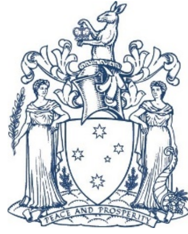

IN THE CORONERS COURT COR 2018 3864
OF VICTORIA
AT MELBOURNE

FINDING INTO DEATH WITHOUT INQUEST

Form 38 Rule 63(2)

Section 67 of the ***Coroners Act 2008***

Findings of:	Deputy State Coroner Jacqui Hawkins
Deceased:	Paul Turner
Date of birth:	9 February 1945
Date of death:	5 August 2018
Cause of death:	1a) Haemorrhagic stroke in the setting of recent inguinal hernia surgery and change in anticoagulation therapy
Place of death:	Austin Hospital, 145 Studley Road, Heidelberg, Victoria, 3084
Keywords:	INGUINAL HERNIA SURGERY; PERI-OPERATIVE AND POST-OPERATIVE SURGERY ANTICOAGULATION MANAGEMENT; RIVAROXABAN; ARTRIAL FIBRILLATION; RISK OF BLEEDING VS RISK OF EMBOLIC STROKE

INTRODUCTION

1. Paul Turner was 73 years old when he died on 5 August 2018 at the Austin Hospital from a haemorrhagic stroke following surgery for an inguinal hernia.

2. Mr Turner was married to Mrs Maree Turner and they have three daughters, Rebecca, Natalie and Justine. Mrs Turner described her husband as a kind, loving, funny, very generous man.

THE CORONIAL INVESTIGATION

3. Mr Turner's death was reported to the Coroner as it fell within the definition of a reportable death in the *Coroners Act 2008* (the Act). Reportable deaths include deaths that are unexpected, unnatural or violent or result from accident or injury.

4. The role of a coroner is to independently investigate reportable deaths to establish, if possible, identity, medical cause of death, and surrounding circumstances. Surrounding circumstances are limited to events which are sufficiently proximate and causally related to the death. The purpose of a coronial investigation is to establish the facts, not to cast blame or determine criminal or civil liability.

5. Under the Act, coroners also have the important functions of helping to prevent deaths and promoting public health and safety and the administration of justice through the making of comments or recommendations in appropriate cases about any matter connected to the death under investigation.

6. Mr Turner ceased taking his anticoagulation medication prior to surgery and was not charted to receive his usual dose of rivaroxaban in the post-operative period during his inpatient admission at North Park Private Hospital. The Coroners Prevention Unit were requested to assist with the investigation of this case. Statements were requested from Mr Turner's surgeon, anaesthetist and cardiologist to ascertain the circumstances around his death, particularly in relation to the timing of his anticoagulation therapy and whether it should have been recommenced sooner. Further, statements were obtained from Mr Turner's cardiologist and Safer Care Victoria to provide commentary in relation to best practice regarding anticoagulation management in surgery and whether there were any prevention opportunities.

7. This finding draws on the totality of the coronial investigation into the death of Mr Turner. Whilst I have reviewed all the material, I will only refer to that which is directly relevant to my

findings or necessary for narrative clarity. In the coronial jurisdiction, facts must be established on the balance of probabilities.[1]

IDENTITY OF THE DECEASED

8. On 5 August 2018, Paul Turner born on 9 February 1945, was identified by his daughter, Natalie Turner.

CIRCUMSTANCES SURROUNDING THE DEATH

9. Mr Turner had a medical history of porcine aortic valve replacement, atrial fibrillation, type 2 diabetes mellitus, hypercholesterolaemia and controlled gastro-oesophageal reflux disease, all of which were controlled by regular medications.

10. On 25 May 2018, Dr Vivian Peterson, General Practitioner at Watsonia General Practice referred Mr Turner to general surgeon, Mr Devan Gya in relation to a large inguinal scrotal hernia. Surgery was booked for July 2018.

