**Reinfection of Hepatitis C Among People Who Inject Drugs in Norway: Opportunity for Intervention-a modelling study**

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**Background:** Reinfection after successful treatment of hepatitis C (HCV) is a concern in groups still engaging in high-risk behaviour. This study examined the impact of decreasing the probability of reinfection in active people who inject drugs (PWID) in Norway.

**Methods:** A modelling approach was used to estimate the impact of reducing the probability of reinfection among active PWID treated for HCV. The first scenario assumed the probability of reinfection to be equal to the probability of initial infection. The second scenario assumed that the probability of reinfection was 50% that of the probability of initial infection and the third scenario assumed the probability of reinfection to be 25% that of initial infection. In Norway the estimated number of chronic HCV infection among people who have recently injected drugs is 3,970. A treatment paradigm resulting in a 90% reduction in prevalence by 2030 among active PWID was utilized to highlight the impact within a large-scale treatment strategy.

**Results:** At baseline year 2016 the number of new cases among PWID was estimated to be 310. This will be reduced to 200 new cases of viremic HCV among active PWID in 2030 in the first scenario and will decrease dramatically to 30 in the second scenario and further to 10 in the third scenario in 2030. The total number of viremic reinfections between 2016-2030 would fall from 2,430 in scenario one to 420 during scenario three. Total prevalence decreased from 560 viremic active PWID in 2030 in the first scenario to 90 and 50 in the second and third scenarios respectively.

**Conclusion:** Reduction in the probability of reinfection among active PWID can have a significant impact on successful treatment outcomes. Interventions to reduce the risk of reinfection after successful treatment should be explored.

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