

# Hospitalisations wholly attributable to Alcohol

This report presents information on hospitalisations where the primary diagnosis is a condition wholly caused by alcohol in Aotearoa New Zealand.

## Key facts

- The 2024 alcohol hospitalisation rate was 79.1 per 100,000 people, an increase from 74.5 hospitalisations per 100,000 people in 2023.
- Alcohol caused hospitalisation rates were much higher for males than females, were highest in the 45 to 54 and 55 to 64 age groups and higher in more deprived areas.
- The main wholly attributable condition was “mental and behavioural problems due to use of alcohol”

## The health impact of alcohol

Alcohol consumption has been linked to more than 200 conditions including liver diseases, road injuries, violence, cancers, cardiovascular diseases, suicides, tuberculosis, and HIV/AIDS (World Health Organization, 2018) and there is increasing emphasis on alcohol as the third most important risk factor for cancer behind smoking and obesity (The Office of the Surgeon General, 2025).

There are also a number of health conditions that are defined as being **wholly** caused by alcohol. These are listed with their codes in the International Classification of Disease version 10, Australian Modification.

This document reports on the number and rates of hospitalisation for these wholly attributable causes. As such it will be an underestimate of the role of alcohol in total hospitalisation. It will also underestimate the total burden of disease resulting from alcohol as it does not cover alcohol related conditions not requiring hospitalisation. The source for this data is the National Minimum Data Set (NMDS) and discharges are counted from public hospitals only.

**Table 1: Conditions wholly caused by alcohol**

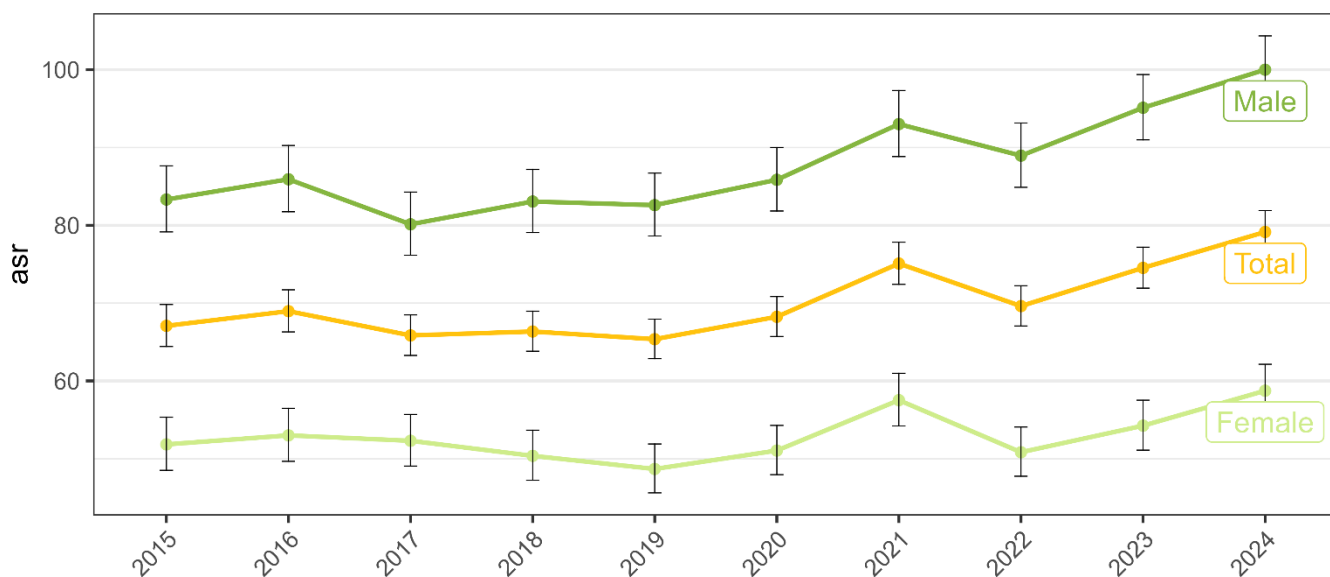
ICD 10	Description
E24.4	Alcohol-induced pseudo-Cushing's syndrome
F10	Mental and behavioural disorders due to use of alcohol
G31.2	Degeneration of nervous system due to alcohol
G62.1	Alcoholic polyneuropathy
G72.1	Alcoholic myopathy
I42.6	Alcoholic cardiomyopathy
K29.2	Alcoholic gastritis
K70	Alcoholic liver disease
K86.0	Alcohol-induced chronic pancreatitis
T51.0	Ethanol poisoning
T51.1	Methanol poisoning
T51.9	Toxic effect of alcohol, unspecified
X45	Accidental poisoning by and exposure to alcohol
X65	Intentional self-poisoning by and exposure to alcohol
Y15	Poisoning by and exposure to alcohol, undetermined intent
K85.2	Alcohol-induced acute pancreatitis
Q86.0	Foetal alcohol syndrome (dysmorphic)
R78.0	Excess alcohol blood levels
Y90	Evidence of alcohol involvement determined by blood alcohol level
Y91	Evidence of alcohol involvement determined by level of intoxication

