IN THE CORONERS COURT
OF VICTORIA
AT MELBOURNE

COR 2023 002978

FINDING INTO DEATH WITHOUT INQUEST

Form 38 Rule 63(2)

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

Findings of:	Coroner Catherine Fitzgerald
Deceased:	Gary William Bruce
Date of birth:	29 January 1952
Date of death:	3 June 2023
Cause of death:	1(a) Complications following a right hepatic artery injury following an open cholecystectomy in the setting of previous splenectomy and small bowel resection
Place of death:	Bendigo Hospital, 100 Barnard Street, Bendigo, Victoria, 3550

INTRODUCTION

1. On 3 June 2023, Gary William Bruce was 71 years old when he passed away at Bendigo Hospital. At the time of his death, Mr Bruce lived at Rochester, Victoria, with his wife.

2. Mr Bruce's medical history included trauma leading to splenectomy and small bowel resection, polycythaemia rubra vera and myelofibrosis, unspecified cardiomyopathy, and gout.

THE CORONIAL INVESTIGATION

3. Mr Bruce'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 the circumstances in which the death occurred. The 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. This finding draws on the totality of the coronial investigation into the death of Gary William Bruce. 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]

[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.

MATTERS IN RELATION TO WHICH A FINDING MUST, IF POSSIBLE, BE MADE

Circumstances in which the death occurred

7. On 19 May 2023, Mr Bruce presented to his general practitioner (**GP**), Dr Eji Ekeanyanwu, reporting a three-day history of pain in the upper right quadrant of his abdomen, associated with fevers and vomiting. Dr Ekeanyanwu noted a mild fever of 38.1 and abdominal tenderness. He referred Mr Bruce to the Echuca Regional Health (**ERH**) Emergency Department (**ED**), with a query of possible cholecystitis. Mr Bruce presented to the ERH ED later that day.

8. Mr Bruce was reviewed by general surgeon, Mr Hasanga Jayasekera, and the surgical registrar. His ultrasound showed cholelithiasis and cholecystitis, and his tests showed a white blood cell (**WBC**) count of 71.9 and a c-reactive protein (**CRP**) level of 203. Mr Bruce explained to the surgeon that he had been experiencing this pain intermittently over a period of several months and did not want to go to the Alfred Hospital for treatment.

9. Mr Jayasekera offered two options – definitive or conservative management. Given Mr Bruce's experience with repeat episodes of pain, definitive management with surgical intervention was preferred. He was given the option of waiting for a bed at Bendigo Hospital to become available, however preferred to undergo surgery closer to home so that his family could visit him more easily.

10. The treating team contacted Mr Bruce's treating haematologist at the Peter MacCallum Cancer Centre (**PMCC**) given Mr Bruce's diagnosis of myelofibrosis. His haematologist advised that it was prudent to proceed with a cholecystectomy, as his myelofibrosis was being actively treated. The haematologist advised that Mr Bruce's baseline WBC was between 50 and 60.

11. Due to Mr Bruce's previous abdominal surgeries, a laparoscopic approach was not preferrable, so he consented to undergo an open cholecystectomy. The consent form signed by Mr Bruce listed risks including bleeding, damage to surrounding organs and vessels, and death.

12. Mr Jayasekara performed the open cholecystectomy on 20 May 2023, assisted by anaesthetist Dr Nada Alrawi. Mr Jayasekera noted that during the final stage of the dissection of the gallbladder, an artery was in close proximity to the cystic duct and was affected. He explained:

> "*This was an accessory right hepatic artery, as the main right hepatic artery was palpable at the porta-hepatis. The injury was recognised and a 6/0 prolene*

repair was performed. Haemostasis was achieved and distal pulsation of the vessel was checked."

