

Assessment of the elimination strategy for hepatitis C

Summary

Objectives: To assess the activities to be carried out in Estonia in order to achieve the aims of the WHO's global hepatitis C (HCV) elimination strategy by 2030 and to calculate the budget impact of these activities.

Methods: An overview of international guidelines and recommendations on HCV elimination was provided based on relevant literature. Best practices from countries that have successfully started with the elimination process were described. Literature and Estonian data were used to provide an overview of the main HCV risk groups and necessary interventions to achieve the goal of elimination by risk group. An economic analysis was performed to determine the budget impact of testing the risk groups and treating those with HCV. Based on a previous analysis of the cost-effectiveness of treating HCV in Estonia, direct health benefits associated with HCV treatment were assessed. Costs and health benefits were evaluated in four main risk groups separately and across all risk groups, taking into account the overlap between them. In addition, a strategy where all of those aged 16 to 49 going for a primary medical visit in Harju and Ida-Viru Counties would have to be tested was analyzed. It was assumed in the analysis that it would be possible to start with the elimination strategy in the year 2023.

Results: In the analysis, the main HCV risk groups determined were people who inject drugs (PWID), detainees, people involved in prostitution and men having sex with men (MSM). The total estimated cost of HCV elimination in all risk groups simultaneously was between 17.8 and 23.1 million euros, which was spread over a period of seven years. The annual cost of testing and treating all the people at risk was estimated at over 5 million euros in the first two years of implementing the strategy. Thereafter the costs would gradually start to decrease. In Estonia, PWIDs are the largest HCV risk group, who make up a substantial proportion of the other risk groups mentioned. Thus the cost of testing and treatment of HCV in PWIDs was estimated to be between 17.2 and 22.3 million euros. The estimated cost of testing and treating (if necessary) all people aged 16 to 49 who go to a primary medical visit in Harju and Ida-Viru Counties was between 13.9 and 18.0 million euros. The overall cost was most affected by the choice of the drug used in HCV treatment – using a pan-genotypic drug comes with a higher cost. As a result of testing and treating all risk groups 10,485 quality-adjusted life-years (QALY) could be gained. The cost of a QALY gained was estimated to be around 2,000 euros in all the determined risk groups. These results were based on the assumption that all the people in risk groups would be tested and those with HCV would receive antiviral treatment. If this was not the case, the actual costs and outcomes would be lower.

Conclusions: The objectives of the WHO's global hepatitis C elimination strategy can be achieved by 2030 by comprehensive and targeted HCV testing of risk groups and treatment of all hepatitis C patients detected. Still, continued testing of all risk groups would be necessary even after reaching these goals.

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