IN THE CORONERS COURT
OF VICTORIA
AT MELBOURNE

Court Reference: COR 2019 2336

FINDING INTO DEATH WITH INQUEST

Form 37 Rule 63(1)

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

INQUEST INTO THE DEATH OF PETA HICKEY

Findings of:	Coroner Simon McGregor
Delivered On:	22 November 2021
Delivered At:	65 Kavanagh Street Southbank, Victoria, 3006
Hearing Dates:	29 April 2021 through 18 May 2021
Counsel Assisting the Coroner:	Deborah Mandie
Representation:	Raph Ajzensztat for Richard Hickey Jr Ben Jellis for FMIG Radiology Fiona Ellis for Dr Gavin Tseng Matthew Hooper for Programmed Deborah Siemensma for Dr Doumit Saad Paul Halley for Priority Care Health Solutions

Sharon Keeling for Ambulance Victoria

Megan Fitzgerald for Dr Richard Kain

Kevin Gilchrist for MRI Now

Catchwords

Anaphylaxis, contrast reaction, CT Coronary Angiogram, radiology, medical imaging, workplace health, screening

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INTRODUCTION

1. The Cardiac Health Assessment Programme (**CHAP**) was a snapshot test of Australia's system of private diagnostic imaging practices, sending 26 scanning referrals, insufficient in both clinical details and follow up contact information, to an almost random selection of practices throughout Australia. Despite these deficiencies, every scan was performed and the checks and balances the industry believed were present failed.

2. Ms Peta Hickey, wife, mother of two young children and successful business executive, found herself amongst this unfortunate cohort, even though she had no history of heart problems.

3. In early June 2018, a labour hire firm called **Programmed** sought a provider to deliver a '*medical assessment program for heart health*'[1] for its executives, via a 'corporate deal'. Programmed contacted a corporate booking service, operating in the health area[2], Priority Care Health Solutions (**Priority**), to facilitate and co-ordinate the programme.[3]

4. In early June and July of 2018, Programmed was told by a doctor of a potential medical assessment programme for heart health that could be offered to their executives, being a combination of heart check tests – a "*Coronary artery CT calcium scores with angiogram*". [4]

5. Ultimately, Programmed was advised these tests were the CT coronary angiogram (**CTCA**) and a Coronary Artery Calcium score (**CAC**).[5] Both tests were to be performed more or less simultaneously, in the one sitting.

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[1] 2019 2336 Hickey – AM3-19 - Statement - Chris Sutherland (Programmed) – 16 10 2020, paragraph 18 - 19

[2] 2019 2336 Hickey – AM3-31 Statement Rani Haddad (Priority) – 04 11 2020, paragraph 5; Haddad, T1447.20 – T1448.7

[3] 2019 2336 Hickey – AM3-31 - Statement – Rani Haddad (Priority) – 04 11 2020, paragraph 6; 2019 2336 Hickey – AM3 - 54 - Statement – Rob Kosova – 05 02 2021 - paragraphs 2 and 7

[4] Statement of Shah Abdul-Rahman, CB 81, [12]; See Expert Opinion of Dr David Eddey, CB 146; 2019 2336 Hickey – AM3-19 - Statement - Chris Sutherland (Programmed) – 16 10 2020, paragraphs 19 – 23 and AM3-19 - 8 - 9 – Attaching Email from Kosova to Sutherland dated 3 July 2018 and email from Kain to Kosova of same date; 2019 2336 Hickey – AM3 - 54 - Statement – Rob Kosova – 05 02 2021 - paragraphs 12 - 18

[5] 2019 2336 Hickey – AM3-19 - Statement - Chris Sutherland (Programmed) – 16 10 2020, paragraphs 19 – 23 and AM3-19 - 8 - 9 – Attaching Email from Kosova to Sutherland dated 3 July 2018 and email from Kain to Kosova of same date; 2019 2336 Hickey – AM3 - 54 - Statement – Rob Kosova – 05 02 2021 - paragraphs 12 - 18

6. For the reader's convenience, these two tests will be described together as the **CT scan**, unless there is a relevant distinction to be made. For instance, only the CTCA involved the administration of an intravenous (IV) contrast medium (an injection of contrast dye).[6]

7. On 26 October 2018, Programmed formally engaged Priority to co-ordinate the CHAP for the first cohort of Programmed participants, which included the CT scan.[7]

8. At some time in late 2018, Priority engaged **Jobfit**, a company which provides corporate or 'bulk medical assessments' involving occupational health medical services (including pre-employment fitness assessments), throughout Australia and New Zealand. Jobfit was engaged to review the CT scan test results of Programmed executives and to allocate executives to their doctors for this purpose.[8]

9. A doctor employed by Jobfit, **Dr Doumit Saad**, performed CT scan test result reviews for the first and then a second cohort of Programmed participants.[9]

10. In March 2019, Programmed invited Peta, by email, to undergo the CHAP.[10] A Priority email to Peta set out the steps of the CHAP and stated that a company named MRI Now will arrange the "*diagnostic imaging referral*".[11]

11. MRI Now is a Medical Image booking concierge service that also provides independent radiological opinions via their network of radiologists (**MRI Now**). MRI Now does not provide medical assessments, so in the case of the CHAP, it assisted patients to find options to attend an Imaging Centre for their CT scan.[12]

12. So, Priority referred CT scan bookings to MRI Now. MRI Now then engaged various imaging providers to facilitate the scans, including the Future Medical Imaging

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[6] First report of Dr Eddey, CB 158.

[7] 2019 2336 Hickey – AM3-19 - Statement - Chris Sutherland (Programmed) – 16 10 2020, paragraphs 25 - 26; 2019 2336 Hickey – AM3-31 - Statement – Rani Haddad (Priority) – 04 11 2020, paragraph 12; 2019 2336 Hickey – AM3 - 54 - Statement – Rob Kosova – 05 02 2021 - paragraphs 19 – 20; AM3- 6 Program Documents – Accepted Proposal – Executive Medical Assessments – 26 10 2018

[8] 2019 2336 Hickey – AM3 – 53 - Statement – Tim Whicker – 03 01 2021 - paragraphs 2 – 4,7 – 11 and 14; Whicker, T46 and T48 – T49; 2019 2336 Hickey – AM3-29 – Statement (2) – Dr Doumit Saad – 09 11 2020, paragraphs 14 - 20

[9] Saad, T265.18 – T268.25

[10] 2019 2336 Hickey AM3-30 - Statement – Jennifer Boulding (Programmed) – 05 11 2020, AM3-30-5

[11] Statement of Shah Abdul-Rahman, CB 81, 85 - 86

[12] 'Facts Not in Dispute Relating to MRI Now – signed (3851351.1)', dated 28 10 2020, paragraph 1; Mtanios, T1584.15 – T1585.15

Group, a private radiology practice with six locations in Victoria.[13] So it was ultimately MRI Now who assisted Peta to find an imaging centre to attend, being the Future Medical Imaging Group clinic located in Moonee Ponds (**FMIG**).[14]

13. The form used to book Peta into FMIG for the CT scan procedure was headed "MRI Now – Booking Confirmation" dated 12 March 2019 (the **booking form**).[15] The booking form appears to include an MRI Now 'referral form' (the **referral**), received by MRI Now from Priority,[16] bearing Saad's name as the referring doctor and Saad's electronic signature. The referral did not include any clinical notes.[17]

14. Dr Saad had not had any involvement in Peta's care prior to the CT scan.[18]

15. Peta had no medical history of cardiac problems but agreed to undergo the CT scan.[19]

16. On 1 May 2019, Peta attended FMIG for the CT scan. **Dr Gavin Tseng** was the radiologist at the FMIG clinic that day. Prior to her CT scan, Peta filled out an 'FMIG CT Coronary Angiogram Questionnaire'.[20]

17. The CT scan for the CAC was performed first and then Peta was administered 75 ml of Omnipaque 350 contrast dye, intravenously**.** The CTCA was performed simultaneously with the Omnipaque administration.[21]

18. Following the administration of the IV contrast dye for the CTCA, Peta suffered an allergic reaction to the contrast dye.

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[13] Statement of Shah Abdul-Rahman, CB 81; Expert Opinion of Dr David Eddey, CB 146

[14] 'Facts Not in Dispute Relating to MRI Now – signed (3851351.1)', dated 28 10 2020, paragraph 2

[15] Statement of Reddan (2), CB 57

[16] 'Facts Not in Dispute Relating to MRI Now – signed (3851351.1)', dated 28 10 2020, paragraph 8

[17] MRI Now- Booking Confirmation dated 12 March 2019', CB 57; Statement of Dr Gavin Tseng (3rd), CB 18-19

[18] Statement of Dr Doumit Saad, CB 77-78

[19] Statement of Dr Gavin Tseng (3rd), CB 19; Note medical records showing Peta was a daily smoker, See E-Medical Deposition Form (RMH), CB 107 and Medical Exhibits, complete medical record of Peta from 'Doctors of Ivanhoe', p.7

[20] Statement of Reddan (2), CB 53 - 54– 'FMIG, CT Coronary Angiogram Questionnaire and Patient Consent Form – Peta Hickey' CB –59 – 60

[21] Statement of Lesley Gilbert, CB 46; Statement of Reddan (2), CB 67-69; FMIG (Dr Tseng) Report 'CT Coronary Angiogram & Calcium Score', CB 64

19. A call to emergency '000' call was placed by FMIG office manager, Liezl Samakovski, to the Emergency Services Telecommunications Authority (**ESTA**), seeking the assistance of Ambulance Victoria.[22]

20. Ambulance Victoria's Advanced Life Support (**ALS**) paramedics arrived and assisted Tseng with Peta's care. Mobile Intensive Care Ambulance (**MICA**) paramedics arrived shortly afterwards and administered adrenaline.

21. Peta was then transported to the Royal Melbourne Hospital (**RMH**) and admitted to the Emergency Department (**ED**) and then the intensive care unit (**ICU**).[23]

22. Peta did not regain consciousness and died on 9 May 2019.[24]

23. The FMIG CT scan Report for Peta recorded a calcium score of '0' and a normal CTCA.[25]

24. On 15 May 2019, Dr Malcolm Dodd of the Victorian Institute of Forensic Medicine (**VIFM**) performed an autopsy on Peta and formulated the cause of death as:

    1(a) Multisystem organ failure and hypoxic/ischaemic encephalopathy;

    1(b) Anaphylactic reaction to CT contrast medium.

25. The Post-mortem examination also confirmed Peta had a normal heart and coronary artery, and found no evidence suggestive of cardiovascular disease.[26]

26. Professor Jo Douglass of the RMH stated that blood tests taken at the time of admission to the RMH for tryptase (an enzyme released as an immune response or in allergic responses, such as anaphylaxis) also confirmed that Peta had suffered an anaphylactic reaction.[27]

27. Peta died as a result of substandard clinical judgement from doctors at the beginning and end of this programme, combined with a misalignment of incentives amongst the

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[22] Recording of '000' Call – EXT to Brief; Statement of Lara Delecheneau, CB 43; Statement of Lesley Gilbert, CB 48; AM3-16 - Statement of Liezl Samakovski; 2019 2336 Hickey – AM3-18 Statement of Jessica Taylor (ESTA) – 16 10 2020 – Attachment 1 – Transcript of 000 Call, from AM3-18-8

[23] Expert Opinion of Dr David Eddey, CB 146; Statement of Melodie Toth, CB 87; Ambulance Victoria Patient Care Record (Ambulance Victoria), CB 133 - 138

[24] Expert Opinion of Dr David Eddey, CB 146

[25] Expert Opinion of Dr David Eddey, CB 147; FMIG CT Coronary Angiogram & Calcium Score Report (Dr Tseng), CB 32 - 33

[26] Expert Opinion of Dr David Eddey, CB 146 – 147; Medical Investigation Report (VIFM), CB 112 - 114

[27] Expert Opinion of Dr David Eddey, CB 147; Statement of Prof Jo Douglass (RMH), CB 90 - 91

various business entities that facilitated the process. It may be somewhat of an oversimplification, but the snapshot provided by this Inquest has revealed an industry putting profits over patients.

28. Two main issues arise from the circumstances surrounding Peta's death: whether she should have undergone the CTCA scan at all and whether FMIG staff should have been able to better manage her anaphylactic reaction to prevent her death.

THE CORONIAL INVESTIGATION

Jurisdiction

29. Peta's death constituted a 'reportable death' pursuant to section 4 of the *Coroners Act 2008* (Vic) (**the Act**), as her death occurred in Victoria and was unexpected.

Purpose of a coronial investigation

30. The jurisdiction of the Coroners Court of Victoria (**Coroners Court**) is inquisitorial.[28] The specific purpose of a coronial investigation is to independently investigate a reportable death to ascertain, if possible, the identity of the deceased person, the cause of death and the circumstances in which the death occurred.

31. The broader purpose of coronial investigations is to contribute to a reduction in the number of preventable deaths, both through the observations made in the investigation findings and by the making of recommendations by coroners. This is generally referred to as the prevention role.

32. Coroners are empowered to:

    (a) report to the Attorney-General on a death;

    (b) comment on any matter connected with the death they have investigated, including matters of public health or safety and the administration of justice; and

[28] Section 89(4) of the Act

(c) make recommendations to any Minister or public statutory authority or entity on any matter connected with the death, including public health or safety or the administration of justice.

These powers are the machinery provisions by which our prevention role can be advanced.

Findings pursuant to section 67(1)

33. The matters regarding which a coroner investigating a death must make findings are set out in section 67(1) of the Act. The Act replaced the *Coroners Act 1985*, which set out the findings a coroner must make at section 19(1).

34. Notably, prior to the *Coroners Amendment Act 1999*, the *Coroners Act 1985* included at subsection 19(1)(e) a requirement for the coroner to find "*the identity of any person who contributed to the cause of death*". The *Coroners Amendment Act 1999* removed this subsection and no equivalent to this subsection was reintroduced in the Act.

35. Counsel for the Senior Next of Kin submitted that, as no equivalent of s 19(1)(e) was reintroduced, in a situation where a coroner is "*confronted with the obligation or the need to assess the … culpability of a person or an interested party in connection with Peta's death*", this assessment should not occur when making findings into the circumstances of the death, but rather when exercising the power to make comments.[29]

36. I accept this submission.

37. The circumstances surrounding a death can include several important categories in relation to a person's involvement:

(a) the courses of action that person undertook;

(b) any relevant normal practices in that person's profession or party's industry; and

(c) the likelihood that various courses of action, including the one taken, could have prevented the death.

[29] T1725.18 – T1726.7.

38. Questions about a person or party's "*culpability*", in a context where coroners do not assign fault or blame, will necessarily be addressed in comments regarding the relationship between the person or party's course of action and either of the latter two categories above.

39. Comments and recommendations pursuant to sections 67(3) and 72(2) The power to comment arises from section 67(3): "*A coroner may comment on any matter connected with the death, including matters relating to public health and safety or the administration of justice*".[30]

40. The power to make recommendations, at section 72(2), is formulated similarly: "*A coroner may make recommendations to any Minister, public statutory authority or entity on any matter connected with a death or fire which the coroner has investigated, including recommendations relating to public health and safety or the administration of justice*".[31]

41. These powers arise as a consequence of the obligation to make findings. They are not free ranging. The powers to comment and make recommendations are inextricably connected with, rather than independent of, the power to enquire into a death or for the purpose of making findings. They are not separate or distinct sources of power enabling a coroner to enquire for the sole or dominant reason of making comment or recommendation.[32]

42. It is important to stress that coroners are not empowered to determine the civil or criminal liability arising from the investigation of a reportable death and are specifically prohibited from including a finding or comment or any statement that a person is, or may be, guilty of an offence.[33] It is not the role of the coroner to lay or apportion blame, but to establish the facts.[34]

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[30] Section 67(3) of the Act

[31] Section 72(2) of the Act

[32] *Harmsworth v The State Coroner* [1989] VR 989 at 996.

[33] Section 69(1) of the Act. However, a coroner may include a statement relating to a notification to the Director of Public Prosecutions if they believe an indictable offence may have been committed in connection with the death. See sections 69(2) and 49(1) of the Act.

[34] *Keown v Khan* (1999) 1 VR 69.

Causation, proximity and connection

43. The cause of death refers to the medical cause of death, incorporating where possible, the mode or mechanism of death.

44. The circumstances of the death do not refer to the entire narrative culminating in the death, but rather to those circumstances which are sufficiently proximate and causally relevant to the death. Findings as to circumstances will necessarily include findings as to which events caused others, in what combination they played this causative role and to what degree.

45. The standard for making a finding that matters are 'connected with' the death, for the purpose of the power to make comment under section 67(3) of the Act or the power to make recommendations under section 72(2), is not the same as the standard of proximate connection required for a finding as to the circumstances. In *Thales v Coroners Court*, Beach J adopted the interpretation of Muir J in *Doomadgee v Clements*[35] that "*there was no warrant for reading 'connected with' as meaning only 'directly connected with*'", and that the range of matters connected with a death, for the purpose of comments or recommendations, can be "*diverse*".[36]

Standard of proof

46. All coronial findings must be made based on proof of relevant facts on the balance of probabilities.[37] The strength of evidence necessary to prove relevant facts varies according to the nature of the facts and the circumstances in which they are sought to be proved.[38]

47. In determining these matters, I am guided by the principles enunciated in *Briginshaw v Briginshaw*.[39] The effect of this and similar authorities is that a coroner should not make adverse findings against, or comments about, individuals or entities, unless the

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[35] *Doomadgee v Clements* [2006] 2 QdR 352.

[36] *Thales Australia Limited v The Coroners Court* [2011] VSC 133.

[37] *Re State Coroner; ex parte Minister for Health* (2009) 261 ALR 152.

[38] *Qantas Airways Limited v Gama* (2008) 167 FCR 537 at [139] per Branson J (noting that His Honour was referring to the correct approach to the standard of proof in a civil proceeding in the Federal Court with reference to section 140 of the *Evidence Act 1995* (Cth); *Neat Holdings Pty Ltd v Karajan Holdings Pty Ltd* (1992) 67 ALJR 170 at 170-171 per Mason CJ, Brennan, Deane and Gaudron JJ.

[39] (1938) 60 CLR 336.

evidence provides a comfortable level of satisfaction that the individual or entity caused or contributed to the death.

48. Proof of facts underpinning a finding that would, or may, have an extremely deleterious effect on a party's character, reputation or employment prospects demand a weight of evidence commensurate with the gravity of the facts sought to be proved.[40] Facts should not be considered to have been proven on the balance of probabilities by inexact proofs, indefinite testimony or indirect inferences. Rather, such proof should be the result of clear, cogent or strict proof in the context of a presumption of innocence.[41]

Adverse comments about professionals

49. Counsel for multiple interested parties and Counsel Assisting made submissions about the burden of proof for adverse findings or comments against professional persons, and in particular comments about their contribution to the death.[42]

50. Counsel for FMIG specifically submitted, in this regard, that:

> *[F]indings as to the departure of professional persons from the normal standards that contributed to the death of a person should be determined at a higher level of satisfaction as set out in* Briginshaw. … *Perhaps a little bit unusually rather than [relying] on the standard of care part of that formulation, my emphasis is on the proposition that we are looking for the normal standards that apply within the relevant industry or profession at the relevant time. That's the touchstone of negligence and also what can reasonably be expected of people at a point in time.*[43]

51. Counsel for FMIG elaborated that "*hindsight is the great enemy*" of that question.[44]

52. Counsel for FMIG is correct that the "*normal standards that apply within the relevant industry or profession at the relevant time*" are part of the circumstances of the death

[40] *Anderson v Blashki* [1993] 2 VR 89, following *Briginshaw v Briginshaw* (1938) 60 CLR 336.
[41] *Briginshaw v Briginshaw* (1938) 60 CLR 336 at pp 362-3 per Dixon J.

[42] See, eg, written submissions on behalf of Ambulance Victoria dated 26 May 2021 at para 24; written submissions of Counsel Assisting dated 3 June 2021 at paragraph 5; written submissions on behalf of Dr Doumit Saad dated 26 May 2021 at paragraph 3.

[43] T1743-T1744.

[44] T1744.

into which findings can be made, and that hindsight should be avoided in making these findings.

53. This does not, however, mean that comments as to whether a health practitioner adhered to these standards are subject to the same standard of proof as findings of negligence.

54. A key support for the reasoning Counsel for FMIG proposed is the 1995 judgment in *DHCS v Gurvich*, where Southwell J addressed the question of the standard of proof for a finding that a person contributed to a person's death:

> *To say of professional people that they "contributed to the cause of death" of another person in the course of their professional duties is to make a very serious allegation. It is an allegation of negligence, that by a breach of their professional duty owed to the deceased, they contributed to his death. ... [N]o such adverse finding should be made unless there exists comfortable satisfaction that negligence has been established which contributed to the death.*[45]

55. However, this judgment related to a finding made under the then-in-force section 19(1)(e) of the *Coroners Act 1985*, which has been discussed above. As discussed above, under the current Act the question of persons' contribution to a death is a matter for comment rather than findings into circumstances. It will be a comment either:

(a) that a person's course of action departed from normal professional practices; or

(b) that there was another course of action available which would have been more likely to prevent the death, or less likely to cause it.

56. A comment of the second type does not necessarily imply that the person had enough information to recognise that this other course of action would have been more appropriate.

57. If the question of contribution to the death arises when making comments such as these, rather than when making findings into circumstances, the issues to consider are different. The purpose of making comments is directed toward identifying prevention opportunities. It is particularly important to be able to make comments where systemic

[45] *The Secretary to the Department of Health and Community Services v Gurvich* [1995] 2 VR 69 at 74.

prevention opportunities exist that might relate to practices across a profession rather than a single practitioner.

58. A comment that a practitioner had another course of action available to them which had a higher probability of preventing the death, or a lower probability of causing the death, is an adverse one. The standard of proof is therefore heightened in accordance with *Briginshaw*, though not to the degree required to justify a finding of negligence as would have been appropriate for findings under section 19(1)(e) of the *Coroners Act 1985*.

59. As this is an objective issue, it is not appropriate to shun the benefit of hindsight when addressing it. It is important that a coroner is able to identify opportunities to prevent a death even if they were not apparent at the time – this is central to the coroner's death prevention function.

60. If, however, a further comment is made that the practitioner had enough information at the time to recognise this other course of action, this would be a substantially adverse comment and the standard of proof would be appropriately heightened. This is the step where a coroner should take great care not to confuse what is apparent in hindsight with what was apparent at the time.

61. Normal professional practices will be a factor in considering whether a practitioner had enough information to recognise a better course of action: where I propose to make a specific comment that a health practitioner's conduct was substandard for their profession, then counsels' submissions should be accepted regarding the heightened standard of probability and the heightened wariness of hindsight to be applied. The same heightened standards must also apply to any notification or recommendation to regulatory or professional bodies that a practitioner's conduct should be reviewed and possibly be made the subject of disciplinary action.

Non-causative substandard conduct

62. A comment that a health practitioner's conduct causally contributed to a death is not the same as a comment that they departed from normal professional practices. If normal professional practices do not correctly address an aspect of the chain of events which led to the death, normal professional conduct might play a causative role in the death.

Conversely, a practitioner could depart seriously from normal practices without causing the death, depending on the factual circumstances.

63. Counsel for Ambulance Victoria submitted that:

> *[I]f a link is not to be made between the conduct of a person or an entity … and the death, that is, a causative link, then no findings can be made regarding public health and safety issues, for examples … and indeed … recommendations can't be made*.[46]

64. This submission, as it regards the 'connected with' standard for comments and recommendations, cannot be accepted. Beach J in *Thales* quoted a number of examples of matters 'connected with' a death from Muir J in *Doomadgee v Clements* which included "*the reporting of the death*" and "*a police investigation into the circumstances surrounding the death*". These matters are clearly not causatively linked to the death in the manner that counsel for Ambulance Victoria submits is required.[47]

65. A comment about such non-causative substandard conduct would thus still be appropriate as it is a matter 'connected with' the death. It remains an adverse comment, despite not implying causation of the death, and the standard of proof for making it is appropriately heightened.

The holding of an inquest

66. Section 52(1) of the Act provides that a coroner may hold an inquest into any death that the coroner is investigating. This discretion must be exercised in a manner consistent with the preamble and purposes of the Act.

67. In deciding whether to conduct an inquest a coroner may consider factors including (but not limited to):

    (a) whether there is such uncertainty or conflict of evidence as to justify the use of the judicial forensic process;

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[46] T1803.

[47] *Thales Australia Limited v The Coroners Court* [2011] VSC 133.

(b) whether there is a likelihood that an inquest will uncover important systemic defects or risks not already known about;

(c) whether an inquest is likely to assist in maintaining public confidence in the administration of justice, health services or other public agencies;

(d) whether the family or another person has requested the inquest; and

(e) to draw attention to the existence of circumstances which, if unremedied, might lead to further deaths.[48]

68. On 3 April 2020, representatives of Peta's family submitted a Form 26 Request for Inquest, noting that a number of factual issues required investigation and that there were important public health implications, "*including the process of company employees being tested, the failure to be seen by a doctor prior to an invasive test and the management of Peta's anaphylactic reaction*".[49]

69. At this time I was still in the process of obtaining evidence, including expert medical advice on the care provided to Peta. For this reason, on 19 May 2020 I completed a Form 28 response to their request, advising that I had not yet made a decision whether or not to hold an inquest.

70. After obtaining further evidence and coordinating with interested parties, on 2 October 2020 I held a Directions Hearing. This hearing addressed a number of topics, including whether it would be appropriate to hold an inquest rather than make findings based only on written materials. Parties were asked to make any submissions supporting or opposing the family's request for an inquest in advance of the next Directions Hearing.

71. That next hearing was held on 16 December 2020. No parties had made submissions opposing the family's request for an inquest and I ruled that there remained sufficient areas of disagreement on the facts that an inquest was required.

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[48] State Coroners Guidelines, Queensland, December 2003, 8.3; *Chiotelis v Coate* [2009] VSC 256; *Conway v Jerram* [2010] NSWSC 371; United Kingdom, *Death Certification and Investigation in England, Wales and Northern Ireland: The Report of a Fundamental Review* (the Luce Report), Cmnd 5831 (2003), 80; *Coroners Bench Book 2007*, New Zealand, 166; United Kingdom, *Report of the Committee on Death Certification and Coroners*, Cmnd 4810 (1971), para 14.19 (the *Brodrick report*).

[49] Form 26 Request for Inquest dated 3 April 2020.

Interested parties

72. In advance of the Directions Hearing on 2 October 2020, eight parties had been identified as interested parties to the investigation:

(a) Richard Hickey Jr, the Senior Next of Kin;

(b) FMIG;

(c) Dr Gavin Tseng;

(d) Programmed;

(e) Dr Doumit Saad;

(f) Priority;

(g) Ambulance Victoria;

(h) ESTA; and

(i) MRI Now.

Removal of MRI Now as interested party

73. After receiving a notification of the Directions Hearing, representatives of MRI Now requested that they not be included in the ongoing investigation, as they advised that their involvement in the circumstances leading up to Peta's death was limited to receiving an already-signed referral for the CTCA and engaging FMIG to perform it.

74. I directed on 29 September 2020 that MRI Now was not required to participate in the investigation moving forward and informed the other parties of this at the hearing on 2 October 2020. Representatives of the Senior Next of Kin opposed this decision and made submissions against it on 8 October 2020.

75. Representatives of MRI Now provided submissions in response to this on 14 October 2020, noting that they agreed to certain specified facts. On the condition that they provide an attestation to these facts, I ruled on 21 October 2020 that they were not required to participate further although they had leave to rejoin the investigation in the future if they wished.

76. An attested document was provided on 20 October 2020. Representatives of MRI Now requested that they not receive all ongoing correspondence in the matter. They were informed that, in the event that matters adverse to MRI Now arose, they would be contacted by the Court.

Addition of Dr Richard Kain as an interested party

77. As the scope of the investigation developed, on 18 December 2020 representatives of Peta's family made submissions that evidence should be obtained from Dr Richard Kain regarding his involvement in the circumstances leading up to Peta's death.

78. I accepted these submissions and on 15 March 2021, the Court informed Kain's representatives that he would be required to appear at the Inquest as a witness.

79. On 24 March 2021, Kain's representatives submitted a Form 31 Application to Appear as an Interested Party. I accepted this application.

Removal of ESTA as an interested party

80. Prior to the Inquest, representatives of ESTA requested that they not be required to participate as an interested party. On 16 March 2021, they made submissions in support of this request, noting that no witnesses from ESTA were to be called and that no part of the scope as it existed could be assisted by an ESTA witness.

81. These submissions were accepted and ESTA was not required to appear. ESTA were informed that, if it appeared that any matters adverse to them would arise, the Court would contact them.

82. After the inquest, ESTA were given the opportunity to respond to a proposed recommendation that would affect their operations. They did so by letter on 2 June 2021.

MRI Now rejoining the proceeding

83. Following the oral evidence of certain witnesses at the Inquest, I requested further statements and documents from MRI Now on 9 May 2021. Due to this request, representatives of MRI Now rejoined the proceedings and appeared at the Inquest on 18 May 2021. Representatives of MRI Now also made written closing submissions on 26 May 2021 and oral submissions on 7 June 2021.

Scope of Inquest and Facts Not in Dispute

84. Although the coronial jurisdiction is inquisitorial rather than adversarial,[50] it should operate in a fair and efficient manner.[51] When exercising a function under the Act, coroners are to have regard, as far as possible in the circumstances, to the notion that unnecessarily lengthy or protracted coronial investigations may exacerbate the distress of family, friends and others affected by the death.[52]

85. In *Harmsworth v The State Coroner,*[53] Nathan J considered the extent of a coroner's powers, noting they are "*not free ranging*" and must be restricted to issues sufficiently connected with the death being investigated. His Honour observed that if not so constrained, an inquest could become wide, prolix and indeterminate. His Honour stated the Act does *not* provide a general mechanism for an open-ended enquiry into the merits or otherwise of the performance of government agencies, private institutions or individuals. Significantly, he added:

> *Such an inquest would never end, but worse it could never arrive at the coherent, let alone concise, findings required by the Act, which are the causes of death, etc. Such an inquest could certainly provide material for much comment. Such discursive investigations are not envisaged nor empowered by the Act. They are not within jurisdictional power.*[54]

86. In *Lucas-Smith v Coroners Court of the Australian Capital Territory*[55] the limits to the scope of a coroner's inquiry and the issues that may be considered at an inquest were also considered. As there is no rule that can be applied to clearly delineate those limits, 'common sense' should be applied. In this case, Chief Justice Higgins noted that:

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[50] Second Reading Speech, *Legislative Assembly: 9 October 2008, Legislative Council: 13 November 2008.*

[51] Section 9 of the Act

[52] Section 8(b) of the Act

[53] (1989) VR 989.

[54] Ibid.

[55] [2009] ACTSC 40.

> *It may be difficult in some instances to draw a line between relevant evidence and that which is too remote from the proper scope of the inquiry...[i]t may also be necessary for a Coroner to receive evidence in order to determine if it is relevant to or falls in or out of the proper scope of the inquiry.*

87. Chief Justice Higgins also provided a helpful example of the limits of a coroner's inquiry, suggesting that factual questions related to cause will generally be within the scope of the inquest. [56]

88. Ultimately, however, the scope of each investigation must be decided on its facts and the authorities make it clear that there is no prescriptive standard that is universally applicable, beyond the general principles discussed above.[57]

Development of the scope and Facts Not in Dispute

89. In advance of the Directions Hearing on 2 October 2020, Counsel Assisting prepared a draft document of proposed 'Facts Not in Dispute' (**FNID**), which would not require further investigation to establish. This was distributed to parties, along with a draft scope for the investigation, addressing remaining matters which required further investigation.

90. At that Directions Hearing, I directed that representatives of interested parties work with Counsel Assisting to agree on a final version of the FNID document so as to establish as many of the facts as possible in order to remove unnecessary matters from the scope of the investigation.

91. At the next Directions Hearing on 16 December 2020, a revised scope of inquest was provided to parties, in light of the FNID document as was agreed at that time.

92. Final versions of the FNID and the scope were distributed to parties prior to the commencing of the Inquest on 29 April 2021. The final Scope document is attached to this Finding as Appendix A, and the contents of the FNID have been incorporated into the circumstances of the death as set out later in this Finding.

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[56] I note that in that matter, Chief Justice Higgins was referring to the cause of a fire. However, I consider this analogous to the cause of death.

[57] See Ruling No.2 in the 'Bourke Street' *Inquest into the deaths of Matthew Poh Chuan Si, Thalia Hakin, Yosuke Kanno, Jess Mudie, Zachary Matthew Bryant and Bhavita Patel* (COR 2017 0325 and Ors), Coroner Hawkins, 23 August 2019.

Witnesses called at the Inquest

93. Sixteen witnesses were called to give oral evidence at the Inquest regarding the factual circumstances surrounding Peta's death:

(a) Chris Sutherland and Rob Kosova, executives at Programmed involved in the development of the CHAP;

(b) Dr Richard Kain, a workplace health physician who was involved in discussions with Programmed at an early stage of the CHAP's development;

(c) Rani Haddad of Priority Care;

(d) Philip Mtanios of Priority Care and MRI Now;

(e) Dr Doumit Saad;

(f) Tim Whicker, who was Client Relations & Operations Manager NSW/ACT for Jobfit at the relevant times;

(g) Dr Gavin Tseng, the radiologist present at FMIG Moonee Ponds on 1 May 2019;

(h) Lesley Gilbert and Tuan-Anh Nguyen, the radiographers who performed Peta's scan at FMIG on 1 May 2019;

(i) Lara Delecheneau and Liezl Samakovski, FMIG administrative staff who were involved with Peta's scan and the management of her contrast reaction;

(j) Geraldine Reddan, Chief Administrative Officer at FMIG, who gave evidence as to FMIG practices and policies; and

(k) Paramedics Melodie Toth, Cam Asker and Joel Malone, who attended the scene of Peta's reaction.

94. Six expert witnesses were also called to provide opinions on medical matters. Their evidence will be discussed in a later section of this Finding.

95. All of these witnesses were examined and cross-examined by Counsel Assisting and the representatives of the interested parties.

Certificates granted under section 57

96. Section 57(1) of the Act permits a witness to object to giving evidence, or evidence on a particular matter, at an inquest on the ground that the evidence may tend to prove that the witness has committed an offence or is liable to a civil penalty.[58]

97. If a coroner finds that there are reasonable grounds for such an objection, they can give that witness a certificate under section 57. The effect of such a certificate is that, in any proceeding in a court or before any person or body authorised by a law of the State of Victoria, or by consent of parties, to hear, receive and examine evidence:

> *(a) evidence given by a person in respect of which a certificate under this section has been given; and*
>
> *(b) any information, document or thing obtained as a direct or indirect consequence of the person having given evidence –*
>
> *cannot be used against the person. However, this does not apply to a criminal proceeding in respect of the falsity of the evidence.*

Rani Haddad and Philip Mtanios

98. On 28 April 2021, prior to the commencement of oral evidence, representatives of Haddad and Mtanios submitted an application that they be granted certificates pursuant to section 57 of the Act in respect of oral evidence that they may give at the inquest.

99. This application was accompanied by an affidavit from their representative, Mr James Hand. Mr Hand's affidavit noted that Saad's written statements contained allegations that persons at Priority had used his electronic signature to order a CTCA for Peta without his knowledge or agreement. Mr Hand submitted that Saad's allegation was in effect an accusation of fraud, a criminal offence.

100. I accepted that this was a reasonable ground for objecting to giving evidence. For this reason, on 28 April 2021 I granted Haddad and Mtanios certificates under section 57 in relation to two matters within the scope of the inquest:

[58] Section 57(1) of the Act

(1) With regard to the presence of Dr Saad's signature on the 'MRI Now – Booking Confirmation' dated 12 March 2019 (including 'referral' form):

a) Who affixed Dr Saad's signature to the 'referral' for the CT Scan?

b) If Priority staff affixed Dr Saad's signature to the 'referral' for the CT Scan, who did Priority consult about affixing Dr Saad's signature to the 'referrals' for the CT Scan?

c) Was either Dr Saad or JobFit asked if Dr Saad's signature could be affixed to the "referral" for the CT Scan?

(2) Was there a practice at Priority Care of making requests or referrals for any scans or any x-rays (or other imaging procedures) without the relevant doctor reviewing the individual patient or their records prior to the procedure? If so –

(a) Were Jobfit or Dr Saad aware of this practice and what was the extent of this practice?

(b) What was the practice and what was the extent of the practice?[59]

101. The certificates as initially made were granted with respect to the evidence of Haddad and Mtanios, to be given on days for which their evidence was then scheduled. As the schedule changed during the Inquest, additional certificates were granted to them on 18 May 2021 and 19 May 2021, covering the same matters.

102. An additional certificate was granted on 30 April 2021 to specifically cover documents produced during evidence on 30 April 2021. The relevant document was an email exchange between Saad and Haddad, which was added to the Coronial Brief as item 64 of the Additional Materials.[60]

[59] Form 32 Certificate for Rani Haddad dated 28 April 2021; Form 32 Certificate for Philip Mtanios dated 28 April 2021.

[60] Form 32 Certificate dated 30 April 2021.

Dr Doumit Saad

103. After his first day in the witness box on Tuesday 4 May 2021, Saad applied for a certificate under section 57 of the Act rendering his evidence in this proceeding privileged in respect of self incrimination in any other proceedings.[61]

104. The reasonable grounds for the granting of the certificates, in their usual prospective form, were apparent to me. Certificates were then granted for his evidence given on 12 May 2021 and 13 May 2021.[62] However, the supporting submissions sought that the certificates operate retrospectively as well, so as to cover his oral evidence given on 4 May 2021.

105. The retrospective operation of the certificates was opposed by the Senior Next of Kin and Programmed.

106. The submissions in support of the retrospective operation of the certificate made analogous reference to Section 128 of the *Evidence Act 2008 (Vic)*, the protective purpose of this type of statutory provision and a line of Victorian County Court authority that had diverged from New South Wales Supreme Court authorities.

107. I prefer the New South Wales line, most recently reaffirmed in *Shanahan v Jatese Pty Ltd: In Re Chynoweth and section 128 of the Evidence Act 1995 (NSW)*.[63]

108. In *Shanahan*, Hammerschlag J's analysis[64] compelled a conclusion which was the same as that reached ten years earlier in *Meiko Australian Pacific Pty Ltd v Adam Samuel Hinchcliffe*.[65] Section 128 does not permit a certificate to be issued in respect of evidence already given, if no objection was taken,[66] as the transcript shows was the case in this matter.

109. His Honour observed that it "*is plain that the objection must and can only be taken*

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[61] Messers Haddad and Mtanios had already been granted similar certificates by this stage.

[62] Form 32 certificates dated 11 and 13 May 2021.

[63] [2018] NSWSC 1097

[64] *Shanahan,* [13] – [26].

[65] [2009] NSWSC 354, see especially at [183]-[191].

[66] *Shanahan,* [27] citing with approval *Meiko,* [183] – [186].

before *the evidence is given*"[67] and that the text and structure of the provision "*do not accommodate any other answer*".[68]

110. Section 57 plainly covers the field. The coverage is achieved by section 58 of the Act preventing the operation of the analogous Part 3.10 of the *Evidence Act*, leaving section 57 as the only operative provision.

111. Further, the purpose of this type of provision is not just protective, but is to provide a mechanism by which to balance the well-recognised privilege against self incrimination[69] with the interests of the administration of justice in triers of fact receiving as much relevant evidence as possible.

112. Accordingly, on 20 May 2021 I ruled that none of the certificates had retrospective effect.

Credibility of witnesses

113. Before I begin setting out the results of my investigation, it will be convenient for the reader that I summarise my views on the credibility of certain witnesses, having had the opportunity to both see and hear them in the witness box whilst they were being examined.

114. I was not impressed by Kosova and Haddad. Their answers had a slick, manufactured note to them that struck me as being self-serving and well prepared, rather than spontaneous.

115. Nonetheless, those answers at least appeared to have been thought through. Unfortunately, that is not how I would describe the implausible evidence provided to me at different times by Mtanios, and both Saad and Tseng. I shall say more about this later, but it will suffice for now to record that Mtanios had to be repeatedly encouraged to actually answer the questions being put and had to be dissuaded from attempting to argue with counsel's questioning. His own Counsel properly recognised this and apologised to the Court for his conduct in the witness box.

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[67] *Shanahan,* [20].

[68] *Ibid* [11].

[69] By both section 25 of the *Charter of Human Rights and Responsibilities 2006*, and at common law.

