



Trends in Viral Hepatitis Liver-Related Morbidity and Mortality in New South Wales, Australia

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Viral hepatitis elimination goal



World Health Organization (WHO) goal

Eliminate viral hepatitis as a public health threat by 2030

Hepatitis B virus (HBV) and hepatitis C virus (HCV) liver-related morbidity and mortality targets

Relative reduction target

65% reduction in deaths attributable to HBV or HCV between 2015 and 2030

Revised absolute mortality target

≤ 4 deaths per 100,000 population for HBV

≤ 2 deaths per 100,000 population for HCV

≤ 6 deaths per 100,000 population (combined target)

Progress towards elimination

Equitable framework

Complexity of monitoring population-level mortality

Demographic (e.g. population age distribution), data quality issues

Standardised and universally applicable

Current progress

Globally many falling short of current mortality targets

Evidence of HBV and HCV therapies resulting in decreases in liver related morbidity and mortality in Australia

Need for enhanced interventions to achieve elimination

NSW, Australia

HBV and HCV notifications (January 1, 1993- March 31, 2022), linked to :

- Hospital admissions (January 1, 2002- December 31, 2022)
- Mortality records (January 1, 1993- December 31, 2022)

Viral Hepatitis Liver-Related Morbidity and Mortality

Objectives

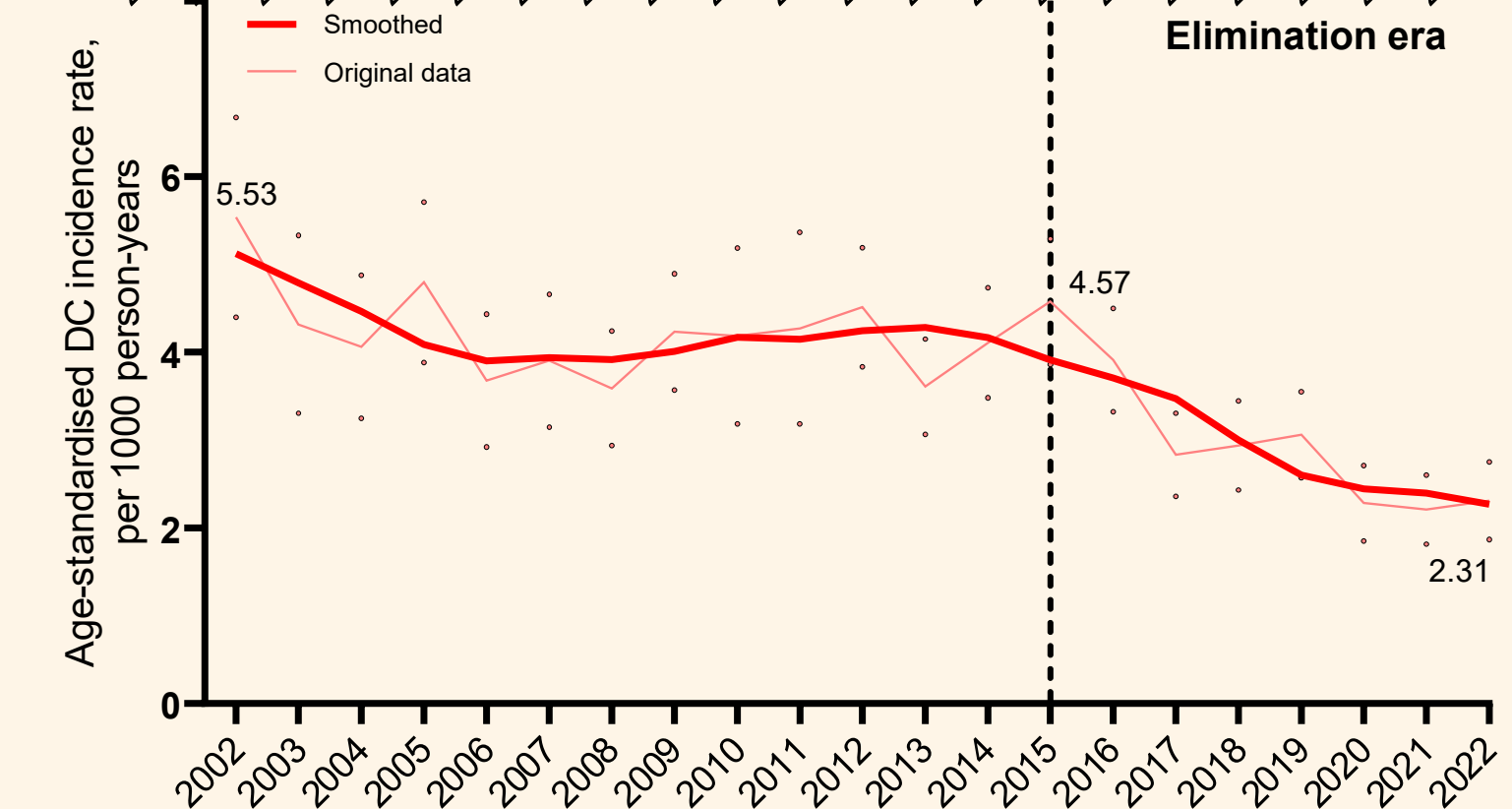
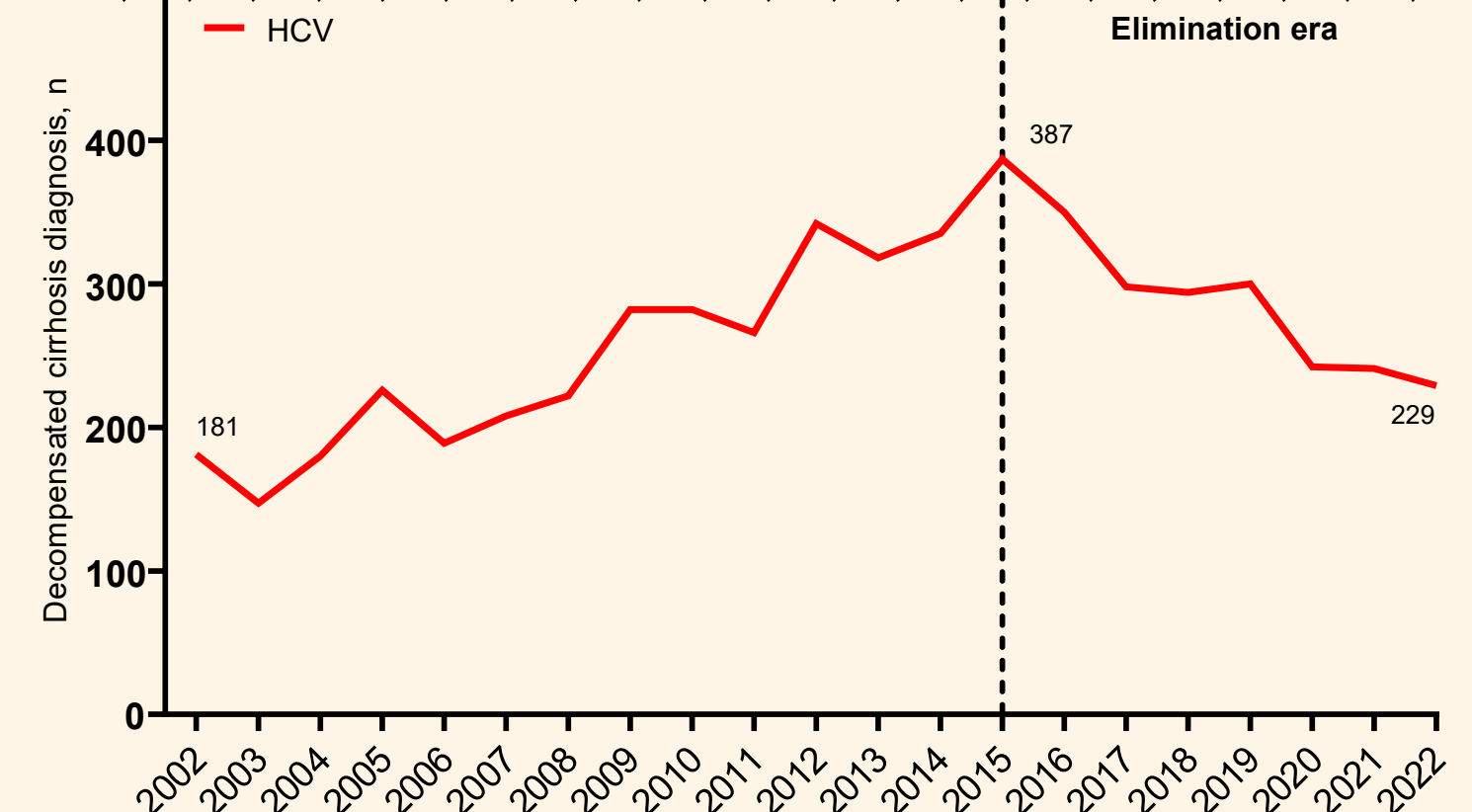
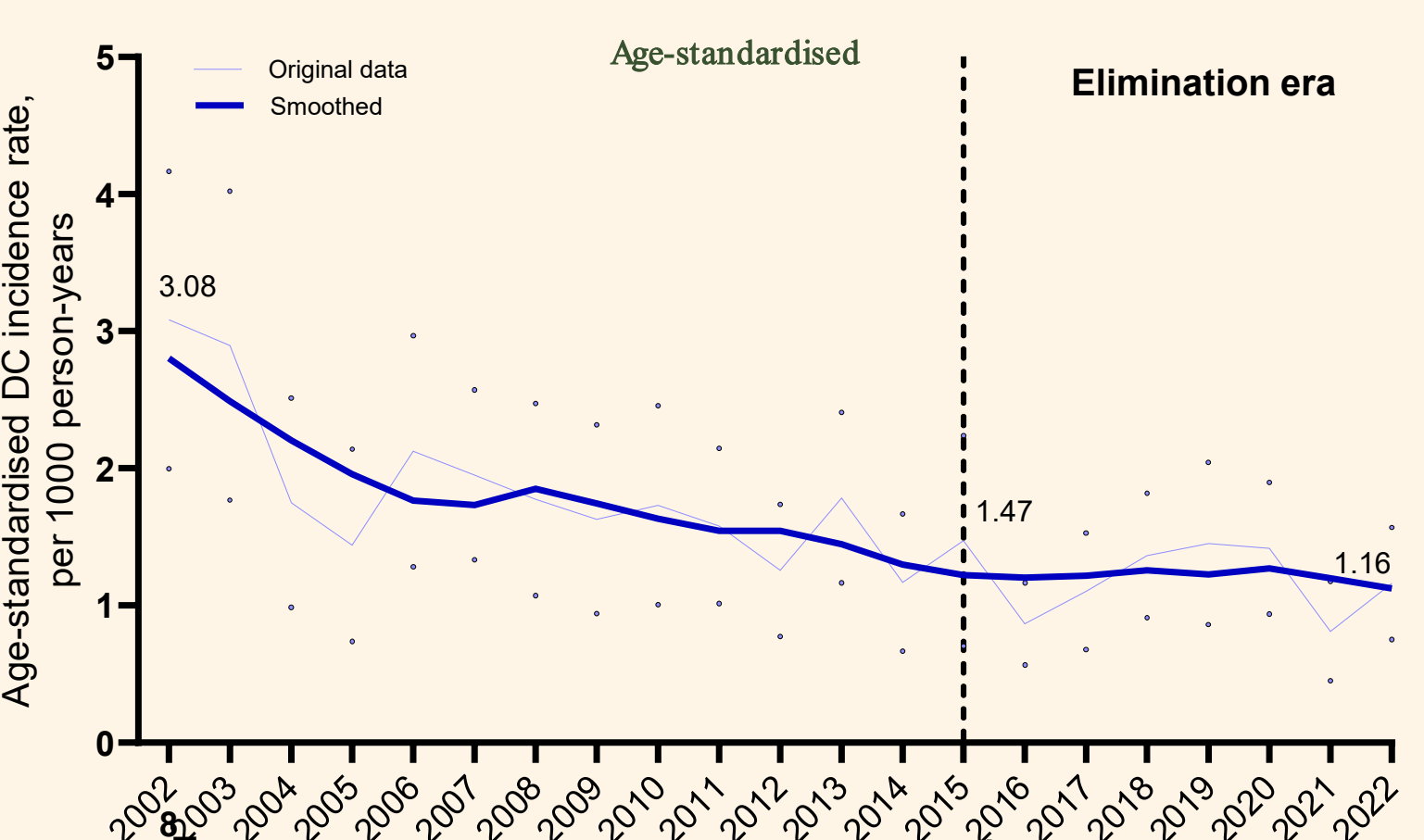
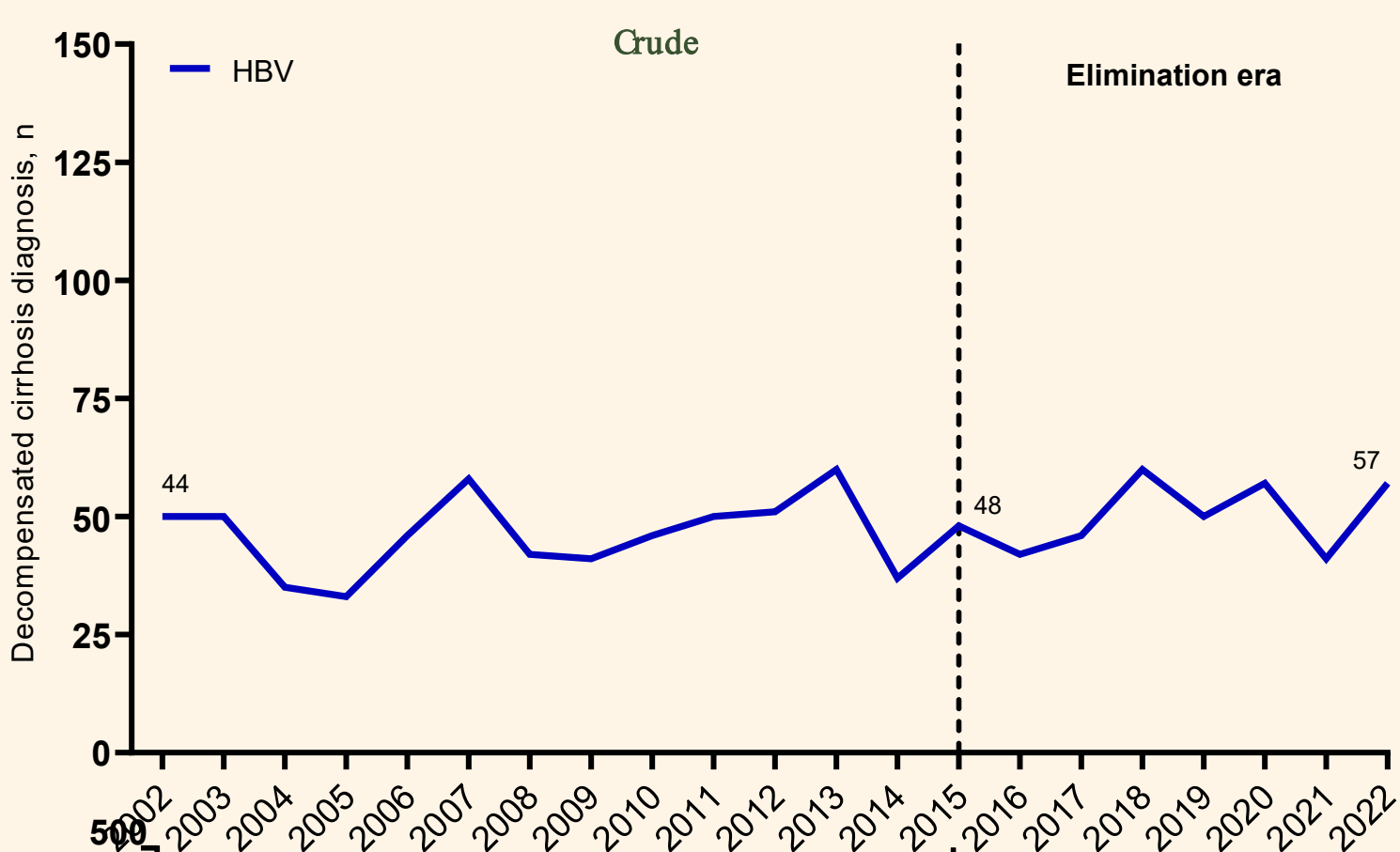
Among individuals with HBV and HCV notification in NSW:
Evaluate progress towards viral hepatitis elimination in NSW
Evaluate impact of WHO call for viral hepatitis elimination

