

Information topic	Details																																						
Indicator name	Mortality wholly attributable to alcohol																																						
Domain and topic	Alcohol related harm: Harm to drinkers																																						
Indicator definition and units	The number and rate of registered deaths in population where the cause of death is wholly attributable to alcohol. Crude and age-standardised rates per 100,000 persons																																						
Data sources	New Zealand Mortality Collection (Health New Zealand - Te Whatu Ora) Populations web tool (Health New Zealand – Te Whatu Ora) Stats NZ NZDep2018 population denominators																																						
Numerator	Counts of deaths, where the underlying cause is in the alcohol wholly attributable group, are made for each year. Deaths are assigned to the year they were registered. The codes below are the ICD-10-AM codes and the associated conditions defined as wholly attributable to alcohol. These are listed in Jones and Bellis (2013) and Carr (2026) <table border="1"> <tbody> <tr><td>E24.4</td><td>Alcohol-induced pseudo-Cushing's syndrome</td></tr> <tr><td>F10</td><td>Mental and behavioural disorders due to use of alcohol</td></tr> <tr><td>G31.2</td><td>Degeneration of nervous system due to alcohol</td></tr> <tr><td>G62.1</td><td>Alcoholic polyneuropathy</td></tr> <tr><td>G72.1</td><td>Alcoholic myopathy</td></tr> <tr><td>I42.6</td><td>Alcoholic cardiomyopathy</td></tr> <tr><td>K29.2</td><td>Alcoholic gastritis</td></tr> <tr><td>K70</td><td>Alcoholic liver disease</td></tr> <tr><td>K85.2</td><td>Alcohol-induced acute pancreatitis</td></tr> <tr><td>K86.0</td><td>Alcohol-induced chronic pancreatitis</td></tr> <tr><td>Q86.0</td><td>Foetal alcohol syndrome (dysmorphic)</td></tr> <tr><td>T51.0</td><td>Ethanol poisoning</td></tr> <tr><td>T51.1</td><td>Methanol poisoning</td></tr> <tr><td>T51.9</td><td>Toxic effect of alcohol, unspecified</td></tr> <tr><td>X45</td><td>Accidental poisoning by and exposure to alcohol</td></tr> <tr><td>X65</td><td>Intentional self-poisoning by and exposure to alcohol</td></tr> <tr><td>Y15</td><td>Poisoning by and exposure to alcohol, undetermined intent</td></tr> <tr><td>Y90</td><td>Evidence of alcohol involvement determined by blood alcohol level</td></tr> <tr><td>Y91</td><td>Evidence of alcohol involvement determined by level of intoxication</td></tr> </tbody> </table>	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	K85.2	Alcohol-induced acute pancreatitis	K86.0	Alcohol-induced chronic pancreatitis	Q86.0	Foetal alcohol syndrome (dysmorphic)	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	Y90	Evidence of alcohol involvement determined by blood alcohol level	Y91	Evidence of alcohol involvement determined by level of intoxication
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	- Codes T51.0, T51.1, T51.9, X45, X65, Y15, Y90 and Y91 are excluded as, by definition, they cannot be an underlying cause of death. - Non-residents (domicile code = 9999) are excluded. - Q86.0 events are excluded as they indicate mortality caused by someone else's alcohol consumption.
Denominator	The population data for districts (formerly District Health Boards (DHBs)), priority ethnic groups, age groups, gender and for years 2001 to 2021 is from Health NZ and Stats NZ. Mid-year population estimates are used
Time period and time scale	Calendar year data from 2001 until latest year of available data (currently 2021).
Population coverage	New Zealand usually resident population.
Spatial Coverage	National, with rates also presented by district (formerly District Health Boards), Territorial Authority, and Auckland Local Boards
Measures of frequency	Results are presented by year, age group, sex, priority ethnic group (Māori, Pacific, Asian, European/Other), NZDep2018 quintile (Atkinson. et al. 2020), urban/rural classification and district.
Methodology	95% confidence intervals for crude and age-standardised rates as recommended by the UK Association of Public Health Observatories, using Byar's approximation and exact probabilities for small counts (Eayres 2008). Suppression was applied to some rates due to the unreliability of estimates based on small numbers. Age-standardised rates were suppressed for mortality counts (numerator) less than 20 or population (denominator) less than 30. Crude rates and age-specific rates were suppressed for counts less than 5 or populations less than 30. Rate ratios have been used to compare rates. A rate ratio higher than 1 indicates the rate is higher in the group of interest than in the comparison group. We have used 95% confidence intervals to decide if the rate ratio is statistically significantly different from 1 (where 1 indicates no difference because the two rates are the same). If the 95% confidence interval does not include 1, then the rate ratio is statistically significant (at the 5% probability level). Deaths are allocated to geographical areas based on the residential address of the person.
Limitations of the indicator	Alcohol consumption is a contributory cause (i.e. less than 100%) to many other fatal conditions including many cancers. This report does not cover deaths not wholly attributable to alcohol. A study estimating the partially attributable deaths due to alcohol was carried out by the University of Otago in 2024 (Chambers et al. 2024). Deaths caused by another person's alcohol consumption are not included. Deaths from alcohol may occur many years after harmful drinking and in a different location to where the harmful drinking occurred.

Related indicators	• Hospitalisations wholly attributable to alcohol • Alcohol-related motor vehicle crashes and injury outcomes from alcohol-related crashes • Hazardous drinking • Heavy episodic drinking
References	Atkinson. J, Salmond C, Crampton P. 2020. Nzdep2018 index of deprivation, final research report. University of Otago. Carr S et al. 2026. A review of the relationship between dimensions of alcohol consumption and the burden of disease: 2026 update including mendelian randomisation studies. <i>Addiction</i>. 121(8):1998–2018.. doi:https://doi.org/10.1111/add.70435. Chambers T, Mizdrak A, Jones AC, Davies A, Sherk A. 2024. Estimated alcohol-attributable health burden in Aotearoa New Zealand. <i>Health New Zealand</i>. Eayres D. 2008. Commonly used public health statistics and their confidence intervals. Association of Public Health Observatories. Jones L, Bellis MA. 2013. Updating england-specific alcohol-attributable fractions. Centre for Public Health, Liverpool John Moores University.