13. Following the procedure, Mr Bruce was admitted to the High Dependency Unit (**HDU**) overnight, where he suffered at least two episodes of hypotension. The first episode of hypotension started from about 11.00 pm, although a Medical Emergency Team (**MET**) call was not activated until about 1.00 am on 21 May 2023. When the MET call was activated, the ED Hospital Medical Officer (**HMO**) called Mr Jayasekera, who recommended contacting the Bendigo Hospital Intensive Care Unit (**ICU**). Mr Jayasekera also recommended administering a fluid bolus, taking venous blood gases (**VBG**) for testing and planned for further intervention if his condition did not improve. Mr Jayasekera noted that he was later informed that Mr Bruce responded well to the fluid bolus and appeared more comfortable.

14. However, Mr Bruce's VBG results indicated he was experiencing metabolic acidosis. Mr Jayasekera was contacted again at about 4:40 am, was provided with Mr Bruce's VBG results, and he directed that Mr Bruce have an urgent CT scan. The urgent CT scan occurred at about 6.40 am, which revealed a large haematoma extending from the cholecystectomy bed to the umbilical region. Mr Bruce was returned to theatre at about midday for an emergency exploratory laparotomy. Dr Alrawi was the anaesthetist again, and she noted that Mr Bruce was critically unwell with hypovolaemic shock and mottled skin. She noted that she attempted resuscitation with a blood transfusion, provided ongoing fluids and an arterial line was inserted. During the emergency laparotomy, a 1.5L haematoma was discovered, with diffuse bleeding from the base of the cystic duct and from the abdominal wall. The haematoma was evacuated, washed out and haemostasis was obtained by packing. Mr Bruce was intubated post-operatively and was transferred to the Bendigo Hospital ICU.

15. Upon admission to the ICU, Mr Bruce remained intubated and had increasing noradrenaline requirements overnight from 21 to 22 May 2023. On the morning of 22 May 2023, Mr Bruce underwent a relook laparotomy by Mr Jayasekera and Mr Fred Hyunh. No clear bleeding site was identified, however a hole in the small bowel (enterotomy) and a hole in the colon (colotomy) were identified and repaired.

16. Post-operatively, Mr Bruce remained profoundly hypotensive, developed an acute kidney injury and new atrial fibrillation. He required significant support in ICU including a further unit of packed red blood cells.

17. Mr Bruce was successfully extubated on 25 May 2023, however experienced ongoing renal failure requiring continuous renal replacement therapy. He suffered a respiratory arrest on 30 May 2023 and required re-intubation. He also experienced pulmonary oedema, infection with methicillin-resistant staphylococcus aureus, liver impairment and critical illness weakness. Despite maximal supports, he continued to deteriorate. Following discussions with his family, Mr Bruce was extubated and transitioned to palliative care, passing away on 3 June 2023.

Identity of the deceased

18. On 3 June 2023, Gary William Bruce, born 29 January 1952, was visually identified by his wife, Jennifer Francis Bruce.

19. Identity is not in dispute and requires no further investigation as I am satisfied that the identity of the deceased is Gary William Bruce.

Medical cause of death

20. Forensic Pathologist Dr Joanne Ho, from the Victorian Institute of Forensic Medicine (**VIFM**), conducted an examination on 5 June 2023 and provided a written report of her findings dated 8 June 2023.

21. The post-mortem examination revealed findings consistent with the clinical history.

22. Toxicological analysis of post-mortem samples was not indicated and was therefore not performed.

23. Dr Ho provided an opinion that the medical cause of death was "*1(a) Complications following a right hepatic artery injury following an open cholecystectomy in the setting of previous splenectomy and small bowel resection.*"

24. I accept Dr Ho's opinion.

FAMILY CONCERNS

25. Mr Bruce's family wrote to the Court and expressed their concern that Mr Bruce should not have undergone surgery at ERH and stated ERH was unaware of Mr Bruce's full medical history.