116. Dr Saad, for his part, took an inordinate amount of time to answer certain questions, although he did eventually make some concessions against his own interest.[70]

117. Dr Tseng repeatedly explained that he could not recall many key details of the events[71] because of the shock he experienced,[72] yet he claimed to have specific recall of certain facts helpful to him. Whilst such a response is perhaps consistent with the experiences of some people who participate in traumatic incidents, it nonetheless does not leave him as a reliable historian. He also omitted to foreshadow any of his difficulties with his memory, despite providing the Court with three separate witness statements and then asking to alter aspects of those statements at the outset of his oral evidence, failing to provide an explanation as to why he wished to make those late changes.[73]

118. In contrast, I was particularly impressed by the evidence of Kain and FMIG's employees Delecheneau, Gilbert, Nguyen and Reddan. These witnesses gave evidence which, at times, could be seen to be against their own interests and, accordingly, spoke all the more highly of their personal integrity. They also answered the questions with a level of spontaneity that I found persuasive.

Sources of Evidence

119. This Finding draws on the totality of the Coronial Brief and further material sought and obtained by the Court, the evidence adduced during the Inquest, as well as the oral and written submissions provided by Counsel.

120. In writing this Finding, I do not purport to summarise all of the evidence but refer to it only in such detail as appears warranted by its forensic significance and the interests of narrative clarity. The absence of reference to any particular aspect of the evidence does not imply that it has not been considered.

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[70] For instance, under sustained cross examination, he retreated from asserting he had not *read* or *seen* his name on medical reports, to asserting that he did not *notice his name as the referring doctor,* to conceding that it is possible that he could have noticed that it was his name (T311 L26-T312 L6 in relation to the one page report AM3-08, report from Radiology SA dated 21 January 2019).

[71] T405.19-406.1, 405.7-8, 410.8-10, 410.15-16, 414.18, 416.1-4, 480.31-481.4, 483.3-10, 483.28, 585.1-6.

[72] T580 L18, T581 L4-10, T582 L9, T584 L21-25

[73] T414.29, 475.4

IDENTITY OF THE DECEASED

121. On 8 May 2019, Richard Hickey Jr visually identified the body of his partner, Peta Hickey, born 19 June 1975. Identity is not in dispute and requires no further investigation.

CIRCUMSTANCES SURROUNDING THE DEATH

Personal history

122. Peta Hickey was born on 19 June 1975 and was 43 years old when she passed away on 9 May 2019. Her partner was Richard Hickey, with whom she has two dependent children.

123. Through their 13 shared years together, Richard "*was able to witness her passion for life first-hand, whether it involved her love and care for family and friends, to a dedication towards her career within the health industry, spanning 20 years*."[74]

124. The warmth and depth of her personal relationships was further confirmed by the statements provided to the Court by her long term friends.

Pre-existing relationships between individuals and entities

125. In order to understand why an invasive medical procedure such as this CT scan, with well-known risks, was performed in circumstances outside those permitted by the Medicare benefits schedule on an otherwise healthy lady, it is necessary to understand some relationships between the people who contributed to Peta's death.

126. Peta was employed by Programmed Skilled Workforce Limited, located at 333 Collins Street, Melbourne, as General Manager of Operations (Direct Care). In 2015, Programmed Skilled Workforce Limited became a subsidiary of Programmed Maintenance Services Limited, a provider of staffing, maintenance and facility management services.[75] The Programmed registered head office is in Burswood, Western Australia.[76]

127. Prior to and during the development of the Programmed CHAP, a number of the entities and individuals playing a role in that development were already dealing with

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[74] AM3-17 - Statement - Richard Hickey (incl exhibit) – 30 09 2020, at [3].

[75] 2019 2336 Hickey – AM3-19 - Statement - Chris Sutherland (Programmed) – 16 10 2020, paragraphs 3 and 5; Sutherland, T35 – T36 (29 April 2021)

[76] Sutherland, T35 (29 April 2021)

each other professionally in some capacity. Some parties had close and ongoing professional relationships.

128. Programmed had previously worked with both Kain and with Priority /MRI Now. While Kain had no relationship with Saad before or during the CHAP, Priority /MRI Now had an extensive history working with Kain and he had been involved in previous work for Programmed through Priority.

Relationship between Priority and MRI Now

129. Representatives of Priority and MRI Now took great pains to distinguish between the two companies. In reality, Mtanios had roles with both.

130. Whilst it may not be the case in other forums, within the coroner's jurisdiction it is not vital to differentially allocate Mtanios' various actions to his various corporate roles. It is clear though that his role in conceiving of and negotiating the CHAP was directly causative of the actions later taken by both Priority and MRI Now with respect to that programme.

Key finding:	**Mtanios' role in conceiving of and negotiating the CHAP was directly causative of the actions later taken by both Priority and MRI Now with respect to that programme.**

Role of Kosova at Programmed

131. The relationships between Programmed and Priority, MRI Now, Kain and Saad were all mediated by Programmed's Rob Kosova.

132. At the time when the CHAP began, Kosova was Managing Director of Workers Compensation. He managed a team of around twenty employees in assisting injured workers with workers compensation claims and seeking treatment via preferred medical providers. This role also included managing pre-employment health assessments for labour hire staff and a nursing advice phone line. In this capacity, Kosova had extensive involvement with the health sector.[77]

Relationship between Dr Kain and other parties

133. Dr Kain is the Managing Director of Complete Corporate Health (**CCH**), which provides acute and ongoing injury management to companies for their injured

[77] Kosova, T79.7 – T79.24; T79.30 – T80.4.210]238]

workers and pre-employment medicals, alcohol and drug testing, fitness for work screening and medicolegal reports.[78]

134. Priority had previously referred work to Kain and CCH. Through Priority, Kain met Kosova and from May or June 2018, CCH undertook "*wellness medicals*" for Programmed staff at their Burswood offices. Kain's direct dealings had been with Mtanios in his capacity at MRI Now. Kain had treated Programmed employees at Burswood.[79] Soon thereafter, Mtanios) requested that Kain introduce Kosova to 'Handoc', an organisation specialising in plastic surgery for acute hand trauma.[80] It was this brief meeting with Kosova that led Kain to become involved in advising on the CHAP and appropriate heart tests for Programmed.

Relationship between Programmed and Priority /MRI Now

135. Philip Mtanios (who had at least a nominal role of managing director with both Priority and with MRI Now) had previously introduced Programmed and Priority to each other.[81]

136. By May or June 2018, Programmed was already dealing with Priority and MRI Now with regard to streamlining the injury management and pre-employment medical assessments Programmed provided to their own (Programmed) employees as well as their labour hire staff. Kosova had engaged Priority for this project, with approval.[82] To deliver the pre-employment services, Priority had previously engaged a Chief Medical Officer on an *ad hoc* basis for some of those specific projects, but they did not do so for the CHAP.[83]

137. Previously, Priority had also provided Programmed with an early intervention advice and triage service via a 24/7 nursing hotline to notify of employee incidents and injuries.[84]

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[78] 2019 2336 Hickey – AM3 – 57 - Statement – Dr Richard Kain – 21 04 12- paragraph 7

[79]2019 2336 Hickey – AM3-57 – Statement of Dr Kain – AM3-57-2, paragraphs 9 -11; Kain, T349.17 – T350.20; Kosova, T80.4 – T80.8; Mtanios, T1591.24 – T1592.8

[80] 2019 2336 Hickey – AM3 – 57 - Statement – Dr Richard Kain – 21 04 12- - paragraphs 8 - 10

[81] Mtanios, T1566.14 - T1567.26 and T1568.19 – T1568.30

[82] Kosova, T79.25 – T81.12 and T132.6 – T132.18; Haddad, T1447 – T1448 and T1453.27 – T1454.2; Sutherland, T42 (29 April 2021);

[83] Haddad, T1450 – T1451

[84] Haddad, T1448.21 – T1449.19

138. From 2015 to 2018, Kosova states that he had been involved in attempted roll outs of pre-employment initiatives for Programmed, using Priority. However, funding for those had not been approved and these didn't go ahead.[85]

Relationship between Dr Saad and Priority /MRI Now

139. Dr Saad had an ongoing professional relationship with MRI Now (its managing director and sole owner being Mtanios). From approximately 2008 to 2015, Saad was engaged by Mtanios to do consultancy work for MRI Now on an *ad hoc* basis. From 2015 to June 2019, Saad was formally engaged by MRI Now as a consultant. Between January 2018 and August 2019, Saad was paid $6000 monthly by MRI Now for services provided by him in relation to start-up companies within the MRI Now 'group'.[86]

Previous work done for Programmed by Dr Saad

140. From around 2008, Mtanios and Saad had been working to expand the MRI Now medical image booking business by promoting this service in the workers compensation industry. By 2018, Saad and Mtanios, via Priority, sought to provide their service to Programmed in further locations. By late 2018, Priority was providing Programmed employees with injury management and pre-employment medical assessments and there were prospects of expanding that business with Programmed.[87]

141. Mtanios stated that he believed he was first introduced to Programmed by Saad. Saad states he was aware of discussions Mtanios was having with Kosova of Programmed in early 2018 to expand the pre-employment medical assessment work. Mtanios states this pre-employment work was for Priority, not MRI Now. Saad, Mtanios, MRI Now and Priority were working closely in 2018 to expand Priority's injury management work to provide a national service via its network. This included expanding work with Programmed.[88]

142. Whilst it is unclear precisely how these relationships developed, it is clear that Saad, MRI Now (Mtanios), Priority and Programmed had dealings with each other prior to

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[85] Kosova, T93.22 – T94.4

[86] 2019 2336 Hickey – AM3-63 - Statement (3) – Dr Doumit Saad – 23 04 2021, AM3-63-1; 2019 2336 Hickey – AM3-91 – Statement – Philip Mtanios for MRI Now – 17 05 2021, AM3-91-1 –91-2

[87] Mtanios, T1594.14 – T1595.21; 2019 2336 Hickey – AM3-63 - Statement (3) – Dr Doumit Saad – 23 04 2021, AM3-63-3; Haddad, T1453.27 – T1454.10

[88] Mtanios, T1590 – T1591; Saad, T220.21 – T221.22

June 2018, and were all developing mutually beneficial commercial relationships in relation to the provision of health-related services well before the time that Peta unfortunately crossed their paths.

Key finding:	**Prior to June 2018, Saad, MRI Now (Mtanios), Priority and Programmed had already had dealings with each other and were developing mutually beneficial commercial relationships in relation to the provision of health-related services.**

The CHAP

143. Because of its causal role in Peta's ultimate death, the collaborative development and oversight of Programmed's CHAP requires a detailed excavation.

144. The evidence regarding the history of the CHAP was much more obscure than one would expect if one were dealing with a coherently designed and rationally targeted programme.

145. A consequence of this opacity is that I will need, occasionally, to interrupt the fact finding narrative below to indicate the conclusions I have drawn, where this will affect interpretation of later events.

Genesis of the CHAP

146. On 31 May 2018, Mr Glenn Thompson, the Managing Director and CEO of Programmed's Maintenance Division, suffered but survived a cardiac arrest whilst on a business trip to Japan. Spurred on by this close call, the Managing Director and CEO of Programmed Chris Sutherland [89] states that he requested that the managers responsible for Workers Compensation (Kosova) and Occupational Health and Safety (Malcolm Deery) "*ascertain the best medical checks*" they could make available to their managers, including "*the best private medical assessment program for heart health.*".[90]

[89] Sutherland, T34.24 to T35.1 (29 April 2021)

[90] 2019 2336 Hickey – AM3-19 - Statement - Chris Sutherland (Programmed) – 16 10 2020, paragraphs 7 - 18

147. Glenn Thompson had told Sutherland that Thompson's GP had not recommended he get a heart check as he was otherwise healthy. For his part, Sutherland also had children who had heart conditions that had gone undiagnosed for 20 years.[91]

148. Sutherland formed the impression that doctors refused to give heart checks to the asymptomatic as Medicare wouldn't cover it, and that this was due to "*cost to the system*". Sutherland therefore formed the view that the obstacle to obtaining such "*heart checks*" was a matter of cost that could be overcome if privately funded, in this case by Programmed.[92]

149. Sutherland did not enquire whether his impression was correct, but instead jumped ahead one step and enquired as to the best heart check that Programmed could privately provide.[93] On balance I find that Sutherland was well-intentioned, though mistaken in his impression as to why heart tests are not ordinarily carried out on, or referred by doctors for, the asymptomatic.

Key finding:	**Sutherland, with good intentions, formed the mistaken view that doctors refused to give CTCA scans to asymptomatic patients because of cost, rather than other considerations.**

150. Sutherland considered the Programmed personnel most at risk were those affected by a combination of two factors – those who travelled most and so were in remote locations, foreign countries or on an airplane and those who had the workload and potential stress as more senior managers. Sutherland wanted to give Programmed's managers with that profile the opportunity to have heart checks done at the company's cost.[94] His view was always that the risk of heart disease was "*very small*" but he considered the consequence of the risk very high if it were to eventuate. His aim was to eliminate the risk of a low probability event that may have fatal consequences.[95]

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[91] 2019 2336 Hickey – AM3-19 - Statement - Chris Sutherland (Programmed) – 16 10 2020, paragraphs 7 - 18

[92] Sutherland, T43 – T45 (29 April 2021); AM3-19.

[93] Sutherland, T43 – T45 (29 April 2021); AM3-19.

[94] 2019 2336 Hickey – AM3-19 - Statement - Chris Sutherland (Programmed) – 16 10 2020, paragraphs 12 – 14 Sutherland, T45 - T46 (29 April 2021).

[95] Sutherland, T47 (29 April 2021)

151. Sutherland did not obtain medical advice about his impressions from anyone directly, but instead relied on Kosova and Deery to speak to people and come up with the heart check programme.[96]

152. Sutherland had discussions with Kosova and sent an email to him, copying in Deery, immediately after the incident involving Glenn Thompson on 1 June 2018.[97] In this email, Sutherland asked Kosova if there was a heart doctor who could do a "*corporate deal*" with Programmed because his own GP and cardiologist had refused him such a test when he had no symptoms.[98] However, Sutherland stated he was not merely seeking a willing doctor, he was seeking a second or third medical opinion, given the risk of undiagnosed cardiac injury that he perceived for his staff.[99]

153. Sutherland trusted in the "*high standard*" and "*regulatory oversight*" of the Australian health care system to eliminate any risk arising from the test itself. He also trusted in his delegates, Deery and Kosova, to make such an assessment or to obtain adequate medical advice as to the "*best heart check*" Programmed could provide. Sutherland did not turn his mind to the specific risks of the CHAP, such as allergic reactions, as he regarded this as being in the hands of the clinics and the doctors.[100]

154. Kosova and Deery had an initial discussion about what to do next. Kosova regarded the situation as urgent, in that there was a desire from the executive team to get some advice to the team to consider "*as quickly as possible*".[101]

155. Kosova's goal was to identify what tests were available that were reliable and could "*give an accurate prediction of the risk of cardiac problems*" and who could arrange them.[102] Kosova understood the request to find a "*corporate deal*" to mean he was to arrange this for Programmed as an organisation and to liaise with their "*corporate network*", developed via their previous interactions with the health industry, for example via Programmed's pre-employment arrangements for their workforce. As

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[96] Sutherland, T46 - T47 (29 April 2021); Kosova, T79

[97] 2019 2336 Hickey – AM3 - 19 - Statement – Chris Sutherland – 18 10 2020 -, AM3 -19-7; 2019 2336 Hickey – AM3 - 54 - Statement – Rob Kosova – 05 02 2021, AM3 54-6 to 7; Kosova, T81 – T83

[98] Sutherland, T49 (29 April 2021)

[99] Sutherland, T49 – T50.1-T50.9 (29 April 2021)

[100] Sutherland, T45 and T51.14-T51.25 and T53.8 – T53.15 (29 April 2021)

[101] Kosova, T83

[102] 2019 2336 Hickey – AM3 - 54 - Statement – Rob Kosova – 05 02 2021 - paragraphs 4 - 5

stated above, in 2018, this network included Priority,[103] and Kosova was of the view Priority may be able to provide "*a heart check service*" or put him in touch with the right provider.[104]

Discussions with service providers

156. On 1 June 2018, Kosova contacted Haddad and Mtanios regarding the possibility of Priority being involved in the "*executive cardiovascular health check program*" for Programmed. Kosova forwarded Sutherland's email of 1 June 2018 to both, addressing it to "*Gents*", and stating:[105]

> *Our MD has asked me to get onto heart checks for the Executive team – noting his comments below (usual GP's won't go the extra mile unless someone is symptomatic and/or family history..)*
>
> *Can we talk about the best type of Exec assessment, which includes perhaps a stress ECG?"*
>
> *I'm happy to fund this out of my own budget if needed – I'd really like to endear our PCHS network into the minds of our EXCO – providing a service now when everyone is sensitive to it is the best way to do that…timing is everything*
>
> *Can we talk Monday?*

157. As Kosova was due to leave Programmed by November 2018, he was anticipating the handover of his projects. By wanting to 'endear' the 'PCHS network' to the Executive Committee, Kosova explained he wanted to ensure continuity of service between his corporate contacts and his successor, because until this time, Kosova and his team had been the only Programmed contact with Priority.[106]

158. On 7 June 2018, Kosova, Haddad and Mtanios held a telephone conference to discuss this matter.[107]

159. At this stage, Mtanios was Managing Director of both Priority and MRI Now. MRI Now told me that there was no contractual relationship between Priority and MRI

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[103] Kosova, T88.29 – T89.12

[104] 2019 2336 Hickey – AM3 - 54 - Statement – Rob Kosova – 05 02 2021 - paragraph 6

[105] 2019 2336 Hickey – AM3 - 54 - Statement – Rob Kosova – 05 02 2021 - paragraphs 7 – 8 and AM3-54-6-7; 2019 2336 Hickey – AM3-31 – Statement – Rani Haddad (Priority) – 04 11 2020, paragraph 6

[106] Kosova, T84.20 – T84.23 and T94

[107] 2019 2336 Hickey – AM3 - 54 - Statement – Rob Kosova – 05 02 2021 - paragraph 10 and AM3-54-4 - 5

Now, that Priority is a user of MRI Now as a Medical Imaging booking concierge service, and that MRI Now did not have a role beyond assisting clients with options as to which imaging centre to attend.[108] While this may be the case as a matter of form, it was Mtanios who first initiated the professional relationship between Priority and Programmed and who was working at expanding roles for both Priority and MRI Now with Programmed at this time. Mtanios said this is why he was included in this email correspondence.[109] MRI Now states that in the chain of emails between Kosova, Haddad and Mtanios in early June 2018, Mtanios was acting in his role as Managing Director of Priority only.[110]

160. For reasons set out below, none of these corporate structures persuaded me that Mtanios was not a causative actor in the chain of events that led to Peta's death.

Key finding:	**None of the corporate structures including Priority or MRI Now change the fact that Mtanios was a causative actor in the chain of events that led to Peta's death.**

161. Meanwhile, at some time during June 2018, Kosova had been travelling to an unrelated professional meeting on hand trauma at Handoc with Kain. While *en route*, Kosova opportunistically snatched a short conversation with Kain about his search for a heart check test for asymptomatic people.[111]

162. In a subsequent email on 2 July 2018, Kosova asked Kain the following:[112]

> ...
>
> *Richard, when we drove to see Handoc you mentioned a CVD test that was very thorough and could provide confidence of a persons CVD risk (I think your [sic] said no need for retesting for 10 years?)*

[108] Facts not in dispute relating to MRI Now – signed (3851351.1), paragraph 4 – 5; See also 2019 2336 Hickey – AM3-91 – Statement – Philip Mtanios for MRI Now – 17 05 2021 para no.?

[109] Mtanios, T1567.21 – T1568.6

[110] Facts not in dispute relating to MRI Now – signed (3851351.1), paragraphs 3 – 4 and 6

[111] 2019 2336 Hickey – AM3 - 54 - Statement – Rob Kosova – 05 02 2021 - paragraph 12, 2019 2336 Hickey – AM3 – 57 - Statement – Dr Richard Kain – 21 04 12- paragraphs 11-12; Kosova, T96 – T97

[112] 2019 2336 Hickey – AM3 - 54 - Statement – Rob Kosova – 05 02 2021 - paragraphs 13 and 16, and AM3-54-9; 2019 2336 Hickey – AM3 – 57 - Statement – Dr Richard Kain – 21 04 12- paragraph 13 and AM3-57-5 –-6

My Managing Director wants to implement some form of thorough CVD assessment for his Management Team (it can also include a general health check like the recent medicals held at Burswood). One of our CEO's had severe chest pain while in Tokyo (for work recently), he was fortunate to have been taken directly to ED over there, rushed straight into surgery to insert 2 stents in one of the arteries… There is a heightened sensitivity so my MD wants to know what is the gold standard / best assessment they should be requiring of Exec Team members…

163. In an email on 3 July 2018, Kain responded to Kosova's email of 2 July 2018 and elaborated on the mentioned 'CVD test' as follows:[113]

Hi Rob

Yes, coronary artery CT calcium scores with angiogram is the test I was talking about.

One of my patients with long standing heart disease with stents, saw the cardiologist 3 weeks ago. The cardiologist hadn't seen him in a few years, so instead of stress echocardiogram, had him undertake the Ct scan. Low and behold, severe critical stenosis of his LAD (major heart vessel), straight into the cath lab and a stent inserted. This man had no symptoms and no indication to do the test but his cardiologist thought he would do it on a whim. A whim that undoubtedly saved his life.

It's a great test in that it gives everyone a real feel for what is actually there in the coronary arteries.

The cost is around $560, and it takes about 45 minutes. Result back within 24-48 hours.

It would be very easy to incorporate this into thorough cardiovasc assessment (blood test and medical). How many people are in the Exec Team?

164. Dr Kain responded to Kosova's queries by confirming the test he had been talking about was a "*Coronary artery CT calcium scores with angiogram*" and then recounted an anecdote of how the test saved the life of a man with long standing heart

[113] 2019 2336 Hickey – AM3 - 54 - Statement – Rob Kosova – 05 02 2021 - paragraph 14 and AM3-54-8 – AM3-54-9; 2019 2336 Hickey – AM3 – 57 - Statement – Dr Richard Kain – 21 04 12- paragraph 14 and AM3-57-5

disease.[114] Kosova regarded this as medical advice aimed specifically at the asymptomatic Programmed executives.[115]

165. In an email dated 3 July 2018, Kosova then forwarded (with slight alteration) Kain's 3 July email to Sutherland, with an attachment titled 'Angiography FAQ'.[116] In this email Kosova summarises Dr Kain's recommendations, stating:

> *Below is a response from Dr Richard Kain on his recommended heart disease tests (by way of background, Richard treats our injured employees and also conducted health checks at Burswood in June, arranged by the Burswood office Safety Working Group calendar event):*
>
> - *Coronary artery calcium (CAC) score (a good article is here: http://www.abc.net.au/news/2017-10-10/fact-check-coronary-calcium-score-heart-disease/9023960), with*
> - *Angiogram (see attached FAQ), and*
> - *Standard health check/ cardiac risk factor (blood pressure, blood test, lifestyle questionnaire)*
>
> *It looks like CAC is developing a reputation as the best predictor, with the only real draw back appearing to be the radiation dose of the CT scan used to generate the CAC score equivalent to 50 chest x-rays per CT scan.*
>
> *Please let me know if you would like any more info and/or would like Dr Kain to come in to discuss (his clinics are in Perth CBD and Ascot, so close by)…*

166. Kosova forwarded the email from Kain to Sutherland, setting out what he considered to be the steps involved, as relayed by the doctor, and providing supporting information (attached) to Sutherland regarding Kain's advice. However, this additional material attached to the email to Sutherland was based on Kosova's own inexpert research and was not provided by Kain.[117] The additional material attached to the email was comprised of a link to an ABC story and a 'FAQ' document obtained

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[114] 2019 2336 Hickey – AM3 - 54 - Statement – Rob Kosova – 05 02 2021, AM3-54-8 - 9

[115] Kosova, T105.11 – T105.28

[116] 2019 2336 Hickey – AM3 - 54 - Statement – Rob Kosova – 05 02 2021 paragraph 15 and AM3 – 54-8 --9 and AM3-54-11 -14

[117] The evidence of Kain will be considered below.

from the Heart Foundation website which, as it turned out, referred to the wrong test, being an angiogram rather than the CTCA.[118]

167. It is also noted that when forwarding Kain's email to Sutherland, Kosova did not alter Kain's portion of the email but he did alter the email chain showing the history of his correspondence with Kain. Specifically, he altered the text of his own email to Kain, removing the paragraph "*My Managing Director wants to implement some form of thorough CVD assessment for his Management Team (it can also include a general health check like the recent medicals held at Burswood). One of our CEO's had severe chest pain while in Tokyo (for work recently), he was fortunate to have been taken directly to ED over there, rushed straight into surgery to insert 2 stents in one of the arteries… There is a heightened sensitivity so my MD wants to know what is the gold standard / best assessment they should be requiring of Exec Team members…*" and replacing it with the single sentence "*Can you please confirm the test/process please?*" I do not find that this alteration had any effect on Sutherland's decision-making.[119]

Key finding:	**Kosova's alteration of Kain's email on 3 July 2018 did not affect Sutherland's decision-making.**

168. Around this time, Kosova was preparing to leave his employment with Programmed to take up a position with QBE Insurance, which he did on 9 November 2018.[120] There were a number of 'handovers' of Kosova's projects underway by October 2018. The CHAP was one such project, and Kosova was handing it over to Deery in the short term whilst his own replacement was recruited.[121]

169. Following the Kain email forwarded by Kosova to Sutherland and a follow up conversation between Sutherland and Kosova, Sutherland accepted the doctor's recommendations and made no further enquiries of or about Kain or the tests mentioned. Sutherland accepted that the health check for Programmed participants

[118] 2019 2336 Hickey – AM3 – 54 – Statement – Rob Kosova – 05 02 2021, AM3 -54.8; Kosova, T106, T109.10 – T110.8 and T111.

[119] Kosova's original email can be found attached to the statement of Kain at AM3-57-3; Kosova's later email to Sutherland with the altered email chain can be found attached to Kosova's statement at AM3-54-9.

[120] Kosova, T84.29 – T84.31

[121] Kosova, T86.7 – T86.17

would include the three steps set out in Kosova's summary, including a test for cardiac risk factors.[122]

The roles of Sutherland and Kosova

170. As stated above, I find Sutherland was basically well-intentioned, though he was mistaken in the impression he had formed as to why a heart tests are not ordinarily referred by doctors for the asymptomatic.

171. Further, my conclusions on the inception and initial development of Programmed's CHAP are that Sutherland, as CEO of Programmed, had conveyed to Kosova the urgent need to identify a suitable "heart check" for Programmed executives, following the Glenn Thompson incident.[123] Sutherland conveyed this urgency to Kosova without conveying concern regarding any risk arising from the test itself and the level of diligence the enquiry might entail. Sutherland had assessed the risk to Programmed executives to be injury through possibly fatal heart event and so did not turn his mind to the distinct risk of a heart check programme itself. In any event, he relied on Kosova and any medical practitioners or associated clinics to manage this risk.[124]

172. Given Kosova's senior role as Managing Director of Workers Compensation at Programmed and his experience in the health space, it was reasonable for Sutherland to delegate the identification of a suitable test to him. From that point onwards, Kosova, as Sutherland's delegate, was the 'controlling mind' of the Programmed corporation.

173. While it was reasonable for Sutherland to rely on Kosova to diligently perform the task that had been delegated to him, Kosova unfortunately did not do so, despite his experience in commissioning and designing workplace health programmes. He knew that he had not paid for any proper programme design input and was instead focused on reporting the completion of the task to his CEO prior to his imminent departure from the company.

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[122] Sutherland, T55 – T58, in particular T56.7 – T56.10 and T58.11 – T58.20 (29 April 2021); 2019 2336 Hickey- AM3-19 -Statement – Chris Sutherland (Programmed) – 16 10 2020, paragraphs 22 – 23 and AM3-19-8

[123] Kosova, AM3-54, [3]; Kosova, T91.12 – T91.21

[124] Sutherland, T53.8 – T53.15 and T57.11 – T58.10 (29 April 2021)

174. Kosova did not pay Kain for his medical advice, nor engage him formally in the subsequent processes. Rather, in obtaining the medical advice on which his recommendations to Sutherland and Programmed were based, Kosova relied on an "*open question*", put in hypothetical terms, as to what assessment of cardiovascular disease in asymptomatic people Kain would recommend. This was a question posed during a conversation with Kain during a short car drive to an unrelated work meeting that they were attending together.[125] The answer to that question and one follow up email with Kain was taken by Kosova to be sufficiently formal medical advice for the programme to proceed.[126] Kosova did not ask about any risks posed by the test mentioned but noted only Kain's "off the cuff" warning as to the risk of exposure to radiation.[127] Further, Kosova regarded an email confirmation of the name of the test mentioned by Kain in the car and an anecdote as to its success as adequate medical advice from Kain.[128]

175. The conduct of Programmed via Kosova was rushed in the interests of satisfying Sutherland's urgent request. As such, there was a failure of due diligence and risk assessment in the obtaining of what was informal medical advice with little to no follow up. The paucity of medical advice and assistance was not conveyed to Sutherland as to the selection of the heart test or the subsequent implementation of the CHAP on the basis of that advice.

Key finding:	**The conduct of Programmed via Kosova was rushed and there was a failure of due diligence and risk assessment in the obtaining of informal medical advice with little to no follow up.**

176. In fairness, it is Kosova's evidence that a 'second opinion' was sought from Saad, but this advice was equally informal, as will be considered below, and so did not cure the deficiencies of Kain's initial advice.

The role of Dr Kain

177. In his oral evidence, Kain candidly admitted that he knew he was giving medical advice to Kosova on the best cardiovascular disease test (the CT CAC and CTCA

[125] Kosova, T99.16 – T99.21, T99.31 – T100.30 and T101.18 – T101.26

[126] Kosova, T102.7-T102.9

[127] Kosova, T100.27

[128] Robert Kosova, T105.11 – T105.28

tests) during his short car ride to Handoc and in their brief exchange of emails in early July 2018. He was in "*professional mode*" and he knew the test he was recommending was intended for asymptomatic people.[129] Kain also admitted he knew his advice was incomplete,[130] and whilst he expected to be able to complete the advice at a later stage, he did not state that the advice was incomplete, nor did he subsequently give a more complete clinical picture, when he was followed up by email. As stated above, in the email correspondence that followed, Kain simply confirmed with Kosova the name of the test he had referred to in the car and recounted a recent anecdote to recommend the CT scan test.[131]

178. However, it is of some significance that Kain had regarded the conversation with Kosova in the car as incomplete because it was only of a preliminary nature. He had intended to provide more complete advice at a later date, anticipating he may have ongoing commercial involvement with Programmed here.[132] Importantly, in his follow up email to Kosova of 3 July 2018, Dr Kain restated that the CT CAC and CTCA was 'a great test' but added that: "*It would be very easy to incorporate this into thorough cardiovasc assessment (blood test and medical).*" Kain was thereby referencing two alternate diagnostic and assessment pathways. Kain had understood that as the tests were to involve Programmed upper management, the next step would have been a more thorough assessment of their risk factor profile (such as blood tests or an ECG).[133] This was sufficient in my eyes to exonerate him from having made a causal contribution to Peta's death.

Key finding: Dr Kain did not make a causal contribution to Peta's death.

179. Further, Kain had invited Kosova to please let him know if he'd like more information or would like Kain to come in to discuss the advice further. However, Kosova and Sutherland's dealings with Kain went no further than those couple of emails in early July 2018. There was no follow up contact or meeting arranged with

[129] Kain, T354.23- T354.29, T363.14 – T363.20, T356.5 – T357.9, T371.25 – T372.2 and T383.6 – T383.15

[130] Kain, T360.10 – T360.14

[131] 2019 2336 Hickey – AM3 – 57 - Statement – Dr Richard Kain – 21 04 12, AM3-57-5;
Kain, T362.5 – T362.21

[132] Kain, T357.16 – T357.30, T358.10 – T358.21, T360.10 – T360.27, T373.27 – T373.29 and T381.3 – T381.5

[133] Kain, T364.5 – T364.26

Kain by anyone at Programmed, including those to whom Kosova handed over the project.[134]

180. It can be surmised from his evidence as a whole that Kain intended his advice to be preliminary to him having further involvement with Programmed and potentially obtaining work providing medical services through Priority.[135]

181. On the whole, the conduct of Kain was somewhat careless, in that he failed to complete advice that he knew was incomplete, but not sufficiently careless to justify a regulatory referral. Medical professionals proffering advice with a predominantly commercial motive, that is, proffering advice in order to attract future work, should remain cognisant that this does not negate their professional obligations to the patient, even to merely 'potential' patients. As an example of best practice, Kain would have presented Kosova with the possible downsides and risks of the test he was recommending or made it explicitly plain from the outset that his advice was limited or incomplete.

Key finding:	**Dr Kain intended his advice to be preliminary to him having further involvement with Programmed and potentially obtaining work providing medical services. On the whole, his conduct was somewhat careless, in that he failed to complete advice that he knew was incomplete, but not sufficiently careless to justify a regulatory referral.**

Design of the CHAP and the meeting on 19 October 2018

182. Neither Kosova nor Sutherland had any further conversations with Kain about the recommended test or followed up on his advice orally or in writing. Rather, Kosova was asked by Malcolm Deery to consult a different doctor for a second opinion.[136]

183. Although this is a point of great controversy, which I will discuss below, I find that Kosova then obtained a 'second opinion' to clarify the correct test from Saad, and that the substance of this 'second opinion' was that coronary angiograms were an

[134] Kain, T368.10 – T368.21

[135] Kain, T375.4 – T375.10

[136] Kosova, T120.19 – T120.21 and T142.25 – T143.19

unnecessarily invasive test, but that there was a less invasive test available, the CTCA.[137]

Key finding:	**After considering Kain's advice, Kosova obtained a 'second opinion' from Saad. The substance of Saad's 'second opinion' was that coronary angiograms were an unnecessarily invasive test, but that there was a less invasive test available, the CTCA, which was suitable.**

184. I find that Saad provided this 'second opinion' at some point prior to the finalisation of the design of the CHAP. Though it is not clear precisely when, or in what circumstances, this second opinion as to the appropriate test was provided by Saad, it was certainly sometime between June and October of 2018, well before Peta participated in the programme.[138]

185. Regardless of when and how the further opinion of Saad was obtained, I find that, for the second time, Kosova did not obtain any formal confirmation of this purported medical advice.[139]

Key finding:	**After receiving Saad's 'second opinion', Kosova did not obtain any formal confirmation of this purported medical advice.**

186. Kosova instead relayed this medical advice both to Sutherland and to Priority and for "*collective decision*" at the Programmed "*executive*" level.[140] He admitted he had wanted to "*get the executive assessments kicked off as soon as possible*" as he was trying to get all his projects to a clear handover point. [141]

187. It is significant that Kosova could not produce any document, commissioned by him for the purpose of scoping whether to run the CHAP proposal at all. Kosova was tasked with obtaining the medical advice and information by Sutherland and Deery, who he reported to, but he himself was not on the Programmed executive who would

[137] Kosova, T111.11 – T111.30

[138] This issue is addressed in more detail below. By Kosova's own admission at T111.11 – T112.28, he did have a telephone call and discussion with Saad at some time in July or August of 2018 in which he obtained a second opinion.

[139] Kosova, T164.18 – T164.20

[140] Kosova, T130.25

[141] Kosova, T130.11 – T131.10

make the final decision based on this advice.[142] There was no such proposal document, either in Kosova's possession or in the possession of Programmed or its Board. Everything reads as though the performance of the CHAP was a *fait accompli*.

188. My conclusions about the 19 October 2018 meeting are set out in in more detail below, but I shall first make some findings about Programmed's causative contribution up to this point.

The role of Programmed in the design of the CHAP

189. As I have found above, the process by which Programmed went about obtaining the purported medical advice pivotal to and relied upon in the development of the CHAP was inadequate. As a result of the hurry in which it was obtained and through Kosova's lack of diligence, no proper risk assessment was carried out, nor even considered.

Key finding:	**The process by which Programmed went about obtaining the purported medical advice pivotal to and relied upon in the development of the CHAP was inadequate. No proper risk assessment was carried out, nor even considered.**

190. Another stage at which an opportunity to assess the risk to Programmed participants in the CHAP presented itself was at the stage of development or design of the structure of the programme. Specifically, a pre-test assessment to assess the suitability or necessity or otherwise of the CTCA test could have been carried out, as was initially recommended by Kain in his 3 July 2018 email.

191. The issue of whether Programmed dictated that the structure of the CHAP would not include any assessment prior to the referral for the CTCA and/or whether Programmed relied on Priority and/or the medical advice of Saad in dispensing with that step was hotly contested during the Inquest. It is, however, not necessary for me to decide the extent of Programmed's role in this decision because, certainly by the time Peta joined the second cohort of participants in the programme, I find that everyone directly involved in the development and delivery of the CHAP from Programmed, Priority and MRI Now, knew what the components of the CHAP were, and that it did not involve any pre-test assessment of patient's suitability for the CT scan.

[142] Kosova, T156.1-T156.7

Handovers & Second Opinions: the Meeting of 19 October 2018

192. A central issue in dispute in the Inquest was the role Saad played prior to the commencement of the CHAP. This was linked to whether or not Saad was consulted during the 19 October 2018 meeting at the Programmed Burswood offices. This issue then gave rise to two further issues. First, whether and to what extent Programmed and Priority and/or Saad designed the CHAP, including the omission of pre-test assessments and second, whether Saad provided the 'second opinion', that the CTCA was an appropriate test for the proposed CHAP.

193. Kosova,[143] Haddad[144] and Mtanios[145] all stated that, during this meeting on 19 October 2018, they spoke to Saad by telephone and discussed the structure of the CHAP. None of them resiled from this during their cross-examination, although Kosova expressed less certainty about the exact order of events and content of the call than Haddad and Mtanios did.

194. Saad firmly denied having called into the meeting or having received a call from the meeting.[146]

195. The Court has obtained numerous telephone records for 19 October 2018. These include:

(a) Outgoing calls from the Jobfit office landline in Mascot;[147]

(b) Incoming and outgoing calls from Dr Saad's mobile phone; [148]

(c) Outgoing calls from Jobfit landlines at Rooty Hill;[149]

(d) Incoming and outgoing mobile phone records for Rani Haddad;[150]

[143] T112-T113.

[144] T9-T11.

[145] T35-T36.

[146] 2019 2336 Hickey – AM3-63 – Statement (3) – Dr Doumit Saad – 23 04 2021, paragraph 13

[147] Annexure C to AM3-63.

[148] Annexure D to AM3-63; AM3-75.

[149] Annexure H to AM3-63.

[150] AM3-71.

(e) All calls through Jobfit's NSW Voice Over IP (**VOIP**) system;[151]

(f) Incoming and outgoing phone records from meeting rooms at the Burswood office of Programmed;[152] and

(g) Telstra records detailing the specific connections involved in a call from Rani Haddad to Jobfit's South Australia office at 1.14pm AWST on 19 October 2018.[153]

196. None of these records showed a call between anyone in the meeting at Burswood and Saad. However, they could not entirely exclude the possibility that a call could have been made to some other telephone number.

197. Saad also provided documentation of his schedule of patients seen on 19 October 2018.[154]

198. Despite the significant resources expended here, the totality of documentation did not demonstrate that Saad could not have participated in the meeting by telephone.

199. Other evidence did not assist in clarifying or determining the question. For example:

(a) Though included by name in the process outlined for the CHAP, in emails between Programmed and Priority in the week following the 19 October meeting, Saad was not copied in on any of these emails. On the face of the contemporaneous documents, Saad was not party to the further discussions of the CHAP;[155]

(b) On 26 October 2018, Haddad advised Kosova via email of Saad's involvement, as follows: "*In anticipation Doumit has created the relevant imaging referrals so that we can move as soon as sign off is provided*."[156] Haddad partially conceded this statement was a misrepresentation but only

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[151] AM3-94.

[152] AM3-97.

[153] AM3-111.

[154] AM3-88, AM3-89 and AM3-90.