## Alcohol hospitalisations have remained steady since 2015.

The chart below (Figure 2) shows the rate of wholly caused alcohol hospitalisations over the 2015-24 period. The rates have been standardized to the World Health Organisation standard population. The rates remain steady over the period but there is an increase towards the end of the series – perhaps as a catch up following the COVID epidemic. The rate for men is higher than that for women and there is no evidence in this data that the gap is closing. This is reiterated by the standardized rate ratio for the risk of hospitalisation for men versus women reported in **Error! Reference source not found.** which is always significantly higher

than 1.

Age-standardised rate per 100,000



source: NMDS

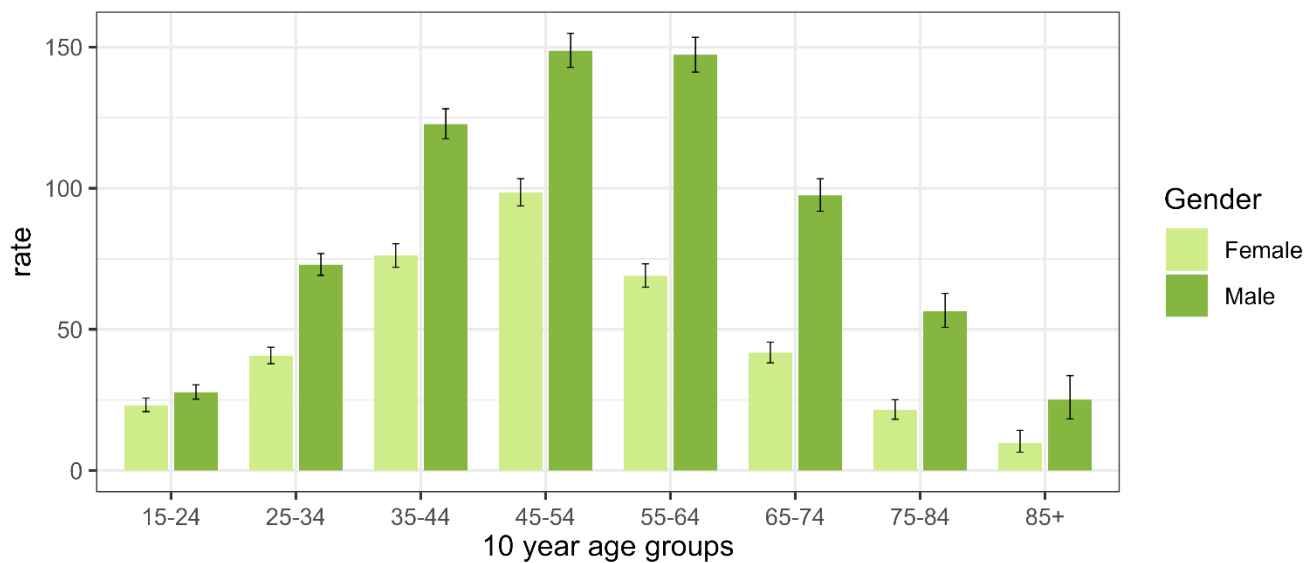
Figure 1: Age standardised rate of hospitalisations: Men vs Women.

Year	SRR	Lower confidence limit	Upper confidence limit
2015	1.61	1.48	1.75
2016	1.62	1.50	1.76
2017	1.53	1.41	1.66
2018	1.65	1.52	1.79
2019	1.70	1.57	1.84
2020	1.68	1.56	1.82
2021	1.62	1.50	1.74
2022	1.75	1.62	1.89
2023	1.75	1.63	1.89
2024	1.70	1.59	1.83

Table 2: Standardised rate ratio: Men vs Women

**The highest hospitalisation rates were among 45 to 54 and 55 to 64 year olds**

### Crude rate per 100,000 2020-2024



Source: NMDS

Figure 2: Alcohol hospitalisation by age.

