The National Coroners Information System: contributing to death and injury prevention

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Introduction
The NCIS is a world-first electronic national database of coronial information from all Australian states and territories dating back to 1 July 2000, with the exception of Queensland data, which commences from 1 January 2001. As a collection of information about all deaths reported to a coroner, the NCIS assists death investigators, government agencies and researchers around Australia in obtaining more timely and efficient access to national coronial data and contributes to a reduction in preventable death and injury in Australia.

Prior to the inception of the NCIS, Australia’s eight coronial jurisdictions each had their own systems of data collection and storage; in some jurisdictions, this involved a manual filing system. The coroners’ ability to identify trends on a national basis was hampered by the lack of the means to systematically identify and retrieve clusters of similar cases. By May 2007 over 127,000 cases were available on the NCIS. This represents over six years of data on deaths that have been reported to coroners’ offices around Australia since implementation of the NCIS.

Background information about the NCIS
The NCIS provides a national database of coronial information that is current, comprehensive and easily accessible by authorised users. The dataset includes the following information:
Case Details
- name, age, date of birth and date of death
- place of usual residence & marital status
- usual occupation, employment status
- country of birth and years in Australia
- indigenous identification.
Incident information
- Case Type; natural or external
- classification of intent, such as intentional self-harm, unintentional, interpersonal violence
- date and time of death or incident leading to death
- activity at time of incident leading to death
- whether the activity involved working for income.
Medical information
- mechanism of injury
- object or substance that produced injury
- medical cause of death
- ICD-10 cause-of-death codes.
Full text reports
- documents such as police narrative of incident, autopsy report, toxicology report, and coronial findings.

The NCIS contains coded and non-coded data and is accessible via the Internet. The facility to search data fields as well as full-text reports for keywords provides a sophisticated method to identify cases nationwide to assist with hazard identification, research and injury prevention.

The NCIS does not contain transcripts of inquests, photographic evidence or witness statements.

Influence on injury prevention activities
The NCIS has helped contribute to the safety of the Australian community over the past few years by assisting in the identification of preventable death patterns, and providing evidence to support death and injury prevention programs. Several specific examples are presented below.

Cigarette safety
In December 2006, data from the NCIS was used by the NSW Emergency Services Minister Tony Kelly to help gain support for a recommendation made to state and federal counterparts for a new cigarette safety standard. Reduced Fire Risk
Reports

(RFR) cigarettes will now be tested and made available in Australia after NCIS data indicated that 63 people died in fires started by cigarette ignitions between 2000 and 2005.

**All-Terrain Vehicles (ATVs)**

In December 2002 a national trend involving deaths related to the use of All-Terrain Vehicles (ATVs or Quad bikes) was identified using the NCIS. At that stage there had been 20 such deaths identified as having been reported to a coroner since July 2000. A joint inquest was subsequently held in Victoria and Tasmania, and WorkCover\(^1\) issued a warning about the dangers associated with such vehicles.

In the four years since the original search was conducted, NCIS has continued to monitor the number of ATV related fatalities. The tally had risen to 84 deaths by August 2006, at an average of about 14 each year since July 2000. This alarming fatality rate, particularly when coupled with the non-fatal injuries, has prompted several government and research initiatives involving ATV safety, including:

- the development of safety courses in Western Australia and Tasmania for farmers utilising ATVs
- media coverage of the dangers associated with ATV use (e.g. the ABC’s *7.30 Report; Who magazine*)
- the establishment of an ATV deaths register and database by the National Farm Injury Data Centre
- the development of a national industry strategy by FarmSafe Australia titled ‘The safe operation of All-Terrain Vehicles and All-Terrain Utilities on Australian Farms 2004-2009'
- coronial recommendations made by Tasmanian and Victorian coroners to help reduce the occurrence of ATV fatalities.

As a Victorian Government minister recently commented in a media statement: ‘The Government is prepared to examine the full range of options to reduce ATV deaths and injuries … The number of accidents and deaths associated with ATVs is unacceptably high …’ (*Media release: Acting Minister for WorkCover, John Brumby, 8/01/03*).

It is hoped that over the next few years, the rate of fatalities involving ATVs will decline as a result of the above initiatives. The NCIS will continue to assist with monitoring this issue.

**Victorian level crossing fatalities**

In November 2005, the Victorian Government unveiled its multi-faceted railway crossing safety campaign ‘Don’t Risk It’. The campaign involved TV, radio and outdoor advertising combined with trials of several new traffic initiatives and a stronger enforcement of road laws around the six highest risk level crossings. This major safety campaign was developed as a result of NCIS data provided to the Victorian Department of Infrastructure revealing that 22 people had died at level crossings over the past seven years. These data also included the circumstances surrounding the fatal incidents.

