Using Coronal Data to Assist in Death Prevention – The Prevention of Unintentional Drowning

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"Without data, you're just another person with an opinion"

- W. Edwards Deming
"(...) The coroner's death prevention role, a matter of extraordinary social utility and a cornerstone of the coronial process." (Ros Fogliani)
National Coronial Information System

- Until early 1990’s – ad hoc information sharing at conferences
- 1991: Royal Commission into Aboriginal Deaths recommended that “a national coronial record keeping system be established”
- A lot of work
- 2000: the NCIS is officially launched
Launch of the NCIS (2000)

“The NCIS will provide a means of accessing data in a timely way and will increase the potential for coronial information to contribute to a reduction in preventable death and injury in Australia and in doing so, it will reduce both the emotional and financial burden of lost life in our community. The NCIS will revolutionise the way we investigate and respond to preventable deaths in Australia.”

The Honourable Rob Hulls, Attorney General Victoria
The NCIS today

- Data storage, retrieval, analysis, interpretation and dissemination system
- Contains
  - Australian coronial data from July 2000
  - New Zealand coronial data from July 2007
- >330,000 cases
  - 2/3 ‘Natural Cause Death’ cases
  - 1/3 ‘External Cause Death’ cases
- Unique in the world!
What data is contained?

Coded & Contextual Data
- Demographic Details
- Time & Location of Incident & Death
- Activity at Time of Incident
- Mechanism and Object Details
- Cause(s) of Death: 1a, 1b, 1c, 1d, 2, 3

Attached Documents
- Police Summary of Circumstances
  - Autopsy Report
  - Toxicology Report
  - Coronial Finding

External Data
- ICD-10 Cause of Death Codes
- ASGC (Geographical) Codes
- Safe Work Australia
The process

Case coded and closed by Coroner’s Court on Local Case Management Systems

Case coding and documents uploaded to the NCIS

Quality Assurance Review by NCIS Quality Team

Accepted

Rejected

Data is made available to

Support Coroners

Facilitate Research
Pathways to Prevention

Support Coroners

Facilitate Research

Contributions to Safety
Pathways to Prevention

Support Coroners

Facilitate Research

Contributions to Safety
Past

NSW - Data - Evidence
VIC - Data - Evidence
QLD - Data - Evidence
SA - Data - Evidence
WA - Data - Evidence
TAS - Data - Evidence
NT - Data - Evidence
ACT - Data - Evidence
NZ - Data - Evidence
Present

NSW Data
VIC Data
QLD Data
SA Data
WA Data
TAS Data
NT Data
ACT Data
NZ Data
Present

NSW Data
VIC Data
QLD Data
SA Data
WA Data
TAS Data
NT Data
ACT Data
NZ Data

NCIS
Present

NSW Data
VIC Data
QLD Data
SA Data
WA Data
TAS Data
NT Data
ACT Data
NZ Data

Evidence

NCIS
Evidence
Support Coroners

- Data Provision to Coronial Death Investigators

<table>
<thead>
<tr>
<th>Organisation Type</th>
<th>2015-16</th>
<th>2014-15</th>
<th>2013-14</th>
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<tbody>
<tr>
<td>External Interest Groups</td>
<td>65</td>
<td>44</td>
<td>42</td>
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<tr>
<td>Coronial Death Investigators</td>
<td>64</td>
<td>41</td>
<td>11</td>
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<tr>
<td>Total</td>
<td>129</td>
<td>90</td>
<td>61</td>
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Themes in 2016

• Detailed drug-related information
  o Pentobarbitone
  o Champix®
  o Novel Psychoactive Substances (NPS)

• Data by
  o Age range (intentional self-harm deaths in the elderly)
  o Geographic location (by jurisdiction, LGA, etc.)
  o Occupation (FIFO workers, emergency personnel, veterans etc.)

