



Injections and Infections Understanding Harm Reduction in a Rural State

AMERSA Conference

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Disclosures

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Outline

- Background
- Study design
- Results
- Conclusions
- Discussion



Rural HeART

- **R**ural **H**arm reduction **A**ccess and **R**egional **T**rends
- Infectious disease and substance use disorder syndemic



IIDSA



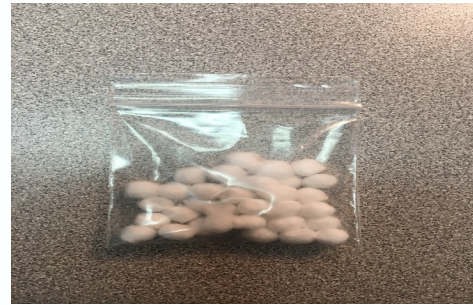
Infectious Diseases and Opioid Use Disorder (OUD)

March 2018

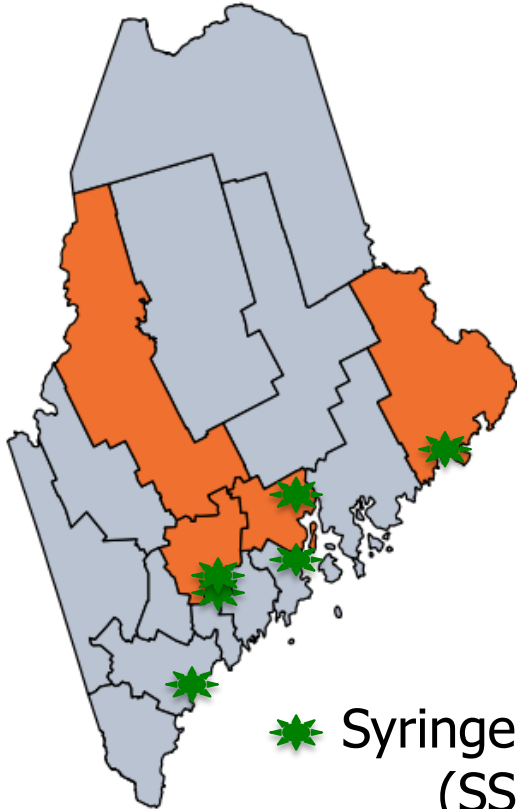
Infectious Diseases (ID) and HIV clinicians are increasingly concerned about the role of the opioid crisis in increasing the incidence of infectious diseases. Physicians report that up to 25-percent to 50 percent of their inpatient hospital consultations are for infections in patients who inject drugs. Failing to prevent and treat the infections and the addiction leads to increased deaths and to severe public health consequences.

Syringe Services Programs (SSPs)

- effectively counsel clients about safe injection techniques
- reduce the transmission of infections
- deliver overdose prevention/education, vaccinations
- facilitate referrals for medication treatment for opioid use disorder (MOUD)



Rural areas of Maine at risk



- 9th highest rates of acute HCV and HBV
- ~10% HIV cases injection drug use-related
- 9th highest rate of drug overdose deaths

 Syringe service programs (SSPs)

Specific Aims

- Primary Aim(s): characterize knowledge, attitudes, and practices regarding safe injection techniques
- Secondary Aim(s): identify the factors predicting syringe service program (SSP) utilization and uptake of other harm reduction services offered/facilitated by SSPs

Significance

- Provide new information about utilization of SSPs by people who inject drugs in Maine and identify potential barriers to these services
- Hypothesis: distance will be an important predictor of SSP utilization

Study design

- Participants admitted with IDU-associated infections
 - Four study sites:
 - Maine Medical Center, MaineGeneral Medical Center, Eastern Maine Medical Center, and Penobscot Bay Medical Center
 - Over an 18-month period, enrolled a convenience sample of 101 inpatients
 - Patient survey and EHR data collection
-

Inclusion/exclusion criteria

Inclusion criteria

- Age 18 – 65
- Electronic Health Record-reported or self-reported injection drug use
- English speaking
- Injection drug use-associated infection
- Ability to provide informed consent

Exclusion criteria

- Intubation
- Suicidal/homicidal ideation
- Showing signs of psychotic symptoms

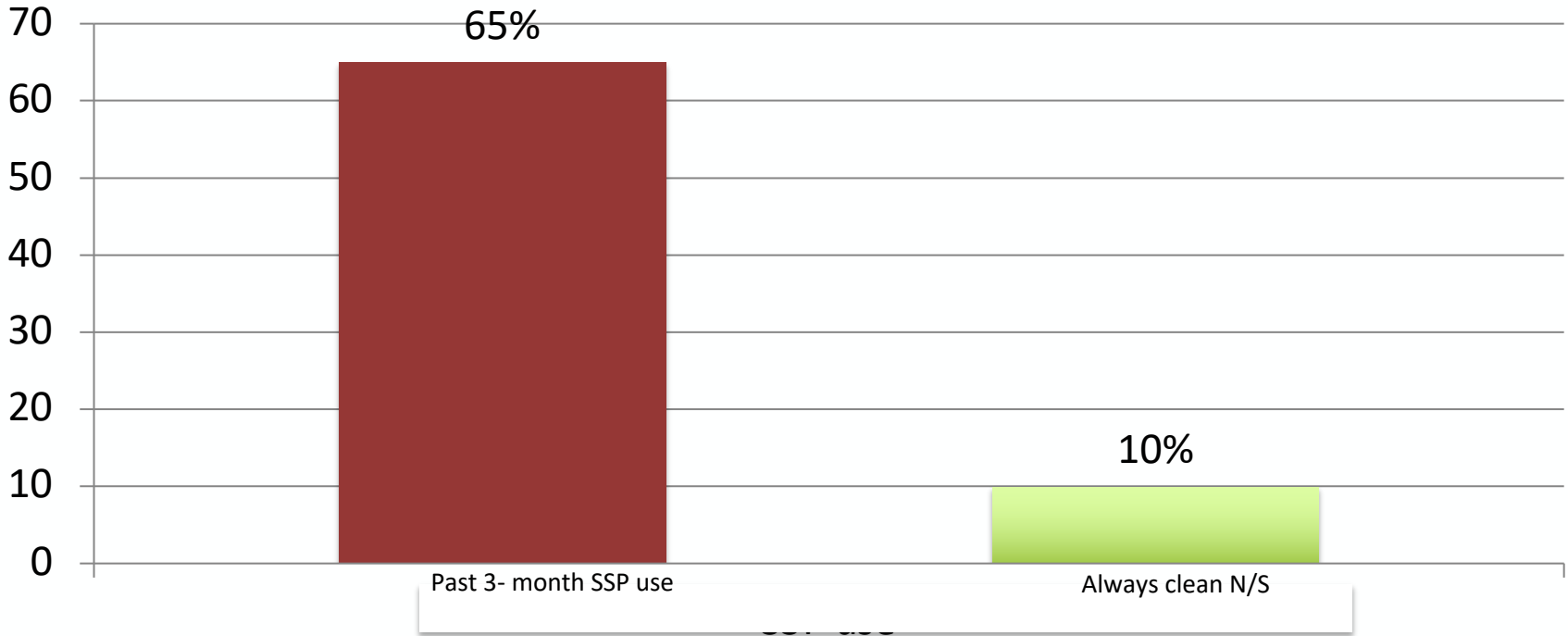
Statistical analysis

- Aim 1: Descriptive analysis of knowledge, attitudes and practices on safe injection techniques
 - Stratify demographics, health characteristics, above variables by SSP utilization
- Aim 2: Bivariate and multivariable logistic regression analyses to identify factors associated with primary outcome

Outcome Measures

- Primary outcome measures
 - SSP utilization
 - Uptake of clean needles/syringes
- Secondary outcome measures include uptake of:
 - Safe drug equipment
 - Naloxone
 - MOUD

Main outcomes: Past 3-month SSP utilization and clean needles/syringes (N/S)



