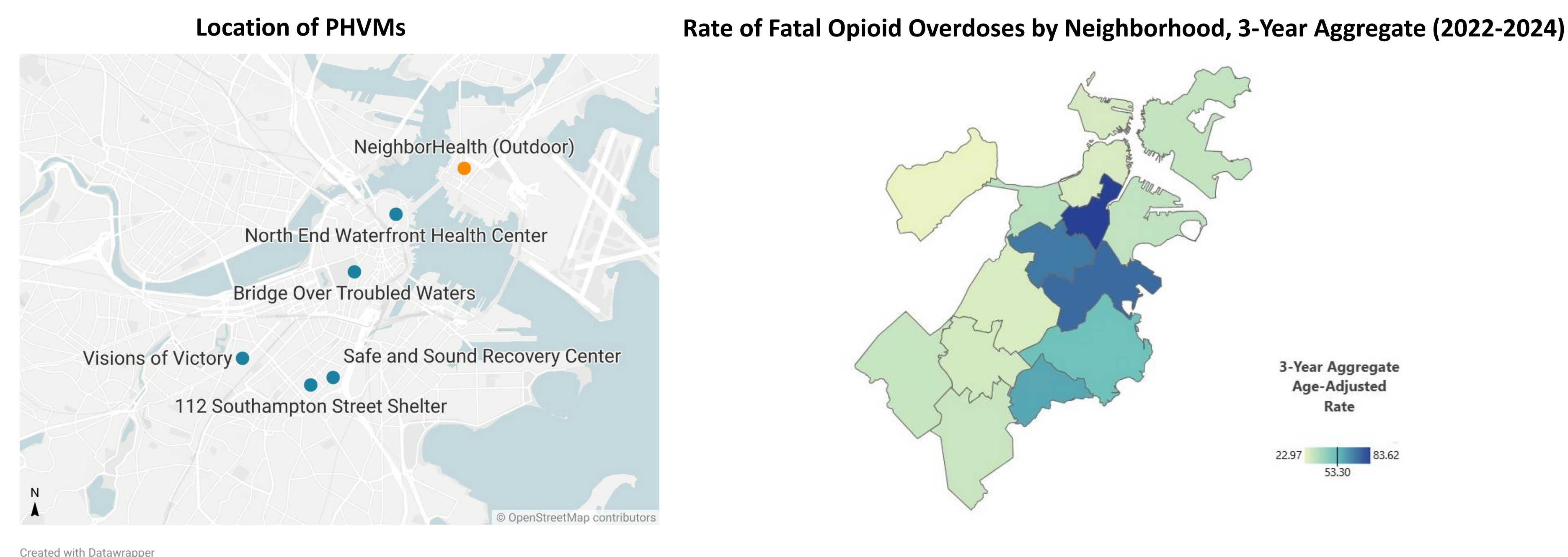


BACKGROUND

In 2024, 169 Boston residents died from opioid overdoses, with disproportionately high impacts among Black and Latinx communities. Systemic barriers limit access to naloxone and other overdose prevention supplies for these communities. Public health vending machines (PHVMs) are an innovative way to address barriers and improve access, reducing overdose risk and injection-related infections.

With funding from the Overdose Data to Action (OD2A) grant, the Boston Public Health Commission (BPHC) placed six PHVMs at shelters, community health centers, community-based organizations, and Health Department facilities. Five are located indoors, and one is Boston's first outdoor, 24/7-access PHVM, placed outside an emergency department. The Institute for Community Health (ICH) is Boston OD2A's evaluator.



METHODS

Data Collection

- All PHVMs were equipped with software that generated detailed reports on time of access, items taken, and the ID code that users were assigned at registration. Data reports were received and reviewed by BPHC prior to sharing with ICH for additional analysis. Reports included in this analysis range from September 1, 2024, through August 31, 2025.
- All five indoor vending machines required users to initially register for an ID code and were asked to provide demographic information. The outdoor vending machine did not require a unique code and users were not asked to complete a demographic questionnaire. Instead, they were asked to input their zip code to access the machine.

Analysis

- Using this data, ICH conducted a descriptive analysis of supply distribution; time of usage; machine use frequency; and user demographics such as race/ethnicity, gender, age, sexuality, primary area of residence, housing status, and experience with overdose. Analysis of data was conducted and reported on quarterly (Q1 = 9/24-11/24; Q2 = 12/24-2/25; Q3 = 3/25-5/25; Q4 = 6/25-8/25).

