STRATEGIES TO MANAGE THE CHRONIC HEPATITIS C DISEASE BURDEN IN MALAYSIA

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BACKGROUND

Hepatitis C (HCV) viraemic prevalence is estimated at 1.8% of the Malaysian population aged 15-64 years; however, only 5% of individuals living with chronic HCV were aware of their infection. Prior to the availability of direct acting antivirals (DAAs), only about 550 of those infected were treated annually.

Nevertheless, Malaysia aims to fulfill the World Health Organization’s (WHO) global targets for 2030. The interim targets for diagnosis of 30% of chronically-infected persons and for treatment of 50% of eligible patients were set for 2020. The latter target depends on access to affordable all-oral direct-acting antiviral (DAA) drugs.

To inform the development of a national strategic plan for Malaysia, we estimated the long-term burden incurred by the care and management of patients with HCV. Our goal was to project the future disease burden (in DALY) and develop scenarios to meet WHO targets and control the morbidity and mortality related to hepatitis C virus.

METHODS

Engagement with relevant stake holders (Hepatologists, Gastroenterologists, Clinical Microbiologists, Public Health and Family Medicine Specialists) had started in 2014 to facilitate identification of those at high risk for HCV, to develop HCV testing algorithm and to provide better linkage to care so effective treatment can be offered.

An age-structured multi-state Markov model was used to simulate the natural history of HCV from the acute infection stage, through chronic infection, moderate chronic hepatitis (corresponding to Metavir stages F2-F3), to compensated cirrhosis and decompensated cirrhosis, primary liver cancer, and death.

The DALY for chronic HCV infection is the sum of the years of life lost and years lived with disability associated with all disease states following acute infection in the progression model.

We describe three treatment scenarios using differing assumptions regarding levels of treatment uptake and distribution of total treatments over disease stage influence the projections of both disease burden

RESULTS

The notification rate for Hepatitis C has increased since screening of high-risk individuals began. A slight reduction in the incidence of new HCV infections is expected due to the impact of harm reduction programmes, but if the annual number of HCV patients treated each year does not increase, the number of individuals progressing to decompensated cirrhosis, hepatocellular carcinoma and liver related deaths are projected to increase.

A drastic scale-up in both screening and treatment between 2018 to 2030 would be required to meet the WHO targets at 2030. This scenario had the largest estimated impact on population health, by averting 205 thousand DALYs compared with the current standard of care.

However, a moderate scale-up strategy (achieving WHO 2020 targets in 2025) is more realistic for Malaysia. Then, followed by an aggressive scale-up strategy between 2026 and 2030. This strategy can potentially achieve a 90% reduction in new cases of HCV and achieve the elimination targets by 2030.

CONCLUSIONS

A substantial reduction in HCV-related disease burden – and achievement of the WHO 2030 targets – is possible with a steep scale-up in the uptake of treatment with high cure rates, with corresponding increases in the rates of screening and diagnosis. These results inform the development of effective HCV disease management in Malaysia, which would require serious investment by the government.

REFERENCES