IN THE CORONERS COURT
OF VICTORIA
AT MELBOURNE

Court Reference: COR 2006 1100

FINDING INTO DEATH WITH INQUEST[1]

Form 37 Rule 60(1)
*Section 67 of the **Coroners Act 2008***

Inquest into the Death of: GLENNI GOODWIN KER

Hearing Dates:	15-17 November 2010
Appearances:	Mr Neil Murdoch of Counsel on behalf of Peninsula Health (Minter Ellison Lawyers) Mr Ron Gipp of Counsel on behalf of Nurse Julie-Anne Rock (Ryan Carlisle Thomas Lawyers)
Police Coronial Support Unit:	Leading Senior Constable Remo Antolini
Findings of:	AUDREY JAMIESON, CORONER
Distributed on:	9 September 2014

[1] This Finding does not purport to refer to all aspects of the evidence obtained in the course of the investigation. The material relied upon included statements and documents tendered in evidence together with the transcript of proceedings and submissions of legal representatives/Counsel. The absence of reference to any particular aspect of the evidence, either obtained through a witness or tendered in evidence, does not infer that it has not been considered.

I, AUDREY JAMIESON, Coroner, having investigated the death of **GLENNI GOODWIN KER**

AND having held an inquest in relation to this death on 15, 16 and 17 November 2010
at Melbourne
find that the identity of the deceased was **GLENNI GOODWIN KER**
born on 19 October 1921
and the death occurred on 23 March 2006
at Frankston Hospital, 2 Hastings Road, Frankston 3199
from:

1 (a) ALLERGIC REACTION TO METOCLOPRAMIDE IN A WOMAN WITH ACUTE MYOCARDIAL INFARCTION AND ISCHAEMIC BOWEL

in the following summary of circumstances:

1. Mrs Glenni Goodwin Ker[2] died at Frankston Hospital[3] following the administration of a medication that she was known to be allergic to. The medication had not been prescribed to Mrs Ker but had instead been initiated by a member of the nursing staff.

BACKGROUND CIRCUMSTANCES

2. Mrs Ker was 84 years of age at the time of her death. She had been living at Village Baxter, a retirement village in Robinsons Road, Frankston South, but had more recently lived in Pearcedale with her son, Russell. Mrs Ker also had two daughters, Elizabeth and Karen.

3. Mrs Ker had a medical history that included hypertension, ischaemic heart disease and diverticulitis.

SURROUNDING CIRCUMSTANCES

4. On 16 March 2006, Mrs Ker presented to the Frankston Hospital emergency department (ED) with intermittent chest pain and an episode of diarrhoea. She was admitted to the hospital with a diagnosis of non-ST elevation myocardial infarction (NSTEMI)[4] based on

[2] Ms Furey and Ms MacDonald requested that their mother be referred to as "Mrs Ker" during the course of the Inquest. For consistency I have endeavoured where possible to also refer to her in the formal sense in this Finding.

[3] Frankston Hospital sits within Peninsula Health.

[4] NSTEMI is a heart attack.

her electrocardiogram (ECG)[5] and Troponin 1 result (3.73ug/L).[6] Mrs Ker was assessed as being unsuitable for surgical or angiographic intervention and was managed conservatively by the General Medical Unit C (GMC) in Ward 5FN.

5. On 17 March 2006 Mrs Ker signed a "Not for Resuscitation" (NFR) order.

6. Over the following week, Mrs Ker continued to complain of intermittent chest pain and nausea treated with modifications to her medications which included Clexane, Aspirin, Frusemide, Morphine, Imdur and Anginine. Her Troponin 1 continued to rise.

7. Mrs Ker was pain free on 19 March 2006.

8. On 22 March 2006, Mrs Ker complained of nausea associated with chest pain on several occasions and was treated with the anti-emetic medication Ondansatron[7] at 9.45am, 10.30am, 3.50pm and 7.00pm by oral, intramuscular and intravenous routes.[8] Her observations remained stable.

9. Overnight and into the early hours of 23 March 2006, Mrs Ker complained of abdominal pain, explosive diarrhoea and generalised discomfort. She was administered a low dose of Morphine (2.5mg) and appeared to settle.

10. On 23 March 2006, at approximately 5.00am, Registered Nurse (RN) Julie Rock administered 10mg Maxalon (metoclopramide) intramuscularly to Mrs Ker to treat nausea. During the administration, Mrs Ker advised RN Rock that she was allergic to Maxalon. Mrs Ker's drug chart indicated that she had an allergy to the drug and she was also wearing a red (Drug Allergy) wristband. No immediate adverse effects to the medication were noted by

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[5] ECG is a sonogram of the heart. It has become routinely used in the diagnosis, management and follow-up of patients with any suspected or known heart disease. It is one of the most widely used diagnostic tests in cardiology. It can provide a wealth of helpful information, including the size and shape of the heart (internal chamber size quantification), pumping capacity and the location and extent of any tissue damage. An ECG can also provide physicians other estimates of heart function such as a calculation of the cardiac output, ejection fraction and diastolic function (how well the heart relaxes after it contracts).