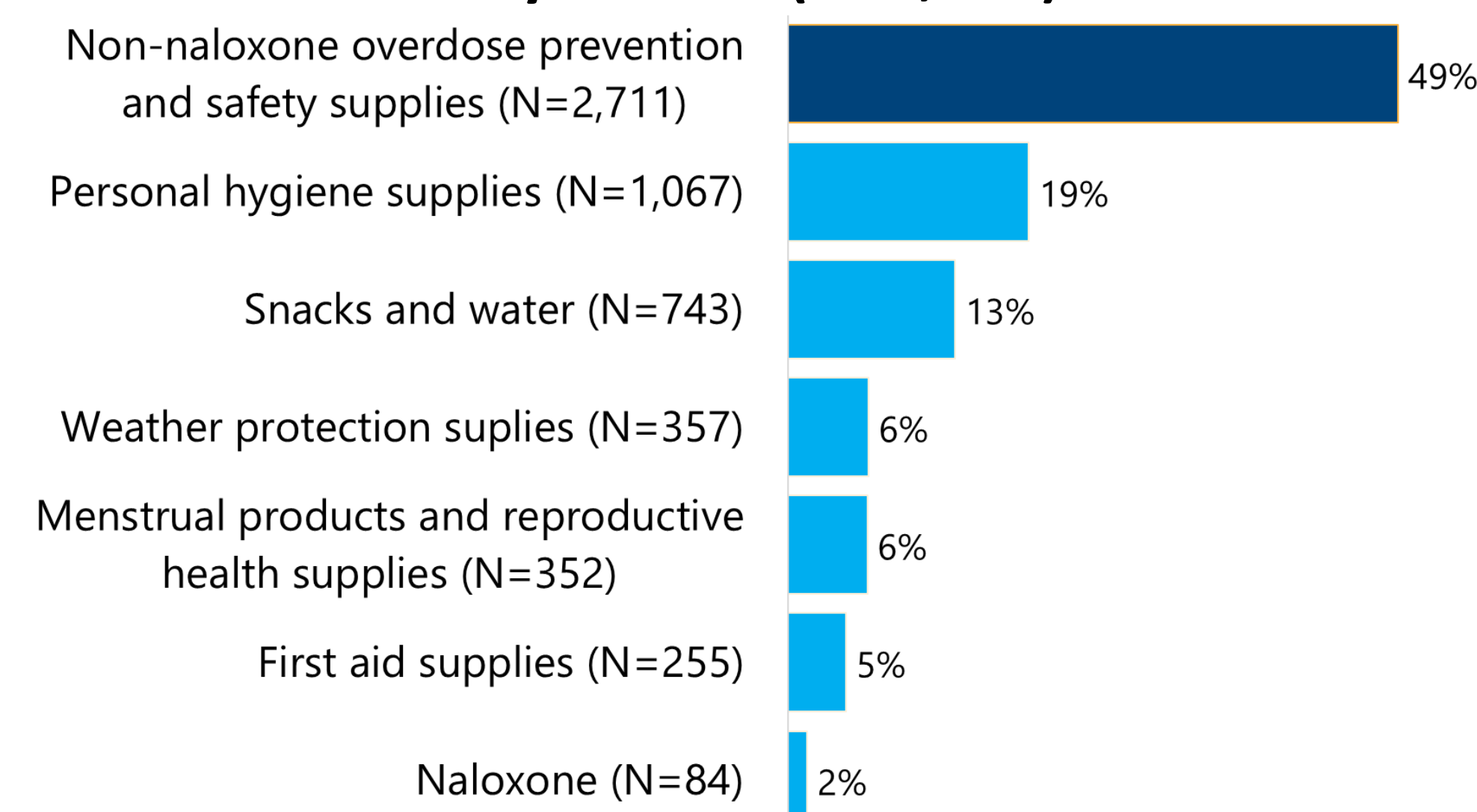
RESULTS

PHVM Implementation Metrics

6 PHVM active as of August 2025

- **Type:** Indoor (5), outdoor (1)
- **Location:** Health department (2), community-based organizations (2), and healthcare organizations (2)

Items Distributed by PHVMs (N=5,569)



