IN THE CORONERS COURT
OF VICTORIA
AT MELBOURNE

Court Reference: COR 2011 / 0192

FINDING INTO DEATH WITH INQUEST

(Amended pursuant to section 76 Coroners Act 2008 on 30 January 2014)

Form 37 Rule 60(1)
Section 67 of the ***Coroners Act 2008***

Inquest into the Death of: KERRI GUNN

Delivered On:	30 January 2014
Delivered At:	Coroners Court of Victoria, 222 Exhibition Street, Melbourne
Hearing Dates:	14 February, 20, 21, 22 May and 24 July 2013
Findings of:	HEATHER SPOONER, CORONER
Representation:	Mr Halley of Counsel for the Family Mr Cash of Counsel for Dr Singh Mr Constable of Counsel for Cabrini Hospital
Police Coronial Support Unit	Senior Constable Tracey Ramsey

I, HEATHER SPOONER, Coroner having investigated the death of KERRI GUNN

AND having held an inquest in relation to this death on 14 February, 20, 21, 22 May and 24 July 2013

at Coroners Court of Victoria, 222 Exhibition Street, Melbourne

find that the identity of the deceased was KERRI LOUISE GUNN

born on 18 November 1969

and the death occurred on 9 December 2010

at Cabrini Hospital, 183 Wattletree Road, Malvern 3144

from:

1 (a) INTRACEREBRAL HAEMORRHAGE

1 (b) POSTERIOR REVERSIBLE ENCEPHALOPATHY SYNDROME (PRES)

in the following circumstances:

1. Mrs Gunn was aged 41 when she died. She was married to Mr Gideon Gunn and they lived together with their three young children in East Malvern. Mrs Gunn had only recently given birth to their third child and she had no known relevant medical history.

2. The death of Mrs Gunn was reported to the coroner by the Registrar of Births Deaths and Marriages. As it transpired, a Cabrini Hospital doctor had in fact contacted the Initial Investigations Office at the Coroners Court (now known as Coronial Admissions and Enquiries, CAE) and was advised the death was not reportable[1].

3. As no post mortem examination was performed, I convened a meeting at the Victorian Institute of Forensic Medicine (VIFM) where the medical records and the cause of death were reviewed by a clinician and pathologist.

Brief Summary of Events Leading to Death

4. On 24 November 2010 at Freemasons Hospital Mrs Gunn gave birth to her third child by a planned caesarean section performed by obstetrician Dr Len Kliman under a spinal anaesthetic. Five days following the birth Mrs Gunn and her baby were discharged home.

5. On Thursday 2 December 2010, Mrs Gunn saw her General Practitioner (GP) with a 36-hour history of a frontal headache.[2] The GP subsequently contacted her obstetrician Dr Kliman who

[1] refer Memedovski -case no 5807/09 for discussion about the reporting of deaths to the Coroner

[2] A frontal headache occurs at the front of the head.

agreed to the suggestion that the GP refer Mrs Gunn to the Cabrini Hospital Emergency Department.

6. Later that same day, Mrs Gunn presented to Cabrini Emergency Department (ED) where her blood pressure was elevated at 180/85.

7. Mrs Gunn was also experiencing lower leg oedema. A test of her urine found proteinuria[3], and a blood test showed an abnormal liver function.

8. Following the ED assessment performed by emergency physician Dr McKenzie, another general physician Dr Ravinder Singh was consulted. Given the frontal headache symptoms, a Computerised Tomography (CT) of the brain was performed later that night.

9. Written in the clinical information section on the CT request form was a *"? saggital sinus thrombosis[4]"* or Cerebral Venous Thrombosis (CVT). The CT scan was reported as normal and the written CT report stated there were no features of this condition but suggested an MRI would be required to definitely rule out CVT.

10. Due to the abnormal liver function, an upper abdominal ultrasound was booked for the following day. Mrs Gunn was admitted to the ward at Cabrini Hospital. Her symptoms were effectively treated by the administration of intravenous fluids and simple analgesia. Dr McKenzie advised Dr Singh that he had discussed Mrs Gunn's presenting symptoms with obstetrician Dr Kliman, who believed the current presentation was unrelated to Mrs Gunn's recent pregnancy and birth.