[6] Troponin is a protein in the striated cell ultrastructure that modulates the interaction between actin and myosin molecules. A troponin test measures levels of cardiac troponins, which are considered a promising biochemical marker for cardiac disease. This test assists in evaluating patients with suspected acute coronary ischaemic syndrome. It is particularly useful in differentiating cardiac from non-cardiac chest pain., evaluating patients with unstable angina, detecting reperfusion associated with coronary recanalization, estimating myocardial infarction (heart attach) size, and detecting perioperative myocardial infarction (*Mosby's Medical, Nursing & Allied Health Dictionary*, 6th ed, 1757).

[7] The trademark name of Ondansatron is Zofran.

[8] Exhibit 5 – Statement of Louise Walsh dated 22 December 2007.

RN Rock. RN Rock did not immediately escalate[9] the incident[10] by reporting the same to the medical officer and/or the nursing night supervisor.[11]

11. At approximately 6.00am RN Rock telephoned the on-call overnight medical officer, Dr Dhushyanthakumar Rajesparasingam and obtained a telephone order to administer intramuscular injection (IMI) Zofran 8mg.

12. At approximately 7.00am RN Rock provided handover to the morning (AM) shift. She informed the AM shift that Mrs Ker had been extremely unwell overnight with constant nausea and explosive diarrhoea and that she had administered intramuscular Maxalon to her at 5.00am. She *went onto explain that Mrs Ker was allergic to Maxalon and that she had not realised this prior to giving her the drug.*[12]

13. Following handover, Nurse Unit Manager (NUM) RN Walsh spoke briefly with RN Rock regarding the administration of Maxalon to Mrs Ker. NUM Walsh advised RN Rock that an Incident Report would need to be completed and senior staff members informed. RN Rock did not initiate the completion of the Incident Report as is required by hospital policy.[13] NUM Walsh subsequently attended to it.[14]

14. Shortly thereafter NUM Walsh went to check if Mrs Ker was wearing a red allergy wristband. She confirmed that the red wristband was in place. Mrs Ker was asleep.[15] Graduate RN Jan Schultz was the AM shift nurse allocated to care for Mrs Ker. At approximately 9.00am Mrs Ker told RN Schultz that the other nurse had given her something she was allergic to.

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[9] T @ pp165-166, 179-180 (Jan Child).

[10] Defined as being an *unexpected event that may cause some adverse harm or may possibly cause harm* – T @ p180 (Jan Child).

[11] T @ p180 (Jan Child).

[12] Exhibit 5 – Statement of Louise Walsh dated 22 December 2007.

[13] T @ p125 (Louise Walsh), T @ p165 (Jan Child).

[14] Attachment "JC2" to Exhibit 8 – Statement of Jan Child dated 26 March 2008, T @ p165 (Jan Child).

[15] Exhibit 5, T @ p124 (Louise Walsh).

15. At 10.00am RN Schultz recorded Mrs Ker's vital signs on the observations graphic chart. All were within a normal range, although RN Schultz thought Mrs Ker to be *more anxious than usual.*[16]

16. At approximately 10.10am Mrs Ker complained to RN Schultz that her tongue was numb. *She could poke it out easily but she was having trouble speaking, similar to a lisp.*[17] RN Schultz telephoned Dr Tissa Tandiari, Intern of the GMC.

17. At approximately 10.30am, Medical Registrar for GMC Dr Manoj Gupta examined Mrs Ker and found her to be hypotensive, cold, clammy, cyanosed and sweaty. She was noted to be in atrial fibrillation with a weak pulse. She was being administered 6 litres (L) of oxygen and her oxygen saturation was 82%. She appeared more anxious than normal and was noted to have a diffuse erythematous rash over her trunk and back. Mrs Ker was complaining of a numb tongue, numbness in the right thigh and back pain. The differential diagnoses at the time included severe allergic reaction, bowel ischaemia, progression of myocardial infarction and/or urosepsis. Mrs Ker's condition was considered critical. Resuscitative measures consistent with a response to an anaphylactic reaction were instigated including the administration of oxygen, adrenaline, hydrocortisone, phenergan, Salbutamol, antibiotics and intravenous fluids. However, Mrs Ker's response to these resuscitative measures was poor.

18. At approximately 2.00pm, Dr Gupta telephoned Consultant Physician, Dr Suresh Varadarajan to discuss Mrs Kerr's critical clinical condition. She was considered not suitable for active treatment and having regard to the presence of the NFR order, it was decided, subject to consultation with her family, to administer palliative care only.

19. Mrs Ker died at 4.50pm on 23 March 2006. Her death was reported to the Coroner.

INVESTIGATIONS

Identity of the deceased

20. The identity of Mrs Ker was without dispute and required no additional investigation.

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[16] Exhibit 10 – Statement of Jan Schultz (Grenville) dated 8 October 2007, T @ p226 (Jan Schultz).

[17] *Ibid.*

Cause of Death

21. Dr Michael Burke, Forensic Pathologist at the Victorian Institute of Forensic Medicine performed an autopsy on the body of Mrs Ker on 27 March 2006. Dr Burke had available to him the Victoria Police Report of Death for the Coroner – Form 83 and the medical records from Frankston Hospital. Dr Burke reported that the post mortem examination showed significant underlying natural disease with coronary artery atherosclerosis, myocardial fibrosis and acute infarction. The bowel also showed evidence of ischaemia. He commented that the medical records reflected that Mrs Ker had allergies to Maxalon, Stemitil, Vioxx and Amoxil. Dr Burke ascribed the cause of Mrs Ker's death to allergic reaction to Metroclopramide (maxalon) in a woman with acute myocardial infarction and ischaemic bowel.

