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Medico-Legal Death Investigation Systems – New Zealand

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ABSTRACT

The majority of deaths in New Zealand do not require an investigation and the death certificate is signed by the local medical doctor. For deaths that are not able to be signed by the local doctor or the death has occurred in circumstances outlined by the Coroner's Act 2006 referral to the Coroner is required. Coronial death investigation in New Zealand follows the British model with the coroner being legally trained but has evolved to meet New Zealand's cultural obligations.

New Zealand's unique mix of ethnicities and its legal and cultural obligations under the Treaty of Waitangi introduces some challenges to the coronial system, in particular how coronial and forensic post-mortems are managed and conducted. These challenges include viewings, objections to post-mortems, and the returning of post-mortem samples and specimens to families. The Coroner's Act specifically states the coroners must consider minimising the distress and offence to the family in deciding whether or not to authorise a post-mortem.

Post-mortems are conducted by both coronial and forensic pathologists with services delivered by a mixture of both private and public service providers. Forensic science services are provided a separate government entity while the death investigation is conducted by the police as New Zealand does not have specialist medical death investigators.

Keywords: Coroner; cultural obligations; Māori; New Zealand; post-mortems

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BACKGROUND

New Zealand is composed of two main islands and situated in the Pacific Ocean. It has a population of just over 5 million and is a diverse multicultural society composed Europeans (70%), Māori (17%), Polynesians (8%), Asians (16%) and other ethnicities[1]. Note that some persons identify with more than one ethnicity.

Research suggests that eastern Polynesians settled in New Zealand between 1250 and 133 AD[2]. Over the centuries they developed into a culture that we now know as Māori. Europeans did not start to settle in New Zealand until after Captain James Cook visited in 1769. Following unrest between the European settlers and Māori the Treaty of Waitangi was signed between the British Crown and Māori in 1840 which established rights for Māori and also British sovereignty over all of New Zealand. Today the Treaty of Waitangi forms an integral part of New Zealand legislation and aims to provide equity for Māori.

Given New Zealand's strong historical and constitutional links with Britain it is no surprise that New Zealand adopted the British style coronial death investigation system refining it to recognise New Zealand's multicultural society.

CORONIAL PROCESS

Approximately 34,500 deaths occur per annum in New Zealand[1]. For the majority of these the general practitioner, or another medical doctor who cared for the deceased, will sign the death certificate. If the body is to be cremated the death certificate is first reviewed by a medical referee (another doctor) to confirm that it has been filled out correctly and that there are no outstanding issues which need to be addressed. If there are no issues, the body can be cremated. However, if there are issues or inconsistencies, the certifying doctor may be asked to either review the death certificate, or they may refer the death to the coroner. In case of burial there is no requirement for the death certificate to be reviewed by the medical referee.

The Coroner's Act 2006 outlines the deaths that must be referred to the coroner. These include deaths which are without known cause, self-inflicted, unnatural, violent, the result of a medical procedure/anaesthetic, medically unexpected, maternal deaths and in official custody or care. Approximately 5000 deaths per year are referred to the coroner who on average accepts jurisdiction of approximately 3,500 deaths[3]. Of those deaths undergoing post-mortem examination 52% are due to natural causes. Between 2007 and 2018 there was an average of 68 homicides per annum although in 2019 this had increased to 129[4].

Coroners are government-appointed lawyers who should have held a practising certificate as a barrister or solicitor for at least 5 years. There are currently 25 coroners (17 full-time) including a Chief and Deputy Chief Coroner. The coroner has overall responsibility and authority for the investigation of death of a person, and for reporting of the findings. The New Zealand Police are considered agents of the coroner and conduct all inquiries and investigations on their behalf.

The National Initial Investigation Office (NIIO) is a 24/7 service and is the first point of contact for all deaths referred to the coroner. NIIO provides support to the coroner on duty and coordinates the initial coronial process. If is not accepted, the body is released back to the family/whānau.

Deaths that are referred are reviewed by the coroner on duty to determine whether an inquiry into the death is required. If the decision is that it is required, the coroner will decide whether or not to direct a post-mortem examination. If decision is that a post-mortem examination is required the scope of the examination, whether it will be full (three cavity), limited (confined to a region) or a lesser (external) would be decided. In making this decision the coroner must consider a range of factors including[5]:

1) *The desirability of minimising the distress to people who, by reason of their ethnic origins, social attitudes or customs or spiritual beliefs, customarily require bodies to be available to family members as soon as possible after death and*
2) *The desirability of minimising the causing of offence to people who, by reason of their ethnic origins, social attitudes or customs or spiritual beliefs, find post-mortems of bodies offensive*

To assist with this decision the coroner has the option of seeking the opinion of the forensic pathologist as to the scope of the post-mortem examination via a process known as a preliminary examination. This allows the pathologist to review the known facts of the case, conduct an external examination, review medical records and conduct radiological imaging. Rapid toxicology is not permitted. On the basis of this information the pathologist provides to the coroner their opinion as to the scope of the post-mortem examination required to determine the cause of death. However the coroner may completely dispense with a post mortem examination and release the deceased back to the family/whānau without any form of formal medical examination but still investigate the death.

