IN THE CORONERS COURT
OF VICTORIA
AT MELBOURNE

Court Reference: COR 2021 002798

FINDING INTO DEATH WITH INQUEST

Form 37 Rule 63(1)
Section 67 of the Coroners Act 2008
Amended pursuant to section 76 of the Coroners Act 2008 on 26 Febraury 2026[1]

Deceased:	James Harilaos TSINDOS
Delivered on:	20 February 2026
Delivered at:	Coroners Court of Victoria, 65 Kavanagh Street, Southbank
Hearing dates:	13 February 2024 (Directions Hearings) 4, 7, 8 & 9 October 2024 (Inquest Hearing)
Findings of:	Coroner Sarah Gebert

[1] This document is an amended version of the Finding into Death With Inquest regarding James Harilaos Tsindos dated 20 February 2026. A correction to paragraph 187 has been made pursuant to section 76 of the *Coroners Act 2008* (Vic).

Counsel Assisting the Coroner:	R. Ellyard Instructed by Grace Horzitski, Coroners Court of Victoria
Counsel for Harry and Veneta Tsindos:	P. Halley and A. de Souza Instructed by Slater & Gordon
Counsel for Holmesglen Private Hospital:	R. Harper Instructed by Minter Ellison
Counsel for Ambulance Victoria:	S. Reid Instructed by Lander and Rogers
Counsel for Dr Andrew Han-Su Tay:	M. McLay Instructed by Avant Law
Counsel for Travis Frauenfelder	V. Katotas Instructed by Barry Nilsson
Counsel for Amandeep Choudhary	D. Wallis Instructed by Moray & Agnew Lawyers
Other Matters	*Severe anaphylaxis secondary to nut ingestion, without history of anaphylaxis, asthma, RSV*

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INTRODUCTION

1. James Harilaos Tsindos (referred to in my finding as James) was a 17-year-old boy at the time of his passing. He lived with his parents Harilaos (**Harry**) and Veneta Tsindos and his sisters Georgia, Elpida and Kristina. James was completing year 12 at Brighton Grammar School.

2. James was described by his father as *a healthy, vibrant gifted pianist who loved life.* He *had dreams of studying music and an entrepreneurship in Los Angeles after completing undergraduate business studies at RMIT.*

3. His mother advised that James' *piano teacher also told him that he had exceptional and extraordinary muscle memory and was able to coordinate his hands, mind and body in an advanced manner beyond his age and beyond what is expected. He was a prodigy.*

4. James had recently performed in his school musical *Mamma Mia* and featured in four of the five performances. He appeared healthy and was described by his father as *vibrant and happy*. His mother said that he *was the happiest with his health, fitness and wellbeing that he had ever been in his whole entire life.*

5. James had also recently developed a fitness routine and was attending the gym between four to five times each week. He was focused on aerobics to lose weight and consumed a healthy diet.

6. James had a background of allergic rhinitis, asthma, and tree nut allergy, with symptoms including generalised itch, vomiting, and flares of allergic rhinitis. He was taking his preventer and Ventolin at the time of his passing. He had not been prescribed or used an EpiPen[2] nor had he experienced an episode of anaphylaxis or been diagnosed with anaphylaxis.

7. On 29 May 2021 James passed away at the Alfred Hospital after being transferred from the Holmesglen Private Hospital (**Holmesglen**) on 27 May 2021 where he had been transported by ambulance following a suspected incident of anaphylaxis.

[2] An adrenaline auto-injector used for self-administration of adrenaline for the emergency treatment of anaphylaxis.

THE CORONIAL INVESTIGATION

8. James' death was reported to the Coroners Court as it fell within the definition of a reportable death in the *Coroners Act 2008* (**the Act**) as his death appeared to have been unexpected, unnatural or violent or to have resulted from accident or injury.

The coronial role

9. Coroners independently investigate reportable deaths to find, if possible, identity, cause of death and the surrounding circumstances of the death.[3] Cause of death in this context is accepted to mean the medical cause or mechanism of death. Surrounding circumstances are limited to events which are sufficiently proximate and causally related to the death.

10. Under the Act, coroners have an additional role to reduce the number of preventable deaths and promote public health and safety by their findings and making comments and or recommendations about any matter connected to the death they are investigating.

11. When a coroner examines the circumstances in which a person died, it is to determine causal factors and identify any systemic failures with a view to preventing, if possible, deaths from occurring in similar circumstances in the future.

12. The standard of proof applicable to findings in the coronial jurisdiction is the balance of probabilities and I take into account the principles in *Briginshaw*.[4] 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 evidence provides a comfortable level of satisfaction that the individual or entity caused or contributed to the death.

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[3] The exceptions being cases where an inquest was not held, the deceased was not in state care and there is no public interest in making findings as to circumstances: section 67 of the Act. Further, where an investigation is discontinued under section 17 of the Act.

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

Discretionary inquest

13. James' family made an application for an inquest to be conducted as part of the investigation[5]. The family were concerned, amongst other things, about the provision of care to James proximate to his passing as well as any prevention opportunities arising from the circumstances surrounding his death.

14. I subsequently determined that an inquest would be held as part of the investigation.

Sources of evidence

15. As part of the coronial investigation, the Coroner's Investigator Senior Constable Charles Love prepared a coronial brief in this matter. The Court also obtained a range of evidence which was added to the brief. The brief includes statements from witnesses, including those present at the scene of James' collapse, the forensic pathologist who examined James, ambulance paramedics, James' family members, clinicians involved in James' care, investigating police officers, as well as other documentation including plans, scene photographs, documentation from Triple Zero Victoria (**000Vic**) (formally Emergency Services Telecommunications Authority) and Ambulance Victoria. Also available were the audio of the 000 calls on 27 May 2021 and audio recordings between Ambulance Victoria and Holmesglen on 27 May 2021.

16. James' medical records from Alfred Health, Austin Health, Brighton Medical Clinic, Victorian Immunology and Allergy, Centrehealth Family Clinic and Monash Health were obtained. Relevant policy documents were also provided by Ambulance Victoria and Holmesglen.

17. Other reviews undertaken in relation in this matter contained in the brief included the Ambulance Victoria In Depth Case Review dated 7 June 2021[6] and the Safer Care Victoria Root Cause Analysis (**RCA**) Report (sentinel event program).[7]

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[5] Dated 14 July 2021.
[6] Coronial Brief (**CB**) at p.384-391.
[7] CB at p.1025 -1048.

18. To further assist my investigation, the Court obtained reports (three) from experts with relevant expertise including Professor Jo Anne Douglass[8], Professor Anne-Maree Kelly[9] and Professor Simon Brown.[10] Interested parties also obtained reports (four) which included Professor Peter Cameron,[11] Professor David Armstrong,[12] Associate Professor Luke Lawton[13] and Professor Warwick Butt.[14]

19. The Court also obtained statements from allergy organisations including the National Allergy Council and Allergy and Anaphylaxis Australia.

The Inquest

20. I determined the inquest scope, which is outlined below,

    Whether the medical care provided to James on 27 May 2021 following his ingestion of a meal containing cashews was appropriate.

    Whether there are any prevention opportunities arising from the circumstances of James' death.

21. The inquest ran for four days and heard evidence from twelve witnesses which included an expert panel. The witnesses are listed below,

    a. Paramedic Jonathon Hammond (Ambulance Victoria);

    b. Paramedic Samantha Nickson (Ambulance Victoria);

    c. Professor Warwick Butt[15];

    d. Registered Nurse Travis Frauenfelder (Holmesglen);

[8] Dated 17 March 2023, CB at p509-761.
[9] Dated 23 January 2023, CB at p.762-933.
[10] Dated 25 September 2023, CB at p. 941-954.
[11] Dated 7 October 2023, CB at p. 934-937 and dated 11 October 2023, CB at p. 938-940.
[12] Dated 18 January 2024, CB at 955-961.
[13] Dated 19 January 2024, CB at 962-1048.
[14] Dated 10 May 2024, CB at 1049-1060.
[15] Professor Butt was unable to join the Expert Panel.

e. Registered Nurse Amandeep Choudhary (Holmesglen);

f. Expert panel comprising Professor Jo Anne Douglass, Professor Anne-Maree Kelly, Professor Simon Brown, Professor Peter Cameron, Professor David Armstrong and Associate Professor Luke Lawton; and

g. Maria Said AM, Allergy and Anaphylaxis Australia.

22. After the conclusion of the inquest, I received a written submission from Counsel Assisting followed by written submissions in response from all interested parties. Further submissions regarding recommendations were made on behalf of the family.

23. This finding is based on the entirety of the investigation material comprising of the coronial brief of evidence including material obtained after the provision of the brief, the statements and testimony of those witnesses who gave evidence at the inquest and any documents tendered through them, any documents tendered through counsel (including Counsel Assisting), written and oral submissions of counsel and their replies following the conclusion of the inquest. All this material, together with the inquest transcript, will remain on the coronial file and comprises my investigation into James Harilaos Tsindos's passing. I do not purport to summarise all the material and evidence in this finding but will refer to it only in such detail as is relevant to comply with my statutory obligations and necessary for narrative clarity.

BACKGROUND

24. Harry said that *James had a hypersensitivity to some nuts which was recognised at about the age of 4 to 6. He could not eat cashews, walnuts and pine nuts but had no problem with peanut butter, Nutella, peanuts and almonds nor did he have any problem with traces of any nuts.*[16] In general, if James had a reaction, it would be resolved at home with the use of antihistamines.

25. On 12 November 2015, James experienced breathing difficulty and was taken by ambulance to the Emergency Department of the Monash Medical Centre with the presenting problem

[16] Statement of Harry Tsindos dated 15 September 2021, CB at p.42.

noted as acute wheeze/asthma likely triggered by their cat.[17] The following month he attended the Rosebud Hospital noting, *Asthma, childhood – mild exacerbation*, in circumstances where he had forgotten his Ventolin inhaler whilst on vacation. His allergy to tree nuts was documented.

26. James commenced seeing General Practitioner, Dr David Fox (**Dr Fox**) at Brighton Medical Centre on 19 June 2017.

27. On 25 February 2020, Dr Fox stated that he referred James to Dr Jeremy McComish (**Dr McComish**), Victorian Immunology and Allergy, as he had chronic severe rhinitis unresponsive to the usual treatments. In addition, he had asthma controlled with Flixotide.

28. Following a consultation with Dr McComish he noted that James' history included possible allergy to tree nuts, with symptoms after eating walnuts and cashews including itch, vomiting and flares of his allergic rhinitis, without features of anaphylaxis such as airway swelling, asthma flares or dizziness.

29. Dr McComish reported via correspondence to Dr Fox dated 26 February 2020, James' major *Immunological Diagnosis* as: perennial allergic rhinitis, poorly controlled asthma and possible tree nut allergy. He summarised the consultation as follows,

    Longstanding allergic rhinitis with congestion, sneezing, post-nasal drip and ocular/sinonasal itch. Little response to antihistamines and some epistaxis/unusual throat sensation with Dymista. Triggers include cats, and he has a cat at home. Also has poorly controlled asthma with wheezing most nights, sometimes affecting sleep, with previous hospital presentations associated with car exposure in childhood. Incomplete adherence to his preventer regimen (Flixotide bd with spacer), partly due to previous weight gain while taking Flixotide, is likely a significant factor. James' father has asthma and responded well to a regimen including a cromone and exercise.

[17] CB at p.319 and 355.

Symptoms after eating nuts including generalised itch, vomiting and flares of allergic rhinitis with walnut and cashew identified as triggers; tolerates peanut, hazelnut, almond. No reactions suspicious for anaphylaxis.

Examination Findings:

Severe bilateral allergic rhinitis, with no polyps seen on anterior rhinoscopy. Bilateral polyphonic wheeze.[18]

30. Dr McComish stated that he provided James with a written asthma plan and education as to asthma management, and prescribed an additional preventer medication, inhaled sodium cromoglycate. He also prescribed the intranasal steroid spray Omnaris and provided education as to nasal spray technique. He provided a continuing prescription for the preventer Flixotide. He also referred James for formal lung function testing and blood tests, including serum specific IgE testing to aeroallergens. He also advised James about avoidance of food allergens.

31. The planned skin Prick Testing was not performed that day *due to uncontrolled asthma*, that is, for safety reasons, as James had evidence of current asthma on history and physical examination.

32. The following Plan was documented by Dr McComish,

    1. Asthma plan and education.

    2. Added Intal.

    3. Script provided for Omnaris with education as to nasal spray technique.

    4. Lung function testing.

    5. Serum specific IgE testing for aeroallergens.

    6. Discussed allergen avoidance; avoid nuts apart from the tolerated nuts above for now.

[18] CB at p. 337-338.

33. James was commenced on a preventer and had planned to follow up in one to two months after the planned investigations were complete; however, this appointment was not made due to COVID-19 restrictions and school activities. Harry said,

The COVID-19 lockdowns eventuated mid to end last year and with all this going on, and James' schooling and other interests, we did not follow up.[19]

34. James' mother stated, *Covid hit after that and the visit back to Dr McComish was not made. Covid never ended and it was still on the agenda to go back ASAP. We were waiting for the school term holiday to come up so we can go back. Unfortunately the incident occurred before the end of the school term.*[20]

35. Dr McComish noted that he discussed with James avoiding nuts aside from those which he apparently tolerated. Dr Fox said that he never had the opportunity to discuss the letter from Dr McComish with James or his parents. The medical records contain a copy of referral slip for Melbourne Pathology for various tests.[21]

36. The patient information provided by the Victorian Immunology and Allergy which was signed at the time of James' appointment[22] with Dr McComish outlined that the clinic can do skin prick testing for various allergens, but it needed to be medically safe to do a skin prick test noting that the test could not be done with *anyone with active asthma*.

37. James last attended (in person) with a General Practitioner on 14 April 2020 where he saw Dr Max Lippiatt at Centrehealth Family Clinic in relation to his asthma which was documented to be poorly controlled and that he was *non compliant with preventer.* It was noted that he had *seen allergist.* Clinical management was noted to include education regarding asthma, encouraged regular use of preventer and review in 4 weeks to assess asthma management (has asthma management plan).

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[19] Statement of Harry Tsindos dated 15 September 2021, CB at p.43.
[20] Statement of Veneta Tsindos dated 20 January 2022, CB at p.58.
[21] CB at p.353.
[22] Welcome to Victorian Immunology and Allergy. Please read the following information regarding our clinic, location and service. CB at p.343-345.

38. Veneta said that James *was extremely careful when it came to making sure that he did not eat any of the nuts he knew he was allergic to. He only ate the nuts he knew were safe for him to eat.*[23] His usual reaction to a nut he was allergic to was to vomit. She further stated that he *would check food labels thoroughly and would always ask critical questions when ordering food at restaurants and cafes. For example, I taught him to always be aware of the chance of a nut being present in sauces or dressings, as they would not be visible to the naked eye and you could easily accidentally consume them.*[24]

39. His mother further stated that James grew out of his allergies close to his death being no longer allergic to their cat and not getting hay fever or a congested nose anymore.

CIRCUMSTANCES OF DEATH

40. At around 10.00am on 27 May 2021, James advised his father by text whilst at Brighton Grammar School that he was feeling unwell.

41. James was picked up from school by his father at approximately 10.10am and was taken to a COVID testing centre in South Road, Bentleigh, where they remained for between three and half to four hours. Both James and his father were tested. His father described James as *a little unwell* but *ok.*

42. At around midday, James had a telehealth consultation with Dr Fox to obtain a medical certificate for school. James had two SAC assessments at school that day. The consultation notes document, *urti ++ /started last night*. On the basis of his assessment, a Medical Certificate was provided.[25]

43. James and his father returned to their home in Brighton at approximately 2.25pm where they both ordered food for delivery.

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[23] Statement of Veneta Tsindos dated 20 January 2022, CB at p.57.
[24] Statement of Veneta Tsindos dated 20 January 2022, CB at p.59-60.
[25] CB at p.331.

44. James ordered a *Burrito Bowl* from a local restaurant, *Bowl Me Over*, using the delivery app Deliveroo which was delivered at approximately 2.40pm. *Bowl Me Over* was a vegan restaurant.

45. A photograph of the Deliveroo app on James' phone showed the following description of the ingredients in a *Burrito Bowl*:

    Rice, burrito bean mix, avocado, cucumber, coriander, nacho cashew cheese, coconut yoghurt, corn chips.[26]

46. It was apparent that the full ingredient list was only visible once the consumer selected the meal choice. It was also apparent that the full list of ingredients for any of the meal choices only contained a truncated version of the full list of ingredients. For example,

    Burrito Bowl, *Rice, burrito bean mix, avocado, cucumber, coriander, nacho…..*

    Sticky Tofu Bowl*, Rice, sticky tofu, marinated broccoli, spinach, mint, carrots, edamame, ze…*[27]

47. The Coroner's Investigator noted that common vegan recipes for 'nacho cheese sauce' use tree nuts such as cashews as a substitute for dairy products such as cheese.

48. Soon after eating some of his meal, James noted lip swelling, tingling in his throat, nausea, and abdominal pain and reported this to his father asking for an ambulance to be called.

49. James' father called Triple Zero requesting an ambulance at 2.40pm. Harry indicated that the initial call went for 30 seconds following which a return call was made lasting around 11 minutes and 53 seconds, until an ambulance arrived.

50. Audio of the Triple Zero call includes that, James was initially very anxious but indicated during the call that his condition was remaining the same. James was initially having difficulty breathing; it was uncomfortable to swallow and his father noted that his lips appeared swollen.

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[26] Photograph 2, CB at p.298.
[27] Photograph 1, CB at p.298.

James also felt sick in his stomach. His father asked was it *the first bite you had* or was it later. James appeared to indicate that it was later.[28]

51. Whilst his father engaged with Triple Zero, James called the restaurant who confirmed that the meal contained cashews. Harry stated, *It was obvious to me that for some reason James was suspicious with the sauce ingredients, he was always careful with what he ate as he did suffer some anxiety about his allergy to nuts.* James later told his father that he had not checked that the meal he ordered did not contain any nuts he was known to be sensitive to.

Ambulance attendance

52. As a result of the Triple Zero call, which was documented to have commenced at 14:40:53 hours, the event was triaged as a priority one. The event type *2C1 A ALLERGIES/ENVENOMATIONS: DIFF BREATHING OR SWALLOWING.*[29]

53. At 2.43pm, an ambulance was dispatched and noted to be *1- Time Critical*.[30] The Mordialloc ambulance unit contained Advanced Life Support Paramedic, Jonathon Hammond (**Paramedic Hammond**) and ambulance paramedic, Samantha Nickson (**Paramedic Nickson**). On route the *Chief complaint* was documented as: *Allergies (Reactions)/Envenomations (Stings, Bites)* and the *Problem* as: *Allergic reaction to cashew nuts.*

54. Paramedics arrived at James' home in Brighton at 2.51pm and were met at the door by James' father who advised that his son was not feeling well and might be having an allergic reaction.

55. The paramedics put on 'level D' Personal Protective Equipment (**PPE**).

56. Paramedic Hammond described James as pacing in the kitchen and complaining of nausea. He stated that James' father advised that James was not diagnosed with anaphylaxis, but was told he was sensitive to cashews and other tree nuts but had not been prescribed an EpiPen. Harry further advised that they both had just been swabbed for COVID as James had 3 days

[28] Exhibit 1 of the CB.
[29] CB at p.383 and p.387.
[30] Ambulance Victoria Electronic Patient Care record, CB at p.374.

of a runny nose and productive cough, but had not been to an exposure site or knowingly had any contact with a positive case.

57. Harry advised that by the time the paramedics arrived, James was better and was *able to talk, walk and answer paramedics questions. He was breathing OK, but complaining his throat was a little tight and he had a stomach ache. The paramedics thought his lips had swollen a little and asked me for my opinion also but it was not obviously noticeable to me.*[31]

58. The Ambulance Victoria *Electronic Patient Care record* documented the following,

    17yo male live at home with family.

    Pt states he tried something new for lunch this PM – A burrito bowl. Pt states he was unaware the meal had cashews in it and forgot to check before ordering.

    Pt said he felt swelling to his lips and nausea with associated abdominal cramping within minutes of a couple of bites of the meal. Pt's dad called AV. Patient had not been diagnosed at anaphylactic to nuts father states hypersensitivity and no prescribed epipen. Pt also had 3 days of cough, sore throat and runny nose. He and his father have both had covid-19 swabs today results unknown. Pt has been checking DHS exposure sites and denies any visit to these places. On arrival patient alert and orientated looked well with no signs of respiratory distress or compromised perfusion.[32]

59. The prior medical history on the Ambulance Victoria *Electronic Patient Care record* documented allergies as *Cashew nuts >> and other tree nuts, Peanuts, nutella and peanut butter all ok*. The current medications were noted to include *Ventolin CFC-free Inhaler*. Pre-existing conditions were noted to include *asthma*.[33]

60. After arrival at James' home, Paramedic Nickson stated that James had ordered a burrito bowl via *uber eats* and had *not checked whether it contained any nuts*. She stated that James' *father said he had been seen by a specialist who said he had a sensitivity but not anaphylaxis. Due*

[31] CB at p.44.
[32] Ambulance Victoria Electronic Patient Care record, CB at p.370.
[33] Ambulance Victoria Electronic Patient Care record, CB at p.374.

to this diagnosis he had not been prescribed an epipen. His only other medical history was asthma and he had never had a hospital for admission for this.[34]

61. Paramedic Hammond's stated that on examination of James,

he presented with localised swelling to his lips, and nausea with no signs of respiratory distress or compromised perfusion. I asked James if he had any difficulty breathing and if it felt like he needed to use his Ventolin. James stated his breathing felt normal except for the feeling of a stuffy nose, consistent with the past 3 days of cold and flu like symptoms. On auscultation the patient had no wheeze, good air entry to both left and right bases and had no stridor. I asked James to expose his legs, back and abdomen; no rash was present.[35]

62. James' initial observations were recorded by Ambulance Victoria at 2.55pm as: Heart rate: 107 Regular; Rhythm: Sinus Tachycardia; BP[36]: 133/62; RR[37]: 16; GCS[38]: 15; Temperature: 37.8; and SpO2[39]: 97%.[40]

63. Following their examination the paramedics determined that James met two Respiratory, Abdominal, Skin and Hypotension (**RASH**) criteria (due to swelling to lips and nausea post exposure to a known allergen) and his presentation would be managed as suspected Anaphylaxis in accordance with Clinical Practice Guideline (**CPG**) A0704 – Anaphylaxis. The primary diagnosis was documented as, *anaphylaxis >> ?? to cashews*.

