

ESTIMATION OF THE INCIDENCE AND THE SIZE OF THE EPIDEMIC OF HEPATITIS C AMONG PWID IN GREECE 2002-2015

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Background: People who inject drugs (PWID) represent the core of the hepatitis C virus (HCV) epidemic in Greece. The aim of the study is to estimate the anti-HCV incidence among PWID of Greece during 2002-2015 and to compute epidemiological parameters related to the HCV epidemic.

Methods: A dynamic, stochastic, individual-based model was developed to simulate HCV transmission among PWID. We varied the infection rate until the model reproduced the observed HCV prevalence among PWID in Greece. We divided the analysis into two settings, Athens Metropolitan Area and rest of Greece, since the epidemic in Athens was more intense compared to the other areas.

Results: The incidence rate (95% Credible Interval) of HCV among PWID in Athens was estimated 13.1 (9.6, 17.1), 29.8 (26.2, 34.0) and 11.2 (8.7, 13.9) new infections per 100 person-years in 2007, 2009 and 2013, respectively. Concerning the rest of Greece, the incidence rate (95% CI) was estimated 8.7 (6.6, 11.1), 22.1 (17.6, 24.7) and 8.0 (5.7, 11.1) new infections per 100 person-years in 2007, 2009 and 2014, respectively. The average time to infection for new injectors in 2015 was estimated 20 and 27 months for PWID in Athens and in areas other than Athens, respectively. It is estimated that the HCV epidemic among PWID in Greece during 2002-2015 caused 20,500 new infections, with 48.2% of those occurring in Athens.

Conclusion: Anti-HCV incidence had increasing trends in Greece in the period 2002-2015. Our results highlight that before the HIV outbreak in Athens, which started in the beginning of 2011, an HCV outbreak occurred in 2009. This outbreak was controlled indirectly due to the interventions for HIV epidemic in 2011-12. In the rest of Greece, the increase in the incidence continued until 2013.

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