IN THE CORONERS COURT
OF VICTORIA
AT MELBOURNE

Court Reference: **COR 2019 0756**

FINDING INTO DEATH WITHOUT INQUEST

Form 38 Rule 60(2)
Section 67 of the Coroners Act 2008

Findings of:	**MR JOHN OLLE, CORONER**
Deceased:	**MRS M**
Date of birth:	[redacted]
Date of death:	**10 FEBRUARY 2019**
Cause of death:	**COMPLICATIONS OF PELVIC FRACTURES, SUSTAINED IN A FALL**
Place of death:	**DANDENONG HOSPITAL, 135 DAVID STREET, DANDENONG, VICTORIA 3175**

HIS HONOUR:

BACKGROUND

1. Mrs M was born on 8 February 1928. She was 91 years old at the time of her death. Mrs M lived with her husband, in a retirement village in Keysborough, Victoria.

Medical history

2. Mrs M had a medical history that included hypertension,[1] hypercholesterolaemia,[2] permanent pacemaker, osteoporosis, hypothyroidism,[3] anaemia[4] and atrial fibrillation.[5]

3. In September 2012, Mrs M was reviewed by Ambulance Victoria paramedics after complaining of chest and left shoulder pain. She was transferred to Monash Health for further review and admitted thereafter. At the time, the hospital had documented that Mrs M had multiple drug allergies including penicillin and doxycycline. Similarly, Ambulance Victoria records indicated that Mrs M had allergies which included penicillin.

THE PURPOSE OF A CORONIAL INVESTIGATION

4. Mrs M's death constituted a '*reportable death*' under the *Coroners Act 2008* (Vic), as her death occurred in Victoria, and resulted, directly or indirectly, from an accident or injury.[6]

5. The jurisdiction of the Coroners Court of Victoria is inquisitorial.[7] The purpose of a coronial investigation is to independently investigate a reportable death to ascertain, if possible, the identity of the deceased person, the cause of death and the circumstances in which death occurred.

6. It is not the role of the coroner to lay or apportion blame, but to establish the facts.[8] It is not the coroner's role to determine criminal or civil liability arising from the death under investigation, or to determine disciplinary matters.

7. The "cause of death" refers to the medical cause of death, incorporating where possible, the mode or mechanism of death.

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[1] Hypertension is otherwise known as high blood pressure.
[2] Hypercholesterolaemia is the medical term for high cholesterol.
[3] Hypothyroidism is a condition that results from decreased production of thyroid hormones; commonly referred to as underactive thyroid.
[4] Anaemia is a state in which haemoglobin in the blood is below the reference range.
[5] Atrial fibrillation (AF) is a disease of the heart which is characterised by an irregular and often faster heartbeat. Mrs Mersel was taking the medication, warfarin, for her AF, to reduce her risk of having a stroke.
[6] Section 4, definition of 'Reportable death', *Coroners Act 2008*.
[7] Section 89(4) *Coroners Act 2008*.
[8] *Keown v Khan* (1999) 1 VR 69.

8. For coronial purposes, the circumstances in which death occurred refers to the context or background and surrounding circumstances of the death. Rather than being a consideration of all circumstances which might form part of a narrative culminating in the death, it is confined to those circumstances which are sufficiently proximate and causally relevant to the death.

9. The broader purpose of coronial investigations is to contribute to a reduction in the number of preventable deaths, both through the observations made in the investigation findings and by the making of recommendations by coroners. This is generally referred to as the 'prevention' role.

10. Coroners are also empowered:

    (a) to report to the Attorney-General on a death;

    (b) to comment on any matter connected with the death they have investigated, including matters of public health or safety and the administration of justice; and

    (c) to make recommendations to any Minister or public statutory authority on any matter connected with the death, including public health or safety or the administration of justice. These powers are the vehicles by which the prevention role may be advanced.

11. All coronial findings must be made based on proof of relevant facts on the balance of probabilities. In determining these matters, I am guided by the principles enunciated in *Briginshaw* v *Briginshaw*.[9] The effect of this and similar authorities is that coroners should not make adverse findings against, or comments about individuals, unless the evidence provides a comfortable level of satisfaction that they caused or contributed to the death.