Clinical Liaison Service Review

22. The Clinical Liaison Service (CLS)[18] reviewed the medical records on behalf of the Coroner and suggested that statements be obtained from clinicians involved in Mrs Ker's care with the aim of clarifying the circumstances surrounding the administration of maxalon to Mrs Ker. Statements were subsequently obtained from RN Schultz and NUM Walsh but not from RN Rock. Following a second request for a statement from the Executive Director of Nursing, Ms Child, this too was received.

23. On a final review of the available evidence surrounding Mrs Ker's death, the CLS indicated to the Coroner that the restorative and preventative measures undertaken by the hospital in response to her death warranted further exploration.

24. I subsequently determined to hold a discretionary Inquest.

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[18] The role of the CLS was to assist the Coroner's investigation into the nature and extent of deaths, which occurred during the provision of healthcare, and identify potential system factors in healthcare related deaths. CLS personnel were comprised of practising Physicians and Clinical Research Nurses who drew on their medical, nursing and research experiences, skills and knowledge to independently evaluate clinical evidence for the investigation of reportable and reported healthcare deaths and to assist in identifying remediable factors that may assist in prevention and risk management in health services settings. The CLS was replaced with the Health and Medical Investigation Team (HMIT) in 2010. HMIT sits within the Coroners Prevention Unit, which was established in 2008 to strengthen the prevention role of the Coroner. The unit assists the Coroner in relation to the formulation of prevention recommendations, as well as assisting in monitoring and evaluating the effectiveness of the recommendations.

JURISDICTION

25. At the time of Mrs Ker's death, the *Coroners Act 1985* (Vic) (Old Act) applied. From 1 November 2009, the *Coroners Act (2008)* (Vic) (Coroners Act) has applied to the finalisation of investigations into deaths that occurred prior its introduction.[19]

26. The role of the coronial system in Victoria involves the independent investigation of deaths to determine the cause of death, to contribute to the reduction of the number of preventable deaths and for the promotion of public health and safety and the administration of justice.

27. Section 67 of the Coroners Act sets out the statutory role of the Coroner in that a Coroner must find, if possible, the identity of the deceased, the cause of death and, in some cases, the circumstances in which the death occurred.

28. A Coroner may comment on any matter connected with the death and may also report to the Attorney-General and may make recommendations to any Minister, public statutory authority or entity, on any matter connected with the death, including recommendations relating to public health and safety or the administration of justice.[20]

29. The broader purpose of a coronial investigation is to contribute to the reduction of the number of preventable deaths through the findings of the investigation and the making of recommendations by Coroners.

30. Coroners are also not bound by the rules of evidence and may be informed and conduct an inquest in any matter that the Coroner reasonably thinks fit.[21]

INQUEST

31. Prior to the commencement of the Inquest, two Directions Hearings were held on 2 February 2010 and 28 May 2010.

32. An Inquest was held on 15 -17 November 2010.

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[19] Section 119 and Schedule 1.

[20] Section 72(1) and (2).

[21] Section 62.

Viva Voce evidence at Inquest

33. *Viva voce* evidence was obtained from the following witnesses at the Inquest:

a. Dr Michael Burke, Forensic Pathologist, Victorian Institute of Forensic Medicine;

b. Dr Manoj Kailshnarayan Gupta, Registrar General Medical Unit C (GMC);

c. Professor Johan Duflou, Forensic Pathologist;

d. Louise Walsh, Registered Nurse, Division 1- Nurse Unit Manager of Ward 5FN;

e. Dr Dhushyanthakumar Rajesparasingam – on call overnight medical officer;

f. Dr Tissa Astrid Tandiari, Intern GMC;

g. Jan Child, Executive Director of Nursing, Peninsula Health;

h. Julianne (Julie) Rock, Registered Nurse, Division 1; and

i. Jan Grenville (nee Schultz), Registered Nurse, Division 1.

Nursing care of Mrs Ker

34. At the time of Mrs Ker's death, RN Rock had worked at Peninsula Health for a period of 21 years.[22] She had worked at Frankston Hospital on night duty for the majority of that time. On the nightshift of 22 March 2006, RN Rock was acting in charge of ward 5FN as the Associate NUM (ANUM) was absent. RN Rock reports that she had not slept well prior to commencing her shift and had been caring for her daughter-in-law and two young grandchildren.[23] She was aware before she commenced her shift that they would be one short of their regular staff numbers and despite her personal circumstances, felt obliged to attend work.

35. The shift commenced at 9.00pm and finished at 7.30am on 23 March 2006. It was not RN Rock's usual role to act in the position of ANUM,[24] but she was required to upgrade to act

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[22] Exhibit 9 – Statement of Julianne Rock dated 7 August 2007.

[23] Exhibit 9, T @ p204-205 (Julie Rock).