64. James was given his first dose of adrenaline (0.5mg) by the paramedics at 3.00pm.[41] He responded well to the first dose, with resolution of his nausea and improvement of lip swelling. The records document, *Pt initially had minor swelling to localised to lips and nausea +*

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[34] Statement of Samantha Nickson dated 25 July 2021, CB at p. 68.
[35] Statement of Jonathon Hammond dated 26 October 2021, CB at p. 71.
[36] Blood Pressure.
[37] Respiratory Rate.
[38] Glasgow Coma Scale.
[39] SpO2 (Peripheral Oxygen Saturation) measures the percentage of oxygen-saturated hemoglobin in the blood, representing how effectively the heart and lungs deliver oxygen
[40] Ambulance Victoria Electronic Care Patient Record, CB at p.372.
[41] Ambulance Victoria Electronic Care Patient Record, CB at p.372.

abdominal cramping. Pt responded to first dose, nausea resolved and swelling to lips improved., IM, effective.[42]

65. James had ongoing abdominal cramping and throat tingling and was given a second dose of adrenaline (0.5mg) at 3.05pm. The records document,

Pt's symptoms improving. However still had some abdominal cramping and a feeling of tingles in throat and stated "it still feels like my lips are a little swollen" so seecond [sic] *IM dose given. After only abdominal cramping which was reducing. Nil other, IM, effective.* [43]

Withheld - Salbutamol >> Pt had nil respiratory distress, nil wheeze and when asked if he is having difficulty breathing or feeling as though he needs to use his own Ventolin Pt stated "No my breathing feels fine, just stuffy from a runny nose".[44]

66. Paramedic Hammond stated,

We explained to James and Harry that we were managing James as Anaphylaxis, with injections similar to what is in an EpiPen as he met Ambulance Victoria's criteria for suspected anaphylaxis. Harry stated, "But he doesn't have anaphylaxis". We explained that James met our criteria to be managed as a suspected Anaphylaxis patient and would require transport to an Emergency Department so he could be observed for a minimum of 4 hours and managed if symptoms persisted or worsened. Harry stated that James looked pretty good and questioned if he really needed to go to hospital or if he could stay at home in Harry's care and if he could observe him. We explained that it was vital for James to be transported to hospital via ambulance to be observed by health care professionals in hospital as he may require further treatment if his condition changes.[45]

67. Paramedic Hammond stated that in line with CPGA0706 – Anaphylaxis, they withheld nebulised therapy and steroid therapy (including Salbutamol, Ipratropium Bromide,

[42] Ambulance Victoria Electronic Care Patient Record, CB at p.373.
[43] Ambulance Victoria Electronic Care Patient Record, CB at p.373.
[44] Ambulance Victoria Electronic Care Patient Record, CB at p.373.
[45] Statement of Jonathon Hammond dated 26 October 2021, CB at p. 71.

Adrenaline and dexamethasone) as James had nil evidence of bronchospasm[46] or stridor[47]. The paramedics also withheld Normal Saline IV (intravenous) as he had no hypotension[48] or significant tachycardia[49].

68. Hospital locations were discussed with James' father who decided on Holmesglen as it was nearby. Holmesglen is approximately a 9 minute drive from James' home. The Alfred Hospital is approximately 20 minutes drive from James' home.

69. The Ambulance Victoria transport notes documented:

AV discussed Tx options with Pt's father, Pt appeared to not be time critical. Crew stated the patient is in the catchment area for Alfred health ED and that there is two private options locally, Holmesglen and Cabrini Private. Pt's father queried MMCC – AV advised we have a catchment system we are utilising currently unless there was any previous Hx at a particular ED. Father stated nil history. Pt's father determined transport to Holmesglen as it was close. Av advised we would need to consult with the clinician to check the patient would be accepted to holmesglen due to Pt currently awaiting covid results. 106 clin called Holmesglen and asked if they would accept a 17yo anaphylaxis Pt that had been treated with IM adrenalin who was awaiting COVID results. Holmesglen happy to accept, awaiting and anticipating crew on arrival.[50]

70. According to Paramedic Hammond the paramedics discussed Mobile Intensive Care Ambulance (**MICA**) back up but determined that as James had had a significant improvement in his symptoms post first dose of adrenalin, and his vital signs had remained stable, with no notable changes to respiratory or perfusion assessments, that MICA back up was not required, but would be reconsidered if his condition changed.

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[46] A bronchospasm is the sudden tightening or constriction of the muscles lining the bronchi (airways) in the lungs, causing them to narrow.
[47] Stridor is a high-pitched, harsh, or musical breathing sound caused by a partially obstructed or narrowed airway, typically in the throat or voice box.
[48] Low blood pressure.
[49] An increased heart rate.
[50] Ambulance Victoria Electronic Care Patient Record, CB at p.374.

71. James' observations were recorded by Ambulance Victoria at 3.05pm as: Heart rate: 79 regular; Rhythm: Sinus Rhythm; BP: 134/82; RR: 16; GCS: 15; and SpO2: 97%. [51]

72. At 3.06pm, an Ambulance Victoria East Clinician called Holmesglen and they confirmed that they were happy to receive a 17-year-old anaphylaxis patient who had been treated with adrenaline and was awaiting results of a COVID-19 test.[52] Part of the audio documented,

"*We have a patient with a mild anaphylaxis whose symptoms have resolved post adrenaline*".[53]

73. It was apparent that the purpose of the call between Ambulance Victoria and Holmesglen was primarily related to the hospital accommodating a patient with a pending COVID result.

74. At 3.10pm, Paramedic Nickson, was advised by the Ambulance Victoria East Clinician via radio that Holmesglen were happy to accept James as a patient.

75. Paramedic Hammond stated,

"[a]*t 1515 hours, we moved James into the ambulance. I saw James's Ventolin on the kitchen counter and asked James if we could bring it in case he felt like he needed to use it whilst with us in the ambulance or in hospital. James agreed and held it in his hand throughout transport. James remained connected to monitoring equipment at all times and took some steps down the hall of the house to the ambulance stretcher. I noted the patient's heart rate increased to 126 beats per minute during the transfer but quickly settled back down once on the stretcher. I also noted a low oxygen saturation reading of 86% on room air during movement at this time, with a poor trace on the sensor. Once movement stopped, a good trace of the oxygen sensor returned and the oxygen saturation level returned to 98% on room air. No change in respiratory effort was noted and James stated his breathing remained normal when asked*.[54]

76. James' father followed the ambulance in his vehicle to the hospital.

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[51] Ambulance Victoria Electronic Care Patient Record, CB at p.372.
[52] CB, Multimedia, Exhibit 2.2.
[53] Exhibit 2.
[54] Statement of Jonathon Hammond dated 26 October 2021, CB at p. 72-73.

77. James' observations were recorded by Ambulance Victoria at 3.15pm as: Heart rate: 126 regular; Rhythm: Sinus Tachycardia; BP: 127/73; RR: 16; GCS: 15; and SpO2: 86%.[55]

78. At 3.18pm, James was loaded into the ambulance. The criticality was noted to be *2-Urgent*.

79. A third dose of Adrenaline was drawn up in the vehicle for utilisation by the paramedics, if required.

80. At 3.20pm, IV access was attempted with an 18g cannula, which was unsuccessful. The Ambulance Victoria management notes document; *IV access 18 g, >> Further attempts withheld due to distance to ED and nil obvious access, (R) antecubital fossa, 1 attempt, unsuccessful*.[56]

81. Paramedic Hammond stated in relation to the attempt,

> *I had one attempt at gaining intravenous (IV) access. The attempt was unsuccessful. I withheld further attempts as I was unable to see any obvious access for a second attempt and considered the close proximity to hospital. During the remainder of transport to Holmesglen, there was no signs of angioedema, no rash and no notable change to James's vital signs. James showed no signs of respiratory distress through transport; he stated his breathing felt normal and he still did not feel like he needed to use his Ventolin when asked. James appeared comfortable throughout transport and he was able to speak in clear continuous sentences as we spoke about his schooling and interests. James reported he still had some abdominal pain and discomfort throughout transport that was intermittent in nature but stated it was declining in severity as time went by*.[57]

82. At inquest Paramedic Hammond further stated with respect to the IV attempt that James was positioned on his right side during transport, and he assessed the rest of his arm for an access point that was obviously visible and with a good chance of success, but there wasn't any at that time.

83. As noted above, observations of James at 3.20pm included: no signs of angioedema, no rash,

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[55] Ambulance Victoria Electronic Care Patient Record, CB at p.372.
[56] Ambulance Victoria Electronic Care Patient Record, CB at p.373.
[57] Statement of Jonathon Hammond dated 26 October 2021, CB at p. 73.

and no notable change to James' vital signs; no signs of respiratory distress, James reported his breathing was normal, James did not feel he needed to use his Ventolin.

84. James' observations were recorded by Ambulance Victoria at 3.24pm as: Heart rate: 83 Regular; Rhythm: Sinus Rhythm; BP: 141/85; RR: 16; GCS: 15; and SpO2: 98%.[58]

85. James' observations were recorded by Ambulance Victoria at 3.34pm as: Heart rate: 93 Regular; Rhythm: Sinus Rhythm; BP: 129/80; RR: 16; GCS: 15; and SpO2: 98%.[59]

86. James continued to have abdominal pain noted at 3.34pm, however pain relief was withheld as it was '*intermittent in nature*'.[60]

87. A third dose of Adrenalin was withheld as James was only complaining of abdominal cramping with no other RASH criteria present.

Ambulance Victoria patient care computer

88. Paramedic Hammond clarified at inquest that he was the lead paramedic (Attendant 1) and was logged onto the patient care computer (which is a mobile device) and completed the patient care record. It was apparent that some of the information in the patient care record was completed over the course of the paramedics' interaction with James.

89. There was also evidence that some of the information in the Ambulance Victoria *Electronic Patient Care record* is auto populated. This included some of the times recorded, for example the recording by the monitoring equipment for vital signs, which I have already set out.

90. In addition, a button in the vehicle is pressed by paramedics which will then record such things as when a patient is loaded into the vehicle, and the arrival time at hospital destination (discussed below).

91. As noted in paragraph 78, the arrival time of 15.18 (or 3.18pm) is documented in the Ambulance Victoria *Electronic Patient Care record* for '*Loaded'* to denote when James was

[58] Ambulance Victoria Electronic Care Patient Record, CB at p.372.
[59] Ambulance Victoria Electronic Care Patient Record, CB at p.372-373.
[60] Ambulance Victoria Electronic Care Patient Record, CB at p.373.

loaded to the vehicle for transport for Holmesglen and was the result of a button being pressed by Paramedic Nickson, who was in the front of the vehicle.

Arrival at Holmesglen

92. According to the Ambulance Victoria documents, they arrived at Holmesglen at 3.44pm @ *Destination* as documented in the Ambulance Victoria *Electronic Patient Care record* and again was the result of a button being pressed by Paramedic Nickson, *as we pulled into the driveway of Holmesglen Hospital.*[61]

93. James' observations were recorded by Ambulance Victoria at 3.44pm as: Heart rate: 99 Regular; Rhythm: Sinus Rhythm; BP: 129/82; RR: 16; GCS: 15; and SpO2: 99%.[62]

94. Paramedic Hammond stated that on arrival at Holmesglen James advised *that the abdominal cramping had gone and he felt much better*. Given his COVID status, he advised James that he would attend the Emergency Department whilst Paramedic Nickson remained with him in the ambulance.

95. Paramedic Hammond subsequently entered Holmesglen and the Emergency Department and spoke to the triage nurse, Associate Nurse Unit Manager (**ANUM**) Travis Frauenfelder (**ANUM Frauenfelder**) who asked if he had transported the anaphylaxis patient and advised him that they could go straight into isolation room number one.[63] Paramedic Hammond further inquired about whether James' father could attend with James, noting his age and that he was awaiting COVID testing, and was advised that he could come inside, but would have to remain in the isolation room with James and would be treated as suspected COVID patient, for at least the minimum four hours of observation.

96. At inquest Paramedic Hammond clarified that this was not triage process as such, but was required because of COVID protocols.

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[61] T26 L23-24. Ambulance Victoria Electronic Care Patient Record, CB at p.374.
[62] Ambulance Victoria Electronic Care Patient Record, CB at p.372-373.
[63] According to the Ambulance Victoria *Patient Safety Incident Management, In depth Case Review Report* this occurred at 3.46pm.

97. Despite other evidence to the contrary, ANUM Frauenfelder clarified at inquest that he did not go into the ambulance bay to conduct a COVID screening or any other triage, or have a discussion with James, his father or anybody else at any time.

98. Paramedic Hammond advised that sometimes a COVID screening was done at the vehicle but sometimes it was not. And on this occasion, as they had called ahead, there was no question that James was going to be screened as anything other than COVID (*suspected COVID-19 awaiting results).*

99. Paramedic Hammond stated,

> *I went back out to the ambulance bay and was met by Harry. Samantha unloaded James from the ambulance. we stood by the entry to the ED with James on the stretcher and I explained to James and Harry what the triage nurse had told me about Harry being permitted to enter the ED whilst awaiting a COVID 19 result. James and Harry discussed whether Harry should come in and how James felt at this point in time and if he thought he would be okay without Harry.*
>
> *James stated he felt good and would be okay on his own. Harry stated he would go home and instructed James to stay in contact via mobile phone. Harry and James checked how much battery charge James had left on his phone and Harry and James said goodbye.*[64]

100. Harry stated that,

> *I told James I would go home, have something to eat and come back….*
>
> *At about 3:50pm I left the hospital and called my wife Veneta to update her about what was happening. I told her James was fine and just under observation and he was ok. I also called James' mobile at 4:05pm. There was no answer.*[65]

[64] Statement of Jonathon Hammond dated 26 October 2021, CB at p.73-74.
[65] Statement of Harry Tsindos dated 15 September 2021, CB at p.46.

101. At inquest, Paramedic Nickson thought there was a delay in removing James from the ambulance of about 2 minutes with her partner attending the Emergency Department to speak to the triage nurse, but she wasn't sure.

102. At inquest, Paramedic Hammond estimated that the discussion with ANUM Frauenfelder took about a minute. He estimated that the discussion on his return to the ambulance bay took 2 or 3 minutes (*tops*).

103. Just prior to entering the Emergency Department (approximately 5 metres from the ambulance vehicle), Paramedic Hammond stated that James coughed and said that *he felt like he needed to use his Ventolin*. He instructed him to use it as he normally would and that he would notify the triage nurse and organise a spacer. James self-administered 15 puffs of his Ventolin inhaler without a spacer.[66]

104. At inquest Paramedic Hammond said that this occurred after Harry left and just through the doors of the ambulance bay and stated,

> *I didn't observe any sort of wheeze. I didn't listen to his chest or auscultate him at that point, while walking into the Emergency department, to hear any sort of wheeze. James just told me he had a bit of a cough, and he said, 'I feel like I need to use my Ventolin'. I said, 'You can use your Ventolin as – as you normally would, and I'll let the triage nurse know that you're feeling this way'.*[67]

105. Paramedic Nickson stated that James was well but developed a *wheeze as we were wheeling him into the cubicle* and that this change was conveyed to the triage nurse by her partner who was informed that James *was now symptomatic with a wheeze and shortness of breath*.[68] She was not however present at the handover which was conducted by her partner.

106. At inquest Paramedic Nickson clarified that she thought the wheeze occurred as they came out of the airlock and were turning right into the corridor towards the Emergency Department.

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[66] According to the Ambulance Victoria *Patient Safety Incident Management, In depth Case Review Report* this occurred at 3.46pm. *Crew at the door of ED now.*
[67] T32 L20-27. Harry stated that he was not present when James experienced a wheeze.
[68] Statement of Samantha Nickson dated 25 July 2021, CB at p. 69.

She said that James said that he felt short of breath and asked to use his puffer, but didn't remember his exact words.

107. As part of the Ambulance Victoria *Patient Safety Incident Management, In depth Case Review Report* it was documented regarding Paramedic Nickson, *'Noting she could hear a slight wheeze when the patient breathed and mentioned to her partner 'the importance of handing the information over straightaway*'. Paramedic Nickson said at inquest that she had initiated this review because of the devastatingly unexpected outcome and wanted to know if she had *missed something.* She stated that the review was done three days after the incident when her memory was very clear, so this information would have been accurate.

108. Paramedic Hammond did not consider that James' presentation was such that adrenaline was required to be administered by him at the Emergency Department entrance on the basis of it being *absolutely life threatening and imminent.*

109. He further clarified that in accordance with the clinical practice guideline,

so for us to administer adrenaline, ... he needs to either have like plus or minus two of the rash criteria at the time, ... or isolated respiratory distress. .... at that point in time his respiratory sort of status assessment, he was speaking in full sentences, he was calm, his skin was warm, pink and dry. He was fully alert and conscious. .... his respiratory rate wasn't elevated, and he wasn't sort of showing any signs of respiratory distress, right then, but I didn't feel like it was pertinent or necessary to give adrenaline right at that point in time while walking through a corridor into a hospital, ... but potential that if further distress - like distress came to that it potentially could be.[69]

110. That is, if James was breathing faster or was having difficulty talking or James advised Paramedic Hammond that he was having difficulty breathing, he would have given him a third dose of adrenaline there and then.

111. Paramedic Nickson wheeled James into the Emergency Department and directly into isolation room one. She stayed in this room to transfer James from the stretcher to the hospital bed,

[69] T50 L27-31 – T51 L1-10.

which she described as uneventful. She gave evidence that James stood up, did a 180 degree turn and sat down on the hospital bed.

112. According to the Ambulance Victoria *Electronic Care Patient record* documented, James was noted to be *Off Stretcher* at 3.53pm.[70]

113. The Court was advised that the monitoring equipment is taken off once the patient is on the hospital bed and that this does not take much time, but Paramedic Nickson could not say when this occurred in James' case. However, because of James' COVID status, she gave evidence at inquest that of the speed of the process - *basically get in, get out, we don't want your dirty stretcher. So I've just - literally just taken the stretcher outside.*[71] She said that she left the isolation room straight away (after saying goodbye to James) with the stretcher before Paramedic Hammond had finished the handover. Paramedic Nickson left the Emergency Department once James had been off loaded and cleaned the ambulance equipment.

114. Paramedic Nickson further stated that she did not hear the handover and thought that Paramedic Hammond had told her that he handed the information regarding the wheeze over to the triage nurse.

115. Whilst Paramedic Nickson went straight in the isolation room with James, Paramedic Hammond went to the nursing station outside James' room, for the triage and handover process to be undertaken with ANUM Frauenfelder. He stated that he advised then triage nurse, ANUM Frauenfelder and bed side nurse, Registered Nurse Amandeep Choudhary (**RN Choudhary**) that James *had begun to feel like he needed to use his Ventolin*, but did not have a spacer. He said that RN Choudhary asked if James had an IV line in situ, and was advised that he did not. Paramedic Hammond stated that RN Choudhary left to retrieve a spacer and an IV cannulation kit and returned for the remainder of handover.

116. Paramedic Hammond also stated that he maintained a direct line of sight with James at this time and that the handover conversation took no longer than five minutes. In addition, that

[70] CB at p.374.
[71] T66 L11-13.

during triage, the triage nurse clarified with him when the last dose of adrenaline was given (almost an hour before) and advised him as follows,

He's just started to use his Ventolin now because he feels a bit short of breath or felt like he needed to use his Ventolin, … and that he needed a spacer to do so, and the bedside nurse retrieved the spacer for him.[72]

117. At inquest Paramedic Hammond further stated that the fact of James needing to use his Ventolin was information that was required to be communicated to the triage nurse *because it is one of the signs and symptoms of anaphylaxis, and it might require further treatment*.[73] He indicated that this was the first thing he mentioned during the handover discussion. At that time, he considered James to be in the care of Holmesglen.

118. Paramedic Hammond confirmed at inquest that he,

definitely did handover the newly emerging symptom and I considered it a priority to make that known. It was one of the very first things I said hence why the bedside nurse left and came back.[74]

119. He noted that the information was a priority to be transferred,

because it can - my understanding of anaphylaxis is that it can be a sign - symptom of anaphylaxis … and it potentially could have been a trigger point of potential deterioration and I thought it was important to escalate that care so the hospital knew was a priority that he had it.[75]

[72] T35 L3-6.
[73] T32 L29-31.
[74] T38 L4-7.
[75] T38 L9-14.

120. He clarified at inquest that *wheezy* was the word James used when entering the ED and he advised the triage nurse,

I said specifically, 'Ah James, that like, he used his Ventolin puffer and felt like he was - something to - had - feel like - he - he felt wheezy is the words I used at the time.[76]

121. Paramedic Hammond agreed that a patient feeling the need to use a *puffer* could be a sign of asthma as well as anaphylaxis but said that he did not make any assessment of which it was at the time but wanted to escalate his concern to the hospital so they could make an *assessment and manage accordingly*.

122. Paramedic Hammond also agreed that James' clinical situation had not significantly worsened at that time and that James' clinical situation hadn't deteriorated in a way which caused him to be any further concerned that he may be developing an anaphylaxis reaction as he could still see him sitting comfortably and breathing comfortably while in the isolation room. He was however unable to see the monitoring equipment during the handover.