MATTERS IN WHICH THE CORONER MUST, IF POSSIBLE, MAKE A FINDING

Identity of the Deceased pursuant to section 67(1)(a) of the *Coroners Act 2008*

12. Mrs M was visually identified by her husband on 10 February 2019. Identity was not in issue and required no further investigation.

[9] (1938) 60 CLR 336.

Medical cause of death pursuant to section 67(1)(b) of the *Coroners Act 2008*

13. On 12 February 2019, Dr Gregory Young, Forensic Pathologist at the Victorian Institute of Forensic Medicine, conducted an inspection on Mrs M's body and provided a written report on the same date, concluding a reasonable cause of death to be "I(a) Complications of pelvic fractures, sustained in a fall". I accept his opinion in relation to the cause of death.

14. Dr Young noted that the post-mortem computer tomography (**CT**) scan[10] showed acute fractures of the right superior and inferior pubic rami in the pelvis.[11] The lungs showed increased markings.[12] The heart showed coronary artery calcification[13] and a cardiac pacemaker. Rib fractures were evident, consistent with cardiopulmonary resuscitation (**CPR**).

15. Dr Young reported that complications of pelvic fractures may include increased stress on the heart, multi organ system failure, chest infection, and development of deep vein thrombosis[14] and pulmonary thromboembolism.[15]

Circumstances in which the death occurred pursuant to section 67(1)(c) of the *Coroners Act 2008*

16. On 9 February 2019, Mrs M had a mechanical fall at home. She developed right hip pain and was unable to mobilise following the incident. An ambulance was called with Mrs M being transported to Dandenong Hospital for further review. She arrived at the hospital's Emergency Department (**ED**) at 3.42pm and was given analgesia[16] and antiemetics.[17] On admission Mrs M's observations were satisfactory and within normal limits. A CT scan of Mrs M's brain showed that she did not have an intracranial bleed,[18] and a right hip x-ray concluded that she had normal alignment with no definite fracture being identified.

17. Mrs M remained in the ED's short stay unit overnight and was treated with analgesics for pain. She required oxygen therapy for a decrease in her oxygen saturations,[19] so a chest x-

[10] A computer tomography (CT) scan is a medical imaging procedure that uses x-rays and digital computer technology to create detailed pictures of the body.
[11] The right superior and inferior pubic rami are pubic bones that are found within the pelvis.
[12] Increased lung markings can happen due to calcifications of the vessels inside the lungs. A moderate amount is expected as we age.
[13] Calcified arteries in the heart are a form of coronary artery disease. With this heart condition, calcium accumulates in the walls of the arteries that supply the heart muscle and oxygen-rich blood. The calcium makes the arteries hard.
[14] Deep vein thrombosis (DVT) is also known as thromboembolism. It is a condition in which the blood clots form in veins located deep inside the body.
[15] This is a condition in which a blood vessel in the lung(s) gets blocked by a blood clot.
[16] Analgesia is a medical term for pain medication.
[17] Antiemetics are medications that are used for the treatment of nausea and vomiting.
[18] Commonly known as bleeding within the skull.
[19] Oxygen saturation refers to the extent to which haemoglobin is saturated in oxygen. Haemoglobin is the element in the blood that binds with oxygen to carry it through the bloodstream to the organs, tissues and cells of the body. Normal oxygen saturation is between 95-100%.

ray was obtained and concluded that Mrs M had atelectasis[20] and consolidation[21] in the left lung base, with an increased white cell count giving the impression that Mrs M had pneumonia. Throughout Mrs M's admission she was alert and orientated.

