IN THE CORONERS COURT
OF VICTORIA
AT MELBOURNE

Court Reference: COR 2011 4846

FINDING INTO DEATH WITHOUT INQUEST

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

I, CAITLIN ENGLISH, Coroner having investigated the death of Hazel Angela Bampton

without holding an inquest:
find that the identity of the deceased was Hazel Angela Bampton
born on 10 November 1944
and the death occurred on 28 December 2011
at 138 O'Connor Road, Knoxfield
from:

1(a) PULMONARY THROMBOEMBOLUS

1(b) DEEP VEIN THROMBOSIS

2. CONVALESCENT PHASE-LEFT LOWER LEG TRAUMA

Pursuant to section 67(1) of the **Coroners Act 2008**, there is a public interest to be served in making findings with respect to **the following circumstances**:

Introduction

1. I have had the carriage of this investigation since February 2014, following the retirement of Coroner Spooner.

2. Hazel Bampton was 67 years of age at the time of her death.

3. On 14 December 2011, Mrs Bampton fell from a ladder resulting in a partial rupture of her Achilles tendon. The fall from the ladder was two weeks prior to her sudden death at home on 28 December 2011.

4. On 17 September 2013, the Coroners Court of Victoria (CCOV) advised Mrs Bampton's husband, Mr Albert Bampton, by letter that, after considering the medical records and

pathology report, the coroner had made a decision not to investigate further. The coroner intended to end the investigation by writing a chambers finding without holding an inquest.

5. The timing of this decision followed the finalisation of the review by the Coroners Prevention Unit (CPU), Health and Medical Investigation Team (HMIT)[1] into Mrs Bampton's clinical care and management.

6. Following receipt of this letter, Mr Bampton made a request pursuant to s 52(5) of the *Coroners Act* 2008, dated 6 October 2013, for an inquest to be held into his wife's death in relation to concerns he held regarding the medical care his wife received.

7. On 25 September 2014, CCOV notified Mr Bampton that a decision had been made not to make a decision regarding his request for inquest to allow further investigation, which included a request for a statement from Eastern Health. This statement was received on 8 December 2014.

8. On 19 February 2015, I made a decision not to hold an inquest into the death of Mrs Bampton and indicated that I intended to make a chambers finding in relation to her death. A copy of this decision was forwarded to Mr Bampton by cover of letter dated 20 February 2015.

Circumstances of Death

9. Mrs Bampton resided at 138 O'Connor Road, Knoxfield, Victoria, with her husband. Mrs Bampton had a high Body Mass Index of 35.88,[2] type 2 diabetes (controlled by diet) and hypercholesterolaemia.[3] She was an ex-smoker.

10. On 14 December 2011, whilst at home, Mrs Bampton fell from a two step stool, partially rupturing her left Achilles tendon.

11. Mrs Bampton attended the Angliss Hospital Emergency Department after the fall where she was reviewed by a physiotherapist, Brendon McCarthy. Her ruptured Achilles tendon was immobilised by the application of plaster of Paris. She was discharged with what the

---

[1] The Health and Medical Investigation Team (HMIT) assist in the investigation and development of recommendations surrounding deaths occurring during the provision of healthcare. They assist in identifying factors that may help improve patient safety and risk management in such settings.

[2] Body Mass Index (BMI) is a general guide used to estimate the total amount of fat. It is only an approximate measure of the best weight for health. A BMI greater than 30 is obese and greater than 40 is morbidly obese.

[3] Hypercholesterolaemia is the presence of high levels of cholesterol in the blood.

hospital described as a two-wheel frame borrowed from hospital stock.[4] Andrea Bowles, Mrs Bampton's daughter described this as a *"4 legged frame that had 4 rubber feet, no wheels. Hazel found this frame hard to manage particularly with her leg in plaster."*[5]

12. On 15 December 2011, an orthopaedic surgeon reviewed Mrs Bampton as an outpatient at Maroondah Hospital.

13. A musculo-skeletal ultrasound was performed on her leg. The orthopaedic surgeon determined that due to the nature of Mrs Bampton's Achilles tendon tear, it was appropriately treated by immobilisation rather than surgery.

14. Following examination, she had a plaster cast applied to her leg from just below her knee to around the base of her foot.

