Parallel Overdose and HIV Prevention Education in Detroit Inpatient Substance Use Disorder Programs: Impact on Perceived Vulnerability and Medication Interest

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BACKGROUND

- People with substance use disorders (SUD) face elevated HIV vulnerability, yet pre-exposure prophylaxis (PrEP) uptake remains suboptimal; nationally, fewer than one-third of individuals with indications for PrEP receive a prescription[1,2]
- Detroit reports an HIV diagnosis rate approximately five times higher than the Michigan state average, with disproportionate impact on Black residents and individuals with co-occurring substance use[3,4]
- Inpatient SUD treatment programs offer a unique opportunity to deliver targeted HIV prevention during periods of increased readiness for change

PURPOSE

To evaluate a dual intervention—brief overdose/HIV prevention education and universal PrEP screening—on vulnerability perception, medication interest, and PrEP engagement in inpatient SUD settings

METHODS

Setting: NP-led mobile clinic providing services within inpatient SUD treatment programs in Detroit
- Intervention: Brief (~10-minute) group education session presenting overdose prevention (naloxone) and HIV prevention (PrEP) in parallel
- Workflow: Implementation of a universal 2-question PrEP screening integrated into routine visits

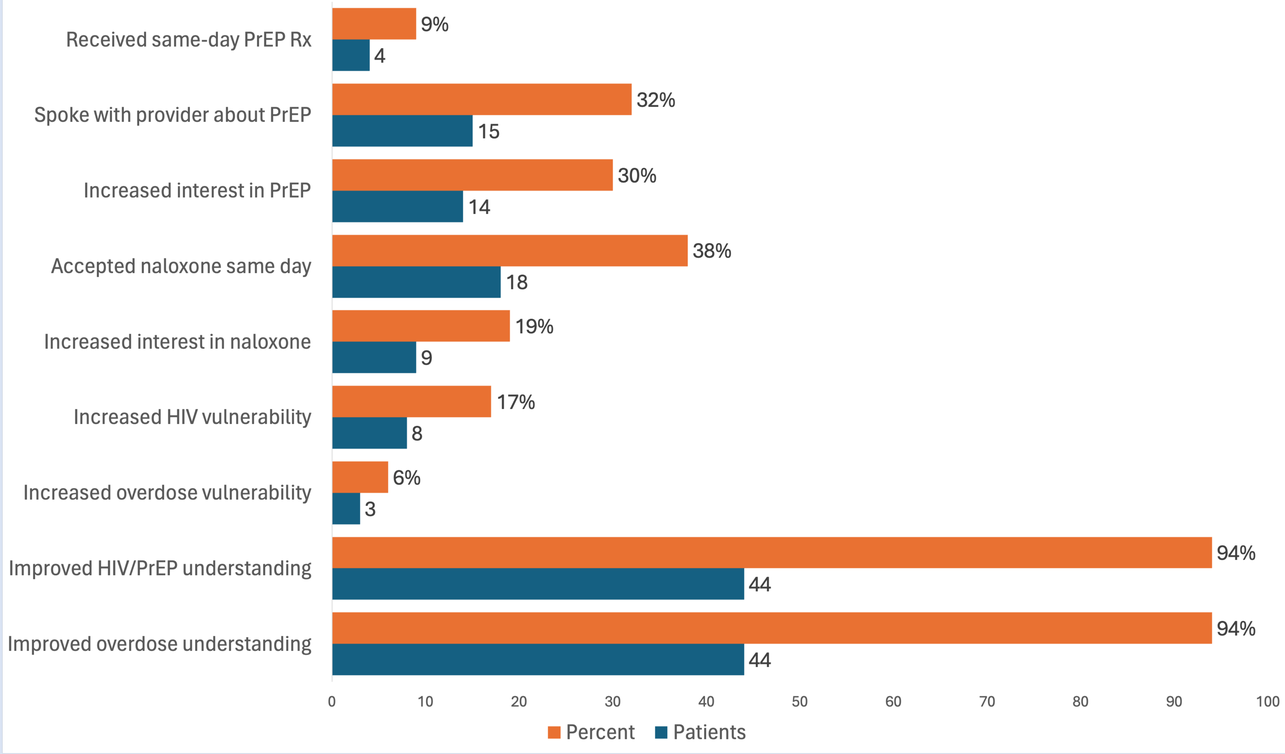
Measures:
- Education: Paired pre/post surveys assessing perceived vulnerability and medication interest; post-session survey assessing understanding
- Workflow: PrEP counseling and prescribing rates following implementation

Outcomes:
- Education-related: Immediate post-session engagement (provider discussion, same-day PrEP prescribing, improved understanding)
- Workflow-related: Change in PrEP prescribing rates

Sample:
- Education cohort: 47 participants completed paired pre/post surveys
- Workflow cohort: 213 patients received PrEP counseling following workflow implementation

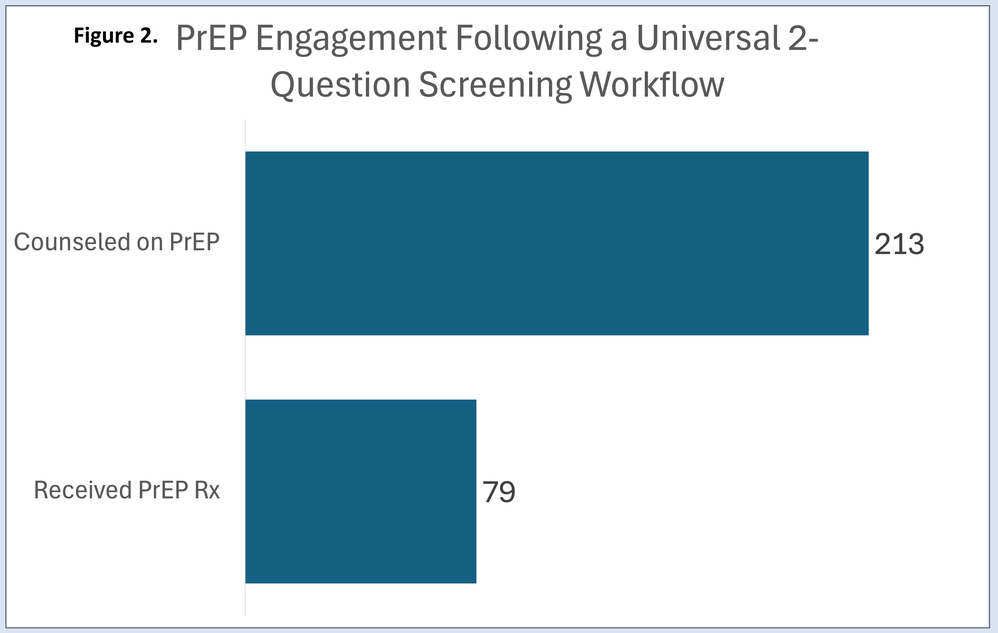
References:
1.Centers for Disease Control and Prevention (CDC). *HIV and substance use in the United States*. 2023.
2.Centers for Disease Control and Prevention (CDC). *Preexposure prophylaxis for the prevention of HIV infection—clinical practice guideline*. 2021.
3.Michigan Department of Health and Human Services (MDHHS). *Michigan HIV surveillance report*. 2023.
4. Detroit Health Department. *HIV surveillance and epidemiology report*. 2022.

Figure 1. Impact of Brief Overdose and HIV Prevention Education (n = 47)



Note. Percentages are based on paired pre/post surveys (n = 47) unless otherwise specified. Understanding outcomes reflect post-session self-report only. Naloxone distribution was limited by facility regulations despite participant interest. PrEP = HIV pre-exposure prophylaxis. Same-day PrEP prescribing was limited by rapid HIV test availability.

Figure 2. PrEP Engagement Following a Universal 2-Question Screening Workflow



37% of counseled patients received PrEP

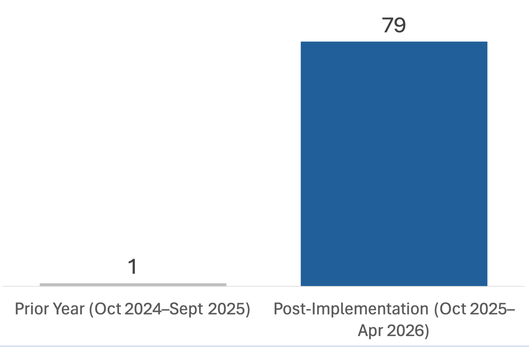
RESULTS

Education Outcomes (n=47): (Figure 1)
- **Knowledge:** 94% reported improved understanding of overdose and HIV/PrEP prevention
- **Perception:** Perceived HIV vulnerability increased in 17%; PrEP interest increased in 30%; naloxone interest increased in 19%
- **Behavior:** 32% participated in a same-day provider discussion; 4 participants (9%) received a same-day PrEP prescription; 38% received naloxone

Workflow Outcomes (n=213): (Figure 2)
- Following implementation of universal PrEP screening, 213 patients received PrEP counseling
- Implementation of a simple 2-question screening workflow increased PrEP prescribing from 1 prescription in the prior year to 79 in 6 months **(Figure 3)**

Note: Same-day PrEP initiation was limited by rapid HIV test availability; expansion of testing is planned to support immediate prescribing

Figure 3. PrEP Prescribing Before and After 2-Question Screening



DISCUSSION

- Brief, parallel overdose and HIV prevention education improves understanding and supports immediate engagement with prevention services among individuals in inpatient SUD treatment
- Inpatient SUD programs represent high-impact settings to deliver integrated harm reduction and HIV prevention interventions
- Implementation of a universal 2-question PrEP screening workflow is feasible and substantially increases PrEP prescribing in a mobile clinic setting
- Structural barriers, including limited rapid HIV testing and facility-level restrictions, impact same-day prevention delivery
- Simple, scalable workflows embedded into routine care can significantly expand access to HIV prevention in vulnerable populations

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