[24] Exhibit 5 – Statement of Louise Walsh dated 22 December 2007.

in this position *a few times a year.*[25] On that night, the 30-bed ward was fully occupied and staffed in accordance with the usual nurse patient ratio[26] by four nurses, three of whom were long-term night duty nurses and the fourth who was an agency nurse.[27] As well as being the ANUM for the shift, RN Rock also had an allocation of eight patients and she was responsible for their overnight care.[28]

Documentation of Mrs Ker's allergies

36. Mrs Ker's medical history file was being held in Ward 5FN during the time of her admission and was therefore accessible to all nursing staff. In the front of the medical history was an 'alert sheet' that is for the purpose of alerting nursing and medical staff to known allergies or other types of alerts.[29]

37. Mrs Ker was wearing a red (allergy) band around her left wrist.[30] According to NUM Walsh it is routine on admission for a patient to have a red band placed around their wrist if the patient indicates any allergies. The policy does not extend to mandating writing on the wristband a particular or list of allergens of the patient. NUM Walsh noted that this does occur from time to time, but as the wristbands are made of plastic, the written information can be washed off. Ms Child concurred about the risk of writing on the wristband stating that although they are waterproof to an extent *we wouldn't rely on them for factual information, because sometimes they can be a bit smudged.*[31] NUM Walsh stated that it is normal practice:

> *...that you should check once the name band is on, you actually have to look at what the allergy is, because sometimes it may not mean a drug allergy, it may mean a food allergy or a latex allergy, so the red name tag is just an alert.*[32]

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[25] T @ p100 (Louise Walsh).

[26] T @ p101 (Louise Walsh).

[27] T @ p175-176 (Jan Child).

[28] Exhibit 9.

[29] T @ p 127 (Louise Walsh), T @ pp167-168 (Jan Child).

[30] Exhibit 5, T @ p 103 (Louise Walsh), Exhibit 1 (@ p3).

[31] T @ p179 (Jan Child).

[32] T @ p103 (Louise Walsh).

38. NUM Walsh indicated that the normal procedure is to look to the documentation for clarification of what the wristband is there for.[33] Its' purpose is to put the nurse on notice that the patient has allergies.[34] The Executive Director of Nursing, Jan Child, also stated that irrespective of whether an allergen is written on the red wristband, all nursing staff are expected to check the patient's medical record for details of the patient's allergy before administering medication.[35] The Clinical Procedure titled "Identification of Patients" which was current at the time also states:

> *The red band signifies allergies, these allergies are listed on the alert sheet and Drug chart.*[36]

39. Each medication chart contained a defined box for noting drugs the patient communicated as being allergic to. Mrs Ker's medication chart listed all the drugs that she had experienced an allergic reaction to and these included Vioxx, Stemitil, Amoxil and Maxalon. At the time, the medication charts were kept in a standard metal spring clipboard folder at the patient's bedside. The position of the clip was such that it obscured the defined box on the chart that indicates the drug allergies.[37] In order to view the medication chart unobscured, it was necessary to remove it from the clip.

Nurse initiated medication

40. At the time of Mrs Ker's death Peninsula Health had a Clinical Procedure policy in place titled "Medications – Nurse Initiated".[38] The Clinical Procedure states that nurse initiated medication is only permitted where no medical officer is on site and even then, is not encouraged. As Frankston Hospital had a medical officer on site at *all times*, nurse initiated drugs were therefore *not* permitted at Frankston Hospital at the time.[39]

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[33] T @ p105, 126 (Louise Walsh).

[34] T @ p111 (Louise Walsh).

[35] Exhibit 8 – Supplementary Statement of Jan Child dated 27 May 2010 (second statement).

[36] Attachment 'JC-4' to Exhibit 8.

[37] Exhibit 5, T @ p101 (Louise Walsh).

[38] Attachment 'JC-7' to Exhibit 8 – Supplementary Statement of Jan Child dated 27 May 2010.

[39] Exhibit 8 – Statement of Jan Child dated 26 March 2008 @ paragraph 5 and Supplementary Report of Jan Child dated 27 May 2010 @ paragraph 8.

41. Mrs Ker's medication chart reflects an order for Maxalon 10mg IM at 5.00am in the once only/premedication section. In the space denoted for the doctor's signature, "NI" (Nurse Initiated) is transcribed. In her statement, RN Rock said that:

> *I intended to confirm the medication with a doctor as soon as I had settled the patient. I then collected the drug and had my order checked by another nurse at the nurse's desk. The nurse did not come with me to the bedside to check the medication to the patient.*[40]

42. Frankston Hospital policy did not permit nurse initiated medications and according to NUM Walsh, the whole of the procedure implemented to administer the intramuscular medication to Mrs Ker did not comply with hospital policy. She said:

> *There is a number of checks that we have to go through, or any nurse has to go through in the state of Victoria, plus there's Peninsula Health policy as well.....when you go to check something that's given intramuscularly, you must check first the patient that you're giving the medication to. First of all you have to get the medication, so you have to check that it's the correct medication, and you check how that medication has been ordered, and any intramuscular or intravenous injection has to be ordered by a medical officer.*[41]

43. Two nurses are required to check all details of an order for an intramuscular or intravenous medication *and* attend the bedside to ensure that the correct drug, the correct dose and the correct route for administration is being given to the correct patient.[42] NUM Walsh said that for the administration of any intravenous or intramuscular injection hospital policy states that:

> *It must be checked by two nurses, the correct drug, from the outset of organising the medication, to the bedside.*[43]

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[40] Exhibit 9 – Statement of Julie Rock dated 7 August 2007.