11. Mr Turner had an aortic valve replacement in August 2011 and was on the anticoagulant, rivaroxaban, amongst other medications for his various conditions. Considering this and his extensive medical history, Mr Gya contacted Dr Mark Horrigan, cardiologist for advice on how to manage Mr Turner's anticoagulant medication for surgery.

12. Peri-operative suspension of anticoagulant therapy is a common requirement for safe surgery and accordingly, Dr Horrigan wrote to Mr Gya on 16 July 2018 and provided the following advice:

    a) Paul has eGFR 62 mls/minute.

    b) Rivaroxaban should be ceased for 3-4 days (doses) prior to surgery.

    c) There is no requirement for bridging therapy in this case.

    d) Rivaroxaban should be recommenced once you are happy with haemostasis.

13. On 18 July 2018, Suzanne Schipano, Practice Manager for Heidelberg Endoscopy and Day Surgery Centre telephoned Mr Turner to confirm the booking for his surgery on 1 August 2018.

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[1] Subject to the principles enunciated in *Briginshaw v Briginshaw* (1938) 60 CLR 336. 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 as to those matters taking into account the consequences of such findings or comments.

She advised him that they had received instructions from Dr Horrigan in relation to ceasing his medications. The letter was then forwarded by email to Mr Turner.

14. Mr Turner was admitted to North Park Private Hospital on 1 August 2018 for an elective bilateral inguinal hernia repair, with mesh, to be performed by Mr Gya. The surgery was uncomplicated and took approximately 40 minutes. In his operation report, Mr Gya directed Mr Turner to rest in bed for 24 hours on the ward, in addition to routine post-operative orders.

15. After surgery, Anaesthetist, Dr Juris Briedis completed the drug chart with Mr Turner's regular medications, as well as analgesia and antiemetics. Rivaroxaban was not charted as it was Dr Briedis' expectation that Mr Turner would be mobilised early and discharged following surgical review, with instructions to re-commence his medications including rivaroxaban.

16. After medical assessment, swelling and bruising was observed on the left side. Mr Gya communicated with nursing staff not to recommence his anticoagulant for two days; ie to recommence on 3 August 2018. This was not documented in the medical records.

17. According to Mrs Turner, she received a phone call from her husband at 9am on Friday 3 August 2018 and he advised he was getting ready for discharge. He called again about an hour later, but this time Mrs Turner noticed her husband's speech seemed slow and he said he felt 'bloody terrible' and wanted to come home and recuperate.

18. Mr Turner suddenly demonstrated signs of acute thromboembolic stroke with an inability to walk or form cohesive sentences. Nursing staff at North Park Private Hospital were immediately aware and called for a Mobile Intensive Care Unit (MICA) ambulance.

19. Mrs Turner drove to the hospital to pick him up but on arrival was advised that he had been taken to the Emergency Department at the Austin Hospital. Urgent stroke treatment was provided at the Austin Hospital with thrombolysis and attempted clot retrieval. Clinicians at the Austin Hospital contacted Mr Gya to ask whether they could administer thrombolytic agents to dissolve a clot that had appeared in the internal carotid artery. Mr Gya agreed, knowing there was a risk of bleeding from the hernia wounds.

20. Unfortunately, Mr Turner suffered a recognised side effect of the thrombolysis with haemorrhagic transformation of the acute stroke for which he did not survive.

MEDICAL CAUSE OF DEATH

21. On 7 August 2018, Dr Paul Bedford, Forensic Pathologist at the Victorian Institute of Forensic Medicine conducted an external examination on the body of Mr Turner and reviewed the Form 83 Victoria Police Report of Death, post mortem CT scan and medical depositions.

22. The CT scan confirmed a haemorrhagic right middle cerebral artery infarct. An aortic valve replacement was also noted. Dr Bedford noted there has been clear medical documentation of events leading to Mr Turner's death in the setting of uneventful inguinal hernia surgery, and complications associated with anticoagulant therapy changes. Dr Bedford provided an opinion that the medical cause of death was 1(a) Hemorrhagic stroke in the setting of recent inguinal hernia surgery and change in anticoagulation therapy. I accept this opinion.