Results: Demographics

	Overall n=101	SSP n=65	No SSP use n=36
Female	56 (55%)	41 (63%)	15 (42%)
Median age (SD)	35 (7)	34 (8)	26 (6)
Caucasian	96 (95%)	61 (94%)	35 (97%)
Insurance*			
Medicaid	59 (60%)	39 (61%)	20 (59%)
Medicare	6 (6%)	6 (9%)	0
Commercial	5 (5%)	2 (3%)	3 (9%)
Uninsured	25 (26%)	14 (22%)	11 (32%)
History of incarceration*	90 (89%)	61 (94%)	29 (81%)
Homeless*	46 (46%)	36 (55%)	10 (28%)
Small/Isolated rural*	18 (18%)	5 (7.7%)	13 (36%)
>10 miles from SSP*	57 (57%)	28 (44%)	29 (81%)

*Chi-square or Fisher exact test p<0.05

Young,
white
women;
>10 miles
from SSP
common

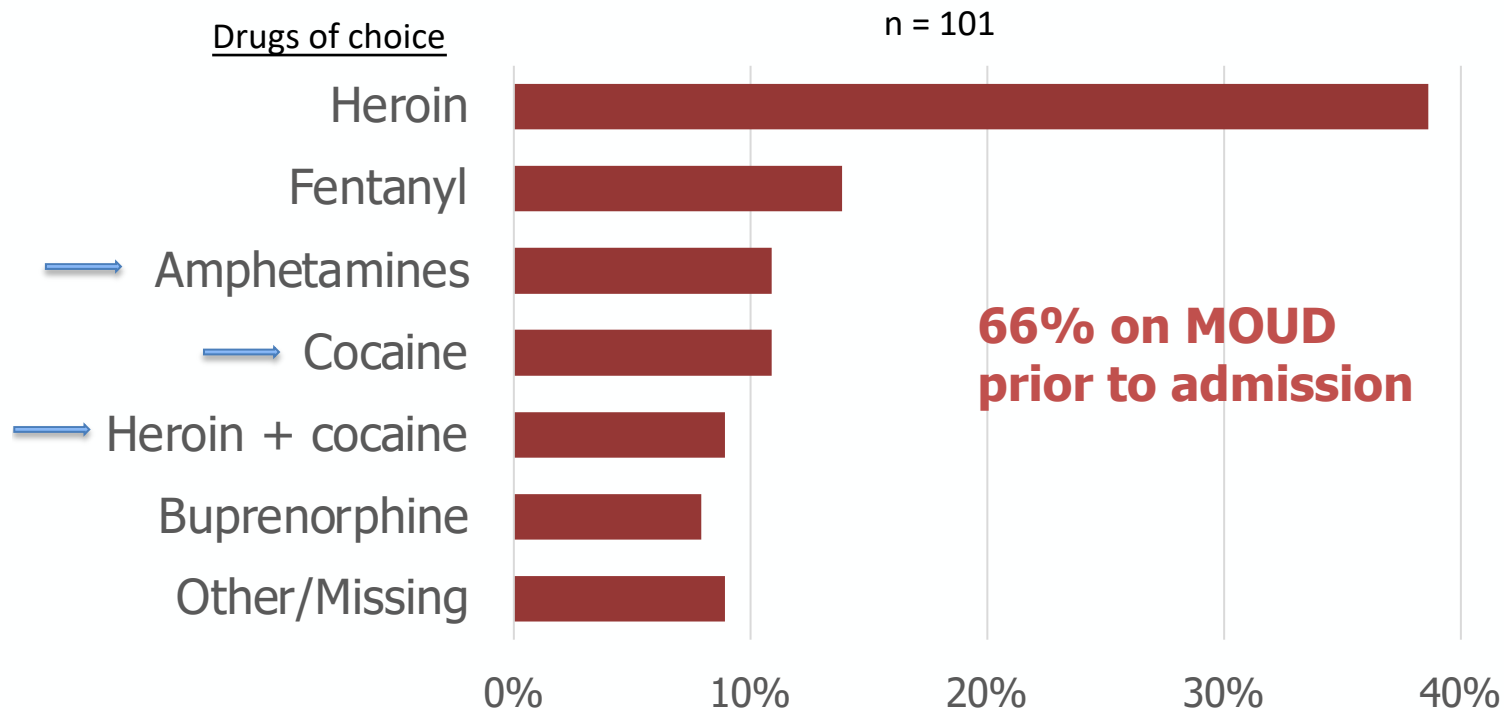
MOUD, naloxone, clean drug equipment uptake higher with SSP use

