

THE BENEFITS OF THE NATIONAL CORONERS INFORMATION SYSTEM (NCIS)

**The world's first national database of
coronial information**

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What is the National Coroners Information System?

The National Coroners Information System (NCIS) is a world first national database of coronial information. It was formerly managed by the Monash University National Centre for Coronial Information (MUNCCI). In March 2005, as part of a new funding arrangement with State/Territory and Federal funding agencies, management of the NCIS was transferred to the Victorian Institute of Forensic Medicine (VIFM) and a new governance structure was put in place. The NCIS is now an official section of the VIFM.

Approximately 18,000 deaths are reported to coronial offices in Australia each year. Of these, approximately 7,500 per year are due to unnatural causes such as workplace accidents, road accidents, drug use, and suicides. Many of these deaths are potentially preventable. The role of the coroner, as investigator of sudden and unexpected deaths, has developed into one of active identification of preventable death and injury. Up until now, the lack of a means to systematically identify and retrieve clusters of similar cases within coronial offices around Australia has hampered the ability of coroners to identify trends on a national basis. The NCIS fills this gap.

Purpose

The NCIS is a valuable hazard identification system and research tool for government agencies and researchers with a role or interest in public health and safety, death and injury surveillance and policy development. The NCIS now has over 130 users from organisations such as the Commonwealth Department of Health and Ageing, the National Occupational Health and Safety Commission, the Australian Transport Safety Bureau, the Australian Bureau of Statistics, Research Centre for Injury Studies at Flinders University, justice agencies, police departments, consumer affairs agencies and occupational health and safety agencies.

The NCIS is also used by state coroners and their death investigation staff nationwide in their day to day work.

What are the benefits to the Australian Community?

Prior to the NCIS

Prior to the NCIS, the difficulties experienced by public sector agencies reliant on coronial data to inform their work was evidenced in the December 1998 Report of the National Occupational Health and Safety Commission (NOHSC) "Work Related Traumatic Fatalities, 1989-1992". The report explains that it took NOHSC 6 years to visit each of the eight coronial jurisdictions in Australia to collect the relevant data, analyse it and report on it. By the time the report was published, the cases reported were between 6 to 10 years old.

Clearly, many other public sector organisations use coronial information every day to identify patterns and trends. This information often influences health

and safety policy and initiatives. Until the NCIS, the information was kept in paper files and separate case management systems all over the country.

Similarly, coroners were frustrated in their attempts to identify and eliminate preventable hazards in the community. Coroners had to rely on their own or their colleagues' memories of similar cases. Coroners were forced to contact other coroners individually to ascertain whether any similar cases had occurred in other jurisdictions.

For example, in April 2000 the Victorian State Coroner delivered a finding after a joint coronial inquiry into the deaths of five prisoners by hanging. Before making his finding, the State Coroner spoke with colleagues in other jurisdictions and found statements in findings from South Australia that provided the pivotal focus for recommending that there be a state review of all cells and cell furniture. The aim of the review was to establish guidelines and eventually standards in both cell and content design for the State of Victoria. The guidelines were subsequently produced and now form the basis for all correctional facility construction in Victoria.

Similarly another Victorian coroner held an inquest into the death of an elderly man at a nursing home after he became entrapped in the mesh of the cotside attached to his bed. The coroner discovered, through his own endeavours, that a comprehensive assessment of mesh cotsides was conducted by the South Australian State Coroner some years earlier, resulting in a number of recommendations. He also found a similar Victorian case. As a result, the Victorian coroner recommended that the particular product should be withdrawn from use.

Obviously, if the NCIS had been available for use at the time, the coroners would have been able to easily access this information on a computer in their offices.

Current NCIS Usage

Since the NCIS has now passed its fifth birthday, the value of its contents is becoming obvious. As at the end of October 2005, there are in excess of 100,000 coronial records stored on the database from the states and territories of Australia. Where available, these records contain a summary of police circumstances, autopsy reports, toxicology reports and coronial findings.

The NCIS has already been used by health organisations to monitor certain types of deaths and has been used by coroners to assist with their investigations, findings and recommendations.

Recent uses of the NCIS have led to many positive outcomes, including the following:

- ***Potential health and safety issues have been identified through the NCIS;***

- ***Health organisations have used the NCIS to monitor particular types of deaths;***
- ***Coronial investigations, findings and recommendations have been influenced by information obtained from the NCIS; and***
- ***Determinations made by coroners about whether to hold an inquest have been influenced by information available on the NCIS.***

Future / potential uses of the NCIS

There are a number of potential uses of the NCIS in future, all of which have the ability to influence and contribute to health policy and planning decisions.

