

# Who to screen for hepatitis C? A cost-effectiveness study in Belgium of comprehensive hepatitis C screening in four target groups

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## Abstract

Background and study aims : hepatitis C virus (HCV) infection often causes asymptomatic disease and patients are frequently diagnosed at an advanced stage. Oral direct acting antivirals (DAAs) are successful in treating HCV with high sustained virologic response (SVR) and excellent tolerability. The aim of this study is to evaluate cost-effectiveness of a broad screening strategy proposing screening to all undiagnosed members of a population (comprehensive HCV screening), in the general adult population, emergency department (ED) attendees, men who have sex with men (MSM) and people who inject drugs (PWID).

Patients and methods : We populated a theoretical model with Belgian data. A decision tree model simulating HCV screening and diagnosis was combined with a Markov state transition model simulating treatment. There was one screening round per year during live years. In the ED population only one screening round was considered.

Results : The model calculated that more HCV patients could be detected and treated with comprehensive screening compared to the current situation. Incremental cost per incremental quality . adjusted life years (QAIN) gained was lower than 10.000(sic)/QALY for one and for the screening rounds in the general population (5,139 and 5.200 respectively), in ED attendees (one screening round 5.967), in MSMs (4.292 and 4.302 respectively) and in PWIDs (3.504 and 3.524 respectively).

Conclusion : A broad screening strategy combined with treatment is likely to be a cost-effective strategy to detect and treat HCV infected patients and diminish the HCV burden in Belgium.

## Keywords

**Author Keywords:** [chronic HCV infection](#); [comprehensive screening](#); [cost-effectiveness analysis](#)

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