

Value assessment of sofosbuvir-based regimens for (chronic) hepatitis C in Spain

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Background and Aims: The treatment of chronic hepatitis C virus (HCV) with direct-acting antivirals has undergone a spectacular revolution, contributing to the World Health Organization (WHO) global strategy of HCV elimination by 2030. The aim of the study was to estimate the clinical and economic value of Sofosbuvir (SOF)-based regimens for a target population of 85,959 chronic HCV patients, from the Spanish National Health System (NHS) perspective, treated with SOF-based regimens during 2015-2019, compared to previous therapeutic strategies (PTS; peginterferon and ribavirin in double/triple therapy with telaprevir or boceprevir).

Method: To assess the impact of the SOF-based regimens, a previously developed lifetime Markov model was adapted simulating the disease evolution of HCV. In SOF-based regimens, all patients (100%) were treated regardless of their fibrosis stage with sustained virological response (SVR) of 93-98%, obtained from real-world data. In PTS, only \geq F2 patients were treated according to clinical practice (38%) with an average SVR of 61% taken from published literature. The results reported included the number of patients with HCV-related mortality, decompensated cirrhosis (DC), hepatocellular carcinoma (HCC) and liver transplantation (LT) avoided cases; total costs and quality-adjusted life years (QALYs) were calculated applying an annual 3% discount rate.

Results: Compared to PTS, during lifetime, SOF-based regimens reduced DC by 89% (-14,372 cases), HCC by 77% (-9,473 cases) and LT by 84% (-1,878 cases), decreasing the cost associated to liver complications management in €770 million. SOF-based regimens also decreased liver-related mortality by 82% (-15,810). Besides, SOF-based regimens gained 310,765/QALYs, saving €274 million (considering drugs, monitoring, and management of HCV complications).

Conclusion: For Spain, which is on a path to achieving HCV elimination within the next decade following WHO goals, SOF based regimens offer value in terms of lowering HCV-related liver disease burden and generating significant cost savings for the Spanish NHS.

Figure: