IN THE CORONERS COURT
OF VICTORIA
AT BALLARAT

Court Reference: COR 2012 000324

FINDING INTO DEATH WITHOUT INQUEST

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

I, Michelle Therese Hodgson, Coroner, having investigated the death of **KATHLEEN RAVEN**

without holding an inquest:
find that the identity of the deceased was **KATHLEEN RAVEN**
born on 19 February 1926
and the death occurred on 26 January 2012
at BALLARAT HEALTH SERVICES, STURT ST, BALLARAT 3350 VIC

from: 1 (a) Pulmonary embolus
(b) Deep Vein Thrombosis
(c) Minor Fall (21/1/2012)

FINDING INTO DEATH WITHOUT INQUEST

The Coroners Court is different from other courts. It is an inquisitorial rather than an adversarial system. In other words, there is no trial, with a prosecutor and a defendant. Instead, there is an inquiry that seeks to find the truth about a person's death – to establish what happened, rather than who is to blame. The Coroner is more flexible in the evidence that they will accept, but they cannot punish.

When making a finding, coroners carefully consider all the submissions that come before them. Not every issue makes it way into the final report but everything has been weighed up and analysed.

A Coroner investigating a death must find:

- The identity of the person who had died
- The cause of death
- The circumstances in which the death occurred

BACKGROUND

Kathleen Raven was 85 years of age at the time of her death.

Ms Raven passed away on 26 January 2012 at Ballarat Base Hospital Emergency Department after she was transferred there from Maryborough Hospital for investigation and management of a suspected Abdominal Aortic Aneurysm (AMA), as well as ongoing intermittent hypoxia.

Due to her advanced age and decreased mobility, Ms Raven has resided at Havana Hostel in Maryborough since late 2011. Ms Raven was independent with her activities of daily living and moved generally with the assistance of a frame.

On January 10, Ms Raven was admitted to Maryborough Hospital due to shortness of breath, poor oral intake and constipation.

With no evidence of cardiac failure, Ms Raven was treated with oral antibiotics for a suspected chest infection.

On 16 January 2012, a persistent right sided abdominal pain was investigated with an ultrasound and it was found that Ms Raven had an enlarged spleen, however her liver, pancreas, aorta and gall bladder were normal.

Ms Raven was discharged back to her Hostel on 17 January 2012.

The following day Ms Raven represented to Maryborough Hospital accompanied by her daughter.

After considering and excluding acute respiratory and cardiac disease, Ms Raven was diagnosed with depression by the Visiting Medical Officer who noted she was "swallowing air with anxiety"

Ms Raven was prescribed Diazepam.

On 19 January, Ms Raven was commenced on the antidepressant Zoloft and the diazepam was replaced with two Mogadon tablets at 9pm as Ms Raven had complained of sleeplessness the previous night.

At 3am on 20 January, Ms Raven was discovered on the bathroom floor after using the emergency call bell for assistance.

Ms Raven had no pain, no obvious injuries and normal vital signs.

After review by Doctors later that day, Ms Raven's Mogadon dose was halved due to the drowsiness it may have caused.

At approximately 6.40am on 21 January 2012, nursing staff were alerted by the noise created from Ms Raven collapsing to the floor, where she was found unrousable for approximately 30 seconds. Ms Raven had no recall of the fall and again had no obvious injuries.

Ms Raven's oxygen saturations declined and she complained of lower back pain as well as persistent shortness of breath.

The Mogadon was ceased. Ms Raven was also experiencing atrial fibrillation.

On 22 January, Ms Raven was observed to have cyanotic fingers and lips.

Medical investigation disclosed a build up of fluid around her lungs in addition to some collapse and consolidation in the lower right lobe.

Ms Raven was commenced on antibiotics, cortisone and a diuretic.

A computerised tomography scan disclosed a new undisplaced compression fracture of the fourth lumbar veterbra superior endplate which was managed with Endone for pain relief.

On 24 January, an anticoagulant was commenced for venous thromboembolism prevention and her cardiac arrhythmic medication was reintroduced.

Hypoxia continued to be a concern for Ms Raven and on 25 January, investigations disclosed that she may be suffering from an infection, moderately elevated potassium levels and slight acute renal impairment.

By 26 January, Ms Raven had become hypothermic, nauseated, vomiting and had a blue tinge to the peripheral regions of her body, indicating poor oxygen supply.

Ms Raven was transferred to Ballarat Base Hospital with a suspected ruptured Abdominal Aortic Aneurysm. Her condition declined during this transfer.

Ultrasounds were conducted on her heart and abdomen in conjunction with her medical history and a clinical assessment led the Emergency Department Doctors to conclude that she did not have an Abdominal Aortic Aneurysm but had had a massive obstruction of the pulmonary artery.

Ms Raven was commenced on intravenous medication that breaks down clots and an adrenaline infusion.

Ms Raven continued to decline and a decision was made not to escalate resuscitation to more invasive means.

Ms Raven passed away at 6.55pm.

FAMILY CONCERNS

A number of concerns have been raised by Ms Raven's family including

a. The need to transfer Ms Raven to Ballarat Hospital;

b. The sedation of Ms Raven

c. Placement of Ms Raven at Maryborough Hospital

It was appropriate to transfer Ms Raven to Ballarat Base Hospital for the suspected potentially life threatening condition of a ruptured Abdominal Aortic Aneurysm. Larger hospitals have more staff and greater medical services and resources, enabling superior investigation and treatment of complicated disease states.

The prescription of Mogadon for Ms Raven was within adult dosage guidelines. The prescription of a heavier sedative was chosen by the treating Visiting Medical Officer due to the poor effect of diazepam the previous night.

The Maryborough Hospital Falls Risk Assessment Tool was completed upon Ms Raven's readmission on 18 January 2012. The correctly calculated classification of low falls risk may have contributed to Ms Raven not being allocated a room near a nurses' station.

After falls on 20 and 21 January, appropriate falls measures were implemented.

After the second fall on 21 January, Ms Raven was moved to a room here she could be more closely observed from the nurses station. A hi-lo bed was also provided.

PUBLIC HEALTH MATTERS

Section 67 (3) of the *Coroners Act 2008* states that

> *A coroner may comment on any matter connected with the death, including matter relating to public health and safety or the administration of justice.*

Issues that relate to public health and safety have been raised by the death of Ms Raven.

The Maryborough Hospital, the venous thromboembolism Risk assessment form 147C was incorrectly utilised by nursing staff on both of Ms Raven's January admissions to Maryborough Hospital, whereby it was documented that ambulation and aspirin precluded venous thromboembolism prophylaxis.

Although Ms Raven's medical history of DVT was not carried forward to the medical profile of her current admission, she was still identified as a high venous thromboembolism risk patient.

There is no documentation to suggest that the instructions to notify the treating Visiting Medical Officer were followed and the Visiting Medical Officer did not recall seeing such a form.

The Maryborough Hospital venous thromboembolism Risk Assessment form follows National Institute of Clinical Studies guidelines.

There are occasions when high venous thromboembolism risk patients are appropriately not provided Venous thromboembolism prophylaxis, however the decision regarding the implementation or withholding of such measures in high risk patients is stipulated on the form to be a medical decision.

The Visiting Medical Officer has indicated that he would have been unlikely to initiate venous thromboembolism prophylaxis on the basis of the comorbidities that paradoxically, made Ms Raven a high risk of venous thromboembolism formulation.

Adequate venous thromboembolism prophylaxis reduces but does not eliminate the risk of deep vein thrombosis formulation.

Therefore Ms Raven's death may not have been prevented even if adequate venous thromboembolism prophylaxis had been administered.

Whilst the physical and radiological examination of Ms Raven conducted in the Ballarat Hospital Emergency Department on 26 January 2012 was highly suggestive of a pulmonary embolism, the absence of a full autopsy has resulted in a less than definitive cause of death.

The Director of Medical Services at Maryborough Hospital has commented that Maryborough Hospital is currently undertaking an audit of the venous thromboembolism Risk Assessment Screening process and subsequent adherence to Thromboprophylaxis Guidelines.

Since Mrs Raven's death, inpatient medication charts have been amended to incorporate a dedicated box for the prescription of Thromboprophylaxis and they are considering the introduction of a system of stickers to be applied to Medication charts, to flag instances where Thromboprophylaxis has not been prescribed.

CONCLUSION

Ms Raven's death appears likely the result of a pulmonary embolism precipitated by a deep vein thrombosis, though this can not be stated with absolute certainty as no autopsy was conducted.

I find on the balance of probabilities that the cause of death was

1 (a) Pulmonary embolus

(b) Deep vein thrombosis

(c) Minor fall (21/1/2012)

RECOMMENDATIONS

Pursuant to section 72(2) of the **Coroners Act 2008**, I make the following recommendation(s) connected with the death:

A. That education be provided to Maryborough Hospital medical and nursing staff regarding the significance of venous thromboembolism risk factors (including advanced age, chest infection, polycythaemia rubra vera, immobilization, chronic heart disease, hypertension, previous DVT and hospital admission within the past three months and appropriate VTE prophylaxis management, consistent with the Maryborough Hospital VTE Risk assessment Form 147C and NCIS Guidelines.

B. Internal auditing and ongoing education of the application of Maryborough Hospital Form 147C to ensure nursing staff are appropriately referring all moderate to high VTE risk patients for review by the treating Visiting Medical Officer.

Signature:

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Date: