Harm Reduction Vending Machines in Clark County, NV

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BACKGROUND & AIM

Starting in 2017, Southern Nevada Health District (SNHD) partnered with Impact Exchange to introduce Public Health Vending Machines (PHVMs) in Clark County, Nevada, which offer sterile syringes and other harm reduction items with the goal of reducing disease transmission and overdose (*Ann Med.* 2022 Dec;54(1):2692-2700). **Aim.** The current project sought to characterize utilization of PHVMs between 8/1/2021 – 5/31/2023.

METHODS

Data. Three datasets were used: (1) enrollment data from the Impact Exchange/Trac-B website; and (2) vending machine transaction data exported from the VendNovation website. Transaction data were linked to the enrollment data by card number to ensure all related transactions during the examined period could be linked to unique individuals. For the analysis of transaction data, those with 0 transactions were removed. A total of 13,174 transactions were made by 606 unique client. Between May to July 2022, there was a known glitch in the PHVM system that permitted cards number to take items over their allotted number. (**Figure 1**).

Statistical analyses. Analyses were performed in R (version 4.3.1). Descriptive statistics were generated to examine demographics of VM users and frequency of use. High utilization was defined as those with total transactions in the >= 75th percentile of all users between 8/1/21 – 5/31/23. A logistic regression model was fit that included age, sex, race, ethnicity, and homelessness status.
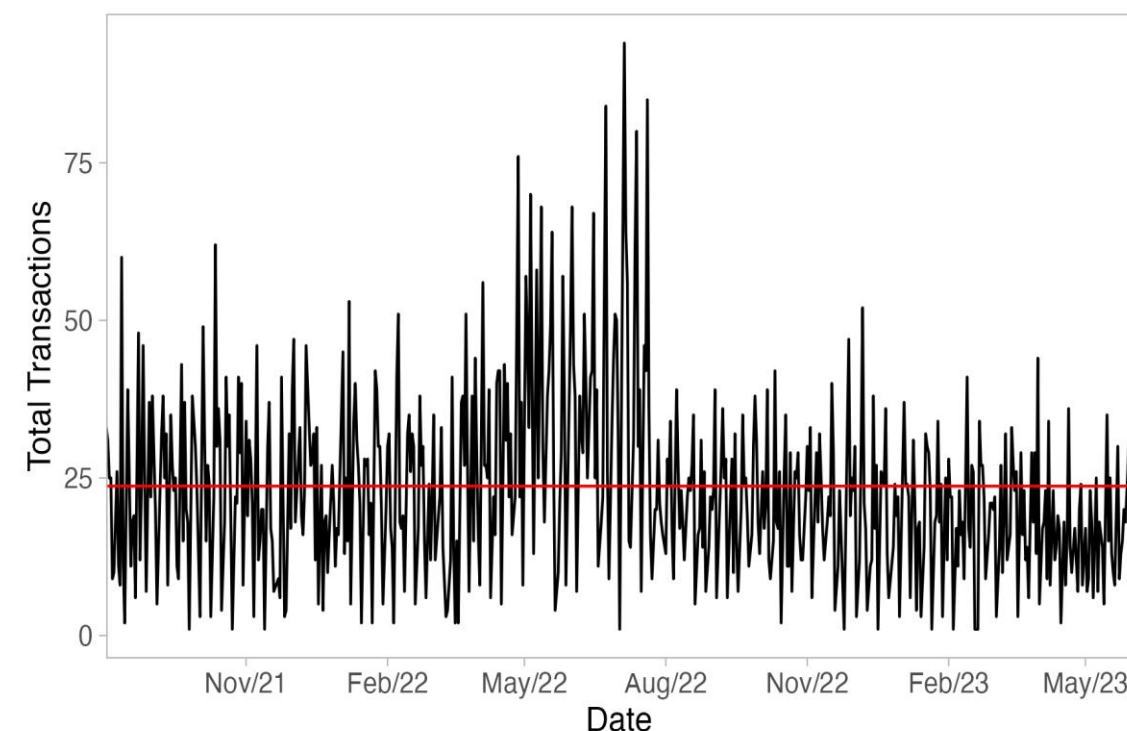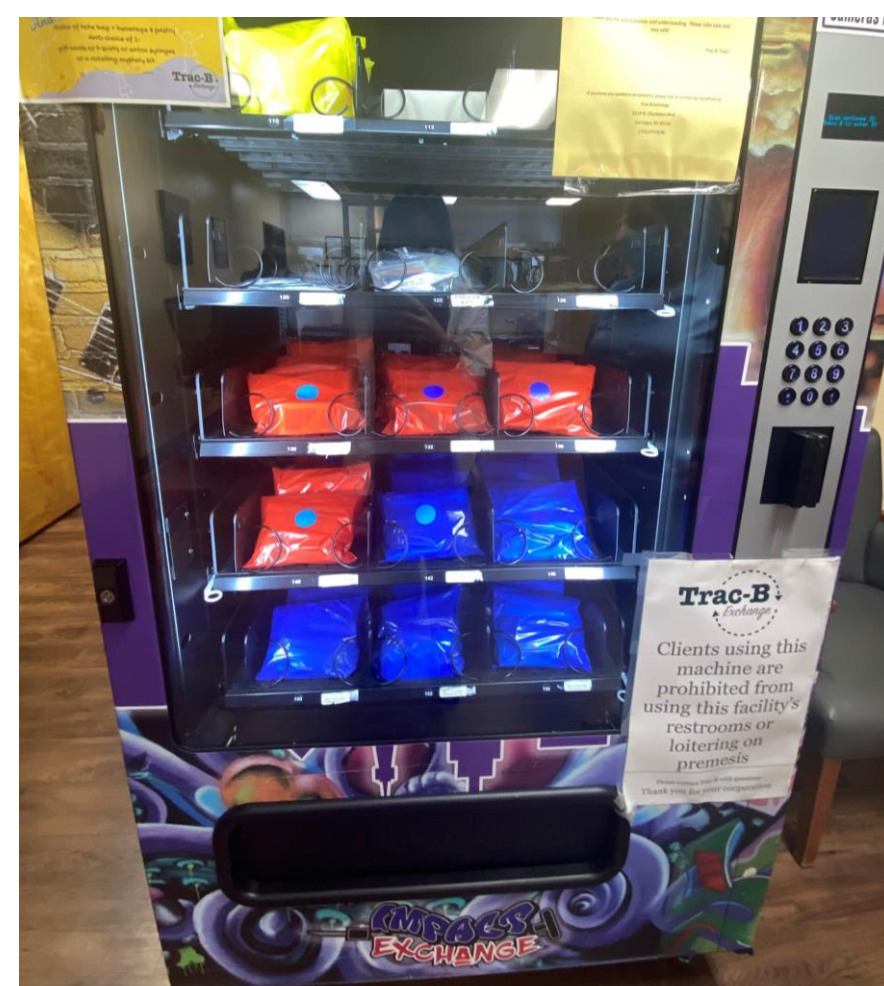

