

CHANGING TRENDS IN HEPATITIS C REINFECTION RATES FOLLOWING THE SCALE-UP OF DIRECT-ACTING ANTIVIRALS AMONG PEOPLE WHO INJECT DRUGS IN SCOTLAND

Authors:

Yeung A^{1,2}, Palmateer NE^{1,2}, Dillon JF³, McDonald S^{1,2}, Smith S¹, Barclay S⁴, Hayes P⁵, Gunson R⁶, Templeton K⁷, Goldberg D^{2,1}, Hickman M⁸, Hutchinson SJ^{1,2}

¹Glasgow Caledonian University, ²Public Health Scotland, ³University of Dundee, ⁴Glasgow Royal Infirmary, ⁵Royal Infirmary of Edinburgh, ⁶West of Scotland Specialist Virology Centre, ⁷Specialist Virology Centre, Royal Infirmary of Edinburgh, ⁸University of Bristol

Background:

With the introduction of direct-acting antivirals (DAAs), an initial rise in hepatitis C virus (HCV) reinfection rates was observed in some settings. In parts of Scotland, major reductions in the population-level prevalence of HCV infection among people who inject drugs (PWID) – associated with rapid scale-up of DAAs – have also now been observed. To gauge the impact of these changes, we examined reinfection rates over time and by region, comparing areas with greater and lower intensity of treatment.

Methods:

Using nationally linked HCV clinical and laboratory test data, a retrospective cohort of PWID who commenced treatment during 2015-2020 and achieved a sustained viral response (SVR) were followed up for reinfection – defined as a positive HCV antigen or RNA test – to December 2021.

Results:

Of 5093 SVRs among 4961 PWID, 3615 (71%) had an HCV RNA or antigen test post-SVR. Of those retested, we identified 350 reinfections (6.2/100 person-years (PY)). The reinfection rate increased from 4.6/100PY in 2016-17 to 6.2/100PY in 2018-19 and 7.6/100PY in 2020-21. Considering the region with the largest scale-up of DAAs and greatest reduction in the population prevalence of HCV within Scotland, reinfection rates increased initially from 8.6/100PY in 2016-17 to 13.8/100PY in 2018-19 but has fallen to 6.2/100PY in 2020-21. Of the cumulative cohort treated since 2015 (and not known to have died or migrated), a declining proportion had been re-tested for HCV RNA post-SVR with each year, from 47-62% pre-pandemic to 23-35% during the pandemic.

Conclusion:

Our data suggest that rising HCV reinfection rates among PWID in Scotland may have peaked in areas with the greatest scale-up of DAAs and marked reductions in population prevalence of HCV. However, additional effort is needed to increase HCV testing among PWID, including those treated before the pandemic, to fully assess this and ensure reinfections are diagnosed and retreated.

Disclosure of Interest Statement:

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