QUEENSLAND COURTS

CORONERS COURT OF QUEENSLAND

FINDINGS OF INVESTIGATION

CITATION:	**Non-inquest findings into the death of Ms B**
TITLE OF COURT:	Coroners Court
JURISDICTION:	BRISBANE
DATE:	6 March 2026
FILE NO(s):	2024/1664
FINDINGS OF:	Melinda Zerner, Coroner
CATCHWORDS:	CORONERS: Basilar/vertebral artery thrombosis with posterior circulation and infract; Hypoxic-Ischaemic Encephalopathy; Stroke Specialist; Stroke Capable Hospital; Missed Diagnosis; Rural Hospital.

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Introduction

1. Ms B was born on 5 September 1988 and died on 30 March 2024, at the Sunshine Coast University Hospital, Birtinya, Queensland. She was 35 years old.

2. A doctor from the Sunshine Coast Hospital and Health Service reported Ms B's death to the Coroner as a potential healthcare related death within the definition of a reportable death in the *Coroners Act 2003*.

3. The role of a Coroner is to investigate reportable deaths to establish, if possible, the cause of death and how the person died. The purpose of a coronial investigation is to establish the facts, not to cast blame or determine criminal or civil liability. An investigation is about attempting to find the root cause of the incident that precipitated the death and in appropriate circumstances to analyse systemic failures that contributed to the death and to design remedial responses.

4. In making my findings, they are based on proof of relevant facts on the balance of probabilities. I am not able to make adverse findings against, or comments about individuals, unless the evidence provides a comfortable level of satisfaction that they caused or contributed to the death.

Circumstances of the Death

5. On 27 March 2024 at 11:10am, Ms B was brought by Queensland Ambulance Service (QAS) to the Murgon Hospital (a small rural hospital) following a three-day history of witnessed collapses at home, slurred speech, incomplete words, and vomiting.

6. On arrival to the hospital, she complained of head pain and was assessed by a senior medical officer (SMO). Her background history was noted as depression, chronic fatigue syndrome, query PTSD, Type 2 diabetes mellites (not formally diagnosed but random blood glucose level was 19.2 mmol) and expressed an ongoing belief that she had a parasitic infection, for which she used over the counter medication, despite negative tests.

7. Following assessment, to rule out a 'space-occupying lesion' in her brain, Ms B was transferred to a nearby rural hospital, Kingaroy Hospital, for a head CT scan.

8. At about 4:30pm, a formal report of the CT scan confirmed there was no evidence of a space-occupying lesion, oedema, ischaemia or haemorrhage. Ms B's diagnosis was listed as 'Mental Disorder' with the SMO documenting that her symptoms 'may be external manifestation(s) of mental health issues' requiring the need for psychological support and GP follow-up.

9. At 6:00 pm, Ms B was discharged into the care of her family.

10. Ms B's symptoms persisted at home throughout the evening, prompting her family to drive her to the Sunshine Coast University Hospital (SCUH), a large tertiary-level teaching hospital located approximately two hours from her home.

11. On 28 March 2024 at 2:00am, shortly after arriving at the SCUH, Ms B collapsed and went into cardiac arrest. She was resuscitated for 20 minutes.

12. Ms B was diagnosed with a basilar/vertebral artery thrombosis with posterior circulation infarct and subsequent cardiac arrest.

13. On 30 March 2024, Ms B was declared brain dead. Her family opted for organ donation which was performed on 31 March 2024.

Preliminary Independent Medical Opinion

14. An opinion was sought from a Forensic Medicine Physician, Dr Stacy Patterson. Dr Patterson has provided information about Ms B's condition. She states,