Table of Secondary Outcomes

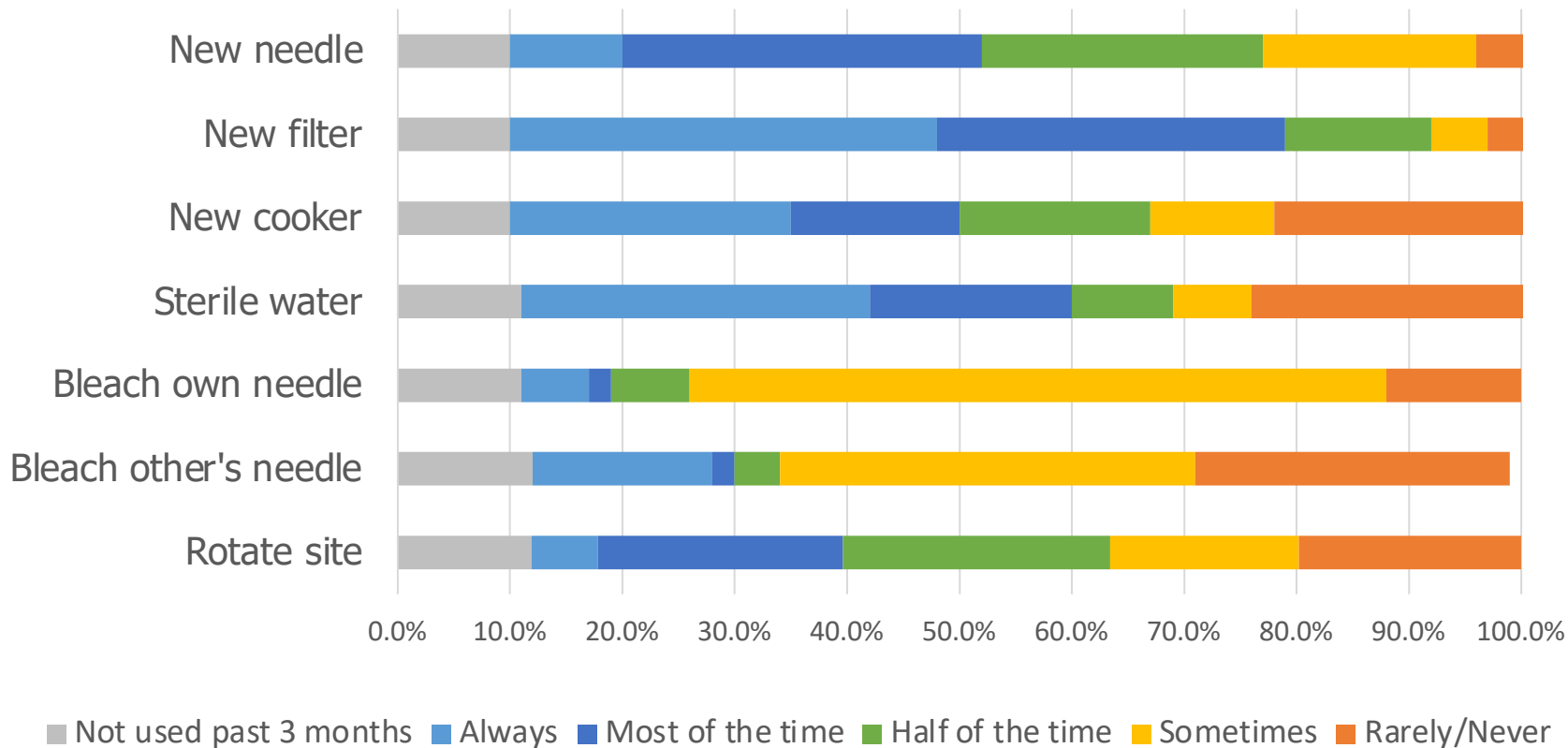
	Overall n=101	SSP n=65	No SSP use n=36
MOUD uptake	67 (66%)	46 (71%)	21 (58%)
Naloxone uptake	48 (48%)	36 (55%)	12 (33%)
Clean cookers/works			
• Always	5 (5%)	3 (4.6%)	2 (5.6%)
• Always or most of the time*	24 (24%)	20 (30%)	4 (11%)

