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Medico-Legal Death Investigation Systems – Australia

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ABSTRACT

Australia's medico-legal death investigation system is overseen by coroners who are independent judicial officers. Deaths reportable to coroners are prescribed in legislation which is broadly similar throughout Australia's six states and two territories. Coronial investigations are inquisitorial in nature and make important contributions to death prevention and public health. Coroners are assisted in the discharge of their responsibilities by specialist pathologists who form the medical arm of the death investigation process. This paper will outline the current system of medico-legal death investigation throughout Australia with the State of Victoria serving as an exemplar of the system around the country.

Keywords: Autopsy; coroners; legislation; pathologists; preliminary examination.

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INTRODUCTION

As a Commonwealth jurisdiction the medico-legal death investigation system in each of Australia's six states and 2 territories[1] is overseen by Coroners akin to the system in England and Wales from which it was inherited on settlement. While in the 18th and early 19th century Coroners could come from various 'walks of life', today in Australia Coroners are judicial officers appointed by the Governor in Counsel which to all intents and purposes means the jurisdiction's Attorney General (the state or territory's chief law officer). Coroners are all legal practitioners that have the status of a Judge and are independent of government, police and other agencies. In some jurisdictions the Coroners Court is a branch of the Magistrate's Court or Local Courts while in others the Coroners Court is its own separate and distinct branch within the Court hierarchy. Coronial legislation varies slightly from State to State but is broadly similar across all states and territories and governs the duties and responsibilities of coroners in respect of a death.

THE CORONERS COURT AND LEGISLATION

The Coroners' jurisdiction is predominantly focused on fact gathering and the strict rules of evidence pertaining to criminal and civil jurisdictions do not necessarily apply, a feature of inquests that perhaps explains that a Coroner has no criminal or civil jurisdiction.[2] They cannot find a person guilty of a criminal offence and cannot commit a person for trial. In addition, the information they uncover cannot be used in evidence, in that form, in any civil proceedings by any party.

Today the Coroners' Court remains perhaps one of the only non-adversarial Courts in the Anglo-Australian (English) legal system. The Coroners in presiding over their 'Inquest' is a true inquisitor. The scope and nature of their enquiry is for them to set within their legislative powers and as a result arguably there are no 'parties' before the Coroner.

A striking feature of modern Coroners Law within Australia has been the inclusion of specific reference to the purpose and role of the jurisdiction beyond the requirement to find the facts regarding a reportable death. In addition legislative reform has imposed an obligation on Coroners to take into account cultural factors and considerations when exercising their powers.[3]
An example of the explicit public health and safety purpose of the jurisdiction can be found in the preamble to the 2008 Coroners Act (Vic.) which states:

> *'The coronial system of Victoria plays an important role in Victorian society. That role*

involves the independent investigation of deaths and fires for the purpose of finding the causes of those deaths and fires and to contribute to the reduction of the number of preventable deaths and fires and the promotion of public health and safety and the administration of justice.'

And further in section 1(c) that the purposes of the Act is:
'to contribute to the reduction of the number of preventable deaths and fires through the findings of the investigation of deaths and fires, and the making of recommendations, by Coroners ……'

While a Coroner has no power to enforce change or exercise any public health function there are two main ways in which Coroners in Australia support public health and death prevention activities. The first of these relates to the wider promulgation of Coroners 'Findings' and 'Recommendations' than the simple production of a legal finding. For example, the Victorian Coroners Act 2008 places a direct obligation on Coroners to publish inquest findings, comments and recommendations and directs that this publication must be made on the Internet. Section 73 (1) stating:

'Unless otherwise ordered by a Coroner, the findings, comments and recommendations made following an inquest must be published on the Internet in accordance with the rules.'

The second way in which the Australian Coroners Jurisdiction contributes to public health and safety is through its engagement with and support for the National Coronial Information System[4] which provides a repository of the results of death investigations that can be utilised by policymakers, researchers and death investigators to support their work.

Death reportability criteria across Australia are outlined in legislation and include obligations to report deaths that are the result of accident or injury, homicide, suicide, not obviously natural, following or as the result of a medical procedure (with the definition varying slightly across the country), deaths in custody (or formal care), of unknown cause, simply unexpected or where no Medical Certificate of Cause of Death (MCCD) is available. The main responsibilities of coroners in respect of a reported death include determination of identity and the cause of death and in some cases elaboration of the circumstances surrounding a death. Importantly it is the Coroner rather than the forensic pathologist who determines the 'manner of death'.