> *Artery Dissection occurs when a tear occurs in the inner wall of an artery. This leads to creation of a false lumen which in turn leads to a bulge that causes impairment of blood flow. Vertebral Artery Dissection is a rare cause of stroke but one of the most common causes of stroke in patients under the age of 45. It is often caused by minor trauma but can be spontaneous. Symptoms are often vague. The dissection can lead to stroke and is estimated to be responsible for over 20% of ischaemic strokes in young people. The prognosis for stroke following dissection is better for extracranial vs intracranial dissections. Prognosis is mainly dependent on the severity of the associated ischaemia and quick diagnosis and management, but in general 70-85% of patients with stroke associated with extracranial dissection make a complete or excellent recovery, 10-25%[1]. have major disabling deficits and death occurs in 5-10%[2]. These rates are much lower in those with an intracranial dissection. As per the CT angiogram of Ms B's neck the dissection appears to have occurred at the first segment of the intervertebral artery which is extracranial.*
>
> *Ischaemic symptoms due to dissection of the vertebral artery include severe head and/or neck pain, dizziness, loss of balance, and nystagmus (uncontrolled eye movements).*

15. Dr Patterson is of the view the initial investigations that were performed at the Murgon Hospital were appropriate. Appropriate bloods tests and the CT scan were ordered. She says given the severity of Ms B's symptoms discharge from hospital was not appropriate despite her normal CT head scan. She has advised it is difficult to determine the likely outcome of earlier intervention, balancing the duration of symptoms with the reported normal CT scan. She states,

> *However, it is possible that earlier recognition and intervention were outcome changing especially as later scans showed the stroke to be actively evolving during her admission.*

16. Dr Patterson is not able to comment on whether the initial head CT scan missed the early signs of a stroke as that would require expert review of the imaging. She notes, due to the thickness of the posterior skull, any lesion in this part of the brain can be very difficult to see on a scan.

17. The relevant health service in its response to Dr Patterson's opinion has advised, if Ms B had been admitted to the General Ward at the Murgon Hospital there would have been only two nurses rostered on overnight to care for inpatients and presentations to the Emergency Department. Further, in hindsight, Ms B probably should not have been discharged, however, it would have made no difference to the outcome given the limited facilities for intervention in an acute stroke that is available in rural hospitals.

[1] Cerebral and cervical artery dissection: Treatment and prognosis - UpToDate

18. Dr Patterson completed the Coronial Certificate. She determined the cause of Ms B's death was 'Hypoxic-Ischaemic Encephalopathy, due to cardiorespiratory arrest, due to vertebrobasilar thrombosis, due to vertebral artery dissection'.

Medical Records

19. The QAS paramedics completed detailed notes in the electronic Ambulance Report Form. They are relevant to the hospital assessment:

> ***Presenting Complaint:*** *Pt has been feeling very tired the past 3/7 where she was noted by her mother to have malaise and fatigue – this is considered not normal for her and much worse that when she has been tired in the past, this day she was walking around her room and multiple times her legs had given way causing her to collapse on the carpet in her bed room, after the last fall, her mother provided a bucket for pt where she had been spewing quite a large amount of food and sputum products into this bucket. Apparently from last pm, as pt didn't have breakfast as yet, it was also stated that pt does NOT see doctors and it had been over 2/3 years since her last presentation where she never followed up the results, from various tests regarding to her daily health status.*
>
> ***Hx of Presenting Complaint:*** *Pt presented altered conscious and disoriented initially, nil resp depression, pulse full and regular, normoglycemic, afebrile, PEARL, vomiting and nausea present, nil incontinence noted, Nil diarrhoea, pt with multilateral movements (purposeful – but cognitively poor initially), pt was able to weight bear with lower extremities but had to be strongly assisted this day, severe staggering gait to extricate from residence to the stretcher, on auscultation L=R clear air movement all fields bilaterally, - nil obvious aspirations at this time, pt had nil obvious trauma detected during case, nil obvious rashes present, ECG NSR – pts pupils upon multiple assessments had been equal and reactive –* ***however throughout case there was persistent and unusual retinal movement at time with nil specific patterns – except for direct North West movement to the top specifically to the direction that pt had mentioned several times her head had specific pain to the R perinatal region, and the was providing irritability at times to the pt*** *– then causing unusual movements or spontaneous jerks. Pt speech was unusual and very poor at times, slurred, non-cognisant in speech patterns or forming a sentence, but at times getting a shortD burst out to try and communicate, airway mostly clear after spitting and vomiting throughout case, - pt was persistent with 'rag dog behaviours' at times in the case and during tfr to ED bed, movements became non purposeful as case progressed and more spontaneous for the pt trying to make movement, pt was with good circulation to extremities however still pain and cold upon follow up examinations during case, pt was with soft abdo palpable nil guarding nor other pains noted during examination, there is nil current HX or any urinary tract infections at this time mentioned. (my emphasis)*

