

NETWORK ANALYSIS OF SECONDARY SYRINGE EXCHANGE AMONG PEOPLE WHO INJECT DRUGS IN RURAL APPALACHIA

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Background:

Secondary syringe exchange (SSE), or the redistribution of needles obtained from a syringe service program (SSP) by people who inject drugs (PWID) to other PWID, can expand syringe access and thereby HCV risk reduction. SSE may be of particular importance in rural communities where direct SSP accessibility may be especially limited. However, SSE in rural PWID have largely been unexplored. This study describes the SSE among PWID in rural Appalachian Kentucky and the drug network positions of those who engage in SSE.

Methods:

SSP clients (n=140) completed interviewer-administered questionnaires that elicited data on SSE, behavioral and demographic characteristics, and drug co-usage networks. These characteristics, including four measures of drug network centrality, were examined for their association with SSE.

Results:

Overall, 30% of participants reported SSE. No statistically significant differences were observed in SSE by demographic or behavioral characteristics. Participants in the second [aOR=3.83; 95% CI: 1.15-12.72] and third [aOR=4.64; 95% CI: 1.33-16.26] tertiles of degree centrality (i.e., number of personal network connections) had higher odds of SSE, controlling for gender, age, and frequency of injection. Participants in the second [aOR=2.99; 95% CI: 0.93-9.6] and third [aOR=3.92; 95% CI: 1.29-11.96] tertiles of betweenness centrality (i.e., frequency of participant lying on the shortest path between two nodes) also had higher odds of SSE, controlling for gender, age, frequency of injection. Eigenvector centrality and membership in the main network component were not associated with SSE.

Conclusion:

Nearly one third of SSP clients participated in SSE and those who occupied more central positions in the drug network had higher odds of engaging in SSE. Given the role of network centrality in risk of HIV and HCV acquisition and transmission and in opportunities for peer outreach, these findings indicate that SSE may have potential to substantially expand syringe access among rural PWID.

Disclosure of Interest Statement:

The authors have no conflicts of interest.