



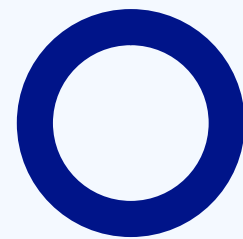
IDAHO DEPARTMENT OF
HEALTH & WELFARE
DIVISION OF PUBLIC HEALTH



Harm Reduction
Vending Pilot
Boise, Idaho

Evaluation Report

2022



Executive Summary

Harm Reduction Vending Machine Evaluation

Background

Idaho implemented a harm reduction vending machine pilot at a Boise Opioid Treatment Program (OTP) in July 2021. A harm reduction vending machine is an efficient and cost-effective syringe service program (SSP) model that has been shown to reach individuals not previously connected to harm reduction services. A harm reduction vending machine operates like a coin-operated soda vending machine, but instead stocks harm reduction supplies such as naloxone (an opioid overdose reversal medication), sharps containers, sterile syringes, HIV-home tests, and wound care kits. The Idaho Department of Health and Welfare's (DHW) Syringe Exchange Program collaborated with the Idaho Harm Reduction Project and the Center for Behavioral Health to design, implement, and evaluate this pilot.

Methods

The pilot period was July 1, 2021 to June 30, 2022. Pilot goals and objectives were measured using vending machine internal software and participant self-reported overdose reversals. A participant survey was conducted to further understand successes, challenges, and develop community-driven recommendations.



KEY FINDINGS

1. Reduced drug-overdose mortality
2. Promoted engagement and retention in ongoing SUD treatment
3. Provided a connection to services addressing social determinants of health

Outcomes

During the pilot period, 54 unique participants accessed the vending machine. Of those 54 participants, 23 responded to the participant survey (43% response rate). The majority (78%) of survey respondents had never used a SSP before accessing the vending machine. The vending machine was most impactful in reducing opioid-related overdose mortality, saving 123 lives with naloxone. For every three kits of naloxone distributed, at least one life was saved; a proportion higher than any other organization distributing naloxone in Idaho. Additionally, the vending machine increased participant engagement in ongoing substance use disorder treatment to 78%; with a 100% retention rate from baseline. The vending machine also facilitated connection to wrap-around services addressing social determinants of health for 52% of participants. In a OTP setting the vending machine was not an effective tool to significantly increase community sterile syringe coverage rates or HIV testing.

Conclusion

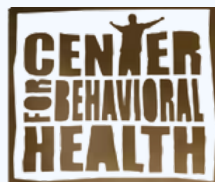
Idaho's first harm reduction vending machine located at a Boise OTP engaged Idahoans in harm reduction and recovery services. This evaluation suggests that a vending machine may be an effective way to distribute naloxone and reduce opioid-related overdose mortality. This SSP model may be especially useful in Idaho counties or settings serving people most vulnerable to opioid-related overdose.

Background

Syringe service programs are an evidence-based public health intervention that play an important role in preventing infectious disease consequences of injection drug use, reducing drug overdose mortality, promoting recovery, and addressing social determinants of health (CDC, NGA, RWJF). Syringe exchanges were authorized in Idaho in 2019 by the Syringe and Needle Exchange Act ([Idaho Code Title 37, Chapter 34](#)). In Idaho, syringe exchanges are community-based and offer comprehensive harm reduction services to individuals who use drugs. Idaho Syringe Service Programs (SSP) safely dispose of used syringes, provide access to sterile syringes, educate on drug overdose prevention, distribute naloxone, screen for HIV and viral hepatitis, and provide basic wound care. Idaho SSPs also offer connection to substance use disorder (SUD) treatment, mental health, and social service providers. In 2020, Idaho SSPs reported that they were serving only 527 (11%) of the estimated 4,800 Idahoans who are injecting drugs (DHW internal data). To adequately reach Idahoans who are injecting drugs and engage them in services, the Idaho Department of Health and Welfare (DHW) Syringe Exchange Program is exploring ideas to expand SSP access through innovative service models.

