IN THE CORONERS COURT
OF VICTORIA
AT MELBOURNE

Court Reference: 2008/3598

FINDING INTO DEATH WITH INQUEST[1]

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

Inquest into the Death of: SHARGA AMOS TAITE

Delivered On:	17 October 2014
Delivered At:	Coroners Court of Victoria 65 Kavanagh Street Southbank VIC 3006
Hearing Dates:	2 – 4 April 2012 and 26 July 2012
Findings of:	AUDREY JAMIESON, CORONER
Appearances:	Mr Trevor Monti of Counsel with Mr Richard Morrow of Counsel - Stringer Clark Lawyers on behalf Mrs Anne Lichtwark and Mr Gage Taite Mr Neil Clelland SC with Ms Carmen Currie of Counsel – Justicia Lawyers on behalf of Midfield Meat International Pty Ltd Mr Michael Croucher SC with Mr Trevor Wraight of Counsel – on behalf of WorkSafe (as it then was)[2]
Counsel Assisting the Coroner	Leading Senior Constable Amanda Maybury

[1] This finding does not purport to refer to all aspects of the evidence obtained in the course of the investigation. The material relied upon included statements and documents tendered in evidence together with the transcript of proceedings and submissions of legal counsel. The absence of reference to any particular aspect of the evidence, either obtained through a witness or tendered in evidence does not infer that it has not been considered.

[2] WorkSafe is now known as the Victorian WorkCover Authority.

I, AUDREY JAMIESON, Coroner having investigated the death of SHARGA AMOS TAITE

AND having held an Inquest in relation to this death on 2 – 4 April 2012 and 26 July 2012

at the Coroners Court of Victoria at Melbourne

find that the identity of the deceased was SHARGA AMOS TAITE

born on 10 September 1990

and the death occurred on 16 August 2008

at The Alfred Hospital, Commercial Road, Prahran, 3181

from:

1 (a) SUBARACHNOID HAEMORRHAGE

1 (b) PENETRATING LEFT ORBITAL INJURY WITH A LONG KNIFE

in the following circumstances:

BACKGROUND

1. Mr Sharga Amos Taite[3] was born on 10 September 1990 to parents Mrs Anne Lichtwark and Mr Gage Taite. His medical history included asthma.

2. Sharga's parents separated in 1996 and he lived with his mother in Hawkesdale, where he attended secondary school until the age of 14. Sharga then went to live with his father in Simpson and completed a further six months of secondary school before seeking employment as a butcher's apprentice in Timboon. He commenced as a butcher's apprentice in mid 2006, training under the supervision of an experienced butcher and was externally assessed by South West TAFE.

3. In March 2008, Sharga left this position and returned to live with his mother, stepfather Mr Brian Lichtwark, and sister Tamara in Port Fairy.[4] Prior to this, he spent three months living with friends in Simpson, where according to his stepfather; he commenced smoking cannabis and drinking alcohol to excess.

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[3] The Taite family requested that Sharga Amos Taite be referred to as Sharga during the course of the Inquest. For consistency, I have, in most part, avoided formality and also referred to him only as Sharga throughout the Finding.

[4] Sharga had three stepsisters - Natasha, Tania and Kristy.

4. Sharga's stepbrother Mr Daniel Urry lived in Warrnambool. Sharga would stay with Daniel every second weekend and it appears that they smoked cannabis together.

5. In April 2008, Sharga secured a position at Midfield Meat International Pty Ltd (**Midfield**), located at the coroner of Scott Street and McMeekin Road, Warrnambool. He began working as a trimmer in the "180 beef boning room" under the supervision of Mr John Malseed. His duties included trimming meat from 25kg pieces using a six-inch sharp boning knife at one of eight stainless steel slicing tables located in the room. The boner's job is to separate the meat from the bone into blades, silverside and so on. The various cuts are then dropped onto one of the eight stainless steel tables by the boner where it is hooked by the trimmer and dragged to their workstation. The trimmer uses a stainless steel hook to drag the meat, and then trims the meat into sizes for packaging.[5] According to Midfield, due to Sharga's previous experience, he was considered competent in meat trimming.

SURROUNDING CIRCUMSTANCES

6. Sharga commenced work on 15 August 2008 at approximately 6.40am. He was working at Table 5 in the 180 beef boning room[6] with trimmer Ms Megan Sutherland working opposite, packer Ms Gail Ricks beside him and packer Ms Glenda Sheehan beside Ms Sutherland. Boner Mr George Atkinson was standing on the boning platform. They were processing bull's quarters on this particular morning and Mr John Malseed was supervising the operation.

7. At approximately 9.30am, Ms Sutherland observed Sharga's knife slide across the table from Sharga's direction. No one witnessed Sharga's activities prior to this.[7] Ms Sutherland looked up and observed Sharga grab his left eye. Co-workers heard him call out an expletive, and observed blood around his left eye area.[8] He was then observed walking a short distance before collapsing.

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[5] Transcript (**T**), page 16.

[6] T204.25.

[7] T62.

[8] Statement Megan Sutherland dated 21 August 2008, Coronial Brief page 36, statement of Glenda Sheen dated 20 August 2008, Coronial Brief page 45.

8. Emergency Services were contacted at 9.41am and line supervisor Mr Wayne Malseed and first aid officer Mr Jason Shaw commenced resuscitation. Paramedics attended at 9.56am[9] and encountered difficulties accessing Sharga due to the room setup.

9. It appears that Sharga suffered a cardiac arrest at the scene and was transported via ambulance to Warrnambool Hospital and was asystolic upon arrival. Resuscitation commenced and cardiac output returned following the administration of one dose of adrenalin. A subsequent computerised tomography (**CT**) scan of the brain (**CTB**) with CT angiography showed a large amount of acute blood in the subarachnoid space (a subarachnoid haemorrhage (**SAH**)), above and below the tentorium with the most prominent collection lying in the suprasellar and prepontine cisterns. It also showed a large amount of haemorrhage into the left orbit, consistent with a vascular injury. There was no evidence of intracranial aneurysm or arteriovenous (**AV**) malformation.

10. Sharga was transported to the Alfred Hospital where a repeat CTB showed progression of the SAH and cerebral oedema with tonsillar herniation. The injury was considered non-survivable and following discussions with Sharga's family, a decision was made to withdraw active treatment. Sharga died at 3.01am on 16 August 2008. He was 17 years of age at the time of his death.

INVESTIGATIONS

Identity of the deceased

11. The identity of Sharga Amos Taite was without dispute and required no additional investigation.

Forensic Pathology

12. Dr Melissa Baker, Forensic Pathologist at the Victorian Institute of Forensic Medicine (**VIFM**), conducted a post mortem examination upon the body of Sharga on 18 August 2008. Anatomical findings included a stab wound inferior to the left eye, pulmonary oedema, small bilateral pleural effusions and a basal SAH. No cerebral aneurysms were identified. No evidence of natural disease or injuries that may have caused or contributed to Sharga's death was identified. Sections from the left carotid siphon and adjacent soft tissue showed acute inflammatory cells.

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[9] Exhibit 2.

13. Dr Baker observed extensive SAH, with the blood predominantly located basally in the posterior fossa. Dr Baker noted that unfortunately, it is not possible to determine with certainty whether the SAH was a natural disease process (for example, occurred due to a ruptured saccular aneurysm), or occurred secondary to the penetrating eye injury. No aneurysm was identified and similarly, no penetrating bony injury was identified to indicate the knife entered the cranial cavity. Dr Baker noted however that a foramen within the orbit may have been penetrated by a thin pointed knife tip.

14. Dr Baker highlighted that Sharga had a family history of cerebral aneurysms with his maternal aunt undergoing surgery on two occasions in this respect.[10]

15. Dr Baker commented that the pattern of diffuse SAH is that of a ruptured arterial vessel in the subarachnoid space. Although no aneurysm or AV malformation was identified, Dr Baker opined that this is the most likely etiology. Dr Baker opined that the diffuse pattern is not that of haemorrhage related to the penetration of the knife.

16. The ante-mortem CTBs dated 15 August 2008 (10.30am and 12.25pm) were reviewed by Consultant Radiologist Dr Christopher O'Donnell of the VIFM. Dr O'Donnell provided a report dated 4 September 2008. He noted the location of the extensive SAH suggested that it occurred in the posterior fossa, but noted that this cannot be said with any certainty. No cause for the SAH was identified (for example aneurysm, vascular malformation or intra-cranial vascular injury). Evidence of a penetrating left orbital injury was observed with displacement and distortion of the left globe however, no obvious disruption to the left globe by a penetrating injury was noted. No specific evidence of a penetrating injury into the cranial cavity was observed and no signs of vascular disruption at the back of the left orbit were observed, in particular in the region of the cavernous sinus or internal carotid artery. The ophthalmic artery and superior ophthalmic vein were identified within the left orbit and were normal. Dr O'Donnell was unable to determine based on radiological evidence whether the SAH was a spontaneous event or resulted from the penetrating injury

[10] Report of Professor Jeffrey Rosenfeld dated 17 January 2012; Coronial Brief page 133a (at page 133d) notes this family history but dismisses it as irrelevant on the basis that no aneurysm was identified on ante or post mortem radiological studies. Similarly, the report of Professor Catriona McLean dated 23 February 2012; Coronial Brief page 133e (at page 133f) dismisses the relevance of Sharga's aunt's history on the basis that she is not a first-degree relative.

to the left globe.[11] Dr O'Donnell commented that in 5-10% of cases of spontaneous SAH, no cause is radiologically identified.