15. On 18 December 2011, she was seen by a physiotherapist at Maroondah Hospital. Medical records indicate she was provided with crutches, taught how to walk with them and was assessed as being able to ambulate on level ground independently. She was deemed safe for discharge home;

    "Crutches provided + crutch walking taught + practiced. able to ambulate on level ground indep...unable to manage steps using crutches however, patient is able to get up ... 2 steps at front using chair transfer with assist from her husband...D/C home today...equipment...form signed."[6]

16. Ms Bowles stated that these crutches were hired from the hospital by Mr Bampton following advice from the hospital.[7] Mrs Bampton was able to move around her home with crutches however according to family, she found the crutches difficult to use and she spent significant time sitting and resting.

17. An occupational therapy home assessment was carried out on 19 December 2011 and a follow up phone call was made on 22 December 2011.

18. On 28 December 2011, Mrs Bampton was at home with her husband having dinner. At approximately 7pm she went into the bathroom to have a shower after feeling generally unwell. A short time later Mrs Bampton called out to her husband.

---

[4] Eastern Health Medical Records, 14 December 2011, 18 and statement of Dr Yvette Kozielski, 8 December 2014, 2.

[5] Letter of Andrea Bowles, 17 May 2015, 2.

[6] Eastern Health Medical Records, 18 December 2011, 60.

[7] Letter of Andrea Bowles, 17 May 2015, 2.

19. Mr Bampton entered the bathroom where he found his wife slumped on the floor, in severe respiratory distress. He noted she was initially very red in the face and then all colour drained from her face and she collapsed to the ground and was unresponsive and not breathing.

20. Mr Bampton contacted emergency services and an ambulance attended a short time later.

21. Ambulance officers commenced CPR for approximately 40 minutes however were unable to revive Mrs Bampton.

Post Mortem Examination

22. A post mortem autopsy was conducted by Forensic Pathologist Dr Malcolm Dodd at the Victorian Institute of Forensic Medicine on 30 December 2011. Dr Dodd formulated the cause of death. I accept his opinion.

23. Dr Dodd noted that;

"The immediate cause of death in this case is one of a large saddle type pulmonary thromboembolus which has dislodged from the left deep calf vein system...

The internal examination disclosed the presence of a large saddle type pulmonary thromboembolus.

Subsequent examination disclosed the presence of deep calf vein thrombus formation on the left side.

No other significant naturally occurring disease was disclosed."

24. Toxicology results were non-contributory.

Coroners Prevention Unit Review

25. The Coroners Prevention Unit (CPU) is a specialist service for Coroners created to strengthen their prevention role and provide professional assistance on issues pertaining to public health and safety. The Health and Medical Investigation Team (HMIT) assist in the investigation and development of recommendations surrounding deaths occurring during the provision of healthcare. They assist in identifying factors that may help improve patient safety and risk management in such settings.

26. HMIT reviewed Mrs Bampton's health care and concluded that the assessment, diagnosis, treatment and discharge of Mrs Bampton by the health professionals involved was reasonable.

Family Concerns - Discharge Planning

27. In a letter from Mrs Bampton's daughter on behalf of her father, dated 15 March 2013, Ms Bowles, expressed concern regarding her mother's discharge care. She stated that;

"Once she returned home from the Maroondah Base Hospital there was no follow-up care provided. She was given crutches to enable her to move around, but never provided with any instructions as how to properly use them."

28. Medical records indicate that instruction and assessment was conducted by a physiotherapist on 18 December 2011 in non-weight-bearing ambulation using crutches. Mrs Bampton was assessed as being able to ambulate on level ground independently. She was unable to manage steps and medical records indicate that she stated that she could negotiate her two house front steps using chair transfer with the assistance of her husband. On this basis she was deemed safe for discharge. Medical records do not indicate whether a standard crutches leaflet was provided to Mrs Bampton. There is nothing documented to confirm whether Mrs Bampton was warned of not ambulating sufficiently.

29. An assessment was undertaken of the home environment and equipment was supplied to allow independence at home. Records indicate that Mrs Bampton was provided with information leaflets on Achilles tendon injury and Care of Plaster Cast at Home, discharge medications, a contact number if she had any concerns post discharge and arrangements were made for follow up in the Orthopaedic Outpatient Clinic and with the local doctor.

30. An Occupational Therapy home assessment was carried out on 19 December 2011. A follow up phone call was made on 22 December 2011. No issues were raised regarding any difficulties with equipment.

