IN THE CORONERS COURT
OF VICTORIA
AT MELBOURNE

Court Reference: COR 2012 03703

FINDING INTO DEATH WITH INQUEST

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

Inquest into the death of ELIZABETH MARY GORMAN

CORONER PETER WHITE

Held, in Melbourne on the 4, 5, 6, 7 July 2017, and 31 August ,2017.

Key words.

Deceased, a 35 year old woman, in her first trimester of pregnancy. Treated for rib/chest pain at Royal Women's Hospital (RWH) followed by discharge and her return within 17 hours by Ambulance Victoria (AV), in state of near collapse. Later transfer to Royal Melbourne Hospital (RMH), suffering from an advanced Pullmonary Embolus. Issues of management by RWH and AV examined.

Representation

Mr Ajzensztat of Counsel for the family of ELIZABETH MARY GORMAN

Mr Burnett of Counsel for Dr S Moore

Mr Grant for Ambulance Victoria

Ms Hodgson of Counsel for the Royal Women's Hospital

Leading Senior Constable T Ramsey, Coroners Assistant.

COURT.

I find that Elizabeth Mary Gorman aged 35 years, died at the Royal Melbourne Hospital on 5 September, 2012,

From, 1(a) PULMONARY THROMBOEMBOLUS AND PULMONARY INFARCTION

(b) DEEP VEIN THROMBOSIS

CONTRIBUTING FACTORS (ELEVEN WEEKS GESTATION)

In the following circumstances:

BACKGROUND.

1. Elizabeth Mary Gorman (Elizabeth) had a Body Mass Index (BMI) in the obese range at 34.48. Her gynaecological and obstetric history included three prior pregnancies, two terminations of pregnancy and the uncomplicated normal vaginal delivery of her daughter Ivy, in 2011.

2. Her medical history also included asthma, a thyroid nodule and a vitamin D deficiency. She was using the Seretide Accu-haler for asthma prevention. She had smoked prior to her first pregnancy, but had given up smoking on discovery that she was expecting.

3. Elizabeth's general practitioner (GP) referred her to The Royal Women's Hospital (RWH) on 1 August 2012 for pregnancy care. Given that she was 11 weeks pregnant when she died, there had not been an opportunity for her first antenatal visit.

4. Elizabeth attended the Northern Hospital on 2 September 2012 and was diagnosed with hyperemesis gravidarum. This was treated by the administration of intravenous fluids for rehydration, which appeared to be an effective treatment and she was discharged home.

5. On 3 September 2012 at 9.30pm, Elizabeth attended the RWH Emergency Care[1] (WEC) with what resident medical officer Dr Moore later described as rib pain. Dr Moore noted a history of *severe, very forceful vomiting* the day prior and that Elizabeth had developed, *right rib pain*. The pain was worse on movement but there was, *no associated shortness of breath, chest pain or calf pain. The initial heart rate was abnormal at 105 beats per minute but when assessed this had settled to 80 beats per minute. The respiratory rate and blood pressure were normal. There was marked chest wall tenderness on the right side.*

6. Dr Moore's impression was of, *musculoskeletal pain secondary to vomiting*. There were no further investigations performed and no electrocardiogram (ECG). The oral narcotic analgesic oxycodone 10mg was administered and Elizabeth was discharged after a further review by Dr Moore shortly after 1 am the following morning. Oxycodone was documented in the medication chart as having been administered at 11.15pm.

7. On 4 September 2012 at 8.32pm, Elizabeth re-presented to the RWH WEC, having been brought in from her home by ambulance. At 8.47pm, a code blue was called due to profound tachycardia, low blood pressure and an altered conscious state. Doctors from the RMH Emergency Department (ED) attended the RWH WEC along with an anaesthetist, and obstetric registrars, gynaecology fellow, and anaesthetic and obstetric consultants.

8. Elizabeth was found to be in a critical condition, suffering from chest pain and shortness of breath. Her blood pressure was un-recordable. The heart rate was extremely elevated at 160 beats per minute (bpm). The doctors performed ultrasound scans, electrocardiograph (ECG) and blood tests with the results suggesting a pulmonary embolus. Whilst she was undergoing a clinical assessment she suffered a cardiac arrest. Cardiopulmonary resuscitation (CPR) commenced at 10.28pm with thrombolysis administered at 10.40pm for a clot.