17. Associate Professor Penny McKelvie, Consultant Neuropathologist, performed an examination on the brain and in a report dated 8 September 2008, noted evidence of a "severe anoxic injury (cardiac arrest)". Associate Professor McKelvie opined that the diffuse pattern of the SAH was consistent with a ruptured saccular aneurysm and was not related to penetrating trauma from the knife.

18. Associate Professor McKelvie observed that although the diffuse SAH was consistent with a ruptured saccular aneurysm, no aneurysm, vascular malformation or vascular anomaly was identified. Associate Professor McKelvie said the left orbital haemorrhage and left lateral subconjunctival haemorrhage related to the penetrating orbital injury but there was no evidence of penetration of the globe. She further commented that patchy intraretinal and macular haemorrhage and subarachnoid and subdural haemorrhage around the optic nerve related to the cerebral SAH.

19. Associate Professor McKelvie noted that in 8-27% of cases of diffuse SAH other than perimesencephalic, no aneurysm is identified at post-mortem. This may relate to the destruction of the aneurysm by the bleed.

20. Associate Professor McKelvie provided a supplementary report dated 21 October 2010 noting that the history of a collapse *after* clutching the left eye and the results of the ante mortem CTB and CT angiogram were not available to her at the time of her neuropathological exam. Associate Professor McKelvie opined that the circumstances now known, the ante mortem imaging and the post mortem findings would all be consistent with a diffuse SAH and left orbital haemorrhage related to a penetrating left orbital injury with a long knife.

21. At the time of the post mortem examination performed by Dr Baker, information was relayed to Senior Forensic Pathologist, Associate Professor David Ranson of the VIFM by a WorkSafe Inspector indicating that prior to collapsing, Sharga was observed to be moving 5kg pieces of meat using a knife, that is, placing the knife into the meat and

[11] In a supplementary report dated 21 October 2010, Dr O'Donnell replaced the word "globe" with "orbit" by way of correction.

moving the meat from right to left in front of his body.[12] Dr Baker opined that based on this information, it was conceivable that the knife may have slipped out of the meat and with continued momentum, penetrated the eye region, causing the SAH.

22. Toxicological analysis of an ante mortem blood sample revealed the presence of delta9tetrahydrocannibinol (**THC**), a metabolite of marijuana, at a concentration of 6ng/mL, which Dr Baker noted was a concentration consistent with recent use. Dr Baker also explained that recent use of marijuana may lead to reduced cognitive and psychomotor functions. No alcohol was detected.

23. Dr Baker explained that Sharga's death was discussed with a number of Forensic Pathologists and the resulting opinions remained divided.

24. Dr Baker ascribed the cause of Sharga's death to 1a) subarachnoid haemorrhage.

Coronial brief

25. A coronial brief was prepared by Coroner's Investigator Detective Leading Senior Constable (**DLSC**) Martin Neagle. The Coroner's Investigator was satisfied from examination of the scene and discussions with witnesses that the stab wound identified on post mortem was self-inflicted and did not involve a third party.

26. Statements were obtained from Sharga's mother, stepfather, stepbrother Daniel Urry, various co-workers, General Practitioner Dr Andrew Cook, South West Health Care (**SWHC**) Medical Officer Dr Qalo Sukabula, SWHC Senior Hospital Medical Officer Dr Kim Ann Ung, SWHC Consultant Physician Dr Barry Morphett, Alfred Health Emergency Physician Dr Mark Santamaria, and WorkSafe Inspectors Mr Alistair Allan, Mr Damian Sierakowski and Mr Anthony Byrne.

27. Police attended the scene of the incident, and it was noted that whilst Midfield Occupational Health and Safety Manager Mr Barry Crimmin attempted to preserve the scene, it was not necessarily found as it was when the incident occurred.[13] Specifically,

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[12] I note however that there were no eyewitnesses that observed such an event. I further note that this evidence was not comprehensively tested at Inquest and I therefore do not necessarily attribute weight to this aspect of the evidence. It is stated only by way of background to the Forensic Pathology opinion provided at the time. I also note Associate Professor Ranson's oral evidence at T159.11-30, where he conceded that this report of the possible circumstances may have been merely the reporter's hypothesis rather than something that was observed.

[13] T63.

DLSC Neagle observed that Sharga's knives had been placed back in their scabbard by the time the Police attended and therefore the precise knife involved was not identifiable.[14]

28. Dr Cook's statement dated 15 September 2008 explained that to his knowledge, Sharga had never complained of headaches or symptoms of a cerebral aneurysm, and accordingly had not undergone relevant investigations such as CTBs. Sharga's mother confirmed that he did not have a history of headaches.

29. Daniel Urry's statement dated 22 August 2011 denied that Sharga smoked marijuana on the morning of 15 August 2008 but conceded the two smoked marijuana together the previous evening at approximately 8.30pm.

Further information

30. In July 2010, I requested that further statements be obtained from:

a. Alfred Health, specifically from the Neurosurgeon and Intensivist who saw Sharga in the Emergency Department (**ED**);

b. the Paramedics who attended Midfield and transported Sharga to Warrnambool Hospital; and

c. the Paramedics who transported Sharga to the Alfred Hospital.

31. On 9 July 2010, Mrs Lichtwark and Mr Tate also requested that the matter be referred to the Director of Public Prosecutions for consideration pursuant to section 131(3) of the *Occupational Health and Safety Act 2004* (Vic).[15]

32. Solicitors acting on behalf of Sharga's family obtained two Neurosurgical reports and provided them to the Coroners Court of Victoria (**the Court**) on 27 May 2010 – Neurosurgeons Mr Peter Dohrmann provided a report dated 7 February 2010 and Mr Craig Timms provided a report dated 10 May 2010. On 19 October 2010, Dr O'Donnell, Dr Baker and Associate Professor McKelvie were provided with these two reports and asked whether they would like to provide supplementary reports in response.

33. Dr O'Donnell commented that although both reports indicate that the most likely cause of the SAH is a penetrating left orbit injury, as there was no intra-cranial vascular injury

[14] T51.

[15] I note that WorkSafe and Victoria Police have both concluded that no prosecution against Midfield should take place.

identified at post mortem examination (and similarly no evidence of a spontaneous SAH), he is still unable to determine the cause of the SAH based on the ante mortem CTBs.

34. Solicitors acting on behalf of Midfield requested Dr Byron Collins, Consultant Forensic Pathologist to provide a report regarding the circumstances and cause of Sharga's death. Dr Collins strongly concurred with Associate Professor McKelvie's comments in her report dated 8 September 2008 that the pattern of diffuse SAH is that of a ruptured arterial vessel in the subarachnoid space and the diffuse pattern is not that of a haemorrhage related to penetrating trauma from the knife.

35. Solicitors acting on behalf of Sharga's family obtained further reports from Neurosurgeon Professor Jeffrey Rosenfeld and Anatomical Pathologist Professor Catriona McLean. All of the expert reports formed part of the finalised Coronial Brief.[16]

36. In September 2011, I requested that the Secretary of the Department of Human Services (DHS) and the Office of the Child Safety Commissioner provide information relevant to their services' involvement with Sharga.

37. The DHS informed me that they had minimal involvement with Sharga during his life. They had some minor involvement in 1994, and the matters were quickly closed. They again had some minor involvement when Sharga was 16 and this matter was also closed. The DHS had no current involvement with Sharga at the time of his death. Sharga was never the subject of a protection application to the Children's Court.

Directions Hearings

38. Prior to the commencement of the inquest, four Directions Hearings (**DH**) were held.

39. The first DH was conducted in Warrnambool on 29 January 2010 by Judicial Registrar Mr R O'Keefe.[17] At this DH, Sharga's family expressed dissatisfaction with the evidence then before the Court regarding the cause of Sharga's SAH being natural, and advised the Court that they were obtaining expert medical reports to the contrary. It was also suggested at that stage that evidence was available that suggested Sharga was using his knife to drag meat towards him when he was injured, and that this warranted further

[16] Also included in the Coronial Brief was an expert report from Professor Olaf Drummer, Forensic Pathologist and Toxicologist.

[17] At the stage, being a regional matter, Magistrate Klestadt had conduct of this investigation.

investigation by the Coroner before findings as to cause of death were made.[18] Midfield did not appear nor make submissions at this DH. As a result of the request by Sharga's family for further enquiry, the matter was transferred to Melbourne and ultimately to my conduct in July 2010.

40. Further DHs were held on 14 September 2011, 12 December 2011 and 22 March 2012.

41. I determined to hold a discretionary inquest at the 14 September 2011 DH.[19]

JURISDICTION

42. At the time of Sharga's death, the *Coroners Act 1985* (Vic) (Old Act) applied. From 1 November 2009, the *Coroners Act (2008)* (Vic) (the Act) has applied to the finalisation of investigations into deaths that occurred prior to its introduction.[20]

43. The role of the coronial system in Victoria involves the independent investigation of deaths to determine the cause of death, to contribute to the reduction of the number of preventable deaths and for the promotion of public health and safety and the administration of justice.

