**ESTIMATING THE BURDEN OF HEPATITIS C VIRUS INFECTION IN IRAN: HOW THE ENHANCED ANTIVIRAL TREATMENTS CAN PREVENT THE RISING BURDEN**

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**Introduction:** This study estimated the burden of hepatitis C virus (HCV) infection in Iran and assessed the impact of various HCV treatment strategies in reducing the burden.

**Methods:** A modelling approach was used estimating the number of existing, diagnosed, and treated HCV infections, and HCV disease progression and mortality from 2013 to 2030. Baseline model parameters were based upon literature review and expert consensus. Base-case scenario assumed the currently-utilized Interferon (IFN)-based treatment. Four other scenarios were assumed utilizing direct acting IFN-free regimens with 1) the base-case diagnosis and treatment rates; 2) limiting treatment to ≥F3 liver fibrosis; 3) doubling treatment rate by 2020 and tripling treatment rate thereafter; 4) targeting 90% reduction in HCV infections by 2030 (HCV elimination).

**Results:** In 2013, a total of 186,990 individuals, 100 individuals, and 130 individuals with chronic HCV (median age: 31 years), HCC, and liver disease death was estimated, respectively. By 2030, the estimated number of people with chronic HCV will increase to 219,030 while a 3.5 fold increase is expected in HCC (n=340), and liver disease death (n=450) case numbers, respectively, assuming the current diagnosis/treatment setting. Compared to the base-case, scenario 1 will have a limited impact on disease burden (5% decrease in HCC and liver disease deaths), while scenarios 2 and 3 will result in 58-64% decrease in HCC and liver disease deaths. For HCV elimination, diagnosis and treatment rates should be increased to 12,000 and 9,000 patients/year (double) in 2016, respectively and to 24,000 and 18,500 patients/year, respectively in 2018 onward.

**Conclusion:** An increasing HCV disease burden is expected in Iran. Increased diagnosis and treatment rates are required in combination with enhanced treatment efficacy to reduce the burden. The relatively young HCV infected population in Iran provides an opportunity for timely interventions to prevent the rising HCV disease burden.

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