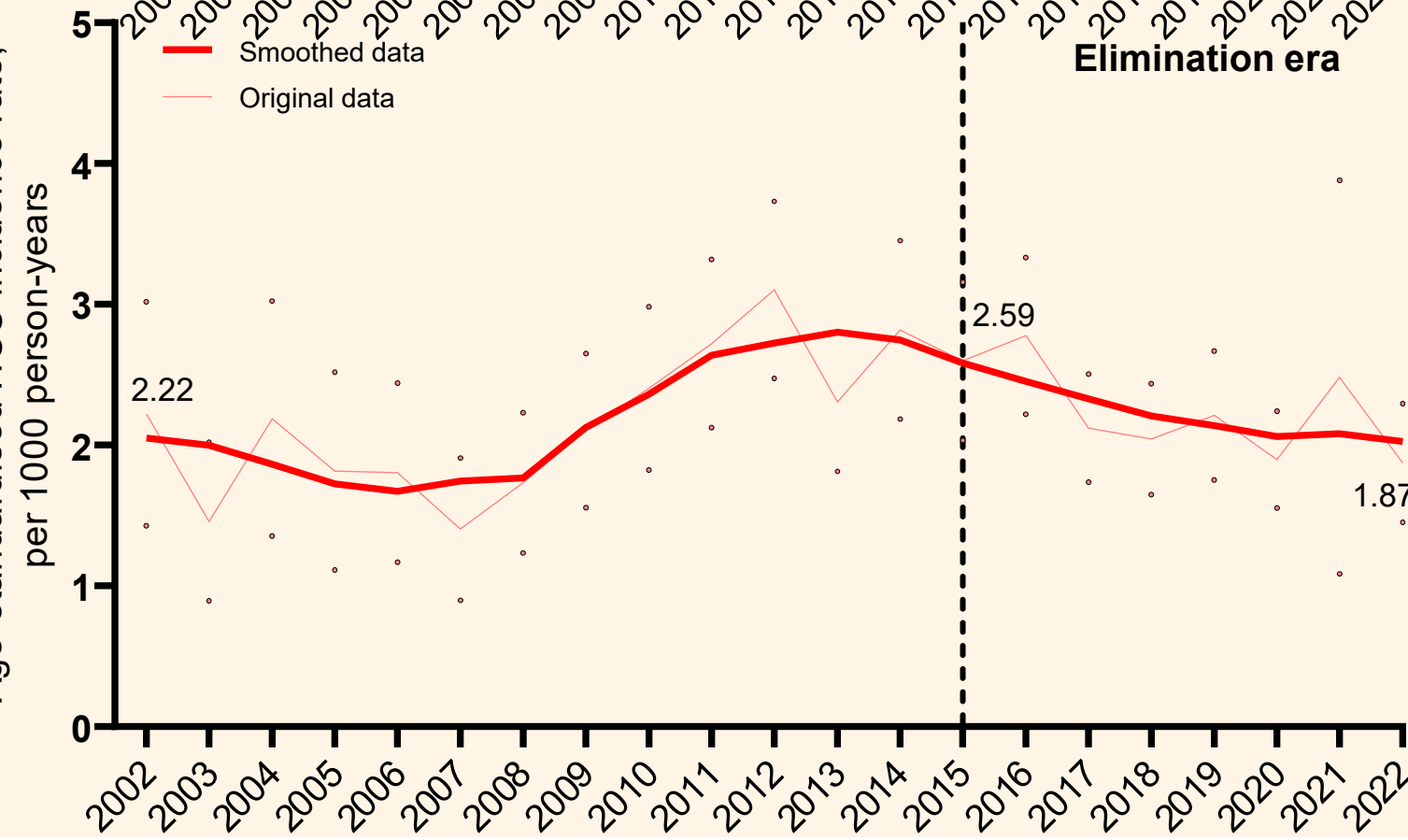
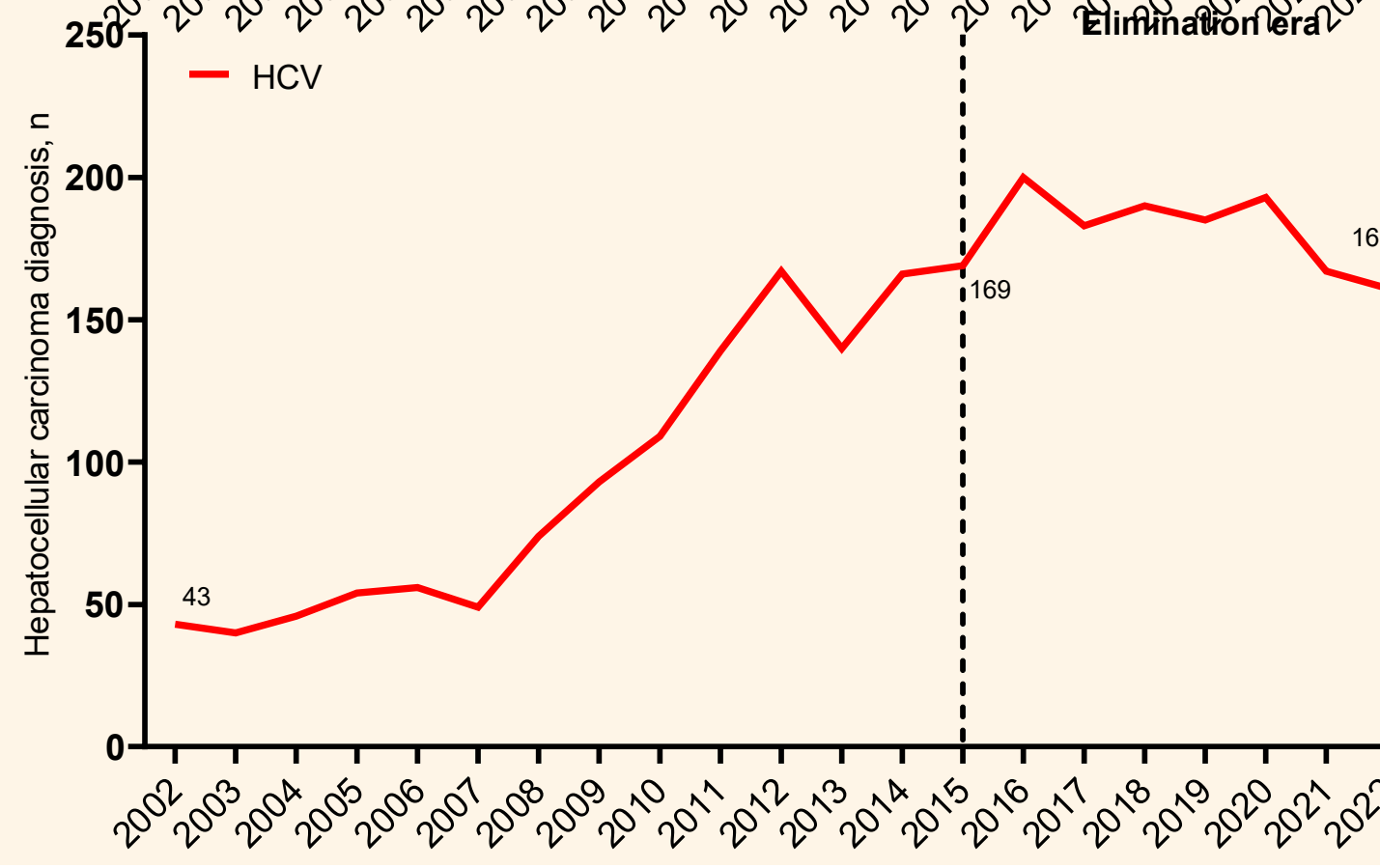
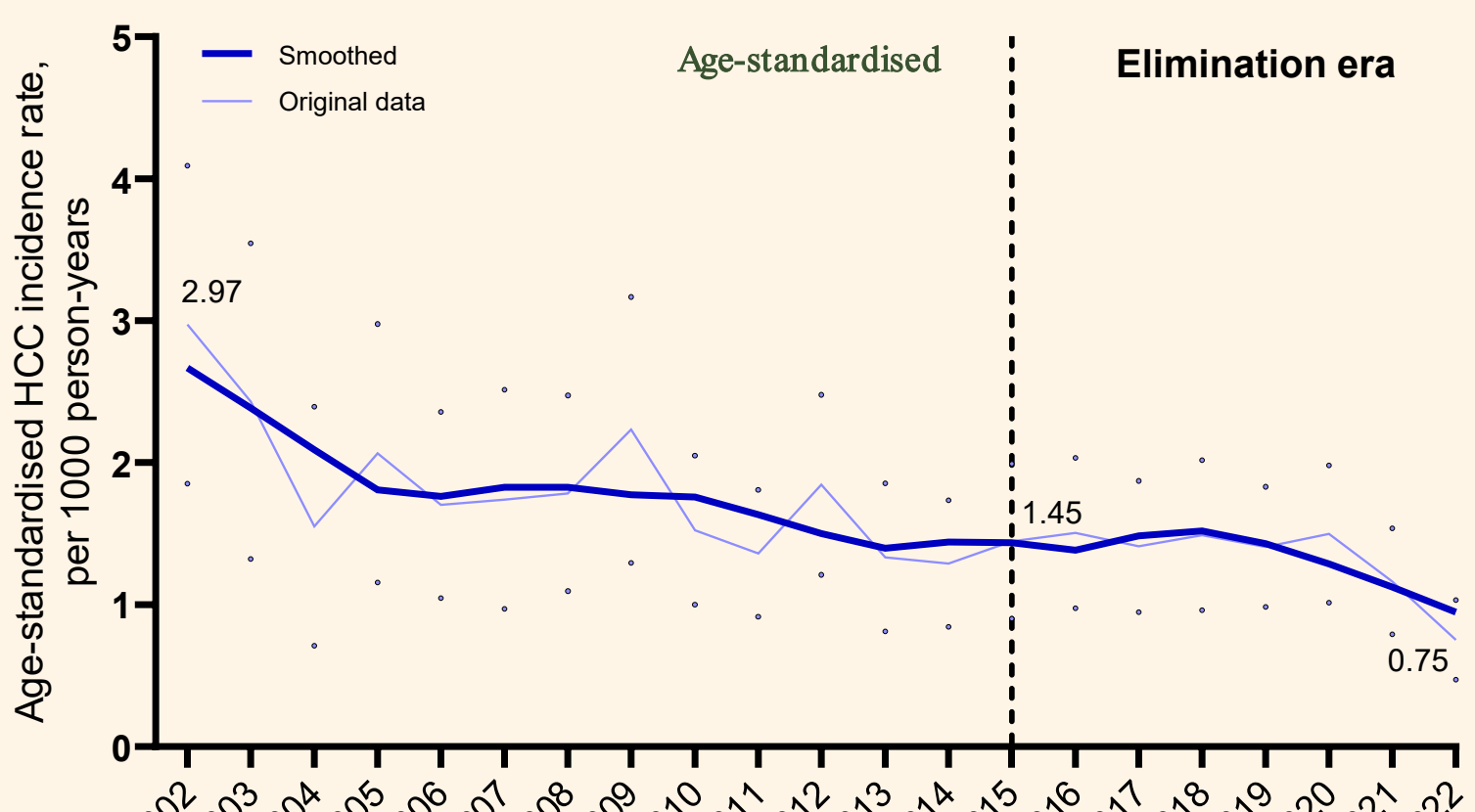
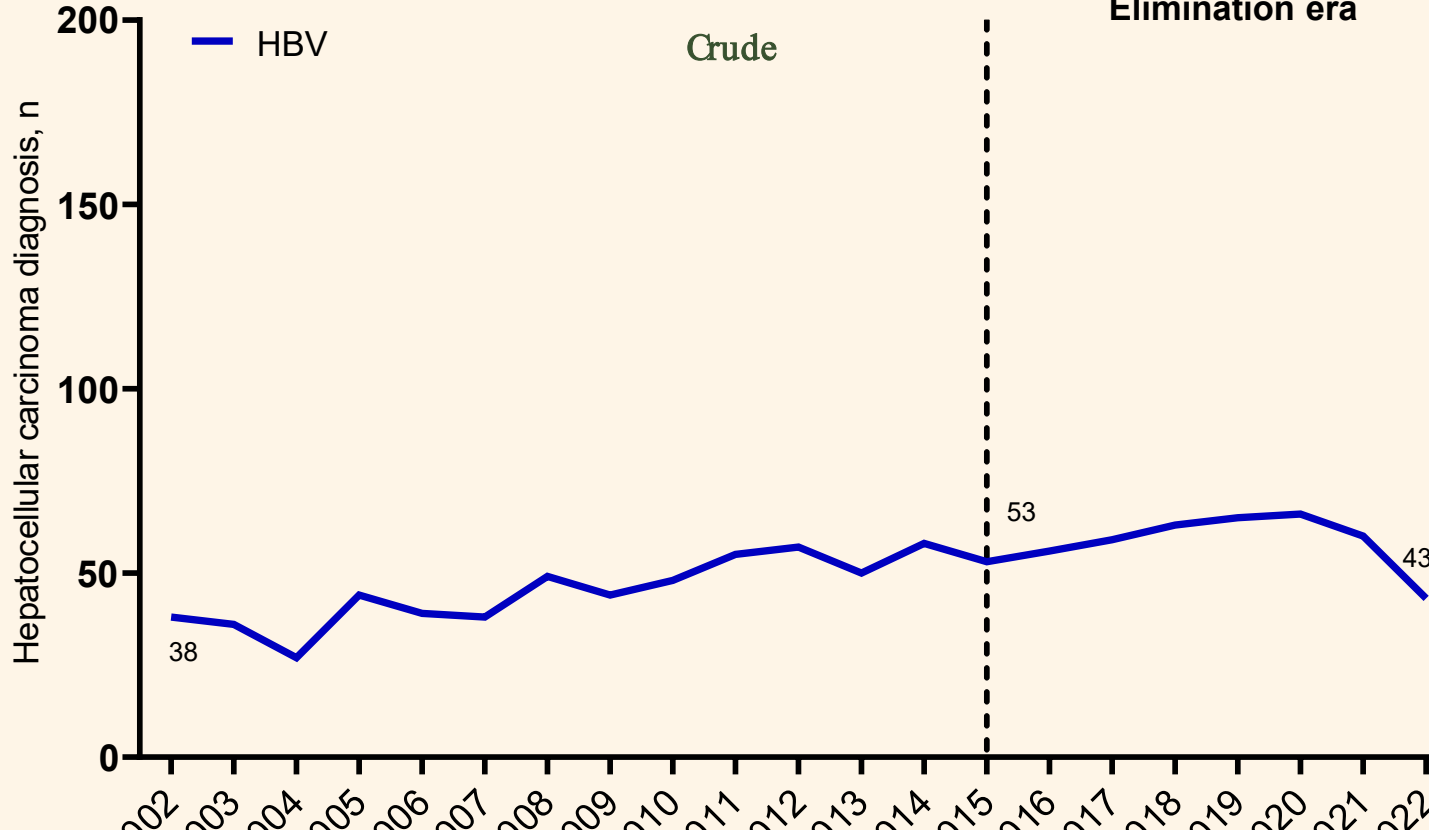
Period of interest