44. Section 67 of the Coroners Act sets out the statutory role of the Coroner in that a Coroner must find, if possible, the identity of the deceased, the cause of death and, in some cases, the circumstances in which the death occurred.

45. A Coroner may comment on any matter connected with the death and may also report to the Attorney-General and may make recommendations to any Minister, public statutory authority or entity, on any matter connected with the death, including recommendations relating to public health and safety or the administration of justice.[21]

INQUEST

46. An inquest was held on 2 – 4 April 2012 and 26 July 2012.

***Viva Voce* evidence at Inquest**

47. *Viva voce* evidence was obtained from the following witnesses at the Inquest:

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[18] Transcript of Directions Hearing, 29 January 2010, T1.20-T3.4.

[19] Transcript of Directions Hearing. 14 September 2011, T2.1. Section 52(1) of the *Coroners Act 2008* (Vic) states: A coroner may hold an Inquest into any death that the coroner is investigating.

[20] Ibid, section 119 and Schedule 1.

[21] Ibid, section 72(1) and (2).

a. Mr Anthony O'Sullivan, Ambulance Paramedic;

b. Coroner's Investigator Detective Leading Senior Constable Martin Neagle;

c. Professor Olaf Drummer, Head of Forensic Scientific Services, VIFM; and

d. Concurrent evidence[22] was obtained from:

   i. Dr Richard Byron Collins, Consultant Forensic Pathologist;

   ii. Associate Professor David Ranson, Forensic Pathologist and Deputy Director of the VIFM;

   iii. Professor Jeffrey Rosenfeld; Neurosurgeon, Head of Department of Surgery in the Central Clinical School, Monash University and Director of Neurosurgery Department, the Alfred Hospital;

   iv. Dr Christopher O'Donnell; Consultant Radiologist at the VIFM; and

   v. Professor Catriona McLean, Head of the Department of Anatomical Pathology, the Alfred Hospital.

Issues explored at Inquest

48. The issues I originally intended to examine at Inquest included:

   a. the medical cause of death by virtue of hearing from a panel of experts providing concurrent evidence;

   b. the effect (if any) the presence of THC in Sharga's blood had on his capacity to safely carry out his employment duties; and

   c. the circumstances of Sharga's death by virtue of looking at

      i. Midfield work practices, policies and procedures;

      ii. Midfield's provision of training and supervision to Sharga; and

      iii. evidence from co-workers.

49. At the conclusion of the concurrent evidence, however, an application was made on behalf of Sharga's family to conclude the Inquest without further evidence being called.[23]

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[22] Concurrent evidence is when a number of expert witnesses are called to give evidence at the same time. In this case, five experts were all provided with the Inquest brief and a number of questions. They met prior to the Inquest to discuss the issues and were then sworn in and asked for their responses to the question to determine if there was a possibility to establish a consensus on any of the questions.

THC

50. Sharga's stepfather, Mr Brian Lichtwark's statement explained that Sharga had been a heavy cannabis user but Mr Lichtwark and Daniel Urry observed that Sharga had reduced his consumption in the months prior to his death.[24]

51. Daniel confirmed that sometime at or around 8:30pm on the night before the incident, he and Sharga had smoked cannabis.[25] There was no analysis of the actual amount of cannabis Sharga smoked that night or its THC content.[26]

52. Professor Drummer was asked to comment on the significance of the ante mortem THC concentration identified and to provide an opinion regarding the possible effects (if any) this substance could have had on Sharga's ability to safely carry out his work duties.

53. Professor Drummer noted studies that have found that THC can affect decision-making capacity under pressure,[27] critical tracking ability[28] and the ability to make informed decisions quickly and properly.[29] Professor Drummer also commented that THC can affect a user's ability to do two things simultaneously.[30]

54. Professor Drummer was asked to comment on the concentration of THC identified in Sharga's ante mortem blood sample (6ng/mL). Professor Drummer referred to a reported study,[31] which found that serum THC concentrations between 2ng/mL and 5ng/mL established a lower and upper range of THC limit for defining general performance impairment above which drivers are at risk.[32] Professor Drummer acknowledged this to be an authoritative report,[33] however he was not able to provide an indication regarding the

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[23] T200-201, 204, 307-209 & 215-219. Please see paragraph 106 below for further information.

[24] Statement of Brian Lichtwark dated 30 January 2009, Coronial Brief page 23, at 24; statement of Daniel Urry dated 22 August 2011, Coronial Brief page 30a; T 88.31-89.4.

[25] T89.4.

[26] T89.6.

[27] T94.19.

[28] T93.21.

[29] T95.2.

[30] T95.7.

[31] Report "Cognition and Motor Control as a Function of THC Concentration in Serum and Oral Fluid limits of impairment" J G Ramaekers, M R Moeller, P van Ruitenbeek et al; T 87.29.

[32] T90.19, 99.1.

[33] T90.23.

degree of impairment (if any) that Sharga had at the time he sustained the injury.[34] Professor Drummer also noted that it is reasonable to assume that "Sharga had some tolerance to cannabis, so therefore the actual psychometric effects are a bit less clear....that is likely that he probably had some decrement in performance ... [B]ut whether that was sufficient to somehow impair his ability to do his job, which is much more difficult to define, I don't know".[35]

55. Professor Drummer commented that the fact that there was no appreciable impairment observable by co-workers does not conclusively mean that Sharga did not experience a level of impairment.[36]

56. Professor Drummer conceded that the 6ng/mL of THC detected was initially surprisingly high after 12 hours,[37] however he opined that it is possible that Sharga last used cannabis at approximately 8:00pm the prior evening in the context of this concentration considering he was a long-term user,[38] and that due to Sharga's reported long-term and regular cannabis use, the 6ng/mL detected could simply reflect a baseline concentration.[39]

57. Professor Rosenfeld could not identify reports of cerebral aneurysms being associated with marijuana use, however noted that chronic smoking is an aggravating factor for intracranial aneurysm development[40] and stated that there is an association between marijuana use and spontaneous SAH.[41] Associate Professor Ranson pointed out however that in someone of Sharga's age, one would not expect to see that degree of vascular degeneration from smoking.[42] Professor Rosenfeld agreed.[43]

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[34] T100.15.

[35] T101.2.

[36] T101.21.

[37] T107.18.

[38] T108.2.

[39] T102.1.

[40] T136.1

[41] T136.23.

[42] T137.3.

[43] T137.10.

Concurrent evidence

58. The following questions were put to the experts in the course of the concurrent evidence:

Is it possible that the carotid artery was lacerated to some small degree – that is less than one millimetre – and that a significant pulsatile haemorrhage occurred but at post mortem was difficult to identify?

59. There was consensus amongst the experts that the answer to this was in the affirmative.[44]

Is it possible that the evidence of a possible knife wound was destroyed when the carotid artery was transected in the removal of Sharga's brain at post mortem?

60. Associate Professor Ranson responded that this is possible, as the level at which the arteries have to be separated during the post mortem process in order to remove the brain, is a target region for possible traumatic injury to the vessel from a knife passing though the orbit and into the cranial cavity.[45]

61. Dr Collins said that although an area of trauma to the vessels (including the ophthalmic artery and smaller branches from the carotid artery) would not have to have been identified at autopsy, he considered it possible that a bleeding point could have been identified, and noted that locating a bleeding point would have been a live issue at autopsy.[46]

62. Professor Rosenfeld stated that it cannot be confirmed whether the Forensic Pathologist actively sought an examination of the relevant anatomical region.[47] Professor Rosenfeld agreed that the knife wound in the carotid artery could have been at the point of transection at post mortem.[48]

If Sharga suffered a spontaneous rupture of an intracranial aneurysm, would or could the clinical presentation be that of him screaming or acutely wounding his face by the knife he was holding and/or the above being associated with sudden collapse?

63. Professor Rosenfeld noted that in his experience, spontaneous SAH does not lead to a scream, rather it normally leads to a severe sudden headache in those who can later

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[44] T115.4-9.

[45] T115.14.

[46] T116.2.

[47] T116.18.

[48] T116.18-26.

describe it,[49] and people experiencing this will often clutch their head in shock and horror, but they do not usually scream.[50] Professor Rosenfeld stated that spontaneous SAHs tend to occur fairly suddenly.[51]

64. Professor Rosenfeld said that people suffering from a spontaneous SAH do collapse, with varying time periods from seconds to minutes, and sometimes longer. He noted that it is possible for the collapse to occur within seconds.[52] The other members of the expert panel agreed,[53] and described such an event as a "massive SAH".[54]

Are the figures stated by Associate Professor McKelvie in her report dated 8 September 2008 of patients with SAH of unknown origin within the total percentage of patients presenting with SAH an over-estimation, as stated by Professor Rosenfeld in his report?

65. Dr O'Donnell noted that Associate Professor McKelvie was correct when she said that in approximately 8-27% per cent of patients who present with SAH, that they have no cause found on radiological imaging. Dr O'Donnell highlighted that this statistic did not relate to the smaller population of patients with a massive SAH, and if you look at the literature relating to patients suffering a massive SAH, it would suggest that in about 5-10 per cent of patients, there would be no cause identified on angiogram, the test usually performed to identify these aneurysms.[55]

Is the general opinion that the family history of cerebral aneurysm (that is, that the maternal aunt had a history of it) is not relevant to what happened to Sharga?

66. Professor Rosenfeld explained that a maternal aunt is not considered a "first-degree relative," and that there is a much higher association with SAH for a person who has a first-degree relative with such a history. With what is considered secondary, second order or secondary degree relative, the chance of associations is remote and is not regarded to have a clinical association.[56] Associate Professor Ranson agreed with this contention.[57]

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[49] T139.21.

[50] T117.2.

[51] T140.2.

[52] T117.8.

[53] T117.15.

[54] T117.23.

[55] T118.9.

[56] T118.30-119.4.

Could the shock associated with a sudden unexpected trauma such as a knife wound cause a spontaneous SAH?

67. Dr O'Donnell characterised this issue as follows: the relevant question is whether the person actually had an underlying aneurysm. Dr O'Donnell conceded there is a postulated possibility or sequence that in someone who has an underlying aneurysm, a sudden rise in blood pressure or a traumatic event could possibly cause the aneurysm to rupture. Dr O'Donnell noted that this situation is referred to in the literature, although noted the likelihood of that happening is rather remote.[58]

68. Dr Collins said that he and Associate Professor Ranson agree with this, that they have both been involved in such cases where the operative event was the rise in blood pressure, but thinks that this would be a highly unlikely mechanism of SAH in Sharga's case.[59]

69. Professor Rosenfeld added in response that in Sharga's case, no aneurysm was indentified at post mortem nor was a bleeding point.[60]

Explanation of the difference between an aneurysm and a SAH

70. Professor Rosenfeld explained that an aneurysm is a weakness in the wall of a blood vessel, relevantly the blood vessels around the brain that supply blood to the brain. Weakness usually occurs at a branched part of the artery where there is a deficiency in the muscle in the artery wall. Professor Rosenfeld said that there may be a congenital element to this artery wall weakness and as people age; they suffer degeneration of the arteries and high blood pressure (with other contributing factors such as smoking). The artery wall will weaken, causing dilation of the artery at the weak point, and a bubble-like structure is formed, which gradually develops into a 'blow-out' – a thin wall of the artery that blows out (or bursts) at the weak point. Professor Rosenfeld stated that the most common site for these aneurysms to occur is around the base of the brain where the arteries are larger and where the blood pressure is higher.[61]

71. Professor Rosenfeld further explained that when the artery ruptures, it releases blood into the space around the brain, between the skull and the brain, which is called the

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[57] T119.5.

[58] T119.9.

[59] T119.15.

[60] T119.28.

[61] T120.21.

subarachnoid space, which is normally filled with cerebrospinal fluid, in which the brain floats. Depending on how rapidly the aneurysm is sealed by clot or surrounding pressure, the blood will stop flowing but the remnants of the blood sitting in the subarachnoid space are visible on CTB scan, and very occasionally when an angiogram is performed, the bleeding point is actually viewable. In many cases they will be able to observe radiologically where the 'blow-out' is and in some cases, view the area actively bleeding.[62]

72. Dr O'Donnell explained the difference between a spontaneous and traumatic SAH. In a spontaneous SAH, the blood vessel bursts of its own accord, as opposed to a traumatic SAH, which results from either a penetrating injury or severe forces to the head. As a SAH can occur in the absence of pre-existing aneurysms, they present in the same way (that is, a leak of blood into the subarachnoid space), with corresponding identical appearances on CT scan of blood in the subarachnoid space.[63]

If someone experiences an aneurysm, are there symptoms?

73. Professor Rosenfeld explained that if the aneurysm grows larger, it starts compressing surrounding structures and there can be corresponding neurological symptoms. He explained however, that it is more common for the aneurysm to be asymptomatic prior to rupture.[64]

Have there been other instances where a person has incurred a facial wound and suffered a spontaneous SAH immediately afterward?

74. Associate Professor Ranson referred to a previous matter in which an individual suffered a SAH immediately following a stab wound to the nose. In this matter, forensic investigators were unable to determine a direct connection between the area where the knife penetrated and the cranial cavity vasculature. Associate Professor Ranson noted however that it can be very difficult to identify a primary bleeding source in part due to the complexity of the relevant vascular structures in the area.[65]

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[62] T121.10.

[63] T122.20.

[64] T123.10.

[65] T123.27.

75. Professor Rosenfeld stated that he had not seen a case of a stab wound to the face causing intracranial vascular injury, and noted that such injuries are generally uncommon in Australia.[66]

Approximately how long would it take a person to collapse upon receiving a pinhole type wound to either the carotid or the ophthalmic artery?

76. Professor Rosenfeld explained that this could take a matter of seconds to minutes; however, it would most likely occur within minutes. If a person suffered a significant haemorrhage, the person would collapse quickly (within a minute or two, but maybe within 10, 15 or 20 seconds).[67] Professor Rosenfeld explained that it depends where the haemorrhage is directed and which part of the brain is subsequently affected, and how rapidly the intracranial pressure increases.[68]

77. Dr Collins agreed with Professor Rosenfeld that there could be a very rapid loss of consciousness, however conceded that his experience lies mostly in blunt force injuries to the head and neck.[69] Associate Professor Ranson also agreed with Professor Rosenfeld's explanation.[70]

Do the experts agree that you do not need a very large hole in the cranial vasculature for sufficient blood to leak out to cause a dramatic response in the human body?

78. Professor Rosenfeld described that in his own personal experience with small holes in arteries around the base of the brain, which are encountered during surgical procedures (not necessarily involving aneurysms), if a small branch of a carotid artery is avulsed (a tiny pinhole), immediate pulsatile high volume haemorrhage from the artery is observed. This is so due to the high pressure within the carotid artery.[71]

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[66] T124.12.

[67] T124.36.

[68] T125.4.

[69] T125.12.

[70] T125.21.

[71] T125.27.

79. Associate Professor Ranson added that even a relatively small volume of blood can effectively cause massive SAH due to the relatively small size of the subarachnoid space.[72]

80. Dr Collins explained that the blood flow to the brain is approximately 750 mls per minute, and that an inference can be drawn on this basis that there will be a considerable quantity of blood flowing through very small diameter vessels in a short time period.[73]

81. Professor Rosenfeld added that the experts had discussed how big they thought the hole, if there was such a hole, had been to have caused the degree of damage observed. Professor Rosenfeld relayed that the experts agreed that although it was not possible to provide a definitive answer, the hole was probably larger than a pinhole, but probably approximately one millimetre or less, and that such an aperture could potentially cause damage consistent with what was found.[74]

82. Dr O'Donnell, with whom Professor Rosenfeld agreed, pointed out that any hole in an artery, whether it is caused by a knife wound, or by a spontaneous bleeding from an aneurysm, will cause a sufficient hole in the vessel to cause a large volume of blood to enter the subarachnoid space. Dr O'Donnell clarified that what is being discussed is the rapidity of blood leaking from a blood vessel into the subarachnoid space, not what has caused it (that is, both penetrating knife injuries and spontaneous SAHs can cause this amount of blood to enter the subarachnoid space).[75]

Can an aneurysm that bursts result in a very small hole?

83. Dr Collins, Professor Rosenfeld, Associate Professor Ranson all agreed that it could, and Dr Collins added that it could result in post mortem examination findings identical to those found in Sharga's post mortem examination.[76]

Accepting that there was a knife wound; would there always be evidence such as a definite wound track on post mortem as mentioned in Dr Collins' report?

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[72] T126.10.

[73] T126.19.

[74] T126.25.

[75] T127.10.

[76] T127.28.

84. Associate Professor Ranson explained that the injury to the skin is a sharp injury in part and in part a small tearing injury. He explained that the skin around this area is loose, soft and in Sharga's case intensely haemorrhagic, thereby making identification of a discrete knife wound path in the area difficult.[77]

85. Dr Collins agreed with Associate Professor Ranson, and added that the depth of the wound track is therefore unknown, as a clear endpoint had not been identified.[78]

86. Associate Professor Ranson added that there is a defined wound shape and size that would suggest that it was not merely the tip or the very short end of the knife that penetrated; that the knife must have gone beyond such a point, otherwise only small indentation puncture marks in the skin would be observed.[79]

87. Dr Collins stated that based on physical measurements of the relevant knives, he readily accepted that any one of the three knives could have penetrated to the back of the orbit and resulted in vessel damage at the posterior aspect of the orbit that resulted in the physical characteristics of the wounds as described in the post mortem report.[80]

Is it possible to determine how far any of the knives would have had to have penetrated to rupture one of those vessels?

88. Dr Collins stated that he had done some measurements of the post mortem CT scan on the uninjured right side[81] and determined that a large number of blood vessels lie at approximately 7 centimetres in (with a measurement of skin to back of orbit of 5 centimetres). The knife therefore would have had to have penetrated 5 to 7 centimetres to reach the back of the orbit.[82] Professor Rosenfeld agreed.[83]

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[77] T128.12-129.3.

[78] T129.4-26.

[79] T130.18.

[80] T131.17.

