

Information topic	Details
Indicator name	Alcohol-related motor vehicle crashes
Domain and topic	Alcohol-related harm: Harm to others
Indicator definition and units	<p>Reported alcohol-related motor vehicle crashes, associated with alcohol use in driver or other road user (passenger, pedestrian, cyclist), crude rate per 10,000 population.</p> <p>A motor vehicle crash is a crash that occurs on a public road that is attributable directly or indirectly to a motor vehicle or its load (Ministry of Transport, 2015).</p> <p>The number of crashes reported to Police, where alcohol is a factor associated with the driver, or other person involved in the crash (passenger, pedestrian, cyclist), based on the following cause codes:</p> <ul style="list-style-type: none"> 101 – Alcohol suspected, not tested 103 – Alcohol test above the limit or test refused 104 – Alcohol (blood) test result unknown 105 – Intoxicated non-driver (pedestrian/cyclist/passenger)
Data source	<p>National traffic crash database, Crash Analysis System (CAS), New Zealand Transport Agency.</p> <p>Crash data are derived from detailed Traffic Crash Reports completed by police officers who attend the scene of a crash.</p> <p>Statistics New Zealand for denominator data.</p>
Numerator	Number of alcohol-related motor vehicle crashes
Denominator	<p>Population of the geographic area in which the crash occurred.</p> <p>District Health Board – Statistics New Zealand DHB estimates and projections, of usually resident population, mid-year estimates as at 30 June.</p> <p>Territorial Authority - Statistics New Zealand Territorial Authority estimates and projections, of usually resident population, mid-year estimates as at 30 June.</p>
Methodology	<ul style="list-style-type: none"> • The small number of crashes that were not geo-coded were excluded from sub-national geographic analysis. • Rates have been suppressed for counts less than 5 • The data used includes a small number of reported crashes that only involve cyclists and no motor vehicles. This is consistent with how the Ministry of Transport produced

	their 2014 annual statement on motor vehicle crashes in New Zealand (Ministry of Transport 2015).
Time period and time scale	Calendar year based on the date of the crash, from 2009 onwards to most current year of data abstraction.
Population coverage	Numerator – All road users Denominator – Usually resident population
Spatial Coverage	District health board Territorial authority Area unit
Confidence interval methodology	95% confidence intervals for crude rates as recommended by the UK Association of Public Health Observatories, using Byar's approximation and exact probabilities for small counts (Eayers 2008).
Limitations of indicator	<p>The law requires that road traffic accidents involving a motor vehicle and an injury be reported (Ministry of Transport 2015). Potentially, only about two-thirds of motor vehicle injury crashes are reported when compared to hospital surveys (Ministry of Transport 2015). There may be under-reporting of alcohol-related crashes from fear of prosecution.</p> <p>Non-injury crashes are also likely to be to be under-reported as there is no legal requirement to report them.</p> <p>The number of crashes becomes small when analysed by sub-national geographical areas, limiting time series and comparisons between areas, particularly for smaller Territorial Authorities.</p>
Limitations of data source	CAS is a live database and is continually changing as data is entered and edited. Crashes that do not occur on public roads are excluded.
Created by	Environmental Health Indicators Programme, Massey University
Related indicators	Injury-related outcomes of alcohol-related motor vehicle crashes Hospitalisations wholly attributable to alcohol Prevalence of hazardous drinking Alcohol outlet licence density
For more information	https://www.nzta.govt.nz/resources/crash-analysis-system/cas.html
References	Eayres D. 2008. <i>Technical Briefing 3: Commonly used public health statistics and their confidence intervals</i> . York: Association of Public Health Observatories.

	<p>See also accompanying spreadsheet tool available from http://www.apho.org.uk/default.aspx?RID=39403</p> <p>Ministry of Transport. 2015. <i>Motor vehicle crashes in New Zealand 2014</i>. Wellington: Ministry of Transport.</p> <p>Ministry of Transport. 2016. <i>Alcohol and drugs 2015</i>. Wellington: Ministry of Transport.</p>
--	---