FAMILY CONCERNS AND FURTHER INVESTIGATION

23. The Court received several letters of concern from Mr Turner's family.

24. On 13 February 2019, Maree Turner together with her daughters Rebecca, Natalie and Justine wrote to the court and raised the following concerns that:

    a) On the morning of 3 August 2018, Mr Turner spoke to a family member and said he was feeling "*bloody terrible*" but his discharge continued.

    b) Mr Turner's cardiologist, Dr Mark Horrigan provided advice to Mr Gya regarding the anticoagulation medication instead of a 'full cardiological review' prior to surgery, and his advice involved an 'excessive amount of time' off anticoagulation prior to surgery which was contrary to the guidelines produced by the Clinical Excellence Commission[2].

    c) Mr Gya provided a poor standard of pre-operative assessment[3] and there was a lack of care and consideration given to the management of Mr Turner's anticoagulation medication.

25. On 20 August 2021, Maurice Blackburn lawyers wrote to the Court on behalf of the family. They requested further investigation into Mr Turner's early cessation of his anticoagulation, approximately six days prior to the surgery undertaken on 1 August 2018. It was submitted that Mrs Turner believed that Mr Gya advised Mr Turner to cease taking the rivaoxaban earlier

[2] The lead agency for improved patient safety within the NSW Health system whose guidelines are useful nationally.
[3] According to family, Mr Turner reported that Mr Gya had spent 2 minutes in the pre-operative consultation and that the use of email to provide instructions regarding the cessation of anticoagulation was inadequate.

than the advice of his cardiologist, Mr Horrigan. Mrs Turner's recollection was that someone from Mr Gya's rooms called to advise him of this.

Further investigations and review by the Coroners Prevention Unit

26. Due to the concerns of the family and the fact that Mr Turner was not charted to receive his usual dose of rivaroxaban in the post-operative period during his inpatient admission at North Park Private Hospital, this matter was referred to the Coroners Prevention Unit (**CPU**) to review the circumstances of Mr Turner's death.

27. The CPU is staffed by healthcare professionals, including practising physicians and nurses. Importantly, these healthcare professionals are independent of the health professionals and institutions under consideration. They draw on their medical, nursing, and research experience to evaluate the clinical management and care provided in particular cases by reviewing the medical records, and any particular concerns which have been raised.

28. The CPU obtained statements from his surgeon Mr Devan Gya, his cardiologist, Dr Mark Horrigan, who provided the advice to Mr Gya regarding anticoagulation, and Dr Briedis, the anaesthetist who wrote the medication chart. The investigation aimed to ascertain whether there was an omission error to chart rivaroxaban in the post-operative period for Mr Turner and how this occurred.

Dr Mark Horrigan

29. In his statement to the court, Dr Horrigan provided his credentials which included his significant expertise in the management of anticoagulation in atrial fibrillation. He also provided an academic discussion around the clinical decision making in peri-operative management of anticoagulation, stroke risk, the role of guidelines and how this information was applied in Mr Turner's case.

30. It is Dr Horrigan's usual practice to suspend anticoagulation therapy for a period prior to and after surgical and other invasive procedures. The duration is determined by a number of variable factors including the time required for anticoagulation effect to wear off without excessive bleeding, time after surgery at which the surgeon deems acceptable, any stroke before or after surgery.

31. Mr Turner had been under Dr Horrigan's care since 2007 following detection of aortic stenosis and subsequent aortic valve replacement surgery in 2011. Dr Horrigan noted important considerations in Mr Turner's case included:

    a) His creatinine levels indicated Stage 2-3 renal impairment which was consistent with diabetic nephropathy in the context of longstanding type 2 diabetes mellitus.

    b) At least three days was appropriate considering his circumstances.

    c) He determined is stroke risk was approximately 1 in 400.

    d) In decisions regarding timing of rivaroxaban resumption it is prudent to consider not only the risk of post-surgical bleeding but its consequences. Mr Turner's bleeding risk was increased due to his age, diabetes, renal impairment and post-operative hypercoagulability.

32. A minimum of three days is recommended to reverse the effects of rivaroxaban. The advice Dr Horrigan gave was to withhold anticoagulants for 3-4 days to allow full reversal of anticoagulation. He recommended resumption of rivaroxaban therapy as soon as Mr Gya was satisfied with post-operative haemostasis. This means that the surgeon should recommence anticoagulants once post-surgery bleeding is diminished. It was to provide the best balance between peri-operative bleeding and stroke risk.

33. No pre-operative review was requested by Mr Turner, his family, GP or Mr Gya or any peri-operative medical staff working with Mr Gya. A full pre-operative work up is only required for patients undergoing major orthopaedic and vascular surgical procedures where risk of cardiac complications is increased. Dr Horrigan said that bilateral hernia surgery does not fall into this class. Dr Horrigan specifically refutes the family concerns regarding the 'excessive amount of time' that Mr Turner spent off anticoagulation and the need for a full cardiological review prior to surgery.

34. According to Dr Horrigan the high-risk phase for thrombo-embolic surgery events is in the post-operative period. He also highlighted that hypercoagulability occurs more in the post-operative period where early recommencement of anticoagulation needs to be carefully balanced with bleeding risk. He stated that:

> *In the absence of major bleeding risk or major bleeding, failure to prescribe post-operative anticoagulants is a significant omission and a departure from guideline based practice.*

35. Patients with chronic atrial fibrillation such as Mr Turner are at ongoing risk of embolic stroke. According to Dr Horrigan, "*ischaemic strokes related to atrial fibrillation usually result from cardiac embolism of a large cerebral artery; they are larger, more frequently fatal, and associated with greater disability than strokes from other causes*." He further opined "*strokes related to atrial fibrillation are largely preventable, because oral anticoagulant medications are so effective*."

36. Dr Horrigan stated that "*Failure to re-commence anti-coagulants in Paul Turner's case may have contributed to a tragic outcome in which low risk surgery was followed by an unexpected and untimely death*".

37. Pre-discharge pharmacy review is a potential mechanism to identify and rectify prescribing errors. Dr Horrigan suggested that had this been done it may have led to a different outcome. He suggested a standardised practice for management of Atrial Fibrillation would be appropriate to reduce practice variation.

Mr Devan Gya

38. Mr Gya made a statement for the Court dated 12 March 2019 and said that he made a deliberate clinical decision to continue to withhold Mr Turner's anticoagulation due to post-operative swelling and bruising, and his subsequent concern relating to post-operative bleeding risk if the anticoagulation was recommenced.

39. Mr Gya expected the anticoagulation would restart on 3 August 2018. Mr Gya acknowledged in his statement that he did not document this decision within the hospital medical record. CPU notes that Mr Gya also did not write up the anticoagulation on the hospital medical discharge summary to commence on 3 August 2018 and there were no instructions on the nursing discharge summary to the effect that Mr Turner should recommence rivaroxaban on the day of his discharge (which was the day of his stroke).

40. Mr Gya made a further statement on 20 July 2020. The death of Mr Turner had given Mr Gya time to reflect on his practices, including a reminder about the importance of good clinical record keeping and the management of post-operative reviews.

41. Mr Gya agreed that the decision to recommence anticoagulants post-operatively was his, as the treating surgeon. The decision involves balancing the risk of bleeding with the risk of thromboembolic disease. According to Mr Gya, normal practice is to resume anticoagulants post operatively within the first 24 to 48 hours depending on the nature of the surgery and whether there is a significant risk of bleeding from the wound or a large part of the body is operated on.

Dr Julius Briedis

42. Dr Briedis was the anaesthetist who wrote the medication chart for Mr Turner. Dr Briedis stated that he was aware that Mr Turner was usually prescribed anticoagulation. His expectation was that Mr Gya would instruct Mr Turner to recommence his anticoagulation on the day following his surgery.