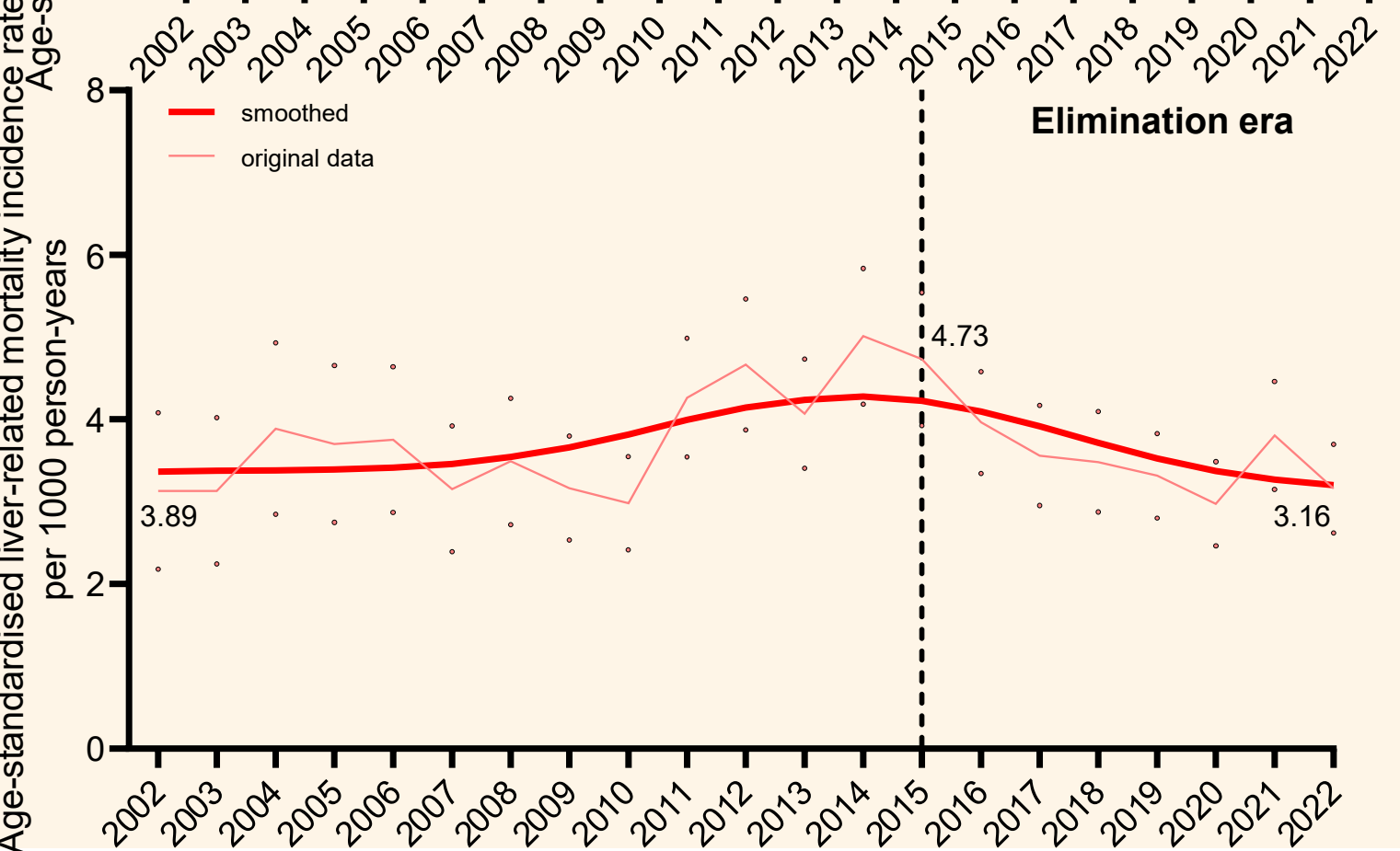
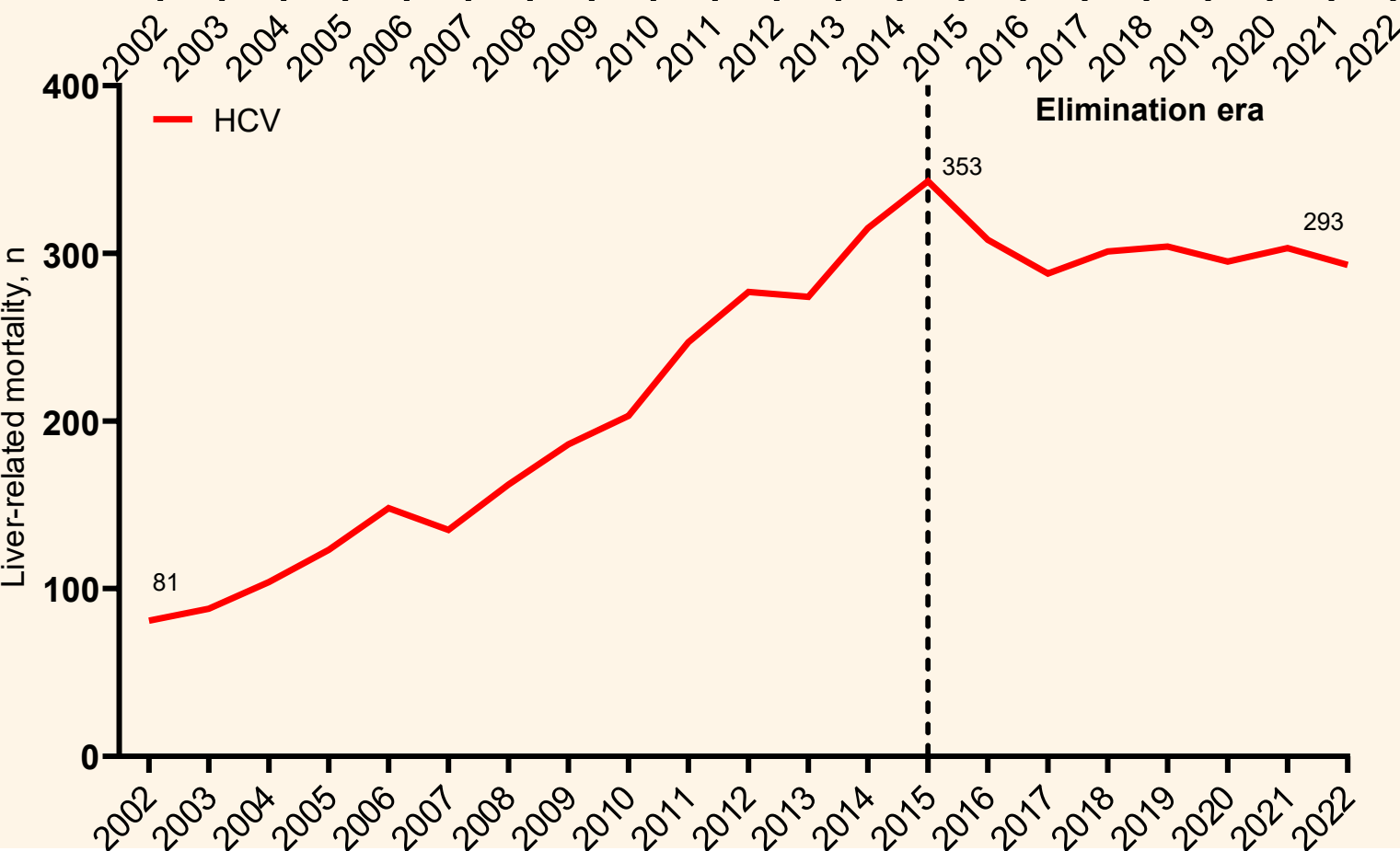
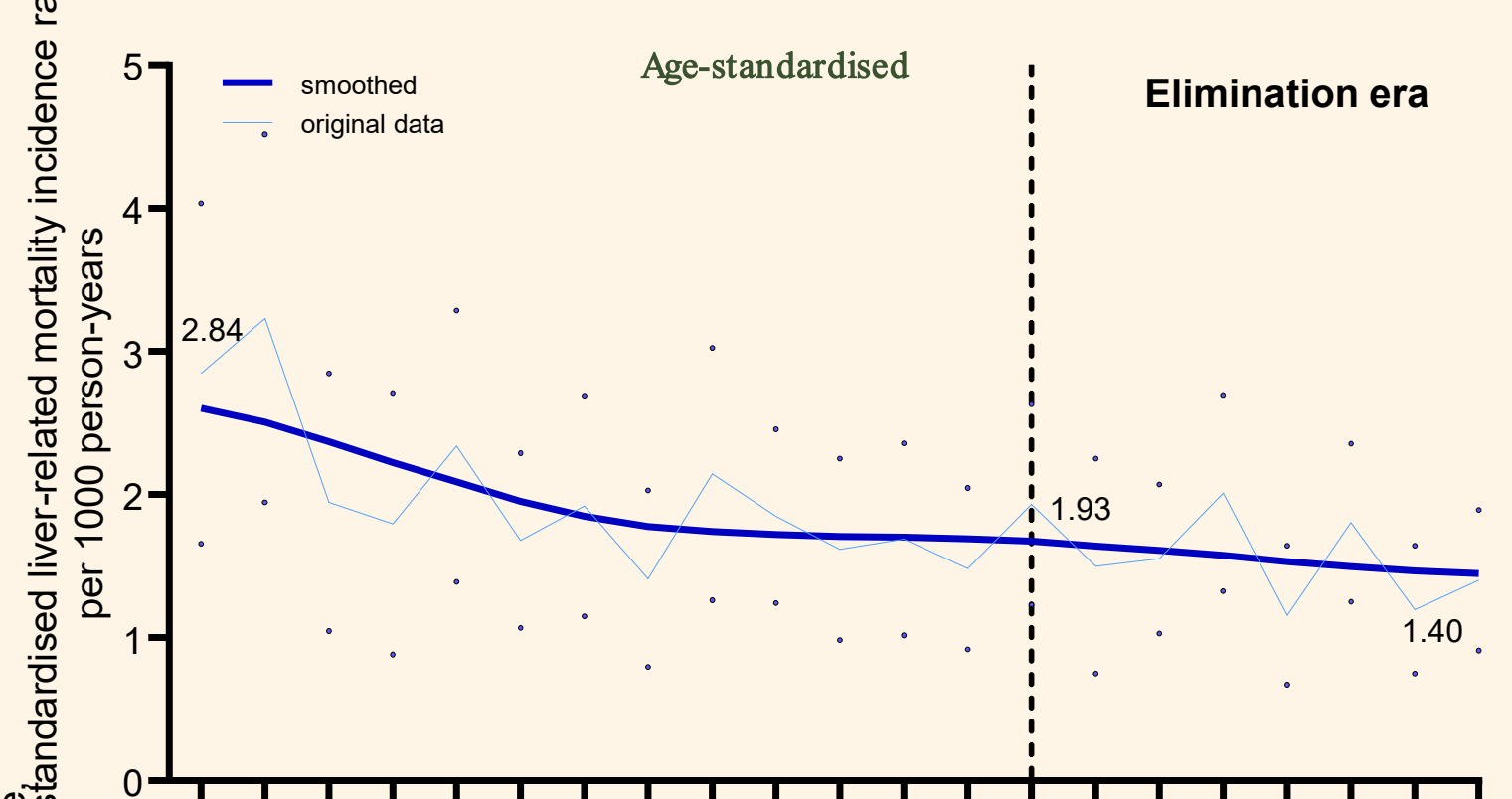