123. The Ambulance Victoria *Electronic Care Patient record* documented the following notes which were made after the handover to the triage nurse[77],

On arrival At ED pt's VSS stable. During transfer to ED bed Pt stated he started to feel like he needed to use his ventolin as he felt wheezy. AV stated to triage nurse PT started to feel wheezy and has own ventolin however no Spacer. ED nurse retrieved a spacer and took over care of Pt.[78]

124. Paramedic Hammond said he completed handover using the Ambulance Victoria IMIST-AMBO[79] structure set out in work instruction *WIN/OPS/333 Paramedic Roles: Health Service*

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[76] T38 L28-31 – T39 L1.
[77] T40 L22-23.
[78] Ambulance Victoria Electronic Care Patient Record, CB at p.373.
[79] Identification; Mechanism of injury/ Medical complaint; Injuries/ Information related to the complaint; Signs; Treatment and trends; Allergies; Medication; Background history; Other information. See Department of Health, Handover of ambulance patients in the Emergency Department, available at: https://www.health.vic.gov.au/patient-care/protocol-handover-ambulance-patients-emergency-department.

Interface and Patient Handover (**AV Handover Instruction**).[80] This instruction notes, amongst other things, the following,

- Upon arrival, the health service has full responsibility for the patient. Any adverse change in the patient's condition must be escalated to medical staff without delay.
- Continue to assess and provide patient care until final handover is complete.
- Patient care is shared between AV and the receiving health service until the final handover is complete.
- Reach agreement with the ED clinician on 'ambulance handover complete' and enter agreed time in VACIS (Victorian Ambulance Clinical Information System).
- Enter agreed triage and handover (off stretcher) times into the Ambulance Arrivals Board.

125. Paramedic Hammond stated at inquest that an agreed completion time for triage did not occur on this occasion, *as there was no time mentioned between the two of us.*[81]

126. He further stated that unlike at other hospitals, where there might be two handovers, involving for example, a conversation with the triage nurse and the bedside nurse, at Holmesglen,

quite often it's common practice at Holmesglen that there's just one initial handover which is the triage handover, and the bedside nurse is either available or is told by the triage nurse what's happened and we're told we're not to do a second … handover like we normally would for every other hospital around the State or most other hospitals.[82]

127. It is apparent that a single handover with Ambulance Victoria occurred on this occasion.

128. The Ambulance Victoria *Electronic Care Patient record* documented that James was noted to be "Off Stretcher" at 15.53 as well as "Triage" at 15.53.

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[80] CB at p.82
[81] T22 L6-7.
[82] T22 L14-20.

129. Paramedic Hammond said at inquest that he was the one who entered that information and that, *Fifteen fifty-three represents the point in time where I would have finished saying my handover to the triage and bedside nurse while James was in the room of Holmesglen*.[83] He stated that the, *time that I took of 15.53 was also timestamped on my monitoring equipment at the time that it was disconnected from James, when James was in the hospital bed of Holmesglen's … and that's the reason why I chose that time.*[84]

130. Paramedic Nickson also said that the monitor (being a ZOLL monitor) records when the monitoring stops, that is when they have disconnected all the leads and turned off the ZOLL monitor.

131. Paramedic Hammond said that the patient care record was completed inside the VACAS room which is located inside Holmesglen Emergency Department between the ambulance bay and the Emergency Department. At inquest Paramedic Nickson advised that she assisted with the completion of the record at that time, which followed James' collapse in the Emergency Department. She also stated that they were both very upset knowing about the Code Blue and could not reconcile it in their minds with how James was presenting, and in those circumstances, it was easier if they completed it together as they needed to get it right.

132. Consistent with the evidence of the paramedics, there was no controversy that James was allocated and placed in Cubicle 1 (an isolation room) due to him waiting on a COVID test result. James was allocated a nurse to care for him, being RN Choudhary referred to by paramedics as the bedside nurse. In addition, the triage nurse was identified as ANUM Frauenfelder.

133. When James was transported into Cubicle 1, ANUM Frauenfelder stated that James was sitting up on the ambulance trolley and was settled and stable.

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[83] T27 L4-7.

[84] *Fifteen fifty-three represents the point in time where I would have finished saying my handover to the triage and bedside nurse while James was in the room of Holmesglen*.[84] He stated that the, *time that I took of 15.53 was also timestamped on my monitoring equipment at the time that it was disconnected from James, when James was in the hospital bed of Holmesglen's … and that's the reason why I chose that time.* T27 L19-23.

134. Cubicle 1 was close to the Nurses' Station and it is apparent that the handover or triage process occurred at the Nurses' Station where Paramedic Hammond, ANUM Frauenfelder and RN Choudhary – at least for a portion, where present for the handover or triage process.

Medical records pre James' collapse

135. In the Holmesglen medical records, *ALERT SHEET*, ANUM Frauenfelder noted under "ALLERGIES / SENSITIVITIES TO MEDICATION", James had an allergy to cashews with anaphylactic effect. The source of information was noted to be "*self*".[85]

136. The Holmesglen medical records, *Emergency Front Sheet*, recorded James' *Arrival Time* as *15:59.*[86]

137. The Holmesglen medical records, *Emergency Patient Record,* recorded James' *Triage Time* as *15:59:52* . The Triage Nurse is documented as ANUM Frauenfelder and the Triage assigned ATS 3 category [Australasian Triage Scale (**ATS**). The presenting complaint was noted to be *Allergic Reaction*. The following is documented in typed form:

BIBA – 1400- ingested cashew nuts. Onset lip swelling, angioedema, abdo cramping w nausea. 1500- 500 IM adrenaline, 500mcg IM adrenaline w effect- (only abdo cramping). HR 110, temp 37.8. 3/7 prod cough, sore throat, COVID SWAB this mane- awaiting results. BP 120/60. spo2 99% RA.[87]

138. ANUM Frauenfelder confirmed that the notes in the triage record were typed by him (paragraph 137).

139. It is also apparent that the vital signs recorded in this entry are taken after James arrived at the hospital at 3.44pm (given they are different).

140. The Holmesglen medical records also document under *Emergency Nursing Observation Chart* that ANUM Frauenfelder made handwritten notes recording the same history as his type written notes and also included that the adrenaline 500mcg doses were given at 1500 hours

[85] CB at p.399.
[86] CB at p.402.
[87] CB at p.409-410.

and 1530 hours. He also noted James had an allergy to cashews and a history of asthma. Under Presentation is recorded the following handwritten notes:

BIBA – Ingested cashew nuts

1400 – onset lip swelling

angioedema abdo cramping

+ nausea

Adrenaline 500g@1500 + 1530

3/7 cough/cold/sore throat

Covid swab this mane.[88]

141. ANUM Frauenfelder confirmed that the handwritten notes (paragraph 140) were done by him after he completed the triage record, and they are done for purposes of clinical care. I note the time of the second dose of IM adrenaline is documented as 1530 (3.30pm) which should be 1505 (3.05pm) according to ambulance records.

142. In addition, the following documents were completed by RN Frauenfelder ("*Trav*") with information provided by Ambulance Victoria,

    a. "*COVID-19 PATIENT SCREENING QUESTIONNARE*". Under "CLINICAL CRITERIA", "*Yes*" was selected for "*Acute respiratory infection with any of these symptoms: cough, shortness of breath, sore throat, runny nose, loss of smell or loss of taste*".[89]

    b. "ADMISSION INFECTION SCREENING QUESTIONNAIRE", which noted "*Yes*" to *Have you had a fever (38°C) and either a cough or sore throat in the past 1-3 days?* [90]

[88] Statement of Travis Frauenfelder dated 4 April 2024, CB at p.116. Holmesglen medical records, CB at p. 419.
[89] CB at p.417.
[90] CB at p.424.

Medical records post James' collapse

143. ANUM Frauenfelder stated that after becoming aware of James' death he *made a retrospective progress note on 6 June 2021, wherein I noted that at the time of triage on 27 May 2021, he was 'talking in full sentence, nil airway distress/stridor/wheeze on arrival. Handed over from AV to be normotensive with spO2 99% RA*.[91] He further noted in that retrospective note that the treating nurse (RN Choudhary) was *present on the Pt's arrival into cubicle.*

144. RN Choudhary made a progress note for 4.15pm,

> *Pt is alert, airway patent, talking in full sentence, anxious ++. Pt had mild wheeze - ventolin given (6 puffs) and pt had 15 himself. SP02 > 97%. On RA, O2 applied as pt was struggling to breathing, RR – 25. IVC in situ 20G. Pt started to desaturate – 88% 10L O2 supplied with non-rebreather mask. Code blue was called as pt had drop in GCS = 8. CPR commenced.*
>
> *Pt moved to resus for further resuscitation team present and taken over.*
>
> *Addin notes - Pt had given IM adrenaline 500mcg given and IV - Hydrocortisone given 100mg prior pt desaturated.*[92]

145. RN Choudhary wrote the above note prior to James leaving for the Alfred Hospital.

Timing of Triage and transfer of information regarding James' wheeze from ambulance to Triage Nurse – divergence of evidence

146. Ambulance Victoria consider that their handover/triage was completed at 3.53pm, or within a minute or two.

147. In contrast, the evidence of ANUM Frauenfelder (and the medical records he authored) is that the triage with Ambulance Victoria occurred at around 4.00pm.

148. There is also evidence of a second handover from RN Frauenfelder to RN Choudhary.

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[91] Statement of Travis Frauenfelder dated 25 May 2022, CB at p.115, CB at p.435.
[92] CB at p.420.

149. RN Choudhary stated that at 4.00pm he received a handover from RN Frauenfelder for James, *who had suffered an allergic reaction from the consumption of cashew nuts at 1400 hours as per Ambulance Victoria (AV) handover. I was present when ANUM Frauenfelder received the AV handover. As per the AV handover and triage notes, Mr Tsindos had been given two doses of intramuscular Adrenaline 0.5mg by AV with good effect, but he had mild ongoing wheeze on the background of asthma and he had self administered 15 puffs of Ventolin without a spacer. At the time of the AV handover, Mr Tsindos was stable. He also had a PCR test for COVID-19 and he was allocated to room 1, which is an isolation room, and I had to put on personal protective equipment*.[93]

150. For the preparation of his statement, RN Choudhary clarified at inquest that he did not have regard to the Ambulance Victoria records (the reference in his statement to *Ambulance Victoria (AV) handover* was to his *memory* of this).

151. An inquest he stated that he thought that the conversation regarding the wheeze was in the front of the cubicle while he was putting on his PPE, but was not really sure, agreeing that his recollection was more accurate at the time he made his statement. He considered that when this information was conveyed by Ambulance Victoria, it was close enough for the triage nurse to have heard.

152. He further clarified that he retrieved a spacer as the ambulance paramedic had mentioned that James had given himself Ventolin without a spacer and if it is given with a spacer, it is more effective. He confirmed that this is the only reason he retrieved the spacer.

153. RN Choudhary stated that it was part of normal practice to get an IV cannula kit when going to review a patient for the first time, so this was not something likely triggered by paramedics having not inserted an IV, but noted that it was common practice to ask at a handover.

154. RN Choudhary stated that his estimates of times in this case were drawn from the medical records. It was noted that his reference to entering the cubicle at 4.03pm, took into account the approximate time it would have taken him to prepare to go into the cubicle added to the

[93] Statement of Amandeep Choudhary dated 6 March 2022, CB at p.90.

triage time noted in the medical records. He agreed that all the timings were made after the event as everything occurred quickly.

155. He had no other patient requiring his attention at the time of James' admission, so there was no delay in the context of him attending with James. He further stated that the medical records would have been available to him before going into the cubicle.

156. RN Choudhary agreed that James was stable at the time of the handover with a mild ongoing wheeze and started deteriorating during the initial assessment.

157. The Root Cause Analysis Report submitted by Holmesglen to Safer Care Victoria noted that James *was viewed from a distance by CMO and noted to look well and alert (as per interview)*.[94]

158. In the statement to the Court made by ANUM Frauenfelder, there is no reference to him being advised by ambulance or anyone else to James' wheeze and the administration of a puffer prior to entering the Emergency Department.[95] Nor is this information recorded in any of the hospital records (as reproduced above). ANUM Frauenfelder agreed at inquest that the triage category he assigned is consistent with him not hearing a wheeze.

159. ANUM Frauenfelder further stated at inquest that he could not recall being told about a wheeze and was certain he was not told as he would have acted on the information, and was confident that the information would have caused him to act differently.

160. ANUM Frauenfelder did however concede that it is possible that the information was said about the wheeze, but he did not hear it.

161. ANUM Frauenfelder said that the Ambulance Victoria handover and triage occurred at the same time, but normally triage would occur with Ambulance Victoria and patient but because of COVID this could not occur.

162. He stated that the notes of the triage can be typed at the time of handover/triage or after.

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[94] CB at p.1028.
[95] Statement of Travis Frauenfelder dated 25 May 2022, CB at p.114-115. He declined to adopt a further statement made on 3 April 2024.

163. With reference to other evidence that triage was completed at 3.53pm, he said that he used the timestamp on the computer as the triage time and as far as he was aware that represented the completion of the entry. He did however agree that there is usually an agreed time between Ambulance Victoria and the triage nurse for the end time of the triage.

164. He could not recall the length of handover/triage, but later estimated, *Five minutes, seven minutes.*

165. ANUM Frauenfelder stated at inquest that he knew that James had a puffer but had no recollection of him using it. In addition, if he'd seen the beside nurse with a spacer that would have rang alarm bells for him. He could recall a discussion about the IV cannula but could not recall the bedside nurse going away and coming back during the triage process.

166. He could not remember exactly what occurred after his triage on this occasion, but he would generally give a handover to the bedside nurse. That is, he would have told him anything he needed to know such as the triage level but there wouldn't be any other purpose if he'd been present at the Ambulance Victoria handover.

167. In terms of the order of things, ANUM Frauenfelder stated that all of the notes would be completed (including the notes in the Emergency Nursing Observation Chart) prior to the bedside nurse attending the patient.

168. ANUM Frauenfelder was not aware of the Holmesglen review which included a review of the appropriateness of the triage category that he assigned (CAT 3) which considered in light of the administration of adrenaline by Ambulance Victoria prior to James' arrival, and determined that the significance of the requirement for two doses of adrenaline was not appreciated at triage. Further the review noted that while anaphylaxis is not listed for consideration under high-risk history on the ATS, the risk of biphasic reaction in adolescence in the setting of asthma warranted triaging James as ATS 2 (to be seen by a doctor within 10 minutes).[96]

[96] CB at p.125.

169. ANUM Frauenfelder said that he was not aware at the time of the risk of a biphasic response as noted in the review but this is now included in training. He was however aware that a person who presents with anaphylaxis can deteriorate and said that he knew the signs and symptoms of deterioration for anaphylaxis, including a wheeze. In hindsight he said that he should have told the bedside nurse what signs to look out for regarding a deterioration.

170. ANUM Frauenfelder stated at inquest that if he had been aware of James' wheeze he,

definitely would have escalated it and escalating being that I would have increased my triage category because obviously if – it's an escalation with a wheeze and I would have prioritised that and made by triage – and with that I would have increased my priority of speaking to the doctor straight away.[97]

171. ANUM Frauenfelder stated that if he had been aware of the wheeze, he would have got a doctor straight away, escalated his triage, as he considered him to be more critical (but not necessarily *life critical*), and he would be concerned enough to get him a doctor to review him. He said that he would have assigned him a Cat 2 (to see a doctor within 10 minutes) but would have spoken to the doctor straight away. He would expect a doctor to assess him *pretty promptly* and he would expect them to order adrenaline.

172. ANUM Frauenfelder stated that RN Choudhary was present on James' arrival to the cubicle and accepted him off the Ambulance officers within 5 minutes of triage. He clarified at inquest that this was after he completed the triage.

173. ANUM Frauenfelder considered that the care of a patient transfers to the hospital once a patient is transferred from the stretcher to the hospital bed.

Initial assessment following triage

174. A primary assessment of James was done by RN Choudhary in the isolation room (Cubicle 1). He attended with a spacer and IV cannulation kit and had donned PPE.

[97] T169 L30-31, T170 L1-5

175. A Registered Nurse (Runner) Ira Echevarria (**RN Echevarria**) was outside the isolation room to provide support.

176. James changed into a nursing gown and RN Choudhary noted there was no rash. He was attached to monitoring equipment. RN Choudhary observed that he was alert, airway patent, and talking in full sentences. He was documented as being 'anxious ++'.[98] He had a mild wheeze, and 6 puffs of Ventolin (Salbutamol) were given. James was alert, orientated, well perfused, no abdominal pain. He was talking normally, SpO2 was 97% RA and he had a slight Work of Breathing (**WOB**)[99]. RN Choudhary placed oxygen (O2) via nasal prongs@2L (2 litres of oxygen via nasal prong).

177. In addition, an IV was placed by RN Choudhary and James began to desaturate to 97%. Whilst oxygen was being applied, he started to desaturate further to 88% and a non-rebreather mask was applied (oxygen therapy at 10 litres via non breather mask).

178. According to RN Choudhary,

At approximately 1603 hours, I went into room 1 with a spacer for Ventolin administration and an intravenous cannula to administer any treatment via an IVC (intravenous cannula). I then commenced my primary assessment, noting that Mr Tsindos was alert and orientated, with a Glasgow Coma Score of 15. He had a clear airway and was talking in clear full sentences. He had mild respiratory distress associated with an increase in his respiratory rate (RR), and mild working breathing of (WOB). His oxygen saturations were 97% on room air. He looked perfused and was warm to touch. There was no complaint of pain. I administered 6 puffs of Ventolin via a spacer and commenced him on 2 litres of oxygen via nasal prongs to help his WOB. Mr Tsindos was anxious about his hospital admission and said words to the effect that "I want to talk to my mother". In order to complete my primary assessment and insert the IVC, I started talking to him about school as distraction therapy and took his vital

[98] CB 126; CB 402.
[99] Work of Breathing refers to the energy, effort, and muscle activity required to move air in and out of the lungs. It is a key clinical sign used to assess the severity of respiratory distress, indicating how hard a patient is working to breathe.

signs, which were all within the normal range. I inserted an IVC 20G to his left cubital fossa and took blood samples (gold, purple and blue tube).[100]

179. According to RN Choudhary, James then started to become more anxious and restless and stated, "*I can't breathe*". RN Choudhary stated that he was able to speak in full sentences but his oxygen saturation levels were fluctuating and so he asked RN Echevarria, who had come to the door, to get a doctor to review him and to bring him a non rebreather mask.

180. RN Choudhary stated that doctors Akintunde Akinloye (**Dr Akinloye**)[101] and Sui-Lin Li (**Dr Li**) entered the cubicle after approximately one minute at which time RN Choudhary had commenced James on oxygen therapy at 10 litres via a non-breather mask. The treatment ordered by Dr Akinloye included: Hydrocortisone 250mg IV, Adrenaline 0.5mg IM (intramuscular) (3rd dose) and Nebulised adrenaline 3mg.

181. It was noted at inquest that RN Choudhary had only just qualified and given this he would rely on more senior clinicians for the appropriate management for a patient coming to the Emergency Department with anaphylaxis.

182. RN Choudhary stated at inquest that given James had a wheeze, he *kind of* expected there would be respiratory symptom.

183. RN Choudhary estimated the time between him first attending the isolation room and James saying *I can't breathe* about 5 to 7 minutes, but he could not recall the exact duration of this time.

184. RN Choudhary indicated he asked for a doctor immediately and RN Echevarria stated that following that request she notified the nearest doctor available, being Dr Akinloye.

185. RN Choudhary stated that approximately one minute later, Dr Akinloye and Dr Sui Li entered the room to assess James. At about the same time they arrived, he commenced James on

[100] Statement of Amandeep Choudhary dated 6 March 2022, CB at p.91.
[101] Holds a Batchelor of Medicine and Surgery and a fellow of the Australasian College for Emergency Medicine (FACEM).

oxygen therapy at 10 litres via a non-rebreather mask. Dr Akinloye provided a verbal order for 500mcg (0.5mg) Adrenaline, 250mg Hydrocortisone and nebulised Adrenaline.

