

Some Observations Concerning the Contrary Evidence of Syringe Exchange Effectiveness

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Background

- Comprehensive review of effectiveness of syringe exchange programs (SEPs) in reducing HIV risk behavior and HIV seroconversion among injecting drug users (IDU) was published by our group in *AIDS* 2001, 15:1329-1341.
- The review identified 42 published studies with evidence of SEP effectiveness
- 28 showed positive effects of syringe exchange use (reduced risk behavior and/or seroconversion)
- 12 showed no effect of SEP use
- 2 found negative effect of SEP use

Methods

- Thirteen (13) of the 14 studies with no effect or negative effects involved comparisons of clients with nonclients of SEPs
- We closely examined these 13 studies and 12 others that compared users with nonusers of SEPs (25 altogether) to discern possible explanations for the discrepant findings

Results

- We determined that all 13 studies with negative or null findings were conducted in settings where IDU had legal access to syringes from pharmacies as well as SEPs (see Table 1)
- No negative or null findings emerged from studies done in settings without legal access
- Seven (7) of the 12 studies with positive findings were conducted in communities without legal access
- Five (5) studies, however, found positive effects despite legal access
- Nevertheless, the relationship between pharmacy access (yes/no) and positive versus negative findings was significant at the $p=.002$ level (see Table 2)

Table 1. Studies comparing users with nonusers of syringe exchange in settings with versus without legal pharmacy access

Lead author, Date ^a	Site	Pharmacy Access	Results
Bruneau, 1997 ⁹	Montreal, Canada	Yes	Negative
Strathdee, 1997 ¹⁰	Vancouver, Canada	Yes	Negative
Donoghoe, 1992 ²⁷	London, UK	Yes	Null
Hagan, 1999 ¹⁷	Seattle, USA	Yes	Null
Hartgers, 1992 ³¹	Amsterdam, Netherlands	Yes	Null
Klee, 1991 ³³	Northwest England, UK	Yes	Null
Klee, 1995 ³⁴	Northwest England, UK	Yes	Null
Patrick, 1997 ²⁵	Vancouver, Canada	Yes	Null
Schechter, 1999 ¹⁸	Vancouver, Canada	Yes	Null
van Ameijden, 1992 ²⁶	Amsterdam, Netherlands	Yes	Null
van Ameijden, 1994 ³⁵	Amsterdam, Netherlands	Yes	Null
van Ameijden, 1998 ³⁶	Amsterdam, Netherlands	Yes	Null
van Haastrecht, 1996 ²⁰	Amsterdam, Netherlands	Yes	Null
Bluthenthal, 1998 ¹²	Oakland, USA	No	Positive
Broadhead, 1999 ²¹	Windham, USA	No	Positive
Des Jarlais, 1994 ²²	New York City, USA	No	Positive
Des Jarlais, 1996 ¹⁶	New York City, USA	No	Positive
Oliver, 1994 ¹⁴	Portland, USA	No	Positive
Schoenbaum, 1996 ¹⁹	New York City, USA	No	Positive
Watters, 1997 ³⁷	San Francisco, USA	No	Positive
Frischer, 1993a, 1993b ^{28,29}	Glasgow, UK	Yes	Positive
Hagan, 1994, 1995 ^{13,24}	Tacoma, USA	Yes	Positive
Hartgers, 1989 ³⁰	Amsterdam, Netherlands	Yes	Positive
Keene, 1993 ³²	Wales, UK	Yes	Positive
Singer, 1997 ²³	Hartford, USA	Yes	Positive

^aSuperscripts denote reference numbers in Gibson, Flynn and Perales, *Effectiveness of syringe exchange programs in preventing HIV risk behavior and HIV seroconversion among injecting drug users. AIDS* 2001, 15:1329-1341.

Table 2. Tally of studies finding positive versus negative or null effects of syringe exchange broken down by presence or absence of legal access to pharmacy syringes^a

		Positive	Negative/Null	Total
Legal Pharmacy Access?	YES	5	13	18
	NO	7	0	7
Total		12	13	25

^aRelationship between positive versus negative or null findings and legal pharmacy access significant by Fisher's exact test at $p<.002$.

Conclusions

- Comparisons of clients with nonclients of SEPs may not be meaningful in settings where nonclients have ready access to other sources of sterile syringes
- Moreover, in settings where IDU have a choice between pharmacy syringes and syringes from SEPs, associations between SEP use and risk behavior and/or seroconversion may be an artifact of where particular subgroups of IDU happen to obtain their syringes
- If studies done in communities with legal pharmacy access are set to one side, 23 of the remaining 24 studies show positive effects of SEP use

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