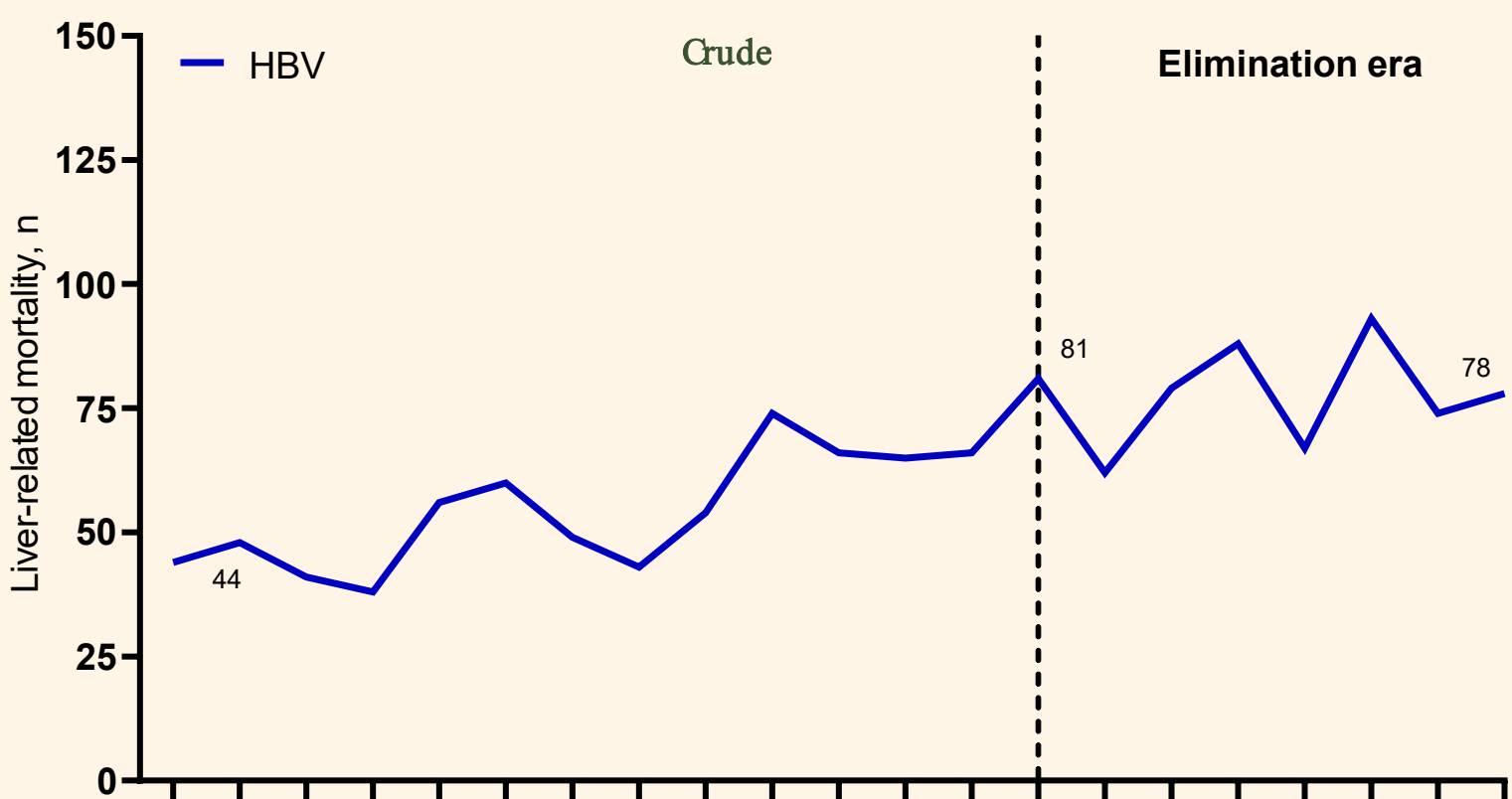
Elimination era: 1 January 2015 - 31 December 2022
Aligned with the WHO baseline relative elimination targets.