Under the Coroners Act 2006, the family/whānau has the right to object to a post-mortem examination. If the coroner, despite the objection, decides to proceed with a post-mortem examination, then the family/whānau has the right to challenge the decision in High Court. To date a High Court judicial review has not occurred. Objections are not uncommon especially from Māori who are culturally opposed to full post-mortem examinations but are more accepting of a lesser examination.

SCENE

New Zealand does not have dedicated medical death investigators. All death investigations are conducted by the national police service which has specialist branches (e.g.: fingerprints, scene examination, criminal investigation branch). The latter is tasked with investigating homicides and suspicious deaths.

If a death is deemed to be a homicide or suspicious then the police will contact the forensic pathologist for advice (by telephone, or requesting the forensic pathologist to attend the scene). It is not unusual for a forensic pathologist to attend the scene of a homicide or suspicious death, depending upon the distance. A forensic scientist will also be called to conduct a thorough scene examination which may take some days. The forensic pathologist has a key input into this part of the investigation.

If the death is considered to be due to natural causes, the police will call the deceased's doctor to sign the death certificate and/or to verify the death. If the deceased's doctor is not willing to sign the death certificate, the death is referred to the coroner.

FORENSIC PATHOLOGY SERVICES

Most coronial post-mortem examinations are full examinations. External examinations constitute approximately 10% of all coronial post-mortem examinations, although there is an increasing tendency and desire to utilise this option. Post-mortem examinations limited to a single region of the body are rare.

Very few non-coronial post mortem examinations are performed. Majority of these are hospital perinatal post

mortems. Hospital post mortems of adults (deaths not referred to the coroner) are extremely rare and in Auckland (population 1.5 million) constitute only 3 to 5 cases per year.

Nationally, forensic pathology services are distributed over four service providers. These are a mixture of private and public services, with all being contracted to the Ministry of Justice. Governance is provided by separate multi-agency clinical and operational governance groups, with an overarching strategic governance group. These committees are composed of Police, Ministry of Justice, operation managers, mortuary technicians, forensic pathologists, and forensic scientists.

Four forensic pathology centres are scattered throughout New Zealand with the Auckland and Palmerston North centres forming the Northern Forensic Pathology Service and the Christchurch forensic pathology service servicing the South Island for all forensic cases. Each of these centres is staffed by full-time forensic pathologists. Auckland, Palmerston North and Christchurch provide dedicated forensic pathology training, and are all accredited for forensic pathology training with The Royal College of Pathologists of Australasia. In smaller metropolitan centres the local hospital pathologists conduct the coronial post-mortem examinations, except in complex and suspicious deaths, and homicides, which are referred to the nearest forensic pathology centre.

The only forensic facility in New Zealand with a dedicated CT scanner is the Department of Forensic Pathology in Auckland. Other forensic departments and mortuaries throughout New Zealand, all being based in a hospital environment, utilise the local hospital radiology service on an ad hoc basis. Post-mortem CT examinations in these centres are therefore performed in only highly selected cases such as homicides, suspicious deaths, diving accidents and infant deaths.

POST-MORTEM EXAMINATION

The forensic pathologist is not permitted to examine the deceased, or talk to the family, without the authority of the coroner. Until authority is received and/or a request for an opinion as to the scope of the examination is received no involvement of the pathologist can occur. The duration between the receipt of the deceased at the mortuary and the receipt of the coroner's authority/direction is variable depending on the complexity of the discussions between the coroner and the family as to the need for a post mortem examination. In the majority of cases this is reasonably straight forward and there is minimal delay (approximately 24 hours). However, on occasion there can be an appreciable delay especially if there is conflict between the views of the family and the forensic pathologist. The final decision as to the scope of the examination rests with the coroner.

Upon receipt of direction for post-mortem examination, in Auckland at least, a post mortem CT scan is done which is reviewed by the forensic pathologist prior to commencing the post mortem examination. Medical records are electronically accessible and reviewed. If a full post mortem has been authorised, a full external and three-cavity internal examination is performed. All post-mortem examinations are fully photographed and undertaken with the assistance of a forensic mortuary technician. At the conclusion of the examination the coroner is informed of the provisional cause of death and which post mortem samples have been retained.

In homicides and suspicious deaths, the post-mortem examination is attended by a police photographer, officer in-charge of the body (to receive all the exhibits) and a senior police officer. Two mortuary technicians are also in attendance; one to assist with evisceration and the other to document all post-mortem exhibits and samples.

