



The Sharing of Needles and/or Drug Injection Preparatory Equipment Among People Who Inject Drugs: A Systematic Review, United States, 1988-2019 (Preliminary Report)

Thomas Salek, M.P.H

Ph.D. Candidate,

Epidemiology Program, Office of Public Health Studies; Minority Health Research Training (MHRT) Program,
Department of Tropical Medicine, Medical Microbiology and Pharmacology, University of Hawai'i at Manoa, Honolulu, Hawaii



INTRODUCTION

- Injection drug use is a significant public health concern with the multi-person usage of drug injection equipment increasing the risk of bacterial, fungal, and viral infections
- Documenting the characteristics associated with needle and equipment sharing among people who inject drugs has important implications for monitoring drug-related trends and providing services
- Needle exchange programs were introduced in the US in 1988, and previous reviews on sharing and injection risk behaviors have been restrictive in either scope, population, interest, and/or context (PICO)

OBJECTIVE

The present study documents and aggregates existing literature on reports of needle and/or drug injection equipment sharing behaviors, as well as other injection-related HIV/HCV risk behavior in the United States in the era of needle exchange programs (i.e., 1988 to 2019).

METHODS

To be included in the review, eligible sources must:

- be published between January 1988 and December 2019,
- be written in English,
- be limited geographically to the United States, and
- include people aged 18 years or older
- report on one or more of the **10 prespecified data items and outcomes** (see **results**)

Systematic review methodology and expanded PICO approach were conducted.

Eligible sources were collected from MEDLINE® Ovid, Web of Science, ERIC, PsycINFO, Google Scholar, and the Cumulative Index to Nursing and Allied Health Literature (CINAHL).

Additional eligible grey literature were incorporated, including dissertations and theses, as well as an online survey of syringe exchange programs participating in the North American Syringe Exchange Network (NASEN).

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This preliminary report catalogued data from 289 publications on syringe sharing in the US since the establishment of syringe exchange programs in 1988

RESULTS

2,486 publications qualified for full review, out of a total 9,925 examined. Of these, **n=354** *unique* research studies from 39 U.S. states were eligible for inclusion (**Table 1**).

Preliminary findings for the **10 prespecified data items and outcomes** include:

- | | |
|---|--|
| 1) syringe sharing (n=289) | 6) sharing partner (n=35) |
| 2) non-syringe drug injection equipment sharing (n=146) | 7) injection partner (n=41) |
| 3) syringe cleaning practices (n=84) | 8) shooting gallery attendance (n=104) |
| 4) syringe-mediated drug sharing (n=69) | 9) HIV/HCV serosorting (n=8) |
| 5) speedball and/or goofball injection (n=136) | 10) syringe reuse (n=30) |

These findings represent **29.3%** of the total data screening and extraction processes to be done. The NASEN survey is undergoing final revision before distribution.

RESULTS

Table 1. Summary of Total Sources Included in Review.

Data Item and Outcome	Number of reports (respective percentage)
Total studies included in review	354
Studies Reporting Paraphernalia Sharing	
Direct sharing: syringe sharing (aggregated)	289/354 (82%)
Unspecified syringe	123/289 (43%)
Receptive syringe	122/289 (42%)
Distributive syringe	44/289 (15%)
Indirect sharing: non-syringe drug injection paraphernalia sharing (aggregated)	146/354 (41%)
Grouped and/or unspecified paraphernalia	98/146 (67%)
Specified individual paraphernalia	48/146 (33%)
Cooker	43/48 (90%)
Cotton	22/48 (46%)
Rinse water	28/48 (58%)
Direct and indirect sharing grouped: "works"	39/354 (11%)
Syringe-mediated drug sharing (SMDS)	69/354 (20%)
Backloading	30/69 (44%)
Frontloading	2/69 (3%)
Studies Reporting Injection Proxies of Sharing	
Injection of speedballs (mixture of cocaine with heroin) and/or goofballs (methamphetamine and heroin)	136/354 (38%)
Shooting gallery attendance	104/354 (29%)
Having an injection partner	41/354 (12%)
Having a sharing partner	35/354 (10%)
HIV/HCV serosorting	8/354 (2%)
Studies Reporting Other Behaviours	
Equipment cleaning practices	84/354 (24%)
Syringe reuse	30/354 (9%)

CONCLUSIONS

Researchers, health-policy leaders, and health services providers may utilize this summarization of syringe sharing and other HIV/HCV injection risk behavior to enhance the understanding of injection-related behaviors with the goal of optimizing the provision of harm reduction services to persons who inject drugs.

contact: tsalek@hawaii.edu