

NAPCRG 52nd Annual Meeting — Abstracts of Completed Research 2024.

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Title

Vending machines for harm reduction and community health: a systematic review

Priority 1 (Research Category)

Systematic review, meta-analysis, or scoping review

Presenters

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Abstract

Context: In response to the growing overdose epidemic, communities in US and Canada have started using vending machines (VMs) as a low-barrier method to provide harm reduction (HR) items to the community. These VMs are becoming popular and typically dispense naloxone, drug testing strips, and other items for co-occurring conditions.

Objective: To summarize and evaluate existing literature on VMs' ability to deliver HR and other health items.

Study Design, Analysis: Systematic literature review. For each eligible article, data was extracted and summarized on study design, goals, VM description, setting, location, target population, sample, results, outcome measures, and limitations.

Dataset: Embase, Cochrane, PubMed, and MEDLINE (searched from inception to November 29, 2023); references of eligible articles and prior reviews. HR organizations were also contacted to share relevant articles on HR-based VMs.

Population Studied: Individuals with substance use disorder or co-occurring conditions.

Intervention: VMs or automated dispensing machines dispensing HR and/or health items.

Outcome Measures: Feasibility, acceptability, reach, impact.

Results: Of the 43 eligible articles, few were based in North America (n=10). Most VMs served those who injected drugs (n=27) and dispensed syringes (n=21). Other items included HIV self-tests (n=6), condoms (n=6), naloxone (n=2), and nicotine gum (n=1). Feasibility was most commonly evaluated (n=34), with high demand for VM-dispensed items, especially after business hours. Compared to in-person outreach,

some VMs were able to provide more syringes and HIV self-tests. VMs were acceptable (n=20), regardless of item dispensed, and reached high-risk populations (n=14). Outcome measures for impact evaluation (n=16) varied on the dispensed item. Articles evaluating syringe-dispensing VMs' impact (n=7) noted decreased syringe sharing (n=4) and drug use (n=2), while those evaluating naloxone-dispensing VMs (n=2) reported fewer fatal overdoses.

Conclusions: VMs providing HR-related items are a promising community-based intervention to reach underserved populations and improve health outcomes. While HR-based VMs have been commonly studied and implemented, VMs could expand into other realms of community health, such as self-sampling kits for detection of cancer or sexually transmitted diseases. Future studies should utilize implementation science frameworks to develop and evaluate the VMs, with an emphasis on health outcomes.

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