

The Australia New Zealand Trauma Registry – Transport-related trauma (20 word limit)

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Abstract

The Australian Automobile Association estimated the cost of road trauma at \$30 billion a year¹. Operating since 2011, the Australian New Zealand Trauma Registry collects trauma data from major trauma centres across Australia, and more recently New Zealand, in order to reflect and act upon emerging trends and demands on the trauma system, and to improve road safety across Australia.

The ATR has data from nearly 30,000 road-transport related severely injured patients, that can contribute to improvements to road safety. The ATR seeks to increase its collaboration with road safety and transport peak bodies to use this data more effectively.

Background and Discussion

Operating since 2012, the ATR (www.atr.org.au) is a key component of the Australian Trauma Quality Improvement Program (AusTQIP). It provides in-hospital trauma data that forms the basis for understanding burden and patterns of severe injury in Australia.

AusTQIP was established in 2011 by the National Trauma Research Institute, Alfred Health and Monash University². It is a collaboration between all Australian major trauma centres and established state and hospital-based trauma registries. AusTQIP currently includes 26 major trauma centres, representing every state/territory in Australia, whose mission is to improve survival, enhance the quality of trauma care, and optimise recovery by shared data and shared knowledge. In 2018, it was joined by New Zealand, representing seven acute-care hospitals.

The ATR collects 67 data-points in accordance with the bi-national Trauma Minimum Dataset for Australia and New Zealand, for severely injured patients (ISS > 12) or death after injury. It collects, analyses and presents national trauma data, which includes how patients were injured, the nature of the injuries sustained, the treatment received and functional outcomes – the full patient journey through the Australian hospital system. There is no other national data collection in Australia that can tell us about the processes of trauma care and patient outcomes.

A subset of the ATR dataset collects road transport information, that when combined with the medical and outcome data, can show road trauma trends and emerging risks. The ATR now has data from 2010 to the June 2018, representing over 65,000 patients, almost half of which are caused by transport-related trauma. Our data shows that one in four in-hospital deaths of trauma patients is caused by road-transport related trauma^{3,4}; the numbers remaining stable over the last three years despite targeted campaigns. Over the last three years, the numbers of off-road (non-traffic) accidents have been increasing⁴.

ATR data is accessible to all contributors, clinicians, researchers, hospital administration, state and federal governments, peak bodies and the public. Transport-related ATR data is used by the Department of Infrastructure, Regional Development and Cities - Bureau of Infrastructure, Transport and Regional Economics (BITRE), who are provided with bi-national trauma datasets

(<https://bitre.gov.au/publications/ongoing/severe-injury.aspx>). The Australian Automobile Association is also working with the ATR linking emergency department data and ambulance service crash site geolocations for minor and major on-road injuries that present to an emergency department. It is predicted that this dataset will allow for the identification of more timely trends in on-road crashes, including location, providing an opportunity for proactive solutions to be implemented in order to reduce the burden of on-road trauma on the health care system.

Conclusion

The ATR seeks to increase the use of its data by road safety and road transport companies. In this presentation, we will present transport-related trauma data collected by the ATR in the last eight years; discuss current and past transport-related trauma engagement; identify emerging trends; and demonstrate how this unique data set can be used to improve road safety and reduce the number of severely injured people on our roads.

References

- ¹Australian Automobile Association. Benchmarking the performance of the National Road Safety Strategy. 2017 Available from URL: https://www.aaa.asn.au/wpcontent/uploads/2018/03/AAABenchmarking-Report_Q4-2017.pdf
- ²Fitzgerald MC, Curtis K, Cameron PA, Ford JE, Howard TS, Crozier JA, Fitzgerald A, Gruen, RL and Pollard C (2018) ANZ J Surg (In press) doi: 10.1111/ans.14940
- ³Australian Trauma Quality Improvement (AusTQIP) Collaboration (2018). Australian Trauma Registry, Management of the Severely Injured in Australia, 1 July 2015 to 30 June 2016, Alfred Health, Melbourne, Victoria.
- ⁴Australian Trauma Quality Improvement (AusTQIP) Collaboration (2018). Australian Trauma Registry, Management of the Severely Injured in Australia, 1 July 2016 to 30 June 2017, Alfred Health, Melbourne, Victoria.