To assist coroners in the discharge of their responsibilities the medical arm of the death investigation process is undertaken by specialist pathologists, most of whom are forensically trained. Hospital-type autopsies (those requiring the consent of the next of kin) for clinical purposes are an increasing rarity and many hospital dissection facilities have been decommissioned in recent times. Medico-legal death investigations are undertaken in purpose-built facilities, many co-located with coroner offices, situated in capital cities and, in the case of Australia's most populous state New South Wales, larger regional centres. In practice this means that in Australia the vast majority of medico-legal death investigations for Coroners are undertaken by full time forensic pathologists as State or Territory Government employees rather than by hospital based clinical/anatomical/histopathologists. These medical services for the Coroner are provided at no cost to the family of the deceased person regardless of the scope or depth of the examination performed. As a result of this central government funding of forensic pathology services the range of tests and examinations undertaken is dependent on the medical and legal needs rather than on fiscal availability of resources. It is now increasingly common in Australia for post mortem CT scans and toxicology testing to be undertaken in the majority of reported deaths. The reliance on State and Territory based Centres or Institutes rather than local hospital facilities also creates economies of scale that permits these facilities to employ forensic Odontologist and Anthropologists on a full or part time basis and to similarly engage sub-specialist pathologists (neuro-pathologists, cardiac pathologists, paediatric patho-logists etc.) to assist with more specialised case work.

In this paper, the state of Victoria will serve as an exemplar of the system in place across the country.

THE VICTORIAN INSTITUTE OF FORENSIC MEDICINE (VIFM)

The VIFM is a statutory agency within the Victorian government's justice portfolio. It was founded in 1988 with a mission to provide high-quality forensic medical and scientific services to the coroner, justice system, health system and the community more broadly. The VIFM's services include medico-legal death investigation, clinical forensic medicine (but not custodial medicine), forensic toxicology, molecular biology and histology, tissue banking (the Donor Tissue Bank of Victoria is a business unit of the VIFM), and it is home to Monash University's Department of Forensic Medicine in association with which many of its teaching, training and research activities are delivered.

DEATHS IN THE STATE OF VICTORIA

Of the approximately 42,000 deaths occurring annually in Victoria (population ca. 6 m), about 16% are reported to the coroner. The spectrum of death types has remained similar over the years with about half of all deaths ultimately found to be from natural causes. Of

those deaths not reported to the coroner, the physician providing or overseeing the care of the deceased individual in life completes a medical certificate of cause of death (MCCD) which is forwarded to the state's registry of births deaths and marriages (RBDM). The RBDM undertakes a limited medical review of all MCCD's and annually approximately 500 of those cases are subsequently referred to the coroner for review due to possible irregularities or errors in the stated cause of death.

For those deaths falling under the remit of the coroner's legislation across the State (including Victorian residents dying overseas), the body is transferred to the Victorian Institute of Forensic Medicine (VIFM) in Melbourne for medical investigation. There is no formal requirement for the fact of death to be confirmed prior to transfer, but a statement to that effect is in most circumstances completed by attending medical or paramedical emergency personnel.

EARLY PROCESSES FOLLOWING A DEATH

The Coroners Act (2008) introduced a process called Preliminary Examination in which authority is granted to a medical investigator (usually the pathologist) to conduct certain procedures (in a process akin to a medical triage). These examinations do not require prior approval of the Coroner but must not involve a dissection of the body. The results of the 'Preliminary Examination' are presented to the Coroner to put them in the best position to determine the most appropriate form of death investigation, including whether an autopsy should be performed.

When a death is reported to the coroner, the office receiving that report is called the Coronial Admissions and Enquiries (CAE) office, a department of the VIFM acting under delegated authority of the coroner. The CAE is predominantly staffed by nurses, many with experience in intensive care or accident and emergency practice assisted by a team of specially trained medico-legal executive assistants. It is the responsibility of these staff to collect the relevant information about the death, and to engage with the next of kin to apprise them of the coronial process, uncover any concerns they may have about the death, seek their views regarding possible autopsy, assist in viewings of the body in some circumstances (especially for identification purposes), and finally to confirm the family's preferred funeral director prior to discharge from the VIFM mortuary.

The types of information normally sought by and provided to the CAE include a police summary of circumstances, a report by hospital treating clinicians (a medical deposition), reports by attending ambulance officers, and where relevant the full medical records held by hospital of general practitioners. Occasionally reports by other agencies including work safety inspectors, Fire investigators, and civil aviation accident investigation experts may also be sought. In the case of a death potentially associated with criminal activity (suspicious death), investigating police (usually specialist units such as the Homicide Squad, Major Collision Investigation Unit, or the Arson and Explosives Squad) may submit a request for urgent autopsy for consideration by the coroner to assist in the early phase of their investigation.

