Influence of a Low-Barrier Buprenorphine Treatment Program on Illicit Drug Use and Quality of Life Metrics among Predominantly Homeless, Needle Exchange Clients in Seattle

Holly J. Whitney[a,b], Caleb Banta-Green[c,d], Jessi Libbing[a], Malin Hamblin[a], Mia Shim[a,e], Julia E. Hood[a,c]

[a] *Public Health- Seattle & King County*
[b] *Council of State and Territorial Epidemiologists, Applied Epidemiology Fellowship*
[c] *University of Washington School of Public Health*
[d] *University of Washington Alcohol and Drug Abuse Institute*
[e] *University of Washington School of Medicine*

ABSTRACT

AIM: The health department operates a low-barrier buprenorphine program ("Bupe Pathways") that is co-located with a needle exchange and primary care clinic in Seattle, Washington. The low-barrier approach aims to connect clients to care immediately and does not exclude people with ongoing illicit or polysubstance use. The majority of patients are homeless. We conducted a survey that documented patient satisfaction and the program's influence on illicit drug use and quality of life metrics.

METHODS: In summer 2018, we recruited (via clinic referrals, phone calls, and mail) current and former Bupe Pathways patients to complete an interviewer-administered, 45-minute survey. We coded responses to open-ended questions for themes and summarized closed-ended questions with descriptive statistics.

RESULTS: Of 190 patients in the sampling frame, 152 had contact information and 84 were interviewed. Of these, 62% were current patients, 21% were no longer active in the program and 17% had transferred to another clinic. Twenty percent of surveyed patients reported that incarceration interrupted their treatment, though most (94%) returned to Bupe Pathways post-release.

Participants noted improvements in general health status (62%), relationships (57%), medical care source (38%), housing status (24%), and employment status (10%). Participants also reported reductions in substance use, with 67%, 45%, and 14% indicating decreased use of opioids, stimulants, and benzodiazepines, respectively, following enrollment in Bupe Pathways. Positive changes were more commonly reported by patients with greater retention.

Open-ended questions regarding factors that facilitated engagement often elicited comments about the low-barrier nature of the program, specifically flexible scheduling and tolerance of ongoing other substance use. Open-ended questions regarding challenges prompted several surveyed participants to comment that the proximity of the needle exchange was "triggering" for relapse.

CONCLUSION: Patients of this needle exchange affiliated, low-barrier, buprenorphine program commonly reported reductions in drug use and improvements in quality of life metrics.

Presented at College on Problems of Drug Dependence (CPDD) 2019 Annual Conference, San Antonio, TX https://cpdd.org/wp-content/uploads/2019/07/abstracts_2019.pdf , Abstract #549

INTRODUCTION

- In King County, 74% of needle exchange clients who reported opioid use were interested in reducing or stopping their use[1].
- Significant barriers to treatment include:
  - Difficulty making appointments
  - Required abstinence
  - Social conditions (e.g., homelessness, incarceration, mental illness)

PROGRAM OVERVIEW

- Buprenorphine program, "Bupe Pathways", established 2017
- Co-located with
  - Needle exchange
  - Primary care clinic
  - Pharmacy
- Limit barriers by:
  - Providing care regardless of polysubstance use
  - Flexible scheduling (including walk-in hours)
  - Connecting clients to psychosocial services
  - Referral to primary care co-located with program

METHODS

Three part strategy to evaluate program:

Data	Source	Status
Toxicology and Retention	Electronic medical records	Published in Substance Abuse, https://doi.org/10.1080/08897077.2019.1635557
Patient satisfaction and impact on well-being	Patient surveys	Presented here
Hospitalization utilization pre and post enrollment	Link with Emergency Medical Services (EMS) data	Upcoming

Patient Interviews:
- Mixed methods survey conducted April-September 2018
- Eligibility: Patients with ≥ 1 Bupe Pathways visit
- Recruited by program staff at appointments and contacted through phone and mail
- Incentivized

RESULTS

In Sampling Frame: 190 → Had Contact Information: 152 → Completed Interview: 84

Table 1: Characteristics of Bupe Pathways Patients, Stratified by Survey Participation Status

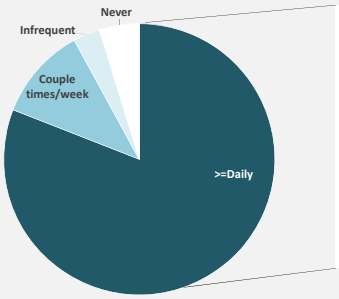
	Interviewed Patients (n=84) N (col %)	Non-Interviewed Patients in Sampling Frame (n=106) N (col %)	P-value
Status in Bupe Pathways*			<.0001
Active^	36 (43%)	17 (16%)	
New patient^^	16 (19%)	8 (8%)	
Inactive	18 (21%)	67 (63%)	
Transitioned to another clinic	14 (17%)	14 (13%)	
Median Age (IQR)*	42.5 (33-52)	35 (29, 46)	0.0019
Non-Hispanic White	63 (75%)	83 (78%)	0.65
Male	56 (67%)	65 (61%)	0.44
Homeless	72 (84%)	88 (83%)	.50
Substances Used Prior to Enrollment	81 (96%)	N/A	
Opioids	72 (86%)		
Stimulants	32 (38%)		
Benzodiazepines			

