

TRENDS IN HEPATOCELLULAR CARCINOMA AMONG PEOPLE WITH A HBV OR HCV NOTIFICATION IN NEW SOUTH WALES, AUSTRALIA BETWEEN 2000 AND 2014

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Background & Aims: This study evaluates trends in first hepatocellular carcinoma (HCC) among people with hepatitis B virus (HBV) or hepatitis C virus (HCV) infection in New South Wales (NSW), Australia between 2000 and 2014.

Methods: Data on HBV and HCV notifications (January 1993-December 2012) were linked to the NSW hospitalizations data (July 2000 -June 2014) and NSW Registry of Births Deaths and Marriages. The burden, crude and age-standardised incidence of HCC were calculated.

Results: A total of 54,399, 93,099 and 3,809 individuals were notified with HBV, HCV and HBV/HCV coinfection respectively. There were 725 (1.3%) with HBV-HCC as compared to 1,309 with HCV-HCC (1.4%). The population-level burden of new HCC cases per year has stabilised in the HBV cohort (53 in 2001 and 44 in 2013), but increased markedly in the HCV cohort (49 in 2001 to 151 in 2013). The age-standardised incidence rates of HCC (per 1000 person-years) declined from 2.3 (95% CI 1.4, 3.1) in 2001 to 0.9 (95% CI 0.6, 1.2) in 2012 among those with HBV and remained stable between 2001 (1.4; 95% CI 0.8, 1.9) and 2012 (1.5; 95% CI 1.2, 1.7) in those with HCV. Factors associated with HBV-HCC included later study period (2010-2014) (HR=0.54, 95% CI 0.42, 0.70), male gender (HR=4.50, 95% CI 3.6, 5.6), Asia-Pacific country of birth (HR=3.84, 95% CI 2.58, 5.71) and alcohol dependency (HR=2.84, 95% CI 1.95, 4.13). Factors associated with HCV-HCC included male gender (HR=2.56, 95% CI 2.20, 2.98), rural place of residence (HR=0.73, 95% CI 0.62, 0.86) and alcohol dependency (HR=3.90, 95% CI 3.39, 4.49).

Conclusion: Individual-level risk of HBV-related HCC has declined, suggesting an impact of more effective antiviral therapy from mid-2000s. In contrast, the interferon-containing HCV treatment era had no impact on individual-level HCV-related HCC risk and has seen escalating population-level HCC burden.

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