Family Concern – Discharge Medication

31. In a letter dated 16 February 2012, Ms Bowles questioned whether her mother was prescribed appropriate discharge medication as she was not prescribed a blood thinning agent.

32. Mrs Bampton's venous thrombosis risk factors included obesity, age greater than 60 years, immobilisation and pre-existing medical conditions. Mrs Bampton's family stated that she spent a significant amount of time sitting and resting on her return from hospital.

33. Improving the prevention of venous thrombo-embolism (VTE) in hospitalised patients is a stated national safety and quality priority for both the National Health and Medical Research

Council (NHMRC) and Australian Commission on Safety and Quality in Health Care. Both organisations have joined in developing guidelines to support health professionals to apply best practice evidence in everyday clinical practice through two very successful national VTE prevention programs in the public and private hospital sectors.

34. The current 2009 NHMRC thromboprophylaxis guideline[8] advises the administration of low molecular weight Heparin (LMWH) for all those admitted to hospital with a lower leg fracture or injury with immobilisation in a brace or a plaster cast. Pharmacological thromboprophylaxis is to be continued for the entire period of immobilisation. Therefore, the guidelines suggest the administration of LMWH for all injuries, fracture or not, with or without a cast for the entire time the fracture is immobilised by cast or splint. The reason for the recommendation is;

"Patients who had a leg injury that had been immobilised in a plaster cast or brace (regardless of whether they were operated on, or whether the injury was a fracture or soft tissue damage) had significantly reduced occurrence of proximal and distal deep vein thrombosis with low molecular weight Heparin. However, significantly there was no difference in pulmonary embolus with those administered low molecular weight Heparin."

35. There is evidence that whilst LMWH reduces the incidence of deep vein thrombosis, it does not reduce the incidence of pulmonary embolus, which was the cause of Mrs Bampton's death.

36. Amongst the other relevant evidence is a Swedish randomised controlled trial, published in 2007, that showed a high incidence of deep vein thrombosis following an Achilles tendon rupture and surgical repair[9]. The incidence was around one-third of cases. However, the randomised controlled trial showed no benefit for low molecular weight Heparin over a placebo.

37. The NHMRC guidelines apply to hospitalised patients, not to those recuperating at home, as was Mrs Bampton's case. Mrs Bampton attended the emergency department and attended

[8] Thromboprophylaxis, preventive measures for developing a thrombus.

[9] Lapidus, L, Rosfors, S, Elvin, A et al. 2007. Prolonged thromboprophylaxis with dalteparin after surgical treatment of Achilles tendon rupture: a randomized, placebo-controlled study. Journal of Orthopedic Trauma. Jan; 21(1):52-7.

Maroondah Hospital as an outpatient. There are no guidelines recommending LMWH for outpatients.

38. In the situation where a person is at home, immobilised and not had surgery performed, the commencement of pharmacological thromboprophylaxis with LMWH could pose an increased risk of stroke or bleeding.

39. In the case of Mrs Brampton, there are no clear evidence based guidelines. Her case does however raise the issue of the increased risk of pulmonary embolus in the obese who are immobilised.

Finding

I find that Hazel Bampton died from pulmonary thrombo-embolus secondary to deep vein thrombosis in the setting of convalescent phase left lower leg trauma.

Recommendations

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

Recommendation 1

The National Health and Medical Research Council should consider commissioning a working group, to collate and analyse evidence concerning thromboprophylaxis for outpatients who have a body mass index over 30. This would include those at increased risk of venous thrombo-embolism, such as people with trauma, requiring limb immobilisation. This evidence should be collated and analysed with a view to creating guidelines for hospitals and the health care system regarding their treatment and management of such patients.

Recommendation 2

That Victorian Health Department should consider a public education campaign to raise awareness of the potential risk of venous thrombo-embolism and the importance of early mobilisation for people who have a body mass index over 30 and find themselves immobilised after discharge from hospital or for any other reason.

I direct that a copy of this finding be provided to the following for their information only:
Mr Albert Bampton

Mrs Andrea Bowles
Executive Director, Angliss Hospital
Executive Director, Maroondah Hospital

I direct that a copy of this finding be provided to the following for their action:
Professor Anne Kelso, Chief Executive Officer, National Health and Medical Research Council
Dr Pradeep Philip, Secretary to the Department of Health, Victoria

Signature:

CAITLIN ENGLISH
CORONER
Date: 20 July 2015