

## **Modelling Hepatitis B In Australia: Improved Estimates Of The Burden Of Disease.**

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### **Introduction:**

Key objectives of Australia's National Hepatitis B Strategy 2014-2017 included increasing the proportion of people living with chronic HBV (CHB) who have been diagnosed, increasing treatment uptake in those affected, and reducing the burden of attributable morbidity and mortality. Measuring progress towards these objectives using associated indicators and targets allows for identification of appropriate interventions, and assessment of progress over time to shape the public health and policy response to hepatitis B in Australia.

### **Methods:**

We developed a mathematical model to better reflect the natural history of hepatitis B in Australia using a wide range of data sources. The model provides updated national and state/territory estimates for: (i) the number of people living with CHB, (ii) the proportion of people living with CHB that have not been diagnosed, and (iii) the burden of disease and deaths attributable to CHB in Australia. We also estimate the impact of treatment on mortality due to CHB and the proportion of deaths due to liver cancer versus cirrhosis.

### **Results:**

The current prevalence of CHB remains around 1% of the population, however, the number of people living with CHB in Australia continues to increase due to the impact of migration. We present the estimated burden of disease attributable to CHB in 2017 for each state/territory and show trends of these estimates over time. To reduce the number of people affected by adverse outcomes of CHB, treatment and monitoring needs to continue to increase.

### **Conclusion:**

The burden of CHB in Australia remains significant, and the proportion diagnosed is still well below National Strategy targets. This analysis highlights the importance of continuing initiatives which aim to increase access to screening, care and treatment for individuals affected. This in turn will contribute to increasing the proportion of people living with CHB who are diagnosed and reducing the overall burden of disease.

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