*Chi-square test p<0.05

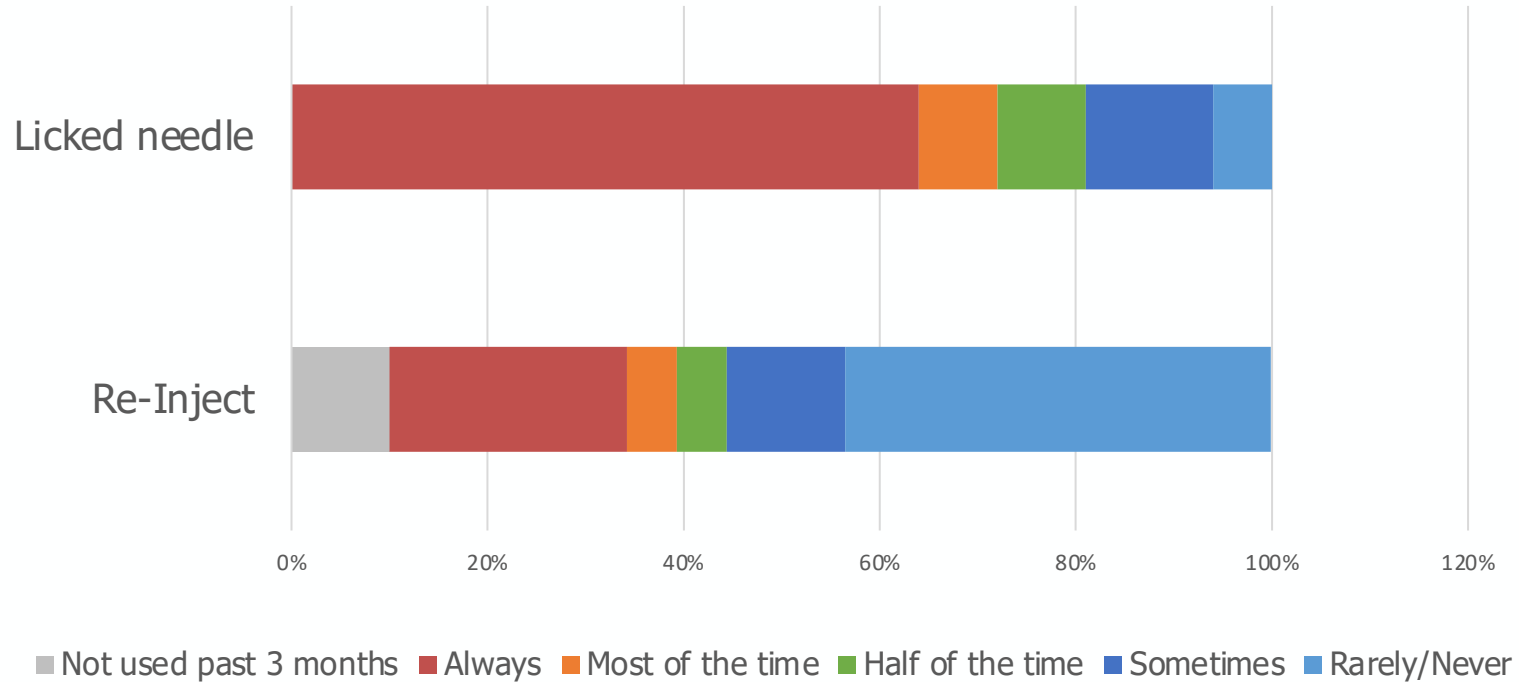
Injecting opioids, but also stimulants



Injection Practices