Conclusions of CPU Review

43. Mr Turner's stroke may have been prevented if his anticoagulation had been restarted sooner after his surgery on 1 August 2018. Whilst the use of anticoagulation will decrease the risk of stroke and therapeutic anticoagulation can be rapidly achieved, the risk of stroke is not negated entirely. Conversely, the use of anticoagulation may cause catastrophic and potentially fatal post-operative bleeding.

44. The CPU reported that it is likely that Mr Turner ceased his anticoagulant for six days prior to surgery rather than the advised 3-4 days but accepts Dr Horrigan's advice that the highest thrombotic risk is in the post-operative period rather than his pre-operative period.

45. In response to the family's concerns about the need for a full cardiology work up, the CPU considered the concerns were not supported.

46. In response to the family's concerns regarding the post-operative management of Mr Turner's anticoagulation, the CPU suggested there may have been a prescribing error, namely the accidental omission of recharting the anticoagulant rivaroxaban. The CPU considered that this was a potential missed opportunity for the reintroduction of rivaroxaban. It appears that Mr Gya provided a retrospective justification for the oversight. However, given there is no written evidence to support his view, the CPU considered the evidence does not support a finding that he charted rivaroxaban. I agree.

Turner Family's final submissions

47. After considering all of the evidence, Maurice Blackburn lawyers sent a further letter by way of final submissions on 14 April 2022 in relation to the following findings that could be made:

    a) It is likely that Mr Turner received a phone call advising him to cease anticoagulation six days before surgery.

    b) There was a failure to identify that Mr Turner had ceased anticoagulation earlier than recommended by his cardiologist.

    c) Anticoagulation was not re-commenced post-operatively.

    d) Whether Mr Turner's death was preventable.

48. I now address some of these key issues from their submissions below.

Was Mr Turner told to cease his anticoagulant medications earlier than advised by his cardiologist?

49. Mrs Turner believes that she overheard a phone call Mr Turner had with someone about when he should cease his anticoagulation medication. She queried the timing with her husband after the call. Regrettably, Mrs Turner does not remember who telephoned Mr Turner.

50. Mr Gya provided a further statement to the Court dated 17 February 2022. He said he specifically requested the advice of Dr Horrigan in writing regarding the management of Mr Turner's anticoagulation and whether bridging therapy was required because of his previous aortic valve surgery. Mr Gya stated he would not have deviated from this advice, given the consequences of ceasing anticoagulants early.

51. Suzanne Schipano, Practice Manager for Heidelberg Endoscopy and Day Surgery Centre made a statement for the court and stated that she called Mr Turner on 18 July 2018 to confirm the booking for his surgery on 1 August 2018. She advised him that they had received instructions from Dr Horrigan in relation to ceasing his medications. She then emailed him the letter from Dr Horrigan. She stated that at no point after a patient is confirmed for surgery would she need to contact them regarding confirming or changing medications. They would not override any specialist instructions.

52. Mr Gya stated he did not contact Mr Turner again after this telephone call was made by his office. Further, he did not instruct any of his staff to contact Mr Turner again after Ms Schipano's telephone call. He explained that Ms Schipano is a very experienced Practice Manager and it is not within her scope of practice to provide information to a patient that is inconsistent with the advice provided by himself or a specialist.

53. The family submitted it was open for me to find on the evidence:

    a) It is unlikely Mr Turner would have ceased his anticoagulation medication against the advice of Dr Horrigan unless he received subsequent alternative advice.

    b) Mr Turner ceased his anticoagulation on 26 July 2018, six days prior to surgery.

    c) Mr Turner only ceased his anticoagulation medication on 26 July 2018 on the basis of a telephone call that took place at some time after 18 July 2018, despite the identity of the caller not being confirmed by the coronial investigation.

