EFFECT OF COMBINED HARM REDUCTION STRATEGIES ON HCV PRIMARY AND REINFECTION INCIDENCES AMONG PEOPLE WHO INJECT DRUGS IN MONTREAL, CANADA

Bruneau J[1,2], Zang G[2], Jutras-Aswad D[1,3], Roy É[,5,6]

[1]Department of Family Medicine, Université de Montréal, [2]CRCHUM. Centre Hospitalier de l'Université de Montréal, [3]Department of Psychiatry, Université de Montréal, [5]Université de Sherbrooke, Longueuil, Québec, Canada, [6]Institut national de santé publique, Montréal, Québec, Canada.

Background: It is acknowledged that a combination of Harm Reduction (HR) interventions is required to control HCV transmission among people who inject drugs (PWID). Evidence of their combined effectiveness for HCV prevention is still scarce. We sought to examine the association between HCV incidences (primary infection (PI) and reinfection/recurrence (REI) and exposure to combined injection material coverage (IMC) and Opioid Agonist therapy (OAT).

Methods: PWID enrolled in the HEPCO cohort (11/2004-12/2014) were tested for HCV infection and completed an interviewer-administered questionnaire on sociodemographic characteristics, drug use behaviours and service utilisation at 3-6 month intervals. Incidence rates were estimated among initially HCV-RNA-negative (± HCV-Ab) participants. Among PWIDs eligible to OAT, exposure to IMC (100% safe sources (full) vs. no) and to OAT (0, < 60 mg methadone or suboxone, ≥60 mg methadone) were used to assess HR coverage. Full HR coverage was defined as OAT ≥60 mg methadone and full IMC, minimal HR as no OAT and < 100% safe sources IMC, and partial HR as other combinations. Time-to-event methods and time-updated Cox regression models were used to examine incidence rates and associations between incident HCV and HR strategies.

Results: Overall, 543 (313 in PI and 230 in REI cohorts) PWID were included in analyses (78% males; mean age 37 (SD 9.7)). 121 PI and 39 REI occurred during follow-up (incidences = 17.3 (95%CI= 14.4, 20.6) and 5.5 (95%CI= 4.0, 7.4) per 100py respectively). In multivariate models adjusting for age and gender, compared to minimal HR coverage, a significant protective effect was found for full HR coverage (aHRs: PI: 0.36 (95%CI: 0.2, 0.8); REI: 0.16 (95%CI: 0.1, 0.7); combined PI and REI cohorts: 0.24 (95%CI: 0.1, 0.5)), but not for those with partial coverage.

Conclusion: Our data suggest that full HR coverage is needed to prevent HCV transmission in this population.