[81] On 1 December 2011, Dr O'Donnell was requested by Dr Collins to provide an opinion on the post mortem radiological imaging. Dr O'Donnell commented that he was unable to use the left orbit for calculation of skin to back of orbit measurements due to the marked swelling and haematoma in the eyelids at the site of penetrating injury. On that basis, he used a comparable position in the right orbit (without eyelid swelling). Dr O'Donnell opined that the right orbital measurements are comparable to the left.

[82] T132.15.

[83] T132.24.

89. All experts agreed that it was possible, having regarding to the shape of each knife (starting off very slender from the tip and widening out), in comparison to the outside of the wound under the eye, that any of the knives could have penetrated that distance.[84]

90. Professor Rosenfeld demonstrated the possible penetrating path/s of the relevant knives to the Court,[85] which showed that the knives, pointed either upwards or downwards, were capable of penetrating the relevant vasculature in a demonstrable trajectory consistent with the observed left eye incision wound.

Whether the SAH occurred due to a spontaneous ruptured aneurysm or due to a penetrating knife wound.[86]

91. Professor Rosenfeld further clarified that for there to be a SAH, the experts believe there was a leak from an artery and the question is whether the leak was spontaneous, from a natural process, or was the leak induced by a knife wound penetrating the artery.[87]

92. Dr O'Donnell explained that he was "sitting on the fence" in response and did not believe the imaging or post mortem examination provided evidence to support either causal preposition.[88] Dr O'Donnell conceded that he was willing to accept that either scenario is possible, and neither is capable of being excluded.[89]

93. Professor Rosenfeld noted that the absence of an identifiable intracranial bleeding point on CT angiogram did not necessarily mean that a wound was not present in the artery. He explained that bleeding aneurysms can seal via clot formation stopping the haemorrhage, preventing an identifiable leaking point at the time of the CT angiogram.[90]

94. Professor Rosenfeld stated that although a spontaneous SAH was possible, it is more likely, taking into account the scenario and the post mortem findings, that the SAH was induced by the knife wound.[91] Professor Rosenfeld proceeded to state that the spontaneous SAH scenario is higher in his mind than it was before he came to court however he still

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[84] T133.14.

[85] T171-173.

[86] Cross examination of Mr Clelland SC appearing on behalf of Midfield, commencing T143.24.

[87] T144.6.

[88] T145.3, 160.9.

[89] T160.9-27.

[90] T146.16.

[91] T145.17.

considered the likelihood of a spontaneous SAH to be "significantly lower" than the traumatic scenario.[92]

95. Associate Professor Ranson agreed, taking into account the circumstantial information regarding the contemporaneousness of the collapse in association with the wound,[93] although he agreed with Mr Clelland, SC that he could not exclude the possibility of a natural disease process causing the SAH.[94]

96. Professor Rosenfeld noted that a spontaneous SAH would be considered a rare occurrence in someone of Sharga's age,[95] and in his experience in cases of spontaneous SAH in teenagers, pathology such as an aneurysm, AV malformation or a tumour is identified.[96] Dr O'Donnell however, noted that due to the age related difference of younger patients' cranial vaults, younger patients having larger brains relative to the skull, it is more likely that the angiogram could be falsely negative in a young person, both for trauma and for aneurysm, despite his confidence in the quality of the study.[97]

97. Dr O'Donnell noted that there are many factors that would determine whether an abnormality is radiologically identified, including whether or not the hole has thrombosed (sealed off) or that the damage caused to the rest of the brain causes such swelling that it prevents any contrast from leaking out. Dr O'Donnell opined on this basis that neither scenario could be excluded.[98]

98. Professor McLean agreed that due to the circumstances, and after an assessment of the knives involved, that it was a traumatic SAH occurring in the context of a knife injury.[99] She provided an opinion that there is a one per cent chance that the SAH was a spontaneous rupture occurring contemporaneously with the traumatic facial injury.[100]

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[92] T170.10.

[93] T147.1.

[94] T147.11.

[95] T176.26.

[96] T177.5.

[97] T181.14.

[98] T178.18. Dr O'Donnell also confirmed that quality of the CT angiogram study done in life was adequate to demonstrate bleeding (T180.3).

[99] T148.26.

[100] T150.21; T167.25. Professor McLean also described an academic paper that examined 10 transorbital stab wounds if which 50 per cent nicked the carotid artery. Professor Collins pointed out however that the paper does not described

99. Dr Collins stated that while the contemporaneousness of the circumstances is seductive in forming an opinion that the knife wound had a relationship to the SAH, there is no hard evidence to support either scenario,[101] and that it is more reasonable to say that the cause of the SAH cannot be identified and that either explanation is possible.[102]

100. In response, Professor Rosenfeld stated that in his experience, he had not encountered a patient screaming a profanity prior to collapse in the course of a spontaneous SAH.[103] Professor Rosenfeld described the possibility of a patient stabbing themselves in the eye as a reflex to a spontaneous SAH as "so unlikely...[however] it's possible".[104] Professor Rosenfeld thought it was "possible but unlikely" that Sharga suffered a spontaneous SAH and a secondary self-inflicted left orbital knife wound.[105]

101. Dr Collins highlighted an area of concern in relation to the lack of evidence relating to trauma being the mechanism of injury – being an apparent lack of damage to the carotid artery in the relevant region, where there is relatively minor haemorrhage in the immediate vicinity of the area of postulated damage compared to elsewhere within the cranial cavity.[106]

102. Professor Rosenfeld accepted Dr Collin's evidence that the distribution is "a little odd" in that there is more blood on the contralateral side of the head, but explained there is still blood on the side of the penetration and it is possible, depending on the angle of the incision in the artery, that the bleed can be directed to the other side of the head more so than the ipsilateral side.[107]

103. Professor Rosenfeld said, in summary, that although it is concerning that no wound has been intracranially identified, despite a thorough examination, that this is possibly due to there being a small wound in the artery, less then a millimetre, which the Forensic Pathologist could not identify, and/or which occurred at the level of the brain

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each of the various cases, and the lack of description of the entry site makes any comment in relation to the study less relevant to the present issues (T168.6-117).

[101] T147.29-148.4, 161.5.

[102] 148.8.

[103] T161.23 – 162.6.

[104] T166.13-15.

[105] T164.8.

[106] T161.14.

[107] T175.14.

transection.[108] The lack of an identifiable track from the knife entry point to the carotid artery area did not in his view exclude the possibility of this being a penetrating wound, relying on Professor Ranson's evidence of the difficulty in forming a track at post mortem examination along this area of the body with friable and fragmented tissues.[109]

104. Associate Professor Ranson, Dr Collins, Dr O'Donnell and Professor McLean agreed with the proposition that there are at least some anomalies, unlikelihoods and improbabilities with either postulated scenarios.[110]

105. Associate Professor Ranson noted the presence of evidence of bleeding and an incise cutting skin injury, which lead to the observed damage, but noted the absence of evidence of an incise injury to a vessel or of an aneurysm.[111] Associate Professor Ranson observed the evidence that Sharga apparently experienced a headache,[112] which he said could be evidence of some other natural disease process.[113] Associate Professor Ranson concluded that it is a question of which seems to be the most probable scenario based on the observable evidence we have been able to glean from the circumstances, and he said that he thought the circumstantial material is also relevant in that regard.[114]

Application and request for submissions

106. On 4 April 2012, following the conclusion of the concurrent medical evidence, an application was made on behalf of Sharga's family for the Inquest to be concluded without further evidence being adduced.[115] The application was made on the basis that findings should be confined to the issue of cause of death and should not extend to the circumstances surrounding the death (other than what it already obvious) or to comments on matters connected with the death. WorkSafe[116] and Midfield supported the application.

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[108] T175.27.

[109] T176.4.

[110] T164. 15-19, T165.25, T167.17.

[111] T165.1

[112] As described in the statement of Karen Suringa dated 28 March 2012. Due to the late production of this statement, and the lack of oral evidence heard from Ms Suringa due to matters discussed below, as I have previously indicated, I will not be attaching weight to Ms Suringa's statement.

[113] T165.9.

[114] T165.13.

[115] T200-201, 204, 307-209 & 215-219.

[116] T201-202 & 209.

107. I determined that the matter be adjourned until 26 July 2012 for oral submissions following receipt of written submissions[117] addressing why I should not hear from lay witnesses and the impact that might have on my capacity to make Findings, Recommendations and/or Comments.

Submissions

108. At the conclusion of the Inquest, on 26 July 2012 Counsels acting on behalf of Interested Parties provided written and oral submissions, which I have considered for the purpose of this Finding.

On behalf of Sharga's family - written

109. Counsel on behalf of Sharga's family submitted that there is a need to examine the activity performed by Sharga at the time of the incident.

110. The submissions examined various witness statements, as follows:

a. Ms Megan Sutherland's, Ms Gayle Rix's, Ms Glenda Sheen's and Mr Peter Sassmannshausen's statements[118] noted they heard Sharga call out an expletive, which Counsel submitted is consistent with him having accidentally stabbed himself;

b. all eyewitnesses observed Sharga holding his face following him calling out;

c. Ms Sutherland's statement made reference to her having often observed Sharga moving the meat using his knife. Other statements made reference to this general practice; and

d. Mr Sassmannshausen's statement indicated that on the day of Sharga's death, they were understaffed, causing increased pressure on Sharga to keep up and that Sharga had at times struggled to keep up with the line.

111. The family submitted that it is clear and undeniable that a work process existed at the premises whereby employees were in the habit of using their knife to stab the meat and then drag it towards them in order for them to process it.

112. Sharga's family also submitted that even though there were no eyewitnesses, the fact that Sharga received a deep penetrating stab wound meant that the only inference that can be reasonably drawn is that Sharga was in the process of moving meat towards him by having

[117] T220.

[118] Coronial Brief pages 36 (Sutherland), 42 (Rix), 45 (Sheen) and 67 (Sassmannshausen).

stabbed it when his knife slipped and entered his ocular orbit. The family submitted that there can be no other logical explanation regarding how he stabbed himself in the eye with such force.

113. Counsel on behalf of the family noted that no other explanation had been offered as to the mechanism of injury by Midfield and it was submitted that no other explanation could be offered. The family submitted in this respect, that the lack of an eyewitness is irrelevant as this was the only available explanation.

114. Counsel on behalf of the family submitted that Midfield's submission's references to "improbabilities, unlikelihoods and anomalies" in respect of the medical evidence is misleading, irrelevant, inaccurate and in most cases unsupported by the opinion of the experts (viva voce and reports).

Causation

115. Counsel cited the unreported Court of Appeal decision in *Forder v Hutchinson* (No 3751 of 2004) in relation to causation, when Justice Nettle, at paragraph 47, in considering the issue of causation where the plaintiff's case alleged negligence against a health care provider said:

> "...the law is that even where medical opinion evidence goes not higher than that an event is capable of being a possible cause of an observable medical condition, it may still be inferred upon the totality of the evidence that the event was a cause of the condition".

116. Counsel submitted that the Court should adopt the approach referred to repeatedly in the High Court[119] in the way in which courts are able to determine issues of medical causation, by reference to these authorities and the rejection of the notion that strict scientific proof is required, and by reference to the "myriad" of factual materials placed before the Court in respect of Sharga's activities at the time of his death. Counsel submitted that there is accordingly only one reasonable alternative open to the court, and the absence of an eyewitness is "neither here nor there". Counsel pointed to the factual

[119] *Tubemakers of Australia v Fernandez* (1976) 50 ALJR 720 per Mason J; *Chappel v Hart* (1998) 195 CLR 232 at 2868-268 per Kirby J; *Amaca Pty Ltd v Ellis* (2010) 263 ALR 576.

sequence of events, in that the knife penetrated Sharga's skull and immediately thereafter, he became unconscious due to a massive SAH.

117. Counsel submitted that the "overwhelming bulk" of medical evidence and opinion in this case strongly supports the proposition, on the balance of probabilities, that Sharga died from a SAH caused by an accidental self-inflicted knife wound.

Medical evidence

118. Counsel submitted that the opinions of Professors Rosenfeld, McLean and Ranson are well supported by the Neurosurgical reports of Mr Peter Dohrmann, Mr Craig Timms and Professor Andrew Kaye.

119. Counsel on behalf of the family submitted that the overwhelming evidence and expert opinions undeniably point to the fact that Sharga unwittingly and unwillingly caused one of three knives tendered in evidence to penetrate his facial orbit and cause a wound to the carotid artery and/or the ophthalmic artery that resulted in an immediate and fatal SAH. Counsel submitted that the chance of a spontaneous SAH occurring in an otherwise fit, well and healthy 17 year old at precisely the same time as he suffered the deep knife wound must be infinitesimal. Counsel submitted that it defies all logic, opinions and four senior Neurosurgical and two Pathological opinions, let alone impressive lay evidence regarding the activities being performed by Sharga moments before his collapse during the course of his employment.

120. Counsel's final submission was that a finding ought to be delivered that the cause of death of Sharga of SAH resulting from a stab wound with the knife being utilised by him in the course of his employment.

On behalf of Sharga's family - oral

121. Counsel appearing on behalf of Sharga's family submitted that I should make findings regarding how the knife injury occurred.[120] Counsel further submitted that, in relation to the circumstances of Sharga's death, the *only* inference that can be draw is that the knife wound injury occurred when Sharga has dragged the meat by use of the knife, in which

[120] T5.23.

scenario the knife has slipped.[121] Although conceding there is no direct evidence in support of this contention, Counsel asserted that three points in support, being:

a. it was a work practice being performed in the boning room of the employer;

b. there have been other injuries that have occurred with a similar mechanism of injury; and

c. there is evidence that Sharga had engaged in this work practice/technique previously, as expressed in six of the witness statements (Atkinson, Malseed, Scroggy, Sassmannshausen, Xing Hui Dai and Harris).[122]

122. Based on these points, Counsel on behalf of the family submitted that there is sufficient evidence from these statements for me to conclude that it is likely that this activity was occurring immediately prior to Sharga sustaining the knife wound injury and that despite the absence of an eyewitness, that no other logical explanation has been proffered in relation to the mechanism of the knife wound injury.[123]

On behalf of WorkSafe - written

123. WorkSafe submitted that it was *open* on the evidence before me to make a finding that Sharga's death was caused by a SAH resulting from penetration of the ocular orbit by a knife, based on the opinions, or part thereof, of those experts upon whom the family relies, to the requisite standards or proof in the coronial jurisdiction.[124] WorkSafe however submitted that no finding as to cause of death *should* be made. WorkSafe pointed to the evidence of Dr O'Donnell and Dr Collins regarding the limits in determining which of the two competing hypotheses caused Sharga's death. WorkSafe also sought to highlight the inability of the other remaining experts to exclude natural causes, and the lack of evidence as to precisely what Sharga was doing prior to the incident.[125]

124. WorkSafe agreed with Midfield's submission that even if I do find that Sharga died from a SAH caused by a traumatic knife injury, it was not open on the evidence to make a finding regarding how the knife injury occurred (that is, the circumstances). WorkSafe pointed to

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[121] T5.27.

[122] T6.1.

[123] T6.20.

[124] Page 3, paragraph 6, WorkSafe submissions dated 11 July 2012, citing section 67(1)(b) of the Act.

[125] Pages 3-4, paragraph 7, WorkSafe submissions dated 11 July 2012.

section 67(1)(c) of the Act that provides that the Coroner **must** find that circumstances in which death occurred, **if possible**. WorkSafe submitted any finding relating to the circumstances of Sharga's death would be based on speculation, as there were no eye witnesses to the incident and it is not able to safely be inferred what happened when resort is had to evidence of the surrounding circumstances.

125. WorkSafe explained that they and the Victoria Police had conducted investigations, that the WorkSafe investigation was subject to legal review by WorkSafe's Enforcement Group, and that the WorkSafe brief of evidence was further reviewed by the Director of Public Prosecutions. While WorkSafe accepted that my judicial role differs from these two bodies, the conclusions of their investigations are not necessarily without significance for the purpose of my role that following these investigations, the evidence was not capable of determining what Sharga was doing immediately prior to his death.

126. WorkSafe submitted that the state of the evidence makes it inappropriate for me to make Comment/s on any matter arising in connection with Sharga's death pursuant to section 67(3) of the Act. Since it is not open, in their submission, to make Findings regarding the circumstances in which the death occurred, WorkSafe submitted there is no proper basis for me commenting on matters relating to public health or safety.

127. WorkSafe supported Sharga's family's application that the Inquest be concluded without taking further oral evidence. Cross-examination of the witnesses, who did not witness the actually incident, appears to be incapable of establishing how Sharga's death occurred. WorkSafe submitted there is no basis to conclude that new evidence will emerge through further enquiries, beyond the evidence/statements already gathered contemporaneously from those around Sharga at the time that would assist in informing further regarding the cause of death or the circumstances in which the death occurred.

On behalf of WorkSafe - oral

128. Counsel appearing on behalf of WorkSafe pointed out that the family's submissions appeared to be intruding on the question of the circumstances surrounding Sharga's death rather than focusing on the cause of death, as previously foreshadowed.[126]

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[126] T7.10.

129. Counsel appearing on behalf of WorkSafe submitted that it was open to me to prefer the evidence of one expert above another/the others given the applicable standard of proof required.[127]

130. Counsel for WorkSafe submitted that it would be tantamount to speculation to make a Finding regarding the circumstances of Sharga's death apart from the obvious (that is, that he was at work, that he had been using a knife prior to that time). WorkSafe submitted that statements detailing work practices were insufficient to infer what might have happened and how the knife wound injury occurred and to make such a finding would be tantamount to speculation.[128] On this basis, Counsel repeated their submission that I had limited scope for making comments under section 67(3) of the Act, as the factual basis for making such a comment is limited.[129]

131. Counsel for WorkSafe submitted that there is no utility in taking further evidence, as the question regarding cause of death can be identified on the available evidence.[130]

On behalf of Midfield - written

132. Midfield submitted that the application made by Sharga's family that I conclude the inquest without proceeding to hear further evidence, on the basis that Findings be confined to cause of death, raises the following issues:

a. what Findings, if any, can I rightly make in relation to the cause of death on the basis of the evidence presently before me;

b. whether my ability to make Findings in relation to cause of death would be advanced by hearing further oral evidence;

c. whether it is open to me to make Findings regarding the circumstances of death other than non-controversial Findings such as time of death and so on; and

d. whether I am permitted to make any Comments in relation to Midfield work practices.