FURTHER INVESTIGATIONS AND CPU REVIEW

26. Following receipt of the family's concerns of care, I referred this matter to the Coroner's Prevention Unit (**CPU**)[2] for an independent review of the medical care and treatment provided to Mr Bruce, particularly whilst at ERH. I also requested that the CPU review the decision to operate and provide an opinion on whether it was reasonable in the circumstances.

CPU review of family concerns

27. The CPU noted that the surgical team who operated on Mr Bruce was aware of his medical history and took appropriate steps to address relevant issues. For example, clinicians contacted Mr Bruce's haematologist to discuss antimicrobial therapy in the context of his prior splenectomy, they continued rituximab for his myelofibrosis and opted for an open (rather than laparoscopic) cholecystectomy, given his prior abdominal surgeries. The CPU opined that his treating clinicians were appropriately informed of Mr Bruce's prior medical history.

Whether decision to operate was reasonable

28. The CPU noted that there were two options available for Mr Bruce – surgical intervention or conservative management. The CPU explained that cholecystectomy is a common operation for gallbladder issues. Conservative management has the advantages of either not requiring surgery at all or allowing surgery to be performed later, once the inflammation has settled. However, conservative management carries other risks, including complications of sepsis, gallbladder perforation, and biliary peritonitis, which all carry substantially increased morbidity and mortality.

29. The CPU noted that Mr Bruce's first procedure was an emergency procedure, meaning that it was not a planned, elective procedure that could have been completed at some future time. He needed to be admitted to hospital immediately for treatment. The CPU opined that the decision to perform the cholecystectomy on 20 May 2023 was reasonable.

30. The CPU noted that arterial injuries are a known complication of cholecystectomies. The gallbladder sits on the underside of the liver in a highly vascular area and the vasculature in

[2] The Coroners Prevention Unit (CPU) was established in 2008 to strengthen the prevention role of the coroner. The unit assists the Coroner with research in matters related to public health and safety and in relation to the formulation of prevention recommendations. The CPU also reviews medical care and treatment in cases referred by the coroner. The CPU is comprised of health professionals with training in a range of areas including medicine, nursing, public health and mental health.

that area is different from one person to another. This risk was appropriately listed on the consent form that Mr Bruce signed, when he consented to the procedure. The CPU opined that the decision to operate and the performance of the procedure was appropriate and reasonable.

Clinical management of Mr Bruce on evening of 20 May 2023 to 21 May 2023

31. Upon a review of the medical records, the CPU observed potential deficiencies in the care provided to Mr Bruce in the HDU, on the evening of 20 May 2023, into the early hours of 21 May 2023. The CPU identified that Mr Bruce appeared to have been within MET call criteria for at least an hour before the first MET call was made. His first episode of hypotension started at about 11.00pm on 20 May 2023, however the MET call did not occur until 1.00am on 21 May 2023.

32. The statement of Maree Woodhouse, Director of Nursing and Midwifery at ERH, conceded that there were 10 occasions during this period where a MET call should have been activated, however it only occurred once during that time. She noted that at 10.00am on 20 May 2023, a MET call should have been activated as Mr Bruce had no urine output recorded for four hours. Similarly, at 2.00pm on 20 May 2023, a MET call should have been activated as there had been no urine output for eight hours.

33. Ms Woodhouse further conceded that MET call criteria was met at 11.00pm, 1.00am (21 May 2023), 3.00am, 4.10am, 4.30am, 5.10am and 8.00am, due to hypotension. Ms Woodhouse noted that by 8.00am, Mr Jayasekera and Dr Alrawi were both in attendance, so the MET call was not strictly required at that time. Ms Woodhouse concluded that out of the ten occasions in which a MET call should have been activated, it only occurred once at 1.00am on 21 May 2023. She stated, "*It appears that the [Associate Nurse Unit Manager] did not follow the hospital's escalation policy*". The CPU opined that this was a significant deficiency.