9. CPR continued in the WEC with the assistance of the RMH team, until transfer to the RMH at 10.55pm.

10. Thereafter a RMH cardiothoracic surgeon operated on Elizabeth opening her chest and performing a thrombectomy, removing a large clot in both right and left main pulmonary arteries. In theatre, she was supported by cardiopulmonary bypass (CPB) however was

unable to come off bypass requiring Extracorporeal Membrane Oxygenation (ECMO)[2]. Following surgery she was admitted to the RMH Intensive Care Unit, with the continuation of ECMO. Elizabeth died some hours later at 5.15am.

FORENSIC INVESTIGATION

11. Forensic Pathologist Dr Dodd conducted a full examination and CT scan at the Victorian Institute of Forensic Medicine (VIFM) and determined that the immediate cause of death was pulmonary thromboembolism and haemorrhagic pulmonary infarction in a woman who had developed a deep vein thrombosis while in the early stages of pregnancy.

12. It is also relevant that the paramedics required clinical assistance to help determine the appropriate transport destination for Elizabeth. There also appeared to be an issue with the RMH staffer's inability to physically access the Royal Women's Hospital ED after hours, thereby enabling timely attendance by the relevant RMH clinical staff at the RWH in an after-hours emergency situation.

13. Although the hospital review of these events concluded that there were no preventable factors, Dr Bessell the then medical superintendent at RWH, outlined changes whereby any woman now presenting to the RWH WEC with chest (or rib) pain would have an ECG.

BROAD ISSUES

14. As Elizabeth had not yet attended her first antenatal clinic appointment, there was no opportunity to assess Ms Gorman's risk factors for VTE prior to the RWH attendance. However there was an opportunity to assess her risk during her attendance at RWH WEC, on 3 September 2012.

15. In issue then was whether there was sufficient consideration given to whether her rib/chest pain on 3 September, 2012 could have been due to a Pulmonary Embolism (PE), and whether a more formal and complete assessment of her risk of this condition should have been undertaken at that time.

16. Also in issue is whether the AV's decision to transport Elizabeth to the RWH on 4 September 2012, was appropriate.

EVIDENCE

Andrew Devitt

Coroners Assistant Tracey Ramsey.

17. Andrew Devitt, (Andrew), the partner of Elizabeth Gorman, testified as to her background. She was the mother of their daughter Ivy and a child care worker. They were in the process of buying a home together and expecting their second child when on 1 September 2012 she awoke and told him that she feeling a little unwell. They thought that she might be suffering from morning sickness, which she had previously experienced.

18. They went out for dinner that evening and returned early as she continued to be unwell. She went to bed at approximately 8.30 pm.[3]

19. The following morning, 2 September 2012, she was still feeling ill, *and it had got a lot worse. Liz looked pale and was vomiting and was saying something about pain in her ribs.*

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[3] Going to bed at that time was not unusual for Elizabeth during pregnancy.

I note that in later testimony Andrew testified that he thought she was pointing towards her ribs on her left side, at this time.[4]

20. During the afternoon Andrew took her to Northern Hospital, where she was seen by an ED Dr, *who said that he thought she was suffering from morning sickness and sent us on our way.*[5]

21. The following day a Monday, Andrew went to work while his mother came to the house to look after Elizabeth and daughter Ivy. On Andrews return after work Elizabeth complained and asked to be taken to hospital again. Andrew determined to take her to the RWH. He hadn't been inpressed with Northern Hospital and felt that, *the Women's would be better equipped.*[6]

22. At the RWH Dr (Moore), *checked Liz out and said that she thought that Liz had pulled a muscle in her back from her vomiting. We remained at the hospital for about two hours and at that time Liz said she was starting to feel better... a little bit better and that she wanted to go home.* [7]

23. On the following day Tuesday 4 September, Andrew returned from work in the early evening and found that, Liz had gone down-hill very quickly. *She was very pale and very cold, she was still sore around her chest and back but had taken some tablets the hospital had given her...*[8]

24. *I decided to call an ambulance... She was in a lot of pain, all over her chest, her back and her left lower leg was really swollen and she screamed in pain when I touched it,*

25. *I was just saying, 'pain-pain the chest and ribs'.*[9] *I remember when I was on the phone to the Ambulance Officer they deemed it to be non-life threatening... We waited for the ambulance for about 30 minutes. They then assessed her and decided they had to take her to hospital. I went with them in the front seat and we travelled to the RWH... I understood from the way the ambulance officers were talking that the RMH, 'was backed up'.* [10]