133. Midfield submitted that in light of the evidence heard and the number of bases upon which the family's application was made, it is neither possible nor appropriate for me to

[127] T8.1

[128] T9.11.

[129] T10.16.

[130] T11.1.

Comment on any matter connected with Sharga's death, including matters relating to public health and safety or the administration of justice.

134. Counsel for Midfield submitted that when evidence gives rise to two competing hypotheses of spontaneous versus traumatic SAH, and cannot positively exclude either, a Coroner can only make a positive finding that one is the true factual cause of death if the applicable civil standard of proof is met. Midfield pointed to the decision in *TNT Management Pty Ltd v Brooks* (1979) 23 ALR 345, where the High Court of Australia clarified the circumstances in which a finding of fact on the civil standard of proof may be made when the evidence gives rise to multiple logical hypotheses (at 345-350)

> "We are concerned with probabilities, not possibilities" and "...while in the latter [civil standard of proof] you need only circumstances raising a more probable inference in favour of what is alleged. In questions of this sort, where direct proof is not available, it is enough if the circumstances appearing in evidence give rise to a reasonable and definite inference: they must do more than give rise to conflicting inferences of **equal** degrees of probability so that the choice between them is mere matter of conjecture".

135. Counsel for Midfield quoted Dixon J in *Briginshaw v Briginshaw* (1938) 60 CLR 336 (*Briginshaw*) at 361: "[W]hen the law requires the proof of any fact, the tribunal must feel an **actual persuasion** of its occurrence or existence before it can be found. It cannot be found as a result of a mere mechanical comparison of probabilities independently of any belief in its reality (emphasis added)".

136. Midfield submitted that:

a. there is no medical evidence to directly prove either possible cause;

b. all medical experts accept that both scenarios as possible, and that neither scenario could be excluded;[131]

c. all medical experts accepted that there were improbabilities and anomalies associated with both scenarios. On this basis, the inherent unlikelihood of an occurrence is a consideration that, according to *Bringinshaw*, must affect the answer to the question whether the issue has been proved to the reasonable satisfaction of the tribunal.

[131] Dr Collins T148.2-7; T 161.13-21; Professor Rosenfeld T145.23, T164.3-8; Dr O'Donnell T 145.8-11, T160.4-27; Associate Professor Ranson T146.25-147.11; Prof McLean (check these!!! – from subs MM).

Midfield submitted that in such matters, "reasonable satisfaction should not be produced by inexact proofs, indefinite testimony, or indirect reference" (emphasis added). In these circumstances, there is insufficient evidence to satisfy to the civil standard required by *TNT Management v Brooks* for a positive finding of fact to be made;[132]

d. Dr Collins[133] and Dr O'Donnell[134] were both of the opinion that it is not possible to determine which was the cause;

e. Associate Professor Ranson said he leaned towards this being primarily a traumatic injury as opposed to a natural disease proves, but certainly did not exclude natural causes;[135]

f. Professor Rosenfeld's opinion was that[136] on the whole scenario, a knife injury was more likely.[137] His view was that what happened at the scene, and the exact history, would be crucial in weighing up the two possibilities;[138]

g. Professor McLean was of the opinion that the SAH had traumatic causation, but was of the opinion that there was not complete evidence to actually support either scenario;[139]

h. there is no evidence of what Sharga was in fact doing with the knife at the time he was injured, and the medical evidence does not assist in reaching any conclusions about how he was holding it or how he was using it at the time;[140]

i. of the medical experts who lean towards traumatic knife injury as the cause, each did so on the basis of a weighing up of other contextual, non-medical evidence (i.e. what

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[132] *Briginshaw at 362.*;T164.11-14; Dr Collins T164.15, Associate Professor Ranson T164.19; Dr O'Donnell T165.15-166.7; Professor Rosenfeld T166.10-29; Professor McLean 167.17-21.

[133] T148.2-7, T161.13-21.

[134] T145.3-145.11, T160.4-27.

[135] T146.25-147.11.

[136] T166.27-T167.6.

[137] T145.17-27.

[138] T166.27-T167.6.

[139] T167.17-21.

[140] T152.5-12, T155.13-23; T158.1-24. I note that Dr Collins and Associate Professor Ranson agreed that it is not possible to determine the orientation of the knife in Sharga's hand based on the incision wound (T158.7-24).

was observed by eye witnesses, the coincidence of the knife wound and the SAH), and not on the basis of any hard medical or scientific evidence.[141] In that sense, none of these experts are in any better position than the Coroner in considering and weighing up the evidence as a whole (including non-medical evidence);

j. given the inherent unlikelihood of either scenario, care should be taken not to make the Finding that one or other occurred if the only evidence available is inexact or indefinite (*Briginshaw*); and

k. on that basis, it is not possible to make any Finding as to the cause of death other than that it was a massive SAH, the cause of which is impossible to determine.

137. Counsel on behalf of Midfield sought to distinguish this matter from the circumstances in the matter of *Thales Australia Limited v The Coroners Court of Victoria and Ors* [2011] VSC 133 (*Thales*), a matter that involved an Inquest into the death of Mr Gary Cook, which was later subject to judicial review. In *Thales*, there were two possible causes of Mr Cook's fatal cardiac arrest that were open on the evidence – natural causes or electrocution. The medical evidence was not conclusive either way. His Honour Judge Beach held that it was open to the Coroner to conclude that there had been an electrocution, with the benefit of two eyewitnesses who had observed Mr Cook moving an earthing stick in close proximity to power lines in the moments before his collapse.[142] Counsel distinguished the current investigation on the basis of a lack of eyewitnesses regarding what Sharga was doing prior to his collapse, and that I therefore do not have evidence that might assist me in reaching a conclusion regarding which was the more probable cause of death.

138. Midfield submitted that even if the SAH was the result of a traumatic knife injury, it is not open on the evidence to make any Finding as to how the knife injury occurred, as:

a. the medical evidence, such as the entry wound, reveals nothing about how the knife was being used or held; and

b. no one witnessed the incident or the moment prior.

139. Midfield submitted that at most, a finding in general terms that Sharga died after suffering a massive SAH whilst at his place of employment is open on the evidence. However, it is

[141] Rosenfeld T166.23-167.6, T166.10, T175.10; McLean T167.17-21.

[142] *Thales*, at [12] and [14].

not open on the evidence to conclude that Sharga was engaged in any particular work practice, authorised or otherwise, as opposed to any other momentary act or activity, at the time he sustained the knife injury.

140. Midfield also submitted that hearing further eyewitness evidence would be unlikely to yield any evidence that would bear on an assessment of whether the SAH was spontaneous or traumatic, as the statements obtained from all co-workers in Sharga's immediate vicinity provided uncontroversial and largely consistent accounts regarding Sharga's collapse for the purpose of making findings on undisputed factual circumstances, such as the location and time of the incident.

141. Regarding whether Sharga complained of a headache on the morning of his death, and the bearing that may have on an assessment of whether the SAH was traumatic or spontaneous, Midfield did not submit that witness Ms Karen Suringa be called to give oral evidence. They submitted that even if Sharga did complain of a headache that day, it is impossible to know what significance to attribute to that fact absent further evidence regarding the nature of the headache, and Sharga's history of headaches (if any), evidence that is unattainable. Midfield conceded that even if Ms Suringa's evidence was accepted as true, it has a negligible bearing on an assessment of whether Sharga's SAH was spontaneous or traumatic, and therefore does not need to be given any great weight.

142. Midfield submitted that bearing in mind the state of the evidence in this inquest, it would be inappropriate for me to Comment on matters. They submitted that inquiries cannot be made for the sole or dominant purpose of making comment/s (footnote omitted in submissions).

143. Midfield submitted that as it will not be known what Sharga was doing with his knife at the time of his injury, or whether the SAH was a result of the knife injury, it is not open for me to find any connection between Sharga's death and any Midfield work practice, or any other worker's injury with a knife. It follows, they said, that evidence in relation to the following topics have no prospect of revealing anything that can be said to form part of the circumstances of Sharga's death:

a. evidence about Midfield policies or work practices (current, relating to specific tasks or general tasks);

b. evidence about Sharga's induction, training and experience;

c. the personal protective equipment Sharga had at the time, and the adequacy of it; and

d. any other knife injury incident where the details or how the injury occurred are not and cannot be known.

144. Midfield submitted that because it is conceded that in the absence of evidence about Sharga's activities in the critical moments before his collapse, there is no basis to make Comment about the presence of THC in his blood and the role, if any, that it may have had in relation to his death. They further submitted that because it is impossible to say that any of those matters were connected with or formed part of the circumstances of Sharga's death, I am not empowered to comment on any of those matters.

145. Midfield submitted that an investigation of another worker's knife injury would be of no use in revealing what happened to Sharga because it will not be known whether the injury resulted from a work practice.

146. Their concluded submissions were:

a. that it was open to me to conclude this inquest by making findings on the evidence presently before me, and without further hearings;[143]

b. applying the test from *TNT Management Pty Ltd v Brooks*, it is not possible on the evidence to draw a definite inference regarding the cause of the SAH, that the only finding that can be made regarding cause of death is that Sharga died from a massive SAH, the cause of which is impossible to determine;

c. apart from uncontroversial Findings such as time and location of death, or the nature of Sharga's employment, it is not open on the evidence for me to make any other Findings regarding the circumstances of Sharga's death;

d. consequently it is not possible for me to find a connection between Sharga's death and any workplace practice, and Findings or Comments on these matters would not be open; and

e. given the content of the coronial brief, further hearings would be of no utility due to a lack of eyewitnesses, and the remainder of the relevant evidence is uncontroversial and has little bearing on my assessment of whether the SAH was due to natural or traumatic causes.

