

# THE COST-EFFECTIVENESS OF INTERVENTIONS TO IMPROVE CASE FINDING AND ENGAGEMENT WITH HCV TREATMENT FOR PEOPLE WHO INJECT DRUGS IN THE UK

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**Background:** People who inject drugs (PWID) are at high risk of Hepatitis C virus (HCV) infection, however approximately 50% are undiagnosed and rates of linkage to care are very low. This study investigated the cost-effectiveness of increasing case finding and engagement with the HCV treatment pathway compared to the status quo in current standard care pathways in drug treatment centres and needle and syringe providers in the UK.

**Methods:** A dynamic HCV transmission and disease progression model of 1000 PWID was parameterised with UK specific data (40% prevalence of chronic HCV) from the Hepatitis C Awareness Through to Treatment (HepCATT) drug treatment centres pilot study and the Eradicate trial (Tayside, Scotland). The model estimated the decrease in disease related deaths from 2016 to 2066 if case finding was increased 2.5-fold and engagement onto the HCV treatment pathway was increased 10-fold (data from HepCATT). A cost-effectiveness analysis with a 50-year time horizon and £20000 per quality adjusted life year (QALY) willingness to pay (WTP) threshold for the incremental cost-effectiveness ratio (ICER) was performed. A cost-effectiveness acceptability curve was calculated from the probabilistic sensitivity analysis.

**Results:** Increasing case finding and engagement with the HCV treatment pathway averts 42 (95% CI 24-65) deaths over the 50-year time horizon. The mean ICER was £19,127 per QALY (cost-effective), with 59% and 98% of the runs cost-effective at the £20,000 and £30,000 WTP thresholds respectively. Univariate analysis showed decreasing HCV treatment drug costs by half decreased the mean ICER to £9,475 per QALY with 100% of simulations being cost-effective.

**Discussion:** Increasing case-finding and engagement with HCV treatment in line with recent pilot interventions is cost effective at the £20000 willingness to pay threshold. As the cost of HCV drugs decreases these interventions will become even more cost-effective.

No Conflict of Interests