### NZ Europeans and Māori had the highest rates of hospitalisation.

The “other” ethnic group (mainly NZ European) has had the highest rate of hospitalisation for alcohol caused conditions over the five-year period 2020-24 marginally higher than the Māori ethnic group.

### Age-standardised rate per 100,000 2020-2024

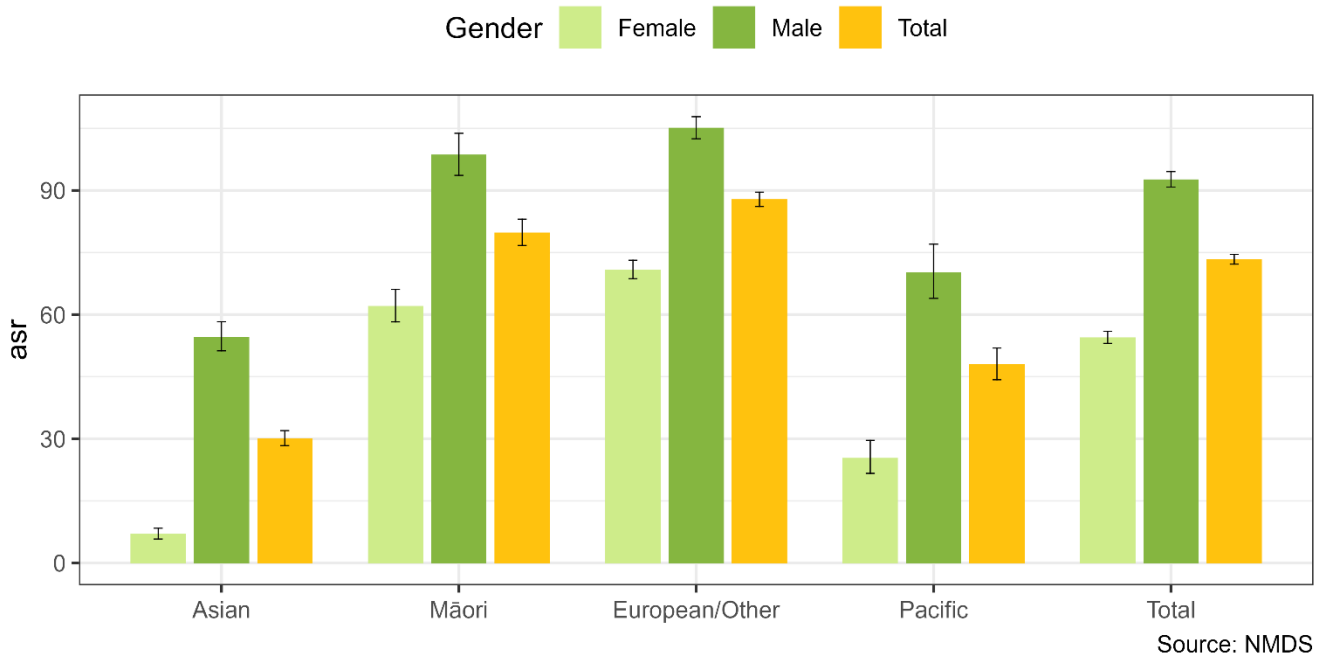


Figure 3: Alcohol hospitalisation by ethnicity.

The rates of hospitalisation for the European and Māori groups have remained above the Asian and Pacific groups from 2015 until the latest data.