[41] T @ pp105-106 (Louise Walsh).

[42] Attachment 'JC-1' to Exhibit 8, T @ p177 (Jan Child).

[43] T @ p 106 (Louise Walsh).

44. According to Ms Child:

> *Breaches of the nurse initiated medication policy and/or Clinical Procedure are not tolerated at Peninsula Health. There was no accepted culture or practice of nurse initiated medications at Frankston Hospital at the time of Mrs Ker's death. The nurse initiated administration of Maxalon to Mrs Ker by Nurse Julie Rock was considered an isolated event.....*[44]

45. The Clinical Procedure policies current at the time of the Inquest in respect of medication management and in particular, nurse initiated medicines,[45] maintain that it is not permissible for a nurse to initiate an intramuscular antiemetic medication such as occurred with Mrs Ker.

Medical medication authorisation

46. Dr Dhushyanthakumar Rajesparasingam was the on-call overnight medical officer between 9.30pm on 22 March 2006 and 8.30am on 23 March 2006 however, contrary to RN Rock's oral evidence, he had no independent recollection of having received a telephone call from RN Rock at 6.00am for the IMI Zofran order but conceded that it could have occurred. Dr Rajesparasingam similarly had no independent recollection of any discussion about Mrs Ker having received an IMI medication to which she was allergic.[46] He stated that it was his usual practice to attend a ward before he finished his shift[47] to sign any telephone orders given but had not signed Mrs Ker's drug chart for the order of Zofran. He also stated that he had a theoretical practice to examine any patient he was advised had been given a medication they were allergic to as soon as possible but had never in fact had such an experience. He had never examined or met Mrs Ker[48] and on this basis he assumed that he had not been told about the administration of Maxalon by RN Rock.[49] Dr Rajesparasingam

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[44] Exhibit 8 – Supplementary Report of Jan Child dated 27 May 2010.

[45] Attachment 'JC-8' to Exhibit 8 – Supplementary Statement of Jan Child dated 27 May 2010

[46] Exhibit 6 – Statement of Dr Dhushyanthakumar Rajesparasingam dated 20 June 2010, T @ p135, 136.

[47] T @ pp 134, 135 (Dr Rajesparasingam).

[48] T @ p133 (Dr Rajesparasingam).

[49] T @ p137, 138 (Dr Rajesparasingam).

said that he was confident that he would have attended Ward 5FN to see Mrs Ker if he had been told that she had been administered a medication she was allergic to.[50]

Documentation after the event

47. According to RN Rock, she commenced a frequent observations chart on Mrs Ker after she realised that she had administered Mrs Ker with a drug she was allergic to.[51] No such chart could be located. RN Schultz could not recall seeing a frequent observation chart after she took over the care of Mrs Ker on the AM shift at 7.00am 23 March 2006[52] and did not enter any information on a frequent observation chart.[53]

48. The Nursing Progress notes for the night shift completed by RN Rock before she went off duty at 7.30am on 23 March 2006 make no mention that she administered Mrs Ker the IM Maxalon. The Nursing Progress notes make no reference to Mrs Ker's baseline or subsequent observations or of the frequent observations chart. There is no notation in the Nursing Progress Notes that she had told Dr Rajesparasingam at 6.00am that she had administered the IM Maxalon as a nurse initiated medication at 5.00am, that she had told the doctor that Mrs Ker was allergic to it or any notation to support her evidence that she had asked the doctor to attend the ward to review Mrs Ker.[54]

49. Similarly, there is no evidence either in the Nursing Progress Notes or on the medication chart to support RN Rock's *viva voce* evidence[55] that she had not administered the full 10mgs of Maxalon to Mrs Ker as she had stopped injecting the same when Mrs Ker told her she was allergic to the drug.

Medical management on 23 March 2006

50. In his evidence, Dr Gupta agreed that the treatment regime he implemented following his examination of Mrs Ker on the morning of 23 March 2006 was intended to address every one of the differential diagnoses – ischaemic bowel, myocardial infarction, underlying

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[50] T @ p138 (Dr Rajesparasingam).

[51] T @ p190 (Julie Rock).

[52] Exhibit 10 – Statement of Jan Schultz (Grenville) dated 8 October 2007.

[53] T @ p 214 (Jan Schultz).

[54] T @ pp196-198 (Julie Rock).

[55] T @ p 208 (Julie Rock).

sepsis (likely to be urosepsis) and allergic reaction.[56] He considered that the signs indicative of ischaemic gut were the report of explosive diarrhoea during the night and Mrs Ker's complaints of abdominal pain, the onset of atrial fibrillation and a serum lactate of 9.3mmol/L,[57] and the signs of myocardial infarction were the rise in Troponin I level to 8.87ug/L.[58] The signs of an allergic reaction were the complaint of numb and swollen tongue and the visible rash on her body. Dr Gupta said he did not however believe that Mrs Ker was dying from this allergic reaction but that she was dying from other medical problems[59] and he denied that he had told Mrs Ker's family that she was dying from the allergic reaction.[60]