A harm reduction vending machine is a SSP service model that has been employed in Europe and Australia for decades ([Obadia, Duplessy, White](#)). A harm reduction vending machine operates like a coin-operated soda vending machine, but instead stocks harm reduction supplies similar to what would be available at a traditional SSP. A vending machine is an efficient and cost-effective SSP service model that can serve more people in a shorter amount of time, is more accessible throughout the day to meet individual needs, and requires less staff time to manage. The literature shows that harm reduction vending machines are effective at engaging young drug users who are not previously engaged in harm reduction and recovery services, increasing community sterile syringe coverage, and reducing needle sharing behavior ([Islam](#)). Harm reduction vending machines were first implemented in the U.S. in Nevada in 2016 ([NASTAD](#)). Studies are increasingly showing that harm reduction vending machines can increase naloxone accessibility and reduce fatal overdose rates ([Allen, Arendt, Wagner](#)). Due to this evidence, SAMHSA has listed harm reduction vending machines as an allowable activity in the State Opioid Response grant CFDA 93.788 ([SAMHSA](#)). As a leader in the U.S., Southern Nevada Health District (SNHD) and Trac-B Syringe Exchange host a monthly Vending Machine Learning Collaborative to provide technical assistance to public health officials. As of this report, 33 states have received technical assistance and are exploring harm reduction vending machine implementation at local health departments or community-based organizations.

Pilot Partners





Pilot Design

In 2020, DHW's Syringe Exchange Program began exploring opportunities to pilot a harm reduction vending machine as a innovative initiative to expand access to harm reduction and recovery services. Pilot partners collaborated to identify goals, design and implement the pilot plan, monitor logistics, and conduct an evaluation. Pilot partners met monthly to review evaluation outcomes, share successes, and workshop challenges.

Funding & Cost

This pilot was funded using DHW's HIV, STD, & Hepatitis Section program funding and Substance Use and Mental Health Services Administration (SAMHSA) State Opioid Response II (SOR II) grant funding. Existing DHW subgrants were amended to add funding for pilot partners who are already funded to operate a SSP or provide SUD treatment. Funding provided through subgrants allowed for purchase of the vending machine (\$10,000), purchase of harm reduction supplies (\$18,000), and personnel time (\$25,000).

Partner Roles

- **DHW Syringe Exchange Program** in the Division of Public Health coordinated pilot partner collaboration, developed a pilot plan, monitored subgrant activities and spending, supported pilot logistics, and tracked evaluation metrics.
- **Idaho Harm Reduction Project (IHRP)** operates Idaho's largest SSP and provides wrap around services to meet the social, behavioral, and healthcare needs of people who use drugs. Using DHW provided subgrant funding, IHRP purchased the vending machine from Intelligent Dispensing Solutions, stocked the machine with harm reduction supplies, maintained machine warranty, and provided harm reduction training to Center for Behavioral Health staff.
- **Center for Behavioral Health (CBH)** is a SUD treatment provider that operates Opioid Treatment Programs (OTP) at three Idaho locations (Boise, Meridian, and Coeur d'Alene). CBH's Boise location serves about 150 individuals. CBH has experience hosting a harm reduction vending machine at two of their Las Vegas, NV locations in partnership with Trac-B Syringe Exchange. In 2021, CBH signed a MOU with IHRP outlining their role and responsibilities as host of the vending machine including: installation, participant enrollment, safe sharps disposal, and vending machine inventory management. In 2022, CBH was sold to Behavioral Health Group.
- **Trac-B Syringe Exchange** is a SSP in Nevada operating a network of harm reduction vending machines who provided technical assistance for this pilot.
- **DHW Idaho's Response to the Opioid Crisis** in the Division of Behavioral Health provided subgrant funding to CBH to hire a recovery coach that supported vending machine implementation, participant enrollment, and engagement.

Background on Opioid Treatment Programs

CBH is one of two Opioid Treatment Programs (OTP) in Idaho that is authorized to store and provide daily doses of methadone to patients for treatment of opioid use disorder. OTPs are highly regulated by the federal government as detailed in the [Certification of Opioid Treatment Programs, 42 Code of Federal Regulations \(CFR\) 8](#). The CFR states that OTPs must successfully complete the following requirements to operate: be both certified and accredited; licensed by the state in which they operate; and registered with the Drug Enforcement Administration (DEA) through their local DEA office. Regulations also state that patients must receive behavioral health counseling, other behavioral health therapies, and counseling on the prevention of HIV and other infectious diseases ([SAMHSA](#)).



Pilot Design

(continued)

Machine's Physical Location

The vending machine is located inside CBH's Boise office in a private room located around the corner from the lobby. Since CBH is an OTP bound by 42 CFR 8 requirements, the vending machine is only accessible with a staff escort and participant enrollment is required.

Participant Enrollment

To use the vending machine participants must enroll with CBH staff and obtain a access code. An access code is created from gathering following minimum data: first two letters of a first name, last two letters of a last name, and an eight digit date of birth. No other demographic or identifying information is gathered in accordance with SSP operational best practices ([CDC](#)).

Participant Access

The vending machine is available during CBH's normal office hours Monday- Saturday 5am-12:30pm. Participants must request access to vending machine at the front desk and are then escorted by CBH staff to the vending machine. Participants enter their access code into a keypad on the face of the machine and can select the harm reduction supplies they need at no cost to the participant. The item type and quantity dispensed are tracked using an integrated vending machine software connected to a secure cloud-based dashboard. CBH staff are trained by IHRP to provide verbal and written education to those accessing sterile syringes required by set forth in the Syringe and Needle Exchange Act (Idaho Code Title 37, Chapter 34). A recovery coach or the office manager are available on-demand to meet with vending machine participants and provide additional infection or overdose education, recovery support, or coordinate referrals (e.g., more complex medical needs, a bed at an emergency shelter, food pantry access).

Harm Reduction Supplies

The vending machine was stocked with the following harm reduction supplies:

- sharps containers
- sterile syringes
- safe injection kits
- naloxone (3 options: 4mg injectable naloxone, 4mg Narcan nasal spray, 8mg Kloxxado nasal spray)
- wound care kits (two sizes: small and large)
- rapid HIV home test kit
- condoms and lube
- tampons
- menstrual pads
- pregnancy tests
- hygiene kits (soap, shampoo, toothbrush, deodorant)
- CPR face shields
- facemasks and hand sanitizer

A menu of harm reduction supplies and kit contents are posted on the front of vending machine. Participants are not limited on the number of supplies they can request or the frequency that they can access the vending machine.



Pilot Design

(continued)

Compliance with Idaho's Syringe and Needle Exchange Act

CBH is able to maintain compliance with the Syringe and Needle Exchange Act ([Idaho Code Title 37, Chapter 34](#)) when participants access the vending machine as described below:

Requirement 2.a. Facilitate the exchange of used syringes or needles for new syringes or needles in sealed sterile packaging.

- The number of new sterile syringes provided through the vending machine and the number of used syringes returned was near 1:1 (return ratio 1.03) during the pilot period.
- CBH staff facilitate return and safe disposal of used syringes by encouraging use of a personal sharps container obtained from the vending machine and collecting returns in a large 18-gallon sharps container located next to the vending machine. CBH contracts with a licensed medical waste company to safely dispose of used sharps returned by participants in accordance with state and federal regulations.

Requirement 2.b. Ensure that the recipient of a new syringe or needle is given verbal and written instruction on:

2.b.i. Methods for preventing the transmission of blood-borne diseases, including hepatitis C and human immunodeficiency virus.

- Verbal education is provided by CBH staff escorting participants to the vending machine.
- Written education is provided in the form of brochures and pocket cards added to some kits and also available on a bookshelf next to the vending machine.
- Education provided is specific to the needs of each participant, but may include recommendations to use a sterile syringe for each injection, strategies to avoid sharing injection drug equipment, safer injection practices to reduce tissue damage and infection, instruction for self-wound care, methods to prevent sexually transmitted infections, medications to prevent HIV (HIV Pre-Exposure Prophylaxis), and a list of HIV and hepatitis C treatment providers.

2.b.ii. Options for obtaining services for the treatment of a substance use disorder; testing for a blood-borne disease; and an opioid antagonist pursuant to section 54-1733B, Idaho Code.

- Verbal education about available services are provided by CBH staff escorting participants to the vending machine. Sterile syringes, SUD treatment, testing for HIV and viral hepatitis, and naloxone (an opioid antagonist) are all available onsite at CBH.
- Written education about available services are provided using a DHW Idaho Response to Opioid Crisis (IROC) pocket card that provides phone numbers for emergency medical services (911), crisis and suicide prevention lifelines (988), an opioid antagonist (through Idaho Harm Reduction Project), and SUD treatment services (211 or findtreatment.gov).

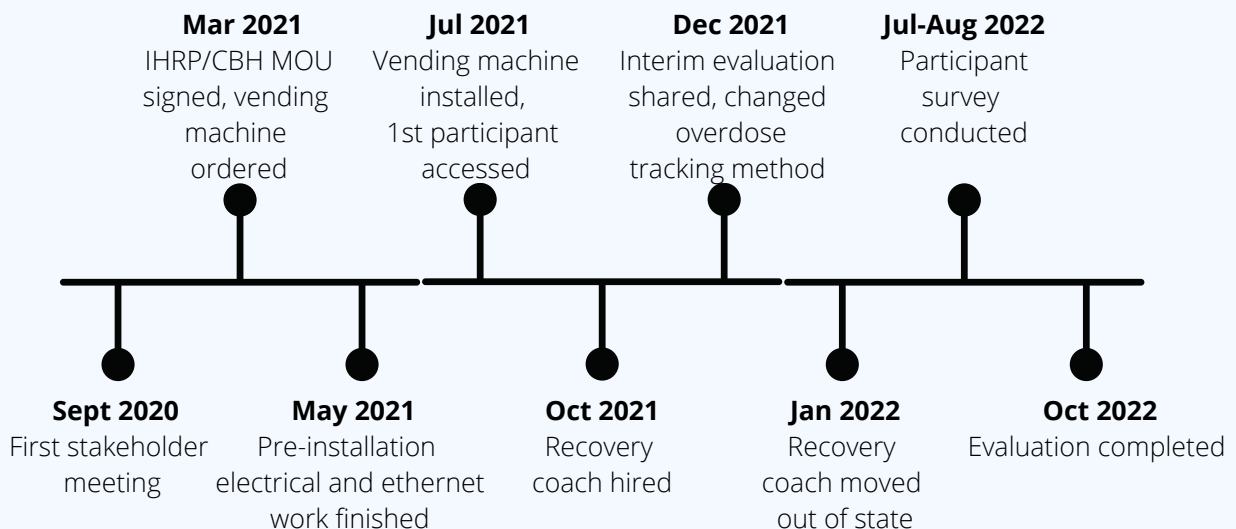


Goals

The overall goals of this harm reduction vending machine pilot were to:

- 1** Increase the number of people accessing SSPs.
- 2** Increase community sterile syringe coverage to prevent the spread of HIV and viral hepatitis associated with sharing injection drug equipment.
- 3** Increase the number of people who have been tested for HIV & know their status.
- 4** Increase access to naloxone for individuals at risk of an opioid-related overdose, their family members, or their friends.
- 5** Increase the number of people accessing recovery services, including counseling or substance use disorder (SUD) treatment.
- 6** Demonstrate the connection a harm reduction vending machine can provide to other services addressing social determinants of health.

Timeline






Methods & Outcomes

Methods

An objective-based evaluation was used to determine if short-term goals were reached during the pilot period (July 1, 2021 - June 30, 2022). Descriptive quantitative and qualitative outcomes were measured using vending machine internal software, participant self-reported overdose reversal data, and participant survey data. A point-in-time participant survey was conducted July 18 - August 20, 2022 to learn more about successes, opportunities for improvement, measure pilot goal 5 & 6, and develop community-driven recommendations. The survey was anonymous and self-administered by vending participants. When access the vending machine, participants were encouraged by CBH staff to complete a paper survey or electronic survey. The electronic survey could be accessed through a QR code posted on the vending machine that linked to a Google survey form.




Outcomes by Pilot Goal

Goal	TARGET	Outcomes	Target Met?
1. Increase the number of people who are accessing SSPs.	50 people will access the vending machine, which is a SSP service model	<ul style="list-style-type: none"> • 54 unique participants • Increased SSP access by 1.1% statewide (54/988) 	
2. Increase community sterile syringe coverage to prevent the spread of HIV and viral hepatitis associated with sharing injection drug equipment.	At least 80% sterile syringe coverage is needed to prevent the spread of HIV and viral hepatitis (<u>Allen</u>)	<ul style="list-style-type: none"> • 59% (32/54) of participants requested sterile syringes • 5,650 sterile syringes provided & 5,480 returned (return ratio 1.03) • Syringe coverage rate was 18% (5,650 syringes provided / 30,720 syringes expected to reach 80% sterile syringe coverage) 	
3. Increase the number of people who have been tested for HIV & know their status.	50% of participants will be tested for HIV	<ul style="list-style-type: none"> • 15% (8/54) unique participants requested a HIV home test 	



Methods & Outcomes (continued)

Outcome by Pilot Goal

Goal	TARGET	Outcomes	Target Met?
4. Increase access to naloxone for individuals at risk of an opioid-related overdose, their family members, or their friends.	25 kits will be dispensed; Any life saved is a success	<ul style="list-style-type: none">• 318 naloxone kits dispensed• 123 overdose reversals reported• Every 3 naloxone kits dispense 1 life is saved	
5. Increase number of people accessing recovery services, including counseling or SUD treatment.	40% of participants will access a form of recovery	<ul style="list-style-type: none">• Ongoing SUD treatment was 52% (12/23) prior to accessing the vending machine and increased to 78% (18/23) at time of participant survey• Retention in ongoing SUD treatment was 100% (12/12) from baseline• 26% (6/23) met with a recovery coach	
6. Demonstrate the connection a harm reduction vending machine can provide to other services that address social determinants of health.	25% of participants will access other services	<ul style="list-style-type: none">• Overall 52% (12/23) accessed other services Connection by service type: <ul style="list-style-type: none">• 26% healthcare• 17% enroll Medicaid• 17% mental health• 13% used other SSP• 9% other social services	



Methods & Outcomes

(continued)

Participant Survey



23
PARTICIPANTS
responded
to the survey
(response rate 43%)

Prior to accessing the vending machine:

78% had **NEVER**
used an **SSP** before

Top 5 Benefits:

- Convenient location
- Staff are supportive
- Has needed harm reduction supplies
- Supplies are free
- It helps me take care of my friends and family who use drugs

Who are supplies for?



73% respondents
are getting supplies for
**themselves and
family or friends**

Opportunities for Improvement:

- Available different hours (CBH's current hours Monday-Saturday 5am-12:30pm)
- Add additional harm reduction supplies

Feelings when accessing the vending machine

Majority of respondents (>90%) agree :

- Services are confidential
- Feel supported by staff at CBH
- Their needs are being met
- Are not embarrassed or judged
- Do not feel pressured to seek SUD treatment or recovery
- Do not feel triggered to relapse

Should additional harm reduction vending machines be installed?