* Per medical record; in some instances, medical record characterization of demographics was discrepant with patient self-report.
^Enrolled before April 2018
^^Enrolled April-July 2018
N/A= "Not Available"

RESULTS (continued)

Self-reported opioid use pre-enrollment and post-enrollment (among those reporting daily use at pre-enrollment)

Pre Enrollment (n=64)



Post Enrollment (at time of survey)

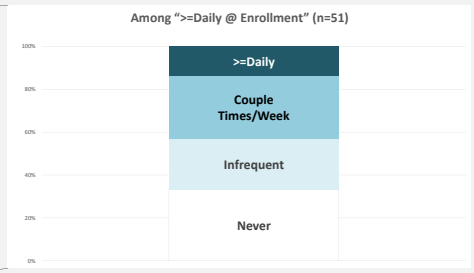


Table 2. Reasons for gaps in care amongst intermittent and current patients.

Retention category	Primary reasons for gaps in care	Exemplary quotes
Intermittent or Inactive Patients	• Withdrawal symptoms following home induction • Difficulty returning after missing appointments	*It did **not do anything** for me. I had **very adverse reactions…*** *So after the relapse **I missed an appointment** and then I **lost my spot** in the program… it was going to **be about a month** until I was going to be seen again.*
Current Patients	• Hospitalizations • Care Taking • Travel	*[After I returned from travel] …It was **so easy to go back** into the program. I felt **so comfortable**. They were **very understanding**. [I] was able to call and just make the appointment again.*

Table 3. Influence of Bupe Pathways on Quality of Life Metrics

	Improved by participation in Bupe Pathways (among patients >5 visits) (n=63)	Patients' Description of Bupe Pathway's Influence *(paraphrased quotes)*
Employment Status	**6 (10%)**	*Before methadone I was on heroin constantly looking for dope. Then I went on methadone, but it took a lot of time to go to the methadone program every day– I didn't have time for work. Now on Suboxone, **I have more free time that I could work more hours**.*
Housing Status	**15 (24%)**	*I could focus and I was clean so people **trusted me** to be in their home.* *It helped me stay sober which in turn **restored my mom's faith in myself** then she lobbied to get myself public housing. Bupe Pathways **directly influenced my housing**-- it was shelters and streets before then.*
Medical Care Source	**24 (38%)**	*It was in the same building. I was coming here anyways and I might as well have a [PCP]. I remember them **asking if I wanted one and I said yeah because I had never had one before**.* *Helping me establish a [PCP] and **giving me the knowledge to do all that stuff** because I have never ever done that stuff before and didn't know I could.*
Relationships	**36 (57%)**	N/A
General Health Status	**39 (62%)**	Well I got off the heroin so my eating habits got better. My sleeping habits. My hygiene. **Everything improved** It is inspiring me to **take care of myself** and **make better decisions**

N/A= "Not Available"; participants were not asked to describe how the program influenced their relationships

DISCUSSION AND CONCLUSIONS

- Self-reported opioid use shows greater reduction post-enrollment than suggested by toxicology tests, which only measure abstinence.
- Qualitatively, intermittent or inactive patients are more likely than current patients to mention difficulty with withdrawal symptoms after starting buprenorphine treatment, as well as barriers returning to the program after gaps in care.
- Many patients reported improvement in quality of life metrics after enrolling in Bupe Pathways.

Limitations:
- Inactive patients, along with younger patients, were significantly underrepresented in the survey sample. These conclusions may not be generalizable to entire sampling frame.
- Qualitative data was collected through open-ended survey questions; patient interviews were neither recorded nor transcribed exactly, some responses may have been paraphrased instead of direct quotes.

Implications:
- Toxicology data may be underestimating overall impact of medication-assisted treatment on opioid use.
- Outreach to patients following home-induction may represent a strategy to prevent loss to follow-up related to adverse induction experiences.
- The low-barrier approach adopted by this outpatient buprenorphine program, along with referral to other services such as primary care, may substantially improve the patients' quality of life.

GRANT SUPPORT

The activities described here were supported in part by an appointment to the Applied Epidemiology Fellowship Program administered by the Council of State and Territorial Epidemiologists (CSTE) and funded by the Centers for Disease Control and Prevention (CDC) Cooperative Agreement Number 1 NU38OT000297-01-00 and 5 NU17CE002734. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the Centers for Disease Control and Prevention or the Department of Health and Human Services.

REFERENCES

[1]Glick SN, Tinsley J, Hood JE, Klein K. Needle Exchange Program in *HIV/AIDS Epidemiology Report 2017*. Vol Volume 86. : HIV/AIDS Epidemiology Unit, Public Health – Seattle & King County and the Infectious Disease Assessment Unit, Washington State Department of Health.; 2017:59-62.

No conflicts of interest to declare

Holly J. Whitney, MPH
CSTE Applied Epidemiology Fellow
(206) 263-1874 · n-hwhitney@kingcounty.gov