[143] The Act, ss 64, 62.

On behalf of Midfield - oral

147. Counsel submitted that the fact that co-workers had previously engaged in a certain work practice, or indeed if Sharga himself had engaged in a work practice, that in itself did not assist me to make a Finding on a proper basis as to what he was doing prior to his collapse.[144]

148. Counsel submitted that if I was to make a Finding as to cause of death, there should be no finding as to the circumstances in which the death occurred, even if I were persuaded that it was a knife injury.[145]

149. Counsel also highlighted that the authorities relied upon in Counsel appearing on behalf of the family's submission were in essence all negligence cases (civil liability), whereas the TNT case has been applied to the coronial jurisdiction.[146]

CONCLUDING COMMENTS

150. I accepted the submissions that in the absence of any eyewitness to what Sharga was actually doing with the tools of his trade, his knives, immediately prior to him sustaining an injury to the left eye area, there was no utility in continuing with the Inquest in the intended manner.[147]

151. I accepted that hearing from lay witnesses was unlikely to add any substantive evidence to that already provided in the generally consistent witness statements obtained contemporaneous to Sharga's death.

152. I note that the absence of direct observations of Sharga's activities or work practices at the time of, or just prior to the incident limits my ability to make Comments relating to work practices at Midfield save to say that I acknowledge the inherent dangerous nature of his duties or in fact the duties of any worker using sharp, unguarded tools.

153. I am consequently also limited in my ability to make Findings specifically in relation to Sharga's training, supervision and work practices, or whether Sharga was or was not involved in an activity that could have been considered an accepted practice, a dangerous practice, a condoned practice, a poorly supervised practice, or the like.

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[144] T15.1.

[145] T13.23.

[146] T14.1.

[147] T 16.24 – 17.2.

154. I am however able to find that Sharga was, on the balance of probabilities, acting in the course of his employment at the time of his collapse and subsequent death from a massive SAH. I am similarly able to find on the facts that in the course of his employment with Midfield, he was using a knife, one of three, to perform his duties, and I am able to find that Sharga sustained an unintentional self-inflicted injury to the left eye area from the knife he was using to perform his duties.

155. While I cannot ignore the presence of THC identified in Sharga's system at the time of the incident, or its known effects on his psychomotor functions, I similarly cannot make a clear causal connection between the presence of THC and the incident, as there was insufficient evidence relating to the amount and strength Sharga had consumed the previous evening or of Sharga's specific tolerance. I am therefore unable to make any Findings in relation to the presence of THC in Sharga's blood or any effect it had on his ability to safely perform his work duties.

156. The apparent disruption of the immediate area surrounding Sharga following his collapse was far from ideal and precluded the identification of the specific knife he was using at the time. I however accept that this in itself did not compromise my investigation or impact on my Findings.

157. The final question for the purpose of the coronial investigation is whether Sharga suffered a spontaneous SAH at or around the same time as, or just prior to the self-inflicted knife injury to the left eye, or whether Sharga first suffered a self-inflicted knife wound that penetrated through the carotid or ophthalmic artery resulting in the SAH. This is not a question easily answered. It has been the subject of numerous expert reports, Forensic Pathology discussion, concurrent evidence and extensive submissions.

FINDINGS

1. I find that the identity of the deceased is Sharga Amos Taite.
2. On the basis that there was no evidence presented to suggest otherwise, I find that the penetrating left orbital injury with a long knife sustained by Sharga, while self-inflicted, was unintentional.
3. I note the comments made by the High Court of Australia in *TNT Management Pty Ltd v Brooks* (1979) 23 ALR 345, regarding the circumstances in which a finding of fact may be made on the balance of probabilities when the evidence gives rise to multiple logical hypotheses (at 345-350), and I am satisfied based on consideration of all of the material, including the Coronial

Brief (and reports contained therein), the concurrent evidence, additional *viva voce* evidence and Counsels' submissions, that a reasonable and definite inference can be made in relation to Sharga's medical cause of death.

4. I have examined the conflicting inferences and find that they do not have equal degrees of probabilities, nor have I merely compared probabilities in a vacuum. None of the expert panel members were able to say that it was more likely that Sharga suffered a spontaneous SAH; however, the majority of the expert panel members agreed that it was more likely that the SAH was caused by a penetrating knife wound. The totality of the unlikelihood of a spontaneous SAH occurring in someone of Sharga's age, medical and familial histories, the lack of an identified aneurysm or arteriovenous malformation on either ante or post mortem radiological studies, or during the post mortem examination itself, together with the contemporaneousness of the penetrating knife injury, and Sharga's witnessed physical and verbal response to the injury,[148] rapid collapse and subsequent death, and the demonstrable capacity of the relevant knives to penetrate the carotid or ophthalmic arteries, when viewed combined, render the possibility that a spontaneous SAH caused Sharga's death too remote and fanciful to entertain. I am persuaded that this is not a mere matter of conjecture, and have satisfied myself to the requisite standard.

5. I accept that none of the experts were able to definitively exclude the possibility of the SAH being due to a spontaneous ruptured aneurysm; however, I do not accept that this alone is capable of detracting from the totality of the evidence in support of the SAH having been caused by a penetrating stab wound.

6. I accept that tiny pinhole damage to the complex intracranial vasculature can result in immediate pulsatile high volume haemorrhage.

7. I note that there were various credible explanations offered by the experts to explain why no stab wound was identified in the ante and post mortem radiological studies or in the course of the post mortem examination, including the possible small incision size to one of the relevant intracranial arteries, the possible incision being at the point of transection during the post

[148] I note in this respect, in response to LSC Maybury's final question, of whether it was possible for someone suffering a spontaneous SAH to continue in a sequence of coordinated physical activity such as stabbing oneself in the face, throwing a knife, covering ones eye with ones hand, turn on the spot and yell out prior to collapsing, Professor Rosenfeld responded that while it is possible it is "extremely unlikely" (T183.29).

mortem itself, thereby destroying the evidence of the incision, and the possibility that the bleeding point has sealed via clot formation, preventing an identifiable leaking point at the time of the CT angiogram.

8. In coming to my decision regarding the medical cause of Sharga's death, I note that I was unable to segregate the cause of death entirely from the undisputed circumstantial material. While I will not make Findings in relation to the exact circumstances of Sharga's death, as the integral moments prior to the unintentional, self-inflicted knife injury were unwitnessed, I note that I was not able to arrive at my Findings in relation to the cause of death without gleaning some observable, non-contentious evidence from the undisputed circumstances, such as the location of the incident, the time of the incident, and that just prior to those integral, unwitnessed moments, Sharga was observed to be engaging in duties consistent with his employment, including the use of one of his knives. It is on this basis that I find that, on the balance of probabilities, I am satisfied that Sharga sustained this injury in the course of his employment.

9. On the basis that the integral moments prior to Sharga's penetrating left orbital injury were unwitnessed, I make no Findings in relation to work practices, training or supervision at Midfield Meat International Pty Ltd.

10. I therefore find that Sharga Amos Taite died on 16 August 2008 from a subarachnoid haemorrhage caused by a penetrating left orbital injury with a long knife while acting in the course of his employment at Midfield Meat International Pty Ltd.

11. I direct the Registrar of Births, Death and Marriages to amend the cause of death to:

    1 (a) subarachnoid haemorrhage

    1 (b) penetrating left orbital injury with a long knife.

I direct that the Findings be published on the internet.

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

i. Mr Peter Claven, Stringer Clark Lawyers on behalf of Mrs Anne Lichtwark and Mr Gage Taite;

ii. Ms Mary-Jane Lerodiaconou, Justitia Lawyers on behalf of Midfield Meat International Pty Ltd;

iii. Ms Mai Pham, on behalf of the Victorian WorkCover Authority;

iv. Mr Simon Fraser, Lander & Rogers Lawyers on behalf of Vevo Insurance Limited;

v. Mr Peter Ewin, Hunt & Hunt Lawyers;

vi. Ms Kirsty McIntyre, Department of Human Services;

vii. Bernie Geary OAM, Child Safety Commissioner;

viii. Leading Senior Constable Amanda Maybury;

ix. Detective Leading Senior Constable Martin V Neagle;

x. Dr Richard Byron Collins, Consultant Forensic Pathologist;

xi. Associate Professor David Ranson, Forensic Pathologist and Deputy Director of the Victorian Institute of Forensic Medicine;

xii. Professor Jeffrey Rosenfeld; Neurosurgeon, Head of Department of Surgery in the Central Clinical School, Monash University and Director of Neurosurgery Department, the Alfred Hospital;

xiii. Dr Christopher O'Donnell; Consultant Radiologist at the Victorian Institute of Forensic Medicine; and

xiv. Professor Catriona McLean, Head of the Department of Anatomical Pathology, the Alfred Hospital.

Signature:

AUDREY JAMIESON

CORONER

Date: **17 October 2014**