

Trends and estimation of Hepatitis B infection cases in Malaysia, 2003–2030

ABSTRACT

Hepatitis B virus (HBV) infection is an upcoming public health problem in Malaysia. This study analysed the trend of Hepatitis B (HB) cases from 2003 to 2012 and project the cases for an 18-year period (2013–2030). Based on the national data of annual reported cases and the Malaysian population projections (2010–2040), trend/regression lines were fitted to analyse the trend and estimated HB incidence. The number of HB cases decreased for six consecutive years and began to increase from 2010 onwards. During the 10-year period (2003–2012), the highest number of HB cases was reported in Sabah, followed by Pahang and Wilayah Persekutuan; the lowest was reported in Perlis. The exponential curve shows a decrease of HB cases by an average of 6.3%. However, the polynomial curve shows fluctuations in the trend, with a higher degree of R-square (0.8655). Most states appear to be at moderate vulnerability to HBV infection (Kedah, Perak, Negeri Sembilan, Terengganu, Sabah, and Sarawak), except for Melaka, Wilayah Persekutuan, and Selangor, which were at high risk of HB incidences. Overall, the estimated HB cases indicate that the number of cases and the incidence rates will increase in the future in all states, except for Penang. As the estimated HB cases and incidence rates show an increasing pattern, the government should strengthen their strategies in the management of HB and take preventive measures such as educating the public through awareness programmes, conducting compulsory blood screening, and sustaining the Expanded Programme on Immunization effectively.

Keyword: Hepatitis B; Infection estimation; Trends; Hepatitis B cases; Incidence rate