[155] AM3-12 – Other Priority Correspondence, See eg, '2018 10 29 Programmed to Priority re template emails'; Haddad, T1473.31 – T1474.28

[156] AM3-12 – Other Priority Correspondence, - '2018 10 29 Programmed to Priority re template emails', p.5

because the statement was open to misinterpretation.[157] It remained Haddad's evidence that Saad had authorised him to manage the administration, which he understood to include the use of the doctor's signature on referrals.[158]

(c) Further, there is a chain of emails in mid-November 2018 from Jody Miller of Programmed to Mr Whicker at Jobfit and then internally at Jobfit with Saad, just prior to Saad's post-scan consultations with the first cohort of Programmed executives. These emails suggest that Saad was not aware that the CHAP had commenced and may not have been as involved as the others said in their evidence.[159] In a further email dated 19 November 2018, from Saad to Whicker, Whicker asks if they (Jobfit) had been previously involved and how the Programmed work came to him. Saad states that Rani (Haddad) had called him and asked if he could do the telehealth consultations for 'Programmed Executive Medicals'.[160] These emails offer some support for Saad's account of how he came to be involved later on and as to his more limited role, though Saad also conceded that, by that time, he had already agreed with Haddad in a phone call in late October 2018 to carry out the post-scan consultations and reviews.[161]

200. This opaque paper trail does not comprehensively rebut Kosova's version, but since the credibility of all of these witnesses is low, what I am sufficiently comfortable about is that by the time the second patient cohort, including Peta, had their CT scan, Programmed, Priority, MRI Now and their chosen doctor, Saad, all knew and agreed that the CHAP would not have any pre-scan assessment of the suitability of alternate pathways for screening asymptomatic cardiac patients.

Key finding:	**By the time of the second patient cohort, all relevant staff at Programmed, Priority and MRI Now, as well as Saad, knew and agreed that the CHAP would not have any pre-scan assessment**

[157] Haddad, T1472.20

[158] Haddad, T1471.23 – T1472.20

[159] 2019 2336 Hickey – Statement – Tim Whicker – 03 01 2021 , AM3-53-6 - 10

[160] AM3-80

[161] Saad, T266.23 – T268.3

of the suitability of alternate pathways for screening asymptomatic cardiac patients.

Dr Saad's 'second opinion' on the appropriate test

201. Whether Saad did advise the corporate entities as to the test to be utilised, and indeed whether Saad had further involvement as consulting or advising doctor prior to the commencement of the CHAP in its final form were said to turn on two key questions of fact, being:

(a) Whether Saad provided Kosova with a 'second opinion' in a telephone call in or around July or August 2018 (or at some other time, prior to 19 October 2018); and/or

(b) Whether Saad attended the Perth meeting on 19 October 2018 by telephone.

202. These aspects of Saad's further involvement in advising on the design, administration and operation of the CHAP were said by Kosova, Haddad and Mtanios to have occurred during the Perth meeting on 19 October 2018. It is noted that Kosova was not clear on whether Saad had advised on these two matters at the meeting.[162]. Mtanios gave evidence under cross-examination that Programmed had already created the programme prior to the meeting and were telling the other parties how it was to be done.[163] However, it was certainly the evidence of all three that Saad attended the meeting by telephone and was involved in these decisions.[164]

203. Dr Saad denied speaking with Kosova and attending the 19 October meeting. He also denied any involvement in design of the programme, dictating or requesting the deletion of pre-test assessments or authorisation of use of his signature on referrals, as referring doctor.[165]

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[162] Kosova, see eg, T111.11 – T112.28, T113.8 – T113.16, T121.27 – T122.22 and T123.28 – T124.23

[163] Mtanios, 1575.9 – T1575.27 and T1579.22 – T1579.25, T1580.1 – T1580.4 and T1596.21 – T1598.8

[164] Haddad, T1457.17 – T1458.1, T1466.6 – T1466.12 and T1482.2 – T1482.6; Mtanios, T33 – T34.16, T1572.31-T1573.22 and T1611.24 – T1612.3; Kosova, T112.29 – T113.1, T121.10 – T121.16, T123.7 – T123.13 and T124 – T125

[165] Statement of Dr Saad (1), CB 77, [2] and [5]; 2019 2336 – Hickey – AM3-29 - Statement (2) – Dr Doumit Saad – 09 11 2020, paragraphs 10 and 14-17; 2019 2336 – Hickey – AM3-63 - Statement (3) – Dr Doumit Saad – 23 04 2021 , paragraphs 13 and 19; Saad, T243 – T245 (generally and T245 in particular), T1058.15-19, T1109.30 – T1110.10

204. As I have already indicated, the question of Saad's further involvement in those two ways and his attendance at that meeting, were hotly contested issues. However, in my view, it does not matter whether Saad spoke with Kosova and/or attended the 19 October meeting by phone, as the clear inference from the totality of the evidence is that Saad must have provided his 'second opinion' on the most appropriate test (being the CTCA) at either, or on both, occasions.

205. I accept the closing submissions of Programmed, Priority and Counsel Assisting,[166] that the most reliable basis for reaching a conclusion on Saad's role in providing the second opinion as to the appropriateness of the CTCA is the inference to be drawn from the following evidence:

(a) The undisputed evidence that Kain was the only source of the original advice as to the appropriate test and this was set out in his emails to Kosova in early July 2018;[167] and

(b) The undisputed evidence that Kosova got the test Kain recommended wrong, believing it to be the more invasive angiogram and not the CTCA;[168] and

(c) The undisputed evidence that there was no further contact between Kosova or Programmed and Kain following those emails;[169] and

(d) The fact that by 19 October 2018 or in the week following, the ulitmately selected test, being the CTCA, was being contemplated for the CHAP, and yet there is no documentary or oral evidence, found by my investigators nor any of the interested parties contesting this issue indicating that any other person with medical expertise was consulted about the programme.[170]

(e) Further, it was Kosova's evidence that Saad had first advised that there was a less invasive test during the July or August 2018 telephone call Kosova

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[166] Submissions on behalf of Priority, [5] – [6]; Programmed's Closing Submissions, [68]-[71]; Outline of Submissions of Counsel Assisting, [23] – [26]

[167] 2019 2336 Hickey - AM3-57 – Statement – Dr Richard Kain – 12 04 2021, AM3-57-3 - 5; Kain, T362.3 – T362.21

[168] Kosova, T110.28-T111.5 and T204.1 – T204.16; Cf. Kain, T355.2 – T355.22

[169] Kain, T368.10 – T368.21

[170] AM3- 6 – Program Documents – 'Accepted Proposal – Executive Medical Assessments 26 10 2018', (referred to as the 'First Contract', p.3); AM3-12 – Other Priority Correspondence, See '2018 10 29 Programmed to Priority re template emails', an email chain between Programmed and Priority, from 26 October 2018

recalled having with Saad. This was also the evidence of Haddad and Mtanios, though they recalled Saad proffering this advice at the 19 October meeting.[171]

(f) Saad was the only doctor, after Kain, to have any involvement with the CHAP.

206. Therefore, on all of the evidence set out above, it is most likely that Saad did provide a 'second opinion' as to the best test prior to the programme's commencement. It doesn't matter whether this occurred on a telephone call with Kosova in around July or August 2018 or some other time prior to 19 October, or whether Saad was consulted and gave this opinion by telephone to any of the parties present during the 19 October meeting in Perth, or on both occasions. What is clear is that Kosova and/or Haddad and Mtanios were advised by Saad that the more invasive angiogram was unnecessary and instead that the CTCA was the right test.

Key finding:	**Dr Saad advised Kosova and/or Haddad and Mtanios that the more invasive angiogram was unnecessary and instead that the CTCA was the right test. It is unclear whether he did this at the meeting on 19 October, by speaking to Kosova earlier, or both. It does not matter specifically when he did so, as it is clear from the totality of evidence that he did so at one or more of those occasions.**

Inclusion of any initial assessment in the CHAP

207. As to whether the CHAP was originally supposed to include an initial assessment and/or referral by a physician, the evidence supports such a finding. Initially, there was to be an assessment by a doctor before each executive would be referred for the CTCA, but this step was dispensed with, by agreement between Programmed, Priority and MRI Now, with the knowledge of Saad.

208. Again, it is not necessary to determine whether Saad in fact advised, or even dictated, that there be no pre-test assessment nor precursor consultation with himself or any other medical practitioner. I find that it is more likely than not that Saad knew from the time he became involved that there was to be no such step, and he almost certainly knew there was no such assessment by the time Peta joined the second cohort of

[171] Haddad, T10.11- T10.16 and T1456.9 – T1456.21; Mtanios, T34.17- T34.30; Kosova, T111.11 – T111.24, T115.22 – T115.28 and T144.26 – T145.13

participants. By that time, Saad himself had reviewed the reports from numerous earlier programme participants.

Key finding:	**Initially, the CHAP was to include an assessment by a doctor before each executive would be referred for a CTCA. This step was dispensed with by agreement between Programmed, Priority and MRI Now, with the knowledge of Saad.**

209. These findings are based on the following evidence:

(a) Following the advice Kosova received from Kain on 3 July 2018, the CHAP included the CAC score and CTCA test but also a "*Standard health check/ cardiac risk factor (blood pressure, blood test, lifestyle questionnaire)"*[172] As a result, a part of the elective process for the first cohort of Programmed participants was a 'BUPA lifestyle questionnaire' or BUPA health checks. A participant could opt to complete these and provide personal medical information to Priority before their CT scans, but it was not compulsory. However, Kosova was clear that at least by the time the first cohort entered the programme, it was not the intention of Programmed that this information would inform whether the CT scans went ahead or not – any further health check opted for was not a 'pre-test assessment' in that sense. The BUPA check was intended merely to obtain additional information to be provided to Saad at the end of the process, once the CT scans had taken place and were being reviewed.[173]

(b) As a consequence of the meeting on 19 October 2018, a proposal titled '*Executive Medical Assessments*' was signed by Kosova on 26 October 2018.[174] Throughout these Findings, this document is referred to as **the First Contract**. At the time of signing and acceptance of the First Contract between Programmed and Priority on 26 October 2018, setting out the structure of the CHAP, the programme was still expressed to include an "*initial assessment and referral by our assessing physicians*", a "*Cardiac CT Scan*" and a

[172] 2019 2336 Hickey – AM3-54 – Statement – Rob Kosova – 05 02 2021, AM3-54.8 - 9

[173] Kosova, T107.8 - T108.25

[174] Copies of this document were included in multiple parts of the evidence. A representative example is the copy annexed to the statement of Rob Kosova dated 5 February 2021 (AM3-54) at pages AM3-54-21 to 26.

"*Coronary Artery Calcium Scoring*".[175] The existence of this reference as a part of the service description, in the signed First Contract, supports the inference that it was originally contemplated there would be a pre-test assessment or consultation by a doctor.

(c) Certainly, Sutherland understood from that First Contract, at the time of signing, that a pre-test assessment would take place (whether an initial consultation or provision of information). However, he became aware at the time of arranging and undergoing his own CT scan that this step had been dispensed with.[176] Sutherland himself participated in the programme's first cohort in November 2018 and provided Priority with his general health information and family history (including details of his genetic heart condition) that he understood was to be forwarded to Dr Saad for discussion after his test results. In fact, Sutherland enquired whether Priority and the relevant doctor wanted to talk about this information prior to the CT scan but was told to just wait for the results and then there would be more conversation at a future appointment with Saad.[177]

(d) Kosova, Haddad and Mtanios all gave evidence that at least by 19 October 2018 they were aware there would be no pre-test assessment as part of the CHAP. Each gave evidence that they were made aware of this when each attended the 19 October 2018 meeting in the Programmed offices, when Saad is alleged to have dialled in (or been called by them) and expressed that he was "comfortable" doing the referrals without a pre-test consultation with the participants if they were asymptomatic. It was their joint understanding that no medical practitioner would be involved in the process until after the results of the CT scan were obtained, which Saad would interpret during a teleconference with the participant. It was the evidence of all three that Saad

[175] AM3-6 Program Documents – 'Accepted Proposal – Executive Medical Assessments' (the First Contract, p.3); or 2019 2336 Hickey – AM3-54 – Statement – Rob Kosova – 05 02 2021, AM3-54.23

[176] Sutherland, T97.10 (29 April 2021)

[177] 2019 2336 Hickey – AM3-19- Statement – Chris Sutherland (programmed) -16 10 2020, AM3-19-4, paragraphs 41-42; Sutherland, T58.24 – T59.3 and T 97.10-11 (29 April 2021)

had said or "dictated" that he didn't need a first consult or "pre-consult" but would need the imaging organised and then, the medical history.[178]

(e) Email correspondence between Haddad and Kosova (copying in Mtanios) in the week following the Perth meeting sets out the steps for the proposed CHAP which does not include a pre-test assessment. The only consultation with a doctor was after the CTCA.[179]

(f) Kosova was aware at the time of signing the First Contract that Saad would not be consulting with participants prior to the CT scan, despite the inclusion of this phrase in the First Contract.[180]

(g) Kosova left Programmed shortly after the first cohort commenced but his understanding was that what tended to happen was that any information or medical history (such as any BUPA health checks) was provided to Saad after the CT scan had taken place. Priority facilitated the CHAP (they said, as outlined by Saad) absent the step of any pre-test assessment.[181]

210. In conclusion, I am well satisfied that by the time the first and second cohort of the CHAP was carried out by Programmed and Priority, all parties were aware that there was no pre-test assessment or consultation by a medical practitioner. There are no breaks in the chain of legal causation between the conception and the execution of this programme, and Peta's death.

Key finding:	**By the time the first and second cohort of the CHAP was carried out by Programmed and Priority, all parties were aware that there was no pre-test assessment or consultation by a medical practitioner. There are no breaks in the chain of legal causation between the conception and the execution of this programme.**

[178] 2019 2336 Hickey – AM3-54 – Statement – Rob Kosova – 05 02 2021, paragraph 20; Haddad, T11.13 – T11.25 and T1456.24 – T1458.1; Mtanios T33.28 – T33.30 and T1611.27 – T1612.3

[179] AM3-12 – "Programmed to Priority re template emails" email dated 26 October 2018 at 12.37 pm

[180] 2019 2336 Hickey – AM3-54 – Statement – Rob Kosova – 05 02 2021,paragraph 24 and AM3-54.3

[181] Kosova, T108.10 – T108.28 and T109.3 – T109.6; Haddad, T1466.6 – T1466.12

The administration of the CHAP and the first cohort of patients

211. As discussed above, in October 2018 Haddad prepared the First Contract, a proposal for the 'Cardiac Health Executive Medical' programme. Kosova signed this contract on 26 October 2018, formalising the agreement between Programmed and Priority.[182]

212. Email correspondence from 26 to 29 October 2018 set out the steps for the CHAP and the proposed communications with Programmed staff 'candidates' who would undergo testing.

213. At 12.37pm on 26 October 2018, Haddad wrote to Kosova, copying in Mtanios:[183]

> ...
>
> *In anticipation Doumit has created the relevant imaging referrals so that we can move as soon as sign off provided*
>
> *The process once we receive approval will be as follows*
>
> *1) Priority Care email to Ex and PA advising of steps (I will provide you the draft email asap)*
>
> *2) MRI Now will arrange the scan*
>
> *3) Scan reviewed by Dr Saad*
>
> *4) PCHS arranges tele medicine consultation with Ex and Dr Saad*
>
> *5) Tele med consult occurs*
>
> *6) As required face to face consultations will be arranged an specialist referrals provided*
>
> *If you have any suggestions we would welcome them on the proposed process.*

214. At 5.54pm on 26 October 2018, Kosova wrote back to Haddad, copying in Mtanios and Malcolm Deery:

> *Hi Rani*
>
> *Fantastic, we are good to go.*

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[182] AM3-6 Program Documents – 'Accepted Proposal – Executive Medical Assessments' – 26 10 2018, (First Contract, p.5); 2019 2336 Hickey – AM3-31 – Statement – Rani Haddad (Priority) – 04 11 2020, paragraph 12; 2019 2336 Hickey – AM3 - 54 - Statement – Rob Kosova – 05 02 2021, paragraphs 23 and 25

[183] 2019 2336 Hickey – AM3-54 – Statement – Rob Kosova – 05 02 2021, AM3-54-20.

Attached is the signed proposal, which Malcolm has agreed with also.

In terms of numbers….25 people.

Malcolm has confirmed he is okay for you to start calling next week and booking these in based on the availability / preferred times of our team….

215. Haddad then generated 20 referral forms using an MRI Now template using Priority IT systems. Each of these listed one of the Programmed staff member's name, date of birth, address and contact information. On each of them, the 'Examination Required' field stated: "*Cardiac CT Scan + Coronary Artery Calcium Scoring*". On each of them, the 'Clinical Notes' field was blank.[184]

216. Each of these forms had a 'Referring Doctor' field. On each form, 'Dr Doumit Saad' was listed along with his Provider Number and address. Each of these forms was dated '26/10/2018' and each of them bore an image of Saad's signature. Haddad readily admitted that he was the person who affixed Saad's signature to the forms in the process of generating them from the template.[185]

217. Programmed and Priority then agreed on a process for communication to the Programmed staff who were going to be offered the CHAP. These duly went out, and a number of staff started received their referrals. These referral forms then went out to a number of diagnostic imaging practices throughout Australia. Every practice which received a referral form performed the CT scan, and they began returning scan results to Priority through MRI Now.[186]

The role of Jobfit

218. This is the appropriate moment to pause the narrative and better understand the role of Jobfit, the company that legally employed Dr Saad.

219. Timothy Whicker is the State Manager of Jobfit, NSW and ACT and at the relevant time was "Client Relations & Operations Manager NSW/ACT" for Jobfit.[187] Saad

[184] AM3-7: Referral Forms for Participant A through Participant S; Haddad, T12.1-T12.3.

[185] AM3-7: Referral Forms for Participant A through Participant S.

[186] AM3-8: CT Scan Results for Participants A through S.

[187] Whicker, T46

was a full-time employee of Jobfit from 2018 and did not receive any part of the fees charged for each telemedicine consultation by Jobfit.[188]

220. On 13 November 2018, Jody Miller, a Client Relations Manager for Priority, emailed Saad (by that time employed by Jobfit), copied to Haddad, stating as follows:[189]

> *We are starting to receive Cardiac CT results from our Programmed Executive Medicals. We are now required to schedule their phone consultation with yourself to discuss results. Please advise time slots you have available week beginning 26th November?...We have 24 executives in total to schedule…*

221. At this time, Priority was a client of Jobfit. Priority had previously been a client of 'Galen & Gray', Saad's former business which was purchased by Jobfit in July of 2018.[190]

222. On 19 November 2018, Whicker received an email from Saad, copied to Miller and Haddad, attaching the email (above) from Miller of 13 November 2018. Saad's email stated:[191]

> *Hi Tim*
>
> *As per below, can you contact Jody or Rani for more information regarding these telehealth medicals…*

223. On 22 November 2018, Whicker received a further email from Miller of Priority, again attaching the emails of 13 and 19 November 2018 (above) and asking that he call her urgently to discuss the 'Executive telehealth consults', stating that their client was expecting appointment times for the next week and Priority had not received Saad's availability.[192]

224. Whicker states that after receiving the email of 22 November 2018 from Miller, he telephoned her and she told him that "*the executives had undergone BUPA assessments and a CT coronary scan and calcium score*" and that she then asked him "*if Jobfit was interested in reviewing the results of each executive's CT scan/calcium*

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[188] Whicker, T58

[189] 2019 2336 Hickey – AM3-53 – Statement – Tim Whicker – 03 01 2021, paragraph 7, AM3-53-6

[190] 2019 2336 Hickey – AM3 - 53 - Statement – Tim Whicker– 03 01 2021, paragraph 5

[191] 2019 2336 Hickey – AM3-53 – Statement – Tim Whicker – 03 01 2021, paragraph 7, AM3-53-8 – AM3-53-9

[192] 2019 2336 Hickey – AM3 - 53 - Statement – Tim Whicke r– 03 01 2021, paragraph 7 and AM3-53-8

scores and doing a telehealth conference with them to discuss the result of their imaging."[193]

225. Whicker further states that Miller said that "*for the purpose of the telehealth conferences, she would be providing us with a copy of the executive's CT scan/calcium score results, together with either their BUPA report (if it were made available) or a lifestyle questionnaire completed by the executive*." Whicker states that he then confirmed that Jobfit was interested in doing the proposed telehealth conference work and he would check the available dates of Saad and their other doctors and get back to her and send a quote for the work.[194]

226. Whicker was in 'organisation mode', wanting to arrange the appointments for Miller, and so did not discuss this matter with Saad and did not turn his mind to how the work had come to Jobfit at this time. [195]

227. On that same date, Whicker emailed Miller a schedule of available dates for Jobfit doctors (giving some priority to Saad, as Priority had been Saad's former client and had strong links to Saad).[196]

228. Whicker also sent an initial quote for 'medical services', being the 'Executive Medicals Phone Consultation (20 minutes)' and including review of a BUPA report or lifestyle questionnaire, in the amount of $150. Whicker states that this initial quote was reviewed following discussions between Steven Harvey, General Manager of Fullerton Health Australia (Jobfit's parent company) and Priority and a revised quote in the amount of $300 was provided, to include preparation by Jobfit doctors of a letter to be provided to the Programmed employee for their GP, following the telehealth consultation and summarising the results of their CT scan.[197]

229. After 22 November 2018, the process for making telehealth conference appointments was that Miller would email Whicker requesting an appointment, with a suggested date or date range suitable to the candidate and then a Jobfit doctor would be

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[193] 2019 2336 Hickey – AM3 - 53 - Statement – Tim Whicker– 03 01 2021, paragraph 8

[194] 2019 2336 Hickey – AM3 - 53 - Statement – Tim Whicker– 03 01 2021, paragraph 8

[195] Whicker, T 53.28 – T54.15

[196] 2019 2336 Hickey – AM3 - 53 - Statement – Tim Whicker– 03 01 2021, paragraph 9 and AM3-53-10 – AM3-53-11; Whicker, T55

[197] 2019 2336 Hickey – AM3 - 53 - Statement – Tim Whicker– 03 01 2021, paragraphs 10 – 11 and AM3-53-14 – AM3-53-15

allocated. As Saad had done previous work for Priority, Whicker would try, where possible, to allocate the files of candidates to Saad. The process would "normally" involve Priority providing Whicker with the candidate's CT scan/calcium score and completed lifestyle questionnaire, with the email requesting an appointment. In a few cases, the test results and questionnaire would follow in a separate email from Priority. Whicker states that although it was foreshadowed (by Miller and Priority) that a BUPA report for candidates would also be provided, these were never made available to Jobfit.[198]

230. Whicker accepted that any advice proffered by Saad regarding the CHAP was via Jobfit but was unable to say if Jobfit turned its corporate mind to the safety of the programme in any way. Whicker said that was a question for Steve Harvey, General Manager of Fullerton Health Australia, the parent company of Jobfit.[199] It was Harvey who discussed and settled on the final consultation fee and fee for the follow up letter to the GP, of $300, with Priority. [200] However, Jobfit was never engaged to assess candidates for suitability to have the CT scans, nor to advise on the structure of the programme.[201]

231. Mr Whicker had no knowledge of the use of Saad's electronic signature on the referrals for the CT scans or that the referrals for the CT scans were being generated by Haddad of Priority.[202]

232. There is no evidence before the Court that Jobfit had any knowledge of the referrals being generated in Saad's name, that his electronic signature had been used or that no pre-test assessments had been carried out.

Key finding:	**There is no evidence that Jobfit had any knowledge of the referrals being generated in Saad's name, that his electronic signature had been used or that no pre-test assessments had been carried out.**

[198] 2019 2336 Hickey – AM3 - 53 - Statement – Tim Whicker– 03 01 2021, paragraph 14

[199] Whicker, T61.19 – T61.25

[200] 2019 2336 Hickey – AM3 - 53 - Statement – Tim Whicker– 03 01 2021, paragraph 11

[201] 2019 2336 Hickey – AM3 - 53 - Statement – Tim Whicker– 03 01 2021, paragraph 12

[202] Whicker, T60.8 – T160.12

Conclusions drawn from subsequent conduct

233. All of this evidence, taken together, was equivocal on the question of Saad's attendance at the 19 October meeting, his role in deleting the pre-test assessment first suggested by Kain and in authorising the use of his signature on referrals. The evidence of his involvement prior to the commencement of the CHAP is therefore inconclusive.

234. However, I am satisfied to the *Briginshaw* standard of proof that the subsequent conduct of Programmed, Priority, MRI Now and Saad demonstrated that, certainly by the time the second cohort of executives (which included Peta) were put through the CHAP, they all knew these were being conducted without any preliminary assessment by Saad or any other medical practitioner. It may also be inferred that all of them were comfortable with this approach. This is based on the following evidence:

(a) Kosova knew Dr Saad was the referring doctor and there would be no pre-test consultations with participants;[203]

(b) The email chain from 26 to 29 October 2018 between Programmed and Priority (with Mtanios copied in via his MRI Now email address) sets out the steps of the CHAP, with no initial assessment included, and including reference to Saad's involvement only post-scan having already created "*the relevant imaging referrals*"; [204]

(c) Both Haddad and Mtanios were aware from the outset that Saad would review the post-scan results without a prior consultation and that Priority would generate the referrals (from Saad) for the CT scans;[205]

(d) There was no dispute that Haddad in fact created each referral for the CT scans;[206]

[203] 2019 2336 Hickey – AM3-54 – Statement – Rob Kosova – 05 02 2021, paragraphs 20 and 24

[204] 2019 2336 Hickey – AM3-54 – Statement – Rob Kosova – 05 02 2021, paragraphs 20 and 24; AM3-12 – 'Other Priority Correspondence' – 2018 10 29 Programmed to Priority re template emails – emails from 26 to 29 October 2018, in particular 26 October 2018 at 12.37pm (p.5)

[205] Haddad, T11; Mtanios, T33.28 – T33.30, T1611.27 – T1612.3 and T1616.6 – T1617.15

[206] Haddad, T12.1 – T12.3

(e) There was no dispute that the MRI Now booking form and referral (for Peta and other participants) for the CT scans included Saad's name as 'referring doctor';[207]

(f) There was no dispute that Saad did not consult with any of the Programmed candidates prior to the CT scan and his role was confined to reviewing and interpreting the test results;[208]

(g) Saad was involved in the CHAP throughout its first and second cohort of participants;[209]

(h) Following the first cohort, Programmed was aware of and happy with the CHAP's components and output, and a second contract was entered into for the second cohort, in March 2019;[210]

(i) Haddad stated that, from the time of the first cohort, Priority generated the referrals and obtained the reports of the CT scan results which they then provided to Saad. The majority of these reports identified Saad as 'referring doctor' and Saad never questioned Haddad as to why he was named as referring doctor on these reports.[211]

(j) Saad certainly received most of the reports from the two cohorts, the majority of which bore his name as referring doctor.[212]

Key finding:	**The evidence of Saad's involvement prior to the commencement of the CHAP is inconclusive. However, there is sufficient evidence to find that by the time of the second cohort, he was aware that the CHAP was being conducted without any preliminary assessment by himself or any other medical practitioner, and was comfortable with this approach.**

235. Before I reach certain conclusions about this conduct, it is necessary to give a little more background about how Saad came to receive the CT scan results. The Inquest

[207] CB 57 - 'MRI Now – Booking Confirmation'; AM3-7 – CT Referral Forms

[208] Saad, T229.13 – T229.19

[209] Saad, T265.18 – T268.25

[210] Haddad, T16.6 – T16.15

[211] Haddad, T16.19 – T18.2; AM3-8 – CT Results Group 1

[212] Saad, T987.1 – T987.19

heard much evidence pertaining to whether or not Saad was aware he was the named and, in fact, the only referring doctor and hence that there had been no other medical practitioner assessing the Programmed participants. Initially, Saad said he never noticed his own name on the reports that came to him for review.[213] Despite his knowing well that reports with results from imaging procedures invariably went back to the referring doctor, Saad's evidence was that he believed the participants in both cohorts were being assessed by some other medical practitioner prior to their CT scans, even when he received all the reports for both cohorts.[214] Under sustained cross-examination, Saad maintained that he did not see his name on any of the reports.[215]

236. However, Saad was then taken to each of these reports in turn and then asked about all 27 reports from the two cohorts where his name was clearly set out as the referring doctor. The doctor claimed he had seen 16 or 17 of these and he did not see his own name on any of them. In fact, the doctor stated he didn't even check the name of the patient on the report.[216] At one point under cross-examination, the doctor conceded that it was possible he could have noticed his name as referring doctor.[217]

237. Under cross-examination, Saad's answers became hesitant. He admitted he never came across any participant who met the criteria for a CTCA, that as a doctor he would have had an obligation to notify Programmed of this and that he didn't actually know of any other doctor involved in the CHAP.[218] Saad further admitted that he should have known who the referring doctor was and should have looked at the papers in front of him for that information.[219]

238. Ultimately, I find Saad's evidence on this issue implausible. Having made a partial concession, admitted that he was aware that a medical practitioner must have assessed and referred the participants, stated that reported results invariably go back to the referring doctor and that he had looked at the majority of these reports on which he

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[213] Saad, T290.21 – T292.14

[214] Saad, T293.15 – T293.24, T312.18 – T313.6 and T314.16 – T314.21

[215] Saad, T983.31 – T984.2

[216] Saad, T984.7ff and AM3-8 – CT Results Group 1 and AM3 – 9 – CT Results Group 2

[217] Saad, T311.24 – T311.30

[218] Saad, T322.22 – T322.27 and T323.5 – T323.14

[219] Saad, T336.20 – T336.27

was named as referring doctor, I find that it is most likely that Saad was aware that he was the referring doctor for the CT scans for the CHAP.

Key finding:	**By the time of Peta's referral, Saad was aware that he was the referring doctor for the CT scan for the CHAP.**

239. By the time of the second cohort, if not before, the structure of the CHAP and the paper trail as to its implementation was in front of all of the relevant parties. As such, whether there was a phone call with Saad on 19 October 2018 or any prior involvement by him, is not crucial to the recommendations and prevention opportunities which arise.

Key finding:	**Whether there was a phone call with Saad on 19 October 2018 or any prior involvement by him is not crucial to the recommendations and prevention opportunities which arise.**

240. The way in which the CHAP was designed and implemented, without a pre-test or preliminary assessment for clinical indications for the CTCA and using automatically generated referrals for the test had two highly relevant consequences.

241. First, neither Programmed, Priority, MRI Now or Saad took responsibility for any risk assessment, and the CHAP, as a whole, was not subject to any proper assessment of its entire risk by Programmed, Priority, MRI Now nor Saad. Specifically, no party assessed or considered the unnecessary risk posed by undergoing a CTCA.

242. The initial good intentions of Programmed were undermined by Kosova's slipshod management, namely his failure to obtain formal and considered medical advice on risk from either Kain or Saad and proposing Programmed staff undergo the CT scan, without advising them to seek any advice on risk, or the necessity for the test.[220]

243. Priority and MRI Now's participation was profit-focused rather than patient-focused. Both Haddad and Mtanios denied having any medical knowledge or expertise and denied that their corporate bodies offered health services involving health expertise.[221] However, both Priority and MRI Now profited by representing themselves as providing (at a minimum) health-*related* services as a 'facilitator/administrator' or 'booking service' (Priority) and a 'booking provider' or

[220] See Outline of Closing Submissions on behalf of the SNOK at paragraph 18.

[221] Haddad, T9.6 – T9.13; Mtanios, T1632.25 – T1633.1, T1633.10 – T1633.14 and T1634.18 – T1635.3

'concierge', able to charge a premium for access to medical services (MRI Now) for the CHAP.[222]

244. Dr Saad was at least wilfully blind to the medical risks that he ought to have known his "candidates" (patients) were experiencing.[223]

245. The second consequence was that a doctor's signature was utilised on a referral for a medical procedure involving some risk, without assessment of or consultation by the doctor with the patient referred. Whether or not the use of Saad's signature was authorised by him, this practice and the parties' awareness of this practice throughout the CHAP is worthy of adverse comment.

Key finding:	**The way in which the CHAP was designed and implemented had two highly relevant consequences: first, no party took responsibility for any risk assessment and no risk assessment occurred; second, a doctor's signature was utilised on a referral without the doctor assessing or consulting the patient referred.**

Use of Dr Saad's signature

246. Again, the question of whether Saad authorised the use of his signature as the referring doctor at the 19 October meeting, as Haddad and Mtanios contended (albeit via 'implied consent'),[224] or whether, as Saad contended, he did not authorise such use,[225] does not significantly affect the issue of whether the various parties were aware that the programme did not involve an initial assessment. I have found that Programmed, Priority, MRI Now and Saad were so aware.

247. However, the use of Saad's signature is of import for the chain of causation by which the administration of the programme led to Peta's tragic death, so it requires consideration.

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[222] Haddad, T7.1 – T7.4, T8.2 – T8.5, T1447.6 – T1447.19, T1448.4 – T1448.9 and T1452.7 – T1452.16; Mtanios, T1575.16 – T1575.18, T1581.9 – T1581.30, T1582.27 – T1583.15, T1584.15 – T1584.18, T1585.12 – T1585.28 and T1637.6 – T1637.19; AM3-6 – First Contract (p.3); AM3-79 – Invoices – FMIG to MRI Now; '2019 2336 Hicky – FNID – Facts relating to MRI Now – 28 10 2020', paragraphs 4-5

[223] Saad T1101.2, 1105.10-11, 1128.10.

[224] Haddad, T11.8 – T11.12, T12.8 – T12.15, T18.8 – T18.10. T18.13- T18.14, T22.8, T1476.17 – T1476.25 and T1488.25 – T1489.29; Mtanios, T1625.20 – T1625.31

[225] Statement of Dr Saad (1), CB 77, [5]; 2019 2336 Hickey - AM3-29 – Statement (2) - Dr Doumit Saad – 09 11 2020, paragraph 10

248. As the following evidence shows, Programmed, Priority and MRI Now (Haddad and Mtanios) and Saad were all well aware throughout the programme, and even more certainly by the time of the second cohort, that Saad's signature was being used and that he was not the referring doctor:

(a) Saad was the referring doctor named on the majority of the post-scan reports he reviewed. As already stated, it is implausible that he did not read, see or notice his own name on these reports and he conceded it was possible;[226]

(b) Saad admits he did not consult with or assess a single participant prior to their CT scan;[227]

(c) Haddad admitted that he affixed Saad's signature and created each referral for the entirety of the CHAP. Haddad did not obtain express permission or authorisation from Saad to do so. He claimed to have implicit authority to do so but conceded no express authority had been given by Saad;[228]

(d) Mtanios was also aware that Haddad was using Saad's signature and creating the referrals;[229] and

(e) Although Kosova denied knowing that Saad's signature was used when creating the referrals,[230] he was aware that Saad would not be conducting any pre-assessments. In his eyes, this was a matter for Priority and Saad to resolve.[231] The email communication between the parties shows that at a minimum, Kosova was aware from the inception of the CHAP that Saad was not carrying out pre-scan assessments (nor was any other medical practitioner) and yet, that Saad was 'creating referrals'.[232]

249. This evidence shows that after commencement of the CHAP and certainly by the time of the second cohort, Saad had knowledge of the use of his name as referring doctor. I

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[226] Saad, T311.24 – T311.30

[227] Saad, T229.12 – T229.15

[228] Haddad, T12.1 – T12.15, T16.19 – T16 and T1472.11 – T1472.29

[229] Mtanios, T31.14 – T31.19, T1618, T1625.20 – T1625.31 and T1639.19 – T1639.22

[230] Kosova, T151.21 – T151.26

[231] Kosova, T123.28 – T124.23

[232] AM3-12 – 'Other Priority Correspondence' – 2018 10 29 Programmed to Priority re template emails – emails from 26 to 29 October 2018, in particular 26 October 2018 at 12.37pm (p.5)

therefore infer, from this evidence and from evidence of Saad's own experience of long-standing industry practice, that he also knew that his signature was being used to refer the CHAP patients for the CT scan. It also shows that all parties were well aware that referrals for a potentially risky medical procedure were being provided by a doctor who had not assessed the patients.

Key finding:	**Programmed, Priority and MRI Now (Haddad and Mtanios) and Saad were all well aware throughout the CHAP, and even more certainly by the time of the second cohort, that Saad's signature was being used to refer patients for a risky procedure and that he had not assessed the patients.**

250. There remains the question of fact as to whether Haddad did reasonably believe he had implied authority to use Saad's signature on the referrals.

251. The evidence clearly established that Priority had previously used Saad's signature on referrals for chest x-rays, without Saad having seen the relevant Holcim workers (patients) or their records before the procedure. This was admitted by Saad.[233] In late 2017, Saad had provided Haddad with two chest x-ray templates to which he affixed his signature, for the purpose of referring a group of Holcim workers for pre-employment and periodic screening for dust diseases (for asbestos and silicosis). It was not in dispute that on this previous occasion, Saad had given Haddad permission to use his signature on the chest x-ray referrals.[234]

252. Haddad's evidence was that he relied on Saad's implicit authority to use his signature based, in part, on this previous conduct and permission. Haddad further claimed the implied authority was derived from Saad advising (at the 19 October 2018 meeting) that Priority could take care of all the administration in this case and from Saad carrying out the post-scan consultations as agreed for the duration of the entire programme. As regards this last point, as already stated, during cross-examination, Saad eventually made a partial admission that at least with some of those reports it was possible that he would have noticed his name as referring doctor on them.[235]

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[233] 2019 2336 Hickey - AM3-29 – Statement (2) - Dr Doumit Saad – 09 11 2020, paragraphs 5 – 6; Saad, T302.24 – T303.19, T1529.17

[234] 2019 2336 Hickey - AM3-29 – Statement (2) - Dr Doumit Saad – 09 11 2020, paragraphs)1-7

[235] AM3-8 – CT Results Group 1, See eg., the particular report 'Participant R dated 21 January 2019'; Saad, T308.20 – T308.25 and T311.11 – T312.6

253. Again, I find that it is implausible that Saad did not notice his own name on these reports.

Key finding: It is implausible that Saad did not notice his own name on the CT scan reports he reviewed.

254. On the other hand, Saad's evidence was that he did not attend the 19 October 2018 meeting and that the authority previously given to Haddad, providing templates bearing his signature to be used for the Holcim chest x-ray referrals, was for that strictly limited purpose and he had conveyed that to Haddad at the time.[236] Haddad admitted that the template form with Saad's signature for the Holcim workers was in pdf and that he had reassured Saad at that time this was done "*so the team can't vary your signature*." Haddad also admitted Saad had told him via email to stop using his signature when he found out, in August 2018, that he was still using it, though Haddad denied this meant he knew he did not have Saad's authorisation to use his signature in the current circumstances.[237] A further example of such conduct was produced by Haddad, involving a pre-employment medical report from December 2018 in which Saad gave Haddad express permission to sign for him.[238] Haddad admitted that in both this case and with Holcim previously, Saad had given his express permission to use his signature and had clearly stated the limited purpose for which permission was given in email correspondence with Haddad.[239]

255. After considering the conflicting evidence and submissions, I conclude that there is evidence of similar conduct on the part of Saad, though not in quite the same circumstances. On the previous occasions, the test was for a non-invasive procedure and for routine tests and Saad gave his express permission to use his signature for those limited purposes. It is not in dispute that any authorisation in the current circumstances was implicit at best and was for a distinct purpose. However, the evidence does offer some support to the allegations that Saad was, or should have been, aware that Haddad was using his signature as referring doctor, at least by the time of the second cohort.

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[236] Saad, T298.28 – T299.31; See also Haddad, TT1529.20 – T1530.3

[237] AM3-29 – Statement of Dr Saad (2), AM3-29-11 – AM3-29-12 and AM3-29-15; T1529.9 – T1529.31 and T1531,3 – T1531.11

[238] AM3-64

[239] Haddad, T1543.30 – T1544.5

Key finding:	**Dr Saad was, or should have been, aware that Haddad was using his signature as referring doctor, at least by the time of the second cohort.**

256. Therefore, whilst a senior medical administrator such as Haddad ought to have initially known that he did not have implied permission to affix the signature in the CHAP, this trespass beyond his authorisation did not constitute a break in the chain of causation, because Saad must also have soon known Priority had used his signature and that he was being relied upon as the referring doctor for the CT scans, including the CTCA. Saad had repeatedly seen annotations on various reports, which would lead a person with his qualifications, experience and knowledge of medical processes to conclude that his signature was being affixed as the referring doctor.

257. By his inaction, as this knowledge accrued, Saad acquiesced to the continuance of this practice. The evidence of his prior permission to Haddad to use his signature, albeit for limited purposes and based on express permission, lends additional support to this conclusion.

Key finding:	**Although Haddad ought to have initially known that he did not have implied permission to affix Saad's signature, by the time of the CT scan, Saad had acquiesced to Haddad's conduct. Therefore, the lack of explicit permission did not break the chain of causation.**

258. I accept the submission of the Senior Next of Kin that, [240] regardless of whether Saad gave his explicit or implicit authority to Haddad to use his signature as referring doctor, there is an impropriety in either scenario. Haddad as an administrator operating in the health space and Saad, a medical practitioner, should both have appreciated this was an improper practice and have contemplated the possible repercussions down the line before they continued this arrangement.

Key finding:	**Haddad, as an administrator in the health space, and Saad, as a medical practitioner, should both have appreciated that the affixing of signatures in the CHAP was an improper practice.**

[240] Oral Submissions for SNOK, T1733.29 – T1734.2

Causal role of the use of Dr Saad's signature

259. Further to this point, the result of the signature being affixed was that the recipient radiology clinics were entitled to presume that a proper clinical assessment had occurred prior to the CT scan.

260. The subsequent mishandling of the adverse reaction to the contrast dye was not a break in the chain of causation leading to Peta's death. It was in fact the very risk that ought to have been under contemplation, both at the time the CHAP was designed, and when the subsequent referrals were made. Statistically, there was a known level of certainty about the risk of anaphylaxis, and the subsequent manifestation of that risk could not be said to break the chain of causation the people named above had, by their combined conduct, already set in motion from the outset.

Key finding:	**The subsequent mishandling of the adverse reaction to the contrast dye was not a break in the chain of causation leading to Peta's death. There was a known level of certainty about the risk of anaphylaxis, and the subsequent manifestation of that risk did not break the chain of causation that had been set in motion from the outset of the CHAP.**

The second cohort and the booking of Peta's scan

261. As we have seen, the first cohort of Programmed senior executives and managers were invited to undergo the CT scan, arranged through Priority, initially from around October 2018 to January 2019, and then a second cohort including Peta from around March 2019. [241]

The 'on-boarding' of the second cohort

262. The formation of the second cohort began in early February 2019, when Programmed's senior management were informed via email that the CHAP could be offered to their 'direct reports', being the second tier of Programmed management.[242]

263. On 12 February 2019, Jennifer Boulding, the CEO of the Health Professionals Division of Programmed and Peta's line manager, informed the managing director's

[241] 2019 2336 Hickey – AM3-19 - Statement - Chris Sutherland (Programmed) – 16 10 2020, paragraphs 35; 2019 2336 Hickey – AM3-30 – Statement – Jennifer Boulding (Programmed) – 05 11 2020, paragraph 4

[242] 2019 2336 Hickey – AM3-30 – Statement – Jennifer Boulding (Programmed) – 05 11 2020, paragraphs 4 – 5; 2019 2336 Hickey – AM3-19 - Statement - Chris Sutherland (Programmed) – 16 10 2020, paragraphs 45 - 46

executive assistant that she would like to include Peta and three others in the 'heart check program'.[243]

264. On 28 February 2019, Deery advised Priority that Programmed wanted to do a second round. Programmed initially indicated that a further 16 executives would be involved.[244]

265. On 7 March 2019, the Priority proposal was accepted for a second cohort of Programmed executives, including Peta, and approved by Sutherland.[245]

266. On 7 March 2019, Sutherland (on behalf of Programmed) signed a proposal drafted by Haddad which formalised the second contract with Priority.[246] Sutherland states that the Programmed 'heart check program' was voluntary, in these terms[247]:

> *Participation in the heart check program was voluntary in much the same way we encourage people to take the flu shot when we arrange for a nurse from a medical services company to come to the office, but it always remains voluntary…*

267. A number of managers elected not to undertake the programme for various reasons.[248] During round two, 14 employees were offered to participate and four declined.[249]

268. Peta's partner of 13 years, Richard Hickey, states that he recalls the first conversation he had with Peta about a test her employer was proposing for their executives. Mr Hickey states that Peta told him words to the effect of: "*work wants the executive team to have some tests as an executive had a heart attack on a plane*", the test being "*some form of heart examination*".[250]

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[243] 2019 2336 Hickey – AM3-30 – Statement – Jennifer Boulding (Programmed) – 05 11 2020, paragraphs 4 - 5

[244] 2019 2336 Hickey – AM3-31 – Statement – Rani Haddad (Priority) – 04 11 2020, paragraph 17

[245] AM3-6 Program Documents – 'Signed Contract for Second Group'; AM3-12 Other Priority Correspondence – '2019 05 08 – Priority to Programmed with summary of events'; 2019 2336 Hickey – AM3-19 - Statement - Chris Sutherland (Programmed) – 16 10 2020, paragraph 46

[246] 2019 2336 Hickey – AM3-31 – Statement – Rani Haddad (Priority) – 04 11 2020, paragraph 18; 2019 2336 Hickey – AM3-19 - Statement - Chris Sutherland (Programmed) – 16 10 2020, paragraph 46; AM3-6 - Program Documents – Signed Contract for Second Group – 07 03 2019

[247] 2019 2336 Hickey – AM3-19 - Statement - Chris Sutherland (Programmed) – 16 10 2020, paragraphs 30

[248] 2019 2336 Hickey – AM3-19 - Statement - Chris Sutherland (Programmed) – 16 10 2020, paragraphs 30 and 35 - 38

[249] 2019 2336 Hickey – AM3-19 - Statement - Chris Sutherland (Programmed) – 16 10 2020, paragraph 47

[250] AM3-17 – Statement Richard Hickey (incl exhibit) - 30 09 2020, paragraph 9

269. In the next conversation, Mr Hickey says that Peta had said Programmed were asking whether she had made an appointment. Mr Hickey says that Peta said words to the effect of: "*Jen Boulding thinks it's a good idea*" and that she should have the test done. Jen Boulding the head of Programmed's Health Professionals Division, and was the person to whom Peta directly reported.[251] Mr Hickey also says it "*was about early to mid-January that Peta said Jen Boulding said it was a good idea to have the test as mum had died from a heart attack*".[252]

270. Mr Hickey advised Peta that she was not compelled to have a medical test, but he says that Peta said that if she did not have the test her employer would "*think I have something to hide*", she would be setting a bad example and "*may be rightly or wrongly looked upon poorly in further career advancement discussions*".[253]

271. Jennifer Boulding sent an email to her direct reports, including Peta, on 12 March 2019 with the subject 'Executive Health check-cardiac medical assessment' which stated:

> ...
>
> *Earlier this year I participated in a cardiac medical assessment that Chris Sutherland commissioned for senior leaders. About 30 leaders participated in the initial round, which included a Cardiac CT Scan + Coronary Artery Calcium Scoring, followed by telephone consultation with a cardiologist. It's a good test to identify an[y] [sic] early issues with heart health and is funded by the company.*
>
> *Following the first round I was asked to nominate additional senior leaders in my business to be offered the chance to participate and I have put your names forward.*

272. The email continued that the recipient will soon hear (or possibly had already heard) from Jody Miller at Priority to set up their appointments and further stated:

> *It's voluntary of course, and no personal health information is shared back to the organisation.*

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[251] 2019 2336 Hickey – AM3-19 - Statement - Chris Sutherland (Programmed) – 16 10 2020, paragraph 48

[252] 2019 2336 Hickey - AM3-17 – Statement - Richard Hickey (incl exhibit) - 30 09 2020, paragraph 10

[253] 2019 2336 Hickey - AM3-17 – Statement Richard Hickey (incl exhibit) - 30 09 2020, paragraph 10

If you'd like to take up this offer, which I found very worthwhile, simply follow the instructions when you receive your email from Priority…[254]

273. Boulding states that after this email of 12 March 2019, she left it to Peta to make up her own mind whether to proceed and states: "*In the period prior to Peta taking the test I did not at any time follow up with her or any of the others to check if they had accepted the invitation to complete the test or pressure them to do so*." [255]

274. Jody Miller of Priority sent Peta an email on 11 March 2019 with the subject 'Cardiac Medical Assessment – Peta Hickey'. Ms Miller stated that Programmed had engaged Priority to coordinate her "*Cardiac Medical Assessment as part of the strategy to provide the best possible care for their employees".* The process for this medical assessment was then set out in 6 steps (in order), consisting of: the Priority introduction email ("*This email*"); MRI Now arranging for diagnostic imaging; imaging results obtained and provided to doctor for review; Peta to provide relevant medical information to Priority/Dr Saad for review; "*Tele Medical Consultation*" between Peta and Doctor takes place (Peta was then told Saad would be "*calling your mobile*"); and then a medical report provided to Peta from Priority/Doctor.[256]

275. Following the 6 steps of the 'medical assessment' process as set out, the email states:

Shortly you will receive an email/phone call from MRI Now who will co-ordinate your [CAC] at a location convenient to you anywhere in Australia. Because of the need to 'interpret' your Cardiac CT and CAC score, you will receive a post-scan consultation from a specialist GP – Dr Saad (which we will arrange). The doctor will explain your results and talk about what it means for you and what, if anything, you should do as a next step…

276. Counsel for the Senior Next of Kin submitted that Peta felt some level of pressure to participate in the CHAP being run by her employer, as indicated in the evidence set out above and as indicated by her partner and friends. There was no submission that

[254] 2019 2336 Hickey – AM3-30 – Statement – Jennifer Boulding (Programmed) – 05 11 2020, paragraph 6 and AM3-30-5

[255] 2019 2336 Hickey – AM3-30 – Statement – Jennifer Boulding (Programmed) – 05 11 2020, paragraph 7

[256] AM3-11 Peta Hickey Correspondence – '2019 03 11 Priority to PH re Health Assessment'

Programmed intended to apply this pressure, but the Court acknowledges the effect on Peta, that she indeed subjectively felt some pressure to participate.[257]

Booking process

277. On the evening of 11 March 2019, following the email from Jody Miller of Priority to Peta, asking her to participate in the CHAP, Haddad sent an email (forwarded by Miller) to MRI Now, asking that they contact Peta to book in her CT scan, attaching Peta's so-called 'referral form'.[258]

278. As stated above, MRI Now was the booking service which assisted Peta to find a radiology imaging centre to attend, in this case being FMIG, and booked the appointment.[259]

279. The booking form for the CT scan for Peta (received by FMIG) is on MRI Now letterhead and is headed 'MRI Now – Booking Confirmation', dated 12 March 2019, naming 'Doumit Saad' as the referring doctor with the note "***please find enclosed the referral for this booking*". The second page is the referral, marking 'Cardiac CT Scan + Coronary Artery Calcium Scoring' as the 'Examination Required' for Peta. This referral again names the referring doctor as Dr Doumit Saad (Provider No 220066VL). The referral has Saad's electronic signature and is dated as signed on 11 March 2019.[260] The booking form does not include any clinical notes or indications as to the justification for the request for Peta's CT scan. The section headed 'Clinical Notes' on the referral is blank.[261]

280. A copy of this booking form for Peta was sent through by MRI Now to FMIG via email, on 29 March 2019, providing a facsimile number for the transmission of reports and invoices (1300 726 839).[262] On the morning of 29 March 2019, Marie Toutai, Customer Service Manager with MRI Now, emailed Peta (copying in Jody

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[257] 2019 2336 Hickey – Submissions – SNOK – 26 05 2021, [17] a); 2019 2336 Hickey - AM3-17 – Statement of Richard Hickey(incl exhibit) – 30 09 2020; 2019 2336 Hickey - AM3-32 – Statement of Deirdre Capuano – 16 11 2019; 2019 2336 Hickey - AM3-33 – Statement of Eleanor Parry – 16 11 2019; 2019 2336 Hickey - AM3-34 - Statement of Jacinta Shannon – 16 11 2019; 2019 2336 Hickey - AM3-35 – Statement of Kirsty MacIsaacs – 09 10 2020

[258] AM3-11 Peta Hickey Correspondence –2019 03 11 Priority to MRI Now with referral'; AM3-1 Email from Priority Care to MRI Now 11 03 2019; AM3-2 Attachment to AM3-1 – CT Referral Form 11 03 2019

[259] 'Facts Not in Dispute Relating to MRI Now – signed (3851351.1)', dated 28 10 2020, paragraphs 1 - 4

[260] Statement of Reddan (2), CB 57; AM3-11 Peta Hickey Correspondence – 'Referral Form for Peta Hickey'

[261] Statement of Reddan (2), CB 57; AM3-11 Peta Hickey Correspondence – 'Referral Form for Peta Hickey'

[262] Email from MRI Now to 'Moonee' (FMIG) dated 29 March 2019, CB 105

Miller of Priority) regarding her 'Programmed – Senior Management Cardiac Assessment'. The email went on to request Peta's consent, as follows[263]:

> *...So there are no delays can you please confirm consent to the following questions (via reply email).*
>
> *1.Do you consent to MRI Now collecting your information and sending your referral to the radiology centre in order to arrange the appointment on your behalf? Yes or No*
>
> *2. Do you also consent to MRI Now providing a copy of your radiology report to Dr Saad for the purposes of review and assessment as part of your Executive Cardiac Medical Assessment?*
>
> *...*

281. In the afternoon of 29 March 2019, Ms Toutai emailed FMIG Moonee Ponds thanking them for making an appointment with Peta on 12 April 2019 and attaching a copy of the referral (dated 12 March 2019), being a document named 'HICKEY Peta – 12032019 MRI Now Referral'. Shortly after this, Ms Toutai sent an email to Peta confirming that appointment at FMIG and another to Miller, confirming Peta's appointment.[264]

282. The booking form and referral used to book Peta in for her CT scan, on MRI Now letterhead, was emailed to FMIG and to Priority only to facilitate and then to confirm the booking. The referral, nominally from Saad, was included with the booking form and passed on by MRI Now, having been received from Priority. MRI Now did not generate the referral form bearing Saad's signature, although having been involved in its design, Mtanios well knew how the CHAP worked.[265]

283. Initially FMIG received only this booking form and referral for Peta from MRI Now and Priority. As stated, this included no clinical notes or background and named the referring doctor as Dr Saad. It is noted that, in order to ensure that referring

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[263] AM3-11 Peta Hickey Correspondence – '2019 03 29 MRI Now to PH re consent'; See also AM3-12 Other Priority Correspondence – '2018 10 31 Priority to Programmed re template email' (from Jody Miller to Rani Haddad, Rob Kosova and Malcolm Deery, copying in Philip Mtianos and Marie Toutai regarding the template for this email); 'Facts Not in Dispute Relating to MRI Now – signed (3851351.1)', dated 28 10 2020, paragraph 9 a)

[264] AM3-11 Peta Hickey Correspondence – '2019 03 29 MRI Now to PH re appointment'; AM3-11 Peta Hickey Correspondence – '2019 03 29 MRI Now to Priority re appointment'; 'Facts Not in Dispute Relating to MRI Now – signed (3851351.1)', dated 28 10 2020, paragraphs 9 b) – d)

[265] 'Facts Not in Dispute Relating to MRI Now – signed (3851351.1)', dated 28 10 2020, paragraphs 7 - 8

practitioners provide all the required information, FMIG requests this information on their own referral form. This form includes 'clinical indication for the examination' as one of the 'minimal essential components' for an adequate request or referral for the CT scan. However, apparently it is not uncommon that referring practitioners do not provide all the required components for an adequate referral in any event.[266]

Key finding:	**It is not uncommon that referring practitioners do not provide all the required components for an adequate referral in any event.**

Lack of risk assessment

284. Prior to Peta's attendance at FMIG, no doctor saw or spoke to Peta in order to perform a cardiovascular risk assessment and determine the need for her to have the CT scan.[267]

285. Programmed did not prepare a formal, written risk assessment as to any risks of injury that might be posed by Programmed employees, including Peta, undergoing the CT scan. Sutherland said that his considerations, as to who was at most risk from potential heart issues, were the factors combined in the case of Glenn Thompson.[268]

Consent procedures

286. As set out above, on 29 March 2019, MRI Now emailed Peta (copying in Priority) regarding her 'Programmed – Senior Management Cardiac Assessment', seeking Peta's consent to collecting her information and sending her referral to FMIG, in order to book her appointment and to providing Saad with a copy of her CT scan results for his review.[269] Consent to the CT scan itself was not sought or obtained at this stage. On 29 March 2019, Peta was advised by email of her 12 April 2019 appointment.

287. On 11 April 2019, the day prior to her CT scan appointment, Peta called MRI Now to reschedule. Peta's appointment was rescheduled to 23 April 2019 but by reply email to MRI Now on 11 April 2019, Peta stated that would be after the Easter long

[266] Statement of Reddan (2), CB 52 - 53 and 'FMIG, General Referral Form' (undated), CB 72 - 75

[267] Statement of Dr Doumit Saad, CB 78

[268] 2019 2336 Hickey – AM3-19 - Statement - Chris Sutherland (Programmed) – 16 10 2020, paragraphs 12 – 13, 26 and 57.

[269] AM3-11 Peta Hickey Correspondence – '2019 03 29 MRI Now to PH re consent'

weekend and requested 30 April 2019 instead. Her appointment was then booked for 1 May 2019.[270]

288. Richard Hickey recalls that in the months following a conversation with Peta about the test, she had articulated that she did not want to have it. Mr Hickey says that within a couple of days of Peta telling him she had booked in for the CT scan, Peta had cancelled the booking. He recalls Peta recounting conversations with Jen Boulding repeatedly asking about Peta's action regarding the test.[271]

289. Boulding says that after her initial email to Peta of 12 March 2019 asking Peta and three others to undergo the test, she did not follow this up with Peta or pressure her to take the test.[272]

290. According to FMIG's office manager Liezl Samakovski, it was usual practice at FMIG for reception to ask for Medicare information and referral paperwork and then for patients to be given a questionnaire to complete and advised to fill it out to the best of their ability. This questionnaire is then provided to the radiographer who completes the questionnaire with the patient.[273]

291. FMIG regard the questionnaire signed by Peta as a consent form, which each patient is required to sign before any care or procedures are undertaken. This includes information on the procedure and includes questions regarding their health information. A patient will be provided with the questionnaire upon arriving for their test. The completed questionnaire is then to be reviewed and discussed by the radiographer with the patient. FMIG states:[274]

> *"…[t]his is an opportunity to explain the tests to the patient, answer any questions they have, and clarify any information on the consent form, as necessary. Once the radiographer has discussed the consent with the patient, they will write their initials on the referral form, to indicate that the patient has*

[270] AM3-11 Peta Hickey Correspondence – '2019 05 03 Chain between Priority and MRI Now and Programmed sharing information', '2019 04 11 MRI Now to PH re appointment' and '2019 04 11 PH to MRI Now re appointment'

[271] 2019 2336 Hickey - AM3-17 – Statement Richard Hickey (incl exhibit) - 30 09 2020

[272] 2019 2336 Hickey – AM3-30 – Statement – Jennifer Boulding (Programmed) – 05 11 2020, paragraph 7

[273] 2019 2336 Hickey - AM3-16 - Statement of Liezl Samakovski (FMIG) – 30 09 2020, paragraphs 10 - 12

[274] Statement of Reddan (2), CB 53-54 and CB 59 - 60 – the questionnaire

consented for the test. Such initials can be seen on Ms Hickey's annotated referral form."

292. The (annotated) booking form with referral form for Peta is initialled by the radiographer that day, Lesley Gilbert.[275]

293. This questionnaire includes a preliminary explanation of the CTCA test (not the CAC test) and provides some details of the procedure and some of the risks, including the following:

> *CT Coronary Angiogram is a study of the blood vessels in the heart. This involves the injection of x-ray dye (iodine contrast). Contrast injection is considered a safe procedure.*
>
> *…*
>
> *Allergic reactions to the dye are uncommon to rare. The symptoms are nausea, mild rash, wheezing and facial swelling. Most reactions occur within minutes of injection and can be treated successfully and promptly. Severe anaphylactic reaction is rare.*
>
> *…*

294. The questionnaire then states:

> *It is important to fill out the questionnaire below so the Radiologist can decide your suitability for the test.*

295. The questionnaire further states: "*I have **accurately** completed the questionnaire, and I have also **read** and **understood** the above information and **give consent to have an intravenous contrast injection***" (with original emphasis). Peta signed and dated the questionnaire on 1 May 2019.[276] Dr Tseng says that consent was obtained from Peta by her signature on this questionnaire.[277]

[275] Statement of Reddan (2), CB 53-54 and CB 58 – the booking form (annotated); Gilbert, T740.14 – T740.17 – the initials are 'LW', Williams being Gilbert's maiden name at the time

[276] Statement of Reddan (2), CB 59 – 60 – the questionnaire

[277] Statement of Dr Gavin Tseng (3rd), CB 20

296. As noted above, FMIG have their own referral (or request) forms. This form has a clear section for 'consent' to be noted. Otherwise, the request form is initialled to confirm that consent has been discussed with the patient.[278]

297. Finally, it is FMIG practice to upload both the signed questionnaire and the annotated request form (initialled to indicate the radiographer has discussed the 'consent form' with the patient) and store these on the patient's electronic file.[279]

298. While Peta certainly filled out the questionnaire that included a signed statement of consent, the absence of a clearly designated consent form and the failure of the FMIG procedures where an invalid referral is received, meant that Peta did not give fully informed consent to the CT scan and did not know the true nature of the procedure, and possible alternate pathways, she was confronting at that moment. This will be considered in more detail below.

Events of 1 May 2019

299. On 1 May 2019, one radiologist was working at FMIG and this was the supervising radiologist, Dr Gavin Tseng.

300. Two radiographers were working together on the CT scans, Tuan-Anh Nguyen and Lesley Gilbert. Nguyen was responsible for the 'work up' which involved getting the 3D reconstruction images prepared. Gilbert was responsible for doing the scanning itself.[280]

301. Also working at FMIG that day was administrative assistant Lara Delecheneau, intern radiographer Karina Ong, in another room, MRI technician Kajin Do, who shared a work-station area with the radiographers performing CT scans, and office manager Liezl Samakovski.[281]

Preparation for the CTCA

302. On 1 May 2019, at some time prior to 9.00am Peta attended at the medical imaging suites of FMIG, being the FMIG clinic located at 247 Ascot Vale Road, Moonee Ponds.

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[278] Statement of Reddan (2), CB 54 and CB 72 -75 - 'FMIG, General Referral Form' (undated), and CB 58 - the booking form (annotated)

[279] Statement of Reddan (2), CB 53

[280] Statement of Tuan-Anh Nguyen, CB 36

[281] Statement of Karina Ong, CB 49; Statement of Kajin Do, CB 39

303. At some stage after her arrival at FMIG and before the CT scan, Peta filled out the questionnaire,[282] indicating therein that she had previously had an injection of x-ray dye and did not have a reaction or feel unwell afterwards. The section for details of any other relevant medical history was left blank. Peta provided her weight and height and answered basic questions about medication.[283]

304. The usual procedure at FMIG was that the patient fills out the questionnaire provided by reception staff and hands it back. It is scanned into the system and then an administrative assistant, such as Delecheneau, is handed all the paperwork to go through with the patient.[284]

305. Delecheneau took Peta from reception into the CT cubicle and took her through the questionnaire. Delecheneau asked if she smoked, to which she said yes, and if she had any allergies or had any heart surgeries, to which Peta said no. Noting that Peta had indicated having a previous x-ray dye, Delecheneau confirmed this had been x-ray dye and asked if she felt unwell after the dye and Peta said no, she felt fine. Delecheneau asked whether Peta had asthma or other specified conditions or took any medication to which she said no. Peta told Delecheneau that she was having the CT scan because her work had requested it.[285]

306. At 9.00 am, Delecheneau took Peta's blood pressure and heart rate, recording her findings. Peta's heart rate was 77 bpm.[286]

307. At 9.05 am, Delecheneau again measured her heart rate and it was 70 bpm. If a patient's heart rate is above 60 bpm it is Delecheneau's practice to ask the radiologist if the patient requires any medication. She therefore informed Tseng that Peta's heart rate was 77 bpm and then 70 bpm. Tseng asked if the patient had asthma and she informed him she did not.

308. As an aside, I will note here that Tseng recalled speaking to Peta directly. As I will discuss below, I find that this did not occur, but that Tseng's only interaction with Peta before the scan was through Delecheneau.

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[282] Statement of Reddan (2), CB53 – 54 and CB 59 – 60 – the questionnaire

[283] CB 59 – 60 – the questionnaire

[284] Delecheneau, T632.18 – T632.26

[285] Statement of Lara Delecheneau, CB 41; CB 59 – 60 – the questionnaire; Delecheneau, T632.27 - T633.4

[286] Statement of Lara Delecheneau, CB 41; Statement of Reddan (2), CB 62 – Delecheneau Notes

309. Tseng prescribed Metoprolol (50mg),[287] a preparatory 'beta-blocker' to be given orally "*to lower Ms Hickey's heart rate for the CT coronary angiogram procedure…*" Whilst this is unremarkable in the ordinary clinical course, it had consequences in this case to which I shall return during the expert evidence discussion below. Meanwhile, Tseng went to another room to conduct an invasive procedure involving injecting another patient's foot (related to plantar fasciitis).[288]

310. At 9.10 am, Delecheneau gave Peta the Metoprolol.[289]

311. At 9.45 am, Delecheneau checked Peta's blood pressure and heart rate again. Her heart rate was 70 bpm.[290]

312. At around 10.00 am, Delecheneau rechecked Peta's heart rate, which had dropped to 62 bpm. Delecheneau then passed Peta's paperwork to radiographers Nguyen and Gilbert and went to get her next patient to bring them to the CT area.[291]

313. Gilbert also reviewed Peta's paperwork and entered her weight and height into the computer, which generates a BMI score, dictating the calibration required for the CT scan. Gilbert then checked the paperwork for the reason for referral, any allergies or medications or previous surgeries, specifically stent or by-pass surgeries which would necessitate a different scanning protocol. Gilbert noted from the paperwork that Peta had no clinical indication for needing a CTCA and that the named referring doctor was based in NSW.[292] Gilbert initialled the paperwork, including the booking form and referral, as did Nguyen the other radiographer.[293]

314. Gilbert called the patient in and went through the questionnaire with her. Gilbert describes the following interaction:[294]

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[287] Statement of Lara Delecheneau, CB 42; Statement of Reddan (2), CB 62 – Delecheneau Notes

[288] Statement of Dr Gavin Tseng (1st), CB 3 and Statement of Dr Gavin Tseng (3rd), CB 19

[289] Statement of Lara Delecheneau, CB 42; Statement of Reddan (2), CB 62 – Delecheneau Notes; Statement of Dr Gavin Tseng (1st), CB 3.

[290] Statement of Lara Delecheneau, CB 42; Statement of Reddan (2), CB 62 – Delecheneau Notes

[291] Statement of Lara Delecheneau, CB 42; Statement of Reddan (2), CB 62 – Delecheneau Notes

[292] Statement of Lesley Gilbert, CB 45

[293] Gilbert, T740.14 – T740.30

[294] Statement of Lesley Gilbert, CB 46

I went through the contrast form with her. She had ticked that she had x-ray dye before. I said words to the effect of "so you remember the hot flush sensation and feeling like you need to wee."

The patient said she could not remember those sensations. In my experience, nearly every person who has had the dye remembers the sensations.

The patient told me she was pregnant at the time of the previous scan when she had the dye. This made me think she may not have had dye before because we could not normally perform CT scans on someone who was pregnant.

I thought she might have been confused about whether she had dye before and I told her words to the effect of "I am not sure you have had it before."

315. Gilbert then explained to Peta the process of administration of the dye would take about five minutes, that she would hear Gilbert's voice telling her to hold her breath. Gilbert described that Peta could expect to experience a hot flush all over and have a 'wee sensation' from the procedure. Gilbert then inserted the cannula into her arm. Gilbert says Nguyen then placed ECG monitors on the patient's chest and Gilbert connected her to the injector machine. Gilbert placed Peta in the scan machine and performed the preliminary CAC scan, which did not require the contrast. [295]

316. At some stage Peta was given one puff of glyceryl trinitrate spray (GTN) prior to her contrast CT scan.[296]

Involvement of Dr Tseng in review and preparation of his patient

317. Despite his assertions to the contrary, I find that Tseng did not speak to Peta before her CT scan on that day.

318. Tseng gave evidence that prior to the CT scan being performed, he:

(a) spoke to Peta about her referral for the CT scan and went through the Questionnaire with her and "*confirmed that the purpose of the scan was to evaluate her coronary artery disease and explained that this was a CT scan to have a look at the blood vessels of the heart as noted on the questionnaire*" ;[297]

[295] Statement of Lesley Gilbert, CB 46

[296] Statement of Dr Gavin Tseng (1st), CB 3

[297] Statement of Dr Gavin Tseng (3rd), CB 19; Tseng, T480.16

(b) explained to Peta the process of the CT scan and what she may experience;[298]

(c) explained to Peta as per the questionnaire that allergic reactions to the dye are uncommon and rare and symptoms include nausea, mild rash, wheezing and facial swelling and that severe reactions are rare;[299] and

(d) in relation to the clinical justification for the CT scan, took into account Peta's age, gender and answer to the questionnaire that she has no relevant medical history and that she was not coming through Medicare (i.e. private referral).[300]

319. However, I prefer the evidence of administrative assistant, Lara Delecheneau, being that she took Peta's paperwork to Tseng to discuss the administration of Metoprolol due to Peta's high heart rate. Delecheneau gave evidence that she brought the paperwork with her to Tseng, was present as he looked at it and then took the paperwork back with her, gave Peta the tablet and retained the paperwork after that. Delecheneau stated she did not give the paperwork back to Tseng but retained it and then passed it on to the radiographers.[301]

320. On this evidence, Tseng had no opportunity after that time to query or discuss the paperwork, including the questionnaire, with Peta.

321. Delecheneau's evidence had the ring of truth about it. Her recollections were vivid, her answers were prompt and cooperative, despite the emotional gravity of what she experienced that day.

322. On this issue and on the other events of 1 May 2019 at the FMIG clinic, I do not accept the evidence of Tseng where it is inconsistent with other evidence. This is not to say Tseng was intentionally misleading the Court. Rather, Tseng stated in evidence on numerous occasions that he was in significant shock on the day following the incident with Peta and so, could not recall certain matters.[302] As such, he was simply an unreliable witness.

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[298] Statement of Dr Gavin Tseng (3rd), CB 19

[299] Statement of Dr Gavin Tseng (3rd), CB 19

[300] Tseng T419.1-6

[301] Delecheneau, T635.14 – T635.27, T636.27 – T637.12 and T637.28 – T638.4

[302] Dr Tseng, T580.18, T581.4 – T581.10, T582.9 and T584.21 – T584.25

323. In contrast to the many questions he was unable to answer, Tseng did volunteer that he specifically recalled asking his staff to connect him with the referring practitioner, Dr Saad, to discuss Peta's referral. Tseng recalled that the FMIG staff informed him that Saad was not contactable as had also been the case for another patient when they had tried to contact him.[303]

324. Again, I prefer the evidence of Delecheneau, being that Tseng did not mention Saad in her presence, nor ask for him to be called when she brought him Peta's paperwork (including the referral).[304] Again, her clear evidence was that she then took all Peta's paperwork with her and so, Tseng would have had no further opportunity after that to consider the referral and to ask that Saad be contacted.

325. The only record of a telephone call from FMIG to Saad that day was at 10.44 am, well after the adverse contrast reaction and at around the time the MICA paramedics were already on site. This one record does more to contradict Tseng's version of events than the recollections of other FMIG administrative staff, which were inconclusive.[305]

Key finding: Dr Tseng did not make any attempt to call Saad before Peta's scan on 1 May 2019.

326. I find that given Tseng did not attempt to call Saad it is also highly unlikely that he spoke with Peta either. Peta's paperwork, comprising the referral and questionnaire with consent form, was taken from Tseng and then given to Gilbert, who then took Peta through it again. There are no notes of a discussion involving Tseng, nor of any additional information he obtained in any such discussion.

Key finding: Dr Tseng did not speak to Peta before her scan. His only interaction with her before the scan was through Delecheneau.

327. In addition, in the view of the expert, Eddey, even if Tseng did go through the fairly rudimentary questionnaire with Peta, where her referral was invalid in the first place,

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[303] Statement of Dr Gavin Tseng (3rd), CB 19; I note that the evidence of Tseng is consistent with the evidence of Gilbert and Nguyen that another patient had presented to FMIG with an MRI Now referral and that the referring doctor could not be contacted: Gilbert, T940.11. Reddan gave evidence of having seen that referral and believes that the referring doctor was Saad

[304] Delecheneau, T635.24 – T636.6

[305] AM3-86-2 – outgoing Telephone Records for FMIG 1 May 2019; Samakovski, T782.26 – T782.31; Other FMIG witnesses - AM3-104 – Statement – Maria Angeli, AM3-105 – Statement – Meltem Balci, AM3-106 – Statement – Jessica Borrelli, AM3-107 – Statement – Chryssi Camerlengo, AM3-108 – Statement – Louise Mascia and AM3-109 – Statement Sara Taylor

this level of review would have been insufficient to provide fully informed consent. I accept that view, and will return to it in more detail later.[306]

Key finding:	**Even if Tseng did go through the FMIG questionnaire with Peta, where the referral was invalid in the first place this would have been insufficient to provide fully informed consent.**

Initial management and treatment of contrast reaction

328. The following paragraphs set out the evidence of FMIG staff and Dr Tseng regarding their recollections of observations of Peta following the contrast reaction and of their actions in attempted management of that reaction. I accept that the precise timing of the events and order of those events is not certain, but as will be seen, the effect of the expert evidence is that the relatively minor discrepancies in different chronologies do not have any significant effect on causation.

329. At around 10.15 am, Peta underwent the CTCA scan, receiving the contrast dye.[307]

330. Gilbert took notes of Peta's contrast reaction and management (the **Gilbert Notes**) and I accept these as a reasonably contemporaneous timeline of events prior to the arrival of Emergency Services.

331. The Gilbert Notes record the time of the contrast injection as 10.15:36, and that it comprised 75ml of Omnipaque 350.[308]

332. At around 10.15 am, Gilbert was recording the patient's heart rate, radiation dose and how much dye was injected. Peta received 5ml per second to a total of 75ml. She then noted that a heart rate check was to be carried out in 30 minutes time, at 10.45 am.[309]

333. The first time the other radiographer, Nguyen, interacted with the patient was when he went into the CT room after she had her scan.[310]

334. At around 10.17 am, after the CT scan, Nguyen took Peta from the CT scanner. Peta told Nguyen she didn't feel well and felt a bit 'nauseated'. Nguyen called Gilbert in to help, asking someone to get the vomit bag. Gilbert got a vomit bag and reassured the

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[306] Eddey, T1211

[307] Statement of Lesley Gilbert, CB 46; Statement of Reddan (2), CB 67 and CB 69 – the Gilbert Notes

[308] Statement of Lesley Gilbert, CB 46; Statement of Reddan (2), CB 67 – the Gilbert Notes

[309] Statement of Lesley Gilbert, CB 46 - 47

[310] Statement of Tuan-Anh Nguyen, CB 36; 2019 2336 Hickey - AM3-14 – Statement - Tuan-Anh Nguyen (FMIG) (2) - 25 09 2020; Nguyen, T672

patient that this feeling would pass and it was normal to experience nausea. Nguyen disconnected the dye injector and Peta was sitting on the edge of the bed and said she felt her ears were blocked or words to the effect of "I can't hear". Peta was dry retching, which did not appear to be passing. Delecheneau did not recall the patient speaking but did recall her dry retching. The staff variously observed that Peta's eyes were glassy, blood-shot, her skin red and she was drooling a lot. Nguyen recalls Peta's eyes and skin were red and she shook a little bit and Nguyen thought maybe the patient was having a seizure. Nguyen says Peta was not responding when he was talking to her. [311]

335. The patient's reaction is noted as occurring at 10.17 am. Gilbert also notes that "*Dr G Tseng was called in and Victoria ambulance was also called*" and lists symptoms as 'vomiting' and 'ears blocked' and 'drooling mouth' and "*collapsed, body was red, not responding cohesively, then no response*".[312]

336. According to the Gilbert Notes, at around 10.20 am, Peta "*started vomiting*".[313]

337. It was at this point that Gilbert asked Delecheneau to get the doctor.[314]

338. At some time shortly after Tseng, Delecheneau, and Gilbert and intern radiographer Karina Ong were all in the CT room, Delecheneau recalls that Peta looked like she was convulsing and when asked by Tseng if she was ok, she was unresponsive. Gilbert recalls that Peta was turning more purple, her eyes were glassy and she was foaming or frothing at the mouth. Ong recalls when she came in, Peta was vomiting foam and had passed out on the bed. [315]

339. Ong went to get the second emergency box and a defibrillator, kept in the radiologists reporting area.[316] Ong states that this second emergency box has emergency drugs, airway material, tubing and syringes. Ong opened the airway equipment including the

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[311] Statement of Tuan-Anh Nguyen, CB 36 - 37; 2019 2336 Hickey - AM3-14 – Statement - Tuan-Anh Nguyen (FMIG) (2) - 25 09 2020; Nguyen, T677.17 – T677.23; Statement of Lesley Gilbert, CB 47; Statement of Lara Delecheneau, CB 42 – 43; Nguyen, T677.26 – T677.27; Delecheneau, T640.19 – T640.22; Statement of Kajin Do, CB 39; Statement of Reddan (2)- Gilbert Notes, CB 67 and CB 69

[312] Statement of Reddan (2), CB 67 and CB 69 – the Gilbert Notes

[313] Statement of Reddan (2), CB 69 – the Gilbert Notes

[314] Delecheneau, T640.22; Gilbert, T730

[315] Statement of Lara Delecheneau, CB 43; Statement of Lesley Gilbert, CB 47; Statement of Karina Ong, CB 49

[316] Statement of Lesley Gilbert, CB 47; Statement of Karina Ong, CB 49 - 50

guedel airway just in case it was needed. Ong states that there was also an emergency box in the CT room, which included the adrenaline.[317]

340. At around the time Gilbert returned to the CT room, she went straight to the emergency box in the CT room and prepared the drugs. She prepared the Hydrocortisone and the adrenaline for drawing up. [318]

341. MRI technician Kajin Do, who had been working in the MRI room nearby, had gone to collect a patient from reception and noticed Nguyen in the CT room asking Peta how she was feeling, if she was ok. On his return, Do noticed "*things had escalated in the CT room*" and Peta's her face had gone red. Do went to the MRI room and got an IV pole, took it into the CT room, set up an oxygen tank and mask, connected the tube and announced: "*Oxygen is ready to go*." By that stage Tseng was in the room with the patient.[319]

342. Tseng observed that Peta was displaying signs of what he considered to be a 'tonic clonic' like seizure, despite having a regular carotid pulse. Nguyen recalls Tseng saying that it looked like Peta had had a seizure.[320]

343. Tseng asked for the ambulance to be called at around the time Peta was having a second seizure.[321] At 10.21 am, Leizl Samakovski called 000 for an ambulance.[322] This is consistent with the 000 call record, which indicates Peta started seizing earlier than 10.22 am.[323] At around 10.25 am, according to the Gilbert Notes, the patient had a 'seizure'.

