



TRAUMATIC BRAIN INJURY: FILLING GAPS IN VITAL DATA

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THE Australian Traumatic Brain Injury National Data (ATBIND) project will fill an Australia-wide gap in data on outcomes for people with moderate to severe brain injury, according to the authors of a study protocol published today by the Medical Journal of Australia.

Associate Professor Gerard O'Reilly, an emergency physician and Head of Epidemiology and Statistics at the National Trauma Research Institute at the Alfred Hospital, and colleagues will analyse Australia New Zealand Trauma Registry (ATR) data and National Coronial Information Service (NCIS) deaths data with the aim of "informing improvements in equitable system-level care for all people in Australia with moderate to severe traumatic brain injury (TBI)".

"In Australia, the number of deaths caused by TBI, based on hospital admissions data, is high, but there are no national baseline data on outcomes after moderate to severe TBI," O'Reilly and colleagues wrote.

"Parallel to the need for national baseline summary data on the incidence and outcomes of moderate to severe TBI in Australia is the need to determine the extent and sources of variation in patient outcomes.

"Specifically, we need to identify population subgroups with greater burden of moderate to severe TBI and the determinants of adverse outcomes.

"Further, the effects of variations in access to emergency care and being able to return home have not been examined.

"Finally, the outcomes and process indicators that matter most to people with TBI need to be established," they reported.

The specific aims of the ATBIND project are:

- to determine, for Australia and for certain subgroups (including Aboriginal and Torres Strait Islander people), the incidence of priority outcomes, including survival to discharge home;
- to identify the main patient- and system-level determinants of survival and function at hospital discharge;
- to develop a priority list of the major patient- and system-level predictors of death and disability at hospital discharge;
- to develop models predicting death or disability at hospital discharge;
- to measure, on the basis of existing and extended targeted data (eg, coronial data), the impact of differences in residential location, demographic characteristics, injury mechanism, system-level processes of patient referral, transfer, pre-hospital care, emergency department reception, and hospital care on hospital discharge destination; and
- to establish a data- and consensus-based set of national clinical quality indicators, targeting key inadequacies (including for the health of Aboriginal and Torres Strait Islander people) and inconsistencies in patient- and system-level interventions associated with adverse outcomes for people with moderate to severe TBI.

"The global burden of injury is enormous," wrote O'Reilly and colleagues.



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“More lives are lost to injury than to malaria, tuberculosis, and the human immunodeficiency virus combined. Road traffic injuries alone comprise the leading cause of death among young adults, causing about 1.3 million deaths annually. TBI contributes significantly to deaths and long term disability around the world, affecting about 69 million people each year.

“The work of the ATBIND project, guided by community consultation and the Indigenous data governance committee, will be integrated into the ongoing activities of the ATR to help build a sound foundation for informing sustainable quality improvement initiatives and to provide an exemplar for other health registries for equitably gathering health data and analysing and reporting findings,” they concluded.

The ATBIND project has an anticipated completion date of 31 May 2023, and is supported by a Medical Research Future Fund grant (MRF2007671; 1 June 2021).

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