Forensic pathologists have a close working relationship with the Cardiac Inherited Disease Group based in Auckland which is a multiagency team which will review referred case with suspicion of channelopathy, cardiomyopathy or other possible inherited cardiovascular disorder. This group will organise genetic testing of the deceased and contact and review the deceased's family with regards to performing genetic testing as required. Referrals from the forensic pathologists to this service have helped save many lives.

JUDICIAL PROCESS

The final detailed written report of the pathologist is issued to the coroner stating the cause of death. Similar to the English coronial system, the manner of death is decided by the coroner and not the forensic pathologist.

The majority of coronial investigations do not result in a formal inquest. Most are either "signed off" or are "chambers hearings by papers" where the coroner will decide upon the cause of death and make any subsequent recommendations based on documentation alone. Formal inquests are very infrequent and it is very rare for forensic pathologist to be called to an inquest.

UNIQUE CHARACTERISTICS OF FORENSIC PATHOLOGY PRACTICE IN NEW ZEALAND

The Treaty of Waitangi is New Zealand's foundation document in which a partnership was established between Māori and the then British Empire in 1840. It is partially based upon this document that New

Zealand's laws and government are determined. The Coroners Act 2006 recognises the Treaty and the cultural requirements of Māori, and the cultural and religious expectations and requirements of all ethnicities, and as such determines elements of forensic pathology practice in New Zealand.

Following the death of a loved one (tūpāpaku) Māori culture requires the family/whānau to stay with the deceased until the funeral (tangi) can be held and the deceased's spirit has departed from Cape Reinga (northern most point of the North Island). This cultural requirement may cause practical difficulties when the death has been referred to the coroner and the body taken to a mortuary (sometimes some distance away) where family/whānau cannot be with the tupāpaku. Most, if not all, mortuaries have facilities for families/whānau to stay overnight should they wish to. They can do so, with the coroner's permission, at least to view and possibly be with the deceased for a short period of time. While not the perfect solution this does allow the families/whānau to be at least be in the same building as the tupāpaku until such time a decision is made whether or not to conduct a post mortem examination. Where homicide is suspected viewings are not permitted prior to the post-mortem.

In deciding whether or not to conduct a post-mortem examination, the coroner must consider the impact of the post mortem examination on the family/whānau, including any undue distress or grief and whether or not this outweighs the benefits of a post-mortem examination. This is situation is most prevalent in infant deaths where the family/whānau is extremely distressed, and for cultural reasons not uncommonly objects to a post-mortem examination. In these situations forensic pathologists may be directed to perform an external examination and post-mortem CT only with no internal examination. If there is overwhelming and uncompromising objection to autopsy, coupled with a desire to have the infant returned to the whānau as soon as possible, the coroner may release the body to the whānau without any form of medical examination, including radiological study, if satisfied that there are no suspicious circumstances. This practice, and the intent of the Act, conflicts with what is deemed to be best forensic pathology practice, and thus can sometimes result in rigorous but respectful discussion. There is no doubt that balancing the cultural, legal and medical requirements in an individual case can, at times, be challenging for the coroner and others involved in the process.

The Coroner's Act also recognises that in order to meet cultural and religious requirements the deceased should be released soon to the family/whānau, and as such gives the Coroner the provision to order an immediate post-mortem examination. This can be ordered solely on the basis that the deceased is an infant. The directing of an immediate post mortem examination means that the coronial post-mortem examination may need to be conducted during the weekend so that the family/whānau can continue with the tangi.

All samples retained at autopsy must be accurately documented and the coroner informed. Any retained tissue larger than a standard histological cassette requires the consent of the coroner. Under the Coroner's Act the coroner must inform the family/whānau exactly what tissue/fluid has been retained by the pathologist. This legal requirement is a disincentive to the traditional practice of a stock jar of retained post-mortem tissue. At the conclusion of the coronial investigation the family has the right to request return of all tissue and fluids that have not been consumed in testing, including all DNA specimens, microscopic slides and blocks. If the coroner authorises the return of such post-mortem samples then the pathologist must oblige. In order to fulfil this requirement the accurate tracking of all post-mortem samples is critical and it must be done without error. Return of post-mortem specimens usually occurs 6-12 months following the post-mortem examination but may even occur years later. These cultural and legal requirements make a subsequent case review somewhat problematic. Approximately 40% of post-mortem samples that are returned to families/whānau are subsequently returned to the originating forensic department as families/whānau had not fully appreciated what would be returned to them and no longer wish to retain them.

Post-mortem organ and tissue donation is rare in NZ. It is permitted by the Coroners Act but only with the agreement of the family. Multi-agency work is currently underway to develop a new process to facilitate this.

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