Harm Reduction as an Outcome in Patients Currently Receiving MOUD

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BACKGROUND

Opioid Use Disorder (OUD) is a chronic condition with a high degree of morbidity and mortality[1]

Medication for OUD (MOUD) is well-established to be a safe and effective approach to the treatment of OUD[2-4] and typically consists of opioid agonists like buprenorphine or methadone

Harm reduction (HR) is the principle of accepting addiction as reality and focusing on minimizing the negative effects of use

- HR has been shown to be a cost-effective approach to reducing overdose mortality and risk of complications secondary to substance use[5-7]
- Compared to abstinence, harm reduction may be a more realistic and less stigmatizing goal of treatment[8]

The perception and use of **harm reduction services (HRS)** among patients receiving MOUD are not well understood, nor is their combined impact on OUD outcomes. OUD is a complex disorder that may require multiple treatment approaches, and understanding the relationship between MOUD and harm reduction services may guide OUD treatment.

OBJECTIVES

This study aims to characterize **harm reduction as an outcome** in patients currently receiving MOUD, and compare these outcomes across MOUD treatment groups

METHODS

Harm reduction outcomes were defined as **access to** and **attitudes towards** harm reduction services (any site with syringe exchange programs or administering fentanyl test strips or naloxone) as well as **changes in substance use practices among those still using opioids** while receiving MOUD.

A novel survey, based on the British Columbia CDC Harm Reduction Client Survey, was built assessing harm reduction outcomes, length of time with OUD diagnosis, and length of time receiving MOUD.

This survey was administered to patients with moderate-severe OUD receiving buprenorphine or methadone through three clinics across Philadelphia

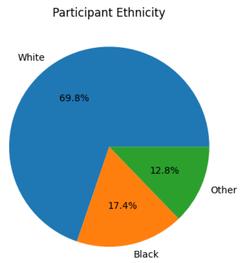
Data was collected from November 2023 – September 2024

Data was collected using RedCAP and analyzed using Python

Participants received a $5 Rite-Aid gift-card as compensation for participating

DEMOGRAPHICS

98 participants were surveyed (26 on buprenorphine, 72 on methadone)
Demographics were similar between sites, with a mean age of 57.8.



RESULTS

Length of OUD	Participants	Length Receiving MOUD	Participants
< 1 month	3	< 1 month	3
1 month – 1 year	7	1 month – 1 year	7
1 year – 3 years	15	1 year – 3 years	15
3 years – 5 years	8	3 years – 5 years	8
5 years – 10 years	29	5 years – 10 years	29
More than 10 years	22	More than 10 years	22

A one-way ANOVA test showed **no significant difference in HRS responses between participants separated by length of time with OUD diagnosis** (F(5,79) = 1.04, 1.12, 1.30, 1.66, 0.44, 2.00, 0.52, p = 0.40, 0.36, 0.27, 0.15, 0.82, 0.09, 0.76) **or length of time receiving MOUD** (F(5,79) = 1.04, 1.30, 1.66, 0.44, 2.00, 0.52, p = 0.40, 0.36, 0.27, 0.15, 0.82, 0.09, 0.76)

Access to HRS

Participants were asked if they have ever accessed HRS, and if so, how recently and how frequently they typically access HRS

57% of participants reported accessing HRS at one point, regardless of time in MOUD treatment or type of MOUD received

A chi-square test of independence showed that **buprenorphine participants were significantly more likely than methadone participants to have accessed HRS at one point in time ($(X^2(1, n = 98) = 19.9, p < 0.001)$)**

Treatment Group	Have Accessed HRS	Have Never Accessed HRS	Row total
Methadone	31	41	72
Buprenorphine	25	1	26
Column total	56	42	98

Opioid Use while receiving MOUD

Participants were asked if they used opioids in the last 6 months while receiving MOUD

38/98 (39%) of all participants reported using opioids in the last 6 months while receiving MOUD. Of these, 19 participants reported injecting opioids, 14 reported snorting opioids, 2 reported swallowing opioids, 2 reported smoking opioids, and 2 reported it depends on the situation.

A chi-square test of independence showed that there was **no significant association between use of HRS and use of opioids in the last 6 months ($(X^2(1, n = 97) = 2.52, p - 0.11)$)**

A chi-square test of independence showered there was **no significant association between MOUD treatment group and use of opioids** in the last 6 months **($(X^2(1, n = 97) = 1.66, p - 0.15)$)**

Treatment Group	Have Used Opioids	Have Not Used Opioids	Row total
Methadone	25	47	72
Buprenorphine	13	13	26
Column total	38	60	98

Attitudes towards HRS

Participants were given statements pertaining to HRS and asked to record their level of agreement with each statement using a 5-point Likert Scale (strongly agree, agree, neutral, disagree, strongly disagree).

A two-sample t-test comparing attitude responses across MOUD types found **buprenorphine participants were significantly more likely to use, recommend, and feel welcome at harm reduction sites** compared to methadone participants

Two Sample T-Test Comparing Attitude Responses Between MOUD Groups ($\alpha = 0.05$)

Attitude Statement	*T test result*	*% Agree or Strongly Agree*
I am likely to use sites that give out syringes, fentanyl test strips, or naloxone (Narcan)	$t = 3.6744766203467316$, $p = \mathbf{0.0004}$	*43.88%*
I am likely to recommend sites that give out syringes, fentanyl test strips, or naloxone (Narcan) to a friend	$t = 2.5504664837065674$, $p = \mathbf{0.0126}$	*65.31%*
I feel welcome at sites that give out syringes, fentanyl test strips, or naloxone (Narcan)	$t = 2.3861348677247016$, $p = \mathbf{0.0194}$	*55.10%*
I feel judged at sites that give out syringes, fentanyl test strips, or naloxone (Narcan)	$t = -1.6852126087929982$, $p = 0.0959$	*14.58%*
I wish there more sites that give out syringes, fentanyl test strips, or naloxone (Narcan)	$t = 1.5358786100864927$, $p = 0.1285$	*52.04%*
Sites that gives out syringes, fentanyl test strips, or naloxone (Narcan) have a positive effect on me and my community	$t = 1.8759907675244623$, $p = 0.0643$	*48.98%*
I can easily get to sites that give out syringes, fentanyl test strips, or naloxone (Narcan)	$t = 1.197691174995386$, $p = 0.2345$	*53.06%*

CONCLUSION

Harm reduction is an important consideration in the treatment of OUD, and may be a valuable endpoint of OUD treatment and research

Patients may continue to use opioids while receiving MOUD treatment, with no evidence of safer opioid use and no difference in recent use across MOUD type

Most patients receiving MOUD had accessed HRS at least once in the past, particularly syringe exchange programs. Patients generally held mixed attitudes towards HRS, yet most participants were likely to recommend HRS to a friend and not feel judged utilizing HRS.

Preliminary results suggest that both buprenorphine or methadone may enhance linkage to harm reduction services, with buprenorphine patients possibly holding more positive attitudes and utilizing HRS more frequently than methadone participants

Further research is needed on harm reduction as an outcome in those not receiving MOUD

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