

NEIGHBOURHOOD RISK ENVIRONMENTS AND HEPATITIS C VIRUS INFECTION AMONG PERSONS WHO INJECT DRUGS IN MONTREAL

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Background:

Few studies apply a longitudinal perspective to study risk environments among persons who inject drugs (PWID). The objective of this investigation is to examine the association between neighborhood deprivation, mobility and HCV transmission among PWID.

Methods:

We analysed data from the HEPCO cohort study of Montreal PWID. Every 3 months, participants provide details on drug behaviours, sociodemographics, and residence postal codes. RNA testing of blood samples is performed. Neighborhood deprivation level was defined based on the Pampalon deprivation index, an aggregate census measure. Based on population quintiles of the index, participants were classified as residing in deprived (Q4-5) vs non-deprived areas (Q1-3). Descriptive analyses compared participants across deprivation categories. Marginal structural models based on inverse-probability weights will be used to examine the impact of mobility across neighborhood deprivation levels on risk of HCV infection.

Results:

49 HCV cases were observed among 277 previously RNA-negative participants, who contributed to 449 person-years of follow-up (IR: 11.0 per 100 p-y). At baseline, participants living in deprived neighborhoods (n=114, 47.5%) were less likely to report injecting heroin (32% vs 44.4%), sharing syringes (16.0% vs 23.0%), unstable housing (13.3% vs 23.0%) and employment (18% vs 31%). 543 postal codes were recorded throughout the follow-up. 84.8% of consecutive follow-up visits represented a move into or out of deprived neighborhoods. In preliminary analyses, no association was found between neighborhood deprivation and rate of HCV infection (aHR: 1.1, 95% CI: 0.6-1.9, 76% of observations non-missing for deprivation). Additional analyses will be conducted to examine mobility in and out of deprivation areas in relation to HCV transmission.

Conclusion:

Neighborhood deprivation was not associated with HCV transmission in analyses considering current neighbourhoods. Greater consideration of mobility across levels of deprivation in subsequent analyses may reveal a dynamic relationship between risk environments and HCV transmission, informing harm reduction strategies.

Disclosure of interest

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