11. On Friday 3 December 2010, Dr Singh reviewed Mrs Gunn in the ward and felt she was improving. Over 3 and 4 December 2010, Mrs Gunn's symptoms fluctuated but her headache was generally mild. Overall, she felt she was improving and there was a discussion about day leave.

12. On Sunday 5 December 2010, late afternoon and following Mrs Gunn's return to Cabrini Hospital from a relatively brief walk outside and a visit to the cafeteria with her family, she collapsed on the ward with an associated altered conscious state and right sided neurological

---

[3] Protein in the urine.

[4] Saggital sinus thrombosis or a Cerebral Venous Thrombosis (CVT) is the presence of thrombosis (a blood clot) in the dural venous sinuses, which drain blood from the brain. Symptoms may include headache, abnormal vision, any of the symptoms of stroke such as weakness of the face and limbs on one side of the body, and seizures. The diagnosis is usually by computed tomography (CT/CAT scan) or magnetic resonance imaging (MRI) employing radio contrast to demonstrate obstruction of the venous sinuses by thrombus.

deficit. Mrs Gunn was admitted to Cabrini Hospital's Intensive Care Unit (ICU) and respiratory support was provided by ventilation.

13. A CT scan showed *'massive acute intracerebral haemorrhage'* occupying most of the left frontal lobe. There was also a small amount of intraventricular and subarachnoid blood. The imaging report suggested the possible causes of the haemorrhage were haemorrhagic transformation of an ischaemic stroke or haemorrhage from recent dural venous sinus thrombosis.

14. On 6 December 2010 Mrs Gunn was seen by a neurologist who initially believed the most likely diagnosis was haemorrhagic transformation of cerebral infarction complicating cerebral venous thrombosis. Later on the same day, another entry by the same doctor noted the possibility Mrs Gunn had Posterior Reversible Encephalopathy Syndrome (PRES).[5]

15. On 7 December 2010, Mrs Gunn underwent a craniectomy[6] and insertion of an intracranial pressure monitor. The intracranial pressures (ICP)[7] remained high at 22-34mmHg while aiming for <20mmHg. The high ICP was apparent despite attempts to lower ICP including the craniectomy, respiratory ventilation and treatment by dehydration.

16. On 8 December 2010, Mrs Gunn's intracranial pressures were increasing, rising from 30mmHg and then later in day her ICP was recorded to be 77-100mmHg. A repeat CT of the brain showed Mrs Gunn had suffered a complete infarction[8] of the left cerebral hemisphere of her brain.

17. On 9 December 2010 a four-vessel angiogram[9] that was performed showed Mrs Gunn had no intracerebral blood flow. This was confirmation of brain death. Mrs Gunn was extubated from the ventilator and death confirmed 30 minutes later.

---

[5] PRES is a syndrome characterised by headache, confusion, seizures and visual loss. It may occur due to a number of causes, predominantly malignant hypertension, eclampsia and some medical treatments. On magnetic resonance imaging (MRI) of the brain, areas of oedema (swelling) are seen. The symptoms tend to resolve after a period of time, with treatment although visual changes sometimes remain. However, long lasting or permanent neurological dysfunction may remain. Uncommonly death may occur from progressive brain swelling or cerebral haemorrhage.

[6] A craniectomy is a neurosurgical procedure in which part of the skull is removed to allow a swelling brain room to expand without being squeezed.

[7] Intracranial pressure (ICP), is the pressure inside the skull and thus in the brain tissue and cerebrospinal fluid (CSF). The normal range of ICP is 7–15 mm Hg.

[8] Cerebral tissue death or necrosis.

[9] An angiogram is an X-ray test that uses fluoroscopy to take pictures of the blood flow within an artery.

18. On 15 February 2011 a clinical team from Cabrini Hospital reviewed Mrs Gunn's clinical course and CT imaging. The review team commented that in retrospect the initial CT scan performed on 2 December 2010 showed a small subarachnoid haemorrhage, albeit subtle.

Family Correspondence and Discussion about their Concerns

19. Once the family were contacted by the Court and aware that Mrs Gunn's death was being investigated, they sent correspondence setting out their concerns which mainly related to the assessment and management of Mrs Gunn prior to her collapse. They were understandably devastated that a previously well mother should die so unexpectedly. Some of their concerns are summarised as follows:

Cabrini Hospital Physician

20. Mr Gunn's concerns focussed on the management by the physician, Dr Singh in Cabrini Hospital prior to Mrs Gunn's subsequent collapse.

21. Mr Gunn expressed concern that there was no specific treatment given for Mrs Gunn's headache, only simple analgesia and that Dr Singh did not communicate with him or her obstetrician Dr Kliman. He was also concerned there was no diagnosis made and that Mrs Gunn did not have a history of headaches or migraines.

22. Mrs Gunn's brother-in-law Dr Barry Gunn, who is an emergency physician, expressed concern that a Cabrini Hospital clinical review on 15 February 2011 focussed on the CT imaging and the possibility a subtle subarachnoid haemorrhage was not identified in the original December 2010 imaging report. He commented that although the haemorrhage was so subtle most practitioners would have missed it, he believed it was an error, however during the inquest the family conceded that it could have been missed.

23. Dr Gunn expressed concern that Mrs Gunn had the symptoms of a severe headache, episodes of hypertension, abnormal liver function tests, proteinuria and oedema when previously she was well and had never suffered from headaches or any other abnormalities during the recent pregnancy.

The Obstetrician

24. Mrs Gunn's GP phoned her obstetrician Dr Kliman, to inform him of her admission to Cabrini Hospital Emergency Department. Dr Gunn was concerned that Dr Kliman did not follow up with Mrs Gunn and let her be assessed by the Cabrini Hospital Emergency Department when he had only discharged Mrs Gunn from his obstetric care two days earlier.

25. Dr Gunn believed the health issues faced by his sister-in-law were pregnancy related and that Dr Kliman, as an obstetrician should be aware of these conditions. In addition, he would have contacts with obstetric colleagues who would possess specialist knowledge to assist in determining a diagnosis. Not only did Dr Gunn believe Mrs Gunn should have been admitted under Dr Kliman's obstetric care, but a referral be made by him to a consultant neurologist or obstetric physician.

26. Dr Gunn was concerned at the misinformation provided by Cabrini Hospital to Dr Kliman regarding Mrs Gunn's admission status. When Dr Kliman telephoned the Emergency Department to enquire about Mrs Gunn, he was incorrectly informed of a plan to discharge Mrs Gunn home. Dr Kliman was unaware of Mrs Gunn's admission to hospital until after her brain haemorrhage on Sunday 5 December 2010.

Discussion about concerns

27. In order to gather additional information, I directed that a statement be obtained from the treating physician Dr Singh. In that statement, Dr Singh explained the type of analgesia prescribed was according to Mrs Gunn's intention to continue breast-feeding. Consequently, aspirin and paracetamol were the only analgesics administered to Mrs Gunn.

28. In his letter, Mrs Gunn's husband appeared to believe the administration of different medication might have altered Mrs Gunn's outcome. However, given the only medicines administered were analgesics, stronger analgesic medication would not have altered the outcome. Dr Singh stated he believed Mr Gunn was aware of the clinical management plan.

29. In relation to the diagnosis of Mrs Gunn's headache, Dr Singh stated that he initially considered Sagittal Sinus Thrombosis or Cerebral Venous Thrombosis (CVT). He believed that the low-pressure headache experienced by Mrs Gunn could be from a cerebral spinal fluid leak subsequent to spinal anaesthetic, resulting in a tension headache.

30. It appeared from his statement, Dr Singh considered other causes of the headache, but possibly did not completely exclude these considerations, as Mrs Gunn reported she was improving and wanted to go home. The CT scan report said that there were no signs of venous sinus thrombosis, but the CT scan did not completely exclude this consideration. Dr Singh stated at the time of his clinical assessment of Mrs Gunn on Saturday 4 December 2010, he noted her headache had been worse overnight but now was 1/10 on a Likert pain scale[10] and

[10] A Likert pain scale rates the degree of pain, with 0 indicating no pain and 10 indicating worst pain possible.

she was feeling much better. They had discussed her discharge from hospital, but she had indicated she wanted to stay in hospital over the weekend for respite.

31. There was no further consultation by Dr Singh with Dr Kliman. This was possibly because he was told Dr Kliman had been contacted and believed the symptoms were unrelated to pregnancy.

32. It appeared Dr Singh was reassured by Mrs Gunn's initial improvement, which may not have been unreasonable. However, as the family noted, Mrs Gunn did not have a history of headaches and this, along with the headache occurring immediately in the post partum period, in combination with elevated blood pressure and proteinuria, could have led Dr Singh to consider 'non benign' causes of Mrs Gunn's headache.

Expert Opinions

33. Given the retrospective concern regarding the adequacy of both the clinical and imaging assessments I directed the Coroners Prevention Unit (CPU)[11] to obtain expert clinical opinions from a neurosurgeon and a physician to assist in answering the question as to whether Mrs Gunn's headache was adequately investigated in the context of her apparently improving condition.

34. Expert opinions were sought from physician Dr Greenberg and neurosurgeon Mr Fabinyi who both agreed at that stage of the investigation that CVT was the most likely cause of death and not PRES.

35. Dr Greenberg provided a lengthy evidenced based opinion. The conclusions offered were, the medical management was adequate with respect to non-specific matters but he believed the cause of the headache was not completely clarified and that further investigation via a Magnetic Resonance Imaging (MRI) or a lumbar puncture was probably warranted.

36. Although Dr Greenberg noted the decision to not pursue further imaging and that this decision might have been influenced by the improvement in Mrs Gunn's symptoms, he believed ideally a MRI should have been performed. He also believed a neurology consultation and further involvement of the obstetrician were warranted. However, Dr Greenberg stated, further investigation and diagnosis of what he presumed to have been

[11] The Coroners Prevention Unit is a specialist service for coroners created to strengthen their prevention role and provide them with professional assistance on issues pertaining to public heath and safety.

Cerebral Venous Thrombosis, may not have altered the outcome. The efficacy of managing CVT by anticoagulation is only based on expert consensus. That is, there is an absence of evidence, with the suggested anticoagulation management based upon opinion. As he noted, anticoagulation carries a risk of cerebral bleeding. Given Mrs Gunn progressed to having a cerebral bleed, in her situation, anticoagulation would have been considered an inappropriate treatment. Therefore, Dr Greenberg concluded a diagnosis of CVT might not have altered Mrs Gunn's outcome.

37. The neurosurgeon Mr Fabinyi provided a slightly different opinion. He agreed the most likely cause of death was CVT and given the lack of neurological signs and Mrs Gunn's improvement in combination with the apparently normal CT brain scan, he concluded appropriate investigations were performed.

38. Mrs Gunn's sudden deterioration was unexpected, and once the cerebral bleed occurred, there was no opportunity for surgical intervention. Mr Fabinyi acknowledged the February 2011 revised initial CT scan report, and believed if this subtle abnormality, which was retrospectively reported in February 2011, was originally reported in December 2010 it might have led to further imaging such as a brain MRI or a CT scan with contrast. The further imaging may have detected a small CVT, but it was then debatable whether this would have been treated given Mrs Gunn was only experiencing mild symptoms. Mr Fabinyi commented further, stating it is debatable whether a contrast brain scan should have been performed at the initial presentation in December 2010. Given the December 2010 CT scan was believed to be normal, there was no clear indication for contrast imaging.

39. Both experts agreed, in the absence of an autopsy, the likely cause of death was from a CVT. Dr Greenberg believed a MRI scan or CT scan of the brain with contrast was warranted, however both experts agreed the outcome for Mrs Gunn was not likely to have changed with a CVT diagnosis, although improved outcome was a theoretical possibility.

Issues

40. At the Directions Hearing on 14 February 2013 several issues were highlighted including the following:

- the cause of death,
- what the original CT scan of 2 December 2010 revealed,
- whether an opinion should have been sought from a neurologist,
- whether the obstetrician should have remained involved and

- whether the outcome for Mrs Gunn might have been any different[12]

Medical Investigation Report

41. On 19 February 2013 I directed my Coroner's Assistant[13] to obtain a medical review of the death of Mrs Gunn from Associate Professor David Ranson, Deputy Director Victorian Institute of Forensic Medicine. He provided a report dated 20 February 2013 which included the following comments and formulation of cause of death:

> *The 'immediate cause of death' of Kerri Gunn appears to be revealed in the materials and, given that no autopsy was performed, is arrived at from a combination of the terminal clinical presentation and progression as well as the radiological investigations undertaken at that time.*
>
> *The 'immediate cause of death' appears to me to be "a left frontal intracerebral haemorrhage".*
>
> *Perhaps the most important aspect of the cause of Kerri's death is the nature of the 'underlying cause of death' and the identification of this is more problematic. This is because on the available clinical and radiological information several possibilities arise and there is no clear way of unequivocally distinguishing between some of them or unequivocally excluding some of the possibilities. While an autopsy with specialist neuropathological examination may have assisted in sorting out some of the differential diagnoses it may not have resolved/distinguished all of the possibilities.*
>
> *In this, it is also important to consider whether the underlying process that lead to the local subarachnoid or cortical haemorrhage noted, retrospectively in the review of the original CT scan, was the same process that caused the major frontal intracerebral haemorrhage.*
>
> *Cerebral venous thrombosis and posterior reversible encephalopathy syndrome (PRES) have been proposed by some of the other medical experts as the 'underlying cause of death' and there is a variable of degree of evidence for these.*

---

[12] Dirs.Transcript. p.16

[13] In Victoria specialist members from the Police Coroners Support Unit of Victoria Police assist coroners in the investigation of reportable deaths and fires.

In addition some of the clinicians have raised other possible processes for which confirmatory/corroborative evidence is less available and indeed there are other underlying processes that could also lead to haemorrhage. These underlying processes include; vasculitis, coagulopathies, trauma, aneurysms or vascular malformations, effects of hypertension, local infections and sepsis. In the absence of an autopsy exclusion of some of these possibilities would be problematic.

The assessment, further clinical investigation issues and subsequent appropriate management of the local subarachnoid or cortical haemorrhage is a clinical medical/neurosurgical matter which I am not qualified to comment on. However, I note that these issues are addressed at several places in the brief of evidence. (For example the issue is addressed on page 21 of the brief in the last page (opinion paragraph) of the statement of Gavin Fabinyi the neurosurgeon.)

On the basis of information available to me at this time, I believe a reasonable 'immediate cause of death' statement could be constructed as:

CAUSE OF DEATH

1 (a) LEFT FRONTAL INTRACEREBRAL HAEMORRHAGE

The nature of the 'underlying cause of death' remains uncertain and as a result I have not commented further on it despite its importance for the evaluation of the diagnostic process and management issues that might arise in relation to this death. I do note however that the entity of cerebral venous thrombosis is mentioned in several of the medical statements as a possible underlying process.

Inquest

42. It became apparent from the medical evidence at inquest that Mrs Gunn died from an intracerebral haemorrhage secondary to PRES. In order to determine this cause of death, I relied upon the evidence of Dr Churchyard, and the Victorian Institute of Forensic Medicine experts Dr O'Donnell and Associate Professor Ranson. Dr Churchyard was the Cabrini Hospital neurologist who managed Mrs Gunn following her collapse and intracranial haemorrhage on 5 December 2010. In addition and somewhat ironically, on 2 December 2010 he was in fact the on call neurologist when Mrs Gunn presented to Cabrini Hospital Emergency Department (ED).

43. Dr Churchyard stated in a letter to the treating physician Dr Singh, "*I have never seen a case of PRES like this before. It really was the most extraordinary situation and in retrospect I doubt if any of us could have prevented it and, therefore, her death.*" Although Dr Churchyard recanted this in evidence to the inquest, it did reflect the rarity of Mrs Gunn's presentation. In evidence, Dr Churchyard also commented that PRES was very difficult to clinically diagnose and he would not expect it to be a diagnosis *"on Dr Singh's radar."*

44. The evidence of Dr McKenzie, the treating ED doctor, revealed that Mrs Gunn presented to Cabrini Hospital ED with 36 hours of frontal headache, elevated blood pressure, abnormal liver function tests and protein in her urine. In this setting, Dr McKenzie did not believe Mrs Gunn had a primary neurological problem and therefore did not refer to a neurologist.

45. According to the evidence, Dr McKenzie became aware of the brother-in-law Dr Gunn's concerns regarding the possibility of pre-eclampsia[14] or another post-partum problem. Dr McKenzie communicated these concerns to Dr Singh, although conceded that his own knowledge regarding post partum pre-eclampsia was limited. Dr McKenzie did consider Dr Gunn's request for referral to a specialist in post-obstetric care, but there was no such specialist at Cabrini Hospital and Dr Singh apparently had expertise in pre-eclampsia.

46. Dr Singh was clear in his belief that Mrs Gunn was not experiencing pre-eclampsia. This was consistent with the opinion provided by the obstetric expert Dr Bernadette White. Dr Singh suggested a CT scan of the brain, and this was performed later in the evening. Dr Singh also suggested the administration of the anti-hypertensive medication Nifedipine for elevated blood pressure. Dr McKenzie offered Nifedipine to Mrs Gunn who, not unreasonably, wanted to wait to the morning to see if her blood pressure would settle spontaneously.

47. Neither Dr McKenzie nor Dr Singh thought there was an indication for an MRI on the night of Mrs Gunn's presentation to the Cabrini Hospital ED. However, Dr Churchyard, the neurologist who managed Mrs Gunn after her subsequent collapse on 5 December 2010, stated that he would have organised an MRI that night.

48. The neurosurgeon expert Dr Fabinyi, in his evidence, disagreed that the diagnosis of PRES was clear and indicated that it was not possible to judge whether an MRI prior to the collapse would have been abnormal.

---

[14] Pre-eclampsia is a serious condition of pregnancy characterised by high blood pressure, protein in the urine and swelling of the hands, feet and face.

49. Dr Fabinyi stated:[15]

> *There was evidence of wide ranging changes in the blood flow to the brain, and which could represent reduced perfusion which is part of PRES syndrome. Nevertheless, one cannot extrapolate backwards and say this was pre-existing before the haemorrhage, because we do not have a scan to show that, and we do not have the symptoms to go with it. Mrs Gunn was apparently well right up to her very sudden deterioration. In other words she wasn't walking around with gross changes in the cerebral cortex and feeling just unwell but still able to walk around and walk outside the ward.*

50. Dr Churchyard believed he would have ordered an MRI and more likely than not the MRI would have shown some brain oedema. This would have led him to commence oral antihypertensive medication which he believed would cause vasodilation in the brain and reverse the PRES condition.[16]

51. However, Dr Churchyard conceded[17], *"..this is a condition for which there is no trial proven best practice"* and that the treatment is based on a theoretical rationale and anecdotal experience. Despite this lack of supporting evidence, Dr Churchyard still suggested that the PRES condition would have reversed with the administration of oral antihypertensive medication. During cross-examination, he conceded[18] that there was a substantial possibility that the outcome for Mrs Gunn could not have been prevented and that there was a potentially very high risk of haemorrhage[19] and that earlier recognition might not have led to an improved outcome[20].

52. It was conceded, that in retrospect, there was a subtle abnormality on the initial CT scan of the brain performed on 2 December 2010 that was not reported in the CT scan result.

53. The main question was whether an MRI should have been requested in the days following Mrs Gunn's admission to the Cabrini Hospital ward. There were conflicting opinions about

---

[15] Page 184 Inquest transcript

[16] Line 6 page 26 and line 1 page 36

[17] Line 12 page 27

[18] Line 10 page 39

[19] Line 26 page 39

[20] Line 30 page 39

whether an MRI was required; with the majority of the evidence supporting an MRI scan of the brain was required, especially by the physician expert Dr Greenberg.

54. Dr Singh became aware during the course of the day on Friday 3 December 2010 that a CT scan of the brain was performed without contrast. However, Dr Singh's evidence does reflect that Mrs Gunn reported, in general, an improvement in her symptoms. In retrospect, it was simple to suggest that an MRI was definitely indicated. The neurosurgeon Mr Fabinyi's evidence supported the contention that there was no clear indication for an MRI.

Conclusions

55. On balance and despite the degree of contention within the evidence before me, I find that PRES was probably the underlying cause of Mrs Gunn's death. This was clearly a very difficult diagnosis for clinicians to make according to the evidence at inquest.

56. My concern was always that here I had a previously well woman who had presented with unusual symptoms a short time after giving birth and being discharged from Freemasons Hospital. Although it was unfortunate that her obstetrician was unclear about her admission status I was not satisfied that her initial management or treatment would have been much different had he somehow remained involved.

57. Mrs Gunn had presented at the Cabrini ED with a range of presenting symptoms (including 36 hour frontal headache, elevated blood pressure, abnormal liver function tests, protein in urine, lower leg oedema) and I could not criticise Dr McKenzie's management nor his choice of referring Mrs Gunn to a general physician rather than a neurologist. There were some relatively minor concerns around some aspects of his evidence including an acceptance that the wording in his statement was wrong. Dr Greenberg also highlighted the issue of an eye examination which generated a lot of interest and discussion, however any perceived failure by Dr McKenzie regarding the performance of such an examination was somewhat ameliorated by the subsequent evidence of Dr Singh to the effect that he performed it the following morning and found nothing untoward.

58. The management by Dr McKenzie in ED was closely scrutinised at inquest. Clearly he was concerned about the elevated blood pressure and there was a lot of evidence throughout about that. Although Dr Singh had suggested commencing therapy for the elevated blood pressure, I concluded that it was not unreasonable to at least initially accept the wishes of Mrs Gunn not to start anti-hypertensive therapy given her desire to continue breastfeeding

and particularly with the CT being reported as normal, everyone may have been entitled to feel reassured.

59. It was submitted that I should accept the evidence of Dr Churchyard, the Cabrini neurologist that not only should an MRI have been ordered in the Emergency Department but that with appropriate anti hypertensive therapy the PRES could have been reversed and the outcome could have been very different for Mrs Gunn. However I was not convinced or as confident about all of Dr Churchyard's assertions and could not conclude that an MRI was definitely indicated or that it would have necessarily disclosed oedema when Mrs Gunn first presented to Dr McKenzie at Cabrini ED. Dr Churchyard was not an ED physician and it seemed to me that he came to the whole management issue from an entirely different perspective. There were also opposing opinions proffered about the merits of immediately ordering anti-hypertensive therapy but overall I preferred the evidence of Dr Greenberg who would not have rushed into it and may not have felt it was indicated at all during Mrs Gunn's admission.

60. Dr Singh was entitled to decide his management, as was submitted, on a 'whole of patient' approach and that was reasonable, but his evidence about Mrs Gunn's improvement in blood pressure and headache was not altogether consistent with the nursing notes. Although Dr Singh felt that it was he who was in the best position to judge Mrs Gunn's level of pain through direct questioning, I was surprised that he might not also have referred to her pain scores in the nursing notes. If he had, then he might also have become aware of her complaint of *'blurred vision'*. Also, there was some significant evidence about his observations and conversations with Mrs Gunn that were not altogether reflected in either his notes or statement. I would have thought a patient was entitled to think that they should not have to repetitively keep regurgitating their symptoms to several different clinicians in the first 12 hours of a hospital admission and that those various clinicians might gather what they could from various available sources of information, including any notes, to try and collect a complete picture of what was going on with a patient.

61. When Dr Singh viewed the CT report and discovered around midday on Friday 3 December 2010 that the CT scan was performed without contrast as he had expected, further radiology should probably have been ordered. Otherwise, I could not be critical of his inability to diagnose PRES up to that point in time given the extreme rarity of the condition.

62. There were some differences in the evidence about the accessibility and availability of an MRI at Cabrini however I am satisfied that one could have been preformed if clinically required but that it was not unreasonable to order a CT in the first instance.

63. The original CT did reveal a subtle bleed that was missed however the family conceded that it was so small as to be difficult to see.

64. Whilst acknowledging how easy it is to be wise in hindsight, ultimately I concluded that further radiology should have been ordered and that an MRI was probably indicated in the days after Mrs Gunn's presentation to the Cabrini ED. Unfortunately, what that might have revealed and whether it could have changed the final dreadful outcome for this much loved wife and mother can now never be known.

Finding

Having regard to all the material and evidence, I find that Mrs Gunn died from an intracerebral haemorrhage caused by an extremely rare and initially undiagnosed underlying condition known as PRES.

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

The Family of Kerri Gunn

Interested Parties

Signature:

HEATHER SPOONER
CORONER
Date: 30 January 2014