age.  
(c) Odds ratios for ethnicity refer to Indigenous compared to non-Indigenous participant

## Discussion

Findings reinforce the role physicians can play in communicating with patients about their comorbid conditions and about medication preferences. In the patient-physician interaction efforts to meet patients' evolving treatment needs and preferences can be made by offering patients access to a range of evidence-based treatments.

**References:** (1) Mattick, R.P., et al., *Methadone maintenance therapy versus no opioid replacement therapy for opioid dependence*. Cochrane Database Syst Rev, 2009; (2) Mattick, R.P., et al., *Buprenorphine maintenance versus placebo or methadone maintenance for opioid dependence*. The cochrane library, 2014; (3) Strang, J., T. Groshkova, and N. Metrebia, *EMCDDA Insights: New heroin-assisted treatment. Recent evidence and current practices of supervised injectable heroin treatment in Europe and beyond*; (4) Oviedo-Joekes, E., et al., *Hydromorphone Compared With Diacetylmorphine for Long-term Opioid Dependence: A Randomized Clinical Trial*. JAMA Psychiatry, 2016; (5) Kilmer, B., et al., *Considering Heroin-Assisted Treatment and Supervised Drug Consumption Sites in the United States*. 2018, RAND Corporation: Santa Monica, CA.; (6) Belackova, V., et al., *Learning from the past, looking to the future - Is there a place for injectable opioid treatment among Australia's responses to opioid misuse?* Int J Drug Policy, 2019.