Avg. 23.7 transactions per day

Figure 1: Transactions per day, 8/1/2021 – 5/31/2023

Public Health Vending Machine in Las Vegas, NV

RESULTS

Table 1. PHVM transactions by item type.

Item	N = 13,174
28 gauge syringe kit	4,628 (35%)
31 gauge syringe kit	3,903 (30%)
First Aid Kit	1,531 (12%)
Personal Hygiene Kit	1,064 (8.1%)
Naloxone multipack	792 (6.0%)
Hormone injection kit	613 (4.7%)
Safer Sex Kit	489 (3.7%)
Pregnancy Test Kit	140 (1.1%)
Sharps container(s)	11 (<0.1%)
Safe Foil Kit	3 (<0.1%)

Table 2. Sociodemographic and transaction characteristics of PHVM clients.

Characteristic	N = 606
18 to 34 years	213 (35%)
35 to 44 years	197 (33%)
45 to 54 years	123 (20%)
55+ years	73 (12%)
Male	364 (60%)
White	507 (84%)
Not Hispanic	521 (86%)
Homeless	73 (12%)
Total Transactions	
1 to 6	274 (45%)
7 to 25	180 (30.1%)
26 to 40	44 (7.3%)
40+	108 (18%)

Table 3. Logistic regression results for high PHVM utilization.

Characteristic	aOR[1]	95% CI[1]	p-value
(Intercept)	0.28	0.19, 0.43	<0.001
Age (ref: 18-24 years)			
35-44 years	1.12	0.69, 1.81	0.65
45-54 years	2.08	1.25, 3.47	0.005
55+ years	1.94	1.05, 3.55	0.031
Sex (ref: Male)			
Female	1	0.68, 1.48	0.98
Race (ref: White)			
Black	0.92	0.45, 1.77	0.81
Other	0.61	0.26, 1.30	0.23
Ethnicity (ref: Not Hispanic)			
Hispanic	1.12	0.64, 1.90	0.69
Homeless (ref: No)			
Yes	0.34	0.15, 0.70	0.006
[1] OR = Odds Ratio, CI = Confidence Interval			

CONCLUSIONS

- PHVM transactions have increased by 300% since 2017-2018 (data not shown).
- Sterile syringes remain the most common harm reduction item accessed.
- White, non-Hispanic males are the most common PHVM client, which has not changed since 2017-2018.
- PHVM transactions are highest for those who report ZIP codes in the immediate vicinity of machines
- Older age associated with high PHVM utilization while homelessness associated with reduced PHVM utilization.

FUTURE DIRECTIONS

Increased outreach to young adults, racial/ethnic minorities, and the unhoused is needed to identify barriers impacting use, which are hypothesized to include poor awareness of this resource, transportation issues, and stigma.

DISCLOSURES

Authors declare no conflicts of interest.

ACKNOWLEDGEMENTS

Resources

- Overall Design Recommendations:
  - https://biorender.com/blog/top-5-tips-for-designing-a-scientific-poster
  - https://guides.nyu.edu/posters
  - http://www.personal.psu.edu/drs18/postershow/
- Specific Design Tools:
  - Icons: https://thenounproject.com
  - Free Stock Photos: https://unsplash.com/
  - Color Palette Picker (if you don't want to use ASAM's): https://coolors.co/
  - QR Code Generator: https://www.qr-code-generator.com/
- Printing (ASAM has not independently verified the quality of these printers)
  - https://www.posterpresentations.com/
  - https://scientificposterprinting.com/
  - https://www.uprinting.com/large-format-posters-printing.html
  - https://www.makesigns.com/products/scientific-posters
  - https://www.megaprint.com/research-posters.php