34. Ms Woodhouse explained that when a MET call is activated out of hours, the following people should be notified:

    a) The most senior doctor in the ED, which in Mr Bruce's case, was a locum HMO.

    b) The after-hours manager, who did not attend.

    c) The nurse in charge of the ward (the HDU), the Associate Nurse Unit Manager (**ANUM**). The ANUM did attend in this case.

d) The allocated nurse from the HDU, who also attended.

e) The nurse assigned to Mr Bruce's bed, who was the HDU ANUM (who was present) and the surgeon on call must be contacted.

f) The visiting medical officer (**VMO**) surgeon must attend if a second MET call is triggered for the same reason, irrespective of the time between the MET calls. In this case, there was only one MET call, however there should have been more than one, which would have resulted in notification of the VMO surgeon.

35. The CPU noted that whilst junior medical staff were involved with Mr Bruce's care in the early hours of 21 May 2023, it does not appear that senior medical staff were sufficiently informed of the deterioration until about 7.00am. I note that Mr Jayasekera knew about the arterial injury during the procedure on 20 May 2023, and was informed of the fall in blood pressure at 1.00am on 21 May 2023. He directed a fluid bolus and VBG tests. However, as further MET calls did not occur in accordance with the escalation policy, there was no trigger for a surgeon to attend.

36. The CPU opined that the lack of MET calls was a significant issue. They noted that the period from 20 May 2023 into the early hours of 21 May 2023 was critical for Mr Bruce. The CPU noted that if a MET call had been activated earlier, it is quite possible that Mr Bruce may have been returned to theatre sooner and may have experienced a different outcome.

37. In a statement provided as part of the coronial investigation, anaesthetist Dr Alrawi expressed her disappointment that she was not notified until about 7.00am on 21 May 2023 about Mr Bruce's deterioration. She explained that "*As the treating anaesthetist, I expected to be called because I consider it is my responsibility to care for a surgical patient in the first 24-48 hours post operatively. I expect to be notified if such a patient is deteriorating*."

38. Dr Alrawi opined that the surgeon (Mr Jayasekera), the treating anaesthetist (herself) and the Bendigo Hospital ICU should all have been notified of Mr Bruce's blood pressure deterioration. She stated that had she been notified, she would have attended the hospital to review Mr Bruce in person to check for bleeding or sepsis. She explained that if she had been notified, she would have inserted an arterial line to administer fluids and a blood transfusion and would have asked Mr Jayasekera to return Mr Bruce to theatre as soon as possible.

39. The CPU noted that ERH's MET call policy does not require notification of the treating anaesthetist, which they opined was common. In public hospitals, the CPU noted that anaesthetic staff who are on site are usually not notified as part of a MET call, as they are often in the process of giving anaesthetic to another patient and cannot leave that patient to attend a MET call. In a larger hospital, the CPU noted that there are often other staff available with the expertise required.

40. However, they commended Dr Alrawi's suggestion that the treating anaesthetist be notified, given her opinion that "*it was [her] responsibility for care for a surgical patient in the first 24-48 hours*". The CPU opined that if she had been called, it is possible that a different course of events may have occurred, resulting in a different outcome for Mr Bruce.

41. Dr Alrawi also noted that she requested that following the first procedure, that Mr Bruce have his arterial line remain in situ for about 24 hours. She explained that it was her routine practice to make this request for high-risk patients who have undergone major surgery, such as Mr Bruce. She noted that Mr Bruce had elevated inflammatory blood markers prior to the surgery, and she was concerned about complications such as sepsis. Both Dr Alrawi and Ms Woodhouse were unable to explain why or how the arterial line was removed and there is no explanation for this in the clinical records.

42. The CPU explained that it is relatively common for arterial lines to 'fall out' or stop working for some other reason. However, in those circumstances, the nursing staff are expected to ask medical staff for a decision as to whether a new one should be inserted (which will be inserted by medical staff) or whether medical staff were content to continue management without it.