The CAE is also the first point of contact for hospital organ transplantation coordinators where the next of kin express a wish for organ donation (either on their own initiative where there has been no recorded objection to the procedure by the deceased in life or in accordance with the deceased's previously expressed wishes), usually in cases of brain death being treated in intensive care units. The CAE also houses the VIFM's identification unit, staffed by anthropologists and forensic dentists who review all identifications for reliability and facilitate dental or molecular investigations in those cases where scientific means of identification are required such as decomposed or fragmented remains.

In any event, the body is transported from the scene or hospital by a government contracted transport service to the VIFM where, if the case is not deemed suspicious, it is subject to the Preliminary Examination' process. The deceased is photographed dressed and undressed, identification labels attached, and a blood sample is obtained (by blind puncture of the inguinal region).[5] In every case a full-body CT scan is then obtained as part of the admission procedure. An overnight quantitative toxicology analysis for over 350 drugs is undertaken on the admission blood sample. The CAE provides the reviewing (or 'duty') pathologist with information gathered as part of its initial enquiries in respect of a death and this often supplemented by hospital clinical record extracts (digital or in paper form), general practitioner records, and an external examination of the body. The CT scan is assessed by the duty pathologist (with referral for specialist radiological interpretation if necessary), and a summary of all information gathered in this initial phase is prepared by the pathologist for presentation to the coroner in a daily morning meeting. Approximately 20-25 cases are discussed at this meeting.

The preliminary examination process has two important outcomes (in addition to the confirmation of identity) which are provided to the coroner in the form of advice: the cause (and by implication in most circumstances, manner) of death, and the most appropriate form of medical investigation in the circumstances; normally autopsy (to the extent deemed necessary by the

pathologist) or a visual inspection (so-called Inspection and Report).

With these preliminary examination findings the coroner then makes a decision regarding the type of medical examination[6] which will be authorised and this is conveyed to next of kin by CAE staff. If the coroner makes an order that an autopsy is necessary, this procedure cannot be performed until a further 48 hrs has elapsed to enable the family time to formally object to the decision, unless this right is waived by them. If an objection is raised, the same coroner reconsiders the issue in the light of the family's expressed views and any further available information. If it is determined that the original decision to perform an autopsy will stand, and the family are unwavering in their objection, the case may be considered by the highest judicial authority in the state, the Supreme Court. In every one of the 10 or so cases considered by the Supreme Court under this current legislation the family's objection has been upheld, usually on the basis that the case was 'not suspicious' and there would be no public benefit in conducting autopsy, even if a precise cause of death was otherwise unobtainable.

DEATH INVESTIGATION PROCEDURES

The practice of medico-legal death investigation in Victoria is constantly evolving. In those circumstances where the death is not considered suspicious by police, where no concerns have been raised by next of kin or treating clinicians, where a coroner determines that that an autopsy would unnecessarily exacerbate familial grief and it is considered that no public benefit would likely accrue from the procedure, and in the face of familial objection to autopsy it would be very unusual for an autopsy to be performed. This has highlighted the critical importance of properly medically informed information provision to families in the early phase of the death investigation process to enable them to understand the potential detrimental consequences (to the grieving process, or to the family's understanding of its medical history) of their decisions in respect of a death. In any event, currently about 53% of all case admissions to the VIFM do not undergo an internal examination. Discussions with government and the Coroners office are currently underway which may result in the necessary legislative amendments to allow pathologists to complete a MCCD in appropriate (non-suspicious, natural deaths) cases. This would thus provide a third possible outcome for daily coroner-pathologist meeting: autopsy, inspection and report, or MCCD.

If it is determined that no autopsy of the body is to be performed the pathologist will conduct a detailed external examination of the body, request photographs if necessary and prepare a report outlining the circumstances of the death, the medical history if obtainable, and the medical cause of death. Occasionally toxicology analysis will also be performed on the admission sample of blood although the definitive results of this analysis will not normally be available until after the cause of death has been registered.

If an autopsy is to be performed it will normally occur between 3 days and a week after admission and be performed by a forensic pathologist or specialist trainee (registrar) assisted by a forensic technician. Specimens and samples obtained during the procedure include histology blocks (normally about 15-20 from each case), toxicology samples (normally blood, urine, vitreous humour, stomach contents, liver, and hair), microbiology samples (for bacteriology and virology), molecular biology samples (for example head of femur for identification purposes), implanted cardiac devices for interrogation, and other specimens as necessary including for metabolic, biochemical and serologic analysis. After reconstruction and if no further testing is required, the body is normally ready for release to funeral directors later that day.