20. On Ms B's arrival to the hospital, she was assessed by a medical officer. A clinician noted Ms B had incomprehensible verbal words, that her eyes were deviating upwards but that she was then interacting with staff. She vomited in the ED. Ms B was seen by the Senior Medical Officer. At 11.24am, the doctor records,

> *I note that whilst she sounds muddled in her speech, she occasionally formulates words enough to be understood – she also is aware of her*

environment and averts her gaze toward and stimuli (the person speaking in the room and movement). She moves all four limbs and shows good power. Babinski is going down. Formal neurological exam is difficult in this context, however, deep tendon reflexes are elicited and normal.

21. At 5.49pm, it is noted the CT brain scan shows no cause for the symptoms. Ms B was discharged, the doctor records, 'no evidence of physical reason for these symptoms'; 'I have explained that I think this may be external manifestation of mental health issues and that psychologist is important'; and 'Noted her symptoms are inconsistent. She walked to bathroom on returning from KGH but was unable to walk back'.

Root Cause Analysis

22. The Darling Downs Hospital and Health Service (DDHHS) undertook a Root Cause Analysis into the circumstances concerning Ms B's passing.

23. The review team believed the SMO's lack of a high index of suspicious was not unreasonable given Ms B's presentation and fluctuating neurological symptoms. The family had raised the possibility of a stroke with the SMO. He advised the reviewers the family's concerns about a stroke were acknowledged and taken seriously. However, following the CT head scan and given the variable nature of Ms B's symptoms, it was deemed highly improbable.

24. The neurosurgical and stroke expert (part of the review team) remarked on the diagnostic challenges posed by Ms B's fluctuating symptoms and the subsequent confirmed location of her infarct. The absence of apparent limb weakness may have falsely reassured the SMO regarding the absence of significant CNS pathology, thus leading to an assessment that further deterioration was unlikely. Similarly, the documentation of normal reflexes could provide false reassurance. They state, "Despite these factors reducing clinical suspicious of stroke, it should not have completely eliminated the possibility".

25. The review team acknowledged when attributing physical presentations to mental health conditions, a very high confidence needs to be established regarding the absence of physical findings. The review team believes there was a missed opportunity to undertake a longer observation period or admission to hospital to assist with ongoing monitoring and management of Ms B's condition. This observation period may have led to further examination and investigation for potentially more serious medical conditions however may not have changed the outcome for Ms B.

Stroke Specialist

26. Dr G, the stroke specialist who was involved in Ms B's care at the SCUH was asked to provide his opinion on the care Ms B received prior to her admission. He is of the view that appropriate referral for further investigation and potential earlier intervention at the initial time of presentation may have resulted in a very different outcome for Ms B. He states,

The initial presentation with vertigo associated with other neurological signs (slurred speech and fluctuating level of consciousness) indicated that a peripheral (more benign) cause of vertigo is less likely and that is appropriate to investigate to exclude the much rarer, but clearly potentially catastrophic diagnosis of stroke. Had appropriate consultation with a stroke service occurred initially, systems are set up across Queensland for rapid transfer to 'stroke capable hospitals' where further investigation such as CT angiography

are available. This, rather than transfer for a non-contrast CT scan at Kingaroy would have avoided the long delay to definitive diagnosis which I believe had a major impact on the outcome. CT angiography of the cervical and cerebral vessels soon after onset of symptoms would have identified the diagnosis at a time when reperfusion therapies may have been an option – including intravenous thrombolysis, and possibly endovascular thrombectomy.

27. Dr G reviewed the CT scan and sought input from a neuro-radiologist. While there was a subtle dense basilar artery sign, this sign of basilary artery thrombosis was not definite or sufficiently prominent that it would be expected to be diagnosed on routine CT scanning.

28. Dr G has advised the presence of dysarthria, abnormal eye movements, and fluctuating level of consciousness together with the vertigo were indicators that it was appropriate to consider stroke as a potential diagnosis from the outset.