Study population: 64,865 people notified with HBV, 112,277 people notified with HCV

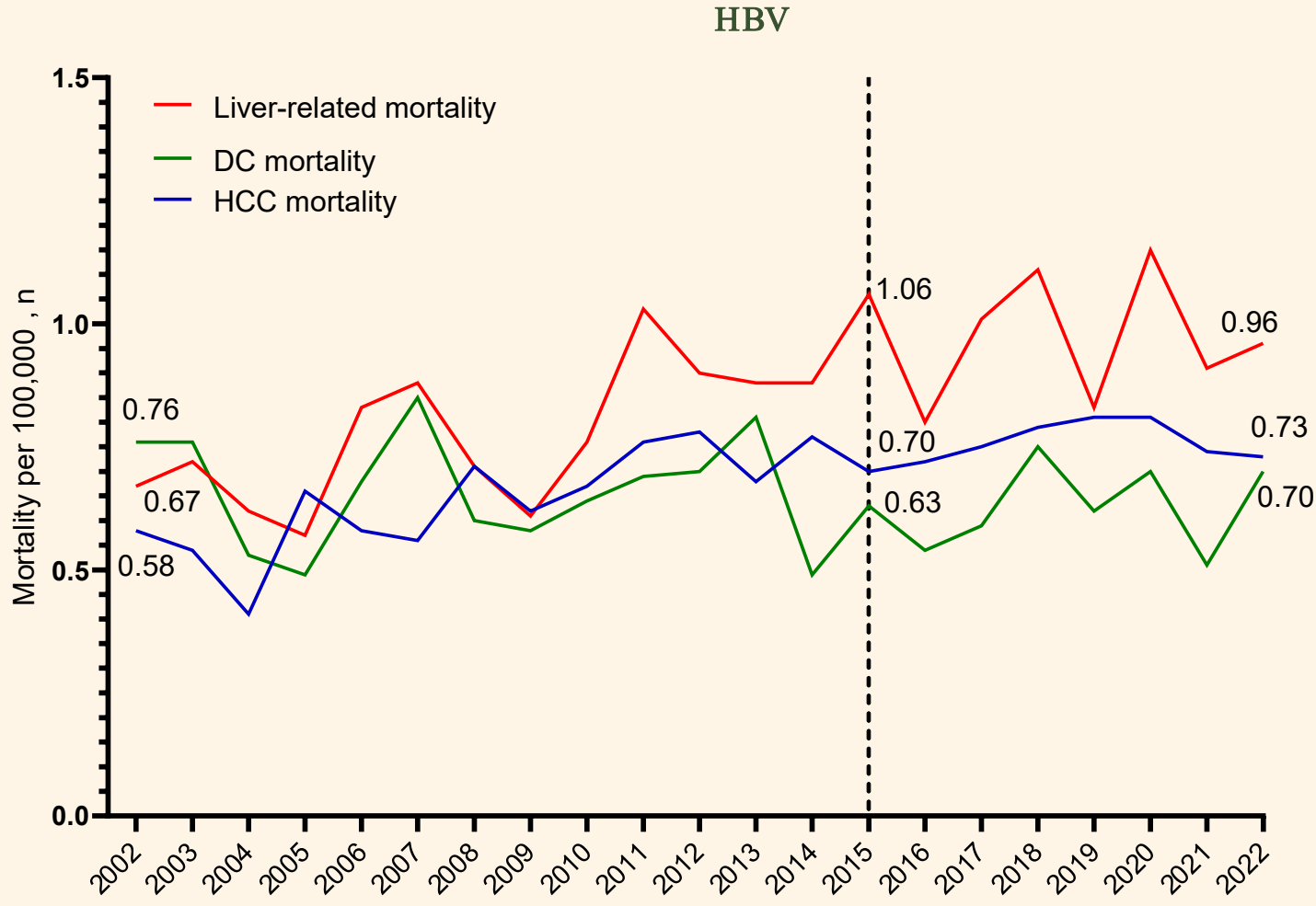
HBV- and HCV-DC, -HCC diagnoses, and liver-related mortality
Impact of Elimination era (1 January 2015 - 31 December 2022)
Factors associated with liver-related mortality