51. Dr Tissa Tandiari was one of two interns working in the General Medical Unit C (GMC) at Frankston Hospital at the time. She was accompanying her Registrar, Dr Gupta and the other intern, Dr Kun Choi on their usual ward rounds on the morning of 23 March 2006 when she was paged by the nursing staff on 5FN to come and see Mrs Ker. Dr Tandiari was told that Mrs Ker was having back pain and *had been given Maxalon (to which the patient was allergic) at 4am by a night nurse.*[61] The team of doctors went to 5FN shortly thereafter and Dr Tandiari was present when Dr Gupta examined Mrs Ker. She stated that Dr Gupta *examined her tongue and commented that it (sic) was slightly swollen and pale.*[62] Dr Tandiari stated that they were looking at the tongue in the setting of having been told that Mrs Ker had been given something she was allergic to and that:

> *...it wasn't really related to her initial presentation and when we noticed that it was swollen then – or slightly swollen then we – sort of our top differential diagnosis would be an allergic reaction.*[63]

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[56] T @ p68 (Dr Gupta) and T @ p144 (Dr Tissa Tandiari).

[57] Exhibit 3, T @ pp70-71 (Dr Gupta).

[58] T @ p70 (Dr Gupta).

[59] T @ p 75 (Dr Gupta).

[60] T @ p76 (Dr Gupta).

[61] Exhibit 7 – Statement of Dr Tissa Tandiari dated 22 April 2008.

[62] *Ibid.*

[63] T @ p 144 (Dr Tissa Tandiari).

52. After observing Mrs Ker's swollen tongue, all of the doctors noticed that Mrs Ker had *a pinkish flat widespread rash over her trunk and back,*[64] which Dr Tandiari said *again could be part of an allergic reaction as well.*[65]

The medical cause of death

53. In reaching his conclusions about the medical cause of Mrs Ker's death, Dr Burke stated that Mrs Ker had significant underlying natural disease with evidence of a recent heart attack. He said:

> *The macroscopic and microscopic examination at the autopsy showed ischaemic bowel but she also had a documented episode where she was given a drug which she was (sic) known to be allergic to. She was treated for an allergy by her medical (sic) doctors. The allergic response may well lead to decrease in blood pressure which would exacerbate these other underlying natural disease.*[66]

54. Dr Burke was requested to provide a supplementary report[67] in response to the expert opinion of Professor Johan Duflou[68] that had been obtained by Peninsula Health and provided to the Court. In particular, Professor Duflou had concluded that the cause of death of Mrs Ker was directly related to her significant underlying atherosclerotic arterial disease and that the inadvertent administration of metoclopramide did not contribute to her death. In preparing his supplementary report, Dr Burke also had available to him the medical record from Frankston Hospital. Dr Burke concluded that although he agreed with Professor Duflou that Mrs Ker did have significant underlying cardiac disease, to which she could have succumbed at any time to a cardiac arrhythmia, he opined that:

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[64] Exhibit 7.

[65] T @ p144 (Dr Tissa Tandiari).

[66] T @ p14.

[67] Supplementary Report dated 9 September 2010 (Exhibit 1).

[68] Statement of Professor Johan Duflou dated 5 May 2010 (Exhibit 4).

...the temporal association between the administration of metoclopramide, history of numb tongue, and clinical record of a rash over the trunk and back, suggests to me that an allergic reaction has contributed to her death.[69]

55. In evidence Dr Burke said:

I'm not saying for one moment this woman was given Maxalon and had full-blown anaphylaxis and died in front of people's eyes, we know from her clinical course that's not the case, but the fact that she's had a rash, her tongue swelled up, different symptoms from what she's been displaying, symptoms that aren't explained by her heart disease, aren't explained by her bowel disease, makes me think that the administration of this drug has caused some sort of allergic response and tipped her over.[70]

56. Professor Duflou was of the opinion that it was unlikely that Mrs Ker had suffered a significant allergic reaction to the administration of Maxalon and was of the opinion that her death could *be entirely explained on the basis of her cardiovascular disease.*[71] He said that he could not however exclude that *there may have been a cutaneous allergic reaction in the form of a skin rash* but as there did not appear to be any associated severe bronchospasm,[72] he did not think that allergy, *if there was such a problem,...contributed significantly to the death.*[73] Professor Duflou said that he thought it unlikely that an allergic reaction could have "tipped Mrs Ker over" as opined by Dr Burke and stated that:

... if there was an allergic reaction it was minor and minor to the extent that it had no significant effect.[74]

57. Professor Duflou conceded that Mrs Ker's clinical presentation to Dr Gupta at around 10.00am of rash and swollen tongue warranted including allergic reaction high on the

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[69] Exhibit 1, T @ p19.

[70] T @ p31.

[71] Exhibit 4 – Report of Professor Johan Duflou dated 5 May 2010, T @ p85.

[72] T @ pp85, 86, 87.

[73] T @ p85.

[74] T @ p90.

differential diagnoses as something that should be excluded.[75] He emphasised however that a rash could have also been a symptom of sepsis. Professor Duflou did not adopt the same position as Dr Burke on the likely effect of an allergic reaction on Mrs Ker's compromised state and instead stated that if she did have an allergic reaction it:

> *...appears to have been very minor in type and as such I would not expect that contributed significantly to the death...*[76]

Restorative and Prevention strategies

58. Following Mrs Ker's death an internal critical incident review was conducted by Peninsula Health's Director of Medicine, the Operations Director of Medicine, the Deputy Pharmacist and the Patient Safety Officer. According to the Executive Director of Nursing, Jan Child, the identified issues under review included:

    a. the knowledge regarding the indications, trade names and generic names of antiemetics was not current;

    b. the "five rights" of safe drug administration were not followed;

    c. the Nurse initiated drug policy was not followed; and

    d. there is a potential risk of the new medication chart also having the allergies section/data obscured by clips when stored on the clipboards.