**National safety campaigns**

Over the past few years, data from the NCIS has been provided to the Australian Department of Health and Ageing (DHA) and the Australian Compensation and Consumer Commission (ACCC), resulting in the launch of several safety campaigns by these agencies. These campaigns have included:

- safety of infants/children relating to blind and curtain cords

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\(^1\) Each State in Australia has its own government WorkCover organisation, which manages workplace safety, injury management, and workers compensation systems.
• safe working under vehicles.
A mandatory safety standard concerning trolley jacks has also been released by the ACCC after details about fatal incidents involving this object were provided to the Federal Government.

How is the data collected?
To obtain the coronial information required for NCIS, all jurisdictions (except NSW and Victoria, which have existing case management systems) have been provided with a local case management system (LCMS) into which they enter coronial data. Coronial staff within each jurisdiction are regularly trained in how to use the local systems and are supplied with the NCIS Data Dictionary, NCIS Coding Manual and LCMS User Manual to assist with accurate and consistent coding, in addition all coders have access to help desk support.

Funding and governance of the system
The NCIS is funded jointly by the State and Federal Governments. Each State Justice agency, and several Commonwealth Departments (Department of Health and Ageing, Workplace Relations, Australian Institute of Criminology, Australian Compensation and Consumer Commission, and the Australian Transport Safety Bureau) contribute towards annual funding for the management and maintenance of the NCIS. The NCIS Unit is managed by the Victorian Institute of Forensic Medicine, on behalf of the NCIS Board of Management.

Quality assurance of the data
One the main objectives of the system is to ensure that the data included in the NCIS is of the highest quality in terms of its comprehensiveness and relevance.

A monthly case review process is completed for cases which have been closed in each jurisdiction in the preceding month. Completeness, accuracy and consistency with NCIS coding practices are checked, with any detected errors reported back to each jurisdictional office for correction.

The NCIS Data Dictionary specifies standards, and where applicable codesets, for NCIS core data items. A more detailed NCIS Coding Manual is provided to guide coronial jurisdictions in the coding of NCIS data items. To complement the coding manual, a regular newsletter is distributed to data entry staff highlighting errors of concerns or amendments to the NCIS or to coding practice.

Face-to-face coder training is also provided to jurisdictions, ensuring that new data-entry clerks and NCIS coders are knowledgeable in both data entry and search functions.

Access to the NCIS
Government or non-profit research agencies with a bona fide requirement to access the NCIS can apply to access the system. Authorised third parties include Commonwealth, State and Territory government departments and agencies, university research centres, other research organisations and agencies with a role or interest in public health and safety, death and injury surveillance and policy development. Applicants must be approved by the Victorian Department of Justice Ethics Committee, and a fee is applicable to users who access the system.

Upcoming system enhancements and initiatives
There are a number of initiatives and system enhancements that have recently been (or are soon to be) implemented. The majority of these enhancements relate to two key areas:
• adding more coded information to the NCIS to facilitate simpler case identification
• presenting and providing information to NCIS users in a more proactive and easily interpretable manner.
Addition of more coded information
Facilitation of several long-standing projects of the NCIS will continue in the coming years. The Police Form Project involves the automatic upload of fielded information from the initial Police Report of Death forms. The Drugs Module Project will provide automatic uploads from toxicology laboratories across Australia (directly into NCIS) denoting drugs present and their detected levels.

Additional coding for occupation and industry of the deceased for work-related deaths is now being provided to the NCIS by the Australian Safety and Compensation Council (ASCC).

Geocoding of location addresses to provide latitude/longitude and boundary tags will allow enhanced searching of data by geographic regions and allow for the provision of maps and graphical representation of coronial data.

Presenting information to NCIS users
An automatic notification function will be implemented within the next 12 months allowing NCIS users to be notified, via email or appropriate means, when cases or deaths of interest are added to the NCIS.

Focus on the production of more aggregated statistical data from the NCIS will enable users and the general community to more easily obtain information about the frequency of certain fatality types.

As previously discussed, the provision of maps and graphical representation of geocoded address information will enable the use of information about the location of deaths reported to a coroner, allowing for particular trends and hot spots to be more easily identified.

- Further information regarding the NCIS can be found at www.ncis.org.au
- Enquiries regarding access to the NCIS should be addressed to Jessica Pearce, NCIS Manager via telephone on +61 3 9684 4414 or email on jessicap@vifm.org.

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