Some enhancements to the existing system have recently been approved, and include:

- An ability to provide more extensive trend and pattern analysis
- The implementation of Geographic Information System (GIS) maps which allow visual identification of location 'hotspots' in relation to a variety of different criteria (ie. Suicide deaths, drug related deaths, deaths concerning certain demographic age ranges)
- Register of agency responses to coronial recommendations
- Automatic generation of statistics on certain types of deaths to be analysed by experts
- Automatic notification to NCIS subscribers of deaths relevant to their area of interest

Other possible future uses of the NCIS include:

- An ability to identify and/or monitor certain types of deaths nominated to be of interest or concern. For example, the following could be monitored:
 - Deaths in the elderly
 - Falls in the elderly, at or upon release from hospital
 - Tourist deaths
 - Volunteer deaths
 - Intentional and/or accidental overdoses of prescription medications
 - Product/ work related deaths (ie. faulty equipment, scaffolding deaths)
 - Industrial poisonings (i.e. monoxide poisonings, hydrogen sulphide poisonings, methane poisonings)
 - Transport related deaths
 - Pedestrians
 - Off-road vehicles (quad bikes)
- The provision of common national/statewide reports regarding death trends and patterns

- The provision of industry or unit specific reports to governmental and research bodies focusing on their area of interest. For example:
 - Local Councils – a breakdown of the incidence of various types of deaths (road traffic deaths, drug related deaths, suicides) within their shire over a certain time period
 - Surf Lifesaving – the number of coastal drownings
 - Fire Authority – the number and types of fires resulting in death
- Detailed identification and classification of medical adverse event incidents
- Expert system analysis
- Establishment of an online death investigation information portal and support forum
 - Links to death investigation agencies
 - Links to library and academic resources
 - General list of research topics being investigated by NCIS users
 - Research documentation, codes and further reference information

Some Examples of Recent NCIS Use

Potential Health and Safety issues have been identified through the NCIS

Launch of a national safety campaign on working under vehicles

A national safety campaign concerning working under vehicles was launched on February 18 2005 by the Federal Minister for Ageing, Julie Bishop. This joint campaign by the Australian Department of Health and Ageing and the ACCC was prompted by new figures from the NCIS which showed that 19 home mechanics died in Australia over the past four years as a result of incidents associated with the incorrect use of jacks. As part of this campaign, a safety alert brochure has been produced and can be downloaded from the ACCC website.

Falls through fragile roofing

An 'Issue of Concern' was lodged with each State/territory coroner by the NCIS concerning the number of fatalities detected which involved individuals falling through fragile roofing (such as Perspex or fibre panel sheets) or skylights, when a standard search concerning home maintenance fatalities was undertaken. It was found that from July 2000 to August 2005, 23 such fatalities occurred nationally. The frequency and circumstances surrounding these types of deaths can now be referred onto the relevant prevention organisations by the State/Chief coroners in each jurisdiction, for further action to be taken if necessary.

Increased awareness – blind/curtain cords

In July 2003, a request was made to the Research Centre for Injury Surveillance (RCIS) at Flinders University by the Commonwealth Health Department, to research the number of fatalities of infants and young children due to strangulation by blind or curtain cords. This request was prompted by a query to the Health Department by a parent who had lost a child under these circumstances. The RCIS was able to use the NCIS to identify a number of these cases. The frequency of these cases prompted the RCIS to lodge an Issue of Concern, which was subsequently passed along to all State and Chief coroners around Australia. A brochure concerning Blind and Curtain Cord Safety was subsequently produced by the Commonwealth Consumer Safety Unit within Treasury and the Department of Health and Ageing. In May 2004, the Blind Makers Association of Australia contacted the NCIS and requested de-identified case information concerning the nature of these fatalities, to present to their members at the Annual Conference. This material was used to reinforce to manufacturers the necessity of new regulations concerning blind manufacture.

National trend involving quad bikes

The value of the NCIS as a hazard identification tool was demonstrated by the Victorian State Coroner in 2002, who used the NCIS to identify that over a

period of a little more than 2 years, there had been at least 20 quad bike deaths across Australia (excluding Queensland). The results of this national search, prompted by the recent deaths of 2 Victorians after a quad bike accident, persuaded the coroner to hold a mention hearing to discuss the danger of quad bikes.

Warnings about the dangers of Quad Bikes have subsequently been issued by WorkCover, and studies of the injury rate for quad bikes in Victoria and nationwide are being considered. A joint inquest is also to be held in Victoria regarding some of the Quad Bike deaths.

That fact that these warnings were issued within a fortnight of the initial search request highlights the immediacy of the benefits that the NCIS can provide in terms of death and injury prevention.

In July 2004, an accredited TAFE training course was developed in Tasmania for farmers, who can now enrol in the 3-tiered program to increase awareness and safety concerning the use of Quad Bikes. To be provided by Stay Upright, figures from the NCIS helped build a case for the creation of this course when it identified 57 Quad Bike related deaths has occurred in Australia since July 2000.

