

Health Care Costs of Patients with Hepatitis B Disease in The Northern Territory, Australia

Authors

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Background: The burden of chronic viral hepatitis B (CHB) is high in the NT, especially among First Nations people. The Hep B PAST Project has been demonstrated to be a highly effective model of care. Reflecting this, the draft National Hepatitis B Strategy recommends broad implementation of this new model of care. The aim of this study was to estimate costs of the Hep B PAST model of care compared to usual care.

Methods: A retrospective data linkage study was undertaken. The cohort included all individuals with CHB attending a clinic that participated in the Hep B PAST project. Data were extracted from the Primary Care Information System, public hospital Emergency Department, inpatient admissions, outpatient datasets for the period 2014-2023. Only episodes of care mentioning liver diseases and related conditions were included in the estimates. Costs were taken from the Independent Hospital and Aged Care Pricing Authority, Pharmaceutical Benefits Scheme and published literature. To compare costs between usual care and the Hep B PAST model of care, a pre- and post-implementation design was used. All costs were reported in 2023 Australian dollars.

Results: Total annual cost prior to implementation (aka 'usual care') was AUD\$339,526. Inpatient admissions accounted for 49% (AUD\$166,013), with primary care accounting for 25% (AUD\$86,450). The mean cost per patient was AUD\$1,191 (95% confidence interval (CI): 800-1,581). Post-implementation, the total annual cost was AUD\$589,905, with the inpatient admission costs comprising 61% (AUD\$362,372) and with primary care cost accounting for 18%(AUD\$104,412). The mean cost per patient was AUD\$1,634 (95%CI: 1,014-2,253).

Conclusions: The Hep B PAST model of care has provided outstanding results, particularly regarding meeting the targets of the National Hepatitis B Strategy. Whilst this new model of care is more expensive than usual care, the medium- and long-term health benefits will likely yield an excellent return on investment.

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