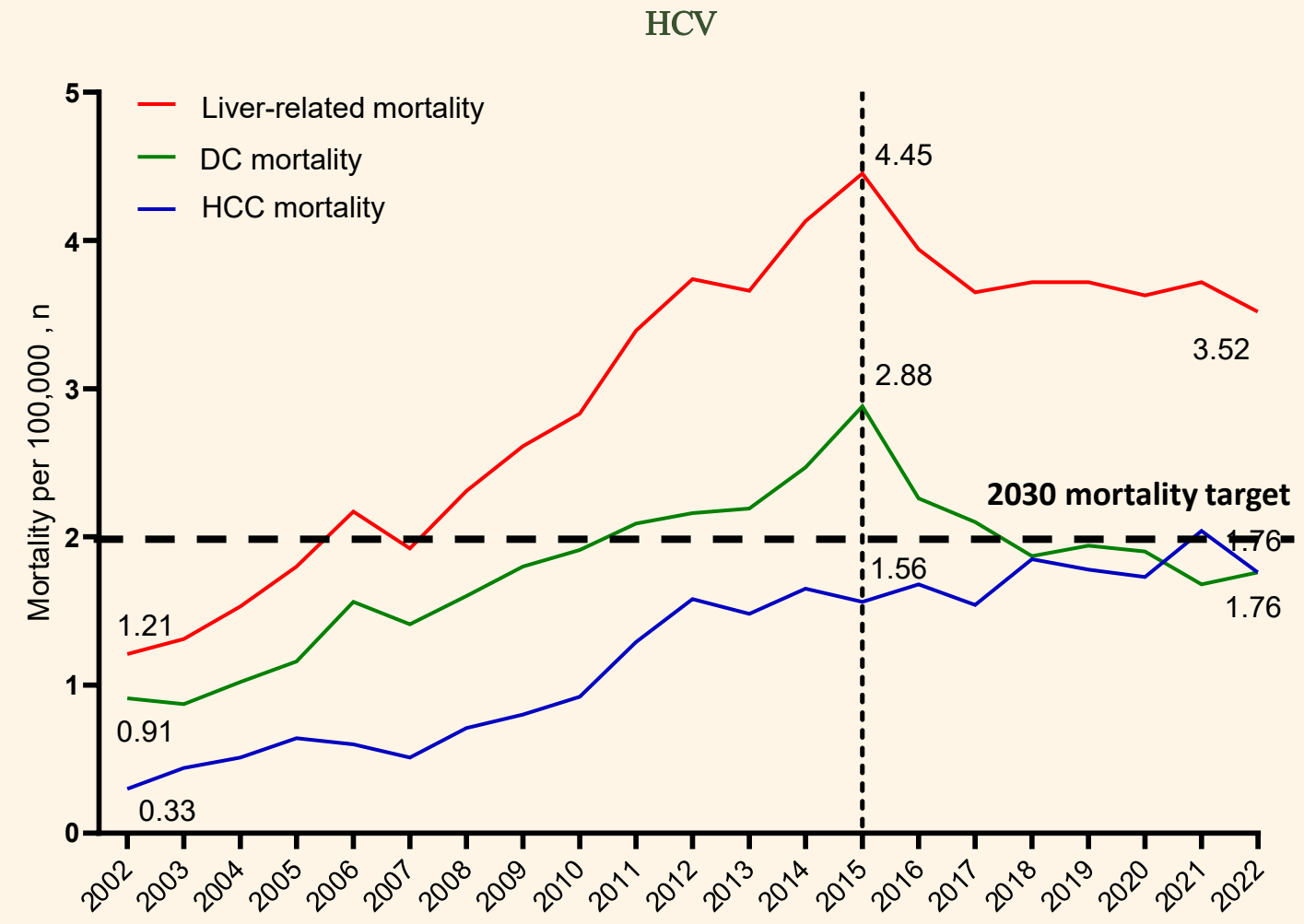




Temporal trends in HBV- and HCV-DC, -HCC and liver-related mortality in NSW



HBV mortality WHO target: ≤ 4 deaths per 100,00 population

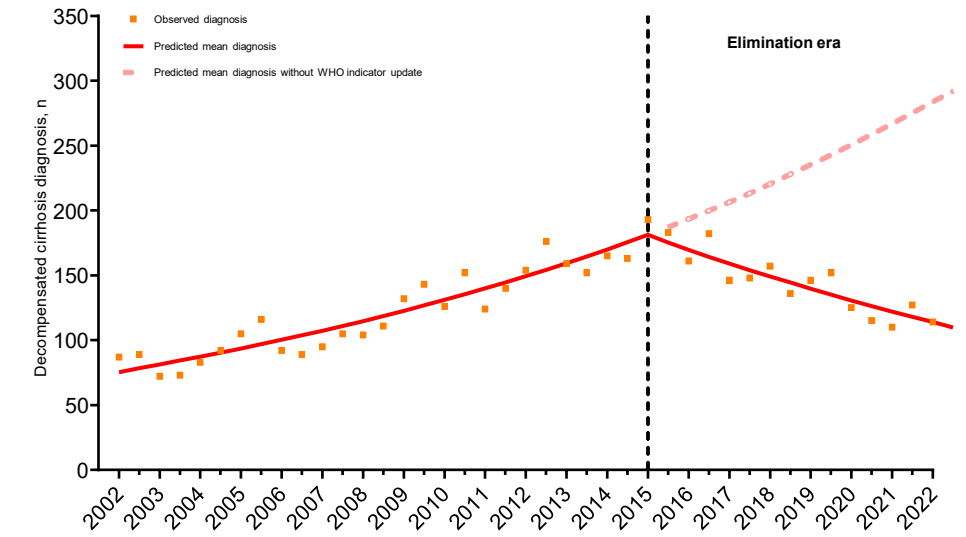
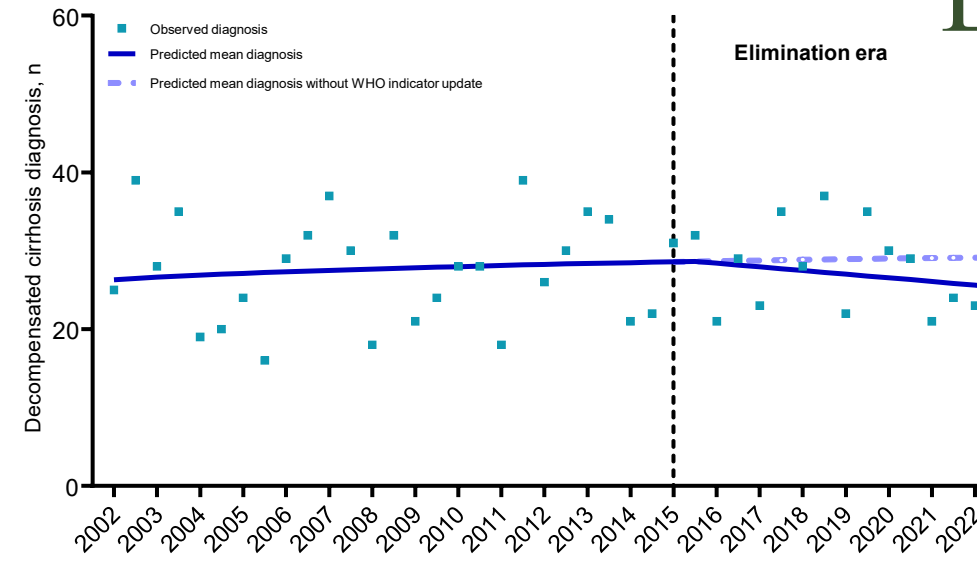