18. On 10 February 2019 at around 10.28am, Mrs M's blood pressure dropped slightly, but she was asymptomatic.[22] The resident medical officer was notified. At the time, Mrs M's family were in attendance. At 1.30pm, Mrs M's blood pressure dropped further. She remained asymptomatic and had no complaints of dizziness, sweats, headache, nausea or vomiting. Mrs M was reviewed by an ED consultant who prescribed a stat[23] dose of intravenous fluids and requested that a CT scan of Mrs M's hip be undertaken to rule out fracture. At 2.00pm, Mrs M displayed no respiratory distress and was able to speak in full sentences. She was prescribed and administered 100mg of doxycycline orally and 1.2g of benzylpenicillin intravenously. A short time later Mrs M started to feel nauseated, so an antiemetic was administered.

19. At or around 2.08pm, Mrs M was noted to become unresponsive. The emergency buzzer was pressed, and CPR was commenced. After approximately 20 minutes with no return of spontaneous circulation, CPR was stopped, and Mrs M was declared deceased.

Review of care

20. Given the differing diagnoses of pelvic fractures identified on the post-mortem CT scan in comparison to the investigations performed while Mrs M was an inpatient at Dandenong Hospital, I requested that the Coroners Prevention Unit (CPU)[24] review Mrs M's care.

21. Following review, it appeared that the treating team had made plans to further investigate Mrs M's ongoing pain by way of undertaking a further CT scan, however, this did not eventuate due to Mrs M's deterioration.

22. Additionally, the antibiotic administration appeared proximate to death. Mrs M's medical file and previous attendances to Monash Health revealed a nursing assessment on 9 February 2019 stated that Mrs M had nil allergies. Similarly, the Ambulance Victoria notes of the same date also reported that Mrs M had no known allergies. These notes were reviewed in

[20] Atelectasis is a condition where lungs collapse partially or completely.
[21] Lung consolidation is a region of normally compressible lung tissue that has filled with liquid instead of air.
[22] Asymptomatic refers to a person producing or showing no symptoms.
[23] Stat in medical terms is commonly referred as 'immediate'.
[24] The Coroners Prevention Unit (CPU) was established in 2008 to strengthen the prevention role of the Coroner. The unit assists the Coroner with research in matters related to public health and safety and in relation to the formulation of prevention recommendations. The CPU also reviews medical care and treatment in cases referred by the coroner. The CPU is comprised of health professionals with training in a range of areas including medicine, nursing, public health and mental health.

comparison to Mrs M's previous admissions to Monash Health in 2012 which identified that she had multiple drug allergies including penicillin and doxycycline. Consequently, further statements were sought regarding Ambulance Victoria and Monash Health's processes in relation to drug allergy alerts.

23. Ambulance Victoria's medical director, stated:

(a) the attending paramedic on 9 February 2019 recalled that Mrs M was alert and orientated, able to answer questions appropriately and that she had informed her that she had no allergies.

(b) with regard to the capabilities of Ambulance Victoria having patient alerts they advised that they do not have a system for patient alerts and would have alerted the paramedics attending in February 2019 of Mrs M's reported allergies in 2012.

(c) while Ambulance Victoria maintains a comprehensive electronic patient care record data warehouse, with over 7 million individual records, no patient information is accessible to the infield staff.

24. Monash Health provided statements from the emergency consultant, (**EC**), emergency physician, (**EP**), and pharmacist.

25. The EC provided a chronology of Mrs M's presentation and admission. He said that during his conversation with Mrs M and her husband, he had asked Mrs M whether she had any drug allergies, especially for penicillin, to which they both confirmed that Mrs M did not have any allergies to medications. He noted Mrs M's past allergic history from her current ED presentation notes, paramedic notes and medication charts. All were recorded as "*no known allergies*". On reviewing Mrs M's past medical history in relation to her previous Monash Health attendances he noted that the medical records listed a number of medications under the 'Allergies' section with notes stating that Mrs M suffered side effects of either nausea of "GI upset", rather than a true allergy response to the medications. With this knowledge the history provided by Mrs and Mr M's that she had "*no known medication allergy*" was correct.

26. The EP concurred regarding the concept of 'GI upset' or 'nausea'. He stated that on at least three different occasions during her ED episode of care, Mrs M denied being allergic to any medications, and that it was still most likely that penicillin would have been prescribed and given, although this was not certain. The EP denied that Mrs M had a documented allergy to

penicillin on admission to Monash Health in 2012; that she had a side effect to penicillin documented, not an allergy. As such, he said that Mrs M was correct in reporting that she did not have any known medication allergies.