344. Peta was laid on her side and Tseng called for a guedel airway and ambu-bag and for her blood pressure and oxygen to be recorded. Ong gave the guedel airway and ambu-

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[317] Statement of Karina Ong, CB 49 - 50

[318] Gilbert, T749

[319] Statement of Kajin Do, CB 39-40

[320] Statement of Tuan-Anh Nguyen, CB 37; Nguyen, T698.4 – T698.9; Statement of Dr Gavin Tseng (1st), CB 4; Tseng, T540 – T541

[321] Statement of Tseng (1), CB4, [7]; AM3-36-1 – Typed Notes – Dr Gavin Tseng – 01 05 2019

[322] Statement of Lara Delecheneau, CB 43; 2019 2336 Hickey - AM3-16 – Statement of Liezl Samakovski (FMIG) – 30 09 2020 paragraphs 17 - 18

[323] Statement of Reddan (2), CB 69 – the Gilbert Notes; 2019 2336 Hickey – AM3-18 – Statement – Jessica Taylor (ESTA) – 16 10 2020, AM3-18-8ff – Transcript of Call; 2019 2336 Hickey – 000 Call – Police Transcript

bag to Tseng. Delecheneau recalls that the guedel airway and ambu-bag were usually kept in an emergency box in the radiologists' room with the defibrillator.[324]

345. At around this time, Tseng asked Delecheneau to get the blood pressure cuff and pulse oximeter, usually kept a few metres from the CT room, in the CT cubicle**.** She grabbed them and went back to the CT room.[325]

346. Tseng inserted the guedel airway and started pumping the ambu-bag. Nguyen was holding the patient in position on the table.[326]

347. Tseng's evidence was that once Peta had collapsed, he was focused on managing her airway and ventilating her with the ambu-bag. He had asked for Peta's oxygen saturation and blood pressure but was also intermittently monitoring her pulse himself by palpating Peta's carotid pulse and found it to be regular and present. The doctor stated he could not take Peta's peripheral pulse as he was ventilating.[327] Tseng believed Ong had been trying to get Peta's oxygen saturation, using the oximeter.[328]

348. Delecheneau did not see Tseng monitor Peta's pulse by palpating Peta's carotid. She only recalled Tseng using the ambu-bag.[329]

349. Delecheneau recalls that after Ong arrived with the guedel airway, she gave the blood pressure cuff to Nguyen and that she was holding the patient, so she did not fall off the bed.[330]

350. Delecheneau then recalls placing the pulsometer (or oximeter) on Peta's finger to try to get a read of her pulse. Delecheneau saw there was no reading. Gilbert or Delecheneau then tried it on a different finger. Delecheneau recalled that by the time the ambulance arrived, that the 'machines' were recording neither pulse nor blood pressure. Gilbert recalls that at some point the oximeter was not registering and it took a couple of goes to work. She also recalls Delecheneau taking Peta's blood pressure a

[324] Statement of Lara Delecheneau, CB 43; Statement of Tuan-Anh Nguyen, CB 37; Statement of Lesley Gilbert, CB 47; Statement of Dr Gavin Tseng (1st), CB 4; Dr Tseng, T540 – T541; AM3-36-1 – Typed Notes – Dr Gavin Tseng – 01 05 2019

[325] Statement of Lara Delecheneau, CB 43; Delecheneau, T644; Gilbert, T747.24 – T748.7

[326] Statement of Dr Gavin Tseng (1st), CB 4; Statement of Karina Ong, CB 50; Statement of Kajin Do, CB 40

[327] Tseng, T458.22 – T458.25 and T463.23 – T463.26

[328] Tseng, T 464.3 – T464.7

[329] Delecheneau, T645.12 – T645.17

[330] Statement of Lara Delecheneau, CB 43

couple of times. Delecheaneau was calling out and Gilbert recording readings.[331] Nguyen could not recall whether he used the blood pressure machine on Peta, though it was possible.[332]

351. The Gilbert Notes record a blood pressure reading of 113/79 and a heart rate of 56 as at 10.30 am.[333] Gilbert said both these readings came from the 'blood pressure machine' and someone was telling her the figures [334] though she said it was possible she was mistaken and only assumed that was where the readings came from.[335]

352. According to Tseng, Peta's heart rate and level of blood oxygenation were not unrecordable, but the equipment itself was not reliable and an oximeter can only give a pulse reading if reliable.[336] In terms of the reliability of the information he had, he added that he knew Delecheneau was not medically trained, and that Nguyen was not monitoring Peta's pulse.[337]

353. On balance, the witnesses present in the CT room were uncertain about who operated the heart rate and blood pressure monitoring equipment and as to whether Peta had a pulse or a blood pressure reading. While the evidence is unclear, on the face of the Gilbert Notes, Peta was recording a pulse and giving a blood pressure reading at 10.30 am. I accept that Peta had a pulse and recordable blood pressure at least at approximately 10.30 am.

Key finding: As of 10.30 am, Peta had a pulse and recordable blood pressure.

354. As stated above, at around the time Peta began seizing again and Tseng called for the guedel airway, he also asked that an ambulance be called and Nguyen requested the ambulance have sirens on.[338]

355. The FMIG office manager, Liezl Samakovski, was in the corridor and heard the call for someone to dial an ambulance but does not recollect who asked for the ambulance.

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[331] Delecheneau, T644.8 – T646.6; Gilbert, T747.24 – T748.15

[332] Nguyen, T680

[333] Statement of Reddan (2), CB 69 – the Gilbert Notes

[334] Gilbert, T760

[335] Gilbert, T773

[336] Tseng, T462.25 – T462.31 and T556.13

[337] Tseng, T459 – T460

[338] Statement of Tuan-Anh Nguyen, CB 37; Statement of Dr Gavin Tseng (1st), CB 4; Tseng, T540

Samakovski had worked at FMIG for 13 years and she was the primary person who would call the ambulance on such occasions and had done so multiple times.[339]

356. Samakovski immediately went down to the CT room where Tseng and the radiographers were with the patient and was given a mobile phone to call 000.[340] At 10.21 am, Samakovski called 000 for an ambulance.[341]

357. As she made the call, Samakovski called out into the CT room, asking, regarding the patient, "*is it a contrast reaction?*", as that was the most common reason for calling the ambulance in her experience. She could see Tseng in front of Peta on the bed, with an ambu-bag. In answer to her question whether it was a contrast reaction, Samakovski was told 'yes' by Gilbert or Nguyen, that it was a contrast reaction.[342] She was also told to ask the ambulance to attend with "*lights and sirens*". Samakovski told the 000 operator at the commencement of the call that this was a contrast reaction. For the duration of the call, Samakovski stood at the doorway to the CT room or went to the carpark to check if the ambulance had arrived.[343]

358. The recording of the 000 call confirms that within 16 seconds of making the call, Samakovski asked those in the room if it was a 'contrast reaction' and then stated that there was a specialist radiologist present. Within the first 40 seconds of the call, Samakovski stated: "*…I'm not 100% sure but the patient is here having a CT scan and they've had an allergic reaction to our iodine contrast*".[344] More detail of the content of the 000 call is set out below.

359. After the ambulance had been called and Tseng had been attempting to ventilate Peta, Tseng asked for Diazepam. Gilbert says the Diazepam was not kept in the CT room but in the drug storage room located in the CT workstation area about two meters

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[339] 2019 2336 Hickey - AM3-16 – Statement of Liezl Samakovski (FMIG) – 30 09 2020, paragraphs 15 - 16

[340] 2019 2336 Hickey - AM3-16 – Statement of Liezl Samakovski (FMIG) – 30 09 2020, paragraph 17

[341] Statement of Lara Delecheneau, CB 43; 2019 2336 Hickey - AM3-16 – Statement of Liezl Samakovski (FMIG) – 30 09 2020, paragraphs 17 - 18

[342] Samakovski, T786,25 – T787

[343] 2019 2336 Hickey - AM3-16 – Statement of Liezl Samakovski (FMIG) – 30 09 2020, paragraph 20; External Exhibit – Recording of '000' Call (ESTA); 2019 2336 Hickey – AM3-18 – Statement – Jessica Taylor (ESTA) – 16 10 2020, AM3-18-8ff – Transcript of Call; 2019 2336 Hickey – 000 Call – Police Transcript

[344] 2019 2336 Hickey - AM3-16 – Statement of Liezl Samakovski (FMIG) – 30 09 2020, paragraph 19 ; External Exhibit – Recording of '000' Call (ESTA); 2019 2336 Hickey – AM3-18 – Statement – Jessica Taylor (ESTA) – 16 10 2020, AM3-18-8ff – Transcript of Call; 2019 2336 Hickey – 000 Call – Police Transcript

away. Gilbert handed the Hydrocortisone to Delecheneau and went to the storage room to get the Diazepam.[345]

360. Gilbert's evidence was that, on her own initiative, she had already got the Hydrocortisone and adrenaline ready and needles out, ready to be drawn up. She only got the Diazepam ready because Tseng asked her to do so.[346]

361. Nguyen says the Diazepam *was* kept in the emergency box in the CT room.[347]

362. Nguyen states that both he and Gilbert had checked the Diazepam, its expiry date and that it said Diazepam 5 mg diluted with saline. Further saline was kept in the emergency box located in the CT room.[348]

363. Tseng says he prepared the Diazepam 5 mg diluted with saline.[349]

364. Gilbert says she snapped the lid of the Diazepam but can't recall if she drew up the drug herself. Tseng said to her "*give it*". This surprised her as she had never before administered drugs, as a radiographer. Then Nguyen took the Diazepam and, as Peta was still cannulated, Nguyen started administering Diazepam to Peta intravenously, as Tseng instructed him. Tseng then interrupted, saying "*no*" and "*mix it with saline*". Gilbert recalls Nguyen then mixed the Diazepam with 10mls of saline, kept in the emergency box in the CT room. Under Tseng's instruction, Nguyen then administered the Diazepam but says he did not inject the whole lot, only a few mls, or half the vial.[350]

365. At around 10.25 am, it is noted that 10 mg or 5 mg Diazepam with saline was administered intravenously to Peta (though Tseng states that he requested 5mg of Diazepam and Nguyen says he only administered half the vial).[351]

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[345] Statement of Lesley Gilbert, CB 47–48; AM3-36-1 – Typed Notes – Dr Gavin Tseng – 01 05 2019

[346] Gilbert, T749

[347] Statement of Tuan-Anh Nguyen, CB 37

[348] Statement of Lesley Gilbert, CB 48; Statement of Tuan-Anh Nguyen, CB 37

[349] Statement of Dr Gavin Tseng (1st), CB 4

[350] Statement of Lesley Gilbert, CB 47 - 48; Gilbert, T750.3 – T750.23 and T751.13 – T751.16; Statement of Tuan-Anh Nguyen, CB 37; Statement of Lara Delecheneau, CB 43 – 44; Statement of Dr Gavin Tseng (1st), CB 4; Nguyen, T683.9 – T683.16 and T684.3 – T684.10; Delecheneau, T647.7 – T647.20

[351] Statement of Reddan (2), CB 69 – the Gilbert Notes; Statement of Dr Gavin Tseng (1st), CB 4

366. It was at around this stage that Gilbert started noting down the time drugs were administered to Peta and other observations of the patient.[352]

367. Nguyen recalls that he was only half-way through administering the Diazepam when Tseng asked for Hydrocortisone to be administered intravenously. Gilbert had prepared the Hydrocortisone and passed it to Delecheneau who told Tseng she had it and he instructed that it be administered, so Delecheneau handed it to Nguyen.

368. At around 10.28 am, the Hydrocortisone was administered intravenously to Peta by Nguyen.[353]

369. Nguyen says the standard ampoule contains '2 mil grams' volume of fluid, which in turn contains 100 mg of Hydrocortisone. As the whole ampoule was administered intravenously, the dose was 100 mg.[354] Gilbert's Notes also record '100 mg 1 mils' (with '2 mls' crossed out) Hydrocortisone administered. Tseng's note records IV administration of 100 mg of Hydrocortisone and this was the amount he instructed be administered.[355]

370. As the drug was administered, Tseng was giving step-by-step instruction as he continued with his resuscitation attempts, focusing on ventilation but not chest compressions.[356]

371. At some time after the administration of the IV Hydrocortisone, Gilbert recalls Peta was not responding and looked like she was turning blue.[357]

372. Gilbert says that, at around this time, Samakovski came in and said she was on the phone to the ambulance and asked whether the patient had been given adrenaline yet. Gilbert shook her head. Tseng was present.[358]

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[352] Statement of Reddan (2), CB 69 – the Gilbert Notes

[353] Statement of Tuan-Anh Nguyen, CB 37; Nguyen, T684.3 – T684.10; Statement of Lara Delecheneau, CB 44; Delecheneau, T646.29 – T646.31; Statement of Lesley Gilbert, CB 47-48; Statement of Reddan (2), CB 69 – the Gilbert Notes; AM3-36-1 – Typed Notes – Dr Gavin Tseng – 01 05 2019

[354] Nguyen, T684

[355] Statement of Reddan (2), CB 69 – the Gilbert Notes; AM3-36-1 – Typed Notes – Dr Gavin Tseng – 01 05 2019; Tseng, T471.23 – T472.10; Nguyen, T684.12 – T685.8

[356] Statement of Dr Gavin Tseng (1st), CB 4; Tseng, T469.22 – T469.27

[357] Statement of Tuan-Anh Nguyen, CB 37; Statement of Lesley Gilbert, CB 48

[358] Statement of Lesley Gilbert, CB 48

373. A recording of the 000 call confirms that at about 11 minutes into the call, the call-taker asks if they have adrenaline at the clinic and Samakovski asks someone, then confirming that they did.[359]

374. As stated above, the Gilbert Notes record a blood pressure reading of 113/79 and a heart rate of 56 as at 10.30.[360]

375. At around 10.35 am, the ambulance staff arrived at the patient and assisted with resuscitation efforts.[361]

376. Tseng gave evidence that he had considered administering adrenaline but states that he:[362]

> *…was concerned that unless this was administered intravenously (rather than intramuscularly) under my guidance it would require me to cease maintaining the airway. My concern with intravenous administration was that it might shock the heart, the route of administration of adrenaline for anaphylaxis usually being intramuscular.*

377. As to why Tseng did not immediately administer adrenaline, he said Peta's condition was not sufficiently clear to him as her "*…symptoms appeared non-specific*". Tseng says that, at the time, he considered a number of differential diagnoses, including seizure, ruptured aneurysm, stroke, undiagnosed intracranial space occupying lesion,[363] metabolic derangement due to vomiting and possibly an allergic reaction.[364]

378. Further, Tseng maintained that as he was the only medically trained person at FMIG that day, he was only able to provide Basic Life Support (**BLS**) to Peta and not Advanced Life Support (**ALS**) as there were no other medically trained persons present to assist him. He stated: "*By the time I suspected an allergic reaction and the requirement for adrenaline there was not enough support available to provide Peta*

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[359] Exhibit – Recording of '000' Call (ESTA); 2019 2336 Hickey – AM3-18 – Statement – Jessica Taylor (ESTA) – 16 10 2020, AM3-18-8ff – Transcript of Call; 2019 2336 Hickey – 000 Call – Police Transcript

[360] Statement of Reddan (2), CB 69 – the Gilbert Notes

[361] Statement of Dr Gavin Tseng (1st), CB 4; Electronic Patient Care Record (ALS/Ambulance Victoria), CB 140 (**ALS ePCR**) - Timeline

[362] Statement of Dr Gavin Tseng (1st), CB 4

[363] See Eddey Expert Report, CB 152 – *ie, a 'brain tumour'*

[364] Statement of Dr Tseng (3rd), CB 21

with Advanced Life Support and therefore BLS continued until the ambulance arrived." [365]

Possibility of instructing staff to administer IM adrenaline

379. Tseng's contention he was somehow prohibited from instructing another FMIG staff member to administer adrenaline intramuscularly (**IM**)[366] is not credible.

Key finding:	**It is not credible that Tseng was somehow prohibited from instructing another FMIG staff member to administer adrenaline intramuscularly.**

380. Tseng's evidence was that he did not know the staff well and therefore he did not know their level of skill and assumed they were not skilled enough.[367] The point was also made in examination of Tseng, that while the FMIG staff were asked to administer IV drugs, this was via cannulation, not requiring a needle or injection that way.[368] Tseng's evidence was that there was a different skill required to administer drugs intramuscularly.[369]

381. However, he could have asked if any of them could administer IM adrenaline and he did not. He had already asked Nguyen (and prior to him, Gilbert) to administer various drugs intravenously that day and yet Tseng did not ask if any FMIG staff present could, or were willing to, administer IM adrenaline with his guidance.[370]

382. Nguyen gave evidence that he could have administered IM adrenaline if instructed.[371] The only instruction he would have needed would be the site of injection.[372]

383. Further, Tseng conceded that he could have asked the ALS paramedics to administer IM adrenaline on arrival but said he didn't because he was in shock and they were all trying to resecure Peta's airway.[373]

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[365] Statement of Dr Gavin Tseng (3rd), CB 22

[366] Tseng, T498.5, T498.29.

[367] Tseng, T598.25 – T598.29

[368] Tseng, T594

[369] Tseng, T599.26 – T599.30

[370] Nguyen, T721.21 – T721.27 and T497 – T498

[371] Nguyen, T690 – T691

[372] Nguyen, T716.7 – T716.22

[373] Tseng, T582.6 – T582.10

384. It was the opinion of the experts that it was possible for Dr Tseng to administer or instruct as to the administration of IM adrenaline, even while managing the emergency situation. It would have taken a matter of 30 or so seconds and is, actually, a simple procedure.[374]

385. However, it was also the view of one of the experts, Professor Pitman, that a doctor with Tseng's training and experience and in the specific setting would find it a difficult situation to handle. For example, it would be difficult to decide to abandon the emergency treatment in order to administer the IM adrenaline oneself.[375]

Significant controversies of fact regarding response to contrast reaction

386. As to the facts and circumstances following Peta's contrast reaction in dispute and the subject of the inquest, on balance:

(a) I accept the evidence of Delecheneau as a highly credible witness; and

(b) I accept the evidence of Gilbert and Nguyen as they were both credible witnesses and their evidence was broadly consistent.

Key finding:	**Where evidence is in dispute as to the facts and circumstances following Peta's contrast reaction, I accept the evidence of Delecheneau, Gilbert and Nguyen.**

387. Tseng was told it was a 'contrast reaction', asking Delecheneau how bad it was. Tseng recalled that this is what Delecheneau told him when she came to retrieve him from the injection room to attend to Peta in the CT room.[376]

388. When Tseng came into the room, he nonetheless considered differential diagnoses. It is not in dispute that Peta did have a seizure and this symptom led Tseng to also consider 'intracranial pathology/haemorrhage/lesion' or 'some metabolic disturbance', as differential diagnoses to anaphylaxis. He did not know at the time that seizure could also be a symptom of anaphylaxis.[377] Further, it was the doctor's evidence that he formed an alternate diagnosis of 'vasovagal episode', though this

[374] Pitman, T1381; Phal, T1387; Eddey, T1387 – T1388; Andrews, T1410.2 – T1410.6

[375] Pitman, T1384

[376] Tseng, T448.6 – T448.9 and T449.1 – T449.2; Gilbert, T745.19-24; Delecheneau, T640.13-T640.14, T641.2-T641.3 and T643.3-T643.6

[377] Tseng, T486.13 – T486.23, T618.8 – T618.25

was a late amendment to his evidence which he claimed was by way of clarification as to why he had not administered adrenaline to Peta.[378]

389. In any event, whether Tseng recognised Peta's presentation to be anaphylaxis at all, or whether he was weighing this against differential diagnoses, I find that despite being told Peta had a contrast reaction, he did not act on this information.

Key finding:	**Despite being told that Peta had a contrast reaction, Tseng did not act on this information.**

390. Tseng claimed to have based his alternate diagnosis of vasovagal episode, in part, on Peta sitting up and talking to him when he returned to the CT room.[379] Under cross-examination, Tseng maintained Peta had been sitting up and talking to him when he was brought to the CT room.[380] I find on all the evidence that Peta did not speak to Tseng at this time. Peta had collapsed and was not sitting upright under her own power but was slumped onto Delecheneau and was incoherent.[381] Nguyen also recalls that after Peta collapsed, before Tseng had arrived, she was lying down while he supported her with his hand and did not sit up herself.[382] No other witness present in the CT room when Tseng returned recalls Peta sitting up or speaking to Tseng at all.[383]

Key finding:	**When Tseng entered the CT room after the scan, Peta had already collapsed and was being supported by Delecheneau or Nguyen. She did not speak to Tseng.**

391. Another issue in dispute was whether the adrenaline was available to treat Peta at the FMIG clinic in the CT room that day, and I find that it was. Gilbert gave clear evidence that she got adrenaline (along with the Hydrocortisone) out and placed it on the bench along with the syringe ready to draw the drug up with. Short of drawing up the adrenaline herself, she had it out ready for use. Gilbert did this on her own

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[378] Tseng, T486.30 – T487.7, T489.22 – T489.24, T490.21 – T490.24, T491.3 – T491.5

[379] Tseng, T486.30 – T487

[380] Tseng, T555.24 – T555.30, T556.5 – T556.16

[381] Delecheneau, T650.12 – T650.18; Gilbert, T747.10 – T747.17

[382] Nguyen, T679.26 – T679.29, T687.4 – T688.12

[383] Delecheneau, T650.1 – T650.10; Gilbert, T747.18 – T747.23; Nguyen, T678.16 – T678.22, T688.13 – T688.24

initiative. Gilbert did not think she told anyone as she assumed she would be asked for it.[384] While Tseng assumed adrenaline was 'on hand' on the day and knew it was stored near the CT room with the other drugs, he did not see Gilbert get it ready for use and no-one told Tseng that she had done so.[385]

Key finding: Adrenaline was available in the CT room for injection. Gilbert had placed it on a bench with a syringe on her own initiative.

392. With regard to the management and treatment of Peta's reaction, Tseng's memory was so poor that, in the absence of any other explanation proffered by him for the enormous gaps in his memory, I find that his recall of events has been impacted by the shock he experienced during this incident and so he was a particularly unreliable witness.

Key finding: Tseng's recall of events was impacted by the shock he experienced during the incident, making him an unreliable witness.

The 000 call

393. ESTA is the statutory authority responsible for the provision of emergency services communications across Victoria, including ambulance services.[386] They have a pool of dedicated 'call-takers' who receive calls for ambulance assistance for all of Victoria via Telstra's 'E000' service.[387] ESTA exercises its functions as dictated by the directions of particular emergency services, including Ambulance Victoria (**AV**). These directions and other protocols directing how ESTA functions include:[388]

(a) The specific organisation's 'Service Delivery Requirements' (**SDRs**), including those of AV; and

[384] Gilbert, T749.17 – T749.26, T750.12-T750.18; Delecheneau, T666.22 – T666.24

[385] Tseng, T468.8 – T468.27

[386] 2019 2336 Hickey – AM3-18 – Statement – Jessica Taylor (ESTA), paragraph 2.1; *Emergency Services Telecommunications Authority Act 2004* (Vic) (ESTA Act)

[387] 2019 2336 Hickey – AM3-18 – Statement – Jessica Taylor (ESTA) paragraphs 3.1-3.3

[388] 2019 2336 Hickey – AM3-18 – Statement – Jessica Taylor (ESTA) paragraphs 3.4-3.5 and 4.1

(b) SDR supporting documents, including ESTA's standard operating procedures (**SOPs**); and

(c) A 'Computer Aided Despatch' (**CAD**) system for each emergency service; and

(d) AV requires that ESTA employ a formal, structured 'question and answer' methodology set down by the International Academies of Emergency Dispatch (**IAED**) – called the 'Medical Priority Dispatch System' (**MPDS**) – aka 'the 'Protocols').

394. The MPDS or 'Protocols' provide call-takers with key questions regarding different event types to assist the call-taker to elicit relevant information from the caller. The caller's responses are then entered into the Protocols software (ProQ). The responses are then generated into CAD and CAD translates this into an event type for dispatch.[389]

395. Then, depending on that event type, the Protocols present the post-dispatch and pre-arrival instructions for ESTA call-takers to pass onto the caller.[390]

396. Each event type is also given a pre-determined level of priority for AV Dispatch and the ESTA Dispatcher will manage the dispatch accordingly (Priority 0 is highest to Priority 4 lowest). However, certain Duty Managers and Communications Support Paramedics and AV clinicians are AV personnel who can make assessments and alter priority and response requirements.[391]

Information provided by the caller

397. The transcript of the '000' emergency call placed by Smakovski from FMIG included the following (times are approximate and in minutes and seconds from time of call at 10.21 am).[392]

398. At 00:16 seconds elapsed in the call, the Caller indicates (not in response to the Call-taker) that patient has had a contrast reaction:

Caller: "Is it a contrast reaction? Contrast..." (speaking to someone in

[389] 2019 2336 Hickey – AM3-18 – Statement – Jessica Taylor (ESTA) – 16 10 2020, paragraph 4.2

[390] 2019 2336 Hickey – AM3-18 – Statement – Jessica Taylor (ESTA) – 16 10 2020, paragraph 4.3

[391] 2019 2336 Hickey – AM3-18 – Statement – Jessica Taylor (ESTA) – 16 10 2020, paragraphs 4.4 - 4.6

[392] 2019 2336 Hickey – AM3-18 – Statement – Jessica Taylor (ESTA) – 16 10 2020, paragraph 5.1 and AM3-18-8ff – Transcript of Call; Exhibit – Recording of '000' Call (ESTA); 2019 2336 Hickey – 000 Call – Police Transcript; AM3-28-7 – ERTCOMM Event Register records call start as 10:21:07 1 May 2019

background)

399. At 00:30 the Caller indicates that there is a specialist radiologist on site:

> *Caller: "Yes, I've got a specialist radiologist on site and I need lights and sirens please."*

400. At 00:45 the Caller indicates that patient has had an allergic reaction to iodine contrast and then refers to the radiologist being with the patient:

> *Caller: "Um, I'm not 100% sure but the patient is here having a CT scan and they've had an allergic reaction to our iodine contrast"*
>
> *Call-Taker: "Ok, yep"*
>
> *Caller: "Yeah. The specialist radiologist is in with the patient at the moment, so I can only sort of give you very minimal information."*

401. At 01:00, the Caller indicates that the patient is having a seizure:

> *Caller: "Okay she's seizing, she's having a seizure."*
>
> *Call-Taker: "Having a seizure. Okay"*

402. The Call-Taker then proceeded to ask the required questions of the Caller, asking whether the patient was awake, breathing, completely alert, having difficulty breathing or swallowing, to which the Caller did not have answers.

403. The Caller then asked if the patient had ever had a severe allergic reaction before and the Caller said she was not sure. The Call-Taker continued organising an ambulance to attend.

404. At 03:30 the Caller indicated that the patient was not conscious:

> *Caller: "Yeah. She doesn't look conscious at the moment, from my understanding."*

405. The Call-Taker then asked further questions regarding the patient's history, such as whether she was pregnant or diabetic, epileptic or had history of stroke or brain tumour, all of which the Caller did not know.

406. The Call-Taker checked if there was a doctor in with the patient which the Caller confirmed again.

407. The Call-Taker stayed on the line in case those in the room called for anything else.

The Caller then confirmed that the patient looked "quite red" and was non-responsive.

Caller: "Okay and I've just been told she's non-responsive."

408. At 06:58 the Caller indicated that a defibrillator is there but not being used, but artificial breathing is being used:

Call-Taker: "Is there a defibrillator available?"

Caller: "Umm, yes. I think we're just about to try using the defib. Are we using the defib? They're asking (female voice in the background says no) No. Not yet"

Call-Taker: "Do they have one on the scene?"

Caller: Yeah, we do have one right here, but we're not using it"

Call-Taker: "Oh good, but it's close to her"

…

Call-Taker: "Perfect. Do you know are they still breathing for her, or?"

Caller: "They are. They're just checking her, can you yell out any updates to me that's helpful? She's got a pulse."

409. At 09:50 the Caller states that the patient remains unresponsive:

Call-Taker: "She's got a pulse"

Caller: "But she's still unresponsive…"

410. At 11:25 the Call-taker asks if adrenaline available in clinic:

Call-Taker: "Do you have adrenaline at the clinic?

Caller: "Uh, we've got adrenaline in there, don't we? Yes, yes we do."

Call-Taker: "They've got adrenaline in there?"

Caller: "Yeah"

411. At 12:15 the Call-taker asks if adrenaline has been given. The Caller confirms that it has not:

Call-Taker: "Okay. So you don't know if they've given the adrenaline?"

Caller: "I'm not sure"

Call-Taker: "That's okay, one of the paramedics [INAUDIBLE]…"

Caller: "Have we given adrenaline? We've given adrenaline ? (to someone in the background) No. No. Okay, they're here."

412. At 12:30 minutes elapsed, paramedics arrive and the call ends.

Coding and dispatch by ESTA

413. According to ESTA records, at 10.21 am on 1 May 2019 they received a call for AV to attend an incident described as 'convulsions/seizures' and not breathing at the FMIG location, Moonee Ponds (Case No 10471).[393]

414. At 10.22 am, the ESTA Call-Taker accepted the event into CAD. The event was initially processed under Protocol 2 (Allergy) with event type '2B1 – A ALLERGIES/ENVNOMATIONS: UNK or NO OTHER CODE APPLICABLE, Priority 2.'[394]

415. At 10.22 am the ESTA dispatcher dispatched an ambulance to attend at the FMIG location, under Code 2 'Urgent'.[395]

416. Samakovski of FMIG who made the call was limited in her ability to answer all the ESTA Call-Taker's questions as she was not present in the room with Peta.[396]

417. At 10.23am the ESTA Call-Taker notified the ESTA team leader of the event and then also notified the AV Clinician of the event.[397] The Call-Taker notified the AV Clinician as the event had been given Priority 2 but the request for 'lights and sirens' indicated that a 'doctor' had requested a higher degree of urgency than that required by the Protocols. This requires that the event still be processed according to the Protocols, but an AV Clinician be notified of the event and the 'doctor's' request. The AV Clinician can then review the priority.[398]

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[393] Statement of Melodie Toth, CB 87; 2019 2336 Hickey – AM3-18 – Statement – Jessica Taylor (ESTA) – 16 10 2020, paragraph 5.2; ALS ePCR, CB 140 - Timeline; See also Electronic Patient Care Record (MICA/Ambulance Victoria), CB 136 (**MICA ePCR**) - Timeline; 2019 2336 Hickey – AM3-55 – Statement Joel Malone – 09 03 2021, paragraph 4.1; 2019 2336 Hickey – AM3-56 – Statement Campbell Asker – 05 03 2021, paragraph 4.1; AM3-28-7 - AV ERTCOMM Event Register

[394] 2019 2336 Hickey – AM3-18 – Statement – Jessica Taylor (ESTA) – 16 10 2020, paragraph 5.5; ; AM3-28-7 - AV ERTCOMM Event Register

[395] 2019 2336 Hickey – AM3-18 – Statement – Jessica Taylor (ESTA) – 16 10 2020, AM3-18-14 – Computer Aided Despatch Chronology Report; ALS ePCR, CB 140

[396] 2019 2336 Hickey – AM3-18 – Statement – Jessica Taylor (ESTA) – 16 10 2020, paragraph 5.9

[397] 2019 2336 Hickey – AM3-18 – Statement – Jessica Taylor (ESTA) – 16 10 2020, paragraphs 5.6 – 5.8

[398] 2019 2336 Hickey – AM3-18 – Statement – Jessica Taylor (ESTA) – 16 10 2020, paragraphs 6.2 – 6.3

418. At 10.25 am the ESTA Call-Taker processed the event on Protocol 12 (Seizures) and reconfigured the event type to '12D4 – A CONVULSIONS/SEIZURES, EFFECTIVE BREATHING NOT VERIFIED >35, Priority 1'. According to a statement from ESTA personnel, "*This was done in light of the responses given by the Caller in answer to the Call-Taker's questions in the course of the 000 Call.*"[399] The ambulance was dispatched at this time as Code 1 – Time Critical.[400]

419. At 10.28 am, after confirming that the doctor was performing artificial breathing on Peta, the ESTA Call-Taker reconfigured the event to '12D1 – AFEMR CONVULSIONS/SEIZURES, NOT BREATHING, Priority 0'. Further ambulance units were then dispatched to the scene, under Code 1 'Time Critical'.[401]

The role of ESTA

420. Jessica Taylor has been 'Quality Improvement Audit Lead' with ESTA since September 2019 and previously an Ambulance Emergency and Non-Emergency Call-Taker and Dispatcher and holder of other positions with ESTA, since 2013.[402]

421. Taylor states, in relation to the '000' call, that Peta was in a medical radiology facility, in the care of a specialist radiologist and that this fact was apparent to the Call-Taker. She further states that the Call-Taker stayed on the line in case further information was provided to update the ambulance crew. Taylor is of the view, and I accept, that there was no indication during the call that the radiologist was unable to manage the situation or required any clinical advice.[403]

Key finding: There was no indication to the Call-Taker during the '000' call that the radiologist present was unable to manage the situation or required any clinical advice.

422. Jessica Taylor further states:[404]

[399] 2019 2336 Hickey – AM3-18 – Statement – Jessica Taylor (ESTA) – 16 10 2020, paragraph 6.4

[400] ALS ePCR, CB 140

[401] 2019 2336 Hickey – AM3-18 – Statement – Jessica Taylor (ESTA) – 16 10 2020, paragraphs 5.11 – 5.12; MICA ePCR, CB 136

[402] 2019 2336 Hickey – AM3-18 – Statement – Jessica Taylor (ESTA) – 16 10 2020, paragraph 1.3

[403] 2019 2336 Hickey – AM3-18 – Statement – Jessica Taylor (ESTA) – 16 10 2020, paragraphs 6.5 – 6.7

[404] 2019 2336 Hickey – AM3-18 – Statement – Jessica Taylor (ESTA) – 16 10 2020, paragraphs 6.8 – 6.9

ESTA is unable to confirm why the Caller was asked whether adrenaline had been given, as this is not contained in the scripts or Protocols or required by ESTA's SOPs.

Call-Takers may ask additional medical questions at the request of AV Duty Managers, CSPs or Clinicians. Medical questions may also be relayed from the attending paramedics, prior to their arrival. It is not possible to say with any certainty why adrenaline was mentioned by the Call-Taker on this occasion toward the end of the call…

423. It is not open to ESTA Call-Takers to advise those at the scene to administer adrenaline, as they are not medically qualified. Also, AV requires they follow a formal and structured question and answer methodology (set down by the IAED) and use the ProQ software which stipulates the questions. The Protocols provide Call-Takers with the specific questions to ask the Caller and the Protocols (in this case) did not prompt the Call-Taker to instruct those at the scene to administer adrenaline.[405]

Ambulance Victoria attendance and treatment

424. At 10.32 am, Melodie Toth and Martin Dix, ALS Paramedics employed by AV, City/West Melbourne Branch, arrived at the scene and at 10.35am arrived at the patient.[406] Upon arrival, paramedics Toth and Dix found Peta "unconscious and generally cyanosed", with Tseng managing her airway, ventilating with a bag valve mask. The patient had a weak carotid pulse and was not breathing on her own. An 'oropharyngeal airway' was in place and Toth noted secretions in the patient's airway.[407]

425. Toth does not recall any conversation about adrenaline or any instruction as to administration of adrenaline by Tseng upon her arrival. Toth also states it was difficult to get information from those at the scene and she could not recall being told by FMIG staff Peta had an allergic reaction to contrast dye. She does not recall being given a formal handover or seeing the Gilbert Notes.[408] While Toth asked questions it

[405] 2019 2336 Hickey – AM3-18 – Statement – Jessica Taylor (ESTA) – 16 10 2020, paragraph 6.10

[406] Statement of Melodie Toth, CB 87; ALS ePCR , CB 137 - 141

[407] Statement of Melodie Toth, CB 87; ALS ePCR, CB 139

[408] Toth, T805.4 – T805.18, T806.9 – T806.16, T808.6 – T808.7, T811 – T812 and T814

was difficult to get one answer and to understand what had occurred before their arrival.[409]

426. The ambulance has a Mobile Data Terminal (**MDT**) although Toth cannot recall reading it on the drive over. The MDT contains information known about the case type when the call initially comes through and would update later if this changed.[410] When asked if information given to the call-taker, for example that the patient was having a CT scan and had an allergic reaction, would have been useful upon arrival, Toth agreed it would have been useful. However, Toth explained that with every patient they attend they will go through an assessment process and will not initiate management purely based on information received before they arrive. While that information would be useful and relevant to the assessment, they don't rely on it and it is not essential to read it.[411]

427. Toth would have asked what medications Peta had been given but cannot recall if she specifically asked if adrenaline had been given.[412]

428. Toth recalls Peta's skin was blue in colour on her arrival.[413] Toth's initial concern was that Peta was unconscious and not breathing and so she was focused on the primary survey.[414]

429. The ALS ePCR document records vital signs taken at 10.36 am, the primary and secondary surveys at 10.35 am and the management of the patient between 10.35am and 10.37 am. The ALS ePCR also includes a timeline from arrival to leaving the site.[415] Upon discovering Peta was not breathing and becoming aware of secretions in Peta's mouth, assisted by Tseng, Toth placed the patient on her back to suction the secretions from her airway. Toth connected oxygen to the bag valve mask and assisted Tseng managing the patient's airway.[416]

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[409] Toth, T808.16 – T808.25

[410] Toth, T809 – T810

[411] Toth, T819.7 – T819.25 and T832.18 – T833.8

[412] Toth, T822

[413] Toth, T815.3 - 4

[414] Toth, T820.12 – T820.18

[415] Electronic Patient Care Record (MICA/Ambulance Victoria), CB 137 – 141

[416] Statement of Melodie Toth, CB 87; ALS ePCR, CB 139; Toth, T820

430. Toth's understanding was that Tseng was the radiologist and emergency management was his responsibility and so Toth's focus was to try to understand what had happened and to assist Tseng until the next team arrived.[417]

431. Toth was concerned with the primary survey and Peta's breathing and with assisting the doctor with responsibility for managing the situation, so did not consider diagnosis or administration of adrenaline herself. However, Toth did agree that had Tseng formed the view this patient had a severe anaphylactic reaction, with the aid of she and her team member Martin Dix, Tseng could have administered adrenaline without waiting for the AV MICA team to arrive.[418]

432. At 10.36 am, Mobile Intensive Care Ambulance (**MICA**) paramedics Joel Malone and Campbell ('Cam') Asker arrived at the scene at the same time, though they drove separately.[419] Malone drove with his lights and sirens on.[420]

433. At around 10.40 am Asker and Malone arrived at the patient, directed to Peta by FMIG staff.[421]

434. Toth provided a brief clinical hand-over and the MICA paramedics took over subsequent treatment.[422] MICA paramedic Asker cannot recall the specifics of the handover from Toth and Dix, other than what is recorded in the MICA ePCR. Malone took over medical management and scene leadership upon arrival, including receiving the hand-over.[423]

435. Malone states that prior to attending Peta at FMIG he was aware that the reports regarding Peta were of an allergic reaction, a seizure and that she was critically unwell. Asker is unclear as to if, or when, they were informed that Peta had been administered CT contrast though he states that as Omnipaque is documented in the MICA ePCR and anaphylaxis was their provisional diagnosis, he assumes they were

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[417] Toth, T823.26 – T824.8

[418] Toth, T830.1 – T830.10

[419] MICA ePCR, CB 136 – Timeline; 2019 2336 Hickey – AM3-56– Statement Joel Malone – 09 03 2021, paragraphs 4.2 and 4.5; 2019 2336 Hickey – AM3-55 – Statement Campbell Asker – 05 03 2021, paragraphs 4.2 – 4.4 and 4.6

[420] 2019 2336 Hickey – AM3-56 – Statement Joel Malone – 09 03 2021, paragraph 4.3

[421] MICA ePCR, CB 136 – Timeline; 2019 2336 Hickey – AM3-56 – Statement Joel Malone – 09 03 2021, paragraphs 4.2 and 4.5; 2019 2336 Hickey – AM3-55 – Statement Campbell Asker – 05 03 2021, paragraphs 4.2 – 4.4 and 4.6

[422] Statement of Melodie Toth, CB 87; Statement of Melodie Toth, CB 87; MICA ePCR, CB 133 - 134

[423] 2019 2336 Hickey – AM3-56 – Statement Joel Malone – 09 03 2021, paragraph 4.4

provided with this information at some stage, though it may have been after Peta was stabilised.[424]

436. Upon attending at FMIG and being brought to Peta, Asker commenced immediately with her treatment, while Malone asked FMIG staff questions to get a history of events, including questioning FMIG staff about Peta having suffered a possible allergic reaction. Malone cannot recall if FMIG staff gave their names or any precise answers. They told him Peta had quickly deteriorated.[425] Malone states that his discussion with FMIG staff was 'very limited' but that the information he gathered from the dispatch officer, the MDT and from FMIG staff was that "Peta had been well before the administration of contrast dye" and as a result, his working diagnosis was 'anaphylaxis'.[426] However, Malone was uncertain as to precisely where the information of an allergic reaction had come from.[427]

437. It is noted by both Malone and Asker that they were not told that Peta had been given a beta-blocker medication (the Metoprolol 50 mg orally) and a GTN nasal spray before the CT scan. Nor were they told that Peta was given IV Hydrocortisone and Diazepam before paramedics arrived.[428]

438. Upon arrival, Malone recalls being shown the room where Peta was still on the CT scanner bed. An FMIG staff member was attempting to manage Peta's airway with the assistance of Toth. Peta was cyanosed and had no effective breathing, though Malone cannot recall if she had any respiratory drive. Peta's 'Glasgow Coma Scale' score was 3 and she had a palpable carotid pulse rate of 50/min. Her blood pressure was unrecordable. Malone does not recall Peta's skin being red or that she had a swollen face – two signs it was his usual practice to look for when an allergic reaction is reported.[429]

439. Asker recalls the FMIG staff appearing 'frantic' upon their arrival in the CT room. Peta was unconscious and non-responsive, lying on her right side in the CT scanner

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[424] 2019 2336 Hickey – AM3-56 – Statement Joel Malone – 09 03 2021, paragraph 4.3

[425] 2019 2336 Hickey – AM3-56 – Statement Joel Malone – 09 03 2021, paragraph 4.7; 2019 2336 Hickey – AM3-55 – Statement Campbell Asker – 05 03 2021, paragraph 4.14

[426] 2019 2336 Hickey – AM3-56 – Statement Joel Malone – 09 03 2021, paragraph 4.13

[427] Malone, T839

[428] 2019 2336 Hickey – AM3-55 – Statement Campbell Asker – 05 03 2021, paragraph 4.8; 2019 2336 Hickey – AM3-56 – Statement Joel Malone – 09 03 2021, paragraph 4.7

[429] 2019 2336 Hickey – AM3-56 – Statement Joel Malone – 09 03 2021, paragraph 4.5

bed with an oxygen mask on and making minor respiratory effort but not breathing adequately and being cyanosed. Asker also does not recall red skin or swollen face but that Peta was "blue".[430] Asker further stated:

> *I remember asking what CT scan Peta was having, whether it was urgent and whether it was for her heart, lung or kidneys. The FMIG staff said that she had complained of shortness of breath and then collapsed, but initially no-one could tell us what the scan was and what it was for. I recall thinking it would be relevant to know whether the scan was to investigate a serious underlying condition, or whether, as it turned out to be, her condition was due to the contrast dye administered for the purposes of the scan.* [431]

440. Malone completed the MICA ePCR a short time after Peta was conveyed to the RMH. Malone states that the MICA ePCR is "*a summation of all of the information of which I was aware at the time that I completed the ePCR, being after the event and having consulted the printouts from our monitoring equipment, the information from the MDT [the Mobile Data Terminal in the AV vehicle [432]] and having spoken with Cam, the ALS paramedics and the FMIG staff*."[433]

441. The MICA ePCR notes the case type as 'Emergency' and the case given as "*Convulsion/Seizures, Not Breathing*". Under 'Cause', the following descriptions were recorded:[434]

> ****Very little known about Pt*** Pt was referred to an imaging facility by ?? cardiologist for insurance purposes. Staff at facility state Pt appeared well with no complaints prior to procedure. Immediately after staff admin contrast (Omnipaque 300 mcg/ml) Pt c/o SOB [435], Dizziness and vomited x 1 @ 10.21 hrs. AV called. O/A of ALS crew[436] @1035 hrs – Pt was GCS3 and generally cyanosed – Staff had positioned Pt in lateral position – No resp effort and no*

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[430] 2019 2336 Hickey – AM3-55 – Statement Campbell Asker – 05 03 2021, paragraph 4.6

[431] 2019 2336 Hickey – AM3-55 – Statement Campbell Asker – 05 03 2021, paragraph 4.7

[432] 2019 2336 Hickey – AM3-56 – Statement Joel Malone – 09 03 2021, paragraph 4.3

[433] 2019 2336 Hickey – AM3-56 – Statement Joel Malone – 09 03 2021, paragraph 4.18

[434] MICA ePCR CB 133ff

[435] c/o SOB = complained of shortness of breath

[436] O/A = On site arrival of

peripheral pulses – Palpable weak carotid – HR 50/min s/r.[437] *ALS crew – reposition Pt supine suction airway – unable to effectively ventilate. ZRI and CSO arrive at 10.40hrs.*

442. Malone confirmed that it had been very difficult to get the best information they could as to the reason the patient was there or to get the appropriate information on the patient.[438]

443. The MICA ePCR then sets out 'All Management Entries', including hand-over and then treatments and management of Peta from 10.40 am to 12.00 pm which notes arrival at the RMH.[439] This includes the following entry regarding the handover:

At 10.41 h/o from crew on scene (188 – west melb) as per hx.1035 – ALS crew arrive – Pt in left lat position – BVM by staff op in situ – R/A. ALS crew reposition pt supine BVM attempted with suctioning – ineffective. Primary survey issues – A + B – unable to effectively ventilate – Palpable carotid pulse.