CPU conclusions

43. The CPU concluded that the original decision to operate was appropriate and reasonable, and that Mr Bruce unfortunately suffered a known complication during the procedure. The complication was appropriately recognised during the procedure and was treated accordingly.

44. However, the CPU noted Ms Woodhouse's concessions that Mr Bruce satisfied the MET call criteria on ten occasions over 20 and 21 May 2023, and a MET call only occurred on one of those occasions, which was a significant deficiency.

45. Furthermore, the CPU was concerned about the issue of the arterial line and whether it merely fell out and staff did not ask about replacing it or whether there was an inappropriate decision

to remove it. Based on the information in the statements and medical records, it was not possible to explain what occurred.

CPU observations regarding the adequacy of relevant policies

46. The CPU noted that it was provided with the relevant MET call policies and procedures from ERH. It was observed that the policies were reasonable, clear, appropriate and in accordance with the requirements of the Australian Commission on Safety and Quality in Healthcare 'Standard 8: Recognising and Responding to Clinical Deterioration'. The key element identified from ERH's policies was that it was mandatory to activate a response, such as a MET call, when clearly defined clinical parameters are met.

47. The CPU noted that the makeup of the response team in ERH was appropriately tailored for a small hospital and the staff available. It noted the requirement that "*if a second MET Call is triggered for the same reason, irrespective of the time between MET calls*", then the VMO or specialist must attend. The CPU considered this to be a prudent policy to ensure senior medical review of a patient, in circumstances where the issue was not properly identified or addressed in the first MET call, or the patient's condition progressed further.

ERH Root Cause Analysis

48. ERH identified Mr Bruce's case as a sentinel event[3] and reported the matter to Safer Care Victoria on 27 March 2024. The health service conducted a root cause analysis (**RCA**) and prepared a report of their findings dated 17 July 2024. The RCA panel identified four root causes:

    a) Mr Bruce was classified as an American Society of Anesthesiologists (ASA) physical status of 4 (patient with a severe condition that is life threatening) prior to the first operation. At that time, consideration could have been given to transferring Mr Bruce to a larger hospital for surgery. The RCA panel noted that the protocol for elective cases at the primary hospital was ASA 3 or less, but for emergency cases this would not apply if the surgeon and anaesthetist were content to proceed, as was the case with Mr Bruce.

[3] An 'unexpected and adverse event that occurs infrequently in a health service entity and results in the death of, or serious physical or psychological injury to a patient as a result of system and process deficiencies at the health service entity: https://www.safercare.vic.gov.au/best-practice-improvement/publications/sentinel-events-guide

b) Major flaws in the pre-operative workup and management of Mr Bruce that likely led to him being in a sub-optimal condition at the time of the first operation. This appears to be based on the panel's observations that Mr Bruce's significant comorbidities were not actively managed in the perioperative period.

c) Poor recognition of, and escalation in response to, Mr Bruce's deteriorating condition in the HDU overnight on 20-21 May 2023; and

d) The pre-operative resuscitation of Mr Bruce prior to the second operation was sub-optimal.

49. The RCA panel concluded that it was not unreasonable to offer Mr Bruce operative treatment for cholecystitis via the operation chosen. They noted that the arterial injury he suffered was a known complication of the procedure and considered the operative management of it was appropriate.

50. The RCA panel observed that the hospital had the appropriate equipment, a 24-hour HDU, 24-hour imaging and junior staff available to safely perform an open cholecystectomy, but noted that the HDU is not staffed by a Fellow of Australian College of Emergency Medicine (FACEM) or College of Intensive Care Medicine (CICM) trainee on site. They considered that the lack of involvement of an appropriately skilled and experienced critical care doctor to recognise the significance of Mr Bruce's deterioration may have contributed to the lack of timely support overnight on 20-21 May 2023.

51. In particular, the RCA panel noted that the hospital's policies relating to the care of deteriorating patients were not adhered to and identified 'significant problems' in Mr Bruce's post-operative management, 'ranging from poor note writing, not calling MET calls, no MET call notes, not attending to review a patient, substandard resuscitation and poor decision making around bleeding resuscitation prior to surgery'.

52. The RCA panel's analysis largely aligns with the CPU's independent review in identifying the failure to identify and escalate Mr Bruce's deterioration as a significant area of concern. In this regard, I remain satisfied that the failure to activate MET calls when they were clinically indicated delayed the involvement of more senior clinicians and, consequently, the decision to proceed with reparative surgery.

ERH response to proposed adverse findings

53. In a statement dated 1 August 2024, ERH Chief Medical Officer Dr Annemarie Newth reported that a number of changes have been made at ERH since Mr Bruce's death, including, relevantly:

    a) strengthening the use of a daily virtual ward round with Bendigo Health specialist intensivists (Virtual Trauma and Critical Care Unit or ViTCCU) for all HDU patients;

    b) appointment of Co-Clinical Directors of Medicine (specialist physicians) with oversight of the HDU; and

    c) work with medical and nursing staff to ensure adherence to the medical emergency team (MET) call policy, including mandatory attendance of the responsible member of senior medical staff for a second MET call.

54. In submissions dated March 2025, ERH accepted that there were repeated failures to activate a MET call on the night of 20-21 May 2023, but noted that Mr Jayasekera had nevertheless been informed of Mr Bruce's medical condition by the Emergency Department HMO on two occasions, at approximately 1:00 am and 4:40 am, on 21 May 2023.

FINDINGS AND CONCLUSION

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

    a) the identity of the deceased was Gary William Bruce, born 29 January 1952;

    b) the death occurred on 3 June 2023 at Bendigo Hospital, 100 Barnard Street, Bendigo, Victoria, 3550, from complications following a right hepatic artery injury following an open cholecystectomy in the setting of previous splenectomy and small bowel resection; and

    c) the death occurred in the circumstances described above.

56. The evidence establishes that there were deficiencies in the response to Mr Bruce's deteriorating clinical condition following surgery over the night of 20 -21 May. By the time his condition was fully appreciated, he was critically unwell. If a MET call had been activated

earlier, it is quite possible that Mr Bruce may have been returned to theatre sooner and may have experienced a different outcome. This was a missed opportunity to prevent Mr Bruce's death.

RECOMMENDATIONS

57. Pursuant to section 72(2) of the Act, I make the following recommendations:

Recommendation 1:

ERH should undertake improved education, training and awareness of the Hospital's deteriorating patient response with its medical and nursing staff and gather evidence to demonstrate improvement amongst its staff.

Recommendation 2:

ERH should consider implementing a mechanism by which anaesthetic or other critical care trained specialists such as ICU or ED staff are available to provide advice to a junior doctor who attends MET calls overnight.

COMMENTS

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

58. It is concerning that it could not be identified why or when the arterial line was removed. It would be prudent for ERH to further investigate why the arterial line was removed. If an explanation is discovered, ERH should consider any opportunities for improvement arising as a result.

I convey my condolences to Mr Bruce's family for their loss.

Pursuant to section 73(1A) of the Act, I order that this finding be published on the Coroners Court of Victoria website in accordance with the rules.

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

Jennifer Bruce, Senior Next of Kin

Bendigo Health (C/- Lander & Rogers)

Echuca Regional Health (C/- Moray & Agnew Lawyers)

Australian Health Practitioner Regulation Agency

First Constable Thomas Gillahan, Victoria Police, Notifying Member

Signature:

Coroner Catherine Fitzgerald

Date : 15 October 2025

NOTE: Under section 83 of the *Coroners Act 2008* (**the Act**), a person with sufficient interest in an investigation may appeal to the Trial Division of the Supreme Court against the findings of a coroner in respect of a death after an investigation. An appeal must be made within 6 months after the day on which the determination is made, unless the Supreme Court grants leave to appeal out of time under section 86 of the Act.