54. Having considered all of the available evidence, I find I am unable to determine who advised Mr Turner to cease his Rivaroxaban medication when he did. I accept that the surgery called Mr Turner to advise him of his surgery date and provided the advice of Mr Horrigan which was followed up by email. I also accept the family submissions that it is unlikely that Mr Turner would have ceased his anticoagulation medication earlier against the advice of Dr Horrigan, but I am unable to determine where this advice came from. The evidence supports a finding that Mr Turner ceased taking his medication on 26 July 2018, six days prior to surgery, which was two days earlier than recommended by Dr Horrigan.

Was the failure to realise that Mr Turner had ceased his anticoagulation earlier than the date a missed opportunity?

55. At a pre-surgical consultation on 31 July 2018 Mr Turner advised hospital staff that he had not taken the anticoagulant for the previous six days. Mr Gya was not made aware of this fact until after Mr Turner's transfer to the Austin Hospital.

56. Mr Gya spoke to Mr Turner on the day of his surgery. He explained the procedure, as well as the risks involved, his follow up care and how long he would be required to stay in hospital. He stated that he did not ask Mr Turner when he ceased taking his anticoagulation because he knew he had been provided with clear instructions both verbally and in writing from his office.

57. The family's lawyers submitted that the failure to realise Mr Turner had ceased his anticoagulation earlier than the date advised represented a missed opportunity to have changed the events. It was submitted that it was unfortunate that Mr Gya did not know that Mr Turner had ceased his anticoagulation medication earlier than the date advised by Dr Horrigan. They submitted had it been known it may have significantly altered the decision about when to re-commence the medication.

58. I agree with the family submissions that Mr Gya's lack of knowledge about the timing Mr Turner ceased his anticoagulant medication was most unfortunate and represented a missed opportunity, particularly with the timing to recommence anticoagulant medication. I accept that Mr Gya assumed that Mr Turner would have followed the instructions of Dr Horrigan, however if hospital staff were aware, it is difficult to understand how this would not have been conveyed to Mr Gya.

Was Mr Turner's death preventable?

59. The evidence suggests that Mr Turner's stroke may have been prevented if his anticoagulation had been re-commenced sooner after surgery. Dr Horrigan's opinion is that failure to re-commence anticoagulants may have contributed to Mr Turner's death. Mr Gya conceded that being off anticoagulants for nine days would have contributed to Mr Turner's clotting.

60. Mr Gya was the clinician responsible for the decision to recommence the anticoagulant medication and to interpret Dr Horrigan's advice about 'once you are happy with haemostatis'. In his statement to the Court, Dr Horrigan clarified his interpretation of this to mean:

> *In the ongoing post-operative assessment of the patient, the surgeon would be expected to recommence anti-coagulant therapy once the post-surgical bleeding risk is sufficiently diminished. This is a clinical decision for the surgeon to make on an individual case basis.*

61. The evidence of Mr Gya is that he made a deliberate decision not to recommence anticoagulation because of 'generalised oozing' and 'swelling and bruising on the left side'. Mr Gya stated that he observed this on 1 August 2018 at his post-operative review. However, he conceded that he made no clinical notes of this review. Similarly, the contemporaneous nursing notes do not refer to any significant bleeding during Mr Turner's admission and there was no reference to this on the nursing discharge summary. There is also no documentation in the hospital progress notes that Mr Gya reviewed Mr Turner on either the 2 or 3 August 2018.

62. Post-surgery, Mr Gya directed nursing staff to recommence the anticoagulant medication on 3 August 2018, two days after surgery. On examination, he observed extensive bruising and scrotal swelling. Mr Gya indicated that had the swelling not been present, he would have directed the recommencement of anticoagulants on 2 August 2018. For these reasons he considered it was reasonable not to recommence anticoagulants on 2 August 2018.

63. In a statement to the Court Mr Gya conceded:

> *I sincerely regret not reviewing Mr Turner post-operatively on 2 and 3 August 2018. I accept that I should not have relied solely on updates from the nursing team and that I have a professional obligation and responsibility to personally review my patients post-operatively. In this case, reviewing Mr Turner on 2 August may not have caused me to change my decision about recommencing his anticoagulant on 3 August. However, I accept that given the concerns that I had about his bleeding, I should have reviewed him the day after surgery to check his recovery and to assess whether his anticoagulation medication should be recommended on 3 August 2018 as planned or whether it could be recommenced earlier.*

64. Mr Gya also conceded that he did not write in Mr Turner's clinical records his observations when he reviewed him on 1 August 2018 or his instructions to recommence anticoagulants until 3 August 2018. He said he conveyed his directions to nursing staff verbally and they are very experienced. Moreover, he said

> *I regret that I did not clearly record my instructions in the clinical records, I accept my responsibility as the treating surgeon to maintain clear and accurate records for a patient which clearly set out the management plan for a patient. ... In retrospect, I should have written all my instructions including the timing of Mr Turner's medications in the clinical records.*

65. Acknowledging this, and through his medical defence insurer, Avant, Mr Gya completed an education plan regarding note taking.

66. The family submissions acknowledged Dr Horrigan's statement that failure to prescribe post-operative anticoagulants is a significant omission and a departure from guideline-based practice. It was noted that Mr Gya conceded that given the concerns about bleeding, he should have reviewed Mr Turner on 2 August 2018 to check his recovery and to assess whether his anticoagulant medication should be re-commenced on 3 August 2018 as planned or whether it could be re-commenced earlier. This is said to have been another missed opportunity.

67. The family submitted that if Mr Turner had been re-assessed and anticoagulants re-commenced on 2 August 2018 he would have had full anticoagulant activity within two hours and on the balance of probabilities his death would have been avoided.

68. I find the evidence is clear that had Mr Turner commenced anticoagulant medication sooner, his death may have been prevented. I accept that these decisions are difficult and there is a need to balance the risk of bleeding with the risk of a thromboembolic event. However, failing to review Mr Turner on the days after surgery, not recording his thoughts in writing in the medical records and not charting his anticoagulation medication earlier contributed to the events that led to Mr Turner's death.

69. I acknowledge that Mr Gya has reflected on his involvement in this case and made appropriate concessions about these issues.

PREVENTION OPPORTUNITIES

70. This case has highlighted some challenges and opportunities for improvement in the management of post-operative anticoagulation. In his statements to the court, Dr Horrigan provided some insightful and meaningful comments about potential prevention opportunities. The Court also obtained a statement from Professor Andrew Wilson, Chief Medical Officer from Safer Care Victoria to provide some further insight into prevention and suggested recommendations.

71. According to Dr Horrigan 50% of strokes occur within the first 28 days of surgery. He indicated that some members of the medical profession have limited knowledge and practice variation is common, post-operatively.

72. Of note, Mr Horrigan said that

> *for clinicians working at the coal face, there is no clear and readily available brief electronic guideline or practice support tool for assessment and management of patients who have pre-existing AF, or whose surgery is complicated by it. AF should be accorded the same major alert status as an allergy or adverse reaction. There is currently no policy framework outlining appropriate medical review for these patients before and after interventions, or for routine pharmacy review prior to discharge from hospital.*

73. It is worth repeating some of Dr Horrigan's final insights:

> *Failure to recommence anticoagulants in Paul Turner's case may have contributed to a tragic outcome in which low risk surgery was followed by an unexpected and untimely death. Acts of omission are a common form of practice variation, particularly in the management of Atrial Fibrillation. Although the final responsibility in such cases attaches itself to the managing doctor, this provides an opportunity to advocate for a routine multidisciplinary approach.*
>
> *I am unfamiliar with North Park Private Hospital, its procedures and policies, and can*

make no specific comments, but at the centres in which I work (Austin Health, Warringal Private Hospital) there are mechanisms in place to detect and rectify prescribing errors. This is usually in the form of a pre-discharge pharmacist review where pharmacists can assist practitioners with discharge prescribing. Such a process might have led to a different outcome for Paul Turner.

At Austin Health I am currently advocating for standardised program management of Atrial Fibrillation; I have established a clinic to reduce practice variation. I am also lead clinician in the RAFED study (through DHHS) which is a multi-centre project with similar aims.

74. This case provides an opportunity to highlight the differences in approach and the importance of a multidisciplinary approach. Mr Horrigan made the following final comments:

    a) There is no streamlined system for managing AF, particularly for perioperative anticoagulant management.

    b) The lack of ownership of anticoagulation management has led to a culture that uses patients as go-betweens in arranging their own specialist care.

    c) There is currently no quality system to assess and monitor quality and safety for this large patient group. System wide reporting of events and near misses is inadequate.

75. He made several suggested recommendations, including:

    a) Develop and promulgate a Victorian Guideline for peri-operative anticoagulation management with patients who have Atrial Fibrillation.

    b) Support development of Atrial Fibrillation experts – including an education program for all clinicians.

    c) Develop a policy mandating pharmacy review at discharge for Victorian patients.

    d) Develop a better system for incident reporting, including near misses, and creating a tool for improving discharge processes.

    e) Funding for a pilot program to collect data for quality and safety improvement in post-acute, general and perioperative AF management.

76. Professor Andrew Wilson from Safer Care Victoria agreed that a Victorian Guideline to support and standardise peri-operative management of anticoagulant therapy would be beneficial. This would require the establishment of a multi-disciplinary working group (Anaesthetics,

Cardiology, Haematology, Pharmacy, Surgery) to develop state-wide guidelines and assist with the dissemination and roll out of a program to increase practitioner awareness, knowledge and performance.

77. Professor Wilson also suggested a recommendation to mandate pre-discharge reviews for all patients leaving hospital and day surgery centres. This would assist to minimise prescribing errors.

FINDINGS

78. Pursuant to section 67(1) of the *Coroners Act 2008* I make the following findings:

    a) the identity of the deceased was Paul Turner, born 9 February 1945;

    b) his death occurred on 5 August 2018 at Austin Hospital, 145 Studley Road, Heidelberg, Victoria, 3084 from Hemorrhagic stroke in the setting of recent inguinal hernia surgery and change in anticoagulation therapy; and

    c) the death occurred in the circumstances described above.

79. I express my sincere condolences to Mrs Turner and her daughters Rebecca, Natalie and Justine and their extended family for the loss of their kind and loving husband and father.

COMMENTS

80. Pursuant to section 67(3) of the Coroners Act, I make the following comments connected with the death.

81. Mr Turner's death has highlighted the post-operative risk of stroke and the importance of the timing of recommencement of anticoagulation medication, particularly in patients with Atrial Fibrillation. Evidence suggested that this heightened risk may not be fully appreciated by clinicians and that there are variations in practice. I note there are no formal clinical guidelines for the management of anticoagulation therapy for peri or post-surgery.

82. For this reason I have made the following recommendation below.

RECOMMENDATION

83. Pursuant to section 72(2) of the Coroners Act, I make the following recommendations connected with the death.

    I recommend that Safer Care Victoria establish a multi-disciplinary working group (made up of Anaesthetics, Cardiology, Haematology, Pharmacy, Surgery) to develop state-wide guidelines for the management of anticoagulation therapy for peri and post-surgery for patients with Atrial Fibrillation and assist with the dissemination and roll out of a program to increase practitioner awareness, knowledge and performance.

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

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

    Mrs Maree Turner

    Mr Devan Gya, General Surgeon, Heidelberg Endoscopy and Day Surgery Centre

    Dr Mark Horrigan, Cardiologist

    Professor Michael Roberts, Chief Executive Officer, Safer Care Victoria

    Professor Andrew Wilson, Chief Medical Officer, Safer Care Victoria

    Ms Lara Watson, Northpark Private Hospital

    Maurice Blackburn Lawyers

    Austin Health

    Avant Law

Signature:

JACQUI HAWKINS
DEPUTY STATE CORONER
Date: 6 June 2022