In the case of a suspicious death, the autopsy will normally be performed in a separate /isolated room with attending police officers in an adjacent viewing area able to observe the procedure from behind glass and communicate with the pathologist by intercom. In addition to the pathologist and technician those present in the autopsy suite may also include a police photographer and specialist crime scene scientist/investigators with expertise in such fields as ballistics or explosives. Investigating police often make specific requests of the case pathologist including obtaining fingernail scrapings, trace evidence analysis, sexual assault sampling (using a sealed, individually numbered pre-packed kit designed for the purpose), and particular/targeted photographs. Normally at the end of the case the pathologist will present the findings and their conclusions to the police and a discussion will ensue about what further information or testing is required.

In a minority of suspicious cases the pathologist may have attended the scene prior to the autopsy, usually at the request of investigators to provide a provisional cause of death, an approximate time since death, or to help police decide if a death actually was suspicious.

AFTER THE AUTOPSY

Preliminary/provisional information obtained from the autopsy is provided by the case pathologist or CAE staff to police and family members on request. A comprehensive report on the medical investigation is normally provided to the Coroner's office within three

months of the autopsy but may take considerably longer (up to 6 months) if specialised toxicological analyses or neuropathological examinations are necessary. Once the body has been released from the Institute, engagement with family members about medical matters (including potentially heritable conditions diagnosed at autopsy) is handed to a team of Family Health nurses (FHN) whose role is to explain the autopsy findings in understandable terms, arrange for family follow up with general practitioners or specialised cardiac genetic services, and on occasions facilitate face to face meetings where the pathologist and FHN nurses can explain the findings and any potential consequences in detail.

From a coronial perspective, once the case report is provided to the coroner by the VIFM, it is passed to the coroners' registry whose role is collate the necessary information to enable the coroner to discharge his or her responsibilities in respect of the death. These may require the gathering of further information and statements from witnesses such as treating clinicians. In a small number of cases (around 5%) a formal inquest (courtroom hearing) is convened, but in the majority the coroner issues what is called a chambers finding which details the circumstances, cause and occasionally manner of death. Such findings can vary considerably in their detail and complexity depending on the issues in the particular case and individual coroners have dedicated registry personnel and lawyers to assist them in this task. For formal inquests where there may be a number of interested parties, each with legal representation, the coroner often engages the services of a barrister to assist in the preparation for and conduct of the hearing, as well as the writing of the finding and recommendations.

In criminal matters, the coronial investigation is frequently paused to allow the matter to proceed through the courts by way of committal hearing and trial. Occasionally, particularly in homicide cases the coroner will recommence the investigation after all criminal proceedings have been completed. In the case of a guilty verdict, the subsequent coronial investigation is usually a perfunctory affair. However, in the case of a not guilty verdict, particularly where no other suspect is in prospect, the coronial inquest into the death can be a mechanism to explore matters relevant to the death which were outside the often narrowly defined matters at issue in a criminal trial. The decision to undertake such a further exploration of the death is for the Coroner alone. Traditionally they have been reluctant to exercise this power with legislative amendment being sought to enable Coroners to exercise their discretion not to enquire further. This situation arose because of the wider inquest powers to hear evidence that was not admissible in the criminal proceedings a situation that could have reduced the standing of the criminal trial process in the eyes of the community.

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[1] There is no Federal Coroners jurisdiction in Australia and all medico-legal death investigation services and facilities are State and Territory based.

[2] Coroners can send their findings to the Office of Public Prosecutions for consideration if they believe that a criminal offence may have been committed.

[3] When exercising a function under this act, a person should have regard, as far as possible in the circumstances, to the following—

(a) that the death of a family member, friend or community member is distressing, and distressed persons may require referral for professional support or other support; and

(b) that unnecessarily lengthy or protracted coronial investigations may exacerbate the distress of family, friends and others affected by the death; and

(c) that different cultures have different beliefs and practices surrounding death that should, where appropriate, be respected.

[4] "The National Coronial Information System (NCIS) is a secure database of information on deaths reported to a coroner in Australia and New Zealand. The NCIS contains data on almost 400,000 cases investigated by a coroner. Data includes demographic information on the deceased, contextual details on the nature of the fatality and searchable medico-legal case reports including the coronial finding, autopsy and toxicology report and police notification of death.

The database is available to coroners to assist investigations and appropriate access is available on application for research or monitoring projects." https://www.ncis.org.au/about-us/

[5] If the case is considered suspicious; it is placed into a body bag which is sealed with a numbered security tag and the bag is not opened until the time of autopsy in the presence of the pathologist and attending police.

[6] Autopsy, limited autopsy or external examination.