HCV mortality WHO target: ≤ 2 deaths per 100,00 population

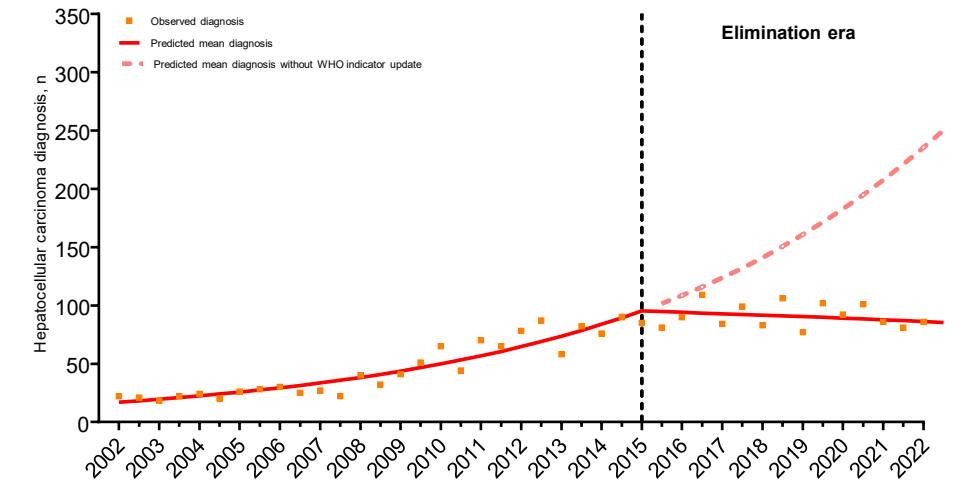
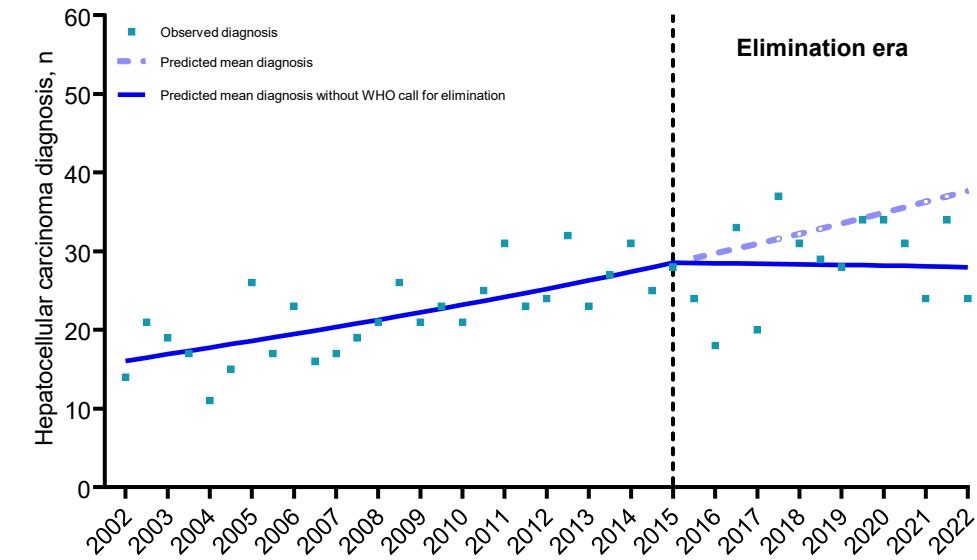
WHO combined mortality target: ≤ 6 deaths per 100,00 population

Elimination era impact

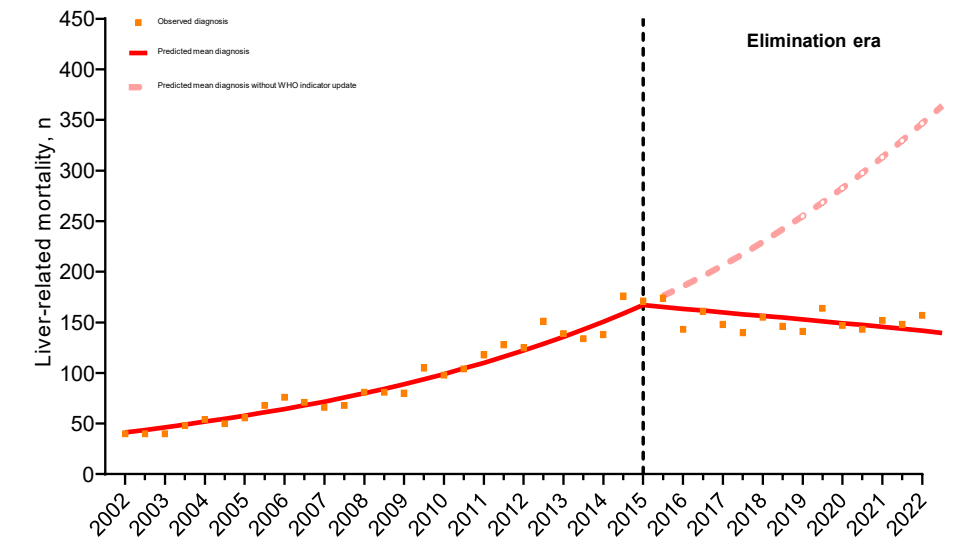
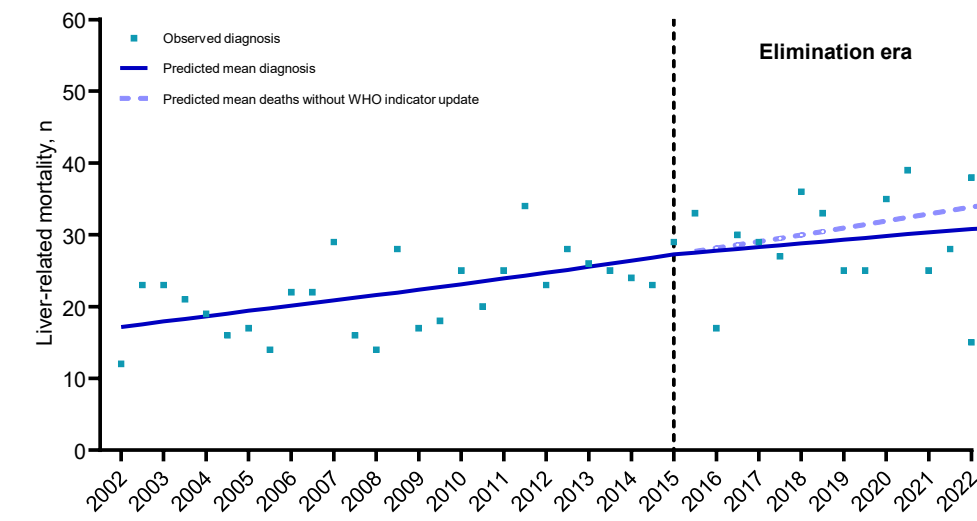
Decompensated cirrhosis diagnoses



Hepatocellular carcinoma diagnoses



Liver-related mortality



Factors Associated with Liver Mortality in the elimination era among people with HCV and HBV

1 Older Age

Individuals born before 1967 had a 6-fold higher risk of liver-related mortality compared to younger cohorts for both HBV and HCV

2 Male Sex

Males had a 2-fold and 1.4-fold higher risk of liver-related mortality than females for both HBV and HCV, respectively.

3 Comorbidities

Those with significant comorbidities had a 60% higher risk of liver-related mortality for both HBV and HCV

4 Alcohol Use Disorder

A history of alcohol use disorder was associated with a 4.5-fold higher risk of liver-related mortality for both HBV and HCV

Turning the Tide on Viral Hepatitis Morbidity and Mortality

Pre-Elimination Era
2002 - 2014

Prior to 2015, there were increasing trends in decompensated cirrhosis, hepatocellular carcinoma, and liver-related mortality for both HBV and HCV in NSW.

Elimination Era
2015 - 2022

Since 2015, the elimination era has seen stabilisation or declines in these outcomes.

Mortality target
progress

NSW's current combined liver-related mortality from HBV and HCV is already below the WHO elimination target of ≤ 6 per 100,000 population.