Indoor PHVM Implementation Metrics

PHVM users and demographics

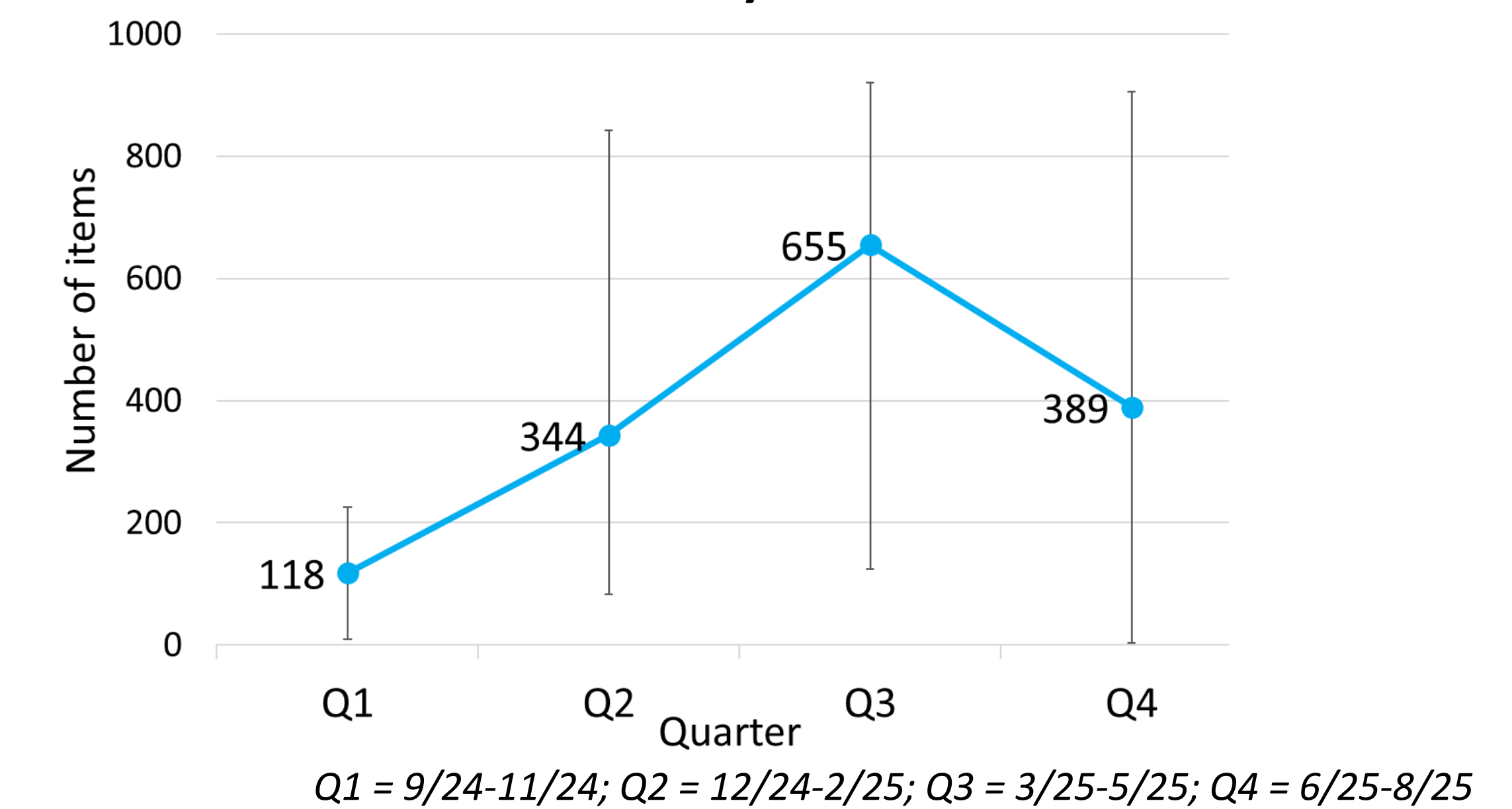
- **Reach:** Between September 2024 and August 2025, **180** individuals took at least one item from the indoor PHVM
- **Race:** 50% White, 20% Hispanic/Latinx, 15% Black/African American
- **Gender:** Users generally evenly split between men and women
- **Age:** 46% between 35-44 years old
- **Sexual orientation:** 80% straight (heterosexual)
- **Top five home neighborhoods:** South End, Jamaica Plain, outside of Boston, Roxbury, Dorchester

Indoor PHVM Implementation Metrics (Cont.)

PHVM user engagements

- Engagement: **82%** visited the indoor PHVMs more than once
- Large variations in usage across machines
 - Machine with maximum usage was active all four quarters and distributed 2,906 items
 - Machines that became active in Q4 have had limited to no usage so far

Average Number of Items Distributed by Indoor Machines



Outdoor PHVM Metrics

- The outdoor vending machine distributed 208 items. The most common type of items distributed were:
- Weather protection supplies (25%)
 - Personal hygiene supplies (24%)
 - Non-naloxone overdose prevention and safety supplies (14%)

DISCUSSION

The data collected demonstrates that after PHVMs became established and known in the community, they became a source for a broad variety of public health supplies in the communities where they were placed. The frequency of their use, including the diversity of supplies distributed, allowed the machines to meet a variety of different public health needs. User demographics demonstrate that the machines were reaching diverse populations, including many from communities at high risk of overdose. While there is less data on outdoor machine users, the outdoor PHVM can reach distinct populations that may be in high need of supplies.

The program is ongoing, and machine numbers and placement have shifted since August 2025. New machines are in process of being placed, and one existing machine has been moved and is currently out of service. Through the ongoing evaluation of the Boston OD2A project, ICH will continue to collect long term data about all active PHVMs placed in Boston to deepen our understanding of user and usage trends. We will also conduct a qualitative research project on PHVMs to better understand their impact on communities.

ACKNOWLEDGEMENTS

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