Suggested locations for additional vending machines include: shelters, airport hotels, medical clinics, & behavioral health providers.



Methods & Outcomes

(continued)

Participant Survey

What else do you want us to know about your experience with this vending machine?

"It is a good thing to see happening here in Idaho. When I first used here it seemed it was a sweep under the rug issue and now its being addressed and I am thankful that for myself and other."

"I think it's a great idea! Having something like this back in the heavy drug days (1990-2010) would have saved a ton of lives. Having a safe place to get clean needles is priceless, Good Job guys."

"It's nice to have access to safe supplies."

"It's totally safe and the Naloxone saved our life!"

"I'm really grateful and appreciate the vending machine."

"I'm glad you began offering this service and I feel services like this can greatly reduce risk to both ourselves and the community."

"Convenient and so helpful it being free is comforting so i can always come to it."

"I think its a positive thing."

Actions taken based on participant feedback:

- Shared participant survey results back with participants using a QR code that links to a Tableau dashboard.
- Removed less frequently used harm reduction supplies from the machine such as CPR face mask and small wound care kit.
- Added additional frequently used harm reduction supplies to the machine such as naloxone and sterile syringes.
- Provided an opportunity for participants to communicate ideas, needs, or other feedback regularly with IHRP using a comment box next to the vending machine.
- Explored opportunities to install another harm reduction vending machine that is available 24/7 or at participant suggested locations.

View full participant survey results [here](#).

Conclusions

Idaho's harm reduction vending machine pilot demonstrated that this model engages Idahoans using drugs in harm reduction and recovery services. Successes, challenges, and recommendations are summarized below.

Successes

- Provided harm reduction services to a population of people using drugs and their social network who were not previously connected to an SSP.
- Highly effective at getting naloxone to people who are at highest risk for overdose. At least 123 lives were saved using naloxone from this vending machine. For every three kits of naloxone distributed, at least one life was saved; a proportion higher than any other organization distributing naloxone in Idaho.
- Increased engagement in ongoing substance use disorder treatment to 78% at time of participant survey. Retention in ongoing SUD treatment was 100% from baseline.
- Facilitated connection for over half of participants to other physical health, mental health, and social services addressing social determinants of health.

Challenges

- Did not significantly increase community sterile syringe coverage. Syringe coverage rates were below the 80% recommended to prevent spread of HIV and viral hepatitis associated with injection drug use. Low syringe coverage rates could be due to reduced injection frequency over time as participants begin to receive therapeutic doses of medication for opioid use disorder (MOUD), preference for other drug consumption methods (e.g., smoking, oral, etc.), or sterile injection supplies are being used to inject other medications (e.g., insulin) and not drugs.
- Poor engagement in HIV home testing. Opportunities to engage this high-risk population in HIV prevention, testing, and care services should be explored to further prevent spread of HIV among people who use drugs.
- CBH had difficulty hiring and retaining a recovery coach to support the vending machine. Other CBH staff were able to assist participants accessing the vending machine and provide coaching, demonstrating that peers are well equipped to do this work and a recovery coach may not be necessary.

Recommendations

Idaho's first harm reduction vending machine located at a Boise OTP engaged Idahoans in harm reduction and recovery services. Based on the results of this evaluation, the following recommendations should be considered:

1. Explore implementation of additional harm reduction vending machines that primarily dispense naloxone in the following Idaho counties identified in a 2021 analysis as most vulnerable to opioid-related overdose: Bannock, Benewah, Canyon, Clark, Kootenai, Nez Perce, Payette, Shoshone (Internal report *Opioid Overdose Vulnerability in Idaho: A Mixed Methods Assessment January 2021*).
2. Explore opportunities to implement additional harm reduction vending machines that primarily dispense naloxone in settings serving individuals at high-risk for opioid-related overdose such as county jails or crisis centers.