59. A summary of the recommendations arising from the review was provided in Ms Child's first statement.[77] Improvements to education to nursing staff and the purchase of new medication chart folders that did not obscure any words on the chart were the relevant features.

60. On 1 April 2006 Peninsula Health commenced using a National Medication Chart. This chart retains a defined drug allergy box in a similar position to the previous medication charts but because it is now kept in a two-ring binder, the allergy section is unobscured.[78]

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[75] T @ p91.

[76] T @ p93.

[77] Exhibit 8 - Statement of Jan Child dated 26 March 2008.

[78] Exhibit 5, T @ p102 (Louise Walsh).

61. Prior to Mrs Ker's death Peninsula Health enabled nursing staff to attend to their responsibility of maintaining competencies by providing internal education and permitting time for attendance at external professional development programs. To obtain yearly registration it was however incumbent on the individual nurse to continue with their own professional development and attest to their competencies to practice, including competencies to medication administration.[79]According to NUM Walsh and Ms Child,[80] they have taken the next step since 2006[81] with the addition of a prescribed medication administration training for nurses. NUM Walsh said that in addition to an orientation program for new members of the nursing staff, a two-hour medication management error-prevention program has been formulated with attendance mandated[82] for all nursing staff on a two yearly basis. The orientation program also includes the new medication error-prevention program.[83] All hospital policies were and remain available on the intranet to which all nurses have access.[84]

62. Following Mrs Ker's death, a complaint of unprofessional conduct concerning RN Rock was made to the Nurses Board of Victoria (as it then was). In addition, the hospital imposed restrictions on RN Rock's practice. She had a period of time off work for personal reasons and was suspended from practice by the Nurses Board of Victoria.[85] She was then required to undertake a Medication Safety Learning Package, which she completed. A performance plan was also instigated and for a period of approximately 12 months she was required to work day shift instead of her usual night duty shifts and was supervised in her medication administration practices.[86]

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[79] T @ p182 (Jan Child).

[80] T @ pp163-164 (Jan Child).

[81] T @ p182 (Jan Child).

[82] T @ p183 (Jan Child).

[83] T @ pp128-129 (Louise Walsh).

[84] T @ p119 (Louise Walsh).

[85] T @ p209 (Julie Rock).

[86] T @ pp129-130 (Louise Walsh) and Exhibit 8 (Jan Child), T @ p209 (Julie Rock).

FINDINGS

1. I find that the identity of the deceased is Glennie Goodwin Ker.

2. I make no adverse finding against Peninsula Health or more specifically, Frankston Hospital, where this incident occurred. I accept that the circumstances of Mrs Ker's death do not reflect systemic shortcomings but rather the shortcomings of one of their health care professionals. The hospital's own review of the circumstances surrounding Mrs Ker's death and subsequent improvements to internal education, including prescribing attendance at the medication training program, does not indicate that they had not supported their nursing staff in maintaining competencies (which is the individual's responsibility), but is a reflection and acknowledgement that *medication errors are one of the highest incidences for nurses.*[87] I find that the hospital's response is reasonable and appropriate – it is appropriate that the hospital support their nursing staff in maintaining competencies.

3. I recognise and have considered RN Rock's acknowledgement of her departure from hospital policy and accepted clinical practice.[88] It is to her credit that she voluntarily gave *viva voce* evidence and made admissions about events that appear out of character to an otherwise unblemished 21 year career at Peninsula Health.[89] I also acknowledge RN Rock's apology to Mrs Ker's family, to the nursing profession and to Frankston Hospital[90] however, given the significance of her departure from hospital policy and accepted clinical practice, and the fact that some of her *viva voce* evidence was difficult to reconcile with the evidence of others, it remains necessary and appropriate to make specific findings regarding the particular circumstances surrounding Mrs Ker's death.

4. I find that there is clear and cogent evidence to support the following findings in relation to RN Rock's involvement with Mrs Ker's care:[91]

    a. RN Rock acted outside of the hospital policy[92] by initiating the administration of Maxalon to Mrs Ker. She had neither the qualifications nor the authority to initiate

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[87] T @ p 182 (Jan Child).

[88] T @ p 200, 204 (Julie Rock).

[89] At the time of the Inquest, RN Rock stated she had worked a total of 24½ years at Peninsula Health in a 41 year nursing career – T @ p186.

[90] T @ p212 (Julie Rock).