186. RN Echevarria also stated that nursing staff was instructed by the medical staff to administer IM Adrenaline, IV Hydrocortisone, and nebulised Adrenaline. She further stated that she was the one who prepared and administered the IV Hydrocortisone and was preparing the nebulised adrenaline when the patient became unresponsive and cyanotic.[102]

187. RN Choudhary stated that he administered the Adrenaline intramuscularly into James' right vastus lateral injection site and the Hydrocortisone was administered intravenously via the left arm IVC (intravenous cannula).[103] The medications were provided to him by RN Echevarria and he cross checked the medications with her. He stated that although the medication chart states that these medications were given at 1608 hours, this entry was made in the days after the admission and is thus an approximate time.[104]

188. Dr Akinloye stated that at approximately 4.10pm he was called to attend with James and immediately did so. James appeared dyspnoeic and tachypnoeic.[105] He stated that he believed he,

was called to the isolation cubicle to about 5 minutes before Master Tsindos was moved into the resuscitation cubicle at 16:15, given this timing, I have estimated that I was called to the isolation cubicle around 16:10. Master Tsindos subsequently received IM adrenaline, IV hydrocortisone, and nebulized adrenaline (most of which he did not receive as he was moved to the resuscitation cubicle within less than a minute of its commencement) shortly after this.[106]

189. Dr Akinloye stated that RN Choudhary had informed him that,

he had administered 6 puffs of salbutamol (Ventolin) to the patient via a spacer, shortly after his arrival as he had a wheeze but was otherwise well. He had done an initial nursing

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[102] Statement of RN (Runner) Ira Echevarria dated 26 May 2023, CB at p.112.
[103] 'inferior vena cava' amended to 'intravenous cannula' pursuant to section 76 of the *Coroners Act 2008* (Vic).
[104] Statement of Amandeep Choudhary dated 6 March 2022, CB at p.92. CB at p.454.
[105] Statement of Dr Akintunde Akinloye undated, CB at p.94.
[106] Statement of Dr Akintunde Akinloye undated, CB at p.98.

assessment, inserted an IV line and collected blood samples before I arrived. After some time in the cubicle, Master Tsindos had, however, rapidly deteriorated complaining of increasing shortness of breath, so he (RN Aman Choudhary) called for help. The patient was dyspneic and said he had difficulty breathing. Given the history of wheeze, lip swelling, and rapid deterioration after arrival in ED, I remarked the patient was likely developing recurrent anaphylaxis and that he would require another dose of IM adrenaline.[107]

190. Dr Akinloye further stated after collecting the IM adrenaline from a nurse he quickly returned to the cubicle with the IM adrenaline and handed it to RN Choudhary to administer and proceeded to apply oxygen via a Hudson mask. He said that the NUM, Darren de Vries (**NUM de Vries**) arrived as he was applying the Hudson mask and he asked him to help get a non-rebreather oxygen mask as he noted that James was beginning to desaturate. He said that given James was complaining of respiratory symptoms and had bronchospasm, he left the cubicle where a nurse was drawing up the nebulized adrenaline who informed him that he had only drawn up 3mg and put it into the nebulizer mask. He said that he collected it anyway noting that they could add more to it but we needed to administer it urgently, and asked the nurse to continue to draw up some more adrenaline.[108]

191. Dr Akinloye stated that he quickly returned to the cubicle and proceeded to commence nebulized adrenaline but less than 1 minute later he noticed that James had become more *dyspnoeic* and was pointing to his upper airway. He said he became very concerned that James may be developing airway obstruction from angioedema, and asked NUM de Vries to call a code blue. He said that they both agreed that they needed to move James to a resuscitation cubicle where there was equipment and space to manage the patient's airway. Dr Li was also present at this time.[109]

192. NUM de Vries stated,

[a]t approximately 1615 hrs (I was in my office adjacent to cubicle 1), I heard a call for more assistance as the patient in cubicle 1 had started to deteriorate, and the doctor was requesting

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[107] Statement of Dr Akintunde Akinloye undated, CB at p.94.
[108] Statement of Dr Akintunde Akinloye undated, CB at p.94-95.
[109] Statement of Dr Akintunde Akinloye undated, CB at p.94-95.

some nebulized adrenaline. I entered cubicle 1 and noted that James was conscious, but was struggling with his breathing. The doctor was starting to connect the adrenaline nebulizer, and James was becoming more distressed and finding it difficult to breathe, so the decision was made to transfer him to the Resuscitation cubicle. While transferring James to the resuscitation cubicle, I dialled 555 (emergency number) to call a code blue so that we could get more assistance to treat James (and also to look after the other patients in the department

Within 1 minute of transferring James into the resuscitation cubicle, he became unresponsive and he was placed into a supine position and CPR commenced. The ARC Advanced Life Support guidelines were followed, with 2 minute cycles ongoing."[110] [Emphasis added]

193. A Code Blue emergency buzzer was called at 4.15pm and James was moved to the resuscitation bay. Within a minute of arrival in the resuscitation bay, James became unresponsive. The monitoring module from the isolation room was not transferred with James to the resuscitation bay, which resulted in a loss of recorded observation data from this period.

194. Dr Akinloye stated that upon *arrival at the resuscitation cubicle,* James became unresponsive and he developed cardiac arrest. He said that at this time Dr Andrew Han-Su Tay (**Dr Tay**), ED Physician and other ED nurses arrived in the resuscitation cubicle and they commenced cardiopulmonary resuscitation (**CPR**) as well as the Advanced Life Saving (**ALS**) protocol. He stated that he proceeded to take over managing James' airway with bag valve mask ventilation.

195. Dr Akinloye further stated that the code blue team also arrived from Intensive Care Unit (**ICU**) and the ICU fellow, Dr Yi Wei Baey (**Dr Baey**)[111] then took over the team leader role, of running the resuscitation, while Dr Tay proceeded to gain further IV access. He noted that a scribe was not immediately assigned and scribing did not commence until 4.24pm as the team members proceeded to do other time critical tasks. Dr Akinloye believed James received at least 1 dose of 1mg of IV adrenaline before the commencement of scribing.[112]

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[110] Statement of Darren de Vries dated 3 December 2021, CB at p.106.
[111] Who holds a Bachelor of Medicine and Surgery (Honours), and at the time of making his statement a provisional Fellow of the Australian and New Zealand College of Anaesthestists.
[112] Statement of Dr Akintunde Akinloye undated, CB at p.95.

196. Dr Baey stated that when he arrived the Emergency Department doctors were in the process of changing airway management from a laryngeal mask airway to an endotracheal tube and obtaining central access via the right femoral vein. His role was *to coordinate efforts as per the ANZCOR Advanced Life Support algorithm in collaboration with the emergency department team.*[113]

197. Dr Tay[114] stated that at the time he attended with James in the resuscitation cubicle, Dr Akinloye and Dr Li were attending to him and that James was unresponsive. He stated that there was a weak palpable peripheral pulse and his blood pressure was not measurable. He stated that there was a widespread macular rash involving his torso and all his limbs as well as mild angioedema involving his eyes and lips. He noted that a one-litre bag of normal saline was running through a peripheral intravenous canula.

198. Dr Tay stated the following,

There was no signs to suggest any other cause of Master Tsindos' s deterioration other than an allergic reaction. Pulmonary embolism (PE) was possible but unlikely given that he had no risk factors for thromboembolism. There was no signs of legs swelling to suggest deep venous thrombosis (DVT). There was no sign of volume loss from a gastro-intestinal (GI) bleed. His abdomen was soft with no swelling or masses. He was not hypoglycaemic. He was not hypothermic. There was no fever to suggest sepsis. He had been home from school that day and his condition was therefore unlikely to be related to illicit drug use or overdose. He was wheezy but had equal breath sound and chest expansion making tension pneumothorax unlikely."

"Within the minute after I attended Master Tsindos, his radial pulse became unpalpable. There was no palpable femoral and carotid pulse on further examination. I initiated cardiopulmonary resuscitation (CPR) and asked for IV adrenaline 1mg which was given soon after.

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[113] Statement of Dr Yi-Wei Baey dated 17 August 2023, CB at p.117.
[114] Co-Director of the Emergency Department at Holmesglen. Holds a Batchelor of Medicine and Surgery and a fellow of the Australasian College for Emergency Medicine (FACEM).

A team of doctors and nurses were taking turns on chest compression while I inserted a second intravenous canula (ICV).

At 1620 hours, Dr Akinloye was ventilating Master Tsindos manually through the laryngeal mask. He said that ventilation was difficult due to bronchospasm. He started preparation for intubation. Master Tsindos was given a second dose of IV adrenaline.[115]

199. At 4.24pm, Emergency Response Data Collection commenced.

200. Dr Tay stated, *While CPR was continuing, Dr Akinloye successfully intubated Master Tsindos using video laryngoscope and bougie at 1629 hours. I noted that Master Tsindos's oxygen saturation (SpO2) dropped to 74% from 98% transiently caused by the pause in ventilation during the process of intubation*.

201. Dr Akinloye stated, *Intubation was confirmed by an end-tidal CO2 capnograph trace on the monitor by auscultation. End-tidal CO2 at 1630 was 20mmHg. After intubation, I noted that the patient was very difficult to ventilate, as evidenced by high pressure in the Ambu bag when manually ventilating the patient, I believed this was due to bronchospasm, so I asked for a metered-dose inhaler adaptor and salbutamol so I deliver some salbutamol via the endotracheal tube to manage his bronchospasm. This was administered by coordinating it with manual ventilation.*

202. Dr Akinloye stated that, *CPR continued concurrently as per the ALS protocol and the patient received further doses of IV adrenaline every 2nd cycle, normal saline was also continuously infused using a hand pump infusion line. I continued to intermittently administer salbutamol via MDI into the airway circuit as the patient was notable difficult to ventilate as evidenced by the high pressure Ambu bag*.

203. Dr Tay stated, *At that stage we had been performing CPR for over 40 minutes. There was no sign of return of spontaneous circulation (ROSC) in the setting of severe lactic acidosis. We were aware of the poor prognosis for good outcome. However, because he was young, we decided to engage Extracorporeal Membrane Oxygenation (ECMO) team for help*.

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[115] Statement of Dr Han-Su Tay dated 11 January 2022, CB at p. 100.

204. At 4.46pm, the Extracorporeal Membrane Oxygenation (**ECMO**) team were contacted by Dr Tay, who were about 20 minutes away.

205. At approximately 4.48pm, Harry called the Holmesglen to ask for a certificate for James' school. He stated that he was put through to ED to get the certificate however was then told that James was *"very sick and in critical condition"*. Harry also advised that while on route, he telephoned the hospital back. He spoke with an Emergency Department Doctor who advised James' heart had stopped and informed *"he's very sick, very ill, in critical condition"*.

206. At approximately, 4.49pm, Harry arrived but was not allowed to enter the Emergency Department due to his COVID status.

207. Holmesglen contacted Forcyte Pathology in an attempt to get Harry and James' COVID Results from swab taken earlier that day but were informed by pathology staff that their swabs had not been put into the system as yet.[116]

208. The ECMO team arrived at 5.20pm. James was successfully placed on ECMO by 5.46pm and CPR ceased at 5.47pm and IV noradrenaline infusion was commenced at 5.49pm. James was noted to be in sinus rhythm after CPR was ceased.

209. James was transferred to the Alfred Hospital ICU at 9.00pm on 27 May 2021. James was documented to have a widespread urticarial rash (hives) on his trunk/arms and legs on arrival. Blood tests sent several hours after the symptom onset at the Alfred demonstrated elevated serum tryptase of 34.4mcg/L which are results consistent with a diagnosis of anaphylaxis.

210. Despite maximal ICU interventions, James was declared brain dead at 5.20 pm on 29 May 2021. It was documented that James had a long down time of approximately 82 minutes. ECMO supports were withdrawn at 8.30pm on 1 June 2021. The medical records reflect that the family were devastated.

211. Both James and his father's COVID test results were negative.

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[116] CB at p.433.

IDENTITY OF THE DECEASED

212. On 1 June 2021, James Harilaos Tsindos born 1 October 2003 was identified by his father, Harry Tsindos.

213. Identity is not in issue and required no further investigation.

CAUSE OF DEATH

214. On 3 June 2021, Dr Joanne Ho, medical practitioner and registrar in forensic pathology at the Victorian Institute of Forensic Medicine, conducted an autopsy and prepared a report of her findings dated 22 November 2021.[117]

215. Dr Ho made the following comments,

> *The deceased was a 17 year old male who consumed a salad, containing a cashew nut dressing in the setting of a known allergy to cashews. He notably had tingling of the lips and mouth within minutes of consuming the salad.*
>
> *The circumstances described suggest anaphylaxis. Anaphylaxis is a severe and potentially lethal acute allergic response. Some individuals are genetically predisposed to develop allergies ('atopy') and when exposed to certain allergens, they tend to produce antibodies of the IgE class (which are normally produced at very low levels) rather than of the IgG class. In anaphylaxis, exposure to an allergen in a previously sensitized individual leads to widespread IgE-mediated degranulation of mast cells and basophils (release of molecules from these types of white blood cells), which can cause death via low blood pressure, multi-organ failure, and/or breathing difficulties from laryngeal oedema.*
>
> *Examination of the airways showed mild erythema, petechial haemorrhages and haemorrhage along the epiglottis and vocal folds. While these findings could support a diagnosis of anaphylaxis, they can also be iatrogenically caused by medical intervention.*
>
> *Antemortem testing of tryptase (date of collection 27/05/2021 at 22:25 hrs) showed a tryptase of 34.4 mcg/L from Alfred Health medical records. Subsequent antemortem serum samples*

[117] With supervising pathologist, Dr Matthew J. Lynch.

(from Alfred Hospital, collected on the 27th of May 2021) showed a tryptase of 37 ug/L. Tryptase is an enzyme released by mast cells which rises during anaphylaxis. This antemortem level of tryptase would be in keeping with an anaphylaxis. Antemortem IgE was also elevated (1301 kU/L). A specific IgE to cashew was 0.64 kUA/L.

The autopsy also showed infarction of the myocardium, bilateral pleural effusions and superficial haemorrhagic gastric erosions. The pleural effusions (fluid within the lung cavities) can be seen in heart failure and superficial gastric erosions can be seen during physiological stress on the body, such as in organ failure. There were also features of hypoxic ischaemic encephalopathy, in keeping with the described events.

….

There was no post mortem evidence of any injuries which may have caused or contributed to death.

216. In addition, toxicological analysis of blood showed no ethanol (alcohol), common drugs or poisons.

217. Dr Ho further noted that whilst James was at the Alfred Hospital, Respiratory syncytial virus (**RSV**) was detected.

218. Dr Ho formulated the cause of death as "*1(a) Hypoxic Ischaemic Encephalopathy Complicating Anaphylaxis".*

219. I accept Dr Ho's opinion.

POLICES AND PROCEDURES RELEVANT TO JAMES' PASSING

Ambulance Victoria

220. Applicable at the time of James' passing was Ambulance Victoria policy *Anaphylaxis – CPG A0704*[118] which provided the following definition for anaphylaxis:

[118] CB at p.75-81.

Severe, potentially life-threatening systemic hypersensitivity reaction

221. In relation to Pathophysiology and presentation it provided the following overview:

Anaphylaxis can exist with any combination of the signs and symptoms below, but may also be limited to a single body system (e.g. isolated hypotension or isolated respiratory distress in the setting of exposure to an antigen that has caused anaphylaxis in the patient previously).

Rapid onset (usually within 30 minutes but may be up to 4 hours).

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.* [Emphasis added]

- Respiratory

Respiratory distress, shortness of breath, wheeze, cough, stridor[119] - Due to inflammatory bronchoconstriction or upper airway oedema.

- Abdominal

Pain / cramping

Nausea / vomiting / diarrhoea - Particularly to insect bites and systemically administered allergens (e.g. IV medications)

- Skin

Hives, welts, itching, flushing, angioedema (e.g. lips, tongue) - Due to vasodilation and vascular hyperpermeability

- Cardiovascular

[119] Stridor refers to the high-pitched noisy breathing, often a sign of upper airway obstruction, particularly common in children with conditions like croup or inhaled foreign bodies.

Hypotension - Due to vasodilation and vascular hyperpermeability

222. *Anaphylaxis – CPG A0704* outlined in relation to anaphylaxis and asthma that,

Asthma, food allergy and high risk of anaphylaxis frequently occur together, often in adolescence. Bronchospasm is a common presenting symptom in this group, raising the likelihood of mistaking anaphylaxis for asthma. A history of asthma increases the risk of fatal anaphylaxis.

Maintain a high index of suspicion for anaphylaxis in patients with a history of asthma or food allergy.

223. According to *Anaphylaxis – CPG A0704* Adrenaline is the primary treatment for anaphylaxis, where deaths from anaphylaxis are far more likely to be associated with delay in management rather than inadvertent administration of Adrenaline. It was noted that IV Adrenaline bolus should only be administered if extremely poor perfusion or cardiac arrest is imminent and that IV Adrenaline should be subsequent to IM Adrenaline in all cases with an initial IM therapy option selected for every anaphylaxis patient regardless of presentation.

224. And further, Adrenaline remains the absolute priority and that additional therapies may be administered concurrently or in order of clinical need but must not delay continued Adrenaline administration.

225. *Anaphylaxis – CPG A0704* further outlined that all patients with suspected or potential anaphylaxis must be advised that they should be transported to hospital regardless of the severity of their presentation or response to management. Hospital-based observation is required for a minimum of four hours in case of a biphasic reaction, where symptoms return after an initial resolution. It was noted that this occurs in approximately 20% of cases.

ASCIA – Australasian Society of Clinical Immunology and Allergy

226. ASCIA developed guidelines referred to as Acute Management of Anaphylaxis.[120]

[120] CB at p.611-622.

227. ASCIA defines anaphylaxis as:

- Any acute onset illness with typical skin features (urticarial rash or erythema/flushing, and/or angioedema), plus involvement of respiratory and/or cardiovascular and/or persistent severe gastrointestinal symptoms; or
- Any acute onset of hypotension or bronchospasm or upper airway obstruction where anaphylaxis is considered possible, even if typical skin features are not present.

228. The ASCIA guidelines note the following,

ALWAYS GIVE ADRENALINE FIRST, then asthma reliever if someone with known asthma and allergy to food, insects or medication has SUDDEN BREATHING DIFFICULTY (including wheeze, persistent cough or hoarse voice) even if there are no skin symptoms.

Adrenaline is the first line treatment for anaphylaxis and acts to reduce airway mucosal oedema, induce bronchodilation, induce vasoconstriction and increase strength of cardiac contraction.

229. It is apparent from the above guidelines that each emphasise that the administration of Adrenaline must take precedence over the administration of other medications.

OTHER REVIEWS

Ambulance Victoria Review

230. On 7 June 2021**,** Ambulance Victoria prepared a "*Patient Safety Incident Management, In depth Case Review Report*" which formed part of the coronial brief. The investigation noted that relevant staff were interviewed on 7 June 2021.

231. The review noted that during handover, *Att1 requested staff get the patient a Ventolin spacer and advised due to this he might be due another Adrenaline.*[121]

232. The review concluded under Analysis,

[121] CB at p.386.

- *It was found the crew managed the patient appropriately and there was no variation to the expected practice.*

- *There was scope to administer a 3rd dose of Adrenaline when the patient complained of 'asthma' type symptoms but given the logistical situation (at the door of the emergency department) the crew had reasonable grounds to treat as they did (Ventolin, at hand).*

- *It was self-reported by Att2 that the patient walked to the stretcher. The CPGA0704 states 'Don't stand or walk the patient if possible.' It is the authors belief this has no bearing on the patient outcome given the timeframe from loading (walking) to deterioration.*[122]

233. As already noted, Paramedic Nickson stated at inquest that she prompted this review shortly after the tragic outcome and it was conducted promptly.

Safer Care Victoria

234. The Root Cause Analysis Report submitted by Holmesglen to Safer Care Victoria formed part of the coronial brief.

235. The RCA panel (**the Panel**) was noted to have consisted of appropriately qualified persons who were not involved in the care of the patient, and included clinicians and a consumer external to the hospital and to Healthscope.

236. The Panel documented that *there was no handover from AV to Triage RN on the patient wheeze* which I note was a matter in dispute as part of the coronial investigation.

237. The Panel noted the following with respect to the appropriateness of the triage category,

Triage RN was an experienced ANUM. Discussion had occurred with AV regarding the requirement for a second dose of Adrenaline including hand-over that their policy is to give adrenaline if any symptoms present. ATS decision made on stable status of patient on arrival. The panel determined the significance of the requirement for two doses of adrenaline was not appreciated at triage. They noted that while anaphylaxis is not listed for consideration under high-risk history on the ATS, the risk of biphasic reaction in adolescence in the setting

[122] CB at p.338-339.

with asthma warranted triaging this patient as ATS 2. The panel determined that the decision to triage the patient as AST 3 did not impact the time to review and there was no delay in reviewing the patient on arrival by an RN.[123]

238. It was noted by the Panel that discussion occurred with the NUM regarding staff allocation in relation to the triage category. Staff allocation would have remained the same with the support of a senior staff member for ATS 2.

239. It was further noted that the information on James' wheeze was handed over by AV to the accepting RN (1) as a new complaint by James. James stated that he felt he had asthma. The nurse initiated Ventolin 6 puffs via MDI after obtaining a spacer. At this time the patient was assessed as stable on transfer into isolation room.

240. Again, I note that whether and to whom the information in relation to the wheeze was communicated was a matter that was in dispute as part of the coronial investigation.

241. The Panel determined that in the absence of swelling, rash or GIT[124] symptoms, the onset of wheeze was interpreted as asthma and treated initially with Ventolin. In view of objective signs of anaphylaxis following ingestion of a known cashew sensitivity, there was scope to administer an Adrenaline dose at this time. The Panel recognised that the period of time between the administration of Ventolin MDI and Adrenaline was minimal. The Panel were unable to determine if this contributed to James' outcome as his deterioration was extremely rapid and catastrophic in the setting of a very resistant anaphylaxis.

242. The Panel considered the description by the treating RN that James was anxious and interpreted this with regards to a 17-year-old patient in the ED department without parental support. It was not associated with shortness of breath or hypoxia as James was conversing well with the RN at the time.

243. The Panel noted that James' deterioration was rapid and escalation to the Emergency Response Team occurred in a timely manner. James was moved into the resuscitation bay without delay and his airway was initially maintained via an LMA (laryngeal mask airway).

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[123] CB at p.1031.
[124] Gastrointestinal Tract.

Hand bagging via the LMA did not feel tight during ventilation. Chest rise and fall was noted. Intubation performed by FACEM[125] (1) via video laryngoscope with ICU support. Ventilation via the ETT (endotracheal tube) was very tight with very high pressures. The ETT position was double checked due to the extremely high pressures and difficulty in achieving ventilation. Ventolin metered dose inhaler was connected to the respiratory circuit to try to decrease the bronchospasm. The external ED clinical expert identified no concerns with the airway management.

244. Documentation of observations by the Panel include: *The panel noted that the monitoring module from the isolation room was not transferred with the patient to Resus which resulted in a loss of observation data from this period.*

245. The Panel noted that the resuscitation was led by the ICU team immediately following their arrival and that whilst there were no formal roles assigned to the team, all roles and delegations were filled and appropriate within the clinical resuscitation team. Instructions were clearly provided by the team leader and additional staff were appropriately sourced to support continuous cardiac compressions. The medications administered during the resuscitation period were determined to be timely and appropriate. On interview of staff, it was noted that a number of adrenaline doses may have been missed on scribing.

246. The Panel acknowledged that the referral for ECMO was appropriate, however it recognised that there was no protocol available to assist with the decision to refer a patient for ECMO. The Panel understood that the timely arrival of the ECMO team was related to the close proximity of the team to the hospital at that time.

247. The Panel reviewed the Safer Care Victoria Anaphylaxis Clinical Care Standard and a number of anaphylaxis guidelines currently available. The Panel noted the Acute Anaphylaxis Clinical Care Standard had not been launched at this time and the ASCIA guidelines were also subsequently updated.

248. The Panel noted that best practice guidelines are not available for an anaphylaxis scenario where the allergen is ingested and not able to be removed. In the absence of this specific

[125] Fellowship of the Australasian College for Emergency Medicine.

guideline the clinicians are required to use clinical judgement on how to modify the guideline to the specific scenario. To better manage scenarios of this nature in future, an ingestion anaphylaxis guideline would be beneficial.

249. The Panel considered the impact of COVID on the management of James. The Panel considered the admission to the isolation room and subsequent move to the resuscitation bay as appropriate.

250. The Root Cause Analysis Report noted James' medical history was a contributing factor to the outcome.

251. The Root Cause Analysis Report detailed the following findings:

    a. There was a lack of staff knowledge on recognising and treating this uncommon presentation of biphasic anaphylaxis because refractory and severe bi-phasic anaphylaxis is uncommon.

    b. There was a lack of staff knowledge on recognising and treating bi-phasic anaphylaxis because clinical education and guidelines do not emphasise this clinical scenario; The guidelines available at the time did not emphasis this clinical scenario and the importance of administering adrenaline first, then asthma reliever.

252. The Root Cause Analysis Report detailed the following learnings:

    a. Staff were less familiar with the treatment guideline to always administer Adrenaline prior to Ventolin even in patients who have a history of Asthma. Consider Simulation/scenario based training to include the subtle but significant differences which may present for patients who present with allergic reaction +/- anaphylaxis as a result of ingestion, environmental exposure or systemic administration.

253. Amongst the recommendations noted was the following:

    Discuss with SCV the opportunity to utilise the learning from this case to develop a state wide approach to the treatment of Anaphylaxis such as the ANZCA pathway/cards. In addition to include reference to anaphylaxis in the ATS guidelines.

Holmesglen - Statement of Keryn Hopkins

254. A statement was provided by Keryn Hopkins (**Ms Hopkins**), General Manager at Holmesglen regarding the circumstance of James' clinical care.

255. Ms Hopkins advised that Holmesglen uses the ATS to allocate triage categories to all patients attending the Emergency Department, using the Australasian College for Emergency Medicine *Guidelines on the Implementation of the Australasian Triage Scale in Emergency Medicine*.

256. In addition, that *Healthscope Policy 8.07 - Triage* guides hospital practice[126]. This policy notes that,

- A Triage assessment should take place between 2-5 minutes of a patient's arrival in department.
- Triage principle is that the triage category is allocated based on clinical urgency.

257. Ms Hopkins noted the RCA panel findings in relation to the ATS category assigned but that under an ATS 2 score the nursing staff allocation to James would have remained the same with the support of a senior staff member.

258. Ms Hopkins noted that Holmesglen used the Department of Health and Human Services – COVID-19 assessment and streaming matrix for emergency department, urgent care and respiratory assessment clinics to guide patient emergency department for COVID-19 and the appropriate use of PPE. In addition, that the Australasian College for Emergency Medicine Clinical Guidelines for the management of COVID-19 in Australasian emergency departments v4.1 are also used to guide practice within the ED.[127]

259. She noted that at the time of James' presentation to the ED, Holmesglen was under the Victorian State Government directive of being a COVID Steaming site which meant that it was required to treat any SCOVID or COVID patients that attended. Although the ED was not set up with a negative pressure room, modifications were made to the best of

[126] CB at p.138.
[127] CB at p.162.

Holmesglen's ability to implement the directive.

260. Ms Hopkins noted that Holmesglen did not have a policy for the management of anaphylaxis in place at the time of James' death. Rather, guidelines recommended by other external authorities in anaphylaxis were used. She noted that following the RCA review Healthscope formed a working party to develop an anaphylaxis policy.

261. Ms Hopkins further noted that Holmesglen Private Hospital opened in January 2017 and whilst many anaphylactic patients have been admitted to the ED for observation and management of their anaphylaxis including the administration of IM Adrenaline, none have required intubation or admission to ICU for ongoing management. They had therefore not had a similar incident in the past.

262. A range of recommendations were made which included the following:

- Mandatory ASCIA online training for anaphylaxis for ED staff;
- Incorporation of a simulated anaphylaxis event in Code Blue training;
- Development of anaphylaxis resource materials to supplement available guidelines;
- Gap analysis regarding the Anaphylaxis Clinical Care standards;
- Provision of education re accessing the ECMO service;
- Duty of candour training; and
- Discussion with Safer Care Victoria regarding a state-wide approach to anaphylaxis and inclusion of anaphylaxis in "ATS' guidelines.

263. I noted that according to the *Guidelines on the Implementation of the Australasian Triage Scale in Emergency Medicine* the arrival time is the first recorded time of contact between the patient and ED staff and triage assessment should occur at this point.[128] The following is noted regarding the various ATS categories.

[128] CB at p.132.

ATS Category 2

264. Category 2, *Response*: Assessment and treatment within 10 minutes (assessment and treatment often simultaneous), with *Description of Category* to include the following,

Imminently life-threatening

The patient's condition is serious enough or deteriorating so rapidly that there is the potential of threat to life, or organ system failure, if not treated within ten minutes of arrival

or

Important time-critical treatment

The potential for time-critical treatment (e.g. thrombolysis, antidote) to make a significant effect on clinical outcome depends on treatment commencing within a few minutes of the patient's arrival in the ED

265. Clinical descriptors described as indicative only do not include anaphylaxis.

ATS Category 3

266. Category 3, *Response*: Assessment and treatment within 30 minutes, with *Description of Category* to include the following,

Imminently life-threatening

The patient's condition may progress to life or limb threatening, or may lead to significant morbidity, if assessment and treatment are not commenced within thirty minutes of arrival

or

Situational Urgency

There is potential for adverse outcome if time-critical treatment is not commenced within thirty minutes

267. Clinical descriptors described as indicative only do not include anaphylaxis.

EXPERT ADVICE

Summary of Expert Advice on the provision of care – Reports provided

268. Seven experts gave their opinion about the provision of care to James.

Professor Jo Anne Douglass

269. The Court's expert, Professor Jo Anne Douglass (**Professor Douglass**) provided an expert report to the Court and gave evidence as part of an expert panel. Professor Douglass is a specialist medical practitioner in Respiratory Medicine and Allergy and Clinical Immunology.

270. Professor Douglass noted that James previously experienced nausea and vomiting on eating nuts and was avoiding nuts. She noted that over 12% of young people diagnosed with a nut allergy suffer from inadvertent exposure in a 5 year period.

271. Professor Douglass was of the opinion, that the decision to not perform skin prick allergy testing in the presence of unstable asthma is explicit in the relevant guidelines and aligned with common speciality practice. Moreover, the use of blood specific IgE testing (RAST testing) in the setting of unstable asthma is safer for the patient and is frequently performed in adults and adolescents as an initial step. She noted that skin prick allergy testing carries a small risk of inducing anaphylaxis or other allergic reactions and in the presence of unstable asthma, this risk is magnified. By contrast, blood specific IgE testing gives a quantitative measure of allergen-specific IgE and does not carry a risk of anaphylaxis.

272. Professor Douglass indicated that prior to James' passing he did not have symptoms that met anaphylaxis criteria and that based on the information available, in that James had not experienced a hypotensive, asthmatic or generalised reaction to nut ingestion, a decision not to prescribe an EpiPen is within guidelines since James had not experienced a systemic allergic event in relation to food ingestion. She noted the prescription of adrenaline injectors in this setting is controversial and the decision not to prescribe an EpiPen was within guidelines. In addition, she noted that further evaluation was sought to assess James but this had not occurred.

273. Professor Douglass provided advice that asthma complicates anaphylaxis and renders it more severe. Unstable asthma is reported as a risk factor for adverse outcomes in anaphylaxis and in this setting, attention to asthma management is important to effective patient management.

274. Professor Douglass indicated that James suffered biphasic anaphylaxis, which is well described as a complication of food allergy. This is defined as a further deterioration following initial anaphylaxis with recurrent anaphylactic symptoms up to 72 hours after the initial presentation. She stated that James' primary presentation in the biphasic episode was of wheeze suggesting this was lower airway obstruction, that is asthma. It seemed that the asthma as a consequence of the anaphylaxis was the major driver of his second severe acute deterioration. She therefore considered his deterioration was due to anaphylaxis complicated by acute severe asthma.

275. Professor Douglass noted that the presence of severe asthma and adolescence are considered as potential indicators to advocate for adrenaline autoinjector prescription in the guidelines. A plan to review the patient and re-visit progress in a month would be reasonable practice in her experience.

276. Professor Douglass noted that a further complicating factor in James' case was the COVID pandemic noting that restrictions to lung function testing were in practice at that time due to infection risk and Thoracic Society recommendations were to defer testing that was not essential to mitigate infection risk.

277. Professor Douglass observed that James' tryptase from 27 May was 37 mcg/L (normal level <15 mcg/L) and this remained elevated for 24 hours post his initial anaphylaxis. Tryptase is a product of mast cells, the histamine-containing cells in the body. Raised mast cell tryptase in a blood test is indicative of mast cell degranulation. Although there may be other causes, in this setting it was suggestive of an acute allergic reaction.

278. Professor Douglass noted the following with respect to the preventability of James' death:

    a. Not all anaphylaxis deaths are preventable.

b. Even with the presence of qualified doctors in an emergency department setting, resuscitation in this case was unsuccessful. Tragically, anaphylaxis can be extraordinarily difficult to treat and severe asthma similarly requires specialist intervention.

c. Prevention of trigger exposure is the *only way* that anaphylaxis prevention could be absolutely assured. For example, avoidance of food and clear food labelling. Noting that whilst challenging to implement, clear labelling of allergenic foods does increase the chance of avoidance of its consumption.

d. Biphasic anaphylaxis is well described, as are the risk factor for its occurrence of more than one dose of adrenaline being required for treatment of the initial anaphylactic event and the requirement for asthma treatment. Consideration of this may have enabled the staff at Holmesglen to respond more quickly and appropriately in the event of James' anaphylactic deterioration.

e. Prevention of asthma: earlier escalation of treatment may have attenuated the asthma response and increased chances of a favourable outcome. The complication of maintenance asthma treatment and food allergy is not specifically mentioned in the National Asthma Management guidelines but these could be strengthened in this regard providing doctors with an opportunity to intervene with escalation of therapy and a licence to do so.

f. Resuscitation: Respiratory arrest subsequent to asthma or anaphylaxis is a critical and life-threatening emergency from which survival is far from assured. The prioritisation of ventilation in resuscitation of a primary respiratory arrest is not explicit in the guidelines for acute cardiac resuscitation. The mode of ventilation following James' respiratory arrest was not successful, evidenced by the complication of by pulmonary hyperinflation leading to pulseless electrical cardiac activity (**PEA**) and barotrauma, evidenced by bilateral pneumothoraces. There is evidence that this practice could be improved. Evidenced by hyperinflation leading to PEA and barotrauma (pneumothoraces). Australian Resuscitation Council (**ARC**) guidelines prioritise cardiac compressions over ventilation – this is a deficiency in respiratory arrest patients. The resuscitation of primary respiratory, as opposed to cardiac arrest deserves separate advice in the Australian resuscitation guidelines as evidenced by this case. It is also evident in the resuscitation

that James underwent following his acute deterioration, there appears to be little recorded employment of fluid resuscitation.

279. She noted that James' tragic loss serves to emphasise the extensive burden and risk of anaphylaxis and food allergy which is experienced by as many as 1:20 young people in Australia and that standards of care and diagnosis for people with food allergies including refining trigger avoidance and injector prescription will require a broad response of medical and public health systems to achieve.

Professor Anne-Maree Kelly

280. The Court's expert, Professor Anne-Maree Kelly (**Professor Kelly**) provided an expert report to the Court and gave evidence as part of an expert panel. Dr Kelly is an Emergency Physician.

281. Professor Kelly advised that in Australia, fatal anaphylaxis is rare but not unknown. She noted that the rate of food-related anaphylaxis deaths in Australia is estimated to be about 1 per year and that the rate of fatal anaphylaxis due to food appear to have remained stable, despite a significant increase in admissions to hospital for food-related anaphylaxis. Of these the vast majority are in people aged between 5 and 35 years. Professor Kelly noted that active asthma was present in a large proportion of cases of food-related anaphylaxis deaths and previous anaphylactic reactions were rare. In addition, that in research reports, most patients who died did so despite having received treatment with adrenaline, although the timing of administration was sometimes after onset of cardiac arrest.

282. Professor Kelly advised that international research suggests that young adults with a history of asthma and previously known food allergy particularly to peanut/tree nuts are at higher risk of fatal anaphylaxis reactions. Delayed adrenaline injection is associated with fatal outcomes, but timely adrenaline alone may be insufficient to prevent death. In the United Kingdom Fatal Anaphylaxis Registry, up to one-third of fatalities occurred despite timely adrenaline administration.

283. Professor Kelly undertook a guideline review which included that of the Australasian Association of Clinical Immunology and Allergy, World Allergy Organization, Royal Children's Hospital and Australian and New Zealand Committee on Resuscitation

(**ANZCOR**) Anaphylaxis Flowchart.

284. The *Australasian Association of Clinical Immunology and Allergy* guidelines noted under the section - Special situation: Overwhelming anaphylaxis (cardiac arrest) states:

Key points:

- There may be massive vasodilatation and fluid extravasation.
- It is unlikely that IM adrenaline will be absorbed in this situation due to poor peripheral circulation.
- Even if absorbed, IM adrenaline on its own may be insufficient to overcome the vasodilatation and extravasation.
- The need for both IV adrenaline bolus (cardiac arrest protocol, 1 mg every 2-3 minutes) and aggressive fluid resuscitation in addition to CPR.
- To not give up too soon - this is a situation when prolonged CPR should be considered, because the patient arrested rapidly with previously normal tissue oxygenation and has a potentially reversible cause.

285. The ANZCOR Anaphylaxis Flowchart, says for patients having suffered a cardiac arrest, the ANZCOR advanced cardiac life support algorithm is indicated.

286. Professor Kelly advised that in her experience (more than 30 years), in patients who have been treated with IM adrenaline, recurrence of symptoms requiring additional treatment is uncommon and symptoms are rarely severe. She had not experienced a case such as James' case with sudden, severe symptoms recurring over such as short time frame after a period of symptom resolution post administration of adrenaline.

287. Professor Kelly considered that the treatment provided to James by Ambulance Victoria clinicians was reasonable and consistent with national and international guidelines, for the following reasons,

- An appropriate clinical assessment (history and examination) was performed;

- Adrenaline was appropriately administered after initial assessment and repeated when symptoms did not completely resolve; and

- A decision was taken to transport James to an ED for further observation and treatment.

288. Professor Kelly also considered that it was reasonable to transport James to a private hospital ED with the staffing and resource profile of Holmesglen Private Hospital, noting amongst other things that there was nothing in James clinical appearance at the time the decision was made that would indicate that he was likely to deteriorate and require ECMO treatment or other treatment not available at that hospital.

289. Professor Kelly noted that the process of triage, is brief and occurs over about 3-5 minutes, and is designed for assigning an urgency category for treatment. She noted that it takes into account features of the history of the illness/injury, the risk of sudden deterioration and a physiological assessment.

290. Professor Kelly noted that the decision in this case was between ATS categories 2 and 3 based in part on the risk of recurrent symptoms of anaphylaxis. For category 2 the target maximum times to see a clinician is 10 minutes and for category 3 it is 30 minutes. She noted that a triage category can be changed if a patient's condition changes and irrespective of the triage category assigned, a treating nurse can escalate care at any time by directly requesting an urgent medical review.

291. Using the *Emergency Triage Education Kit – Quick Reference Guide* and assuming that James had mild wheeze at the time of triage but had been treated with adrenaline, Professor Kelly considered that ATS 3 would have been reasonable. Professor Kelly did however say that it could be argued that ATS 2 was more appropriate because the wheeze may have been an indication of recurrent anaphylaxis effects but *this is a judgement call based on overall assessment at the specific time of triage*.

292. She noted however that irrespective of the category assigned, James was attended by a doctor within 10 minutes of his arrival, consistent with the ATS 2 treatment time target. Therefore, assignment of ATS triage category is very unlikely to have changed what happened.

293. With respect to where James was placed, Professor Kelly considered that his condition on

arrival was not indicative of a requirement for a resuscitation cubicle. He had mild wheeze, normal vital signs and normal work of breathing. In her experience, in most hospitals in Victoria, care would have been in a monitored (high acuity) cubicle/room, but not necessarily a resuscitation cubicle.

294. She further noted that at the time, which was during the pandemic, guidelines from health departments and learned colleges were that, where possible and clinically appropriate, patients with suspected COVID (based on presence of symptoms such as fever and sore throat) should be managed in a way so as to minimise risk of transmission of the virus to other patients. In her experience, this usually led to S-COVID patients being managed in negative pressure rooms, enclosed rooms or in cohorted areas within ED.

295. Professor Kelly further understood that the room which James was assigned was enclosed but had full monitoring and emergency equipment and was close to the staff station. In her experience, this is the same equipment that would be available in other high acuity cubicles/rooms in emergency departments, such as those used for assessment and monitoring of patients with potential heart attack, stroke or moderate trauma.

296. Professor Kelly further noted that in Cubicle 1, James had 1:1 nursing in the period from his off-load from the ambulance to and during his deterioration, his deterioration was recognised promptly and escalated, he was seen by a doctor quickly after the nurse's request for assistance (and within 10 minutes of arrival), that a support nurse was present outside the room to get drugs and additional equipment as needed and that he promptly received treatment, including IM adrenaline, in that area.

297. Professor Kelly indicated that while it might be argued that if James had been allocated to a resuscitation area initially there might have been some minor time savings, however in her opinion, these would have been very small and unlikely to have influenced the outcome.

298. Professor Kelly considered that overall, James' initial ED management was reasonable, with her principal reason being that guideline recommendations were followed.

299. However, she noted with the benefit of hindsight, that the onset of wheeze and mild shortness of breath indicated recurrence of anaphylactic features. This was in the context of normal vital signs and having received two doses of IM adrenaline.

300. She noted that relevant guidelines suggest the use of inhaled salbutamol and corticosteroid for persistent wheeze.

301. In the overall context, she opined that it was not unreasonable of RN Choudhary to have administered salbutamol. When James' condition worsened (within a few minutes with the nurse at the bedside), a doctor was summoned, and further IM adrenaline as well as hydrocortisone were given. Further when James' complained of upper airway symptoms, nebulised adrenaline was initiated (as suggested by the guidelines) and a decision was taken to move James to a resuscitation bay.

302. Professor Kelly noted that given that James suffered a cardiac arrest very quickly there probably was not time to start an adrenaline infusion as suggested by the ASCIA guideline.

303. Professor Kelly considered that James' deterioration was recognised and managed reasonably, for the following reasons,

- The treating nurse identified and escalated concerns about James' condition within a few minutes of his arrival;
- A senior doctor promptly responded to the nurse's request for assistance;
- Relevant medications, including salbutamol, IM adrenaline, IV hydrocortisone and nebulised adrenaline, had been given or commenced within about 10 minutes of James' arrival at the ED and within about 5 minutes of verbal orders being given. In her experience, this was consistent with the time required to obtain, draw up and administer the medications, irrespective of treatment location.
- When James continued to deteriorate, he was promptly moved to a resuscitation area with the major reason likely to be an anticipation of a need for advanced airway management (such as intubation).
- When James suffered a cardiac arrest, he was treated according to an appropriate cardiac arrest guideline.
- When James failed to respond, rescue ECMO was requested.

304. Regarding the specific aspects of the emergency treatment Professor Kelly noted the

following,

a. Adrenaline dosing, timing and frequency

After James' cardiac arrest, the records suggest that IV adrenaline was given every 2-4 minutes except for a period between 4.28pm and 4.35pm. It is unclear if this is a documentation error or a true gap. Those intervals are consistent with ALS Guidelines.

b. The airway management in this case, specifically the time to intubation

An LMA was inserted 'as soon as CPR commenced'. This was changed to endotracheal intubation at about 4.29pm. Given the relative treatment priorities, the progression of airway management in this case was, in her opinion, probably reasonable.

c. The use of amiodarone

The use of amiodarone is consistent with the ANZCOR algorithm for a shockable rhythm as VT. The records suggest that the two doses given were administered after the advent of the non-shockable rhythm PEA. Once PEA was the rhythm, amiodarone would not have been indicated.

As it appears from the statements that the record of drugs given was, at least in part, compiled after the event, it is possible that amiodarone was given earlier than recorded and when VT was present. This would have been consistent with the guidelines.

d. When the clinical scenario warranted consideration of escalation of treatment such as to ECMO

Professor Kelly noted that time passes quickly in events such as this. The situation is very stressful and highly dynamic. Therefore, it can be hard for clinicians to be managing the cardiac arrest and watching the clock. Research evidence suggest that the longer the period of conventional CPR without response, the worse the outcome. Professor Kelly was not aware of any widely accepted duration of CPR after which a referral to ECMO is recommended. She noted that some researchers have suggested cut-offs of 10 and 16 minutes. Recognising the complexity and resource demands of this dynamic situation, in her opinion, referral at about 20 minutes was reasonable.

305. Given the rarity of the case, Professor Kelly considered that the best way to raise awareness of it is by sharing James' story with ED clinicians in Victoria and Australia.

306. She agreed that the external guidelines provide options regarding further treatment of wheeze and upper airway symptoms after IM adrenaline has been given. She also stated that the treatment options are not alternatives to further doses of IM adrenaline, if required.

307. Professor Kelly considered that prior to this event, it could not be predicted that James would suffer a severe anaphylactic event.

308. In her opinion, once symptoms had resolved and James looked well, it could not have been predicted that he would have a precipitous recurrence of such severe symptoms. That said, he was being managed in an area where recurrence could be promptly identified and responded to.

309. Professor Kelly noted that it was it was important to remember that the same sequence of events could have happened at any hospital and with the same outcome.

310. In particular, Professor Kelly noted that it could also have happened in an ambulance or on an ambulance trolley awaiting off-load at a public ED. Her estimate is that the ambulance transfer time to The Alfred Hospital or Monash Medical Centre is about twice that from James' home to Holmesglen and looking at Victorian Agency for Health Information (**VAHI**) data in mid-2021, median time to offload ambulance patients at The Alfred Hospital and Monash Medical Centre were of the order of 25 minutes.

Professor Simon Brown

311. The Court's expert, Professor Simon Brown (**Professor Brown**) provided an expert report to the Court and gave evidence as part of an expert panel. Professor Brown is an Emergency Physician.

312. Professor Brown considered that James' presentation of anaphylaxis is typical for both the timing of deterioration and the specific clinical features that were observed. The serial blood tryptase levels taken after the event (very high, then rapidly falling to normal) confirm the diagnosis and the treating staff appear to have had no difficulty recognising that this was a severe anaphylactic reaction when deterioration occurred.

313. Professor Brown indicated that it is well-recognised that life-threating bronchospastic ('asthma-like') reactions to food can be delayed for some time after ingestion. He stated that bronchospasm appears to be the first life-threatening feature to appear in this case, associated with a rapid drop in oxygen saturations prior to collapse and a very 'tight' chest (i.e. difficulty ventilating) after intubation according to Dr Akinloye. However, he did note that some aspiration of stomach contents was observed (and evident at necroscopy). He said that this is a plausible contributor or alternate explanation for the difficulty that was encountered ventilating after intubation.

314. Professor Brown noted that a history of poorly controlled asthma with a history of food allergy (both were present in this case) is a recognised risk for this type of severe anaphylaxis. ASCIA therefore lists this scenario as an indication for prescribing an adrenaline autoinjector to be carried by the patient, even when an episode of anaphylaxis has not yet been observed.

315. Professor Brown noted that cardiovascular collapse, which followed rapidly after the onset of hypoxia in this case is also a well-recognised feature of anaphylaxis, and is likely a combination of distributive and hypovolaemic shock, cardiogenic shock, hypoxaemia and high pressures in the chest. He said that these pathophysiological processes and the appropriate response to them are widely learnt, practiced, and examined during specialist training in Emergency Medicine.

316. With respect to the management by Ambulance Victoria, Professor Brown considered that initial treatment with two IM doses of adrenaline, approximately 5 minutes apart was reasonable and consistent with AV guidelines, ASCIA guidelines and ARC guidelines. He indicated that given the requirement for two doses of IM adrenaline, it was reasonable to pause for 10 minutes in the back of the ambulance to try for intravenous access in case escalation to an intravenous infusion of adrenaline was required. He considered that when the first attempt was unsuccessful it was also reasonable to abort trying for intravenous access and move straight to hospital which was just 10 minutes away.

317. Professor Brown noted regarding transfer to private hospitals, that it is the responsibility of a private hospital that accepts an acute ambulance transfer to be ready to provide high-level resuscitation team care if required. In this case, Holmesglen accepted care for the patient, so

it was appropriate for Ambulance Victoria to take him there.

318. Professor Brown considered With respect to ATS category allocated, Professor Brown considered that ATS category 3 was not appropriate for a patient that has just received two intramuscular doses of adrenaline, does not yet have intravenous access, and who is still in the high-risk period when a reaction can worsen due to (i) the ongoing inflammatory mediator cascade, and/or (ii) the previously administered adrenaline becoming less effective as serum levels of adrenaline decline.

319. He noted that the history of asthma and known food allergy further increased the risk of deterioration.

320. Professor Brown considered that the ATS Category 2 would have been appropriate, with immediate transfer to a well-equipped resuscitation area for prioritised intravenous access and early medical review then starting an adrenaline infusion in the event of any deterioration.

321. He noted with respect to the impact of COVID in general that it impeded triage and timely/effective care due to inefficient department layouts, PPE donning time and SCOVID isolation areas being not well equipped. He said it was difficult to say exactly how this affected James' case but *Isolation Room 1* was not an appropriate location for patients at high risk of sudden deterioration.

322. Professor Brown considered that priorities after failure to respond or any deterioration after intramuscular adrenaline should be to:

    a. Establish an intravenous adrenaline infusion.

    b. Obtain wide bore intravenous access in preparation for bolus loading of fluid up to 40-50 ml/kg (i.e. up to 5 Litres of crystalloid fluid in a 100 kg patient) if the patient becomes hypotensive, to overcome reduced venous return due to vasodilation +/- fluid extravasation through leaky capillaries.

    c. Consider adding potent/specific vasoconstrictors such as metaraminol, noradrenaline or vasopressin in addition to adrenaline, if the patient remains hypotensive.

d. Secure an adequate airway, intubating if necessary.

e. Establish effective ventilation, including lung protective strategies if airway pressures are high.

f. Give additional bronchodilators (and steroids) if the adrenaline infusion is not having an adequate effect.

323. Professor Brown considered that the care delivered overall was not to an expected standard. Furthermore, the contemporary documentation of the resuscitation was unacceptable.

324. He considered the following to be deficient. An adrenaline infusion was not immediately commenced when deterioration was evident. There was a window of 5-10 minutes from the onset of deterioration (which appears to have happened during transfer, prior to 4.10pm) until the emergency buzzer was activated at 4.15pm, and when commenced, the rate was too low.

325. Professor Brown further noted that fluid resuscitation, according to the Emergency Response Data Collection record, did not commence until 4:41pm and he could find no other records to confirm any volume greater than 1L of saline being given in the early phase of the resuscitation. I note with respect to this matter, a statement was provided to the Court from Dr Tay (after the provision of Professor Brown's report) which noted that fluid was given.

326. Professor Brown commented that two doses of Amiodarone were given during periods of asystole (4.37pm) and PEA (4:46pm) when not indicated and that the ECMO team not contacted until 32 mins after cardiac arrest.

327. Professor Brown was also concerned that suxamethonium (given for intubation) was not indicated. The adrenaline infusion, when commenced, was at a low rate at the same time further bolus intravenous doses of adrenaline were being given. Adjunctive vasopressors (e.g. vasopressin, metaraminol) do not appear to have been considered early in the resuscitation. A focused ultrasound examination was not performed to exclude pneumothorax and cardiac tamponade as possible differential diagnoses for PEA, and to assess right ventricular filling. An incorrect ventilation strategy may have been adopted. Bilateral pneumothoraxes were not detected until after arrival at The Alfred, many hours later.

328. Professor Brown commented that the paucity of contemporary medical notes, combined with

the observed deficiencies in the resuscitation and the subsequent response from Holmesglen raised questions as to whether an effective, well-practiced system for resuscitation emergencies is in place.

Professor Peter Cameron

329. On behalf of Holmesglen, Professor Peter Cameron (**Professor Cameron**) provided two expert reports to the Court and gave evidence as part of an expert panel. Professor Cameron is an Emergency Physician.

330. With respect to hospital management, Professor Cameron noted that when James presented to Holmesglen, a series of events unfolded, which even the most advanced hospital with all known technical facilities and specialised doctors may not have been able to prevent. He noted that following arrival, when James appeared to have had a relatively mild anaphylactic reaction to nuts, he was managed according to protocol.

331. Professor Cameron considered that he did not suffer long delays to treatment, and when he suddenly deteriorated, expert initial resuscitation happened within minutes. In addition, that the profound anaphylactic shock that James suffered, did not respond to standard therapy, which involves high dose adrenaline, with airway support. He noted that the doctors were cognisant of this and within a short period called the statewide ECMO service. He considered that the response was quick, but given the logistics, could not have happened any more swiftly.

332. Professor Cameron further considered that the doctors should not have given adrenaline or other agents more quickly than they did, because James was stable up until the point of sudden deterioration.

333. His only criticism was that James should have received steroids after two doses of adrenaline, however, he was not sure that this would have made any difference in that early period.

334. Professor Cameron also considered that the COVID restrictions and isolation made assessments much more difficult for the nurses and introduced delays in assessment and treatment. He observed that looking at the notes, it is unclear how much delay this introduced,

but it may have resulted in a few minutes delay, but in any event, he was not sure that this would have altered the outcome in this case.

335. Professor Cameron further considered that the hospital management accorded with standard management of anaphylaxis and in addition, the early activation of the ECMO service was exceptional. He said that the restrictions in place because of COVID, placed an added burden on clinicians, but again, this probably only resulted in a few minutes delay to assessment and deterioration appears to have occurred following the initial assessment. He said that the deterioration was recognised quickly, the right treatments were given and CPR and airway support were applied immediately.

336. In his second report, and in response to Professor Douglass' comment that the mode of ventilation was not successful (pneumothoraces and barotrauma), he noted that it may be an implied criticism that ventilation may have been more forceful and PIP higher than desired, but we do not know for certain if this is the case from the information provided. Professor Cameron said that it is highly likely that during the period of the cardiac arrest, that higher pressures may have been experienced and this could have caused the pneumothoraces. However, equally, cardiac compressions and the asthma itself, may have resulted in the pneumothoraces. He considered that Professor Douglass was making a general comment regarding training for this situation, so that all clinicians are aware of potential dangers of incorrect ventilation during an anaphylactic respiratory arrest.

337. In response to a number of comments made by Professor Brown which have been noted above, he made the following comments.

338. Professor Cameron agreed that a higher triage category and triage to a resuscitation bay may have resulted in faster action. He noted that at the time of triage, observations were stable and there was no indication for commencing an adrenaline infusion, so the delay in commencing an adrenaline infusion would be minimal – possibly a few minutes. He noted that as Professor Brown states, it is unclear whether this would have made any difference to the outcome.

339. With respect to the statement that biphasic anaphylactic reactions are not uncommon is correct. However, Professor Cameron said that it does not imply that all patients who receive adrenaline prehospital should go to the resuscitation bay or receive an adrenaline infusion.

Most biphasic reactions are much less severe than the initial anaphylactic reaction. He noted that there was implied criticism of the resuscitation team, however there was very little information on the dynamics of the team.

340. Professor Cameron agreed with the criticism of the documentation but considered that the intubation and resuscitation happened relatively quickly. He commented that, having reviewed many resuscitation videos for quality improvement purposes, the times did not seem prolonged.

Professor David Armstrong

341. On behalf of Holmesglen, Professor David Armstrong (**Professor Armstrong**) provided an expert report to the Court and gave evidence as part of an expert panel. Professor Armstrong is a paediatric respiratory physician.

342. Professor Armstrong did not consider that James's death was preventable and conveyed that his *tragic demise was the result of several factors that* he did *not believe could have been foreseen*.

Asthma

343. Professor Armstrong considered that James' asthma was poorly managed or controlled in the months leading up to his death. He noted that although his history suggested quite frequent asthma with presentations to emergency departments and documentation by general practitioners are frequent, that Ventolin usage and reluctance to take his medication it appears from the notes available to him. However, like many children with asthma, his symptoms were improving as he was getting older.

344. Professor Armstrong noted that the evidence to support this was James' ability to partake in physically demanding rehearsals for the school musical without any asthma symptoms or indeed needing his Ventolin. It may have been helpful to confirm that his asthma was not an issue if pulmonary function testing or lung function testing had been available, but as already mentioned, although this was ordered by Dr McComish, it was not obtained because of Covid restrictions in the lung function laboratory.

RSV Infection

345. Professor Armstrong noted that it is well recognised that infection with respiratory syncytial virus occurs at all ages and can itself result in lung inflammation known as pneumonitis. In addition, that RSV can also trigger asthma exacerbations. Professor Armstrong indicated however that he was not able to say to what extent RSV contributed to James' death, but he certainly considered that it made a contribution. He noted that there are no current widely available medications to prevent or treat RSV infection.

Anaphylaxis

346. Professor Armstrong noted that James had a long history of allergy to certain nuts, but no history of a severe systemic allergic reaction which would be considered anaphylaxis, making this event James' first episode of anaphylaxis. He further noted that this episode of anaphylaxis was of a biphasic character, that is, there was an initial burst of symptoms, James seemed to improve and then got much worse again. Professor Armstrong noted that biphasic and delayed anaphylactic responses have been well reported, but did not think that these cases are as well-known as they should be.

347. He said that the standard treatment for management of anaphylaxis is adrenaline administration, and in patients with both asthma and anaphylaxis for sudden deterioration, the well-known recommendation is to administer adrenaline first.

348. Professor Armstrong noted Professor Brown's opinion was that an adrenaline infusion should have been started as soon as James arrived at Holmesglen. He noted however, that on arrival James had no respiratory symptoms, and was well enough for his father to feel comfortable to leave him and return home. Therefore, it was his opinion, that there was no reason to start an adrenaline infusion at that time.

349. Professor Armstrong stated that wheeze, cough and respiratory distress only developed once he was transferred from the ambulance into the emergency department cubicle and that these symptoms progressed very quickly – in fact only 12 minutes elapsed from the time Ventolin was first administered to the code blue being called.

350. Professor Armstrong did agree that current Australian Society of Clinical Immunology and Allergy Anaphylaxis Guidelines recommend administration of IM adrenaline before

salbutamol for the treatment of wheeze in the setting of acute anaphylaxis, and to consider the use of an adrenaline infusion if more than 2 doses of IM adrenaline are required.

351. He noted that, given James also had RSV infection and severe asthma in addition to acute anaphylaxis, he is unsure whether an adrenaline infusion would have prevented the severe and rapid deterioration that James suffered from.

352. Professor Armstrong said in summary that, James had an acute RSV infection, inadvertent exposure to cashew nuts which triggered his first ever anaphylaxis episode that was biphasic, and in the second phase produced an extremely rapid and severe anaphylactic episode. He said that these two factors together with his underlying asthma resulted in an episode that was impossible to reverse.

353. Professor Armstrong considered that the ambulance personnel, doctors and nurses at Holmesglen were faced with an extremely difficult, stressful and rapidly escalating medical emergency situation, however their efforts were sadly unsuccessful.

A/Professor Luke Lawton

354. On behalf of James' family, A/Professor Luke Lawton (**A/Professor Lawton**) provided an expert report to the Court and gave evidence as part of an expert panel. A/Professor Lawton is an Emergency Physician.

355. A/Professor Lawton noted that the nature of anaphylaxis, a disease which can deteriorate rapidly, represents one of the few disease processes where matters of mere minutes can be determinative of a catastrophic outcome. He further noted the conflicting information in relation to certain aspects of the case, including when the wheeze occurred on arrival to Holmesglen, what was handed over between the ambulance and the triage nurse and what time IM adrenaline was later administered.

356. A/Professor Lawton further noted that asthma and anaphylaxis are both type I[129] (IgE

[129] *Type I hypersensitivity occurs as a result of exposure to an antigen. The response to the antigen occurs in two stages: the sensitization and the effect stage. In the sensitization stage, the host experiences an asymptomatic contact with the antigen. Subsequently, in the "effect" period, the pre-sensitized host is re-introduced to the antigen, which then leads to a type I anaphylactic or atopic immune response.* CB at p.987.

mediated) hypersensitivity reactions and that asthma is a risk factor for more severe food induced anaphylaxis. He noted that it may increase the burden of allergic disease during an acute event and it may delay diagnosis because anaphylaxis might initially be mistaken for an asthma attack.

357. A/Professor Lawton noted that the emergency treatment of anaphylaxis is the immediate injection of 0.01mg/kg to a maximum of 0.5mg of intramuscular adrenaline and noted the following:

    a. This should be undertaken as soon as possible, so as to induce vasoconstriction and prevent the development of airway obstruction and hypovolaemic shock.

    b. Both the Australian and New Zealand and United Kingdom resuscitation councils recommend that adrenaline be administered immediately upon suspicion of anaphylaxis, and that further adrenaline should be administered 5 minutes after the first dose if there is an inadequate response.

    c. Approximately 10% of food anaphylaxis may be resistant to a first dose of adrenaline, but 98% of reactions respond to a second or third dose.

    d. The peak of adrenaline activity occurs approximately 5 minutes after intramuscular injection.

358. A/Professor Lawton considered that the wheezing developed after arrival at the ED was concerning for a recurrence of anaphylaxis and that it was not reasonable for a competent physician to attribute this symptom to another related pathology. He considered that James should have been assumed on presentation to have ongoing and unstable anaphylaxis, which is a time critical medical emergency.

359. A/Professor Lawton noted that James appeared to have consumed a significant amount of the allergen (cashews in sauce) and the implications of this are that he would have had an ongoing and significant exposure to the allergen because it remained in his digestive tract, especially compared with another hypothetical anaphylaxis patient who has but one brief contact (such as a bee sting) that sparks their immune chain of events.

360. He considered that James would have been at risk of continuing allergy until his exposure to the allergen was removed and therefore, as the adrenaline administered earlier in the day at 3.00pm and 3.05pm began to wear off, the pathophysiology of the continued exposure to cashew allergens would recur. And so, in the context of a patient with a known nut allergy, a wheeze developing 14-29 minutes after the last adrenaline is therefore concerning for ongoing anaphylaxis, and should have been recognised as the beginning of a medical emergency and at the time of presentation to ED, where further respiratory symptoms were developing, IM adrenaline should have been immediately administered.

361. A/Professor Lawton noted that anaphylaxis is much more likely to respond to treatment before a cardiac arrest occurs.

362. He also considered that as a result of James' wheeze, he should have been triaged to ATS category 2 and placed into a high acuity treatment area, and had a higher tier clinical response activated to ensure he was expediently seen by senior clinicians. He said that had such a response occurred, even with recognition of the wheeze and its implications as late as 3.59pm, a further dose of IM adrenaline could realistically have been administered by 4.05pm, some 5-10 minutes before James' arrest.

363. A/Professor Lawton considered that had adrenaline been administered at this time, it *is more probable than not* that James' hypoxic cardiac arrest would have been averted, and he would *more probably than not* have survived.

364. In relation to further medical management A/Professor Lawton considered that the administration of suxamethonium was not needed but it would not have meaningfully changed the outcome; there was no indication for a focused ultrasound; he was neutral on whether fluid resuscitation would have altered the outcome; he was not critical of the ventilation strategy used; and he did not consider that the amiodarone received would have materially affected the outcome. A/Professor Lawton said that he was not familiar with the relevant guidelines for activating ECMO.

365. A/Professor Lawton considered that following the Code Blue hospital management was reasonable, and that he did not think that any of the actions undertaken contributed

substantially to the outcome. He advised that once James' had suffered a cardiac arrest from anaphylaxis, his prognosis was always very grave.

Professor Warwick Butt

366. On behalf of James' family, Professor Warwick Butt (**Professor Butt**) provided an expert report to the Court and gave evidence at the inquest. Professor Butt is a Paediatric Intensive Care Unit Physician.

367. Professor Butt considered that given James had a history of asthma, intercurrent infection, anaphylaxis, 2 doses of adrenaline and ongoing symptoms during transport and new development of asthma, he should have at least been triaged as ATS 2 category or, given his risk factors for deterioration, it would be more appropriate for ATS 1 category. He said that James needed observation, monitoring and immediate treatment with Ventolin, Hydrocortisone, IM Adrenaline, and an insertion of an IV for fluids. He considered that this would have led to treatment 15-20 minutes earlier and improved James' cardio-respiratory function and more likely than not, averted the cardiac arrest.

368. Professor Butt advised at inquest that Paramedic Hammond's position was not unreasonable regarding why a third dose was not given, and he would otherwise not feel comfortable to comment on Ambulance Victoria's decision.

369. Professor Butt considered that there was a total lack of understanding of the biphasic response associated with food ingestion anaphylaxis, especially to nuts and especially after treatment failure (i.e., need for repeated adrenaline injections) and an understanding would have led to James having had urgent nebulised Ventolin, Intravenous Hydrocortisone, IM Adrenaline, and consideration of respiratory support.

370. Professor Butt considered that James did not receive appropriate treatment and that the deficiencies of care are in the delay to the treatment that was eventually given. He considered that this meant there was less time for those treatments to be effective in improving his status and thus potentially avoiding the cardiac arrest and that if the cardiac arrest had been avoided it is more likely than not, that James would be alive today.

371. He considered that respiratory support and anti-bronchospasm medication should have been delivered as soon as desaturation/ wheeze or increased work of breathing was identified i.e. at 4.00pm.

372. Professor Butt considered that the kind of anaphylactic reaction James experienced was *uncommon*.

373. Professor Butt further considered with respect to the resuscitation, that Suxamethonium did not harm James; two doses of amiodarone were excessive (especially given 300mg was used as a first dose and would cause hypotension/ventricular dysfunction) and lignocaine for ventricular arrythmia would have been a useful choice as it does not cause hypotension or impairment of ventricular function. In relation to the management of hypotension and lactic acidosis during resuscitation, he considered that a better treatment of these parameters was required and could have been accomplished with a combination of fluids, vasopressors, and inotropes. In terms of a focus on ultrasound, he considered that ideally a cardiac ultrasound may have been useful to look at ventricular ejection, ultrasound, and Xray to exclude hyperinflation/pneumothorax would be essential to deal with other causes of hypotension that are amenable to treatment such as drainage or ventilation changes especially after being put on ECMO.

374. He did however consider that the time to call ECMO was reasonable, within approximately ~34 minutes of intubation with CPR continuing during that time.

375. At inquest, Professor Butt clarified that he considered James should have been triaged as a ATS 2 category until the wheeze, following which he became a ATS 1 category, which he noted wasn't a *mere progression* of the disease as is not unexpected, and James should have got adrenaline.

376. Professor Butt noted that placing James in the isolation room implied that he did not need immediate treatment, that is, he was stable and safe (i.e. ATS 3 category) which underestimated the clinical situation with its attendant risk of deterioration and would delay any urgent treatment that may be needed. Whereas placing James in a resuscitation bay would have allowed more timely and appropriate treatment to be given thus improving his chances of his survival.

377. Having noted that the paramedics reported the deterioration to triage nurse and observed James having 15 puffs of Ventolin, Professor Butt advised that the responsibility for care had been transferred to the ED staff of Holmesglen and that they should have listened and changed his status immediately to ATS 1 category and this would have reflected the development of an important new symptom and one that needed urgent treatment.

378. At inquest, Professor Butt stated that this entailed IM adrenaline within a minute or two and that he was very confident that an earlier dose would have had a better result, but he was unable to say *how good a result.* He further stated that had James received adrenaline earlier, and repeated doses, it is more likely than not the cardiac arrest would have been avoided.

379. At inquest he stated,

> *So everything they did a bit later, …. if that had happened earlier – and I'm not blaming any individual per se. I see it as a system issue rather than a specific person's issue. But had, 15 minutes earlier, the treatment started, I think it is more likely than not he would have survived*.[130]

380. Professor Butt explained that James was seen more than an hour before the event that he died from, and that is why he used the word *system* saying that it was therefore more than 60 minutes for the system to prevent the events.

381. With respect to the significance of the RSV, which they could not have known about, although an infection does carry an extra risk, Professor Butt said that James had active inflammation, *so anything that happens is going to on that background be much worse*.

382. Professor Butt said that there was no doubt that the wheeze James experienced was the anaphylaxis progressing and that the best case of James surviving was that the cardiac arrest was avoided, which would have been by more timely administration of adrenaline. He stated between 75 and 80 percent more likely than not to have avoided an arrest but 100 percent*, Absolutely not, but no one can say that.*[131]

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[130] T101, L22-29.
[131] T104 L9-16.

383. At inquest he commented in relation to the resuscitation effort that there were deficiencies in the post-cardiac arrest care, but it was a very complex situation. He considered that he thought that Holmesglen could do *a little better*; it was not quite as *good as perhaps they could have been* and there was room for improvement, but it certainly was not negligent. It was however hard to say whether this would have made a material difference and no-one could say this with confidence.

384. Professor Butt concluded in his report,

> *[James] died of severe ingestion anaphylaxis due to a lack of appreciation of the trajectory of [James'] illness and a lack of recognition by attending staff, of his risk of progressive disease and possibly death. He had rapid onset of symptoms after ingestion of food, and incomplete resolution of all his symptoms after two doses of adrenaline. During transport he continued to have symptoms of anaphylaxis, albeit mild, and on arrival at Holmesglen, 48 minutes after his last Adrenalin IM injection, he developed new onset of wheeze. This represented a substantial deterioration (with the background knowledge that he had nut allergy, intercurrent infection, asthma, and ongoing symptoms after 2 doses of adrenaline) and mandated immediate assessment and treatment as a Category 1 not Cat 3. This lack of perspective about [James'] disease progression and risk of death, led to a slow response to his deterioration and coupled with problems of airway management during resuscitation, and low blood pressure and oxygenation prior to ECMO, ultimately contributed to his death.*[132]

EXPERT PANEL

Expert Advice on the provision of care – Concurrent Evidence

385. The Expert Panel further clarified the opinions provided in their reports via concurrent evidence. I have set out matters which I consider are significant in relation to these views (and not already articulated), where appropriate.

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[132] CB at p.1059.

386. The members of the Expert Panel were all imminent in their field and agreed in many respects, but there were departures particularly in relation to whether different treatment would have altered the outcome in this case.

387. It was noted that as James appeared to have consumed a significant amount of the allergen (cashews in sauce) and he had an ongoing exposure to the allergen because it remained in his digestive tract. James therefore would have been at risk of continuing allergy until his exposure to the allergen was removed.

388. In the context of James' RSV, the Court heard that multiple published reports of anaphylaxis fatalities documented that a concurrent respiratory illness or a febrile illness is a major risk factor for fatal anaphylaxis. It was considered another factor that made James more vulnerable, than he might otherwise have been, to a severe anaphylaxis response. That is, the RSV made him more vulnerable to an extreme respiratory response to the allergen.

389. In this context, Professor Armstrong referred to several findings at autopsy that suggested that James had much more significant asthma than his symptoms would suggest; an underlying significant chronic asthma component that was unrecognised.

390. There were varying views amongst the Expert Panel on whether James suffered a biphasic reaction or otherwise described as, a continuation of the anaphylaxis or a prolonged/protracted reaction or a recurrence of his anaphylaxis symptoms (with a temporary response to Adrenaline), but in practical terms it does not make a difference to how a patient is to be treated.

391. The Expert Panel noted that a cardiac arrest from anaphylaxis is a rare occurrence.

392. There was general agreement that any patient who goes into cardiac arrest in the context of anaphylaxis faces grave odds but prolonged resuscitation should be undertaken as the patient is often relatively fit and healthy with an oxygenated body.

393. There was also agreement that from the point of cardiac arrest, even with optimal management, the outcome was more likely than not that James would not recover (Professors Brown, Kelly and Armstrong and A/Professor Lawton), although Professor Douglass said that the chances were low *but nevertheless not zero*.

394. Comments were made expressing surprise that the prolonged CPR in this case had not been able to get James' heart to start as he was an otherwise young and fit person and, in those circumstances, it was hard to be certain about what occurred, with some experts suspecting it was a mixed picture that complicated matters.

395. Professor Douglass also emphasised the need for ventilation in both her report and at inquest; if it was primarily a respiratory arrest, then ventilation at that time might have given clinicians longer to deliver the other treatments including adrenaline infusions and that might have made a difference to the outcome. She noted that more attention could have been paid to a ventilation strategy to preserve James' capacity to take up oxygen.

396. This was in the context of the guidelines that were in place at the time, noting that clinicians at Holmesglen followed those guidelines.

397. The Expert Panel agreed that the the best opportunity for a better outcome for James was to have prevented the cardiac arrest from occurring.

398. In addition, whilst there were no empirical studies, the earlier the administration of adrenaline the likely a better outcome.

399. Several scenarios were put to the Expert Panel about the effect of the earlier administration of adrenaline which are discussed in my conclusion, suffice to say there were a range of views in response.

400. The Expert Panel were asked to consider prevention opportunities, noting that their reports set out those in more detail.

401. Professor Armstrong indicated, as noted above, that this was not a straightforward case of just anaphylaxis and that RSV played a role but not sure to what extent.

402. Professor Douglass stressed the need for allergen avoidance and clarity of labelling, clarity of avoidance strategies and a capacity of the individual to adhere to them, noting they are critical parts of both the public health and the individual response.

403. Further, it was noted that a preventative asthma treatment would be important, and should be emphasised in the setting of people with food allergies.

404. The ability to recognise the significance of the wheeze in the circumstances was also crucial.

405. Professor Cameron did however caution against trying to predict things with the benefit of hindsight, noting that this was a functioning ED in the middle of COVID and we are delving into what may or may not have happened within five or 10 minutes noting that this is *a very uncommon event for someone to get exposed to a cashew nut in a burrito bowl and then die within an hour or two.* He further cautioned against disrupting an emergency department with *basically* well people occupying resuscitation bays, but also noted that the communication strategy between the clinical personnel involved in this case could have been better.

FOOD STANDARDS AND LABELLING

406. In Victoria, the regulatory and legislative mechanism to ensure food safety includes the Food Act 1984 and the Australia New Zealand Food Standards Code (**the Food Standards Code**), which is part of Victorian law.

407. The National Allergy Council (**the Council**) confirmed[133] that there is no requirement under the Food Standards Code for food service providers (such as cafes, restaurants, takeaway outlets and bakeries) to label their food, however they are required to provide accurate information about what the food is made from, including whether any ingredient contains allergens or may contain allergens, when a customer asks for it.

408. In addition, if a customer indicates that they are allergic to a food, the food service provider must ensure that the product provided does not contain the food with the particular allergen which has been identified. To be able to do this, they should have appropriate practices in place to prevent cross contamination with the declared food allergen when preparing the customer's meal.

409. The Council considered that the inclusion of an 'allergy requests' feature in the Uber Eats app in Australia is a welcome one as it allows the customer to clearly declare the food/s that they are allergic to.

410. The Council noted that currently in Australia, that food service providers are required to have

[133] Correspondence dated 29 July 2024

a Food Safety Supervisor, and the Food Safety Supervisor is required to undertake food safety training. However, New South Wales is the only a state that requires Food Safety Supervisor training to include comprehensive food allergen management training. That is, in all other jurisdictions, there is no mandated requirement to complete comprehensive food allergen management training.

411. The Council noted that in collaboration with the NSW Food Authority and Allergy & Anaphylaxis Australia they had developed a *food allergen management module* for Registered Training Organisations to use across Australia to deliver standardised food allergen management training. They noted that this module is based on the National Allergy Council's All about Allergens free online training which was developed in 2017 in consultation with key stakeholders to provide access to best-practice, nationally standardised food allergen management training that would be easy to understand and accessible to all.[134]

412. The Council were of the view that all staff working in food service, not just Food Safety Supervisors, should undertake food allergen management training. They considered that just like hospitality staff are required to complete a Responsible Service of Alcohol course, before they can be employed, food service staff should be required to complete the All about Allergens online training, which is available free of charge.

413. A number of general recommendations were made by the Council. I note that the Council recommended that *Best practice guidelines for food allergen management for online ordering* should be developed and noted that The National Allergy Council is developing best practice guidelines for food allergen management for online ordering in partnership with Allergy & Anaphylaxis Australia (**A&AA**) and this would underpin the development of an All about Allergens online course specifically for this type of food service.

414. In this case I note that the food was described on the online platform to include cashews, but you may have needed to select the meal to have seen this before ordering.

415. If there had been an 'allergy requests' feature on the delivery app at the time, this may have

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[134] *All about Allergens online training.* In addition, a range of practical best practice food allergen management resources have also been developed to support people working in food service and these are available free of charge from the *All about Allergens resource hub.*

avoided the incident as it would have prompted or reminded James of the need to check the meal he proposed to order for the nuts he needed to avoid.

416. I further note with respect to the NSW Food Authority requirement for Food Safety Supervisor training to include comprehensive food allergen management training, that the units of competency must incorporate key focus areas which were developed in response to common high risk food safety issues in the retail and hospitality sectors and include Allergen Management.

417. Maria Said, AM and CEO of A&AA[135] also provided a statement[136] to the Court and gave evidence at the inquest.

418. As noted by the Council, Ms Said also noted that not all food service staff are trained in food allergy management and training in food allergy is not mandatory for staff working in food service. Ms Said set out a myriad of things that could go wrong in the management of food service, with particular ramifications for allergen management, such as replacement of ingredients, although not relevant in James' case.

419. Ms Said noted that A&AA has reviewed the Uber Eats app and acknowledge that the 'allergy requests' model provides benefits to the consumer with food allergy. Unfortunately, in their testing of the app it appears that most food businesses do not support the 'Allergy requests' function. With 10 orders that they attempted to place, it stated, "Store can't accommodate in-app food allergy requests." Which she said diminishes the value of the app.

420. Ms Said stated that an issue is for greater awareness on the part of consumers about the potential hidden allergens that might exist in food.

421. Ms Said further stated that it is difficult to avoid the food you are allergic to, to check every food, every drink you put in your mouth every time and this is onerous and it is something that is a huge burden for people with allergic disease, but that doesn't take away from the

[135] Allergy & Anaphylaxis Australia (A&AA) is a registered charity and the only national patient support organisation in Australia focused on helping individuals and caregivers manage allergic disease including the risk of anaphylaxis. We work alongside and collaborate with government, food industry, schools, workplaces, health professionals and others.
[136] Dated 8 August 2024.

fact that they must do it to keep safe.

422. She noted that the obligation rests on the person who has the allergy to protect themself through care and attention and asking questions. She referred to this as the primary responsibility.

423. Ms Said referred to the fact that food service facilities have a responsibility as well and referred to the proposed recommendation supported by the Council regarding mandatory for allergen training for all staff. She indicated that they had worked to get the food industry to understand that food allergy is part of food safety but there had been pushback because food allergens only affect a small part of the population, but there is now acceptance that food allergy is a food safety issue.

424. Ms Said stated that they have a lot of reports of circumstances where people make a presumption that vegan food is safe, which is a risk for people with nut allergy because a lot of nuts are used in vegan food. It is also a real risk for people with milk and egg allergy because they presume that it is free of milk and egg.

425. Since 1 November 2018, Victorian and private hospitals have been required to notify the Department of Health (as currently named) of anaphylaxis presentations under an amendment to the *Public Health and Wellbeing Act 2009.* Now, anaphylaxis due to packaged food must be notified online immediately.

426. The primary purpose of the anaphylaxis notifications scheme is to allow the Department of Health to take swift action where a notification reveals a broader public health risk. Such action may include the oversight of a food company recalling an offending food product from the marketplace to protect public health. In addition, data collected will also enable the Department of Health to better understand the burden of anaphylaxis in Victoria and to inform public health policy, interventions and research.

427. Ms Said stated that the Vic Food Safety Unit has seen a huge increase in the number of people ordering food online, resulting in anaphylaxis, including reports related to vegan food. The Vic Food Safety Unit oversees the *Food Act 1984*, setting policy, guidelines, and risk management frameworks for food safety across the state. It supports local councils, who directly regulate food businesses, and manages food recalls and public safety incidents.

CONCLUSIONS

428. There is no evidence available to help determine what, if any information, on the Deliveroo app James relied on to guide his meal choice on 27 May 2021. I note the meal was described to include 'cashew' nuts and that he was able to contact the restaurant without issue to confirm that this was the case.

429. James was however always very careful with his food choices as he was acutely aware of the nuts he needed to avoid, and I suspect that he presumed a burrito bowl which contained nacho sauce, would only be made of cheese. The restaurant was however new to him and served vegan food, which regularly contains nuts instead of dairy products.

430. Following a response from paramedics to the symptoms James experienced, it is evident that their diagnosis of anaphylaxis and the need for four hours of observation at a hospital was uncontroversial. Nor was there any justifiable criticism of the actions of the paramedics in this context, noting in particular that the non-administration of a third dose of IM adrenaline was a reasonable decision, based on clinical practice guidelines and James' presentation at the time.

431. Significant to this case, as Counsel Assisting noted, was that on the day James was admitted to Holmesglen a fourth COVID lockdown was announced in Melbourne because of the rising number of COVID cases in the community. She noted that at that time, vaccines were not fully rolled out and rapid antigen tests were not available. In addition, COVID had significant implications for the management of hospitals, including the manner in which a triage was conducted, and the timing of emergency treatment. A further complicating factor in James' case was also the restrictions to lung function testing which were in place at that time.

432. Devastatingly for James' family, they were unable to be with him during parts of his admission due to outstanding results of COVID testing including following his collapse.

433. It is important to recognise in this case that James felt well enough to go to the hospital ward alone while his father went home briefly, and there was no hint, based on his presentation at that time, that within 20 minutes James would be unconscious.

Timing of events

434. Determining the time when various things occurred in this case following James' arrival at Holmesglen and before his deterioration, is a difficult task, and not without some uncertainty.

435. I note that there is however evidence of some recorded times which are relatively certain as they are automated, although require human input, such as the press of a button. These automated times provided some structure around when events occurred but then needed to be considered with contemporaneous notes (some before and some after James' collapse), statements (of varying ages), sometimes usual practices as well as evidence at inquest which took place some years after the events and related to short periods of time.

436. In addition, even with an automated time, unless it also counted seconds, a time recorded as 3.44pm, could be 3.44pm and 1 second or 3.44pm and 59 seconds, or anywhere in between, which may be significant in a case like this.

437. I consider the evidence of these automated times as follows.

438. Firstly, 15.44 (or 3.44pm) is documented in the Ambulance Victoria *Electronic Patient Care record* for *@Destination* which resulted from a button being pressed by Paramedic Nickson, *as we pulled into the driveway of Holmesglen Hospital.* As noted above this could have been closer 3.44pm or 3.45pm.

439. Secondly, there is evidence of a timestamped piece of equipment (being a ZOLL monitor) which is taken off a patient and entered into the Ambulance Victoria *Electronic Patient Care record* to determine when a patient is taken of the stretcher (*Off Stretcher*). The *Off Stretcher* time in this case is recorded as 15.53 (3.53pm), although this documentation was not available to the Court. Paramedic Nickson said at inquest that due to COVID she removed the equipment from James very quickly, possibly a minute after they entered the isolation room, although she was unable to say whether she disconnected the monitor prior to James standing and transferring onto the bed or after. Based on this evidence, Paramedic Nickson and James entered the isolation room about minute before the *Off Stretcher* time at around 15.52 (3.52pm) or 15.53 (3.53pm).

440. The Court was advised that similarly the ZOLL monitor was used by Paramedic Hammond to determine the *Triage time* he recorded in the Ambulance Victoria *Electronic Patient Care record* as 15.53 (3.53pm). He did however state at inquest that there could be some minutes of discrepancy in addition to this time.

441. Thirdly, the Holmesglen medical records, *Emergency Front Sheet*, recorded James' *Arrival Time* as *15:59* (3.59pm) and the Holmesglen medical records, *Emergency Patient Record,* recorded James' *Triage Time* as *15:59:52* (3.59.52pm).

442. The triage nurse advised at inquest that this arrival time, was done by *admin* (*generated by computer*), and is the same as the triage time, meaning it was probably done *in real time*. He could not definitively say whether the computer generated time was assigned when he opened a file or finished an entry, stating, "*I believe when it's finished*….'.

443. I note that according to the *Guidelines on the Implementation of the Australasian Triage Scale in Emergency Medicine,* the arrival time is the first recorded time of contact between the patient and Emergency Department staff and triage assessment should occur at this point. This suggests that the time is assigned by the system when details are first entered, not when they are completed, which also appears logical otherwise there would be a disjunct between the time.

444. In any event, if the computer system automatically generates a precise time at the completion of the notes, this appears to support a conclusion that the triage was conducted earlier than around 4.00pm.

445. Apart from these automated times, other times for events (apart from the Code Blue) are less certain.

446. The major conflict in the evidence is the difference between the triage time of the paramedics (also referred to as the handover) and that of Holmesglen – either around 3.53pm (with some additional minutes) or around 4.00pm. This is important as it relates to the earliest time James' new symptom of a wheeze and the need to use his Ventolin could have been responded to by Holmesglen.

447. The determination of other event times requires estimations based on witness accounts (the details of which have been set out in my finding). I note the following based on the evidence available to the Court:

a. Arrival at Holmesglen (*pulled into the driveway)* at around 3.44pm;

b. Followed by parking of vehicle, discussion/explanation in ambulance with James and exiting vehicle, approximately 1 to 2 minutes – estimate now in the range of 3.45 – 3.46pm;

c. Followed by attending Emergency Department for COVID triage discussion, approximately 1 to 2 minutes – estimate now in the range of 3.46 – 3.48pm;

d. Followed by discussion outside Emergency Department including with James' father, approximately 2 to 3 minutes – estimate now in the range of 3.48 – 3.51pm;

e. Followed by James being wheeled by paramedics into Holmesglen Emergency Department and the isolation room, approximately 1 minute, estimate now in the range of 3.49 – 3.52pm.

448. Despite this being a rather rudimentary process to estimate these times, I note that 3.52pm, as estimated above, is consistent with Paramedic Nickson's account of quickly removing the equipment from James within a minute of wheeling him into the isolation bay and the Zoll Monitor being used for the *Off Stretcher* time of 3.53pm.

449. As to the time of triage (or handover), I note that the paramedics entered the Emergency Department at the same time following which Paramedic Nickson wheeled James into the isolation room. Paramedic Hammond said he went straight to the nurses' station which was situated outside the isolation room where the triage (or handover) took place. There was no suggestion of a delayed start to the triage (or handover). This suggests that the triage likely commenced at around 3.52pm or 3.53pm, and based on the witness accounts went for likely no longer than about 5 minutes (this was a common estimate between the witnesses, although ANUM Frauenfelder did also say possibly seven minutes). Paramedic Hammond gave evidence of the triage being a minute or two but, in my view, the latter estimate appears more reasonable given the depth of the handover discussion described by Paramedic Hammond and

the evidence of RN Choudhary leaving the handover to retrieve items and return for the remainder of the triage discussion. Given these matters, in my view the completion of the triage (handover) discussion was as early as 3.54pm or 3.55pm and no later than 3.57 or 3.58pm. It's difficult to be any more precise than this in the circumstances.

450. The triage time recorded by Holmesglen at around 4.00pm is not consistent with this analysis, but could be explained if the triage nurse completed his handwritten notes and documents prior to entering the information into the Holmesglen system. I note that at inquest, ANUM Frauenfelder could not say if he was typing the triage notes during the ambulance handover or after the discussion had finished stating, *Could be either. You know generally, whilst they're talking to you, but it's not a hundred percent that.*

451. I further note that both paramedics completed the Ambulance Victoria *Electronic Patient Care record* after they attended to James, which provided two sets of eyes to ensure that it was completed accurately.

452. I note that Paramedic Hammond had a recollection of the bedside nurse going into the isolation room to attend James as he was leaving immediately after triage, but this is not in his contemporaneous statement or notes. In contrast, RN Choudhary had a recollection of a handover from the triage nurse and him preparing to go into the isolation room, which included the donning of PPE equipment, which he estimated to be some 3 minutes after the triage nurse's handover had been completed. This means that he could have attended James a bit earlier than 4.03pm.

453. I therefore consider that the first presentation of James' wheeze likely occurred <u>just before</u> 3.52pm or 3.53pm and that the triage (or handover) that followed the wheeze commenced around this time with a duration of between 2 to 5 minutes.

Transfer of information

454. It is clear from the evidence that James' new symptom of a wheeze and the need to use Ventolin was communicated by Ambulance Victoria during triage/handover at Holmesglen Emergency Department, which is evidenced by the statement and actions of RN Choudhary. As noted by Counsel Assisting, there would have been no reason for a spacer if there was no handover of a need for Ventolin.

455. I further note that reference to a 'wheeze' or 'wheezy' appears in the statements of Paramedic Nickson and RN Choudhary (who stated that he did not access Ambulance Victoria records to prepare his statement) as well as the Ambulance Victoria *Electronic Patient Care record* (completed on the day of James' collapse) and the Ambulance Victoria In-depth Review (completed shortly after James' passing) where Paramedic Nickson said she reported hearing a *slight wheeze* when James *breathed and mentioned to her partner the importance of handing this information over straight away.*

456. In addition, the evidence of Paramedic Hammond and RN Choudhary was consistent in several important ways, including his presence at triage/handover and RN Choudhary retrieving a spacer for James having heard the information about a *mild ongoing wheeze*.

457. In addition, Paramedic Hammond indicated that he utilised the relevant AV handover protocol at triage and gave a detailed description of the handover discussion at inquest. In contrast ANUM Frauenfelder appears to have limited recollection of the events. For example, it is clear that he did not attend the ambulance bay for a COVID triage, but this appeared in his statement. I further note that the retrospective note of ANUM Frauenfelder made on 6 June 2021, after James' passing, documents, *Pt talking in full sentences, nil airway distress/stridor/wheeze on arrival.* Given that he did not conduct James' triage directly because of COVID, the information included in this note could only have come from Ambulance Victoria, since he had no independent knowledge. On a plain reading, it does suggest a positive assertion from paramedics, that there was *nil wheeze*, which is not consistent with other evidence before the Court.

458. On the other hand, I note that ANUM Frauenfelder's statement to the Court contains no reference to him being advised by ambulance or anyone else of James' wheeze and the administration of Ventolin prior to entering the Emergency Department, nor is this information recorded in any of the hospital records, including those he authored. At inquest, he was certain he would have acted on the information had he heard it, but ultimately agreed at inquest that he may have *missed* the information.

459. I am however satisfied based on all the evidence before the Court that the information was relayed by Paramedic Hammond during the triage/handover discussion, but I am unable to determine how it may have been missed by the triage nurse.

460. It does however raise concerns about the manner in which Holmesglen Emergency Department was conducting handovers, from triage nurse to bedside nurse during the COVID period. This handover is obviously critical to ensure appropriate communications take place in the context of patient safety. This would be particularly relevant, during the COVID period when triage was not taking place directly with the patient.

461. There was limited information available to the Court about what occurred during this triage process, including whether the process was standardised to reduce communication issues.

462. I note in this context, the evidence that RN Choudhary took the spacer into the isolation room following his handover from the triage nurse. At inquest, ANUM Frauenfelder, commented in relation to his awareness of this, *no, 'cause that would have obviously rang alarm bells too for me*.

463. At inquest he also stated that in hindsight, he should have told the bedside nurse what signs to look out for regarding a deterioration, noting the reason for his admission.

464. In these circumstances, there was potentially a further missed opportunity for information to be clarified by the triage nurse during this process, so there was a common understanding about James' presentation after the Ambulance Victoria handover, to prepare for James' initial assessment or indeed to respond to his new symptom. This was an important process given that RN Choudhary was junior at the time.

465. I find therefore that the new information, which was clinically relevant to James' presentation, was communicated to Holmesglen Emergency Department and there were missed opportunities which had the potential to have impacted the treatment he received, noting that ANUM Frauenfelder said at inquest, that if he was aware of the new information he would have immediately got a doctor to assess James.

Appropriate triage category

466. The evidence suggests that James' wheeze prior to entering Holmesglen Emergency Department was the first sign of remerging anaphylaxis and, even if it was an expression of his asthma, it should have been treated as if it was a return of the anaphylaxis. It is also evident

that relevant guidelines clearly indicate that if a wheeze occurs it is to be treated as anaphylaxis first with any asthma treatment to follow.

467. Although there was some acceptance that the Triage Category ATS 3, without knowledge of a wheeze, may have been reasonable given his otherwise well presentation, I prefer the opinion of the RCA panel and some of the experts, that the Triage Category ATS 2 was more appropriate particularly noting James' asthma. Anaphylaxis is however not identified as such in the ATS guidelines.

468. It appears that James' otherwise well presentation at this time, which was confirmed by all who saw him, including the paramedics, was a confounding feature at this time. Paramedic Nickson commented that they were unable to reconcile James' sudden deterioration with the patient they had just brought in.

469. In circumstances where there was a wheeze, which represented a new symptom, Triage Category ATS 2 was appropriate and, whilst it would dictate that a doctor should assess the patient within a 10 minute period, it would be more prudent, as the triage nurse noted, to alert a doctor of the presentation immediately so the patient could be seen quickly. In addition, the experts were of the view that consideration should ideally be given to the Emergency Department's ability to escalate care quickly for the patient should the need arise. For example, the patient be monitored in a high acuity cubicle/room, which takes into the account matters, such as, that the time taken to set up an infusion is significant, especially when it's unplanned.

470. I do however note with respect to the care provided by Holmesglen that James had 1:1 nursing shortly after his off-load from the ambulance and was seen by a doctor quickly after the bedside nurse requested assistance. There was also a support nurse present outside the room to get drugs and additional equipment as needed.

471. I consider however that James ought to have been triaged as Category 2, regardless of the knowledge of the wheeze, and had it been responded to, it was likely on the basis on the evidence of the triage nurse, to have led to James being seen by a doctor more quickly.

Missed Opportunities

472. There were two key missed opportunities following James' arrival at Holmesglen for intervention in this case. The first occurred when Ambulance Victoria advised Holmesglen Emergency Department of the wheeze and James' need to use his Ventolin just before entering the Emergency Department.

473. This was the most significant missed opportunity as it occurred earliest in time preceding his collapse, noting that the triage nurse gave evidence that if he been aware of the presence of the wheeze, not only would he have triaged James as ATS 2, but he would have alerted the doctor to come and see him immediately. It appears uncontroversial that an emergency doctor would have ordered further adrenaline had they been advised of this fact.

474. The second missed opportunity occurred during James' initial assessment in the isolation room, where James' need for additional Ventolin and mild work of breathing was not initially recognised as the further emergence of anaphylaxis and therefore the need for a doctor to be called.

475. I do note however RN Choudhary's view that given the earlier report of a wheeze and James' use of Ventolin, he expected there would be respiratory symptoms so may not have viewed this as a deterioration in his condition. Experts did however view mild work of breathing in this context as very unusual in a fit young person with mild asthma and commented that James was quite a *way down the trajectory by that stage* and it was not *trivial asthma*.

476. I note that after James said, "*I can't breathe*" and his oxygen saturations began to fluctuate, the bedside nurse immediately called for assistance and Dr Akinloye and other clinicians came to assist. RN Choudhary considered that it was some 5-7 minutes until James first said that he could not breathe. When Dr Akinloye first saw James, he was in obvious breathing difficulty and he correctly identified the need for immediate anaphylaxis treatment. IM adrenaline was likely administered at around 4.10pm, and within a very short time of Dr Akinloye's attendance in the isolation room.

477. It appears that the effect of these missed opportunities meant that there was delay in the administration of IM adrenaline to treat deteriorating anaphylaxis. That is, it appears that IM adrenaline was not administered until James' deterioration sometime around 4.10pm.

478. The RCA review found that there was a lack of recognition by Holmesglen staff that treatment guidelines provide that adrenaline should be administered prior to Ventolin even in patients who have a history of asthma. In addition, that in the setting of recent objective signs of anaphylaxis following ingestion, the isolated recurrence of wheeze should be treated as related to anaphylaxis and not asthma.

479. I consider in these circumstances that the potential seriousness of the wheeze or indeed his need to use Ventolin was not identified as soon as it could have been which represented a missed opportunity for earlier intervention in this case.

480. With respect to the beside nurse, I accept the submissions made on his behalf that he was a relatively junior nurse at the time, was reliant on either doctors or senior nurses to direct him as to the appropriate management for a patient coming into the emergency department with anaphylaxis and, he had never performed the role of triage nurse himself. I note that there is no evidence of the triage nurse giving him any specific instructions about James' care as an anaphylactic patient, or that he should do anything other than proceed to undertake an initial assessment.

481. I agree that the treatment RN Choudhary provided should be considered in this light, and any deficiencies identified otherwise reflects the quality of support provided by Holmesglen to a nurse with his level of seniority and training in the role he was tasked to undertake.

Impact of missed opportunities

482. The Expert Panel agreed that the the best opportunity for a better outcome for James was to have prevented the cardiac arrest from occurring.

483. Several scenarios were put to the Expert Panel which firstly noted that James likely received his first dose of adrenaline after his arrival at Holmesglen around 4.10pm, but it appeared to have had little or insufficient effect to prevent his deterioration.

484. The Expert Panel were asked to consider whether James would have survived had he been given adrenaline about 15 minutes earlier being 3.55pm, and there were a range of views in response.

485. A/Professor Lawton considered that it would have substantially changed the trajectory of James' course, and *he would have survived*. Professor Kelly largely agreed with A/Professor Lawton noting that it would have stabilised or improved the situation, and also led to an escalation in care which would have prevented delays in the care that followed his deterioration. That is, both a physiologically, and process-wise improvement. She considered that it *probably* would have prevented James' death.

486. Professor Brown was not as confident and stated that it *might have*, but he was not as confident as A/Professor Lawton and Professor Kelly.

487. Professor Cameron noted that it was generally agreed that earlier administration of adrenaline would have been better, but whether it would have achieved survival, is *an impossible question to answer*, and it would be *a stretch to far* to say he would have survived.

488. Professor Douglass commented that it is a *hard question*, noting again that it would have been better to have given adrenaline earlier, so it *probably* would have improved things. However, as to survival, she stated, *I can't say that so it could have been probable, possible, it would have improved the situation from unlikely to survive to - or didn't survive, to a good possibility, I can't say*.

489. Professor Armstong agreed with Professor Douglass noting that earlier administration of adrenaline would have improved his chances, but the acute asthma response reflected in the autopsy findings would suggest that there were chronic changes of asthma, and in his view the presence of those changes meant that he was less likely to respond to pure anaphylaxis management, because this was not straightforward uncomplicated anaphylaxis, there was also RSV and asthma together.

490. In his report, Professor Armstrong noted that James had an acute RSV infection which inflames the lungs, and his extremely rapid and severe anaphylactic episode combined with his underlying asthma resulted in an episode that was impossible to reverse. He was not able to say to what extent RSV contributed to James' death, but he certainly considered that it made a contribution.

491. The Expert Panel were further asked to consider whether James would have survived had he been given adrenaline at about 10 minutes earlier being 4.00pm, and again there was some divergence of opinion with less certainty.

492. A/Profesor Lawton considered that on the balance of probabilities, it would more *probably than not have resulted in the cardiac arrest being averted.*

493. Professor Kelly considered that it would likely have had an effect*, a probably chance of survival*.

494. Professor Brown considered that it would have been beneficial, but I noted his earlier answer.

495. Professor Cameron considered that it is still *a possibility that he might have survived but certainly not a lay down misère*. He further noted that there is no randomised controlled trials to indicate one way or the other, *so I think this is all supposition and open to you know it's what my opinion versus Simon's versus I mean it's not really, we have no idea to be honest*.

496. Professor Douglass stated, *I'm finding it impossible to really make a strong conjecture chances are less because it's later but I still think there would be a better chance giving it at 10 minutes rather than 15 minutes so it would be better. . Does it go somewhere closer to possible rather than probable? Yes.*

497. Professor Armstrong agreed with Professor Douglass, *but whether that would have resulted in a different outcome I think we're all really struggling to give a lawyerly answer I'm sorry.*

498. The Expert Panel were finally asked to consider whether James would have survived had he been given adrenaline at about 5 minutes earlier being 4.05pm.

499. A/Professor Lawton considered that survival was *more likely than not*.

500. Professor Kelly said she was less confident but certainly the earlier administration of adrenaline the better. She further noted that increased Work of Breathing (as observed by the bedside nurse) is very unusual in a fit young person with mild asthma and would suggest that James was quite a *way down the trajectory by that stage*. She said that it may have had an effect, which may have impacted the outcome, but she said it was *'possible'* and no more than *sort of 50/50 given the speed of events thereafter*.

501. Professor Brown was much less confident. Professor Cameron said it was unlikely it would have made much difference, but it certainly would have been better to give it earlier rather than later.

502. Professor Armstrong agreed that mild symptoms of asthma, cough, slight wheeze and then increased respiratory rate or increased work of breathing, is not trivial asthma, and this meant that James was further down *the trajectory* so there was less time to administer adrenaline making it less effective because it's given too close.

503. Professor Douglass considered that adrenaline alone is probably not going to achieve resuscitation, but equally, as an in-hospital respiratory arrest of a 17 years old, there is still a *fair chance of survival*.

504. The Expert Panel were imminently qualified to provide advice in this case. I set out their considerations in detail to demonstrate their differing opinions; the range of views expressed and some views that it was *impossible* to answer definitively. Based on the range of views expressed, the expert panel did not provide certainty of survival even at the earliest time of 3.55pm, but they agreed that there was no doubt that the earlier administration of adrenaline would have improved James' chances of survival, and the earlier the better, but to what extent it would have assisted, they were unable to agree. In particular, I note the speed of James' deterioration, the presence of an RSV infection and his poorly controlled asthma, as well as the fact that he had ingested the allergen, which presented a continuing effect.

505. Having said that, James' chances of survival would no doubt have been greater had he been given IM adrenaline sooner and had that earlier administration been accompanied by an earlier recognition that he was at risk of a severe recurrent anaphylaxis. However, I do not have a proper basis to choose between the expert opinions in order to provide that certainty, and I express my regret to the family that I am unable to do so.

Resuscitation after arrest

506. I note that the medical records are incomplete and do not record the details of the initial actions taken following James' collapse as no scribe was immediately assigned.

507. It is however evident that extensive efforts were made to save James' life and to respond to his severe deterioration.

508. I note that between 4.10 and 4.15pm James' deterioration escalated rapidly until the Code Blue was called at 4.15pm. Shortly after James was unresponsive and in respiratory, followed by cardiac arrest. He had a widespread rash and swelling to his eyes and lips. There was multiple clinicians involved is resuscitation efforts including from Holmesglen ICU. Extensive and prolonged medical intervention was unable to restart James' heart or to avoid significant brain damage before his transfer on ECMO to the Alfred Hospital where he later passed away.

509. Whilst the Expert Panel offered criticism and comment on aspects of that medical intervention, with some suggestions for different approaches, I agree with Counsel Assisting that those criticisms and comments do not rise to the level of supporting a conclusion that James would have survived with different interventions after his cardiac arrest.

510. I further accept that comments made by the expert panel were made with the benefit of hindsight, with months to consider the perfect course and with the full knowledge of James' asthma, RSV and state of anaphylaxis.

511. In addition, I agree with the submission that ultimately an in-depth review of any emergency incident will always find learnings and improvements.

512. I note that there was also general agreement amongst the Expert Panel that any patient who goes into cardiac arrest in the context of anaphylaxis faces grave odds although prolonged resuscitation should be undertaken as the patient is often relatively fit and healthy with an oxygenated body.

513. Some members of the Expert Panel did however consider that there was a window of time early in the medical intervention where there could have been a greater focus on ventilation. They considered James suffered a respiratory collapse which preceded and likely precipitated his cardiac arrest, meaning that the increasing effects of anaphylaxis were causing swelling and increased pressure in his airway and lungs which was a barrier to effective intubation and ventilation. The initial CPR efforts were focused on cardiac compressions and it was considered that there could have been an earlier and greater focus on ventilation in recognition

that James had not had a simple cardiac arrest but an arrest in the context of respiratory collapse secondary to anaphylaxis.

514. However, whilst a different and better ventilation strategy may have been appropriate, it could not be said based on the Expert Panel's advice that James would have survived with a different strategy.

515. In addition, it was noted that clinicians at Holmesglen followed resuscitation guidelines in place at the time.

Summary of Learnings from James' passing

516. The following are matters which arose in the course of the coronial investigation and provide useful intelligence to help inform and prevent the recurrence of the tragic outcome in this case:

    a. Prevention of trigger exposure is the *only way* that anaphylaxis prevention could be absolutely assured.

    b. Over 12% of young people diagnosed with a nut allergy suffer from inadvertent exposure in a 5 year period, which was evident in James' case. Recognition of this is therefore crucial given that anaphylaxis and food allergy is experienced by as many as 1:20 young people in Australia.

    c. Asthma complicates anaphylaxis and renders it more severe. Unstable asthma is reported as a risk factor for adverse outcomes in anaphylaxis and in this setting, attention to asthma management is therefore important to increase chances of a favourable outcome.

    d. International research suggests that young adults with a history of asthma and previously known food allergy particularly to peanut/tree nuts are at higher risk of fatal anaphylaxis reactions.

    e. The administration of Adrenaline is the first line response for suspected anaphylaxis. Relevant guidelines emphasise that the administration of Adrenaline must take precedence over the administration of other medications.

    f. Biphasic and delayed anaphylactic responses have been well reported, but are not as well-known as they should be.

FINDINGS UNDER SECTION 67(1) OF THE ACT

517. Pursuant to section 67(1) of the Act I find as follows:

a. the identity of the deceased was James Harilaos Tsindos, born 1 October 2003;

b. who died on 29 May 2021 at Alfred Hospital, Victoria, from *1(a) Hypoxic Ischaemic Encephalopathy Complicating Anaphylaxis*; and

c. the death occurred in the circumstances described above.

RECOMMENDATIONS PURSUANT TO SECTION 72(2) OF THE ACT

Pursuant to section 72(2) of the Act, I make the following recommendations:

Recommendation 1

With a view to provide additional education and clinical support to families with children and adolescents with food allergies who suffer asthma, noting the importance of asthma management as well as comprehensive allergy testing, I recommend that the **Royal College of General Practitioners** utilise the learnings of James' case to consider whether further information and guidelines should be developed and distributed in response.

Recommendation 2

With a view to enhance the safety of emergency department responses in Victorian hospitals to anaphylaxis presentations and, increase awareness of biphasic or recurrent anaphylaxis, I recommend that **Safer Care Victoria** give consideration to utilising the learnings from James' case to develop a statewide approach to the treatment of anaphylaxis such as the ANZCA pathway/cards or guidelines.

Recommendation 3

With the learnings from James' case, I recommend that **Ambulance Victoria** give consideration to the appropriateness of paramedics carrying EpiPens when responding to presentations of anaphylaxis.

Recommendation 4

In addition, I recommendation that **Ambulance Victoria** utilise the learnings of James' case to highlight the work instruction *WIN/OPS/333 Paramedic Roles: Health Service Interface and Patient Handover*, and in particular the following work instruction –

reaching agreement with the ED clinician on 'ambulance handover complete' and enter agreed time in VACIS (Victorian Ambulance Clinical Information System).

Recommendation 5

With a view to minimising the risk of adverse allergic reaction from inadvertent exposure to allergens, I recommend that, consistent with New South Wales, the **Department of Health** give consideration to requiring that all Food Safety Supervisors undertake food safety training which includes comprehensive food allergen management training, noting the free training module, *food allergen management module,* developed in consultation with Allergy & Anaphylaxis Australia.

Recommendation 6

With a view to minimising the risk of adverse allergic reaction from inadvertent exposure to allergens for people ordering food online, I recommend that the **Department of Health** give consideration to utilising the *Best practice guidelines for food allergen management for online ordering* being developed by the National Allergy Council and the Allergy & Anaphylaxis Australia.

Recommendation 7

Noting the advice to the Court by Allergy & Anaphylaxis Australia of an increase in the number of people experiencing anaphylaxis from vegan dishes online as well as the learnings from James' case, I recommend that the **Department of Health**, task the Food Safety Unit to action identified ways to improve safety around this issue, including consideration of consumer education, reform to relevant and applicable food labelling laws with specific reference to the labelling of plant-based or vegan food substitutes, to ensure consistency with definitions under the Food Standards Code.

Recommendation 8

With a view to enhancing acute cardiac resuscitations consistent with the advice of Professor Jo-Anne Douglass, I recommend that the **Australian Resuscitation Council** give consideration to reviewing its guidelines related to asthma and anaphylaxis settings, including whether there should be separate guidance for the resuscitation of primary respiratory arrest.

518. The loss of James to his family has been shattering and I do not have the words which could even come close to encapsulating that loss.

519. At the conclusion of the inquest, James' family honestly laid bare the extent of their collective grief, and it is apparent that his death occurred at a time when he was excitedly contemplating his future beyond school, and he had the world at his feet.

520. Veneta described James as the boy of her dreams, and said,

> *James should be here living his life out and being his amazing self. His amazing self was talented, intelligent, smart, witty, humorous, creative and musical. His incredible memory, his fast processing skills and abilities, his brain and dexterous hands, were his gifts. Playing the piano was his passion. When the other teenage boys were out partying, James was at home playing the piano. He was a piano prodigy. He had a beautiful spirit and vibrant personality. His teachers loved him. He would offer to make them a cup of tea when they were stressed. He knew how to respect his school, family, friends and community. His friends have been coming into court everyday with their school ties, to honour him. They miss him dearly. He was an entertaining character full of funny antics and animation.*

521. Harry said of their loss,

> *The magnitude of the tragedy that befell James is beyond words….*
>
> *he blessed us with so much laughter, joy, and music. His funny, quirky, and, so many times, brilliant antics will remain in our memories forever…..*

We live on through the lives of the people we touch. James touched everyone he met in such a unique and special way that can never be forgotten. James brought music, joy and laughter to our home and all those around him.

…. He was a considerate, thoughtful young man with a maturity and empathy far beyond his years.

James left us too early, but we find comfort in knowing that in the year he passed, James was the happiest he had ever been. He had begun to find himself.

522. I also acknowledge the health providers including paramedics and nurses who assisted James and those who came before this Court to give evidence. I noted at the commencement of the inquest that what happened to James would be the worst outcome for anyone who undertakes these roles and I am sure James' loss has had a significant toll on them as well.

523. I again extend my heartfelt condolences to James' family for the tragic loss of their very much loved and adored family member.

ORDERS

Pursuant to section 73(1) of the Act, I order that this finding be published on the internet.

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

Harry and Veneta Tsindos, Senior Next of Kin

Slater & Gordon on behalf of Harry and Veneta Tsindos

Minter Ellison on behalf of Holmesglen Private Hospital

Lander and Rogers on behalf of Ambulance Victoria

Avant Law on behalf of Dr Andrew Han-Su Tay

Barry Nilsson on behalf of Travis Frauenfelder

Moray & Agnew Lawyers on behalf of Amandeep Choudhary

Department of Health

Australian Resuscitation Council

Safer Care Victoria

Royal College of General Practitioners

Allergy & Anaphylaxis Australia

National Allergy Council

Senior Constable Charles Love, Coroner's Investigator, Victoria Police

Signature:

_____

SARAH GEBERT
CORONER
Date: 20 February 2026
Re-signed: 26 February 2026