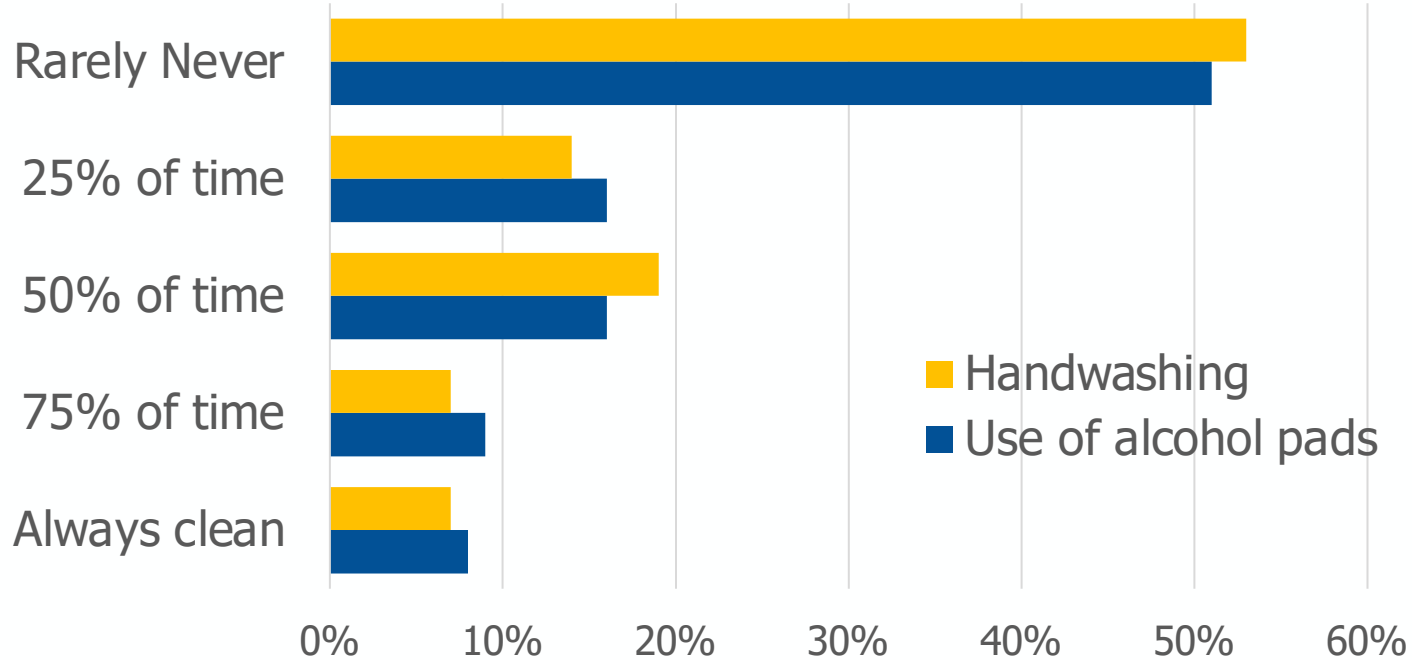


Injection Practices



Bacterial Infections Risk Scale (BIRSI)

- BIRSI-7 median score 4.0 (min 0, max 7)