444. Asker had immediately taken over the ventilation and asked staff to roll Peta onto her back in order to better access her airway. This is when Asker attempted to ventilate Peta with bag valve mask and Guedel airway in position. When this was unsuccessful, Asker placed a laryngeal mask airway in position, sourced from the ALS paramedic equipment by Toth and Dix. However, despite repositioning Peta, the laryngeal mask was also unsuccessful and Asker decided that Peta needed to be intubated. Malone was still trying to obtain information from FMIG staff but came to assist Asker.[440]

445. According to Malone, the AV Clinical Approach Clinical Practice Guidelines (**CPG**) A0191, in place at this time, and all his AV training, required that the first step in managing resuscitation was always to establish an airway, ventilation and circulation.[441] Asker assisted FMIG staff and Toth with tending to Peta's airway, attempting to ventilate Peta with the bag and mask though this was ineffective, as Malone states: "*there was resistance to the insufflation or air/oxygen in Peta's airways*."

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[437] MICA ePCR, CB 133; HR = heart rate

[438] Malone, T840.25 – T840.29

[439] MICA ePCR, CB 134 -135

[440] 2019 2336 Hickey – AM3-55 – Statement Campbell Asker – 05 03 2021, paragraphs 4.9 – 4.10

[441] 2019 2336 Hickey – AM3-56 – Statement Joel Malone – 09 03 2021, paragraphs 4.6 and 4.8 – 4.9; 2019 2336 Hickey – AM3-55 – Statement Campbell Asker – 05 03 2021, paragraph 4.9

446. Both Malone and Asker then performed the intubation of Peta as two paramedics are required for a potentially complicated airway.[442] Both had training in intubation. At 10.41 am, intubation was achieved and manual ventilation commenced. Asker states this intubation occurred within two minutes of their arrival and he notes there was no swelling of Peta's tongue or pharynx and "*I was able to satisfactorily ventilate Peta via the endotracheal tube with supplemental oxygen. A normal end tidal carbon dioxide measurement of approximately 40mmHg showed that Peta had good air movement in her lungs*." It was at this time that Asker and Malone discussed the 'working diagnosis' of anaphylaxis.[443]

447. Malone states that initially, when working through the primary survey and based on Peta's cyanotic presentation, they were considering differential diagnoses, anaphylaxis but also pulmonary embolism and cardiac failure of a differentiated sort.[444]

448. The MICA ePCR notes under 'Secondary Survey': "…*diff dx considered. anaphylaxis (contrast), primary cardiac, P.E or Tpt…*" [445]

449. Malone compiled the MICA ePCR document retrospectively but recalls that when Peta went into cardiac arrest on site, they formed the primary diagnosis of anaphylaxis. He recalls asking Toth to draw up adrenaline prior to the patient going into cardiac arrest.[446]

450. The MICA ePCR sets out a Survey of Peta's vital signs from 10.41 am to 12 pm on 1 May 2019.[447]

451. The MICA ePCR then sets out details of intubation and manual ventilation of Peta by MICA, and other details of Peta's treatment as follows:

    At 10.43 am, *?? anaphylaxis – 500mcg adrenaline drawn up…*

    At 10.44 am, *Pt become bradycardic and go into PEA* and CPR is then performed

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[442] 2019 2336 Hickey – AM3-56 – Statement Joel Malone – 09 03 2021, paragraph 4.9

[443] 2019 2336 Hickey – AM3-56 – Statement Joel Malone – 09 03 2021, paragraph 4.9; 2019 2336 Hickey – AM3-55 – Statement Campbell Asker – 05 03 2021, paragraphs 4.10 – 4.11

[444] Malone, T843 and T849.26 – T850.11

[445] MICA ePCR, CB 133; Diff dx = differential diagnosis

[446] Malone, T843.29 – T844.13

[447] MICA ePCR, CB 134

At 10.45 am, *Adrenaline 1 mg,…Given @ 4/60 – total X4 given throughout cardiac arrest period IV*

At 10.48, *All diff dx considered - ?? Anaphylaxis as most obvious working dx. potential – primary cardiac, P.E, Unlikely but Tpt*

At 11.02 am, *Adrenaline >> bolus – start at 50mcg up to 200mcg – target palpable peripheral pulses – total bolus's 2mg*

At 11.04 am (to around 11.20 am), Adrenaline >> Infusion – started at 50mcg with ongoing bolus mx – titrated up to 250mcg/min target BP >100systolic. Best BP before loading 70systolic – weak radial pulse.

At around 11.25 to 11.30 am, patient was being transferred to vehicle

At 11.30 am, 50mcg of Fentanyl administered intravenously

At 11.35 am, *Pt hypertensive BP200/120 - ??adrenaline driven or undersedation??*

At 11.35 am, *Adrenaline >>infusion – 250mcg/min reduced to 20mcg/min*

At 11.35 am, Midazolam 2 mg

At 11.40 am, *Morphine/Midazolam >> 30mg/each drug/ up to 30mls/normal saline, infusion commenced at 5mg/each drug/hr. titrated to signs of undersedation/ negative haemodynamic effects*

At 11.50 am, *Adrenaline >> infusion titrated up to 40mcg – target bp>100systolic (BP @ hosp 120/180).*

452. As to the administration of the adrenaline:

(a) Malone states that: "*…after Peta's airway was secured, an attempt to optimise ventilation was made. A goal of management was to reverse hypoxia. Upon auscultation an inspiratory and expiratory wheeze was heard. We then addressed the possible diagnosis of anaphylaxis and instructed that Peta be administered adrenaline 500 mcg intramuscularly. Melodie prepared the 500mcg bolus of adrenaline for intramuscular (IM) injection for administration".* [448]

(b) Asker recalls that, during intubation, the diagnosis of anaphylaxis was discussed and other possible differential diagnoses being pulmonary embolism

[448] 2019 2336 Hickey – AM3-56 – Statement Joel Malone – 09 03 2021, paragraph 4.10

or "*a critical illness that required investigation with a CT scan*". Toth commenced drawing up a bolus of adrenaline for initial IM administration within 3 minutes of their arrival, at 10.43 am.[449]

(c) Malone states that at 10.44 Peta became bradycardic and went into cardiac arrest. CPR was commenced and at 10.45, a 1 mg dose of IV adrenaline was administered. Then, following AV guidelines for the treatment of cardiac arrest (anaphylaxis being one cause) three further 1 mg doses of adrenaline were given at 4 minute intervals over the 15 minutes of the arrest. Malone states that differential diagnose of anaphylaxis, cardiac event and pulmonary embolus were considered but as the working diagnosis was anaphylaxis and because of the cardiac arrest, the adrenaline was administered.[450]

(d) Asker also states that within a minute of intubating Peta, she went into cardiac arrest and they immediately began CPR. Two minutes later they administered the first of four 1 mg doses of IV adrenaline, being the dose prescribed by AV CPG.[451]

(e) Malone states that it was 5 minutes from the time of their arrival and the administration of adrenaline to Peta. Prior to that time the focus had been on securing Peta's airway and just prior to the planned IM administration of adrenaline, Peta suffered a cardiac arrest which required immediate CPR and IV adrenaline, according to AV guidelines.[452]

453. Once a cardiac output was obtained, adrenaline infusion was commenced at 11.04 am.[453]

454. Asker states that he does not recall whether any of the FMIG staff said that Peta had been administered adrenaline prior to their arrival so they would have been working on the assumption that adrenaline had not been administered.[454]

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[449] 2019 2336 Hickey – AM3-55 – Statement Campbell Asker – 05 03 2021, paragraph 4.11

[450] 2019 2336 Hickey – AM3-56 – Statement Joel Malone – 09 03 2021, paragraph 4.11

[451] 2019 2336 Hickey – AM3-55 – Statement Campbell Asker – 05 03 2021, paragraph 4.12

[452] 2019 2336 Hickey – AM3-56 – Statement Joel Malone – 09 03 2021, paragraph 4.12

[453] 2019 2336 Hickey – AM3-55 – Statement Campbell Asker – 05 03 2021, paragraph 4.12

[454] 2019 2336 Hickey – AM3-55 – Statement Campbell Asker – 05 03 2021, paragraph 4.15

455. At around 11.41 am, Peta was loaded into the ambulance for transport to RMH.[455] Paramedics Asker and Malone accompanied Peta to the Royal Melbourne Hospital, managing her condition *en route*.[456]

456. At 12.02 pm, the patient arrived at the RMH and was handed over to hospital staff with triage at 12.08 – 12.10 pm.[457]

The Royal Melbourne Hospital

457. Professor Jo Douglass of the RMH is a qualified medical practitioner (MBBS, FRACP, MD) with the RMH ICU, leading the Allergy and Immunology Unit.[458]

458. Professor Douglass has reviewed the clinical notes taken following Peta's presentation at the RMH ED and her admission to the RMH ICU.[459] Those clinical notes include medical progress notes, summaries, pathology and radiology reports and are a full record of Peta's treatment at the RMH from 1 May 2019.

459. As to the history provided upon Peta's presentation at the RMH, Douglass states that the RMH admitting doctor's report, gathered from the ambulance officers and from communication with the treating team at the imaging facility, described a precipitating event that occurred during a CTCA conducted as part of a "wellness investigation".[460]

460. The RMH 'ED Medical e-notes' contain triage notes made by Amy Brewer at 12.07pm, then updated by Dr Luke De La Rue at 3.31pm, and record the patient's 'presenting complaint'.[461] These notes include the following details:[462]

> *43yo P/W out of hospital cardiac arrest. AMPL: unknown HOPC: Pre-notification with OOHCA post severe anaphylaxis from contrast for CT scan. Pt having a CTCA as part of a work health scheme. Was given pre-medication with metoprolol then given contrast prior to the scan. Whilst on the table had developed nausea and had multiple vomits. Followed by SOB and difficulty*

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[455] Statement of Melodie Toth, CB 87; MICA ePCR, CB 136 - Timeline

[456] 2019 2336 Hickey – AM3-56 – Statement Joel Malone – 09 03 2021, paragraph 4.17

[457] Statement of Melodie Toth, CB 88; MICA ePCR, CB 136 – Timeline; ALS ePCR, CB 140 - Timeline

458 Statement of Prof Jo Douglass, CB 90

[459] Statement of Prof Jo Douglass, CB 89ff

[460] Statement of Prof J Douglass, CB 90

[461] "RMH Records – Other" – E-medical e-notes and Triage notes, p.103-105

[462] "RMH Records – Other" – E-medical e-notes and Triage notes, p.105

breathing. Then ?seizure activity, given diazepam by staff due to ?seizure and AV called. ON arrival was in in [sic] presumed anaphylactic shock. Cyanosed, GCS 3, difficulty with BMV and barely palpable radial pulse.

Progressed to PEA arrest.

Down time for approx.. 20 mins.

Intubated during 1st cycle, G1 view, no airway oedema observed.

Given 3 x 1mg adrenaline then ROSC.

Severely bronchospastic initially which improved en route with adrenaline infusion.

Post ROSC requiring large doses of adrenaline to support output (250mcg/min) with only SBP 70.

Down titrated to 40mcg/min by arrival in ED.…

[Details of observations of Peta upon arrival at RMH are then noted and treatment including the following -] …

Initial Mx: - IV hydrocortisone – further IV fluid – IV glucagon 2g given metoprolol use….

461. Upon attending the RMH ED, Peta required adrenaline infusion to maintain blood pressure and was treated with corticosteroids and glucagon. On arrival, physical examination showed "*her initial 0_2 Sat was 92% on 89% FIO2, BP 70 mean arterial pressure, on 30 microg/min of adrenaline…*" Serial tryptase measurements showed a peak of 141microg/L on 1st May decreasing to 8microg/L by 3rd May. The diagnosis was "*Acute anaphylaxis with secondary cardiac arrest and subsequent hypoxic tissue injury*."[463]

462. The treatment and follow up of Peta on arrival at the RMH ED included treatment for anaphylaxis and continued adrenaline infusion and antihistamines and Hydrocortisone commenced. Glucagon was also given as the patient had had exposure to beta-blockers (the Metoprolol) before the contrast administration.[464]

[463] Statement of Prof Jo Douglass, CB 90, paragraphs 2 - 4

[464] Statement of Prof Jo Douglass, CB 90, paragraph 5

463. In summary, the subsequent treatment and follow up post admission to the RMH ICU revealed multiple complications in addition to the cardiac arrest, to organs, hypoxic brain injury and an ischaemic right lower limb. Peta underwent surgery for the limb on 2nd May and again 3rd May which was unsuccessful and led to amputation on 3rd May 2019. Initially Peta was sedated for the brain injury with propofol and fentanyl and seizure activity noted upon 'weaning' of sedation. A brain scan on 4th May showed global hypoxic ischaemic encephalopathy and an MRI performed on 7th May showed severe changes of hypoxic ischaemic encephalopathy through the brain.

464. Over the course of her treatment in the RMH ICU, it became clear that Peta had suffered severe brain damage. A brain scan on 4 May showed global hypoxic ischaemic encephalopathy and an MRI performed on 7 May showed severe changes of hypoxic ischaemic encephalopathy through the brain. Following a poor prognosis from the neurology team and after discussion with family members, life support was withdrawn. Peta passed away on 9 May 2019.[465]

MEDICAL CAUSE OF DEATH

465. Senior Forensic Pathologist, Dr Malcolm Dodd from the VIFM, conducted an autopsy on 15 May 2019 and provided a written report of his findings dated 20 August 2019.

466. In addition to his autopsy, Dodd reviewed an e-medical deposition from the RMH and a Form 83 Report of Death to the Coroner.

467. The main finding of the autopsy was hypoxic ischaemic encephalopathy and signs of multiple organ failure.

468. Dr Dodd noted from the e-medical deposition that Peta's tryptase levels in hospital had peaked at 141 micrograms per litre. He commented that "*this elevation is indicative of an acute anaphylactic reaction which, in this case, would appear to be contemporaneous with the administration of the CT contrast medium*".

469. A measurement of C-reactive protein (**CRP**), a substance which is frequently elevated in the presence of inflammation and/or infection, was returned at 75.1 mg/L. A normal measurement for this quantity is less than 5.0 mg/L.

470. Dr Dodd provided an opinion that the medical cause of death was:

1(a) Multisystem organ failure and hypoxic/ischaemic encephalopathy

[465] Statement of Prof Jo Douglass, CB 90 - 91

1(b) Anaphylactic reaction to CT contrast medium

471. I accept Dr Dodd's opinion.

Key finding:	**The medical cause of death was:** **1(a) Multisystem organ failure and hypoxic/ischaemic encephalopathy** **following an** **1(b) Anaphylactic reaction to CT contrast medium.**

472. Dr Dodd's examination of Peta's heart found that it was enlarged but maintained a normal contour. There was no evidence of coronary artery narrowing, the myocardium was unremarkable, and there was no evidence of significant fibrosis, myofiber disarray or myocarditis. A section of coronary artery disclosed a pristine lumen.

473. These cardiac observations are confirmed by the results of Peta's CT scan: the FMIG score sheet and report shows a total calcium score of '0' (with regard to the CAC component of her CT scan) and a normal CTCA, concluding "*no significant coronary artery disease is seen*".[466]

EXPERT EVIDENCE

Introduction

474. Six expert witnesses provided written reports regarding the events which led to Peta's death. Some of the experts replied to each other's reports, and all six later gave oral evidence at the inquest in a concurrent session.

475. Every medically qualified witness who appeared at the Inquest, be they expert or otherwise, agreed that referring people for tests without reviewing them first is poor medical practice. Even Dr Saad swore that it would be "madness" to do so.[467]

[466] Expert Opinion of Dr David Eddey, CB 147; Statement of Geraldine Reddan (2), CB 55 and CB 63-65 – 'FMIG, Coronary CT Angiography Score Sheet – Peta Hickey' and 'FMIG (Dr Gavin Tseng), Report, CT Coronary Angiogram & Calcium Score – Peta Hickey'

[467] Saad, T246.28 and T1074.31

476. Having readily obtained this common ground, the experts chiefly addressed aspects of safe radiological practice and, in particular, how radiologists should respond to clinical situations encompassed by Peta's experiences.

The expert witnesses

477. Dr David Eddey is an Emergency Physician who currently holds the position of Staff Specialist in Emergency Medicine at The Geelong Hospital. He has extensive experience in emergency medicine and was the Director of Emergency Medicine at The Geelong Hospital from 1995 to September 2014. He is a fellow of the Australasian College for Emergency Medicine (**ACEM**) and was a member of ACEM's Court of Examiners from 1996 to 2016.

478. Dr Eddey is also a Consultant Physician in the Coroners Prevention Unit (**CPU**) at the Coroners Court of Victoria and provides advice to coroners regarding possible death prevention opportunities in that capacity. After Eddey initially reviewed the matter in his role at the CPU, he was commissioned to provide a full expert opinion at my request.

479. Dr Eddey provided his first report on 14 July 2020.[468] He later provided an additional nine reports responding to each of the other experts' reports, the next eight on 17 February 2021[469] and the final one on 13 May 2021.[470] Eddey's reports focussed on issues of emergency response but also addressed questions of radiology practice where they were relevant to the circumstances of Peta's death.

480. Dr Howard Galloway is a specialist radiologist with 29 years of experience, the majority in private practice. He is a Fellow of the Royal Australian and New Zealand College of Radiologists (**RANZCR**). Dr Galloway provided an initial report on 19 October 2020 at the request of representatives of Tseng.[471] The court also received notes from a further conference with Galloway on 22 October 2020 and a second report dated 6 December 2020.[472] Galloway's reports focussed on the appropriateness of Tseng performing the scan based on the existing referral as well as consent processes.

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[468] CB, 142.

[469] AM3-45 through AM3-52.

[470] AM3-83.

[471] AM3-21.

[472] AM3-22, AM3-41.

481. Professor Alexander Pitman is a specialist radiologist and Director of Imaging at Northern Beaches Medical Imaging and the Northern Beaches Hospital. He is a Fellow of RANZCR and served multiple terms as Federal Councillor of RANZCR and was chair of its Nuclear Medicine Reference Group for 13 years. He also served as Chair of RANZCR's Continuing Professional Development Committee for 13 years and, during that time, initiated a review and an update of resuscitation and anaphylaxis guidelines and training. He provided four reports, dated 28 October 2020, 30 October 2020, 19 November 2020 and 20 April 2021 at the request of representatives of Tseng.[473] These reports focussed on Tseng's emergency treatment of Peta's contrast reaction.

482. Associate Professor (A/Prof) Pramit Phal is Director of Radiology at Epworth Medical Imaging. He has over 22 years of clinical practice as a radiologist, typically in a hospital setting.[474] He provided one report dated 11 November 2020 at the request of representatives of the Senior Next of Kin.[475] This report addressed the appropriateness of Tseng's acceptance of the existing referral and his treatment of the contrast reaction.

483. Dr Ronald Shnier is a radiologist with more than 31 years of experience working in public and private settings. He is currently the Chief Medical Officer for I-MED, a large private radiology group. He provided a report dated 2 December 2020 and a further note of conference dated 12 May 2021 at the request of representatives of FMIG.[476] His advice focussed on FMIG policies and procedures, the appropriateness of FMIG staff's adherence to these policies and procedures, as well as the appropriateness of the CTCA test itself.

484. Dr Matthew Andrews is a practising radiologist with over 30 years of experience. He is a past president of RANZCR and was a foundation member of RANZCR's Accreditation Guidelines & Quality Committee. Dr Andrews provided a report dated 18 January 2021 and a further note of conference dated 13 May 2021 at the request of representatives of FMIG.[477] His advice focussed on FMIG policies and procedures, including orientation, training and supplies and equipment.

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[473] AM3-25, AM3-27, AM3-42, AM3-60.

[474] Phal, T1299.9-T1299.17.

[475] AM3-39.

[476] AM3-43, AM3-82.

[477] AM3-44, AM3-84.

Nature of expert evidence

485. Over the course of 14 May 2021 and 17 May 2021, the experts gave concurrent evidence on a number of topics. They were questioned initially on neutral topics by Counsel Assisting, then in turn by counsel for the interested parties. In the course of doing so, they commented on each other's reports and each other's oral evidence.

486. As the subject matter of the various experts' evidence was overlapping, I will not set out each expert's opinions separately in this Finding. Instead, I will discuss various issues on which the experts provided advice and, where relevant for each issue, summarise conclusions reached by the experts as a group, areas where they differed irreconcilably, and the implications I have drawn from this.

487. The experts had different, albeit overlapping, areas of expertise. Emergency medicine becomes relevant in this mix when the practice of any other medical discipline, such as radiology, has left a patient's life imperilled in a time critical manner. Eddey's opinion extends so far as to comment on the radiological and life support care afforded to Peta, and the prevention opportunities therein, in this time critical environment.

488. I consider Eddey's prism of medical practice, concerned as it is with the prevention, diagnosis and management of life-threatening symptoms, to be appropriate in assessing the circumstances proximate to Peta's death, and to be directly aligned with this Court's prevention mission. For this reason, I generally preferred his opinion on the few occasions that the experts did not agree.

Major issues

489. The major issues or questions considered and opined on by the experts in Expert Reports and then in two days of concurrent expert evidence were set out in an Issues and Questions document, finalised on 13 May 2021, which is attached as Appendix B. They were, broadly, as follows:[478]

(a) Was FMIG orientation and training of staff and their supplies and equipment sufficient?

[478] For the full list of issues, see the appended, see Counsel Assisting's Issues and Questions document dated 13 May 2021

(b) In light of prevailing standards and guidelines and practice expected of radiology clinics, was Peta's CTCA, being for an asymptomatic person or for screening purposes only, clinically indicated or justified? ('screening' issue);

(c) In light of prevailing standards and guidelines and practice expected of radiology clinics in relation to the referral or request process for a CTCA, was the process for Peta's referral adequate (including the adequacy of the documentation, the appropriateness of the relevant FMIG policies and the reasonableness of the conduct of Dr Tseng and other FMIG staff that day) ? ('referral' issue);

(d) In light of prevailing standards and guidelines and practice expected of radiology clinics, was the recognition, treatment and management of Peta's contrast reaction by Dr Tseng appropriate? ('treatment' issue); and

(e) Was the clinical advice and treatment provided by ESTA/AV adequate?

Guidelines and standard practices

Relevant professional and government bodies

490. Although Peta's CT scan was performed in a private radiology clinic, the setting was not unregulated.

491. A number of professional bodies represent and support health practitioners working in the private radiology setting, or provide guidance relevant to that setting:

(a) The Royal Australian and New Zealand College of Radiologists (**RANZCR**) is the professional organisation for Australian radiologists. RANZCR publish a number of guidelines on quality and standards of clinical radiology, undertake research and advocate for the profession.

(b) The Australian Society of Medical Imaging and Radiation Therapy (**ASMIRT**) is the peak body representing radiographers and other medical radiation practitioners in Australia. ASMIRT published guidelines on issues including scope of practice and practice standards and also offers certification and training.

(c) The Australian Society of Clinical Immunology and Allergy (**ASCIA**) is the peak professional body of clinical immunology/allergy specialists in Australia.

Although radiologists and radiographers are not immunology/allergy specialists, ASCIA provides key resources and guidance for non-specialists on response to anaphylaxis.

(d) The Royal Australian College of General Practitioners (**RACGP**) and the Australian Faculty of Occupational and Environmental Medicine (**AFOEM**) of the Royal Australasian College of Physicians (**RACP**) may provide guidance and training to General Practitioners and other physicians in Occupational Medicine regarding referrals for radiology.

492. There are also a number of government bodies with oversight over medical imaging practitioners and clinics. These include:

(a) The Australian Health Practitioner Regulation Agency (**AHPRA**) works with National Health Practitioner Boards to manage registration and accreditation of Australian health practitioners. These boards include a Medical Board which regulates radiologists and general practitioners as well as a Medical Radiation Practice Board which regulates radiographers.

(b) The Commonwealth Department of Health operates the Diagnostic Imaging Accreditation Scheme (**DIAS**) which ensures quality and safety standards for diagnostic imaging practices. Mandatory accreditation of private practices is linked to payment of Medicare benefits. Although Peta's scan was not funded by Medicare, the DIAS is nonetheless a powerful tool for ensuring safety at private diagnostic imaging practices.

Relevant standards, guidelines and protocols

493. The following are recognised and accepted national and international standards, guidelines or protocols applicable as at 1 May 2019 (the Standards and Guidelines):

(a) Iodinated Contrast Media Guideline, Version 2.3, RANZCR, March 2018;[479]

(b) ASCIA advice;[480]

[479] Eddey Expert Report dated 14 July 2020, CB 149 – https://www.ranzcr.com/college/document-library/ranzcr-iodinated-contrast-guidelines

[480] Eddey Expert Report dated 14 July 2020, CB 149

(c) RANZCR 'Standards of Practice for Interventional and Diagnostic Radiology', Version 10.2, 2017;[481]

(d) RANZCR Standard 5.3 Review of Appropriateness of Request and Patient Preparation;[482]

(e) RANZCR Standard 7.5 Patient Consent;[483]

(f) RANZCR 'Medical Imaging Consent Guidelines', Version 2, 2013;[484]

(g) Cardiac Society of Australian and New Zealand (**CSANZ**) Position Statement (2017);[485]

(h) American Heart Society (**AHA**) Guidelines (2010);[486]

(i) Current CSANZ, AHA and European guidelines for the use of CTAC test in asymptomatic individuals;[487]

(j) International Society of Radiographers and Radiological Technologists (**ISRRT**) position statement;[488]

(k) Medicare Benefits Schedule;[489] and

(l) International Commission on Radiological Protection (**ICRP**) doctrine of radiation protection.[490]

FMIG Policies and Procedures

494. One initial issue discussed by the experts was whether FMIG's policies and procedures were aligned with the Standards and Guidelines.

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[481] Eddey Expert Report dated 14 July 2020, CB 163 - 164

[482] Eddey Expert Report dated 14 July 2020, CB 163 – 164 and Attachment D, CB 183 - 185

[483] Eddey Expert Report dated 14 July 2020, CB 163 – 164 and Attachment E, CB 186

[484] Eddey Expert Report dated 14 July 2020, CB 163 – 164 and Attachment E, CB 187 – 189

[485] Eddey Expert Report dated 14 July 2020, Attachment C, CB 180

[486] Eddey Expert Report dated 14 July 2020, Attachment C, CB 180

[487] Eddey Expert Report dated 14 July 2020, Attachment C, CB 181

[488] Eddey Expert Report dated 14 July 2020, CB 173 - https://www.education.vic.gov.au/Documents/school/teachers/health/Anaphylaxis_MinisterialOrder706.pdf

[489] Eddey Expert Report dated 14 July 2020, CB 161 - http://www9.health.gov.au/mbs/fullDisplay.cfm?type=note&q=IN.0.6&qt=noteID; It is noted that the Medicare Benefits Schedule did not apply directly to Peta.

[490] Eddey Expert Report dated 14 July 2020, CB 162

495. As at 1 May 2019, the following policies and procedures were in place at FMIG:[491]

(a) Radiation Safety and Protection Plan dated November 2018[492], including the FMIG 'Working Rules;'[493]

(b) Medication Management;[494]

(c) Management of Contrast Reaction 'Documented Plan' or 'Flow Chart' (either or both located on FMIG Emergency Trolley);[495]

(d) The RANZCR Chart of 'Recommended Treatment Regimen for Management of Anaphylaxis in a Radiology Suite';[496]

(e) Manual for radiologists working at FMIG (report formats);[497]

(f) Management of Reactions to Intravenous Agents.[498]

Referrals and requests

496. Under the heading '9.1 Safe Work Practices' the FMIG Radiation Safety Plan states:

> *Before a medical procedure involving exposure of an individual to ionising radiation is approved or commenced, the procedure must be justified for that individual. A valid referral from a qualified practitioner containing sufficient clinical information to justify the examination is required before any procedure is commenced.*
>
> *If there is any doubt regarding the examination requested, or the protocols to be followed, the radiographer or nuclear medicine technician (NMT) must consult*

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[491] Statement of Reddan (2), CB 53, paragraph 15 and CB 70 – 71 – Working Rules, Excerpt from FMIG Radiation Safety Plan; AM3-67 - FMIG Radiation Safety Plan dated November 2018. See also Reddan, T889.29 – T892.5

[492] AM3-67

[493] Statement of Reddan (2), CB 70 – 71 – Working Rules, Excerpt from FMIG Radiation Safety Plan

[494] AM3-68

[495] AM3-65 – Statement of Reddan (1 – in final form), CB 99 – 102 OR See charts annexed to Statement of Dr Tseng (2), CB 9 – 12 and CB 15

[496] AM3-65 – Statement of Reddan (1 – in final form), CB 95; RANZCR, '20160421 Contrast POC Tool Anaphylaxis wall chart (pdf) Recommended Treatment Regimen for Management of Anaphylaxis in a Radiology Suite' (RANZCR 21 April 2016); AM3-15 – Statement of Reddan (3), p.8 - 9

[497] AM3-23– Statement of Reddan (4), AM-23-9 - 76

[498] AM3-65 – Statement of Reddan (1 – in final form), CB 96

with the Radiologist or Nuclear Medicine Physician (NMP). The doctor (Radiologist or NMP) shall then confirm protocols, or contact the referrer and advise a suitable examination…

497. Under the heading '9.2 Procedure Justification', this FMIG policy goes on to state:

Referrals

- *All patient examinations require request form signed by an appropriately qualified health practitioner*
- *The request form must contain sufficient clinical information to justify the examination or procedure requested.*
- *Questionable requests shall be queried with the referring practitioner or attendant radiologist*

No procedure which involves the exposure of a patient to ionising radiation should be performed unless it produces sufficient benefit to the exposed individual or to society to offset the radiation detriment it may cause.

Each request form is to be checked by the attending radiographer/NM technician for appropriateness of the clinical notes.

Each CT and Nuclear Medicine procedure will be individually approved. Each referral form will be assessed initially by the radiographer and the above justification algorithm will be applied.

498. Approval of any such referral or request will also be initialled by the radiographer or radiologist who approved the procedure.

499. At the relevant time, the expert evidence was that the Standards and Guidelines in relation to the request (or referral) and consent process conferred the following expectations on a radiology practice:

(a) Any incomplete (or invalid) referral must be escalated to the radiologist who must then seek further information either from the referring practitioner or from the patient;

(b) The radiologist must then exercise their professional skills and expertise to decide whether or not to proceed with the referred procedure;

(c) The radiologist should seek clinical information from the referring practitioner and, if not possible, from the patient;

(d) Any further information obtained should be documented; and

(e) Fully informed consent to the procedure should be obtained from the patient.[499]

500. The FMIG policies and procedures in place, as at 1 May 2019, were regarded by all experts as adequate in terms of their compliance with the Standards and Guidelines. FMIG's written policies and procedures were largely consistent with the professional expectations of a radiology practice at the time.[500]

501. Dr Shnier relevantly said:[501]

> *The policy in place at FMIG surrounding justification, specifically the requirement for an incomplete referral to be escalated to the onsite radiologist is appropriate. Not only is it appropriate but the staff underwent the appropriate procedure by escalating it to the onsite radiologist of the day…*

Treatment and management of contrast reaction

502. With regard to the FMIG policies, guidelines and displays relating to the treatment and management of contrast reaction and anaphylaxis, as at 1 May 2019, the expert evidence was that the Standards and Guidelines in relation to the recognition, treatment and management of contrast reaction[502] conferred the following standard of care on a radiology practice:[503]

(a) There would always be a radiologist on site if IV contrast was being administered;

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[499] Andrews, T1193, T1202, T1208, T1298.2– T1298.9 and AM3-84-1, [3] – [4]; Shnier, T1204-T1205 and AM3-82-2, paragraph 7; Phal, T1267 and T1271

[500] Statement of Reddan (2), CB 52, paragraps 9, CB 53, paragraph14; See also CB 70-71 - "Working Rules" (the FMIG Radiation Safety Plan is at AM3-67). Statement of Reddan (1), CB 94 – a radiologist must be present. Shnier AM3-43; Andrews AM3-44-1; Eddey, T1249-T1250 and Eddey, CB 183-185. The concurrent expert evidence, T1282 – T1283 (Andrews speaking for all) – the experts were all agreed save for pointing out that the flowchart had an "oversight" in it, that meant it could be read as more prescriptive than the guidelines and the balance of the plan).

[501] AM3-43-1

[502] Being the Iodinated Contrast Media Guideline (V2.3) and the ASCIA anaphylaxis plan or RANZCR anaphylaxis radiology wall chart; See Eddey and Pitman, T1301 – T1302 and Eddey, Andrews and Phal, T1304

[503] Andrews, T1399.1 – T1399.6, T1399.11 – T1399.20

(b) In the event there was an emergency presentation onsite, including a potential anaphylactic reaction, this would be immediately escalated to the radiologist onsite, until further assistance arrived; and

(c) The radiologist would assume management of the emergency presentation and formulate a management plan for the patient, including whatever medication might need to be administered.

503. FMIG protocols for "Management of Reactions to Intravenous Agents" required that:

(a) A radiologist must be present in the immediate vicinity before contrast is injected and for at least 15 minutes post injection;

(b) The radiologist will be contacted immediately at the first signs of a contrast reaction; and

(c) The radiologist will initiate treatment by the administration of the appropriate drug.[504]

504. FMIG policies and procedures for the management of such adverse events required that the event be immediately escalated to the radiologist who would take control of the management of any emergency and follow RANZCR Guidelines for the use of contrast agents.[505]

505. The FMIG 'Documented Plan'[506] stipulates, among other measures, the use of IM adrenaline be considered in the case of Moderate symptoms of Marked Urticaria and Bronchospasm. For isolated hypotension, where the patient is unresponsive, the use of adrenaline is stipulated and to be repeated.[507]

506. The plan also stipulates the provision of IM adrenaline in the case of Severe reaction, of Generalised anaphylactoid reaction, and then repeated doses of adrenaline infusion to restore blood pressure if the patient remains shocked. The additional measure of

[504] AM3-65 – Statement of Reddan (1 – in final form), CB 93 and CB 96; Statement of Dr Tseng (2nd), CB 7, Attachment at CB 8

[505] AM3-68 – 3 - Medication Management Policy

[506] AM3-65 – Statement of Reddan (1 – in final form), CB 99 – 102

[507] AM3-65 – Statement of Reddan (1 – in final form), CB 94 - 'Management of Reactions to I/V Agents', CB 100; Statement of Dr Tseng (2nd), CB 7, Attachment at CB 10

'nebulised adrenaline' is also mentioned for 'laryngeal oedema' as are corticosteroids (IV).[508]

507. The 'Documented Plan' includes Notes that make specific reference to the importance of the administration of adrenaline and recommended dosage levels and other considerations, including:

> 1. *Adrenaline is life-saving and must be used promptly. Withholding adrenaline due to misplaced concerns of possible adverse effects can result in deterioration and death of the patient.*
>
> ...
>
> 4. *Some cases are resistant to adrenaline, especially if the patient is taking beta blocking drugs. If adequate doses of adrenaline are not improving the situation, give glucagon 1 to 2 mg intravenously over 5 minutes.*
>
> ...
>
> 6. *Corticosteroids may modify the overall duration of a reaction and may prevent relapse. However, onset of action will be delayed. Never use these to the exclusion of adrenaline.*

508. The RANZCR Wall Chart[509] recommended:

(a) for both 'moderate' and 'severe' reactions, the administration of intramuscular (IM) adrenaline with repeat IM administration every 5 minutes, including a chart of recommended dosages:

(b) For "Upper Airway Obstruction", treatments including nebulised adrenaline; and

(c) For "Persistent Hypotension", treatments including "*If patient on beta blockers consider 1 – 2 mg of glucagon IV (adult dose)*".

509. There was no significant dispute as to the compliance of the FMIG policies and procedures with the Standards and Guidelines.[510]

510. It is noted that the evidence as to whether the RANZCR Wall Chart or other medical guidelines were displayed in the FMIG CT scan room on 1 May 2019 or also located

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[508] Statement of Dr Tseng (2nd), CB 7, Attachment at CB 9 - 12

[509] AM3-65 – Statement of Reddan (1 – in final form), CB 95

[510] See, eg, Andrews, T1262.

on the trolley was unclear on balance. Tseng was not aware whether this chart or any medical treatment guidelines were displayed or available in the suite on 1 May 2019.[511] However, some staff believed the RANZCR Wall Chart was displayed on the day [512] or that the RANZCR Wall Chart, or the Flow Chart, or the Documented Plan, were on hand in the suite, most likely located on the emergency trolley on 1 May 2019, though it was not clear that Nguyen was aware of the Documented Plan.[513]

511. In any event, at least one or more of the Wall Chart and/or Flow Chart and/or the 'Documented Plan' were located in the radiology suite. At least one of them was available and each recommended the clearing of the airway, administering of oxygen and then the repeat administration of IM adrenaline, for both moderate or severe contrast reactions, all of which is entirely appropriate.