### Age-standardised rate per 100,000

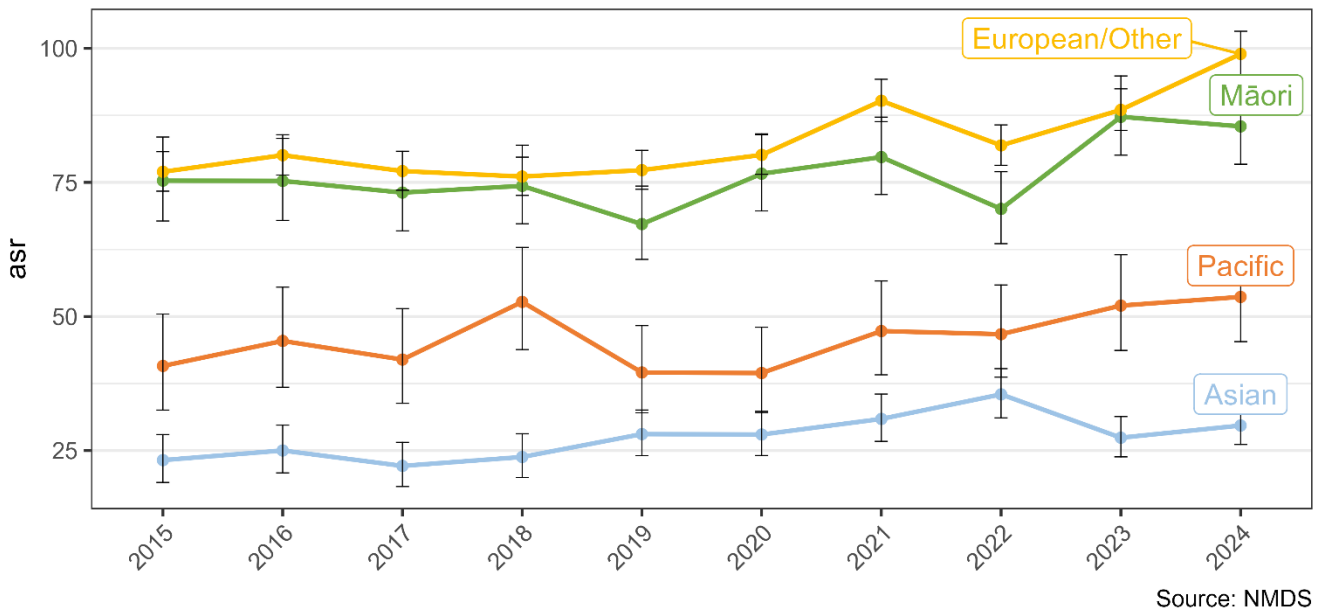
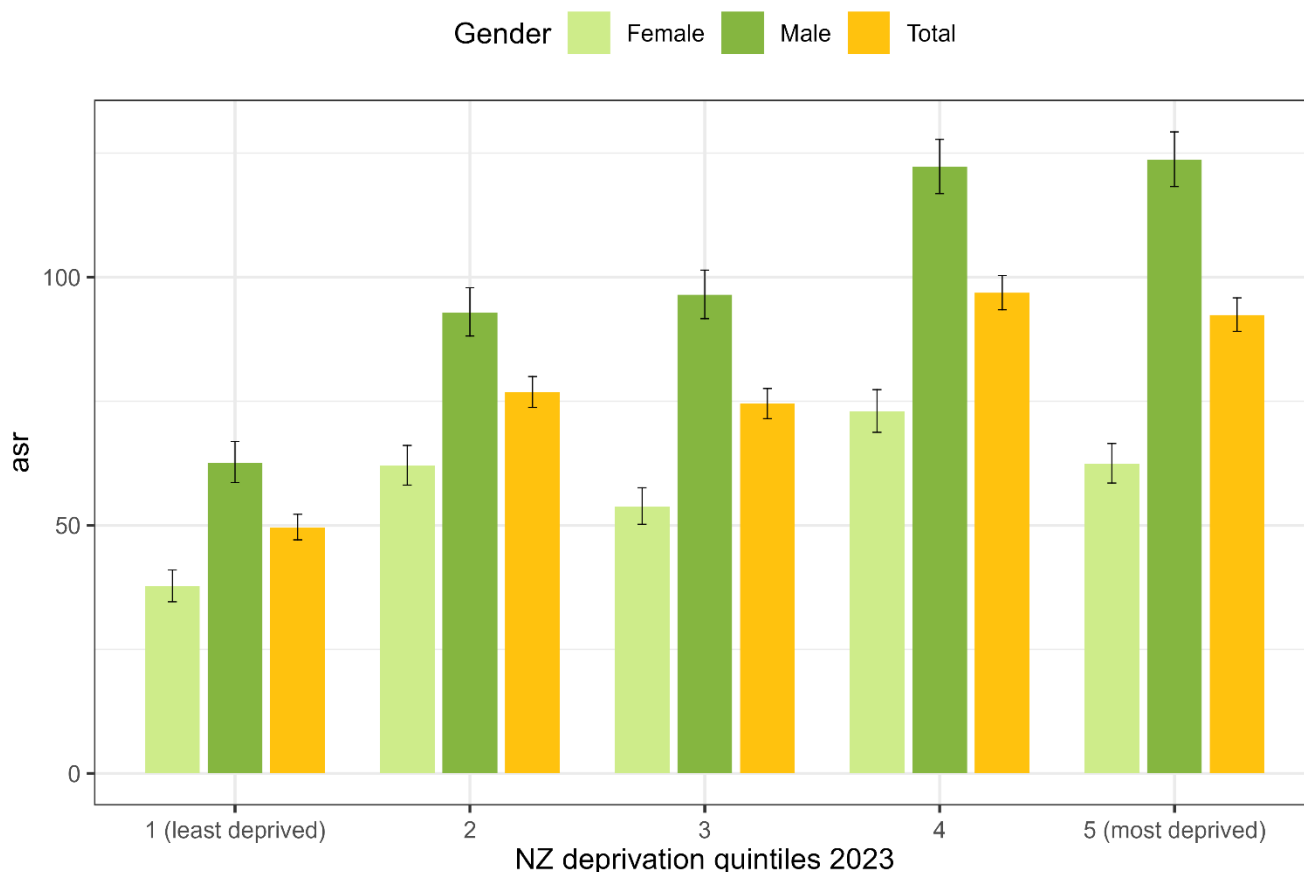