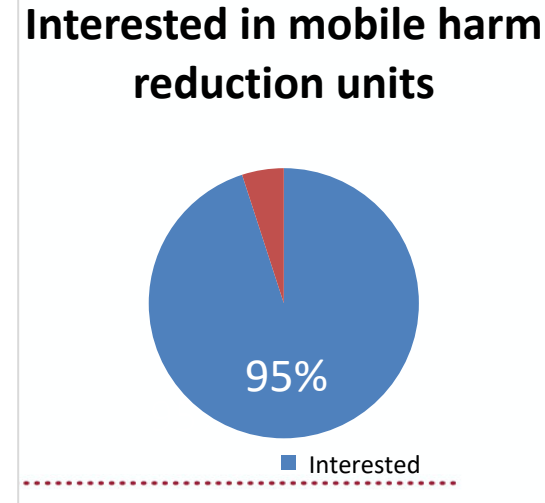
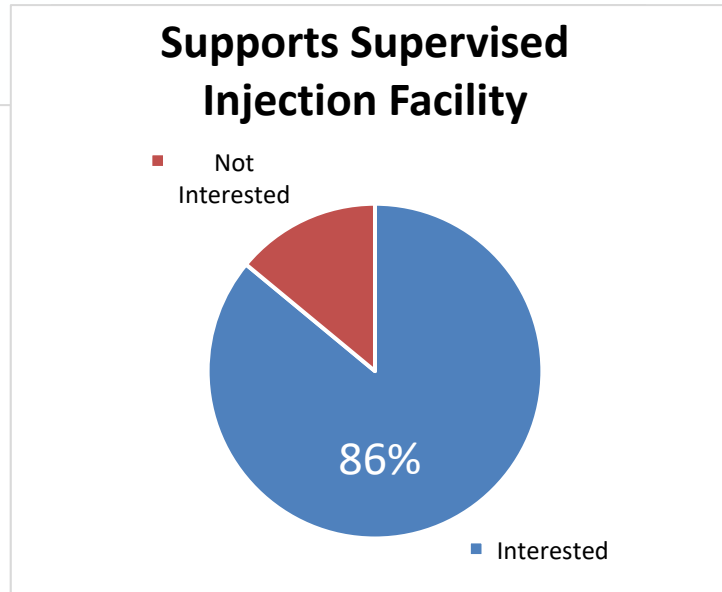
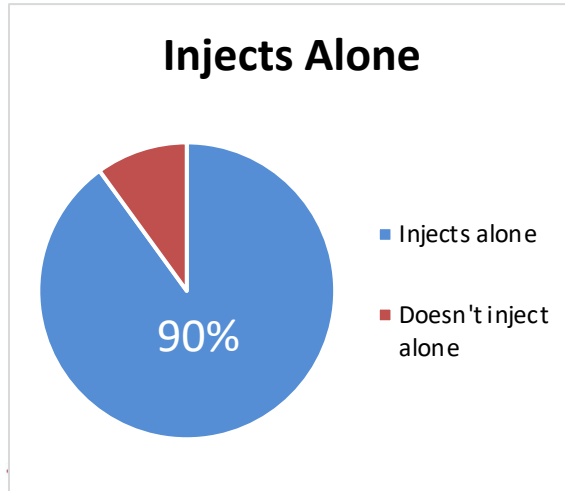


Syringe Acquisition

- Few participants used SSP regularly (36%), clean needles/syringes (10%), or clean cookers/filters (22%)
- 54% trouble accessing SSP
- 57% live more than 10 miles from SSP

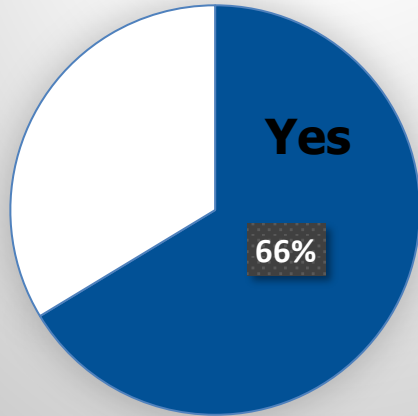
Overdose Risk and Prevention

- 48% participants naloxone uptake
 - Most received naloxone from SSP



Uptake of Medication for Opioid Use Disorder (MOUD)