26. *The driver said that to the person in the back.*[11]

27. *Following events occurring at the RWH and later after her transfer to the RMH, we were told there was nothing more they could do for her. They were telling me this... they told us about DVT and that a blood clot had got to her heart, that's all I can really remember.*

28. Later Andrew and family members attended a meeting at the RWH.

29. *We spoke to a woman, who gave us a copy of the medical notes from the night and also a copy of the procedures that had been altered. She mentioned that if Liz had required an ECG she would have had to come back the next day to get it done. I think that was to call someone in to do that.* [12]

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[4] Transcript page 16.
[5] Exhibit 1 page 1.
[6] Ibid page 2.
She had started to take tablets previously provide by Northern Hospital. See transcript page 9. [7]
Her blood pressure and pulse were taken. Transcript page 19.
Dr Moore saw Elizabeth twice, releasing her on the second such occasion. Transcript page 18.
[8] Exhibit 1 page 2.
[9] Transcript page 12.
[10] Exhibit 1 page 2.
[11] Transcript page 13.
[12] Exhibit 1 page 3. In later testimony Andrew stated that he wasn't sure whether Professor Truesdale mentioned an ECG or a scan, and that he didn't understand the difference between the two. Transcript page 23. See later

Mr Ajzenstat for Andrew Devitt.

30. Under further questioning from Mr Ajzenstat, Andrew stated that Elizabeth spent most of Sunday, 2 September, lying down. His further testimony was that when he returned home on the Monday evening Elizabeth told him that she wasn't feeling right and had spent most of that day also lying down.[13]

31. In regard to Elizabeth's treatment at RWH Andrew agreed that he had remained with Elizabeth in a hospital cubicle during the period following her arrival at 9.30pm on Monday 3 September until their departure at 1.03am on Tuesday 4 September. He further agreed that it followed that she had stayed in hospital over a 3 and-a-half-hour period.[14]

32. In response to further questions he was unable to recall a number of matters, specifically:

    a) whether Dr Moore asked Elizabeth whether or not in the days beforehand she had suffered from leg pain;

    b) whether Elizabeth had been weighed;

    c) whether she was asked if she had been a smoker; [15] and

    d) whether Dr Moore asked Elizabeth whether she had spent a period before her presentation at RWH lying down, or what Elizabeth said in reply.

33. He did recall that Dr Moore had asked about what had occurred at Northern Hospital the night before and that Elizabeth had told her about this matter, although he could not recall precisely what she had said.

34. Q. *Can you recall whether or not Elizabeth said to Dr Moore that she did not have pain when she inhaled?*

    Ans. *No I think when she breathed-she said when she was breathing in she had pain... I don't remember her saying it to Dr Moore, I was looking at Liz telling me yeah she had pain.*[16]

35. In addition Andrew could not recall whether or not Dr Moore had actively examined and perhaps touched, Elizabeth's legs.[17]

    Mr Burnett for Dr Moore.

36. Mr Burnett, suggested to Andrew that he had previously stated in his statement, that when Elizabeth saw Dr Moore on 3 September, Liz told the Dr that she had pain in the ribs. [18] Andrew agreed she held herself and also referred to *'ribs'*.[19]

37. Andrew further agreed that he remained with Elizabeth at the WEC and was present on the two occasions that Dr Moore came into see her. On the first occasion she examined Elizabeth, Dr Moore took her history over a period of some 15 minutes. Andrew also

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evidence from Professor Truesdale concerning the need to recall RWH staff for the taking of x-rays after hours, and the now improved arrangemnts for taking additional tests at the RMH at paragraphs 183-84.

[13] Transcript 26-7.

[14] Transcript 31-2.

[15] His subsequent evidence was that Elizabeth had been a smoker but had stopped approximately two years before her death, this after learning that she was pregnant with their daughter Ivy. Transcript 38.

[16] Transcript 29.

[17] Ibid 30.

[18] Exhibit 1 page 2.

[19] Transcript 31.

agreed that there was a considerable conversation, which went on during this period and that he could not now remember the content of that conversation.[20]

38. Q. *Dr Moore will say that she examined Liz and did in fact feel Liz's rib area, where she complained of the pain... Do you recall that happening?*

    Ans. *No I can't recall... I just can't remember.*

39. Q... *and that as part of that happening she felt the... calf area on both of her legs?*

    Ans. *I can't remember that happening... from my memory it did not occur.* [21]

40. Counsel then referred the witness to clinical notes made on that evening by Dr Moore, in respect of the examination in which there is a reference to, '*soft calves*'.[22]

    Q. *She will say she did feel Liz's calves?*

    Ans. *I can't remember her doing that.*

41. Andrew further confirmed that he noticed the calf and touched it for the first time on the late afternoon of 4 September and, *that was a new development as far as I can recall.*[23] His further evidence was that he did not recall Dr Moore asking any questions about Liz's family history in regard to DVT and that the answer contained in her clinical notes found at brief pages 107-8, that there was no such family history, was consistent with what he knew about that matter.

42. He also agreed that Elizabeth took the pain killers supplied at Dr Moore's direction and that she returned at a later point to see how she was getting on. Elizabeth then confirmed that she was feeling better and that she felt well enough to go home. He also agreed that following that conversation Elizabeth was released.

43. Andrew also confirmed that Elizabeth had told him that she felt pain on breathing, but could not recall if he heard her tell Dr Moore of that matter, or told Dr Moore that she did not feel pain on deep aspiration.[24]

    Mr Grant for Ambulance Victoria.

44. Andrew confirmed that he had travelled in the ambulance, which conveyed his wife to the RWH. He sat in the front and heard a paramedic who was also seated in the front of the vehicle, tell the paramedic at the back attending to Elizabeth, that the RMH was, '*backed up*'. There was *back and forth* on the radio before this occurred and subsequently that the Ambulance took Elizabeth to the RWH.

45. Q. *Because the evidence... will be that the decision to go to the RWH was due to Liz's presenting condition rather than any hospital being, 'backed up'.*

46. Ans. *No.* [25]

Dr Sarah Moore.[26]

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[20] Ibid 32.
[21] Ibid 33-4.
[22] See brief a page 108, **exhibit** .
[23] Transcript 35.
[24] I bid 37.
[25] Transcript 39-40.
[26] See Dr Moore's statement to the Court dated 28 January, 2015 and her CV, at exhibit 15(a).

Coroners Assistant.

-Background, training and induction.

47. Dr Moore graduated from the University of Tasmania MBBS in 2008. She undertook her internship at Geelong Hospital in 2009 and undertook a 10 week residency in the Geelong Hospital ED, during 2010. In 2011 she held no residency position for the first six months and then undertook approximately 10 ED shifts at Warnambool Hospital as a locum.

48. From August 2011 she was a Resident at the RWH *for the second six months* and covered as an ED night resident during a six week rotation, only three weeks in total as roster for nights one week on and one week off.

49. During 2012, she held no resident position for the first six months and thereafter locum positions in Victoria, mainly country Victoria, some of which were in the ED. Later in 2012 she was for the second six months a resident at RWH, during which she covered as a night resident in the ED, (WEC). It was in this capacity that she was involved in the care of Elizabeth.

50. In 2013 she became a first year Obstetric and Gynaecology trainee at the John Hunter Hospital in Newcastle, NSW, and at the time of her testimony had entered the fourth year of that programme.

51. Over the period in question Dr Moore testified that she spent a six week block one week on, one week off in the WEC, with time in the emergency department, the wards and assisting in the theatre overnight. During the night time she, *was the only doctor person staffing the emergency department.*

52. *So I was offered the ward residence, so if there were any concerns or problems with any of the antenatal-pregnant women within the hospital, the potential women who had their babies, also all of the gynaecological patients, and my role was also to assist a senior registrar in any operative theatre cases for the night.*

53. *The shifts in the emergency department could be variable, sometimes you might have lots of presentations of a various nature, and sometimes there wouldn't be many, so the night shift was usually very busy but not always...*[27]

54. In regard to support, Dr Moore worked with a first year obstetrics and gynaecology registrar, (O&G) a second year O&G registrar, and a fourth year O&G registrar, *in the building, and an anaethetic registrar, as well as an on call obstetrician and gynaecologist... So the registrar(s) as their primary role were looking after the women in the birthing suites.*

55. Q. *So if someone came in who was critically ill what would you have done in that situation?*

    Ans. *I would have contacted the second year registrar to come and give me a hand or if they were critically unwell, you can-they had a code system within the hospital so that you could make the call and the anaesthetic department person would also come down as well as the registrars.*[28]

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[27] Transcript 521.
[28] Transcript 522.

56. In those situations the registrars, including the anaesthetic registrar, would attend depending on their availability.[29]

    In such a situation, *I would still have spoken to them and sought their advice and then from that point they would, the more senior doctors would... if they needed to, call the Consultant. However in my time that never happened.*

57. Q. *In this capacity at the time you were involved in the care of Ms Gorman, could you have found yourself working in the ED, with your other supports being tied up doing other duties...*

    Ans. *I saw all the patients first and foremost in Emergency and the other doctors weren't required to come down and see the patients unless... I called them to do that.*[30]

58. After taking up her position at the RWH in August 2011, Dr Moore undertook an induction course, *a three day orientation we had to attend.*[31]

    In regard to the workings of the ED Dr Moore stated, *I don't believe we had any formal information* (or documentation, or protocols), *given to us in regard to the Emergency Department.* The three days spent in the induction programme was provided to all new clinical staff, at all levels. [32]

    The first day was a welcome with a general orientation to the workings of the RWH. The following two days, *were a lot more clinically orientated... on the second day there were workshops and sessions that were primarily focused around obstetric skills that you would use in the birthing suite... on the third day the whole day was devoted to foetal surveillance.*

    In regard to the emergency department (we were), *also shown where the emergency department was and how to get to it, and from memory that was as detailed as it was.* [33]

59. The witness was then shown a document headed Junior Medical Staff Handbooks MG 10 and 11, revised respectively July 2011 and July 2012. She had no recollection of having received such a book, (which I note in any event did not include reference, other than a minor one, to the Women's emergency centre, or to the provision of emergency services).[34]

60. Dr Moore further testified that the only time she worked in the WEC was at night time. *I guess compared to other Emergency Departments, often you have more than one doctor working..., which is what the women's had when I worked there. But as I said previously, sometimes no one would come in all night whereas... you might get six or seven people, women presenting overnight.*[35]

61. In regard to her instructions as to whom the WEC would see, *I remember being told that the Royal Women's would accept-you know obviously their specialty was obstetrics and gynaecology, but they did accept other presentations as well.*

62. Q. *Up to any level of critical seriousness... were you ever given any sort of instructions or information... you know, "We cannot accept these patients because of..."*

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[29] Transcript 522.
[30] Transcript 523-4.
[31] Transcript 525.
[32] Transcript 526-7.
[33] Transcript 528.
[34] See exhibit 15(b), (1) and (2) and transcript 530-31.
[35] Transcript 533.

63. Ans. *No I don't think I was ever given that information because I think ultimately I think if someone presented critically unwell, they would start resuscitation and try and liaise with the RMH. That was my understanding of what they would do in that setting.*[36]

-Support and Supervision during night shift in the WEC.

64. Further in relation to her level of emergency department experience, and the fact that she was working on night shift by herself with other supporting staff potentially tied up performing other duties, she considered that as she had done two rotations in obstetrics in Geelong, *so when it came to simple presentations regarding you know vaginal bleeding in early pregnancy or minor obstetric concerns I felt comfortable assessing them, given my experience at that time.*[37]

65. Q. *What was your understanding at that time, of who you could actually access... for assistance and support?*

Ans. *So going up the chain of command of the doctors working that night would be the second year registrar as the first person to call for assistance... Dr Ying Gu... (a second year registrar) that night... if available..., then there would be the fourth year registrar.*

66. Q. *So you would just continue up the list until you found someone?*

Ans. *Yes.*[38]

67. Q. *What if someone required resuscitation?*

Ans. *So in that instance you would call a code... whether that was a rapid response and a MET call or a code blue and that triggers a notification to other doctors within the hospital. It also gets an automatic notification to the consultants who aren't in the building as well, such as the on-call obstetric and on call gynaecology consultant, the on-call anaesthetist and I am not sure if the Director of the Women's would be notified as well... and they contact to see if they are needed to come in... I believe there was a MET call criteria as well.*

68. Q. *In your time at the RWH did you ever call these codes?*

Ans. *No. I never called a code in my time there.* [39]

69. Q. *During your orientation when you started at the RWH or at any stage during your stay there, were you provided with any instruction in relation to contacting the RMH, if you needed any additional support or advice?*

Ans. *No, not to my memory.*[40]

70. Dr Moore further testified that she was aware that the RWH had guidelines in regard to particular obstetric and gynaecological conditions, and was aware of how to access these. However she was not aware of RMH clinical guidelines and wasn't told about them when she started at the RWH, *or how to access them, or if we should be accessing them.*[41]

-Treatment provided to Elizabeth Gorman.

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[36] Transcript 534.
[37] Transcript 534-5.
[38] Transcript 535.
[39] Ibid 536.
[40] Ibid 537. See also discussion of witnesses reference of an asthma sufferer, to RMH at transcript 537-8.
[41] Transcript 539.

71. Dr Moore was able to recall that when Elizabeth was admitted to the WEC at around 9.30pm, 3 September, 2012, that she was on duty and there were a few other Doctors on duty, who were about to finish their shifts. She also recalled that there were patients waiting to be seen when she commenced her shift. [42]

72. The triage nurse recorded Elizabeths vital signs at 21.35 on 3 September, 2012, prior to her being seen by Dr Moore. They included blood pressure (BP) of 183 *or 140/91,* temperature of 36 degrees celsius, pulse 105 and respiratory rate of 20. Her presenting problem was '*RESPIRATORY/OTHER. CONSTANT RIGHT SIDED PAIN INCREASING ON INSPIRATION PS, (pain score) 7/10. 11 weeks gestation pregnant. Blood oxygen 97%'.*

73. Dr Moore commenced her shift at 21.30 and saw Elizabeth at around 22.15. She noted as per her clinical notes at brief 107-8, that this was Elizabeths second pregnancy, and that she presented with right sided, *rib pain* and a past history of delivering by a normal vaginal birth. She had presented to the Northern Hospital the previous day and had received iv hydration. She reported that her pain was worse on movement or coughing.

74. *She denied any shortness of breath because she reported that it was very much in her chest wall rather than her chest... She denied any pain in her calves and there was no family or personal history of DVT or clotting problems. Then we moved on to an examination. Her heart rate was noted at the triage desk by the nurse and I took her pulse myself which had settled to 80 beats per minute which was normal. Her blood pressure was 140 on 90 which is the same as triage... her lungs were clear, her heart was normal and her calves were soft, temnder... I made the decision to give her some Oxycodone or Endone and I came back to review her after that and she'd had a very good effect from that and she was pain free, giving me the impression that she was suffering from muscoskeletonal pain and I made the plan to discharge her and she was very keen to go home at that time... with direction that if the pain changed or if she had any additional symptoms... she should come back for review.* [43]

75. Dr Moore felt that with this review she had obtained enough information in relation to her history and her presenting problem. In regard to the triage note that her pain increased on inspiration or inhaling, Dr Moore stated that she spoke with and tested Elizabeth on that matter and she denied pain on inspiration. She also asked about calf pain, *currently or previously,* and she denied that, although I note here that her written note does not convey that meaning. [44]

76. Dr Moore was not aware that Elizabeth's father had suffered two strokes. She states that she asked if there was a history in the family of blood clots, but not about strokes.[45] She considered both her heart rate at 80, and blood pressure of 140 on 91, to be within the normal range. She first saw her at 21.30 hrs and later, between 1 and 2am, with the medication relief provided having had, *excellent effect.*

77. Q. *Would that medication have masked any serious issues that she was having?*

Ans. *When you have a serious cause behind it generally doesn't get better with anaelgesia. And subsequently patients I've see with PE their pain have not resolved with anaelgesia, and musco-skeletonal pain has a tendency to improve with anaelgesia and effectively make the person pain free... I would have been more cautious if her pain hadn't*

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[42] Ibid 540.
[43] Transcript 543-4.
[44] Transcript 546-7.
[45] Transcript 548.

resolved... I don't... think I would have expected her pain, to have gotten better from a PE with the anaelgesia I prescribed her. Also that she wouldn't be feeling as well and keen to go home... Also there was no deterioration.