Figure 4: Alcohol hospitalisations by ethnicity since 2015

## People living in more deprived areas

The rates of hospitalisation increase as the level of deprivation increases. It is not a linear increase, but the most deprived areas have higher rates of hospitalisation for both men and women than the least deprived.

Age-standardised rate per 100,000  
2021-2024



source: NMDS

Figure 5: Alcohol hospitalisations by deprivation quintile

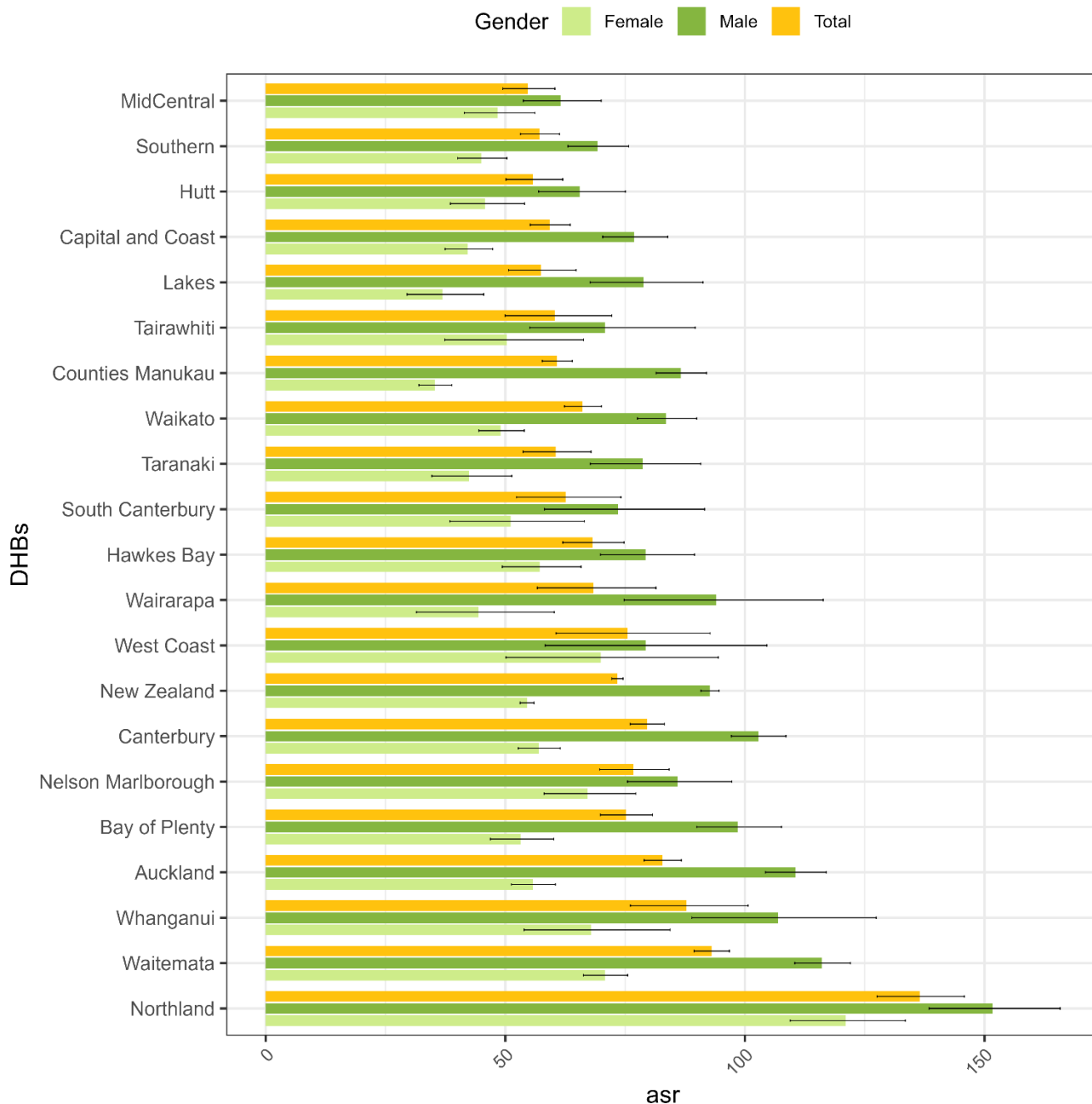
## Most common diagnosis for hospitalisation

