

Information topic	Details
Indicator name	Injury outcomes of alcohol-related motor vehicle crashes
Domain and topic	Alcohol-related harm: Harm to others
Indicator definition and units	<p>Percentage of reported alcohol-related motor vehicle crashes by crash injury type (fatal, severe, fatal or severe).</p> <p>The severity or injury type classification of a motor vehicle crash is determined by the most severely injured casualty in the crash (Ministry of Transport 2008).</p> <p>Injury severity is classified as fatal, serious, or minor as follows: <i>Fatal</i> – Injuries that result in death within 30 days of a crash. <i>Serious</i> – Fractures, concussion, internal injuries, crushing, severe cuts and lacerations, severe general shock necessitating medical treatment, and any injury involving removal to and detention in hospital. <i>Minor</i> – Injuries which are not serious but which require first aid, or cause discomfort or pain to the person injured, eg, sprains and bruises (Ministry of Transport 2016).</p>
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>
Numerator	<p>Number of alcohol-related crashes in the injury categories of :</p> <ul style="list-style-type: none"> • fatal • serious (excluding fatal crashes) • fatal or serious
Denominator	<p>Reported alcohol-related motor vehicle crashes associated with alcohol use in driver or other road user (passenger, pedestrian, cyclist).</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. • Where counts are less than 5, rates have been suppressed. • 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 time and date of the crash, from 2009 onwards to most current year of data abstraction.
Spatial Coverage	District Health Board Territorial Authority Area Unit
Measures of frequency	Fatal, Serious, Serious or fatal injuries
Confidence interval methodology	95% confidence intervals using the Wilson Score method for proportions as recommended by the UK Association of Public Health Observatories (Eayres 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>There is also under-reporting of the injury outcomes in a reported crash. Under-reporting of injury outcomes is considered to higher as the severity of injury reduces.</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 and fatal crashes.</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 not covered by Police crash reporting.
Created by	Environmental Health Indicators Programme, Massey University
Related indicators	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. See also accompanying spread sheet tool available from

<http://www.apho.org.uk/default.aspx?RID=39403>

Ministry of Transport. 2008. *Motor vehicle crash data in New Zealand Factsheet* [Factsheet]. Wellington: Ministry of Health.

Ministry of Transport. 2015. *Motor vehicle crashes in New Zealand 2014*. Wellington: Ministry of Transport.

Ministry of Transport. 2016. *Alcohol and drugs 2015*. Wellington: Ministry of Transport.