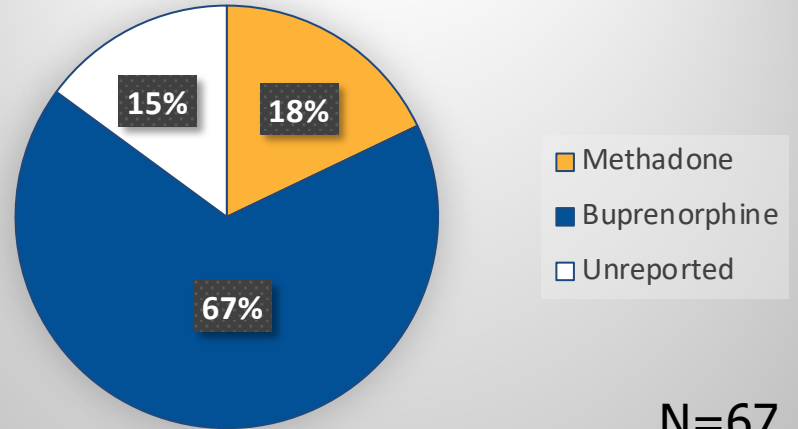
MOUD



N=101

Self reported:
Only 15 of the 67
patients who
used MOUD say
they had been
referred to
substance use
treatment.

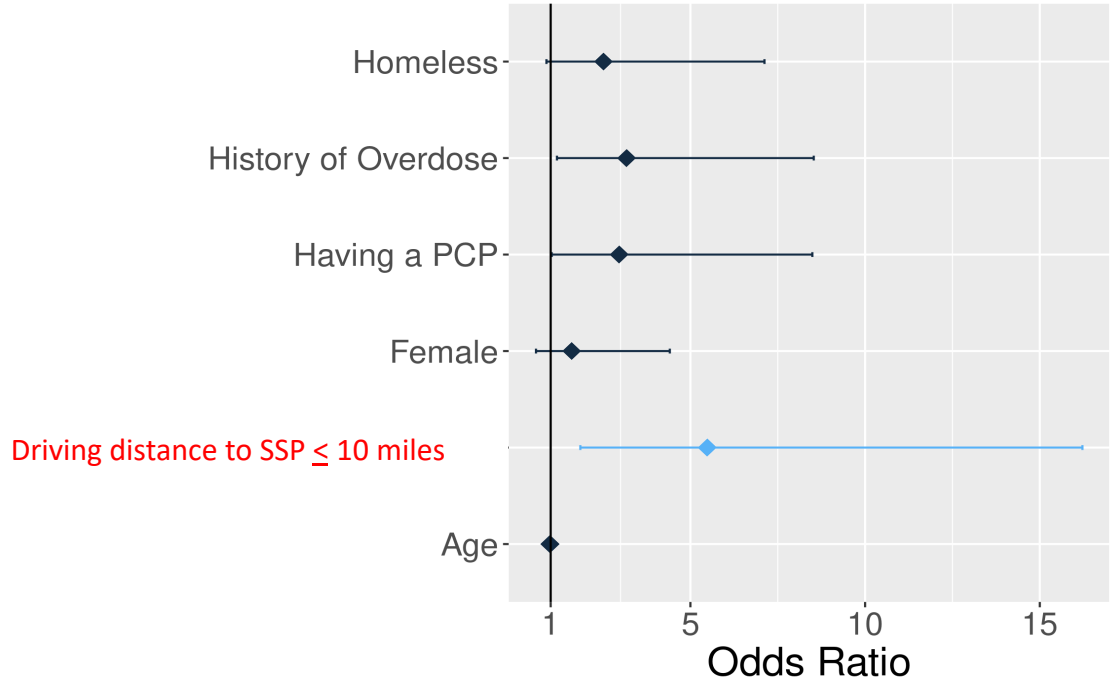
Type of MOUD



N=67

Multivariable regression

PWID were **5.5x** more likely to use SSP if they lived within 10 miles of an SSP controlling for sex, age, homelessness, history of overdose, and having a PCP.



Limitations

- Generalizability
 - Race
 - Rurality

Conclusions

- Unsafe injection practices common
 - Specific behaviors/techniques where more counseling could be helpful
- Lack of consistent SSP utilization
 - Distance is a significant barrier

Discussion

- Need to increase access to SSPs
 - Mobile harm reduction units, especially in rural areas
 - Relaxed policies (i.e. eliminate one-for-one needle exchange)
- Consideration of supervised injection facilities



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Thanks!

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