Response from DDHHS

29. Dr K, an Emergency Medicine Consultant from Kingaroy Hospital has advised on the capability of the Murgon Hospital to arrange a rapid transfer of Ms B to a 'stroke capable hospital' and the timeframes involved in this process and in the transfer itself, in the context of the rural environment.

30. He agrees the most appropriate course of action by the doctor who assessed Ms B at Murgon Hospital would ideally have been to contact a stroke specialist for an opinion in the case.

31. Dr K notes likely transfer times are difficult to predict due to multifactorial issues such as aircraft or road ambulance availability, weather, crew availability etc. He sets out the 'best case scenario' where the process runs efficiently as it reasonably can. He calculated the various assessment times, phone calls, transport time etc. In conclusion he states,

    To get to the stroke specialist, before treatment, in the best-case scenario when the process was at high efficiency would there for be about 6 hours. If everything aligns it may be somewhat faster than this. More often it will have delays within the system at any one of the points above or due to extraneous factors such as weather, aircraft availability, or competing priorities. These delays may range from very minor to many hours.

Expert Opinion

32. I obtained an independent expert opinion from an Emergency Consultant, Dr William Davies. Dr Davies is the Clinical Director of the Emergency Medicine for the Clarence Valley and oversees the clinical governance for Grafton Base and Maclean District Hospitals Emergency Departments. Dr Davies had provided a 17 page report (I have provided a copy of Dr Davies' report to Ms B's family with these findings).

33. Dr Davies provides some background information on the type of stroke Ms B suffered, the assessment and diagnosis of such a stroke, the outcome and prognosis, the impact of delayed diagnosis, and factors contributing to diagnostic delay. I do not repeat this herein.

34. Dr Davies also sets out a detailed chronology which is consistent with the clinical records and the events which are described above.

35. Dr Davies has opined,

a) The assessment of Ms B was not adequate particularly in the circumstances where the comprehensive assessment documented by the paramedics was highly suggestive of a cerebella lesion. He states,

The most common cause would have been a posterior circulation infarct and the most common cause for that in a young person would have been a dissection of a vertebral artery. The Senior Medical Officer did not explore the history or perform a focused examination of the cerebellar neurological system despite many features indicating a posterior circulation lesion being documented in the QAS and nursing assessments including vertical nystagmus (described by the paramedic a "North West gaze"), truncal ataxia, stuttering staccato speech, nausea and headache. These are the most common features of PCS.

b) The diagnosis of posterior circulation stroke must be ruled out before symptoms can be attributed to more benign causes. A high index of suspicion is usually required to identify PCS. In this instance the diagnosis appears to have been clear and should have been identified early.

c) There was sufficient information available to the SMO to have raised the suspicion of a stroke with a stroke service without proceeding to a CT head scan. Competent medical practice would entail contacting a stroke physician for advice on the further assessment and management of patients with suspected stroke. He states,

The QAS and nursing assessments were enough to strongly suggest a PCS without further evaluation by a doctor, but the medical assessment did not focus on this. The medical assessment seems to have focused on mental health, toxicological and behavioural causes. None of these could have produced the spectrum of signs and symptoms documented in the notes.

d) A non-contrast CT brain scan has a very limited role in the diagnosis of PCS and if CT is to be used at all it should include an angiogram to identify the underlying lesion causing the symptoms. In a young person this is often a vertebral artery dissection.

e) Ms B should not have been discharged with severe ongoing symptomatology and no unifying diagnosis. More advanced neuroimaging was indicated. Advice from a neurologist even at this late stage should have been sought.

f) Earlier diagnosis was required, whether that would have changed the outcome that is debateable. He states,

The various parties agree that thrombolysis is not likely to provide benefit outside 4 ½ post symptom treatment window and is likely to cause harm after 6hrs. The closest thrombolysis centre would have been 2 ½ hrs from Murgon. Given that the latest time of symptom onset is likely to have been before 0900hrs on 28th March and Ms B was seen at around 1230hrs, 3 ½ hrs had expired before the earliest possibility of diagnosis, or at least high suspicion.
In his statement Dr K provides a good timeline for a prompt diagnosis and transfer of an acute stroke patient to a stroke centre. Dr K estimates that transfer to Brisbane would result in an arrival time of 1800hrs. That would result

in a delay of 9hours from latest possible symptom onset and thrombolysis, too late for safe use of the therapy.
Had a decision been made to emergently transfer Ms B to Toowoomba, an alternative stroke centre identified by Dr K, by road ambulance the drive would be 2 ½ hours. Assuming an activation time of 1300hrs, 30-minute ambulance pick up target and 2 ½ hrs transit; Ms B could be expected to arrive at Toowoomba (or SCUH) around 1600hrs. Definitive neuroimaging would take an hour. An 8-hour delay from symptom onset is the best that could be expected for provision of thrombolysis. Once again outside acceptable treatment window.
Had Ms B been transferred to RBWH the option of endovascular thrombectomy and reperfusion would have been available. The notes suggest that Ms B's underlying anatomy would have made the intervention challenging and high risk. I am not an interventional neuroradiologist, so am not qualified to comment on the likely outcome but given the extent of the infarcts identified at SCUH I am not convinced the intervention would have been beneficial.
On balance, I believe prompt diagnosis may not have changed the outcome significantly; but it may have spared Ms B's family significant distress.

g) A senior doctor in emergency medicine should be competent and experienced in the assessment of possible PCS. He states,

The assessment of PCS is commonly addressed at education meetings and conferences as the profession has identified that there are delays in the diagnosis. The challenges are outlined in paragraph 6 and include the stuttering symptomatology, heterogenous symptoms and signs and often subtle presentation. This presentation was not subtle and should have been promptly identified. The ACEM curriculum includes the understanding of the causation and pathophysiology of stroke in its curriculum for qualification as an Emergency Physician on page 69 [9]. The term Senior Medical Officer is often used for non-specialist senior doctors working in the emergency department and these doctors may not necessarily have the knowledge and skills associated with a specialist qualification.

36. In conclusion, Dr Davies is clear, there was a failure in the care Ms B was provided at the Murgon Hospital. He states,

Ms B presented with a convincing history, symptoms and signs of a posterior circulation stroke and should have discussed urgently with a stroke physician. The failure to consider the diagnosis was likely to have been due to attribution error on behalf of the SMO as well as an anchoring bias on the previous history of PTSD and delusional parasitosis.
Training and accreditation of senior medical officers is variable. The scope of practice and knowledge base of specialist qualified emergency physicians is better understood and includes an understanding of these high risk, low occurrence diagnoses. It is unclear whether Murgon Hospital applies specialist credentialling to its emergency SMOs and that may be a consideration to avoid future diagnostic failures.
Ms B should have been promptly diagnosed and referred to a specialist stroke service, although I do not believe prompt diagnosis would have changed the outcome significantly due the geographical challenges; but it may have spared Ms B's family significant distress.

Response from the Darling Downs Hospital and Health Service

37. The hospital was a small rural Clinical Services Capability Framework (CSCF) level 2 hospital, this means it caters for low complex inpatients and provides ambulatory care services [according to the CSCF Fact sheet 2 – explanation of service levels, the care is delivered mainly by Registered Nurses and General Practitioners with admitting rights to the hospital, they manage emergency care until transfer to a higher-level service]

38. The health service has confirmed the SMO was a general practitioner. He was a locum doctor. His last placement with the health service was from 17 June 2024 to 7 July 2024.

39. The credentialling for the SMO was undertaken and approved at a July 2022 meeting. The Scope of Clinical Practice approved was 'Specialist General Practitioner: Care of health service inpatients; Emergency care; Outpatient care/Primary care'.

40. Training was to be undertaken locally at the hospital in which the locum is based by another SMO.

41. The SMO had worked at the health service between 2018 to 2024.

42. All relieving medical officers received the same standard 'Junior Medical Officer' orientation, which is done verbally at each site. This was confirmed by the overseeing Medical Superintendent.

43. The SMO had no supervision requirements during his time working at the Murgon Hospital as he was a registered specialist general practitioner.

The SMO

44. Attempts have been made to contact the SMO to provide him with an opportunity to respond to Dr Davies's report.

45. An email has been received wherein the SMO has advised he is working in a remote location overseas. He has not responded to follow up emails requesting that he respond to the report of Dr Davies. Given the SMO is now residing overseas I have no jurisdiction to pursue this further.

46. According to the Ahpra website, the doctor remains registered to practice in Australia.

Cause of Death

47. An autopsy was not necessary to determine Ms B's cause of death.

48. Dr Patterson completed the Coronial Certification, the probable cause of death is recorded as 'Hypoxic-ischaemic encephalopathy, due to Cardiorespiratory arrest, due to Vertobasillar thrombosis, due to vertebral artery dissection'.

Conclusion

49. After considering the material obtained during the coronial investigation, I consider I have sufficient information to make the necessary findings required by s 45(2) *Coroners Act 2003* in relation to Ms B's death.

50. Ms B presented to the Murgon Hospital with signs and symptoms which were or should have been suspicious of a stroke. The thorough documentation by the QAS paramedic suggested Ms B was experiencing several concerning signs. This was corroborated by the documentation by the nursing staff. The combination of this information, along with an examination of Ms B should have been sufficient to have put the SMO on high alert that there was a physiological cause for Ms B's signs and symptoms. It does not appear the doctor was considering all the potential differential diagnoses given the unusual presentation. I accept the opinion of Dr Patterson as to the cause of Ms B's death.

51. It was inappropriate for Ms B to have been discharged from the Murgon Hospital, but I acknowledge had she have stayed under observation, it may not have altered the outcome, as time for urgent intervention was critical and would have expired.

52. It is not clear to me what information was provided to the SMO as part of his orientation or at any other time regarding the ability to consult with a stroke specialist to discuss Ms B's symptoms. In any event, the SMO did not identify Ms B's signs and symptoms as potentially life threatening. Noting Dr Davies is an ED physician and the SMO, a GP, it may have been that the SMO did not have the necessary knowledge and experience to discern, what to an ED physician, would be reasonably classic signs of the stroke. I accept there was some fluctuation in Ms B's condition during her presentation, and that this type of diagnosis is frequently missed and/or delayed by the untrained ED physician. This said, it was inappropriate for Ms B to have been discharged from the hospital.

53. I accept the evidence of Dr Davies that even if Ms B had been diagnosed in a timely manner, given the timeframe for transfer to an appropriate stroke capable hospital, sadly it is unlikely to have made any difference to the outcome for Ms B.

54. According to the Qld Health CSCF, the Murgon Hospital was not required to be staffed by an ED physician (specialist in emergency medicine). Its staffing requirements were to a GP level. I acknowledge the difficulty in staffing small regional hospitals and towns, with some hospitals not having any medical officer from time to time. This issue of staffing and clinical capability is beyond the scope of my investigation and is a matter for Qld Health more broadly.

55. As I did not receive a response from the SMO and he remains registered in Australia, a copy of my findings will be provided to OHO as it may be that this doctor requires further education should he want to again practice in Australia.

56. An inquest will not be held in relation to Ms B's death because the investigation has revealed sufficient information to enable me to make findings about Ms B's death. Further, I do not consider there are any issues which would warrant the use of the judicial forensic process. I have though requested Ms B's family agree to publish these findings on the Coroners Court of Queensland website so that other clinicians may learn from the misdiagnosis which occurred in Ms B's case.

57. A copy of my findings will also be provided to Clinical Excellence Queensland with the aim that this case be used as an example for junior doctors regarding the importance of early diagnosis of stroke in young patients.

58. I extend my condolences to Ms B's family and friends for their loss. This is a tragic outcome for you all. To lose someone so young and in such traumatic circumstances is very difficult. I recognise that no words can adequately address the depth of your sorrow, or the profound impact Ms B's loss has had on you all.

Findings required by s.45

Identity of the deceased – Ms B

How she died – 1(a) Hypoxic-Ischaemic Encephalopathy
1(b) Cardiorespiratory arrest
1(c) Vertobasillar thrombosis
1(d) Vertebrae artery dissection

Place of death – Sunshine Coast University Hospital BIRTINYA QLD 4575 AUSTRALIA

Date of death– 30/03/2024

I close the investigations.

Melinda Zerner
Coroner
CORONERS COURT OF QUEENSLAND - BRISBANE OFFICE
6 March 2026