IN THE CORONERS COURT
OF VICTORIA
AT MELBOURNE

COR 2023 002587

FINDING INTO DEATH WITHOUT INQUEST

Form 38 Rule 63(2)

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

Findings of:	Coroner Simon McGregor
Deceased:	Michael Philip Young
Date of birth:	10 June 1955
Date of death:	15 May 2023
Cause of death:	1a: Complications of pressure ulcers in the setting of a thoracic vertebral fracture and congenital arteriovenous malformation and multiple other medical comorbidities
Place of death:	Monash Medical Centre, 246 Clayton Road, Clayton, Victoria, 3168
Keywords:	Fall, ankylosing spondylitis, chalk-stick fracture, paralysis, sentinel event

INTRODUCTION

1. On 15 May 2023, Michael Philip Young was 67 years old when he died at the Monash Medical Centre following a long inpatient admission. At the time of his death, Michael lived at 25 Voumard Street, Oakleigh South, Victoria, with his wife, Rhonda, and two of their adult children.

2. Michael and Rhonda married in 1982 and together they had three children and two grandsons.[1]

3. Michael had a complex medical background. He was born with a number of congenital conditions including malformation of his feet (club feet), an extensive haemangioma extending over his left leg and torso, associated phlebitis, scoliosis of the spine and short arms.[2]

4. Michael worked as motor mechanic for most of his working life. The physical demands of being a motor mechanic in combination with the phlebitis was having an impact on his health, so in the early 2000s he retired and the reoccurrences of phlebitis reduced significantly.[3]

5. On 5 November 2005, Michael had a fall at home and shattered his right femur. He underwent multiple surgeries but had ongoing non-union of a right distal femoral fracture. He also underwent amputations of a number of toes on each foot.[4]

6. Associated with his haemangioma and surgeries, he had experienced a left leg deep vein thrombosis (**DVT**). He also had ongoing atrial fibrillation, with echocardiograms demonstrating moderately severe left atrial dilatation. Associated with this, Michael had ongoing hypotension and frequently recorded blood pressures of 100/60 or lower, with recordings of 85/60 in the month prior to his final hospital admission. Michael had several hospital admissions for cellulitis associated with his leg haemangioma, as well as osteomyelitis of his feet (related to his club feet and past amputations). Michael was deemed unsuitable for transplantation for technical reasons, including his weight, cardiac status and the technical difficulties of negotiating his extensive haemangioma.[5]

7. In around 2009, Michael was diagnosed with chronic kidney disease which progressed to end-stage kidney disease, and he commenced regular haemodialysis in May 2017. He underwent

[1] Statement of Rhonda Young, Coronial Brief.
[2] Statement of Rhonda Young, Coronial Brief.
[3] Statement of Rhonda Young, Coronial Brief.
[4] Statement of Rhonda Young, Coronial Brief; Statement of Prof Peter Kerr, Coronial Brief.
[5] Statement of Prof Peter Kerr, Coronial Brief.

training to perform self-managed haemodialysis at home and progressed to home haemodialysis in August 2017, routinely undertaking 7-7.5-hour dialysis sessions on alternate days. Michael's other medical issues included bladder outlet obstruction due to a urethral stricture and hypothyroidism and hypogonadism. Michael also had glaucoma in both eyes and 'restless legs'.[6]

8. In his later years, Michael was predominantly wheelchair bound. He retained a baseline ability to transfer from the wheelchair, turn and pivot. The combination of his spinal scoliosis and extended time in a wheelchair meant that Michael had restricted flexibility in his spine. While sitting, he could still bend forward and touch his feet, but he could not lean back or lie flat without pain.[7]

9. Michael adapted to life in a wheelchair and apart from relying on the chair to get around he was independent and did not need assistance with his personal care, cooking, cleaning, hobbies, etc. Three years before his passing he decided he wanted to drive again and had to be trained on hand controls. He achieved this goal and gained his licence in 2022.[8]

10. Michael was social, had many friends, and enjoyed riding his 'wheels of doom', an all-terrain electric wheelchair his friends bought for him. He was re-learning to play the guitar, was good with computers and a skilled woodworker.[9] Michael had many health challenges throughout his life, and he met each with an unflagging desire to recover and move forward. His family remember him as someone who loved life, his family and his friends.[10]

THE CORONIAL INVESTIGATION

11. Michael'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.

12. 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

[6] Statement of Rhonda Young, Coronial Brief; Statement of Prof Peter Kerr, Coronial Brief.
[7] Statement of Rhonda Young, Coronial Brief.
[8] Letter from Rhonda Young to Coroners Court of Victoria dated 22 May 2023.
[9] Ibid.
[10] Ibid.

purpose of a coronial investigation is to establish the facts, not to cast blame or determine criminal or civil liability.

13. 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.

14. Victoria Police assigned an officer to be the Coronial Investigator for the investigation of Michael's death. The Coronial Investigator conducted inquiries on my behalf, including taking statements from witnesses – such as family, the forensic pathologist, treating clinicians and investigating officers – and submitted a coronial brief of evidence.

15. This finding draws on the totality of the coronial investigation into the death of Michael Philip Young including evidence contained in the coronial brief. 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.[11]

16. In considering the issues associated with this finding, I have been mindful of Michael's human rights to dignity and wellbeing, as espoused in the *Charter of Human Rights and Responsibilities Act 2006*, in particular sections 8, 9 and 10.

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

Circumstances in which the death occurred

17. On 2 January 2023, Michael was at home and navigating his wheelchair down a ramp in the back yard, when the front right wheel struck a dog toy, causing the wheelchair to tip over and off the last section of the ramp. Michael fell onto his right side while still mainly positioned in the chair. His fall was captured on home CCTV. Michael can be seen sitting up after the fall and attempting to right himself and manoeuvring out of the wheelchair.[12]

[11] 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.

[12] Statement of Rhonda Young, Coronial Brief; Exhibit 1 – CCTV footage from cameras located at 25 Voumard Street, Oakleigh South, Coronial Brief.

18. The family called an ambulance and Michael was conveyed to the Monash Medical Centre (**MMC**) Emergency Department (**ED**), arriving at approximately 11:21 am. Michael was observed to be hypotensive at the scene, with his blood pressure dropping to 68/51 on arrival at MMC, then 76/48 at triage.[13] Michael's family advised paramedics that his baseline blood pressure 80–100 mmHg systolic. At triage, Michael reported 10/10 right hip and shoulder pain, which was worse on movement.[14]

19. At 12:05 pm, Michael was reviewed by the ED intern while still on the ambulance trolley, and lower limb examination was documented as 'difficulty assessing in AV stretcher, normal sensation in all dermatomes.' There was no additional documentation of lower limb neurological medical assessment during Michael's time in the ED.[15] He was assessed by the ED intern as having paraspinal tenderness over the thoracolumbar spine and painful shoulder movement and plans were made for a computed tomography (**CT**) scan of the lumbosacral spine and x-rays of the right shoulder, hip and knee.[16] The ED consultant in charge assessed Michael after the initial intern assessment but did not complete a full neurological assessment.[17]

20. Rhonda recalled that she was asked to remain in the waiting room while Michael was still on the trolley in the ED corridor. When she was later admitted to the ED room Michael had been allocated, she found he had been taken to have a CT scan, and was again asked to return to the waiting room.

21. At 1:20 pm, a CT of Michael's lumbar spine was attempted but was not successful, as he was unable to lie flat on the CT table due to pain. The plan was changed to an x-ray of the spine, but this too was cancelled due to Michael's ongoing pain and inability to lie flat.[18]

22. Rhonda was again admitted into the ED to support Michael.

23. At 2:27 pm, the ED intern discussed with the renal registrar that Michael was requiring significant amounts of analgesia and would need admission. The renal registrar advised that

[13] Monash Health medical records – SMR, Ambulance Victoria electronic Patient Care Record, 2 January 2023.
[14] Monash Health medical records – EMR, ED Initial Assessment, 2 January 2023; Appendix 1 – Sentinel Event Review Report, Coronial Brief.
[15] Monash Health medical records – EMR, ED Initial Assessment, 2 January 2023; Appendix 1 – Sentinel Event Review Report, Coronial Brief.
[16] Monash Health medical records – EMR, ED Initial Assessment, 2 January 2023; Appendix 1 – Sentinel Event Review Report, Coronial Brief.
[17] Monash Health medical records – EMR, ED Initial Assessment, 2 January 2023; Appendix 1 – Sentinel Event Review Report, Coronial Brief.
[18] Monash Health medical records – EMR, Diagnostic Imaging Orders, 2 January 2023; Appendix 1 – Sentinel Event Review Report, Coronial Brief.

they would not accept the patient until imaging had been completed and it was clear that he did not have an injury requiring a surgical admission.[19]

24. At 2:46 pm, Michael was transferred to a resuscitation cubicle due to his low blood pressure, with a systolic blood pressure (**SBP**) of 68 mmHg. Michael's care was handed over to the resuscitation consultant and senior registrar. Intravenous fluids were not given due to Michael's usual 500ml fluid restriction, which he had already reached for the day prior to the fall that morning. Michael was positioned with his legs elevated above his head, which increased his SBP to 88mmHg. Michael was not tachycardic and appeared well. A plan was made to continue with Michael in that position and monitor his BP, with a plan to re-attempt an x-ray once the hypotension had stabilised.[20] Rhonda spoke with nursing staff about accompanying Michael to obtain the x-ray so that she could assist with positioning, but was advised this was not possible.[21]

25. At about 4:08 pm, x-rays of Michael's right knee, right shoulder and chest were taken and reported to show no fractures and a clear chest.[22]

26. At around 8:00 pm, Rhonda was aware that Michael was going to be admitted and prepared to go home for the evening. Concerned about damage to his right hip, she asked Michael to move both of his legs, which he was able to do. Rhonda said her goodbyes for the evening and left the hospital.[23]

27. At 11:09 pm, the ED nurse documented that Michael had normal power and sensation to his upper limbs and severe weakness to lower limbs (with a flicker of movement), with numbness in left lower limb and decreased sensation in right lower limb.[24] There is no documentation that this finding was a new circumstance or that the finding was escalated to any of the medical teams.

[19] Monash Health medical records – EMR, ED Progress Notes, 2 January 2023; Appendix 1 – Sentinel Event Review Report, Coronial Brief.
[20] Monash Health medical records – EMR, ED Progress Notes, 2 January 2023; Appendix 1 – Sentinel Event Review Report, Coronial Brief.
[21] Statement of Rhonda Young, Coronial Brief.
[22] Monash Health medical records – EMR, Diagnostic Imaging Orders, 2 January 2023; Appendix 1 – Sentinel Event Review Report, Coronial Brief.
[23] Statement of Rhonda Young, Coronial Brief.
[24] Monash Health medical records – EMR, Neuromuscular/Limb Assessment, 2 January 2023; Appendix 1 – Sentinel Event Review Report, Coronial Brief.

28. On Tuesday 3 January 2023 at 1:23 am, Michael was transferred to the ICU for slow low efficiency dialysis and inotropic support.[25] The ED nurse handed over Michael's decreased sensation in the lower limbs and numbness. There were no spinal precautions taken.[26]

29. On arrival to the ICU, Michael was transferred to the ICU bed with a pat slide. Michael reported pins and needles down both legs to his feet, worse on the left side. There was no associated motor or sensory loss and Michael confirmed that the altered sensation was new.[27]

30. The ICU registrar was unable to determine the cause of Michael's hypotension, and a plan was made for an abdominal and pelvis CT and a CT pulmonary artery to rule out pulmonary embolus and traumatic chest injury.[28]

31. At 2:41 am and 4:10 am, Michael was given 1mg of hydromorphone via subcutaneous injection.[29] At 4:45 am and 4:55 am, he was given 40mg of intramuscular ketamine.[30] He was then transported to CT during handover at 7:11 am. A pat slide was used to transfer Michael off the bed and onto the CT table.[31]

32. The ICU junior registrar later recalled that Michael complained of left lower back pain and was unable to lie flat when in the CT. He was administered a further 40mg of ketamine while in CT, which was not documented in the Electronic Medical Record - Medication Administration Record. The registrar reported that Michael's pain improved after the ketamine and that the patient was exhibiting symptoms of dissociation from reality (a side effect of ketamine) in the CT.[32] The patient was reported to have been flattened as much as he could tolerate, with staff stopping further positioning on patient request. Staff reported that halfway through the CT, Michael began screaming in pain.[33]

[25] Monash Health records – EMR, ICU Admission Note, 3 January 2023; Appendix 1 – Sentinel Event Review Report, Coronial Brief.
[26] Appendix 1 – Sentinel Event Review Report, Coronial Brief.
[27] Monash Health medical records - EMR, ICU Admission Note, 3 January 2023; Appendix 1 – Sentinel Event Review Report, Coronial Brief.
[28] Appendix 1 – Sentinel Event Review Report, Coronial Brief.
[29] Monash Health medical records - EMR, Medication Admission Records, 3 January 2023; Appendix 1 – Sentinel Event Review Report, Coronial Brief.
[30] Monash Health records, EMR, Medication Admission Records, Appendix 1 - Sentinel Event Review Report, Coronial Brief.
[31] Appendix 1 - Sentinel Event Review Report, Coronial Brief.
[32] Appendix 1 – Sentinel Event Review Report, Coronial Brief.
[33] Appendix 1 – Sentinel Event Review Report, Coronial Brief.0/5

33. On return to the ICU, at approximately 7:30 am Michael was observed to be sleeping.[34] The nurse reported that when he awoke he was able to move spontaneously but not on command. Michael reported to ICU staff that he had informed the team in CT of his inability to lie flat, and that he heard a crunch/crack in his back on being placed flat on the CT table. He reported that his legs were paralysed and that he lost sensation in his legs from that time.[35]

34. At 7:53 am, the ICU consultant-led ward round documented that Michael was experiencing lower limb decreased sensation, and 0/5 power bilaterally. No further information was documented until 10:45 am, when radiology called ICU to report 'ankylosing spondylitis with complicating acute chalk stick type fracture immediately beneath the T11-12 intervertebral disc, extending across the superior endplate and right transverse process of the T12 vertebra; associated with 18 mm retrolisthesis and resultant severe canal stenosis'.[36]

35. Professor Peter Kerr explained that a chalk-stick fracture occurs when several contiguous segments of the spine are fused, causing the fused column to act as a lever arm. This places greater than normal stress on the spine, and fracture can then occur at the disco-vertebral interface. These fractures can occur following minimal trauma due to the altered biomechanics of the spine, and are more common in ankylosing spondylitis.[37]

36. At 12:38 pm a neurosurgical consultation reviewed the T11/T12 fracture and assessed it as meeting criteria for the American Spinal Cord Injury Association (ASIA) Grade A, the most severe grade, with a complete spinal cord injury with no sensory or motor function being preserved in the sacral segments S4-S5. The neurosurgical recommendation was for conservative management with a brace for comfort as needed,[38] with a consensus after consultation with the Austin Spinal Unit no meaningful neurological recovery could be expected from surgery.[39]

[34] Monash Health medical records - EMR, ICU Admission Note, 3 January 2023; Appendix 1 – Sentinel Event Review Report, Coronial Brief.
[35] Appendix 1 – Sentinel Event Review Report, Coronial Brief.
[36] Monash Health records, EMR, ICU Transfer Summary 22/01/23; Appendix 1 – Sentinel Event Review Report, Coronial Brief
[37] Statement of Prof Peter Kerr, Coronial Brief.
[38] Monash Health records, EMR, ICU Ward Round Note, 3 January 2023; Appendix 1 – Sentinel Event Review Report, Coronial Brief.
[39] Monash Health records, EMR, ICU Ward Round Note, 3 January 2023; Appendix 1 – Sentinel Event Review Report, Coronial Brief.

37. Michael experienced acute distress, sadness and feelings of hopelessness after the incident, and reported flashbacks, feelings of guilt about repercussions for his family, and suicidal thoughts in the days following the incident.[40]

38. After these event, Michael's blood pressure management remained difficult, and he required high doses of noradrenaline. His treating team considered the possibility that this was due to 'spinal shock', though his low blood pressure persisted beyond the timeframe of typical spinal shock, and it was noted that spinal shock is usually only associated with higher spinal lesions.[41]

39. On 4 January 2023, a neurosurgery multi-disciplinary team meeting was held to discuss Michael's care plan. The treating team concluding that surgery was unlikely to be successful, in part because Michael's bone quality was very compromised due to a combination of renal bone disease and osteoporosis. The anaesthetists, at this stage, also raised the issue of ankylosing spondylitis as identified in the x-ray findings. On this day, Michael's noradrenaline requirements were very high (35ug/min) and there appeared to be evidence of a Type II acute myocardial infarction based on a troponin level of 732 ng/I.[42]

40. Over his subsequent ICU admission, until 25 February 2023, Michael required constant blood pressure support, especially during dialysis sessions. His blood pressure readings were almost entirely below 100 systolic and attempts to withdraw blood pressure supporting agents resulted in blood pressure readings as low as 48/39.[43]

41. On 25 February 2023, Michael was discharged to the MMC renal ward. His blood pressure support was converted to oral midodrine, which was only partially effective despite high doses.[44]

42. Over the next two months, Michael suffered ongoing episodes of sepsis, predominantly related to cellulitis in his legs and deep pressure wounds on his left sacrum.[45] Management of his pain remained difficult, and in this setting the option of attempting surgery was again raised.[46]

[40] Monash Health records, EMR, Consultant Liaison Psychiatry Note, 17 January 2023.
[41] Statement of Prof Peter Kerr, Coronial Brief.
[42] Ibid. Normal< 20.
[43] Ibid.
[44] Ibid.
[45] Ibid; E-Medical Deposition of Dr Howard O'Brien, 15 May 2023.
[46] Statement of Prof Peter Kerr, Coronial Brief.

43. A CT scan was performed after considerable pre-planning around positioning and pain relief. This again revealed the chalk-stick fracture and ankylosing spondylitis change. The Neurosurgery team were prepared to offer surgery for stabilisation and pain relief but after some discussion, Michael declined.[47]

44. On 19 April 2023, Michael's dialysis had to be halted due to profound hypotension but was able to be performed on 21 April 2023. Later that day, profound hypotension was again noted and Michael eventually returned to the ICU on 23 April 2023 for blood pressure support.[48]

45. On 23 April 2023, it was discovered that Michael's oral midodrine had been inadvertently ceased three days earlier (as the result of a transcription error on the electronic drug chart). With reintroduction of the midodrine, Michael was able to be discharged back to the ward on 25 April 2023.[49]

46. Michael experienced ongoing issues with hypotension and difficulties dialysing. He developed headaches which seemed to correlate with particularly low blood pressure. His back pain remained a problem, especially with movement and turning. Several family meetings were held to discuss whether further treatment was appropriate. Around 9 May 2023, Michael was also diagnosed with a small pulmonary embolus.[50]

47. On 12 May 2023, Michael decided to stop his dialysis sessions. It was clear that his very low blood pressure would remain extremely problematic, making dialysis in an outpatient or low-care situation impossible. Further, despite the passage of time, he remained in pain from his vertebral injury, especially with attempts at movement.[51]

48. On 15 May 2023, having ceased dialysis, Michael passed away at 9:15 am.[52]

Identity of the deceased

49. On 15 May 2023, Michael Philip Young, born 10 June 1955, was visually identified by his daughter, Phillipa Young.

50. Identity is not in dispute and requires no further investigation.

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[47] Ibid.
[48] Ibid.
[49] Ibid; Letter from Rhonda Young to Coroners Court of Victoria dated 19 May 2023.
[50] Statement of Prof Peter Kerr, Coronial Brief.
[51] Ibid.
[52] Ibid; E-Medical Deposition of Dr Howard O'Brien, 15 May 2023.

Medical cause of death

51. Specialist Forensic Pathologist Dr Victoria Francis from the Victorian Institute of Forensic Medicine conducted an autopsy on 22 May 2023 and provided a written report of her findings dated 12 January 2024.

52. The post-mortem examination revealed multiple severe pressure ulcers over his sacrum, lower limbs and left chest and abdomen. The submitted sections showed no significant cellulitis.

53. Dr Francis noted the large arteriovenous malformation (haemangioma) extending over the left abdominal wall extending onto Michael's back and hip region. Sections of the haemangioma showed thrombi of varying ages and there was no significant soft tissue inflammation within the submitted sections.

54. Michael's kidneys showed changes in keeping with end-stage kidney disease.

55. There was marked kyphoscoliosis of the vertebral column and skeletal changes, with severe lower limb and thoracic oedema.

56. The post-mortem CT scan confirmed a remote T11/12 fracture in keeping with the clinical history.

57. Postmortem microbiology showed Escherichia coli (E. coli) in left abdominal/back skin swab and in the right ankle skin swab. Scanty E. coli and Citrobacter freundii were detected in the left and right lung swabs. The sacral skin swab cultured Morganella morganii and Klebsiella pneumoniae spp. Pneumoniae. Klebsiella pneumoniae spp. pneumoniae was also detected in the right ankle skin swab. Enterococcus faecium was isolated from the blood enrichment culture.

58. Dr Francis provided an opinion that the medical cause of death was 1(a) complications of pressure ulcers in the setting of a thoracic vertebral fracture and congenital arteriovenous malformation and multiple other medical comorbidities.

59. I accept Dr Francis's opinion.

FAMILY CONCERNS

60. In detailed correspondence to the Court dated 19 and 22 May 2023, Michael's wife, Rhonda, raised concerns about many aspects of the medical care Michael received during his last

admission to the Monash Medical Centre. I have summarised those concerns in broad terms as follows:

a) Mismanagement of Michael during the CT scan on the morning of 3 January 2023 after repeated advice from Michael and Rhonda that he was unable to lie flat and had not been able to lie flat for some years, which led to his severe spinal fracture.

b) Subsequent inattentiveness to his need to be regularly and carefully turned for comfort and bathing due to his paralysis, leading to discomfort, pain, and the development of severe pressure sores.[53]

c) Medication errors, including:

   i. administration of pregabalin for pain relief despite a known allergy;

   ii. accidental discontinuation of blood pressure medication, midodrine; and

   iii. repeated incorrect dosing and administration of enoxaparin (clexane) during dialysis.[54]

d) General inattentiveness to Michael's care and comfort requirements, including:

   i. inadequate pick line and wound dressing changes,

   ii. poor communication of Michael's needs at shift handovers;

   iii. long waiting times for nursing staff to assist Michael back into bed after sitting time; and

   iv. insufficient attention to Michael's nutritional needs.

e) Michael's primary carer, Rhonda, being excluded and ignored throughout his admission.

61. Whilst I appreciate the time taken to detail these concerns, the role of the coroner is limited. I am only empowered to examine matters that are proximate and causative, or contributory, to a person's death. Coroners do not investigate aspects of care that have not contributed to a person's death. The limitations on this jurisdiction sometimes lead to the result that concerns

[53] Letter from Rhonda Young to Coroners Court of Victoria dated 19 May 2023.
[54] Ibid.

raised by families are not able to be investigated because they are not sufficiently connected with the cause and circumstances of their loved one's death.

62. Here, the concerns raised by Rhonda as they relate to slow responses to Michael's comfort and repositioning needs over his five-month admission, communication of Michael's care needs between staff at handovers, and ongoing issues with enoxaparin during dialysis fall outside the scope of this investigation, as they are not closely connected with the cause of his passing.

63. I note that the accidental discontinuation of midodrine is acknowledged by Prof. Kerr in his statement. The medical records also indicate that Michael's adverse reaction to pregabalin was recorded on 21 January 2023 and was subsequently administered on 16 March and 29 April 2023. Again, I do not consider that these aspects of Michael's care were causally related to his passing.

64. In these circumstances, there may be other avenues available for the family's concerns to be addressed, such as contacting the health service directly or, if the family is not satisfied with their response, appropriate investigatory bodies such as the Health Complaints Commissioner.

65. A number of the family's other concerns, particularly as they relate to the incident during the CT scan on 3 January 2023, have been acknowledged and addressed by an internal review conducted by Monash Health in the time since Michael's passing.

MONASH HEALTH REVIEW OF CARE

66. Monash Health reported the incident during the CT scan on 3 January 2023 to Safer Care Victoria as a sentinel event[55] due to Michael's development of bilateral lower limb paralysis and sensory loss as a result of the T11-T12 chalk-stick fracture. A sentinel event review was undertaken by the health service and a final report prepared, dated 15 March 2023.[56]

67. The review panel concluded that a failure to provide spinal precautions, combined with poor engagement by staff of Michael and Rhonda into his care planning, contributed to Michael's developing a permanent spinal injury. They identified three critical points and considered

[55] A sentinel event is a particular type of serious incident that is wholly preventable and has caused serious harm to, or the death of, a patient: Australian Commission on Safety and Quality in Health Care, *Australian Sentinel Events List (version 2)* (April 2020).
[56] Appendix 1 – Sentinel Event Review Report, Coronial Brief.

whether a change in care management at any of these points could have altered the trajectory of Michael's last months. They considered the three critical junctures to be:

a) a delay in instituting spinal precautions;

b) a delay in diagnosing the T11/T12 fracture; and

c) contribution to severe spinal cord injury.

Delay in instituting spinal precautions

68. The review panel considered that the mechanism of Michael's original injury was under-appreciated upon his arrival in the ED and that his comorbidities of renal bone disease, kyphoscoliosis and ankylosis were not factored into the risk stratification of his fall. The panel concluded that this was due to clinician inexperience and a knowledge gap in trauma care (root cause #1) and an 'anchoring bias' (root cause #2), as Michael had been brought in without spinal precautions.

69. The panel noted that the ED intern did not undertake a full neurological assessment as it was difficult to complete it while Michael was on the AV stretcher in public view. They also identified that the hospital's trauma alert protocol was not followed, which specifies the patient is to be seen by two doctors and two nurses and that a complete trauma assessment is performed by a senior doctor (root cause #3).

70. The panel identified that the neurological examination was also left incomplete once Michael was in a cubicle despite paraspinal tenderness on palpation and patient report of back pain, due to a shift in focus to his hypotension (requiring vasopressors and ICU referral), resulting in premature diagnostic closure (root cause #4).

71. The panel noted that when nursing neurological observations were completed in the ED at 11:00 pm and in ICU at 2:00 am, Michael's altered lower limb power and sensation was not escalated to medical staff. The panel identified that there was a perception amongst staff that leg weakness was normal for Michael, and that this again demonstrated an anchoring bias (root cause #2) and a failure in communication between the clinical staff, Michael and Rhonda, who could have clarified what was normal for him (root cause #5).

72. The panel also discussed that ED consultant involvement was fragmented, breaking continuity of care and resulting in differing advice with regard to the need for Acute Surgical Unit consultation and imaging. There was involvement of several supervising ED consultants as

Michael was seen by one consultant on arrival, a different consultant when he was moved into a resuscitation cubicle, and then another with shift change, with the panel determining that a failure in handover meant that ASU review was not prioritised (root cause #6).

Delay to diagnosis of T11/T12 fracture

73. The panel identified that the initial delay to acquiring imaging was due to Michael being unable to lie flat on the CT table, with alternative options to obtaining imaging not explored by either ED or ICU staff. The panel also noted that there appeared to be an acceptance by ED clinicians that imaging could not be acquired while Michael was in ED (root cause #7).

74. The Panel heard that during the entirety of Michael's stay in ED, no attempts were made to involve Michael, Rhonda or the Medical Imaging Technologists in finding a solution for the difficulties in acquiring imaging. This was considered a further example of communication failure (root cause #5).

75. The panel considered that there was an additional delay to diagnosis of the T11/T12 fracture when the care focus shifted to the management of Michael's hypotension and on acquiring central venous access to provide safe vasopressor administration and transfer to CT, associated with the underappreciation of Michael's trauma. The Panel determined this to be due premature diagnosis closure (root cause #4) and a failure to perform a complete neurological assessment in both ED and ICU, which was in contradiction with the trauma alert protocol (root cause #3).

Contribution to severe spinal cord injury

76. It was unclear to the review panel at what point Michael's spinal cord injury occurred due to the paucity of documented neurological assessments and incomplete neurological assessments. The panel noted that AV paramedics did not document a comprehensive neurological assessment and it was unclear what the neurological impact of Michael's fall was. The panel noted that Michael was transferred and repositioned numerous times with no spinal precautions in place. It was documented that paramedics considered initially that Michael should be fitted with a cervical collar, but when this was difficult to do, it was abandoned and no other spinal precautions were implemented.

77. The panel noted the report of Michael being able to move up the bed at 2:46 pm on 2 January 2023, and documentation of severe lower limb weakness and new sensory change at 11:00 pm on 2 January and 2:00 am on 3 January 2023. They further acknowledged that Michael was

laid flat on the CT table at 7:11 am on 3 January 2023 and reported paralysis and loss of sensation in his legs from that time.

78. The review panel concluded that lying Michael flat on the CT table contributed to his severe spinal injury. Alternative options for positioning were not explored and his inability to lie flat was interpreted by clinical staff as only being due to his pain rather than appreciating his medical history of renal bone disease, kyphoscoliosis and ankylosis. The panel noted that Michael was administered ketamine at the time of the CT, potentially further impacting his capacity to communicate (due to sedation and a degree of dissociation) (root cause #5) and impaired his ability to effectively protect himself from harmful positioning on the CT table.

79. On the basis of their findings, the review panel made ten recommendations to prevent and reduce the risk of similar events occurring, including:

    1. *Ensure the Trauma Alert protocol is communicated to all ED staff frequently and compliance with protocol monitored*
    2. *Raise awareness and importance of trauma care on admission to ICU (i.e. tertiary assessments), following a fall with consideration to other relevant co-morbidities*
    3. *Optimize the handover process between ED and ICU*
    4. *Promotion of the Disability Liaison service across Emergency Service*
    5. *Improve communication with families and carers by referring the existing recommendation around family escalation of care in the Emergency Department:*

       […] Ensure the organisation wide Family/Carer Concern process is embedded into the ED provision of care.

80. The sentinel event review final report also includes an action plan to timetable the implementation of the recommendations made.

DISCUSSION

81. I note that the sentinel event review proceeds on the basis that Michael's chalk-stick fracture may have been present at the time of his admission to the MMC Emergency Department but was certainly worsened in the course of being positioned for CT scan on 3 January 2023.

82. I have been unable to be satisfied to the *Briginshaw* standard as to the precise timing of the fracture. As established by the sentinel event review panel, a full neurological assessment was not conducted at any time between Michael's fall and the CT incident that confirms the fracture was already present and/or having neurological effects. On the one hand, there is

documented movement in his feet by clinical staff and observed by Michael's wife shortly before the CT. On the other hand, there was also documented lack of strength in Michael's lower limbs, though it is not clear whether this reflected Michael's baseline, and neither Michael nor his wife were asked. Similarly, at the time of his ED assessment, Michael is recorded as complaining of 10/10 right shoulder and hip pain, but he is also recorded as having 'normal sensation in all dermatomes'.

83. I have also considered the CCTV footage evidence that captures Michael's original fall at home, in which he can be seen immediately sitting up and actively readjusting his position and the wheelchair before he is assisted by his family members.

84. The difficulty in determining the exact causal sequence of events in Michael's case is caused by the relative dearth of contemporaneous notes by clinicians who were present at the time of the CT in the early hours of 3 January 2023. This was acknowledged by the review panel, who commented on the 'paucity of documented neurological assessments'.[57] Compounding these difficulties, there is also a marked difference in the account of the incident on 3 January 2023 contained in the sentinel event review report, when compared with Michael's recollection of events.

85. In handwritten notes that Michael dictated to his daughter, he described the following:

> *11:15 – 11:30*
>
> *Come into ED, PM did hand over, legs + moving, feeling.*
>
> *[...]*
>
> *7:AM - CT Took did in, 'you can't lie me flat, I'm happy to try and when I say stop you stop' – started lowing the bed (+ did not pop legs up)*
>
> *Kept lowing the bed, screamed 'stop, stop' and then crack, pain, feet*
>
> *massive rush from my body down to my feet, pins and needles, sheer agony, passed out.*[58]

86. In a review with a community liaison psychiatrist on 10 January 2023, Michael described the incident in similar terms:

> *Reported he informed staff that he cannot lie flat (has scoliosis). Reported he asked staff to allow his wife into the imaging to assist in setting his position up to avoid injuries. Reported his wife wasn't allowed. Reported family consented for sedation to facilitate positioning for scanning. Reported while lying flat, he heard a crack in his back, which was followed by a "massive pain" travelling down his body. Reported that since this incidence, he could no*

[57] Appendix 1 – Sentinel Event Review Report, Coronial Brief.
[58] Exhibit 3 – Handwritten notes taken by Phillipa Young, Coronial Brief.

longer move or feel his lower limbs. Reported that it was the most severe pain he felt in his life, to the point where he believed he was experiencing death.[59]

87. The sentinel event review report describes the incident as follows:

The patient was reported to have been flattened as much as he could tolerate, with staff stopping further positioning on patient request. Staff reported halfway through the CT the patient began screaming in pain, but not describing the pain.[60]

88. Ultimately, I am unable to reach a comfortable level of satisfaction as to the precise chain of events that led to Michael's spinal fracture. I am, however, satisfied that his management during the CT scan in the early hours of 3 January 2023 significantly worsened any existing injury sustained during his fall that morning, and from that point forward, Michael's already complex medical picture was made considerably more complicated by his paralysis and loss of sensation.

89. I accept the evidence of nephrologist Professor Peter Kerr that there were multiple compounding aspects of Michael's clinical picture that led to his passing. Professor Kerr acknowledged that the cause of Michael's ongoing and severe hypotension was unclear:

[Michael's] cardiac status was influenced by atrial fibrillation and left atrial dilatation but left ventricular dysfunction was not severe. […] Although not proven, it was thought that the large haemangioma was acting as a blood pool and shunt, thus dampening the blood pressure. What is clear is that the hypotension preceded this hospital admission. Whether the events in hospital (especially the vertebral fracture and spinal injury) had any impact on the course of his blood pressure responses is also unclear. The inability to support his blood pressure and thus the difficulty in providing haemodialysis was a major contributing factor to his death. This was further contributed to by the acquired paraplegia and the difficulty in achieving adequate pain control.[61]

90. I am ultimately reassured by the findings of the sentinel event review and the concomitant recommendations that Monash Health has recognised and acknowledged significant shortcomings in the care provided to Michael as it related to his experience on the morning of 3 January 2023 while undergoing a CT scan.

[59] Monash Health records, EMR, Consultant Liaison Psychiatry Note, 10 January 2023.
[60] Appendix 1 – Sentinel Event Review Report, Coronial Brief.
[61] Statement of Prof Peter Kerr, Coronial Brief.

CPU REVIEW

91. As a result of receiving the family's concerns, I directed the independent practitioners in the Health and Medical Investigation Team of the Coroners Prevention Unit (CPU)[62] to review Michael's case.

92. The CPU observed that the main findings and lessons learnt arising from the sentinel event review were reasonable and appropriate. They noted particularly that Michael's family were not listened to during his admission and reflected that persons with disabilities should be allowed their carer with them in hospital at all times.

FINDINGS AND CONCLUSION

93. The standard of proof for coronial findings of fact is the civil standard of proof on the balance of probabilities, with the *Briginshaw* gloss or explications.[63] Adverse findings or comments against individuals in their professional capacity, or against institutions, are not to be made with the benefit of hindsight but only on the basis of what was known or should reasonably have been known or done at the time, and only where the evidence supports a finding that they departed materially from the standards of their profession and, in so doing, caused or contributed to the death under investigation.

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

    a) the identity of the deceased was Michael Philip Young, born 10 June 1955;

    b) the death occurred on 15 May 2023 at Monash Medical Centre, 246 Clayton Road, Clayton, Victoria, 3168, from 1(a) complications of pressure ulcers in the setting of a thoracic vertebral fracture and congenital arteriovenous malformation and multiple other medical comorbidities; and

    c) the death occurred in the circumstances described above.

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[62] 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.

[63] *Briginshaw v Briginshaw* (1938) 60 CLR 336 at 362-363: 'The seriousness of an allegation made, the inherent unlikelihood of an occurrence of a given description, or the gravity of the consequences flowing from a particular finding, are considerations which must affect the answer to the question whether the issues had been proved to the reasonable satisfaction of the tribunal. In such matters "reasonable satisfaction" should not be produced by inexact proofs, indefinite testimony, or indirect inferences…'.

95. Having considered all of the evidence, I make the following additional findings:

a) Michael's management during the CT scan in the early hours of 3 January 2023 significantly worsened any existing injury he sustained during his fall that morning.

b) Michael's already complex medical picture was exacerbated by the resulting paralysis and loss of sensation in his legs, which contributed to his deterioration and death.

c) There were repeated failures on the part of Michael's treating team to seek and receive information about Michael's care needs from Michael and his family.

I convey my sincere condolences to Michael's family for their loss, and commend Rhonda Young for her tenacious advocacy on behalf of her husband in extremely difficult circumstances.

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:

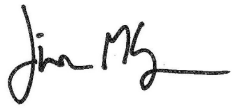
Mrs Rhonda Young, Senior Next of Kin (C/- Katie Murphy, Maurice Blackburn)

Professor Peter Kerr, Monash Health

Mr Peter Ryan, Monash Health

Leading Senior Constable Matthew Anderson, Coronial Investigator

Signature:



Coroner Simon McGregor

Date: 20 May 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.