• Recommendations made
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Introduction

1. Mr. Christopher Walton was 54 years of age at the time of his death. He resided in Currumbin Valley with his wife, Kerry Shepherd and son, Finlay. Shortly before midday on 23rd December 2012, Mr. Christopher Walton was walking along the northern side of James Street, Burleigh Heads when he stopped to speak to friends, John and Agnes Webber and their daughter Jillian Petty, who was with her children, Fletcher and Harrison. As they all talked while standing outside of ‘Tides Boutique’, the awning from 37 James Street (‘Equity House’) collapsed without warning. Mr. Webber describes hearing a loud noise, like the sound of buckling roofing iron, before the awning collapsed, falling too fast for anyone to react and move to safety. A bystander Ellie Seabrook describes the sound as a ‘twisting metal type noise, a loud creaking sort of sound and also a snapping noise’.

2. Mr. Walton became trapped against one of the building pillars, his chest taking the full force of the impact. John and Agnes Webber were also hit by the awning and knocked into an alcove. Jillian Webber was pinned under the awning for some time until it could be lifted, at which time she crawled into ‘Tides Boutique’, where her children had sought refuge. As a result of the awning collapse, Ms. Petty suffered multiple fractures to her right wrist, as well as fractures to her back and lacerations and bruising to her knee, shin and foot. Mrs. Webber suffered a broken wrist, as well as bruising and swelling to her right knee and lower left leg.
Request for NCIS Information – Death Investigators

The NCIS Unit is available to assist Coroners and other approved Death Investigators with requests for system searches to inform upcoming inquiries, or to support other investigations being undertaken on behalf of a Coroner.

Use the ‘?’ to scroll to next question.

1. Indicate the information you require / purpose of this request (ie investigation on behalf of Coroner: research; upcoming inquiry).

2. If this request relates to a specific case / inquiry currently being investigated by a Coroner, please provide the relevant NCIS case number/s and date of inquiry.

3. Do you have NCIS access?*

4. Is the data provided by NCIS intended for public dissemination? If ‘yes’, please provide detail.

No

Information Extraction and Presentation

5. Jurisdiction

   All Australian Jurisdictions □

Or

   □ ACT  □ NSW  □ NT
   □ QLD  □ SA  □ TAS
   □ VIC  □ WA  □ NZ*

6. Date Range / Years of Reporting:

7. Case Status: Closed and open cases

8. Specific Information required (include whether you require age range; case circumstances; reference to Coroners’ findings; recommendations; mechanism / object; cause of death etc)

9. Presentation of information (ie spreadsheet of case information; particular table breakdowns; full Data Extraction report etc.)

10. Date information required:

11. Additional Information:

If you do not currently have NCIS access, you will need to complete a full Data Request Form for the release of de-identified statistics only. This request is subject to approval by the NCIS Unit and relevant State Coroners.

Refer to the ‘How to Access Data/Requesting a Statistical Report’ page on our website:


Alternatively, contact the NCIS to discuss options for data provision, nca@ncis.org.au

*Australian data available from 2000; (QLD data available from July 2001); NZ data available from 2007 (closed cases only).
NATIONAL CORONIAL INFORMATION SYSTEM


PURPOSE
The purpose of this report is to provide information about deaths reported to an Australian State or Territory Coroner between 01/07/2000 and 18/11/2015, where the death of the deceased occurred as a result of the collapse of an awning or similar structure.
NATIONAL CORONIAL INFORMATION SYSTEM

METHOD

Case Identification
The Query Design Search Screen was used to identify cases of relevance. The method of case identification involved searching for cases where:

- Date notified = Between 01/07/2000 and 18/11/2015
- Jurisdiction = All Australians States and Territories
- Case Status = Open or Closed
- Intent = Unintentional

AND

- Mechanism = Blunt Force – Crushing
  OR
- Mechanism = Threat To Breathing

- Object = Building, Building Component, Or Related Fitting

A keyword search was conducted on coronial documents (findings, autopsy, and police report) consisting of the following terms:

- Awning

The search was conducted on 16/11/2015.
RESULTS
There was six (6) deaths identified with the date of notification between 01/07/2000 and 20/18/2015 that were reported to an Australian State or Territory Coroner where the death of the deceased occurred as a result of the collapse of an awning or similar structure. These cases have summarised in the Case Summaries section (Page 5).

From 2000 to 2015, there was an average of less than one (0.4) death of relevance reported on an annual calendar year basis.

Attached with this report is an excel spreadsheet named CR15-50 Awning Collapse-Related Deaths Australia 2000 - 2015.xlsx that list the cases included in the report.
Pathways to Prevention

Support Coroners

Facilitate Research

Contributions to Safety
Direct Access to the NCIS
And the majority of the data goes to…

- Academic institutions
- Not for profit organisations
- Charities
- Community groups
What we are working towards

• Data completeness
  o Electronic availability of attached documents

• National Minimum Dataset
  o Additional fields for inclusion in the NCIS, i.e
    • Diagnosis of mental illness
    • Substance abuse
    • Lifetime suicide attempts

• National Police Form
  o More comprehensive data collection early on

• Data Linkage Projects
  o Connection the dots
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THANK YOU
About Royal Life Saving

• 121+ years in Australia
• Aim to reduce *unintentional* drowning
  – Rescue skills education & training
  – CPR and First Aid Training
  – knowledge & awareness of risk factors and prevention strategies
• Australian Water Safety Council
  – Australian Water Safety Strategy
• Work with partners across Asia
  – Child drowning through survival swimming programs
• Expert witness at inquest
  – Coronal recommendations
Drowning in Australia

- Avg. 282 deaths annually (1.27/100,000)
- 280 drownings in 2015/16 (1.18/100,000)
- Males = 80%
- Children under five = highest rate
  - Swimming pools (home) account for 50% of all deaths
• Rivers the leading location for drowning
• Swimming and recreating, boating incidents and falls into water leading activities
• ~9% international tourists
• ~30% involve alcohol
• ~25% of all drowning victims have a pre-existing medical condition
Use of coronial data

- RLS National Drowning Report
- Infographics & media coverage
• Royal Life Saving National Fatal Drowning Database
  – 4,000+ cases over 14 years (NCIS)
• Research reports
  – Causal factors of swimming pool drowning in under 5s
  – Men 25-34 years
  – Rivers
Role of coroners in drowning prevention

- Coronial findings provide definitive guidance on cause of death & rich narrative on circumstances & therefore causal factors
- Coronial recommendations provide powerful lobbying tools for legislative change and opportunities to seek funding
Coronial recommendations have led to:

- Strengthening pool fencing legislation
- Development of Keep Watch
  - Keep Watch @ Public Pools
  - Keep Watch @ Bath Time
- Development & review of the Guidelines for Safe Pool Operation (GSPO)
Challenges

• What can’t be changed?
  – Diagnosis of drowning
    • Diagnosis of exclusion
  – Body not recovered
    • No autopsy / toxicology
    • No definitive cause of death
  – Decomposition
    • Artificial inflation of blood alcohol content
Challenges

• What can we potentially change?
  – Uniform reporting within & across jurisdictions
  • Status of pool fence & gate
  • Wearing of lifejackets & type
  • Linking to other datasets
  – Autopsies not consistently performed
  – Toxicological testing not consistently performed
'I was just screaming': Heartbroken Logan mother grieves daughters who drowned in backyard pool

Torquay drowning: Kayaker found dead at Fishermans Beach on Victoria’s Surf Coast

DREAM TRIP DEATH Brit backpacker, 23, drowned on Great Barrier Reef on her first ever scuba dive ‘because of string of safety failings’

Inquest held into death of Mrs Sidwell

Abalone fisherman critical after almost drowning on first day of season

Search for missing boater in north Qld
Thank you

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