Key finding:	**At least one of the Wall Chart and/or Flow Chart and/or 'Documented Plan' was located in the radiology suite, which Recommended the clearing of the airway, administering of oxygen and repeat administration of IM adrenaline for both moderate or severe contrast reactions. This was appropriate.**

Qualifications, training and equipment

Dr Gavin Tseng

512. Dr Tseng was contracted as a consultant radiologist with FMIG, Moonee Ponds and other sites. Tseng had worked at the Moonee Ponds location only twice before 1 May 2019. Tseng obtained his MBBS from the University of Queensland in 1995 and is fellow of the RANZCR and the UK Royal College of Radiologists (**RCR**). Tseng has 20 years' experience, previously in Singapore and commencing work as a radiologist in Australia in February 2019.[514]

513. As at 1 May 2019, Tseng was trained in administration of IV contrast medium. He was also trained in BLS, including cardio-pulmonary resuscitation (**CPR**). Tseng had completed a Basic Cardiac Life Support Provider Course on 2 May 2017 in

[511] Statement of Dr Tseng (2), CB 7, [10] - [11]; Tseng, T445 – T446.4 and T602.3 – T602.10

[512] Delecheneau, T639.28 – T639.30; Gilbert, T742.8 – T742.14 but also T744.9 – T744.12

[513] Nguyen, T676.6 – T676.11, T707.4 – T707.20 and T718 – T721.7; Gilbert, T743 – T744.6; See charts annexed to Statement of Dr Tseng (2), CB 9 - 15

[514] Statement of Dr Gavin Tseng (1st), CB 3

Singapore[515], which was required to be renewed every two years. However, Tseng completed only the 'Theory Test' component of that BLS training course. He likely completed the practical component "a couple of years prior to 2017" and had earlier completed such a course on 18 April 2009.[516] Tseng believed the other FMIG radiographers in attendance that day, Gilbert and Nguyen, would have been trained in BLS and CPR.[517]

514. As at that day, Tseng had only been trained in the recognition and medical treatment of contrast reactions including anaphylaxis as part of the general curriculum in further training he undertook with the Royal Australian College of Radiologists. He had not received any specific contrast reaction training. He was unaware of any medical treatment guidelines available at the FMIG site and does not recall any such guidelines or resuscitation guidelines displayed at the site on that date.[518]

515. Dr Tseng was the only radiologist, and in fact the only medical practitioner, on the site on 1 May 2019.

516. In 20 years of practice this was the only severe contrast reaction that Tseng had seen.[519]

517. As will be discussed below, it appears that this training and experience did not adequately prepare Tseng to respond to Peta's contrast reaction.

Key finding: Dr Tseng's training and experience did not adequately prepare him to respond to Peta's contrast reaction.

Other FMIG staff

518. Lesley Gilbert was a senior radiographer with FMIG. Gilbert qualified in 1982 in a hospital in New Zealand and has worked as a radiographer since in New Zealand,

[515] Statement of Dr Gavin Tseng (3rd), Attachment - BLS Provider Course certificate (Parkway College, Singapore) of Dr Tseng 2 May 2017, CB 28

[516] Statement of Dr Gavin Tseng (3rd), CB 20, Attachment – Singapore Medical Council record (accessed 29/10/2011) Screenshot entry "Basic Cardiac Life Support Course (Session 1)" dated 18 -04-2009, CB 35

[517] Statement of Dr Gavin Tseng (2nd), CB 6, paragraph 2

[518] Statement of Dr Gavin Tseng (2nd), CB 7; Statement of Dr Gavin Tseng (3rd), CB 21

[519] Statement of Dr Gavin Tseng (3rd), CB 21

Australia and the United Kingdom. From 1995 Gilbert worked at Western Health and FMIG and did some locum work. Since 2011, Gilbert has worked with FMIG.[520]

519. Tuan-Anh Nguyen was a senior diagnostic radiographer with FMIG. He has a Bachelor of Medical Radiation from the University of South Australia, completed in 1999. Nguyen had been working as a radiographer since 1999 with other private radiology providers and with FMIG since January 2010.[521]

520. Karina Ong was an intern radiographer with FMIG. Ong started working with FMIG in February 2016 as a technical assistant and became an intern radiographer in March 2019.[522]

521. Kajin Do is an MRI technician with FMIG. Do has a Bachelor of Medical Science from RMIT from 2006 and has been practicing as a radiographer since 2007. Do started working with FMIG on 18 August 2008 and has had extra training to become an MRI technician. Do has been working in that role since around 2011.[523]

522. Lara Delecheneau is an administrative assistant at FMIG. She started working at FMIG in 2016 in this role and does not have any formal qualifications but "*learnt on the job*".[524]

523. FMIG have stated, in relation to the level of training of FMIG Moonee Ponds staff present at the site on 1 May 2019:[525]

    (a) Gilbert, Nguyen and Do were able to administer IV contrast media;

    (b) Gilbert, Nguyen, Do, Tseng and some other staff on site were trained in BLS, including CPR;

    (c) Gilbert, Nguyen, Do and Tseng were trained in the recognition and management of contrast reactions, including anaphylaxis. This training comprised 'on the job' training by way of staff's experience assisting with contrast reactions and their management but no formal training;[526] and

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[520] Statement of Lesley Gilbert, CB 45

[521] Statement of Tuan-Anh Nguyen, CB 36

[522] Statement of Karina Ong, CB 49

[523] Statement of Kajin Do, CB 39

[524] Statement of Lara Delecheneau, CB 41

[525] AM3-65 – Statement of Reddan (1 – in final form), CB 92 - 93

[526] AM3-15 – Statement of Reddan (3), paragraph 7

(d) FMIG holds in-house CPR training sessions for all technical staff annually or biennially by trainers who are outsourced.[527]

524. Whilst it is appropriate that FMIG had some insight into the level of the training of their staff, as will be discussed later in this Finding, in the case of Tseng, the FMIG system for capturing this information had not picked up that his training was incomplete, and as will be discussed later in this Finding, that incomplete training did not position him well to lead an effective emergency response when Peta's life depended on it.

FMIG Drugs and Equipment

525. The eyewitnesses confirmed that the 'FMIG Inventory of Medical Equipment for Emergency' (marked 'correct as at 1/5/2019')[528] accurately reflect the medical equipment on the premises at the FMIG Moonee Ponds site on that day. It is noted that whilst 'suction equipment' is not a separate item listed in this inventory, it is included within the item 'Oxygen Cylinders, Oxygen masks, flow valve, tubing' as the suction equipment is connected to the oxygen cylinder set up.[529]

526. The document entitled 'Emergency Drugs' accurately reflects the resuscitation and emergency drugs held on the premises at the FMIG Moonee Ponds site on 1 May 2019.[530] This inventory includes both an Adrenaline Injection BP 1mg in 1ml and a Glucagon Hypokit.

527. These drugs are checked by FMIG staff on a monthly basis and expiry dates recorded and signed off.[531]

528. Dr Eddey opined, and none of the other experts disagreed, that FMIG's inventory was sufficient to meet the likely challenges the clinic might face.[532]

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[527] AM3-65 – Statement of Reddan (1 – in final form), CB 93; 2019 2336 Hickey - AM3-5 – Document – FMIG CPR Training Register

[528] AM3-65 - Statement of Reddan (1 – in final form), CB 93 and CB 103 - 'FMIG Inventory of Medical Equipment for Emergency'; Statement of Dr Tseng (2nd), CB 55 and CB 76 - 'FMIG Inventory of Medical Equipment for Emergency – Correct as at 1/5/2019'6

[529] AM3-15 – Statement of Reddan (3), paragraph 6 - photographs, pp.4-5

[530] AM3-65 - Statement of Reddan (1 – in final form), CB 93 and CB 104 -'Emergency Drugs'

[531] AM3-65 - Statement of Reddan (1 – in final form), CB 93 and CB 97 - 98 – 'Emergency Drug Checklist/ Expiry Log CT Scan FMIG Moonee Ponds (Year 2019)'

[532] Eddey, AM 3-52.

Key finding: FMIG's inventory was sufficient to meet the likely challenges the clinic might face.

Appropriateness of CTCA for screening

529. Although Peta's referral did not list any clinical indication for the CT scan, the experts agreed that, at its highest, the only available rationale for the CT scan would be 'workplace screening', and that this is what would have been apparent to Tseng and other FMIG staff if and when they discussed the CT scan with Peta.

530. The experts all agreed that the CSANZ, 'Non-invasive Coronary Artery Imaging: Current Clinical Implications', dated 26 November 2010;[533] was applicable and authoritative as to the clinical indications and standards for a CTCA.

'Screening' as a clinical indication and its increasing prevalence

531. There is no real consensus amongst radiologists as to whether 'screening', without more, is sufficient justification for a CTCA, and experts' views differed at the inquest.[534] Dr Eddey defined screening as a test for the presence of a disease which is not symptomatic and noted that some screening is seen as valid in the community (breast screening, for example).

532. However, Eddey was clearly of the view that the CTCA is not a valid screening test and is not indicated as a stand-alone test without any other cardiovascular risk assessment, according to CSANZ Guidelines.[535]

533. Dr Eddey was clear that under the current guidelines, an explanation such as 'workplace screening' on a request form or referral for a CTCA, as Peta gave, would not be sufficient clinical indication for the test.[536]

534. Dr Shnier's view, on the other hand, was that to say the CTCA has no role to play for an asymptomatic patient is not in line with current practice. Eddey conceded that this may be a developing practice but it is not in the current guidelines.[537]

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[533] AM3-39-5 – appended to Report of Phal; Eddey, T1188.29 – T1189.1

[534] Oral closing submissions by Counsel for Tseng: TT1758.7 – 17.

[535] Eddey, T1195

[536] Eddey, T1227-1228

[537] Eddey and Shnier, T1228

535. Dr Andrews stated that there is no absolute rule that a CTCA should never be performed on an asymptomatic person. He also stated that there is a distinction between a referral lacking clinical information and a referral listing 'workplace screening' as the clinical indication, because the latter case is transparent to the radiologist with carriage of the procedure: "…because then it's clear…exactly why it's being done."[538]

536. However, Andrews was also of the view that there is a general rule of acceptable clinical practice that an imaging procedure (under the guidelines) still has to be appropriate for this individual patient and the benefit of the result of the test should outweigh the risk of the test.[539]

537. At various times during this Inquest, evidence emerged indicating that radiology scans for 'screening' purposes or else referrals to radiology procedures lacking in clinical information is commonplace in the industry.[540] This means that subjecting asymptomatic people to unindicated imaging procedures, as was Peta's fate, may not be an 'outlying' practice by a few rogue operators.

538. The CHAP itself seems to offer this snapshot: FMIG had received other referrals for Programmed candidates in similar form to that of Peta's. If they had discussed the reasons for the referral with those candidates, they would have learned the reason for the scan was workplace screening, but any such annotations or systematic feedback was either not provided, or at least not visibly recorded on the available records.

539. Geraldine Reddan, an experienced clinic manager and the developer of the current FMIG policies, was of the view that if the clinical notes in a referral simply stated that the procedure was for employment screening or similar, the referral would not have been sufficiently complete in order to proceed with the CT scan, and this accords with the letter of the FMIG policy.

540. However, documentation of other participants in the CHAP shows that FMIG had proceeded with scans in the past where similar referrals were received and no contact had been made with the referring doctor.[541]

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[538] Andrews, T1223

[539] Andrews, T1225.3 – T1225.7

[540] See eg, Tseng, T403; See also AM3-8 and AM3-9 Results Groups

[541] Reddan, T901.5 – T901.19, T905.9 – T905.14, T912.7 – T912.14 and T912.21 – T912.24, T913.17 and T924.22 – T924.28

541. This issue was not isolated to FMIG. There was no evidence of any radiologist or clinic refusing to perform the CTCA for any of the Programmed CHAP candidates who attended other radiology clinics either.[542]

542. Dr Andrews stated that there is increasing pressure from patients and employers for 'so-called health screening' and imaging forms a large part of that. He opined that screening tests will be an increasing problem or dilemma for radiologists to deal with.[543]

543. Ultimately, Andrews was of the view that, if a patient has all the risks of the procedure and the alternative pathways explained, and if the radiologist was comfortable that the patient was fully informed of all the available clinical pathways, and the patient still wanted the scan, he would not be opposed to performing it. This would entail some mechanism of recording the patient's informed consent so that the radiologist is comfortable the patient is fully informed about the alterate pathways before undergoing the procedure.[544]

544. Having had the benefit of hearing the concurrent evidence from the experts, I lean towards Andrews' position as preferable *in the long term*. I note, however, that this puts particularly high responsibilities on the practising radiologist to both ensure and document that the patient is fully aware of the alternative pathways, which would include the option of walking away from the current scheduled privately funded test. Such a situation would therefore require the provision of professional advice that may be in conflict with the commercial interests of the owners of that business, many of whom will be the advising radiologists themselves.

545. Therefore, I understand Andrews' opinion, but have reservations, based on the snapshot of cases visible in the Inquest, that the current clinical private practice environment and renumeration structures do not reliably provide for advice that is both free of 'conflict of interest' and including this level of thoroughness.

546. The implications, or the proper management of this relatively commonplace conflict of interest in a commercial environment should be considered by the relevant regulators grappling with my recommendations below.

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[542] Oral closing submissions for Tseng T1758.7, referring to exhibit AM 3-9, including the Patient AA example.

[543] Andrews, T1198.20 – T1198.28 and T1225.13 – T1225.15

[544] Andrews, T1199.6 – T1199.19 and T1202.5 – T1203.2

547. I therefore prefer the position taken by Eddey *in the short term*, that is, until such time as there has been regulatory review.

Conclusions

548. This issue has two aspects: whether it is appropriate for non-radiologists to refer patients for CTCAs for 'screening' purposes, and how radiologists in private settings should react to such referrals.

549. On the first aspect, I find the evidence of Eddey[545] persuasive. The CTCA is not a valid screening test and is not indicated as a stand-alone test without any other cardiovascular risk assessment, according to the current CSANZ Guidelines.[546]

Key finding:	**The CTCA is not a valid screening test and is not indicated as a stand-alone test without any other cardiovascular risk assessment.**

550. On the second aspect, I find the evidence of Andrews the most convincing. His reasoning was nuanced and considered, and his extensive experience as a radiologist in private settings grounded his positions.

Key finding:	**In the long term, if clear guidelines are developed, if a patient has all the risks of the procedure and the alternative pathways explained, and if the radiologist was comfortable that the patient was fully informed of all the available clinical pathways, and the patient still wanted the scan, it is acceptable for a radiologist to perform a CTCA where an asymptomatic patient was referred purely for 'screening', at the radiologist's discretion.**

551. The prevalence of the use of 'screening' as a clinical indication for a CTCA or other imaging involving risk (be it of radiation exposure, anaphylaxis or any other) ought to impact the policies and procedures of private radiology clinics like FMIG.

552. If the frequency of the practice is increasing, and it will often be left to a radiologist to decide whether to proceed with a test where screening is the only indication, there

[545] T1169.28, T1278.17-18

[546] Eddey, T1195

may need to be clearer guidelines provided. Eddey, for his part, was of the view that the current guidelines are clear, and this is currently not permitted at all.

553. Until such time as clearer guidelines are developed however, Eddey's position that a CTCA should not be utilised as a part of asymptomatic screening should remain the expectation of private radiology clinics faced with such a referral.

Key finding:	**Currently, as there do not appear to be clear widely-accepted guidelines as to the acceptance of 'screening' as an indication to refer a patient for a CTCA, and as referrals for this reason appear to be increasing, private radiology clinics should decline to perform CTCAs on asymptomatic patients.**

Relevance to the CHAP

554. The conduct of Priority, MRI Now and the participating doctors was an example of a systematic practice: arranging and conducting unindicated radiological 'screening' by profit motivated corporate entities, and the obliging doctors they have managed to recruit, interposing themselves into a clinical setting with profit as a motive. This approach to medicine in the workplace led to the design and conduct of the CHAP - a screening programme for asymptomatic candidates, sought and paid for by their employer, without a single party turning their mind to the risks of the test itself, or performing a proper risk/benefit analysis for each individual patient.

Key finding:	**The conduct of Priority, MRI Now and the participating doctors was an example of an approach to medicine that led to the design of the CHAP wherein no party turned their minds to the risk of the tests involved or performed a proper risk/benefit analysis for each individual patient.**

555. Even if screening is 'defined' as the testing of asymptomatic individuals, and this is widely practiced in radiology clinics, this is insufficient explanation for the omission of any pre-scan assessment at all (for example, other preliminary testing such as blood tests or an ECG or ascertaining of any family history of CVD) in this case. It also does not explain why less invasive options were not explored or offered to the candidates Programmed professed to care about.

556. Above all, this issue highlights the flaws of the structure of the CHAP. Radiologists at every radiology clinic that received one of these referrals, with Saad's signature on it, would have reasonably formed the opinion that the patient had been reviewed by Saad before the referral is made.

Key finding:	**Radiologists at every radiology clinic that received a referral with Saad's signature on it would have reasonably formed the opinion that the patient had been reviewed by Saad before the referral was made.**

557. Priority's decision to place Saad's signature on these forms without Saad reviewing the patients first misled and deceived the radiology clinics which received these referrals. Although Haddad and Mtanios were not health practitioners, they had sufficient industry experience to be aware of how radiology practices worked – if they were not conscious that the clinics would form this impression, they should have been.

558. This false impression made radiologists less able to make clinical decisions and protect their patients, and it put lives at risk, including that of Peta.

Key finding:	**By placing Saad's signature on the forms without Saad reviewing the patients first, Priority misled and deceived the radiology clinics which received the referrals. This false impression put lives at risk, including Peta's.**

Validity of referral and decision to proceed

559. None of the experts disagreed with Eddey's opinion that the applicable and authoritative standards and guidelines as to the sufficiency of referrals or appropriate requests and patient consent were contained in the RANZCR Standards of Practice for Interventional and Diagnostic Radiology (Version 10.2 2017) ('RANZCR Standards').[547]

560. These RANZCR Standards contained the 'Review of Appropriateness of Request and Patient Preparation' (Standard 5.3) and 'Patient Consent' (Standard 7.5).

[547] Report of Dr David Eddey, CB 163-164.

561. The uncontested expert evidence was that the request or referral for Peta's CT scan, lacking in any clinical information or indication for the CTCA, was invalid.[548]

562. The question then was what should occur where a clinic or radiologist is confronted with such a request or referral for a CTCA? Should the procedure go ahead? Expert evidence on this question necessarily overlaps with the issue of CTCA as a 'screening' test. That is, a referral may specify screening as the clinical indication for the procedure, or lack the clinical indication or information, and so there is no valid referral in either case. Many of the same considerations are therefore enlivened.

563. The experts agreed that it falls to the radiologist to ensure they are comfortable that the test being done is appropriate and they must do so on the clinical information provided. If they need more information, they can contact the referring doctor or talk with the patient, per the applicable guidelines.[549]

564. On balance, the expert evidence was that in order for a radiologist to satisfy themselves that a procedure like the CTCA was justified, the clinician should have discussions (and make notation of those discussions) of sufficient depth to obtain the necessary information and informed consent. [550] As was the case for referrals for screening purposes only, Andrews was careful to emphasise the need for the fully informed consent of the patient. When faced with a referral lacking in clinical information, any extra information obtained should be documented, which is in the guidelines with regard to such a situation. So long as the radiologist is then comfortable and satisfied that the patient is fully informed and any discussion and information obtained is documented, Andrews is of the opinion that the procedure may proceed even without a valid referral or adequate clinical information in that referral. Phal described what the radiologist should do in order to satisfy themself that the procedure was justified, including possibly sending the referral back for rectification, trying to speak to the referring practitioner, and failing these, having a

[548] Phal, T1256.29 – T1257.2; Eddey, T1278.17 – T1278.18; Andrews, T1279.9 – T1279.11. Neither Shnier nor Galloway contended that the referral was valid.

[549] Andrews T1193, T1202, T1208; Phal T1267, T1270.18 – T1270.25 and T1271.23 - 28; Shnier says similar T1204-1205

[550] Andrews T1193, T1202, T1208; Phal T1267, T1270.18 – T1270.25 and T1271.23 - 28; Shnier says similar T1204 - T1205

discussion with the patient about the reason for going ahead, the procedure, its risks and possible alternatives, whilst documenting this discussion.[551]

565. When confronted with a referral lacking sufficient information and where the referring doctor cannot be contacted, such discussions would likely have revealed in a case like Peta's that she had never been assessed for the CTCA or had the risks or alternatives properly explained.[552] There were no such discussions and certainly no documentation of same.

Key finding:	**If discussions of sufficient depth to justify proceeding with an inadequate referral had occurred with Peta, it would likely have revealed that she had never been assessed for the CTCA or had risks or alternative properly explained. No such discussions occurred.**

FMIG Policies and Dr Tseng's decision to proceed

566. As discussed above, the experts agreed that FMIG's policies and procedures with respect to this issue were in line with the Standards and Guidelines. As such, there is no need to distinguish between whether Tseng's decision was in conflict with FMIG policies or with those Standards and Guidelines.

567. The following points were crucial in determining whether Tseng's decision to proceed with the CTCA was appropriate:

(a) It was not controversial that Peta's request for the CTCA lacked clinical information or notes and no clinical indication for the scan was included. Therefore, the request form or 'referral' itself was incomplete and according to the weight of uncontested expert evidence, the request for Peta's CTCA, the referral, was invalid.[553]

(b) Tseng claimed to have reviewed Peta's referral,[554] yet the FMIG policy regarding an invalid referral clearly failed in practice. As I have discussed

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[551] Andrews T1193, T1202, T1208; Phal T1263, T1267, T1270.18 – T1270.25 and T1271.23 – T1271.28.

[552] See closing oral submissions by the SNOK, T1739.9-T1739.23

[553] AM3-15 – Statement of Reddan (3), paragraph11; Statement of Reddan (2), CB 57; Phal, T1256.29 – T1257.2; Eddey, T1278.17 – T1278.18; Andrews, T1279.9 – T1279.11. Again, neither Dr Shnier nor Dr Galloway contended that the referral was valid.

[554] Tseng, T478.5

above, Tseng did not make any personal effort, prior to the scan, to call Saad as the notional referring doctor. Further, for the reasons already stated I do not accept that Tseng asked any member of FMIG staff to call Saad either. Therefore, the first step required by FMIG's own policy documentation, to call the referring doctor to obtain clinical information, was not followed.

(c) While Tseng had a discretion under the FMIG Radiation Safety Plan to perform the requested test in the absence of clinical information, he should not have proceeded with the test without either speaking to Saad or to Peta. It was submitted on behalf of Tseng that the absence of information was partly cured by Peta "informing FMIG staff" that the test was for workplace screening. That is, Peta told Delecheneau that work had requested the test.[555] As such, Tseng believed that test was for "employment screening" and this justified the test.[556] However, this description of events does not follow the FMIG policy and procedure, as there is no evidence that Tseng spoke to Peta directly.

(d) Whatever the reason, Tseng certainly did not obtain further information from Saad. As such, Peta was not given an adequate explanation of the normal clinical indications for a CTCA and no one discovered that she had not been properly assessed for the procedure.

568. The overwhelming weight of the expert evidence was that it was not appropriate for Tseng to proceed with the CTCA in this case. This was due to the absence of any clinical justification on the face of the referral or obtained from the referring doctor. It was also, in part, because it was not an emergency situation and the doctor could have waited until the clinical indication for the scan could be properly ascertained.[557]

569. The scan should not have gone ahead in the absence of, at least, interrogation of the patient regarding the source of the test and as to the risk factors. The evidence suggests that this was not done with Peta. There is no documentation by Tseng of any discussion with Peta or of information obtained and spurious evidence as to any effort to contact Saad or of any conversation with Peta or information obtained. Eddey states

[555] Delecheneau, T634.3 – T634.5

[556] Reddan, T922.4 – T922.16

[557] Eddey, T1278.21 – T1278.2 and T1278.30 – T1279.1; Phal, T1279.6 – T1279.7; Andrews, T1279.11 – T1279.12

that even if all Tseng did was go through the run of the mill questionnaire where there was no clinical indication for the test, this would have been insufficient.[558]

Key finding:	**It was not appropriate for Tseng to proceed with the CTCA. There should have, at least, been a discussion between the Radiologist in person and Peta herself about the source of the test, the clinical indications for the test and the risk factors. This was not done. Even if Tseng had gone through the standard questionnaire with Peta, this would not have been sufficient.**

570. It was Eddey's expert opinion that Tseng should not have proceeded with Peta's CTCA as the referral was invalid, there was no clinical information and given the lack of evidence of further information being obtained, short of perhaps the questionnaire, it was inappropriate to proceed with the test. It was not an emergency and Tseng could have waited.[559]

571. A/Prof Phal agreed that there was insufficient justification for the test. Andrews also agreed, though added that, as it appeared to be for a screening purpose, the CT scan could have been justified if it was accompanied by fully informed consent, not just to the procedure itself, but to the alternative pathways, was carefully documented and satisfied the radiologist the scan was appropriate here.[560]

Conclusions

572. Despite the compliant FMIG policy and procedures as to invalid referrals for a CTCA, Tseng went ahead with the CT scan. He did so in the exercise of his clinical discretion and using his professional judgment, knowing that at any time he could have stopped it.[561] The responsibility for proceeding with the CT scan ultimately rested with Tseng.

Key finding:	**The responsibility for proceeding with the CT scan ultimately rested with Tseng.**

573. While he was ultimately responsible for patient care at the clinic that day, I note the experts' view that a radiologist in the position of Tseng was under significant pressure

[558] Eddey, T1211

[559] Eddey, T1278

[560] Phal and Andrews T1279

[561] Tseng, T520.7 – T520.10 and T520.20 – T520.29

to perform the procedure where response to an invalid referral is left to the day of the procedure itself and not vetted beforehand.[562]

574. However, there was no direct evidence of Tseng experiencing such pressure.[563] In fact, Tseng gave evidence that he had satisfied himself that the procedure was appropriate and even in hindsight the doctor did not indicate he would form a different view.[564] This surprising but admirably candid response, given the expert consensus that Peta's screen should NOT have proceeded in this way on this day, is evidence of a powerful throughput pressure within private radiology clinics where workplace screening is being performed.

Emergency response by Dr Tseng and FMIG staff

575. The experts all agreed that the applicable and authoritative Standards and Guidelines as to the appropriate diagnosis, treatment and management of contrast reaction are:[565]

(a) Iodinated Contrast Media Guideline, Faculty of Clinical Radiology (Version 2.3, March 2018);

(b) A 'Contrast POC Tool Anaphylaxis Wall Chart Recommended Treatment Regimen for Management of Anaphylaxis in a Radiology Suite' (RANZCR 21 April 2016). This RANZCR wall chart, though a summary document, was said by Andrews to be the most relevant in everyday radiology practice, while he and Eddey agreed that the Contrast Medium Guideline was understood by practitioners to be the more complete reference document;

(c) ASCIA 'First Aid Plan for Anaphylaxis'; and

(d) ANZCOR Resuscitation Council Anaphylaxis Flowchart and Guideline.[566]

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[562] See Andrews, T1266.8 – T1266.21; Galloway T1273 – T1274

[563] Oral submissions of SNOK, T1736.11 – T1736.18

[564] Tseng, T482 and T520

[565] Eddey, T1301.19 – T1301.29 and T1304.16 – T1304.18; Pitman, T1302.20 – T1302.28 and T1304.21 – T1304.23; Andrews, T1303.3 – T1303.6 and T1304.4 – T1304.13.

[566] Australian Resuscitation Council Anaphylaxis Flowchart (anzcor-anaphylaxis-flowchart-20190316.pdf, from www.resus.org.au); Australian Resuscitation Council Anaphylaxis Flowchart (anzcor-guideline-9-2-7-anaphylaxis-aug16.pdf from www.resus.org.au) – 'ANZCOR Guideline'

Compliance with FMIG Policy

576. FMIG confirmed that staff recognised that the patient was potentially suffering from a reaction on the day.[567]

577. The FMIG 'Medication Management' policy in place at the time specified that all adverse reactions should be reported to the treating doctor on duty.[568] FMIG staff complied with the policy by immediately escalating the management of Peta's reaction to Tseng, the radiologist on site.[569]

578. In accordance with procedure, Tseng was then asked to control the emergency presentation.[570] Tseng was the only radiologist and medical practitioner on site and so he had ultimate responsibility at the clinic that day.

Recognition of anaphylaxis

579. I have found that by the time Tseng reached the CT Room, Peta was collapsed and unresponsive. She was not sitting up but lying or slumped against Nguyen and then Delecheneau. Peta did not speak with Tseng.

580. As such, Tseng did not recognise Peta's obvious immediate collapse (a severe reaction) following administration of contrast as being anaphylaxis, despite being told it was a contrast reaction. Beyond just the immediate collapse, Eddey gave evidence that there had been a prodrome (early 'lead-up' signs appearing before major signs of the condition), including vomiting, drooling and breathing difficulties. This prodrome moved Peta's condition into the category of a severe contrast reaction.[571]

581. Peta's symptoms need to be considered in their particular context. Although the symptoms of anaphylaxis are variable in type and rate of progression, the expert evidence verified that any symptom immediately following the administration of contrast medium, or some other situation in which anaphylaxis is known to occur, should alert a health practitioner to consider that diagnosis.[572]

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[567] AM3-15 – Statement of Reddan (2), [8], pp.1-2; See also AM3-13 – Statement of Lesley Gilbert (FMIG)(2) 23 09 2020 and AM3-14- Statement of Tuan-Anh Nguyen (FMIG) (2) 25 09 2020

[568] AM3-68 – FMIG Medication Management Policy.

[569] AM3-15 – Statement of Reddan (2), pp.1-2, paragraph 8; See also AM3-13 – Statement of Lesley Gilbert (FMIG)(2) 23 09 2020, paragraphs 14 - 15 and AM3-14- Statement of Tuan-Anh Nguyen (FMIG) (2) 25 09 2020, paragraph 8

[570] AM3-15 – Statement of Reddan (2), [8]; AM3-68 – 3 – FMIG Medication Management Policy

[571] Eddey, T1314.27 – T1315.4

[572] Eddey, T1305 (in particular) and to T1308 and T1309.15 - 16; Phal, T1310 – T1311; Andrews, T1311

Key finding:	**Any symptoms immediately following the administration of contrast medium should alert a health practitioner to consider a diagnosis of anaphylaxis.**

582. A/Prof Phal stated [573]:

> *…I think the clinical scenario is of the utmost importance, so this is a lady who's been given the intravenous contrast and is having a rapidly progressive medical deterioration. Um it appears that the radiographers recognised this as a contrast reaction and that was what was stated to Dr Tseng when he was called…to attend to the patient, that the patient is having a bad reaction and that is…what needed to be thought of, the thought process, the context and managed subsequently.*

583. In both Phal and Eddey's expert opinions, Tseng should have recognised that Peta was having a contrast reaction. Tseng's differential diagnoses when he walked into the CT room (of brain tumour or some metabolic disturbance) was illogical given the clinical setting where an otherwise well person has just been administered intravenous contrast.[574] The clinical context was of the utmost importance and the context was the recent administration of contrast, where the doctor had been told it was a bad reaction.[575]

584. While Eddey's expertise regarding the recognition of an anaphylactic reaction in a radiology clinic setting is not that of a radiologist practicing in a radiology clinic, Phal has that expertise. In any event, Eddey has ample experience in relation to such recognition generally from his extensive experience in Emergency Medicine[576] and having recently managed a severe anaphylaxis reaction only ten days before he gave oral evidence.[577]

585. Dr Tseng's failure to recognise the most probable diagnosis was likely due to a lack of appropriate training and experience in dealing with severe anaphylaxis combined with his shock at the situation he found himself in. However, given the context and

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[573] Phal, T1315.13 – T1315.23

[574] Eddey, T1330

[575] Phal, T1333

[576] Eddey Report, CB 142; Eddey, T1298.6 – T1298.18

[577] Eddey,T1299.7

information provided to him he was well-placed to make the correct diagnosis and if better trained, he could have recognised Peta's symptoms.

Key finding:	**Dr Tseng was well-placed to make the correct diagnosis and could have recognised Peta's symptoms. His failure to do so was likely due to a lack of training and experience as well as shock.**

Failure to administer adrenaline

586. If IM adrenaline had been administered to Peta at an early stage, it is very likely she would have survived. It was not, and this failure to administer IM adrenaline is clearly a proximate cause of Peta's death.

Key finding:	**The failure to administer IM adrenaline was a proximate cause of Peta's death.**

587. In cases of anaphylaxis, it is clear that the failure to administer IM adrenaline was patently inconsistent with RANZCR guidelines and FMIG policies.

588. As discussed above, I have found that Tseng should have recognised Peta's symptoms as a contrast reaction. It is clear that Tseng did not recognise it initially, but he does state that at some point in Peta's treatment he began to consider anaphylaxis as a differential diagnosis although he was not certain that it was correct. I accept this.[578]

Key finding:	**Although Tseng did not initially recognise Peta's symptoms as a contrast reaction, he later began to consider it as a differential diagnosis although he was not certain that it was correct.**

589. Even at that time, he did not administer adrenaline or direct any person to administer adrenaline, but rather directed Nguyen to administer Hydrocortisone. His stated reason for this, as will be discussed below, relates to intravenous rather than intramuscular administration rather than considering Hydrocortisone explicitly preferable to adrenaline.[579] However, it is still relevant to consider whether adrenaline should be administered in cases of unclear diagnosis or whether there are dangers to doing so.

[578] Statement of Dr Gavin Tseng dated 7 May 2020, Coronial Brief p 22-23.

[579] Statement of Dr Gavin Tseng dated 7 May 2020, Coronial Brief p 22-23.

590. Dr Eddey's evidence was clear that immediate and repeated administration of adrenaline is the appropriate treatment. He was also clear that there is no reason not to administer adrenaline,[580] so it was an easy and quick protective decision.

591. Professor Pitman dissented on this subject and was reticent to say that adrenaline should be administered where there are differential diagnoses or a possible mild reaction only, even where such administration would do no harm. This stance was not adequately explained, other than that there would be no need for it if a reaction appears mild.[581] Pitman's general approach was to go slower and assess.[582]

592. It is difficult to reconcile such an approach when one considers the immediate severity of Peta's symptoms and given the clinical setting and preceding administration of contrast. Additionally, even if I were to accept that Peta's signs were ambiguous, the events leading up to her death emphasise the importance of administering adrenaline in such ambiguous circumstances.

593. I find that Eddey's view is preferable, and that this area is squarely within his expertise rather than that of a radiologist. Even if Tseng were not certain whether Peta was experiencing anaphylaxis, he should have administered adrenaline as soon as possible and continued to administer it.

Key finding:	**Even if Tseng was not certain whether Peta was experiencing anaphylaxis, he should have administered adrenaline as soon as possible and continued to administer it.**

594. Tseng considered that Hydrocortisone was helpful in preventing or shortening protracted reactions and he '*understood that it would not adversely impact some of the differential diagnoses I was considering at the time*'.[583]

595. However, Eddey was clear that Hydrocortisone was insufficient.[584] This is explicitly stated in the RANZCR 'Iodinated Contrast Media Guideline' as of Version 2.3 in 2018, which states regarding contrast reactions:

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[580] Eddey, T1336; Pitman, T1337

[581] Eddey, T1336; Pitman, T1337

[582] Pitman, T1339

[583] Statement of Dr Gavin Tseng dated 7 May 2020, Coronial Brief p 22-23.

[584] Expert report of Dr David Eddey dated 14 July 2020, Coronial Brief p 142.

'*Corticosteroids [such as Hydrocortisone] may modify the overall duration of a reaction and may prevent relapse. However, onset of action will be delayed. Never use these to the exclusion of adrenaline.*'[585]

596. I accept Eddey's conclusion as squarely within the grounds of his expertise and as consistent with the RANZCR guidelines.

597. Although Hydrocortisone may have appeared sufficient as an alternative to adrenaline to Tseng at the time, this was incorrect. Despite the difficulties in instructing staff in IM administration, there was no alternative to administering adrenaline as quickly as possible once a contrast reaction was considered.

Key finding:	**Hydrocortisone was not sufficient as an alternative to adrenaline. Despite the difficulties in instructing staff in IM administration, there was no alternative to administering adrenaline as quickly as possible once a contrast reaction was considered.**

Instruction of other staff on IM administration

598. During his evidence, Tseng claimed that he was in fact unable to administer IM adrenaline, either by himself by taking a break from ventilating Peta or by instructing another FMIG staff member to do so.[586]

599. I accept that it may have been impossible for him to physically undertake the act of administration himself due to the requirement for him to be ventilating Peta. However, the claim that it would not be feasible to instruct a radiographer on how to administer IM adrenaline is not plausible.

Key finding:	**The claim that it would not be feasible to instruct a radiographer on how to administer IM adrenaline is not plausible.**

600. Dr Tseng had instructed Nguyen to administer the Diazepam and Hydrocortisone intravenously, and both Nguyen and Gilbert were experienced in intravenous

[585] RANZCR 'Iodinated Contrast Media Guidelines' Version 2.3 (2018), 31.

[586] Tseng, T497.6 – T499.20

administration of contrast dye. It was generally agreed that IM administration is less technically demanding than intravenous administration.

601. Even if there might have been difficulty in instructing a radiographer in IM administration, it would have been a lesser risk than not doing it. IM adrenaline was the appropriate and necessary treatment for a contrast reaction, and it was Tseng's responsibility as the radiologist present to find a way to administer it.

602. It was, however, universally agreed by the medical witnesses at the Inquest that regardless of whether instructing untrained staff in IM administration of adrenaline was difficult or impossible, the presence of an adrenaline autoinjector would have greatly improved the ability of FMIG staff to administer IM adrenaline early.

Clinical advice and treatment from emergency services

603. In terms of the emergency response and its efficacy, the only significant area of dispute was the chronology of Peta's adverse reaction and timing of treatment upon arrival of the ALS and then MICA paramedics from AV.

604. Both the Ambulance Victoria logs[587] and the contemporaneous notes of Gilbert taken while checking her watch at the time[588] were open to some impeachment for differing reasons.

605. In this regard, generally, I accept the timeline in the Gilbert Notes, until those of AV commence, and I further find that the two timelines set the boundaries of the approximate chronology. However, in the end it is not necessary for me to decide which version is preferable because, in Eddey's opinion, on either analysis (whether 12 minutes or 14 minutes had elapsed from the time Peta was unconscious and not obtaining adequate oxygen), by the time the ALS paramedics attended, it was too late for them to save Peta.[589] Eddey says that for Peta to have had any opportunity to survive she needed to be given 'early adrenaline', well before the ambulance arrived.[590] In either hypothetical scenario, 12 minutes or 14 minutes was too long.

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[587] Electronic Patient Care Record (ALS/Ambulance Victoria), CB 140 (**ALS ePCR**) – Timeline; Electronic Patient Care Record (MICA/Ambulance Victoria), CB 136 (**MICA ePCR**) – Timeline; See Also AM3-28-7 ESTA ERTCOMM Event Register.

[588] Statement of Reddan (2), Gilbert Notes CB 69; Gilbert, T756.8 – T756.14, 757.14 and T758 – T579

[589] Dr Eddey, T1433.24 – T1434.30 and Cf. T1434.31 – T1437.16; Also AM3-28-4 – Statement of Dr David Anderson

[590] Dr Eddey, T1433.31 – T1434.1

606. Further to my conclusions regarding the emergency response, I note that Eddey had no criticisms of the conduct of either ALS or MICA paramedics nor any Ambulance Victoria activity. I accept that opinion.

607. In summary, Eddey held the view (and I accept) that:

(a) It's acceptable for ALS paramedics to defer to a doctor on site.[591] It was therefore reasonable for the ALS paramedics to accept that Tseng was leading the care of his patient, Peta; and

(b) If, as the evidence showed was most likely, the ALS paramedics were not provided with clinical information about Peta having a contrast reaction, they responded as he would expect, engaging with a collapsed, a seizing, unconscious patient 'from scratch' – "*airway, breathing, circulation*".[592] In the circumstances, the ALS paramedics did not cause any avoidable delay in administering adrenaline to Peta.[593]

(c) Finally, the MICA paramedics' intervention with adrenaline was as timely as possible in the circumstances.[594]

608. The fact that Peta was given the pre-scan beta-blocking medication Metoprolol meant that she was likely to be less responsive to adrenaline, and would warrant attending paramedics giving, or being ready to give, a higher dose of that drug. Unfortunately, this fact was not a clear part of the handover to the paramedics.[595] In any event, I cannot find with sufficient certainty that a such a higher dose would have had any positive effect on the outcome here. Identification of this pathway in training and guidance materials is, however, a prevention opportunity supported by both the experts and AV.