27. In the EC's opinion, Mrs M's cardiac arrest was unlikely due to a medication allergy as Mrs M's condition had started to deteriorate before being administered the antibiotics; there was no evidence of anaphylaxis other than hypotension after administration of the antibiotics; and that there was no history of any significant allergy to penicillin such as anaphylaxis or a true allergic reaction.

28. The EP noted Mrs M's case was discussed at Monash Health's ED Service Safety and Quality meeting on 18 June 2019. He said that the review did not identify any specific omissions of Mrs M's care and that her traumatic injury resulted in a slow, steady deterioration in her cardiorespiratory status which was most likely due to the additional strain on the cardiorespiratory system from the trauma, compounded by her underlying anaemia. The review concluded that there was no specific therapeutic intervention which would have prevented Mrs M's oncoming cardiac arrest, with the group agreeing that the administration of penicillin was not related to Mrs M's subsequent cardiac arrest.

29. The EP provided detail of the three different sites where medication allergies may be sourced at the time of Mrs M's admission. The first being an electronic health record known a *Symphony*; the second was an electronic prescribing system called *Merlin*, which was utilised for discharge medication; and the third was the scanned medical record (**SMR**), where previously entered medication allergies were listed on the cover page of the patient's electronic record. He advised that when a patient is cognitively normal and can directly answer questions concerning medication allergies, it would be less usual for Merlin and SMR to be checked but the alert symbol on Symphony would still be readily visible. He noted that it would be difficult to know how frequently the Symphony alert would be viewed when a cognitively normal patient had denied medication allergies.

30. The EP advised that they were due to roll-out a new Electronic Medical Record (**EMR**) in August 2019 at Dandenong Hospital which would be consistent across all of the Monash Health sites within six months. He stated that when the use of the EMR commences, the plan would be for the previously described three sources of information on medication allergies to be drawn together and feature more prominently on the ED patient banner. Further, that the EMR would also link to the medication chart - which would be

electronically generated - and would alert the prescriber to any previously recorded medication issues at the time that medication is charted.

31. In conclusion, it appeared Mrs M experienced side effects to the antibiotics administered, not an allergy. Further, the review performed at the hospital determined that the administration of antibiotics proximate to Mrs M's deterioration was coincidental. Consequently, the treatment appeared reasonable.

FINDINGS

32. Having investigated the death of Mrs M and having considered all of the available evidence, I am satisfied that no further investigation is required.

33. On the basis of the available evidence, I am satisfied to the requisite standard that after experiencing a mechanical fall at home, Mrs M received reasonable and appropriate medical treatment from the staff at Monash Health.

34. I make the following findings, pursuant to section 67(1) of the *Coroners Act 2008*:

    (a) that the identity of the deceased was Mrs M, born [redacted]

    (b) that Mrs M died on 10 February 2019, at Dandenong Hospital, from complications of pelvic fractures that she sustained in a fall at home; and

    (c) that the death occurred in the circumstances described in the paragraphs above.

COMMENT

35. Pursuant to section 67(3) of the *Coroners Act 2008,* I make the following comment:

    (a) The statements provided to me identified significant information into the various medical record platforms in use at Monash Health at the time of Mrs M's presentation and the risk of information not being readily and easily accessible. The information provided detailed the scheduled implementation of electronic medical records at Monash Health. I commend Monash Health on this enactment, as it will provide a standardised platform for history, medication management and allergies to be more visible.

36. I convey my sincerest sympathy to Mrs M's family and friends.

37. Pursuant to section 73(1B) of the *Coroners Act 2008,* I order that this Finding be published on the internet.

38. I direct that a copy of this finding be provided to the following:

    (a) Mrs M's family, senior next of kin;

    (b) Monash Health;

    (c) Ambulance Victoria;

    (d) Investigating Member, Victoria Police; and

    (e) Interested Parties.

Signature:

MR JOHN OLLE
CORONER
Date: 21 October 2020