Deaths involving an auger

Whilst conducting an analysis of tractor related deaths MUNCCI came across an alarming type of death involving an auger. Specifically, MUNCCI discovered two cases on the NCIS of deaths of farmers using an auger attached to a tractor (post hole digger). The **two deaths occurred in almost identical circumstances**, almost 18 months apart and in different areas of country Victoria. With respect to these cases, the findings were completed by two different coroners. Both men died due to becoming entangled in a rotating auger. They both sustained severe injuries, including dismemberment. Each of the men was spun around in a circle by the auger and had their clothing torn from their bodies. In both instances the deceased were discovered some time after the incident, with the tractors found to be no longer running, apparently having exhausted their supply of petrol.

Following this discovery, MUNCCI immediately reported an "Issue of Concern" regarding Public Health and Safety to the State Coroner of Victoria.

As a result, the State Coroner of Victoria wrote to the Director of Worksafe Victoria to advise the Department of the two deaths. The State Coroner indicated to Worksafe that he had discussed the matter with the two Coroners involved and then provided a number of ideas for the Department to consider. The State Coroner emphasized that these suggestions should not be considered as recommendations, but that both he and the two coroners involved believed they were worthwhile and should be brought to the attention of Worksafe Victoria.

Worksafe Victoria has since been developing these proposed design suggestions.

Health organisations have used the NCIS to monitor particular types of deaths

Plastic Bag Asphyxia

NCIS produced a lengthy report in 2002 on suicide by plastic bag asphyxiation in the period between July 2000 and February 2002, for the purposes of a demonstration to the Department of Health and Ageing.

The study revealed that there were at least 36 deaths in Australia from suicide by plastic bag asphyxia in the period examined. Most revealing was that in at least 5 of these deaths, investigating police members discovered a book about suicide at the scene. In four of these cases, the title of the book was mentioned, being "Final Exit" by Derek Humphry.

Following the production of the report, the Department of Health and Ageing obtained permission to produce the report to the National Advisory Council on Suicide Prevention, to promote an informed discussion of suicide by asphyxiation and the use of suicide kits/exit bags.

In light of publicity regarding plastic bag suicide kits, the Department of Health and Ageing asked for an updated national report on deaths by plastic bag asphyxia, which NCIS provided.

Furthermore, the report prompted the State Coroner of Victoria to initiate a retrospective 10 year study of suicides by plastic bag asphyxia in the state of Victoria. The report revealed that there had been a statistically significant increase in this form of suicide in the year 2002.

The National Advisory Council on Suicide Prevention has since made recommendations as to how to reduce the incidence of these types of death based on this information.

Coronial investigations, findings and recommendations have been influenced by information obtained from the NCIS

Deaths from overdose of Quetiapine (an anti-psychotic)

The Victorian State Coroner conducted an inquest into the death of mental health patient who had overdosed on Quetiapine, an anti-psychotic drug. The coroner requested a national search of the NCIS be conducted to ascertain the number of other instances where individuals had died as a result of a Quetiapine overdose. Due to the number of cases identified through this search, the Victorian State Coroner is conducting further inquiries about this drug. The manufacturer of Quetiapine and the Therapeutic Drugs and Goods Administration are assisting. Upon completion of his inquiries, the State Coroner plans to write to the Federal Government regarding this drug and also notify the other state and chief coroners of his findings.

Motorcycle collisions with animals

Victorian Coroner Audrey Jamieson investigated the case of a motorcyclist who collided with a bull which was standing in the middle of the carriageway, and who died at the scene despite resuscitation attempts. In making her recommendation, Coroner Jamieson cited data from the NCIS indicating 30 cases had been reported to a coroner from July 2000 where death occurred to a driver or passenger of a motor vehicle or motorcycle from impact with an animal. 30% of these fatalities involved motorcycles. The finding stated the data served as a reminder to those responsible for livestock of their duty to maintain fences, and Coroner Jamieson repeated a recommendation from one of these previous cases that 'owners of property abutting highways be urged by a public safety campaign to do a regular audit of fencing to ensure stock are safely enclosed'.

Parachuting deaths

In the case of a woman who, an experienced parachutist, died when her parachute failed catastrophically during a group jump, Victorian State Coroner Graeme Johnstone cited data from the NCIS. He noted that a search of the NCIS for the period July 2000 to August 2005 disclosed 9 parachuting fatalities. A significant proportion of these deaths were in Victoria. Coroner Johnstone suggested this statistic, if not a statistical aberration, was of concern. He recommended that 'the Australian Parachute Federation consider examining the statistical variance between the recent rate of parachuting deaths in Victoria and those in the rest of Australia in order to see whether there is a particular reason for the differences or a safety or safety issues that needs to be addressed'.

Determinations made by coroners about whether to hold an inquest have been influenced by information available on the NCIS

Deaths involving electricity substations

The NSW State Coroner was required to determine whether to hold an inquest into a death which occurred when the deceased broke into an electricity substation and was subsequently electrocuted. The NSW State Coroner requested a national search be conducted on NCIS to ascertain whether there were any other deaths involving similar circumstances. The information provided assisted the coroner in determining whether there was a public interest issue in holding an inquest in this case.

The NCIS Team