The most common ICD-10 3-digit codes for conditions requiring hospitalisation all lie within the F10 code group “Mental and behavioural disorders due to use of alcohol”. In particular F10.0 “Mental and behavioural disorders due to use of alcohol, acute intoxication”, F10.3 “Mental and behavioural disorders due to use of alcohol, withdrawal state” and F10.2 “Mental and behavioural disorders due to use of alcohol, dependence syndrome”. Over the five year period 2020-2024 these accounted for 67% of all hospitalisations for alcohol caused conditions. These would all fall under the ‘acute’ category representing recent alcohol consumption. The most chronic conditions for which hospitalisation was necessary was K29.20 “Alcoholic gastritis without bleeding”, K85.2 “Alcohol induced acute pancreatitis” and K70.3 “Alcoholic cirrhosis of liver”.

## Most affected regions

The rates of hospitalisation are highest in Northland, Whanganui and Waitemata DHBs. The rate in Northland is notable because it is also high for women.

## Age-standardised rate per 100,000 2020-2024



source: NMDS

Figure 6: Alcohol hospitalisations by DHB

## Summary and discussion

Hospitalisation is an indicator of the level of alcohol related morbidity in the population. We do not have data on alcohol related harm that did not require a hospital attendance. We also have not included attendances at long term rehabilitation centres. In addition, we have not included hospital spells where alcohol was classed as one of a number of contributory factors. This means our figures are underestimates of the total burden of disease caused by alcohol consumption. The main advantage with this approach is

that the data is robust and collected in a consistent fashion.

The total burden is underestimated also because we do not include the harm caused to those other than the drinker. What estimates exist suggest this harm maybe greater than that suffered by the drinker and a major part of this harm is caused by foetal alcohol spectrum disorder (Casswell et al., 2024).

Men are much more likely than women to be hospitalised. This is probably because men typically drink more than women. Male drinking has been normalised in European-type societies where drinking in group settings affirms masculinity and bonding. However, more recent evidence has shown convergence between male and female drinking patterns, particularly for younger adults (Hunt & Antin, 2019). Given the lag between alcohol consumption and development of conditions requiring hospitalisation this has yet to appear in our estimates.

Evidence seems to show that, whilst the prevalence of drinking in Māori is not significantly different to non-Māori, those that drink are significantly more likely to drink in a hazardous fashion and to engage in heavy episodic drinking at least monthly (Ministry of Health, 2025). There is unequal access for Māori to appropriate and timely healthcare, and this might lead to cases ending up in hospital when a primary care of community based approach would have been preferable.

There is a wide variance between the rates of hospitalisation by DHB with males in Northland hospitalised at a rate three times those in Mid-Central.

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- Casswell, S., Huckle, T., Romeo, J. S., Moewaka Barnes, H., Connor, J., & Rehm, J. (2024). Quantifying alcohol-attributable disability-adjusted life years to others than the drinker in Aotearoa/New Zealand: A modelling study based on administrative data. *Addiction*, 119(5), 855-862.  
<https://doi.org/https://doi.org/10.1111/add.16435>
- Hunt, G., & Antin, T. (2019). Gender and intoxication: from masculinity to intersectionality. *Drugs: Education, Prevention and Policy*, 26(1), 70-78. <https://doi.org/10.1080/09687637.2017.1349733>
- Ministry of Health. (2025). *Annual Data Explorer 2024/25: New Zealand Health Survey*. Ministry of Health. Retrieved 17/2/2026 from <https://minhealthnz.shinyapps.io/nz-health-survey-2024-25-annual-data-explorer/>
- The Office of the Surgeon General. (2025). *The U.S. Surgeon General's Advisory on Alcohol and Cancer Risk*.
- World Health Organization. (2018). *Global status report on alcohol and health 2018*.