

Effectiveness of Syringe Exchange Programs in Reducing HIV Risk Behavior and HIV Seroconversion among Injecting Drug Users

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BACKGROUND

- Syringe exchange programs (SEPs) are a critical component of a comprehensive strategy for reducing transmission of HIV and other blood-borne pathogens
- While the preponderance of evidence suggests SEPs are effective in reducing transmission, some studies have shown no effect and two suggest negative effects
- We reviewed 42 studies published between 1989 and 2000, to better understand the discrepant findings

METHOD

- We systematically searched the scientific literature using Medline and Psychinfo
- We included in our review all published studies of the effectiveness of SEPs in reducing HIV risk behavior and HIV, HBV and, HCV seroconversion

STUDIES

- 42 studies were reviewed
- 23 community studies in which behavior and HIV status of injecting drug users (IDU) using SEPs were compared with that of IDU not using SEPs
- 13 studies were conducted with SEP clients
- 6 studies examined the ecological impact of SEPs

STUDY DESIGNS

- Longitudinal or prospective cohort (10 studies)
- Case-control (5 studies)
- Multiple cross-sectional (5 studies)
- Observational, one-shot (16 studies)
- Mathematical modeling (6 studies)

FINDINGS

- Of the 42 studies, 28 found positive (protective) effects associated with use of an SEP
- 12 found no protective effect
- 2 found a negative (harmful) effect of SEP use

PATTERN OF POSITIVE, NEGATIVE, AND NULL FINDINGS

- Negative and null findings concentrated in community studies comparing users with nonusers of SEPs
- All studies (8 of 8) with SEP clients found positive (protective) effects of SEP use
- 5 of 6 ecological studies found positive effects

POSSIBLE EXPLANATIONS FOR DISCREPANT FINDINGS

- Negative and null findings all obtained in settings where IDU have legal access to syringes through pharmacies as well as through SEPs
- In such settings, negative or null findings could be an artifact of where subgroups of IDU happen to obtain their syringes
- SEPs may attract IDUs at highest HIV risk
- Syringe exchange alone may not be sufficient to prevent epidemic spread of HIV and other blood-borne viruses

CONCLUSIONS

- Preponderance of evidence suggests that SEPs are effective in preventing transmission of HIV
- Negative and null findings were all from sites where IDU had access to syringes from pharmacies as well as SEPs
- The fact that SEPs may attract the highest risk IDU complicates assessment of their effects
- Well-designed prospective studies that adjust for IDUs' preexisting (before access to SEPs) HIV risk, however, could provide better evidence of SEP effectiveness than studies done so far

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