Key finding:	**The fact that Peta had been given Metoprolol prior to her scan was not a clear part of the handover to paramedics. Even if it had been, it is unclear if paramedics would have been able to**

[591] Dr Eddey, T1425.19 – T1246.12

[592] Dr Eddey, T1427.2 – T1427.27

[593] Eddey, T1428.1 – T1428.8

[594] Eddey, T1428.16 – T1429.3 and T1430.18 – T1430.23

[595] Compare CB 61-62 with CB 67- 69, including the Gilbert Notes.

change the outcome of Peta's care by accordingly changing their treatment.

609. In short, no criticism is made of the emergency services response.

Key finding: No criticism is made of the emergency services response.

CHANGES IMPLEMENTED AFTER THE DEATH

610. As it is likely that many of the issues which arose at FMIG are systemic throughout the diagnostic imaging industry, rather than specific to FMIG, I will make a number of recommendations below which relate diagnostic imaging practice in general. These will be directed to RANZCR as well as to the Diagnostic Imaging Accreditation Scheme (**DIAS**) Advisory Committee.

611. I recognise that DIAS standards relate to procedures funded by Medicare benefits and that Peta's scan was privately funded. However, I do not consider that this affects the fact that the circumstances surrounding Peta's death reveal opportunities for the DIAS Advisory Committee to improve the quality and safety of care provided at diagnostic imaging practices, making recommendations directed to them appropriate.

612. FMIG, however, have already taken action relating to some of these recommendations.

613. Some recommendations relate to the obligation of the clinic itself (here FMIG) to obtain a valid referral or request well in advance of the day of the procedure. FMIG appropriately expressed its support for such a recommendation,[596] so that FMIG and other private radiology practices would follow up on inadequate or invalid referrals as soon as they are received. There was agreement amongst the experts that this would be 'good practice', though some uncertainty if this was practical or should be mandated.[597]

614. FMIG have put a new policy, 'Medication Management Policy and Adverse Reaction Policy and Procedure' in place from October 2020.[598] This current policy incorporates

[596] See FMIG closing submissions at [61.3].

[597] See Shnier, T1265.17 – T1265.18; Phal, T1266.1 – T1266.4; Andrews T1266.8 – T1266.21 and T1266.26 – T1266.28

[598] Reddan, T893.20 – T894.12; AM3-23 – Statement of Reddan (4) - AM3-23-152

a document 'Management of Reactions to Intravenous Agents' which sets out the RANZCR guidelines.[599]

615. FMIG have also prepared a formal manual (Safety and Quality Policy Manual 2020) for consultant and other radiologists working at FMIG, including reference to the FMIG Radiation Safety and Protection Plan and Medication Management policies.[600]

616. I accept that, at the relevant time, FMIG radiographers were not expected to administer intramuscular (IM) injections.[601] The inquest gave rise to the suggestion that EpiPens (or similar auto-injectors) should be made available to assist staff to do so, under the direction of the medical practitioner.

617. Recommendation 13 recommends that FMIG stock auto-injectors and Recommendation 16(a) proposes revision of the DIAS Practice Accreditation Standards or their application to ensure that adrenaline auto-injectors are available in every room where a contrast medium is injected. FMIG have indicated they are supportive of such a recommendation.[602]

618. FMIG have advised of revisions and changes to their procedures following this incident: [603]

(a) FMIG have revised their consent form and the process for completion of the consent paperwork by patients. A new consent form has been produced for the administration of intravenous contrast;[604]

(b) FMIG accepts the referral form for Peta was insufficiently completed and have updated their own referral form to ensure all the required information is obtained by referring practitioners;

(c) FMIG have instituted a monthly random audit process to ensure and monitor compliance with RANZCR guidelines;

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[599] Reddan, T893.20 – T893.30 and T894.13 – T894.19; AM3-65 - Statement of Reddan (1 – in final form), CB 96

[600] Reddan, T892.18 – T892.19 and T894.20 – T895.2; AM3-23 – Statement of Reddan (4), [12] and AM3-23-142

[601] Andrews, T1394.21 – T1395.2

[602] See FMIG closing submissions at [55].

[603] AM3-15 – Statement of Reddan (3), p.1-3

[604] AM3-15 – Statement of Reddan (3) - new FMIG consent form, p.6

(d) FMIG have made other changes to staff training and formed a committee to facilitate training in recognising and managing contrast reactions, including emergency drill sessions every six months;

(e) FMIG have installed 'Anaphylaxis Kits' in all CT rooms, including adrenaline, glucagon, needles, syringes, alcohol swabs and dosage and administration directions and for Moonee Ponds and Hawthorn sites, where CTCA scans are carried out involving beta-blockers;

(f) In addition to the existing RANZCR posters in CT rooms which remain, FMIG have posted additional posters;[605]

(g) FMIG have purchased emergency trolleys for all sites, stocked in identical ways so that rotating staff will know exactly where an item is stored in an emergency; and

(h) FMIG has added anaphylaxis training to the standard CPR training for all staff; and

(i) FMIG have purchased separate suction equipment.

619. I accept FMIG policy changes are adequate, subject to any further changes recommended by regulators regarding inappropriate requests and the timely follow up of missing information.

Key finding: I accept FMIG's policy changes are adequate, subject to any further changes recommended by regulators.

620. AV have advised that, since these event, they have updated their anaphylaxis Clinical Practice Guideline ('CPG') A0704 in 2020 so as to effect the following:

(a) emphasise that anaphylaxis "*can exist with any combination of the signs and symptoms listed.., but may also be limited to a single body system symptom (e.g. isolated hypotension or isolated respiratory distress in the setting of exposure to an antigen that has caused anaphylaxis in the patient previously*" and "*Anaphylaxis can be difficult to identify. Cutaneous features are common though not mandatory. Irrespective of known allergen exposure, if 2 systemic manifestations are observed then anaphylaxis should be accepted.*";

[605] AM3-15 – Statement of Reddan (3), p3 - photographs, p.8-9

(b) specifically mention "*contrast media*" as a common allergen, among other medications;

(c) emphasise the importance of adrenaline;

(d) highlight that '*Deaths from anaphylaxis are far more likely to be associated with delay in management rather than inadvertent administration of adrenaline*'; and

(e) simplify the indications for glucagon and remove the requirement for a medical consultation to administer glucagon.

621. AV has also issued a bulletin to paramedics summarising the CPG update, highlighting that adrenaline remains the foundation of anaphylaxis management and is the absolute priority in all cases. The bulletin also reminds paramedics that isolated respiratory distress, in the setting of exposure to a known antigen, is now part of the criteria for diagnosing anaphylaxis.[606]

622. Accordingly, these issues need no longer be the subject of any Recommendation.

623. Further, by their closing submissions, AV indicated their support for the following other Recommendations drawn from Eddey's expert evidence:

(a) That AV issue a practice advisory highlighting that adrenaline be administered as soon as practicable to patients who have acutely deteriorated within a short time of receiving radiological contrast at a radiology clinic; and

(b) That AV issue a practice advisory highlighting the possibility of beta-blocking medication being present in a patient experiencing anaphylaxis to radiological contrast whilst undergoing cardiac CT, and that consideration should be given to administering glucagon in these circumstances if the patient is unresponsive to adrenaline.

624. ESTA advised me that if recommendations were made in line with Eddey's suggestions, this would be a matter for AV ,and ESTA would then manage any subsequent changes in line with AV's responses.[607]

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[606] AM3-59 – Bulletin – Anaphylaxis CPG Update (AV) – 16 12 2020.

[607] 2019 2336 Hickey – AM3-18 – Statement – Jessica Taylor (ESTA) – 16 10 2020, paragraphs 7.1 – 7.3

CONCLUSIONS

625. Despite the fact that her clinical presentation never indicated any such need, Programmed had conceived, arranged and paid for Peta to attend the FMIG radiology clinic in Moonee Ponds on 1 May 2019 for the CT Scan.

626. Despite the fact that FMIG's policies and procedures were substantially compliant with industry standards, Peta's defective referral was accepted and acted upon by FMIG. Her subsequent anaphylactic reaction to the contrast dye was poorly managed by Tseng, and there was nothing the other radiology staff or emergency services personnel could do to reverse the reaction, despite their timely attendances.

627. The FMIG CT scan Report for Peta recorded a Pyrrhic calcium score of '0' and a normal CTCA.[608] The unnecessary privately funded test proved nothing.

628. On 9 May 2019, Peta passed away in the ICU at the RMH. Douglass of the RMH stated that blood tests, taken at the time of Peta's admission, for tryptase (an enzyme released as an immune response or in allergic responses, such as anaphylaxis) confirmed that Peta had suffered an anaphylactic reaction.[609]

629. Unindicated testing on the remainder of Programmed's CHAP cohort continued.

630. Dr Dodd's post-mortem examination also confirmed a normal heart and coronary artery, without evidence suggesting symptoms or signs relating to cardiovascular disease.[610]

STATUTORY FINDINGS

631. Having investigated the death of Peta Hickey, and having held an inquest in relation to Peta's death between 29 April 2021 and 19 May 2021 at Melbourne, I make the following findings, pursuant to section 67(1) of the Act:

(a) that the identity of the deceased was Peta Hickey, born on 19 June 1975;

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[608] Expert Opinion of Dr David Eddey, CB 147; FMIG CT Coronary Angiogram & Calcium Score Report (Dr Tseng), CB 32 - 33

[609] Expert Opinion of Dr David Eddey, CB 147; Statement of Prof Jo Douglass (RMH), CB 90 - 91

[610] Expert Opinion of Dr David Eddey, CB 146 – 147; Medical Investigation Report (VIFM), CB 112 - 114

(b) that Peta died at the Royal Melbourne Hospital on 9 May 2019 from multisystem organ failure and hypoxic/ischaemic encephalopathy, following an anaphylactic reaction to CT contrast medium; and

(c) in the circumstances described above.

632. I acknowledge that AV has already amended their clinical practice guideline for glucagon to include anaphylaxis not responsive to adrenaline in a beta blocked patient as an indication for the administration of glucagon.

633. I acknowledge that despite there being no substantial defect in FMIG's policies and procedures, they have nonetheless taken this opportunity to revise and improve them.

634. Following the events of 1 May 2019, Tseng underwent additional training of his own volition.[611] This includes new training in CPR, Airway Management, Initial Assessment & Resuscitation and Basic Life Support as well as training from ASCIA specifically regarding anaphylaxis.[612] I acknowledge that this training will help prepare Tseng to respond to another event such as Peta's contrast reaction if it reoccurs.

COMMENTS

635. The conduct of Programmed, Priority, MRI Now and Doctors Saad and Tseng causally contributed to Peta's death.

636. The conduct of Doctors Saad and Tseng departed from normal professional practices.

637. The conduct of Priority appears to have been, as a matter of fact rather than any legal term of art, misleading and deceptive.

638. FMIG's written policies and procedures were largely consistent with the professional expectations of a radiology practice at the time, although to the credit of that company, they have nonetheless revised and improved those documents in material ways since Peta's death.

639. I make no adverse comment about the emergency services response.

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[611] T611.

[612] Certificates at AM3-72-8 through AM3-72-12.

NOTIFICATIONS

I hereby direct that AHPRA be notified that the practice of Dr Doumit Saad was insufficient and unsafe with regard to:

(a) Authorising Rani Haddad to generate referrals using his signature for patients he had not reviewed; and/or

(b) Failing to object and halt the Health Assessment Programme upon becoming aware from receiving CT reports that his signature had been used for referrals for patients he had not reviewed; and/or

(c) Failing to apply ethical standards appropriately by viewing himself as holding lesser obligations towards persons he provided medical advice to after reviewing their files due to their being 'clients' or 'candidates' rather than 'patients'.

I hereby direct that AHPRA be notified that the practice of Dr Gavin Tseng was insufficient and unsafe with regard to:

(a) Continuing with Peta Hickey's CT scan after viewing the Referral; and/or

(b) Undertaking Patient AA's CT Scan days after Peta Hickey's severe contrast reaction; and/or

(c) Failing to recognise Peta Hickey's anaphylaxis and administer adrenaline or direct others to administer adrenaline.

RECOMMENDATIONS

Pursuant to section 72(2) of the Act, I make the following recommendations connected with the death:

Recommendations regarding radiologists

1. That the **Royal Australian and New Zealand College of Radiologists** (**RANZCR)** implement a mandatory requirement that radiologists working in settings where contrast is administered without other expert medical support undertake specific training in the recognition and management of severe contrast reactions and anaphylaxis every 3 years.

2. That **RANZCR,** the **Australasian Society of Clinical Immunology and Allergy (ASCIA) and the Australian Resuscitation Council (ARC)** develop and implement

a comprehensive training and certification programme for radiologists in the recognition and management of severe contrast reactions and anaphylaxis and the provision of CPR and basic life support including airway management with equipment available in radiology practices.

3. That **RANZCR** implement a register of severe contrast reactions, their management and outcomes to enable an assessment of the effectiveness of training and compliance with guidelines.

4. That **RANZCR** amend its contrast reaction management guidelines for display in rooms where contrast is administered to specifically highlight:

   (a) that adrenaline is potentially life-saving and must be used promptly. Withholding adrenaline due to misplaced concerns of possible adverse effects can result in deterioration and death of the patient.

   (b) the role of glucagon in reactions in patients undergoing cardiac CT who have received beta-blocking medication.

5. That **RANZCR** amend their Standard 5.3.2 with regard to requests for non-emergency and invasive investigations or procedures, or procedures including administration of contrast dye, so that referrals containing no or inadequate clinical information regarding the test or procedure are rejected or referred back to the requesting doctor if that doctor cannot be directly contacted to provide their clinical indication for requesting the test or procedure.

6. That **RANZCR** prepare a joint position statement with the **Cardiac Society of Australia and New Zealand** regarding when 'screening' is an acceptable indicator for a CT angiogram or other invasive cardiac tests.

7. That **RANZCR** prepare joint position statements with other relevant bodies on when 'screening' is an acceptable indicator for other imaging procedures.

8. That, after these statements are prepared, **RANZCR** update its standards and guidelines regarding both clinical requests and consent procedures to address the increasing prevalence of 'screening' requests, and to ensure that imaging procedures are not performed for 'screening' when lower-risk alternatives might achieve the same end.

Recommendations regarding radiographers

9. That the **Medical Radiation Practice Board (MRPB)** review and update its set of Professional Capabilities for Medical Radiation Practitioners to ensure that emergency response is adequately addressed within them, including both proficiency in recognition of reactions, administration of necessary treatments, and playing an active role in emergency response, including raising issues with more senior staff when required.

10. That the **MRPB** update their CPD guidelines to require that all radiographers who work with contrast media ensure they are consistently trained in emergency response to severe reactions and anaphylaxis.

11. That **RANZCR, ASCIA, Australian Resuscitation Council** and the **Australian Society of Medical Imaging and Radiation Therapy (ASMIRT)** develop and implement a training and certification programme for radiographers in the recognition and management of severe contrast reactions and anaphylaxis, CPR and Basic Life support with a triannual recertification requirement, including:

    (a) the ability to administer adrenaline via autoinjector when encountering a patient experiencing a severe reaction; and

    (b) playing an active role in emergency response, including raising issues with more senior staff when required.

12. That the **MRPB, RANZCR** and **ASMIRT** consider expanding radiographers' scope of practice to include training in the preparation and administration of medications appropriate to their practice, including drugs used to treat medical emergencies encountered in radiology, either under the supervision of a medical practitioner or, in emergencies, without the supervision of a medical practitioner.

Recommendations regarding private diagnostic imaging practices

13. That **FMIG** stock adrenaline auto-injectors (in addition to vials of adrenaline) as a means to enable the rapid administration of an accurate dose of adrenaline by the correct route.

14. That **FMIG** revise their consent process to include a consent form for CTCA and other contrast procedures that is clearly identified as a consent form requiring witnessing by an appropriate person (radiographer or radiologist) and which includes

specific reference to items in the RANZCR guideline including radiation risk and alternatives appropriate to their individual circumstances.

15. That **RANZCR** update its standards regarding radiology practices to ensure:

    (a) That adrenaline auto-injectors (in addition to vials of adrenaline) are accessible in every room where contrast medium is injected as part of a diagnostic imaging procedure.

    (b) That policies and procedures for responding to inappropriate requests specify that the response must occur promptly after receipt of the request.

    (c) That the information required to be given to patients during consent procedures include alternatives which may be appropriate to their individual circumstances.

    (d) That all radiographers are trained in the recognition and management of anaphylaxis and severe contrast reactions.

    (e) That practice staff, including but not limited to radiographers, are trained and empowered to play an active role in emergency response, including raising issues with more senior staff when required.

    (f) That practices have onboarding systems for new radiologists which include an orientation with regard to the location of emergency equipment as well as an assurance of the recency of training with respect to recognition and management of severe contrast reactions and anaphylaxis.

    (g) That all rooms where contrast medium is administered are to have a contrast reaction treatment guideline prominently displayed.

16. That the **Diagnostic Imaging Accreditation Scheme (DIAS) Advisory Committee** review the current DIAS Practice Accreditation Standards and propose revised standards, or means of applying the current standards, that ensure:

    (a) That adrenaline auto-injectors (in addition to vials of adrenaline) are accessible in every room where contrast medium is injected as part of a diagnostic imaging procedure.

    (b) That policies and procedures for responding to inappropriate requests, as required in Standard 2.1, specify that the response must occur promptly after receipt of the request.

(c) That the information required to be given to patients under Standard 2.2 include alternatives which may be appropriate to their individual circumstances.

(d) That Standard 2.4 requires that all radiographers are trained in the recognition and management of anaphylaxis and severe contrast reactions.

(e) That Standard 2.4 requires that practice staff, including but not limited to radiographers, are trained and empowered to play an active role in emergency response, including raising issues with more senior staff when required.

(f) That practices have onboarding systems for new radiologists which include an orientation with regard to the location of emergency equipment as well as an assurance of the recency of training with respect to recognition and management of severe contrast reactions and anaphylaxis.

(g) That all rooms where contrast medium is administered are to have a contrast reaction treatment guideline prominently displayed.

17. That **RANZCR** and the **DIAS Advisory Committee** consult each other on the best distribution of efforts to achieve the aims in the previous two recommendations, and that they work together to develop a programme for communicating any changes to radiologists and diagnostic imaging practices.

18. That **FMIG** review their compliance with the DIAS Practice Accreditation Standards, in particular Standard 2.1.

19. That the **Commonwealth Minister for Health** undertake an audit of all Australian accredited diagnostic imaging practices regarding their compliance with DIAS Practice Accreditation Standard 2.1.

20. That the **Commonwealth Minister for Health** produce and promulgate standard forms for referrals to diagnostic imaging practices, ensuring that referrals include clinical information and effective contact information, and that the Minister consider whether measures should be taken to mandate the use of such forms.

Recommendations regarding the workplace health industry

21. That the **Australian Competition and Consumer Commission** consider whether enforcement action is appropriate against Priority Care Health Solutions, MRI Now or related corporate entities for unconscionable, misleading and/or deceptive conduct in their businesses which:

(a) gave clients the impression that the business directly employs medical practitioners, when it does not; and

(b) gave the impression to diagnostic imaging practices that a medical practitioner has reviewed a patient before requesting a scan, when they have not.

22. That the **Royal Australian College of General Practitioners (RACGP)** and the **Australasian Faculty of Occupational & Environmental Medicine (AFOEM)** of the Royal Australasian College of Physicians prepare a joint position statement on whether practitioners engaged in workplace health have different obligations to 'clients' or 'candidates', for whom they are undertaking a limited review of information, than they do toward their 'patients', as was suggested by Dr Saad.

23. That the **RACGP** and the **AFOEM** prepare a joint position statement on the appropriateness of a practitioner authorising, or otherwise allowing, their signature to be used in referring individuals (whether 'patients', 'clients' or 'candidates') for tests when neither the patient, nor any information specific to the patient, has been reviewed.

Recommendations regarding emergency services

24. That **Ambulance Victoria (AV)** issue a practice advisory highlighting that adrenaline be administered as soon as practicable to patients who have acutely deteriorated within a short time of receiving radiological contrast at a radiology clinic.

25. That **AV** issue a practice advisory highlighting the possibility of beta-blocking medication being present in a patient experiencing anaphylaxis to radiological contrast whilst undergoing cardiac CT, and that consideration should be given to administering glucagon in these circumstances if the patient is unresponsive to adrenaline.

ACKNOWLEDGEMENTS

We all realise that inquests such as this will not bring people back to life. Nonetheless, I thank Peta's family for their cooperation with a painful process that has nonetheless shown our community opportunities to prevent the risk of this tragedy recurring.

The other interested parties, with the exception of Mr Mtanios, have also thoughtfully engaged with the scope of and issues raised by this Inquest, and to that extent have materially assisted the Court to consider the prevention opportunities identified.

ORDERS

Pursuant to section 73(1) of the Coroners Act, I order that this finding be published on the internet.

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

The family and friends of Peta Hickey

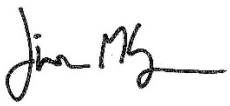
The interested parties

The Australian Health Practitioner Regulation Agency

The Australian Competition and Consumer Commission

All applicants

Signature:



SIMON McGREGOR
Coroner
Date: 22 November 2021

APPENDIX A

SCOPE OF INQUEST

The following issues are to be canvassed during the coronial inquest:

Background to Request for CTCA Scan (SNOK, Programmed, Priority, Dr Saad, Jobfit, Dr Kain)

1. Who developed the Cardiac Health Assessment?
    (a) Which corporate entity and individual identified the CTCA Scan as a test to be included in the Cardiac Health Assessment?
    (b) Whose advice was solicited, and whose advice considered, in regard to whether the CTCA Scan specifically should be included in the program?
    (c) Which corporate entity and individual oversaw the Cardiac Health Assessments, from the 'on-boarding' of Programmed executives through to the review of the post-assessment reports?
2. What are the precise roles of relevant entities, generally and specifically in relation to the Cardiac Health Assessment involving Peta:
    (a) Was Priority a 'medical booking provider' and what did that role entail?
    (b) Was Jobfit a 'medical provider' and what did that role entail?
3. What consideration was given to the possible risks inherent in the program?
    (a) Whose advice was solicited and whose advice considered with regard to any inherent risks?
    (b) Did the Cardiac Health Assessment include an initial assessment and/or referral by any physician?

Request ('Referral') for CT Scan and Consent (SNOK, Programmed, Priority, Dr Saad, JobFit)

4. Whose advice was solicited, and whose advice considered, in regard to the structure of the 'referral' process for the program?
5. With regard to the presence of Dr Saad's signature on the 'MRI Now – Booking Confirmation' dated 12 March 2019 (including 'referral' form):

(a) Who affixed Dr Saad's signature to the 'referral' for the CT Scan?

(b) If Priority staff affixed Dr Saad's signature to the 'referral' for the CT Scan, who did Priority consult about affixing Dr Saad's signature to the 'referrals' for the CT Scan?

(c) Was either Dr Saad or JobFit asked if the Dr Saad's signature could be affixed to the 'referral' for the CT Scan?

6. Was there a practice at Priority Care of making requests or referrals for any scans or any x-rays (or other imaging procedures) without the relevant doctor reviewing the individual patient or their records prior to the procedure? If so -

(a) Were Jobfit or Dr Saad aware of this practice and what was the extent of this practice?

(b) What was the practice and what was the extent of the practice?

Events of 1 May 2019

Prior to CT Scan (SNOK, FMIG, Dr Tseng)

7. What information did Dr Tseng have when deciding to commence with the Scan, including both regarding the clinical appropriateness of the scan and regarding Peta's consent to the scan?

(a) What information did he solicit, and what information did he receive, from FMIG Staff who spoke to Peta?

(b) What information did he solicit, and what information did he receive, directly from Peta?

8. Who did Dr Tseng ask to contact Dr Saad ?

(a) What information did Dr Tseng seek to obtain from Dr Saad?

(b) What attempts were made to contact Dr Saad to obtain this information? By whom?

9. Did FMIG procedures, policies and practices with regard to a referral lacking in clinical information or justification for a procedure escalate the issue to the radiologist?

10. Was Dr Tseng's information-seeking process in accordance with FMIG procedures, policies and practices with regard to a referral lacking in clinical information or justification for a procedure?

(a) If not, was Dr Tseng aware of the FMIG procedures and policies with regard to a referral lacking in clinical information or justification for a CT Scan?

Contrast Reaction (SNOK, FMIG, Dr Tseng)

11. When did FMIG staff determine to escalate Peta's care to Dr Tseng?
    (a) What factors were considered when they did so?
    (b) What information did they provide to Dr Tseng when they did so?
12. Was the escalation to Dr Tseng in accordance with FMIG procedures, policies and practices?
13. The following specific circumstances of the response to the contrast reaction remain unclear:
    (a) When Delecheneau went to call Dr Tseng from the injection room, what precisely was Dr Tseng told about Peta's condition?
    (b) What was Dr Tseng's response to Delecheneau?
    (c) Did anyone other than Delecheneau call Dr Tseng from the injecting room and if so, what was Dr Tseng told about Peta's condition?
    (d) Who monitored Peta's pulse? How was this done and was there no reading at any point?
    (e) What were the precise circumstances of the preparation and drawing up of the vial of adrenaline by Gilbert? Was Dr Tseng informed at any stage?
    (f) What amount of Hydrocortisone did Dr Tseng direct be administered to Peta and how much was in fact administered?

Emergency Response – ESTA and Ambulance Victoria (SNOK, FMIG, Dr Tseng, ESTA, Ambulance Victoria)

14. What actions did FMIG staff and Dr Tseng undertake to contact emergency services?
15. What information did AV seek from FMIG Staff and Dr Tseng upon arrival and what information did Dr Tseng or FMIG staff provide to AV upon arrival?
16. What information was included in AV's internal handovers between staff?

FMIG - Medical Equipment, qualifications and training

17. What orientation and training had FMIG given its staff, including Dr Tseng, on FMIG procedures, policies and practices with regard to a referral lacking in clinical information or justification for a procedure?

18. What orientation and training had FMIG given its staff, including Dr Tseng, with respect to contrast reaction response and management?

Expert Evidence

19. Was the CTCA Scan appropriate and/or clinically indicated?
20. Were the documents used in the referral process (for GP use) and in the determination of consent by FMIG (for radiologist or staff use) sufficient, in form and in practice?
21. Was the practice by Dr Tseng and other FMIG staff, considering the actually available documentation for request and consent:
    (a) Reasonable;
    (b) In accordance with FMIG procedures policies and practices; and/or
    (c) In accordance with relevant Guidelines and Standards?
22. Were FMIG's procedures, policies and practices with respect to escalating issues to the onsite Radiologist to address item 21 appropriate?
23. Was Dr Tseng's course of action appropriate with respect to recognition/diagnosis, treatment and management of Peta's contrast reaction?
24. Was FMIG's orientation and training of staff (including Dr Tseng) with respect to contrast reactions adequate?
25. Was the clinical advice provided by ESTA/AV adequate?
26. Was the treatment provided by AV paramedics appropriate with regard to:
    (a) AV procedures, policies and practices; and/or
    (b) Guidelines/Standards (AV or other)?
27. Did FMIG have sufficient supplies and equipment onsite for response to a contrast reaction?

Prevention Opportunities (All)

28. What measures might be taken to prevent similar deaths in the future?

APPENDIX B

ISSUES AND QUESTIONS

FOR CONCURRENT EXPERT EVIDENCE

Issues and Witness Schedule

The issues to be addressed in questioning of expert witnesses have been identified as follows, with the understanding that evidence given during the preceding days of the inquest may affect the matters to be considered by experts:

	Issue to be addressed	**Relevant expert reports**[613]
A	Was the CTCA Scan appropriate and/or clinically indicated?	Dr David Eddey, A/Prof Pramit Phal, Dr Howard Galloway
B	Were the documents used in the referral process by FMIG (for radiologist or staff use) sufficient, in form and in practice?	Dr David Eddey, A/Prof Pramit Phal, Dr Howard Galloway
C	Was the practice by Dr Tseng and other FMIG staff, considering the actually available documentation for request: (a) Reasonable; (b) In accordance with FMIG procedures policies and practices; and/or (c) In accordance with relevant Guidelines and Standards? (Excepting the matters considering under Issue D.)	Dr David Eddey, Dr Howard Galloway, A/Prof Pramit Phal, Dr Matthew Andrews

[613] Dr David Eddey (CPU); A/Prof Pramit Phal (SNOK); Dr Howard Galloway (Dr Tseng); Dr Matthew Andrew (FMIG); Dr Ronald Schnier (FMIG); Prof Alexander Pitman (Dr Tseng)

D	Were FMIG's procedures, policies and practices with respect to escalating issues to the onsite Radiologist to address Issue C appropriate?	Dr David Eddey, Dr Howard Galloway, Dr Ronald Schnier, Dr Matthew Andrews
E	Was Dr Tseng's course of action appropriate with respect to recognition/diagnosis, treatment and management of Peta's contrast reaction?	Dr David Eddey, Prof Alexander Pitman, A/Prof Pramit Phal
F	Was FMIG's orientation and training of staff (including Dr Tseng) with respect to contrast reactions adequate?	Dr David Eddey, Prof Alexander Pitman, Dr Matthew Andrews
G	Was the clinical advice provided by ESTA/AV adequate?	Dr David Eddey, Dr David Anderson
H	Was the treatment provided by AV paramedics appropriate with regard to: (a) AV procedures, policies and practices; and/or (b) Guidelines/Standards (AV or other)?	Dr David Eddey, Dr David Anderson
I	Did FMIG have sufficient supplies and equipment onsite for response to a contrast reaction?	Dr David Eddey, Dr Matthew Andrews

ISSUES TO BE ADDRESSED AND KEY QUESTIONS

14 May 2021 – Day 1

(Dr David Eddey, Dr Howard Galloway, A/Prof Pramit Phal, Dr Matthew Andrews and Dr Ronald Shnier)

A. Was the CTCA Scan appropriate and/or clinically indicated? *(Dr David Eddey, A/Prof Pramit Phal, Dr Howard Galloway)*

1. Please describe the CTCA test and the CAC test, including:
    a. what is being tested for
    b. the benefits of such a test

c. the risks of such a test, in particular the risk of severe contrast reactions or anaphylaxis (both fatal and non-fatal) following CTCA

2. Is there an applicable and authoritative source of information as to when a CTCA test is appropriate or clinically indicated? Considering the following (or any other source) -
    a. RANZCR Standards
    b. Contrast Media Guideline
    c. RANZCR CTCA Website
    d. RANZCR Contrast Medium Website
    e. Australian Resuscitation Council
    f. Medicare Requirements

    If yes (to any or all of the above) what does that source stipulate are the clinical indications or appropriate reasons for ordering a CTCA test?

3. Is 'screening' of an asymptomatic person for coronary issues a sufficient or appropriate clinical indication for a CTCA test? And what is the basis for your answer?
4. Who are considered at low/intermediate risk of coronary artery disease or cardiovascular disease? Is 'screening' of a person at low/intermediate risk of coronary artery disease a sufficient or appropriate clinical indication for a CTCA test? And what is the basis for your answer?
5. Would your answer to questions 3 and 4 be different:
    a. If a CTCA test is ordered as a 'private' test or in a private clinic setting, as opposed to Medicare funded or in a public clinic or hospital setting?
    b. If a CTCA test is ordered or sought by the patient themselves or by their employer?
    c. If the patient had a family history of coronary artery disease?
6. Are there alternative, lower risk (less invasive or intensive) tests available to achieve a similar outcome to the CTCA test in asymptomatic or low/intermediate risk people? What are they and what are their risks and benefits?

B. Were the documents used in the referral process by FMIG (for radiologist or staff use) sufficient, in form and in practice? ***(Dr David Eddey, A/Prof Pramit Phal, Dr Howard Galloway)***

Sufficient Request -

1. Is there an applicable and authoritative source of information as to when a referral or request is sufficient (clinically appropriate)? Considering the following (or any other source) and their purpose and scope -
    a. RANZCR Standard 5.3 - Review of Appropriateness of Request and Patient Preparation AND RANZCR Radiation Safety Standard 6.3 (ALARA Principle 6.3.1) – contained in 'RANZCR Standards'?
    b. Medicare Requirements
2. Would your answer to question 1 be different when considering a 'private' referral or a public hospital setting? What is the basis for your view?
3. What information *must* be included in a referral or request document for it to be an adequate or sufficient (or 'valid') request for:
    a. A CTCA scan?
    b. Any procedure involving ionising radiation?

    What is the basis for your view?

4. What information *should* be included in a referral for a CTCA scan or any procedure involving ionising radiation, to constitute good medical practice? What is the basis for your view?
5. Is a referral document ever complete or 'valid' without any clinical indications recorded in support of ordering this test?
6. Is 'health assessment' or similar in the clinical notes of a referral or request considered sufficient clinical indication?
7. Would your answers to questions 3 to 5 be different if the requested procedure were:
    a. Funded by Medicare?
    b. Paid for by the patient?
    c. Paid for by an employer?
    d. For 'screening' purposes?
    e. For a procedure in a private clinic?
8. What contact information is necessary for a referral document?
9. How frequently do radiologists in private practice receive referrals lacking clinical indications:
    a. In general; and

b. For imaging procedures involving injection of substances.

10. Was the referral a 'valid' request for a CTCA scan in this case?
11. Was it appropriate in this case for the radiologist to proceed with the CTCA scan? What is your risk/benefit analysis? Is absence of contra-indications sufficient? What is the basis for your view?

C. Was the practice by Dr Tseng and other FMIG staff, considering the actually available documentation for request:

(a) Reasonable;

(b) In accordance with FMIG procedures policies and practices; and/or

(c) In accordance with relevant Guidelines and Standards?

(Excepting the matters considering under Issue D.)

(Dr David Eddey, Dr Howard Galloway, A/Prof Pramit Phal, Dr Matthew Andrews)

1. What should a radiologist do when provided a referral without clinical indications and/or adequate contact details?
2. Would your answer to question 1 be different if the requested procedure were being:
    a. Funded by Medicare?
    b. Paid for by the patient?
    c. Paid for by an employer?
3. To what degree can recipients of referrals be expected to infer aspects of the patient's clinical situation from other aspects of the referral, or any surrounding circumstances or background information obtained other than from the referral document?
4. Where a referral or request is lacking information or clinical indication, what attempts to obtain the information would be considered "reasonable" or "in accordance with appropriate practice"? What is the basis for your view?
5. Is it a common occurrence for clinical staff to seek further information in relation to a referral?
6. On current evidence, were reasonable attempts made to obtain the requisite information? Considering, for example, attempts by Dr Tseng or any clinical or non-clinical FMIG staff to obtain further information from –

a. the referring doctor
b. the patient
c. another source

7. In what circumstances should a radiologist personally speak to patients to ensure informed consent?

D. Were FMIG's procedures, policies and practices with respect to escalating issues to the onsite Radiologist to address issue C appropriate?
(Dr David Eddey, Dr Howard Galloway, A/Prof Pramit Phal, Dr Matthew Andrews and Dr Ronald Shnier)

1. What should radiographers do when provided a referral without clinical indications, sufficient clinical notes and/or adequate contact details? Is it sufficient to escalate the issue for final approval by the Radiologist? Please consider the FMIG 'Radiation Safety and Protection Plan' dated November 2018 (AM3-67-17 to 18)
2. What should radiology clinic staff who are not health practitioners do upon receipt of a referral without clinical indications, sufficient clinical notes and/or adequate contact details?
3. Would your answer to questions 1 and 2 be different if the requested procedure were being:
    a. Funded by Medicare?
    b. Paid for by the patient?
    c. Paid for by an employer?
4. Why is or isn't it appropriate for the issue of a referral without clinical indications, sufficient clinical notes and/or adequate contact details to be escalated to the radiologist or medical practitioner on site for approval? What is the basis for your view?
5. Would your answer to question 4 be different where the radiologist is a locum or contractor? Please explain your answer.
6. Are there any additional safeguards that would make the practice of placing ultimate responsibility with the radiologist on site at a clinic more appropriate?

17 May 2021 – Day 2

(Dr David Eddey, Prof Alexander Pitman, A/Prof Pramit Phal and Dr Matthew Andrews)

E. Was Dr Tseng's course of action appropriate with respect to recognition/diagnosis, treatment and management of Peta's contrast reaction? (*Dr David Eddey, Prof Alexander Pitman, A/Prof Pramit Phal)*

1. What is your specific and relevant experience in the area of the recognition, treatment and management of anaphylaxis?
2. Is there an applicable and authoritative source of information as to the symptoms and the treatment and management of anaphylaxis? Considering the following (And any other source):
    a. Contrast Media Guideline;
    b. ASCIA Anaphylaxis Plan
    c. RANZCR Anaphylaxis in Radiology Suite Wall Chart 2020;
    d. RANZCR Anaphylaxis in Radiology Suite Wall Chart 2016;
    e. ANZCOR Flowchart;
    f. ANZCOR Guideline.
3. Further, with regard to the symptoms of anaphylaxis:
    a. What are the most common?
    b. What other symptoms may present?
    c. How would these symptoms develop over time?

    What is the basis for your view?

4. Were any of Peta's symptoms contra-indications or atypical of anaphylaxis?
5. If a patient is having seizures or convulsions and has recently received a contrast injection, what are the differential diagnoses? What are the most *probable* diagnoses of the patient's condition? What is the basis for your view?
6. Where the diagnosis is uncertain but anaphylaxis is possible, what steps should be taken immediately? What is the basis for your view?
7. What steps should be taken, and in what order, when responding to anaphylaxis to contrast dye? What is the basis for your view?
8. How would your responses to question 7 change if the patient had recently taken metoprolol or any other beta-blocker?

9. Considering all available treatments and the circumstances of this case, what steps should have been taken, and in what order? Specifically consider:
    a. Should adrenaline have been administered immediately? Would early administration of adrenaline have had any practical adverse effect if other differential diagnoses being considered had been correct?
    b. Should hydrocortisone and/or diazepam have been administered?
    c. Was BLS and/or ALS appropriate and when?
    d. Should ventilation and maintenance of the airway have taken precedence over some or all of these medications, if no other person present is able to administer some or all of these medications? Could ventilation have been interrupted and for how long?
    e. Should intravenous fluids have been administered? Would your answer be different if blood pressure and/or pulse was recorded?
10. Explain whether your answers to question 9 as to the appropriate treatment are:
    a. retrospective or prospective;
    b. applicable to Dr Tseng or to any clinical radiologist;
    c. applicable in a private clinic or public clinic or hospital.
11. What bodily position should the patient be placed in during the above processes? What are the advantages and disadvantages of various bodily positions? Consider the following (or any other sources):
    a. ANZCOR Flowchart;
    b. ANZCOR Guideline.
12. What procedures constitute effective ventilation and airway management?
13. How does your response to question 12 change depending on whether supplemental oxygen is available? Depending on whether suction equipment is available?

F. Was FMIG's orientation and training of staff (including Dr Tseng) with respect to contrast reactions adequate?

(***Dr David Eddey, Prof Alexander Pitman, Dr Matthew Andrews)***

1. What assistance would a radiologist require to effectively respond to anaphylaxis following injection of contrast dye?
2. What life support training should other staff possess?

3. What training and experience in administration of intravenous medications should other staff possess?
4. What training and experience in administration of IM medications should other staff possess?
5. What training and experience in coordinating emergency responses should radiologists and other staff possess?
6. To what degree should qualifications and experience as a radiographer prepare staff to assist radiologists in emergency situations?

I. Did FMIG have sufficient supplies and equipment onsite for response to a contrast reaction?

(***Dr David Eddey, Prof Alexander Pitman, Dr Matthew Andrews)***

1. Is there an applicable and authoritative source of information as to the necessary drugs and equipment that must be available (in or nearby) to a room in which contrast media is to be administered? Consider the following (or any other sources):
    a. RANZCR Drugs and Equipment Chart.
2. What supplies and equipment would a radiologist require to effectively respond to anaphylaxis following injection of contrast dye?
3. In particular, should private radiology settings have epinephrine autoinjectors onsite?

(17 May 2021- Day 2 cont…) or 18 May 2021 – Day 3

(Dr David Eddey, Dr David Anderson)

G. Was the clinical advice provided by ESTA/AV adequate?

1. What information should ESTA or an AV clinician solicit from a caller when responding to a report of a contrast reaction?
2. What advice would assist a caller when reporting a contrast reaction?

H. Was the treatment provided by AV paramedics appropriate with regard to:

(a) AV procedures, policies and practices; and/or

(b) Guidelines/Standards (AV or other)?

1. What information should AV paramedics solicit from persons on the scene when responding to a contrast reaction?
2. What treatment should AV paramedics provide, and in what order of priority, to a patient suffering apparent anaphylaxis to contrast dye?
3. How does your answer to question 2 change if the patient has recently taken metoprolol?