

A National Approach to Measuring Non-Fatal Road Injuries

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Abstract

Austrroads project SS2034 aims to provide proof of concept for a national approach to obtaining routine national data on non-fatal hospitalised road injuries in Australia, using data linkage. We report here on the first part of the project: seeking approvals to use necessary data.

Background

Road safety agencies recognise that data on non-fatal road injuries, as well as deaths, should guide programs. Available data on non-fatal cases are thought to be insufficiently complete and reliable and improvement was foreshadowed in the National Road Safety Strategy Review and action plan.

Linkage of crash data with health sector data has potential to provide better information, and projects have been done in some jurisdictions. Linkage at national level could provide additional benefits including consistency of method, capacity to measure cross-border flows and extension to all jurisdictions.

Protocols and facilities for data linkage have been developing in Australia, particularly in the past decade and in the health sector. While national projects have been envisaged, few completed projects have been national or multi-jurisdictional, none using crash data.

Objectives

The objectives are to:

1. Learn whether relevant ethics committees and data custodians will allow the required use of data. Seek necessary approvals.
2. Test the technical feasibility of the method by applying it to one year of data.
3. Assess the utility of the linked data.
4. Communicate the results.

Methods

The sources are: admitted patients databases, police-reported road crash databases and the National Death Index (NDI), a total of 17 collections.

Ethics committee and data custodian approvals are required in each jurisdiction, from the Australian Institute of Health and Welfare (for NDI data) and the participating universities.

The process being used (Figure 1) is consistent with the separation principle that underpins the health data linkage framework in Australia.

Progress

Work began in December 2015 and 13 ethical and 11 custodian approvals have been sought. As at February 2017, approvals had been granted by university ethics committees, for the NDI and for hospital and crash data in four jurisdictions, plus ethical approval in two more jurisdictions. Other

applications were in progress. In WA, the process is being clarified following legislative change. Provision of data to the AIHW DLU began in February 2017.

As required by Austroads, two versions of the project design were assessed for administrative and ethical feasibility. Design 1 applies the separation principle. Linked files do not contain identifying data, are held in a secure repository and are accessible only to authorised investigators. In design 2, linked data would contain identifying information and be available for use by road safety agencies. Design 1 has been found to be acceptable to ethics committees and data custodians. Requirements essential for the acceptability of design 1 could not be met by design 2, which was assessed not to be feasible and was therefore put aside.

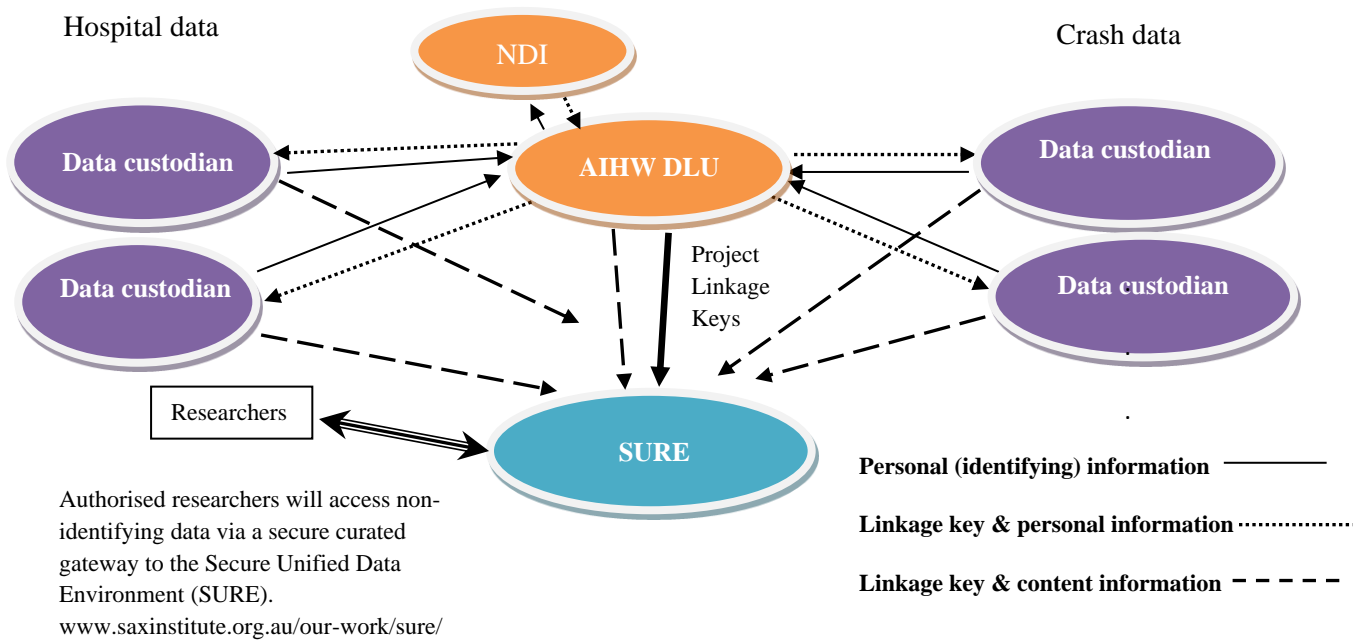


Figure 1: Data linkage process

Conclusions

Some relevant ethics committees and data custodians have confirmed that they will allow the linkage and analysis of required data in a design that employs the separation principle and will hold the non-identifying linked data file in the SURE repository. Whether outstanding approvals will be granted is not yet known. Other unknowns include the time to delivery of remaining data to AIHW-DLU, duration and quality of the matching process and the time to delivery of linked data to SURE.