

# SEX, DRUGS AND HCV: THE ROLE OF SEX AND SEX WORK IN HEPATITIS C VIRUS INFECTION AMONG PEOPLE WHO INJECT DRUGS IN MONTREAL

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## Background:

Although hepatitis C virus (HCV) infection is both preventable and curable, acquisition remains high in key populations including people who inject drugs (PWID) and men who have sex with men. Few studies have examined the independent contribution of sexuality to HCV infection risk in PWID. This study examines the association between sexual activity and HCV acquisition among PWID in Montreal.

## Methods:

Participants of the open prospective HEPCO cohort (2004-2017) HCV seronegative at enrolment with  $\geq 2$  visits were eligible. Behavioural questionnaires and HCV antibody testing were administered at enrolment and follow-up (6-monthly from 2004-2011, 3-monthly 2011-2017). A five-category time-updating exposure variable was generated to summarise engagement in any sexual activity (Y/N), any sex work (Y/N), and any same-sex partner (Y/N) in the past 6/3 months. Relative time to HCV seroconversion was examined using Cox regression analyses adjusted for age, gender and injecting risk behaviours.

## Results:

155 of 440 participants [median age 33 years, 18.9% female, 1.4% HIV-positive at baseline] seroconverted throughout 1306 person years (py) of follow-up (incidence rate: 11.88/100 py (95% CI: 10.12, 13.87)). Incidence rate was lowest among those reporting no recent sex [8.22 (95% CI: 5.92, 11.12)] and greatest among those reporting sex work with [25.45 (12.92, 45.36)] or without same-sex partner(s) [27.83 (95% CI: 12.92, 52.84)]. In adjusted Cox regression models, sex work with [aHR 2.07 (95% CI: 1.01, 4.22)] and without same-sex partner(s) [aHR 3.15 (95% CI: 1.31, 7.52)] were associated with HCV acquisition compared with no recent sex. Sexual activity without sex work was not associated with HCV acquisition, irrespective of partners' gender.

## Conclusion:

In this cohort of PWID, sex work was associated with greater risk of HCV acquisition, particularly among those reporting only opposite-sex partners. These minority populations of PWID at heightened risk of HCV acquisition deserve greater attention in research and prevention.

## Disclosure of Interest Statement:

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