

# Road Crash Trauma amongst Aboriginal and Torres Strait Islander People in New South Wales

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## Abstract

Aboriginal and Torres Strait Islander road users are over-represented in road trauma in NSW, but few details have been known about this issue as crash reports from NSW Police do not identify Aboriginality for people involved in the crash. Linkage between CRS crash data and NSW Health data has allowed reporting of Aboriginality using a weight of evidence approach. Of 931,203 people involved in crashes in NSW between 2005 and 2015, 18,452 were reported as Aboriginal. A comprehensive statistical profile has been produced to improve understanding of crash factors and health implications for Aboriginal and Torres Strait Islander road users.

## Background

This paper aims to describe the data linkage process and methodology for identification of aboriginality status as well as presenting a detailed profile of fatality and serious injury crashes for Aboriginal and Torres Strait Islander road users in NSW.

The aboriginal road users are over-represented in road trauma but the development of countermeasures is hampered by challenges in the accurate reporting of Aboriginality. Previously, the NSW Centre for Road Safety (CRS) only had data from Police crash reports, which do not contain information on a person's Aboriginal status. Record linkage between CRS crash data and NSW Health data has allowed this information to be sourced from multiple datasets. However, Aboriginality is known to be under-reported in health data, particularly those involving self-report or self-identification (Australian Institute of Health and Welfare, 2010). Therefore, a nuanced approach is required.

## Method

Aboriginal status was derived using variables from any linked record (not just road crash-related) in the NSW Admitted Patient Data Collection and NSW Emergency Department Data Collection. The method used an algorithm endorsed by the NSW Ministry of Health (2012). Each record of Aboriginal status was treated as a "unit of information" contributing to a weight of evidence as to whether a person should be reported as Aboriginal. The method will be discussed in detail in the presentation

A statistical profile was produced of road trauma amongst Aboriginal and Torres Strait Islander people in NSW between 2005 and 2015. The profile focused on serious injuries and fatalities and compared the factors underlying Aboriginal and non-Aboriginal casualties.

## Results

Between 2005 and 2015, 931,203 people were recorded as being involved in crashes in NSW. Of these people, 18,452 (2.0%) were reported as being Aboriginal or Torres Strait Islander. They made up 4.0% of serious injuries and 3.2% of moderate injuries. Key findings include:

- Aboriginal and Torres Strait Islander people are 2.7 times more likely than non-Aboriginal people to be fatally injured, and 1.7 times more likely to be seriously injured, in a road crash.

- The crash and serious injury profile of Aboriginal and Torres Strait Islander road users is significantly different to that of other road users.
- The fatality rate for Aboriginal and Torres Strait Islander people increased by 182.1 per cent in 2005–2015, from 3.7 to 10.3 deaths per 100,000. The rate for other road users decreased by 43.2 per cent during this time, from 7.6 to 4.3 deaths per 100,000.
- Over the same period, the serious injury rate for Aboriginal and Torres Strait Islander people increased by 22.9 per cent, from 221.9 to 272.6 per 100,000, while the rate for other road users decreased by 11.4 per cent from 175.5 to 155.5 per 100,000.
- Illegal alcohol, fatigue, restraint non-usage and speeding were more commonly involved among Aboriginal and Torres Strait Islander road users compared to other motor vehicle controller fatalities.

## Conclusions

The use of linked data and a weight-of-evidence approach in reporting Aboriginality has resulted in a wealth of information not previously available to the CRS. This study clarifies the over-representation of Aboriginal and Torres Strait Islander people in road trauma. However this analysis cannot account for differences in exposures between Aboriginal and non-Aboriginal road users, which might account for some of the findings. For example, a higher rate of passenger injury and overcrowding are known issues for Aboriginal road users and therefore it is possible that the contributing factors identified are not necessarily higher among Aboriginal drivers per se. Nevertheless a more accurate identification will aid understanding of the causes and implications of road crashes and inform development of effective initiatives to move towards zero deaths and serious injuries for Aboriginal and Torres Strait Islander road users.

## References

- Australian Institute of Health and Welfare. (2010). National best practice guidelines for collecting Indigenous status in health data sets (Cat. no. IHW 29). Canberra, Australia: AIHW.
- NSW Ministry of Health, Population and Public Health Division. (2012). Improved reporting of Aboriginal and Torres Strait Islander peoples on population datasets in New South Wales using record linkage – a feasibility study. Sydney, Australia: NSW Ministry of Health.