[91] *Briginshaw v Briginshaw* (1938) 60 CLR 336.

the administration of an intramuscular injection in the absence of a doctor's order in circumstances where a doctor was present in the hospital and contactable by telephone.

b. RN Rock failed to check Mrs Ker's alert sheet within her medical history or her medication chart that contained a defined box for noting drugs she was allergic to.

c. RN Rock failed to attach the appropriate significance and due care to the fact that Mrs Ker was wearing a red allergy wristband before she proceeded to initiate and administer the intramuscular Maxalon to Mrs Ker. RN Rock's sole reliance on the absence of a written reference to Maxalon[93] on the red allergy wristband was contrary to hospital policy and usual practice and reflects at best, an over confidence in her own clinical capabilities.

d. Nurse Rock failed to ask Mrs Ker whether she had any drug allergies before she proceeded to initiate and administer the intramuscular Maxalon.

e. I attach no significance in this matter to the fact that the defined allergy section on the medication chart was partially obscured by a metal clip. RN Rock was not unfamiliar with the systems in place in this hospital. She was not a new graduate nurse or an agency nurse. She was more than familiar with this medication chart and the limitation of the clipboard system as it was at the time - that is, the potential for the clip to partly obscure significant medical information. I find that Nurse Rock failed to comply with the expected standard practice of removing the medication chart from the metal clip in order to view the medication chart in its entirety and in particular, avail herself of Mrs Ker's drug allergies.

f. The "procedure" adopted by RN Rock of having another nurse check *her* order had no probative value as RN Rock had initiated and written the order without authority to do so. If another nurse[94] did check the ampoule of Maxalon against RN Rock's written order, that nurse also failed to check the allergy section of the medication chart and failed to attend the bedside with RN Rock to complete the appropriate,

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[92] Attachment 'JC-7' to Exhibit 8 – Supplementary Statement of Jan Child dated 27 May 2010.

[93] Exhibit 9 @ paragraph 6.

[94] The Agency nurse (an RN Div 1) on duty in Ward 5FN that night that is alleged to have checked the intramuscular Maxalon with RN Rock was not able to be located – T @ p176 (Jan Child).

nationally consistent and prescribed procedures[95] for the checking of intramuscular injections. However, I acknowledge that the evidence of RN Rock's checking "procedure" with the other nurse was not able to be tested.[96]

g. RN Rock failed to escalate the incident once she became aware that she had injected Mrs Ker with a substance to which she was allergic and/or failed to recognise that it was an incident being an *unexpected event that may cause some adverse harm or may possibly cause harm*[97] that mandated escalation. In failing to immediately escalate the incident to nursing and medical personnel directly and/or through the completion of an Incident Report, Mrs Ker was denied an opportunity for an immediate and timely response to the incident and as such, there was a delay in implementing treatment commensurate to the time of the incident.

h. RN Rock's documentation in Mrs Ker's Nursing Progress notes for the night shift ending on 7:30am on 23 March 2006 was inadequate, did not reflect what had occurred throughout her shift and was not consistent with expected clinical practice. RN Rock did not document that she had administered Mrs Ker with IM Maxalon, Mrs Ker's baseline observations, any additional frequent observations, that she had told Dr Rajesparasingam that she had administered the IM Maxalon as a nurse initiated medication, or that she had asked Dr Rajesparasingam to attend the ward to review Mrs Ker.

5. I find that Mrs Ker suffered an allergic reaction to the administration of intramuscular Maxalon. The delay of onset of specific signs or symptoms of an allergic response or the absence of a rise in tryptase levels are not determinative and do not outweigh the weight of the evidence of Mrs Ker's deteriorating clinical condition, which included objective signs and symptoms of an allergic reaction.

6. I find that there is a temporal relationship between the allergic reaction to the administration of Maxalon and Mrs Ker's death and as such I find that the allergic reaction contributed to the cause of her death. The degree of contribution is not discernible and nor is it relevant. It may have been a *minor* contribution as opined by Professor Duflou, but it is the evidence of

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[95] Attachment 'JC-1' to Exhibit 8 titled "Policy – Medication Administration", T @ p177, 178 (Jan Child).

[96] See above no 94.

[97] T @ p180 (Jan Child).

an allergic response and that the medical practitioners included it in the differential diagnoses temporal to the deterioration in her clinical condition that I find persuasive. Whilst I acknowledge that Mrs Ker was also experiencing other significant medical conditions including a myocardial infarction and ischaemic bowel, the additional insult to her clinical condition imposed by the allergic response cannot not be ignored or minimised in importance.

7. I find that the allergic response to the administration to Maxalon was sufficiently proximate to Mrs Ker's death such that the cause of death as it is currently registered is appropriate.

8. I accept and adopt the medical cause of death as ascribed by Dr Michael Burke and find that Glennie Goodwin Ker died from an allergic reaction to metoclopramide (Maxalon), acute myocardial infarction and ischaemic bowel.

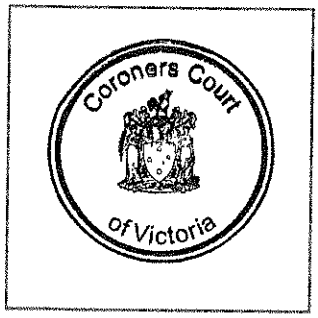
9. AND I make no recommendations in this matter given the restorative and preventative measures implemented by Peninsula Health both generally and in respect of RN Rock's competencies.

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

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

- Ms Elizabeth Furey
- Mr Mark O'Sullivan, Minter Ellison Lawyers (on behalf of Peninsula Health)
- Mr Mark Comito, Ryan Carlisle Thomas Lawyers (on behalf of RN Julie Rock)
- Investigating Coordinator, Australian Health Practitioner Regulation Agency
- Leading Senior Constable G McFarlane

Signature:



AUDREY JAMIESON

CORONER

Date: **9 September 2014**