78. Q. *You're saying that if she had a PE you wouldn't have expected the Endone to have impacted upon that pain?*

    Ans. *Yes. I wouldn't have expected her pain to improve. Also if you hadn't provided her with pain relief... you wouldn't recommend discharging someone who you hadn't been able to address the issue for which they came in for.*

79. Q. If she'd stayed for a couple of hours and the pain returned, because the endone wore off?

    Ans. *So you would once again make a full assessment... had her observations changed? Is anything clinically different? And then you would administer more analgesia...*[46]

    I wouldn't have expected as good a response from the anaelgesia if it was a PE. So the response to pain relief ... because it was such a good response, led to it being my impression, of musko- skeletonal pain.[47]

80. In reference to the number of vital sign tests, Dr Moore understood that one set had been taken at triage. She was not sure if there were other observations taken. She could not recall if she had done so, *but clinically looking at her, she felt better, she looked better. She was moving freely and wanted to go home... So that was what I based my decision on. I personally did not take her observations before she left... That's my usual practise.*

81. Q. *It is all based upon what the patient looks like?*

    Ans. *Correct.*[48]

82. In regard to criticisms contained in his original report concerning an alleged absence of appropriate documentation, Dr Moore stated she hadn't noted whether Elizabeth had been in bed but had noted in her history that she had presented to the Northern Hospital ED where she had gone in a private car and had walked in and walked out... [49] She could not recall if she had asked about her level of physical activity on the day she was taken to the RWH, but probably would have documented that if she had inquired about it.[50]

83. She felt however the fact that she hadn't been immobile over the previous 72 hours, was evidence that weighed against a PE. Further she did not consider that additional evidence was needed in relation to Elizabeth's stay at the Northern Hospital, given that her receipt of fluids indicated that these, *were separate presentations relating to different issues.*[51]

84. Dr Moore was then questioned on the observations made by Professor Truesdale, about the treatment given to Elizabeth at the RWH the night of her admission to the RWH on 3 September.

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[46] Transcript 551-3.
[47] Transcript 554.
[48] Ibid.
[49] I note here that such information does not appear in Dr Moore's clinical note, at brief page 107-8.
[50] See transcript 555.
[51] Transcript 557. See brief pages 107-8. See discussion at transcript 599-60 on the treatment provided at Northern Hospital on 2 September, which includes reference to Dr Jordan's statement on that matter, which statement became exhibit 15(c).

In regard to the non documentation of relevant negatives, *such as ruling out the differential diagnosis, pneumonia for example...*

Ans. *I think when you look at my notes you can see that I explored the nature of her pain, which was that it was very much worse on movement and it was very much localised without sort of documenting the negatives... I mean the clear lungs (page 108), indicates there is no evidence of pneumonia... and it is documented that she is afebrile (page 107)... so I believe a lot of these things are already contained within the page... I am not sure that writing down every negative finding is always required.*[52]

85. And further, in regard to it being either chest pain or musco-skeletonal pain, Dr Moore felt confident in her diagnosis, *and wouldn't otherwise have discharged her home... I think at that time when I saw her in 2012 with all the other negative findings I felt confident it was musco-skeletal... there were no other features of her history that made made me think it might be something else, that it might have been a PE.*[53]

86. In regard to the matters referred to by Professor Truesdale, which should have been explored, if Dr Moore was investigating a PE (evidence of recent travel, overseas travel, prolonged periods of being in bed, smoking history, her general activity over the last little while, if she coughed up any pink frothy sputum, if she had any pain in the chest or radiation pain, pain in the calf, swelling of tbe calves, any physical activity or change, which could have bought about muscle strain to the calves, Dr Moore considered that she had addressed some of these, but not recent long distance travel and the possibility of coughing up of sputum. She further observed that having regard to, *her age, her normal oxygen saturations, normal blood pressure and on examination her normal heart and lung sounds, I know this woman doesn't have PE just by looking at her. I don't think it is necessary to say no evidence of APO... or no evidence of haemoptysis, in my notes.* [54]

87. In regard to the absence of evidence establishing the cause of her interim diagnosis of rib pain, ie absence of evidence of trauma, Dr Moore stated that she put the rib pain down to the effects of forceful vomiting and further offered that it was possible to get such pain in that manner.[55]

88. Dr Moore was then asked whether she had considered an ECG. The ECG had not been carried out by staff prior to her arrival. She carried out her examination and the taking of a history from Elizabeth. At that point, she thought a PE *unlikely*, so she prescribed anaelgesics and did not do an ECG, *because I did not think it would change my management.*[56]

89. Q... *Are you saying you considered it, (an ECG)?*

Ans. *I don't remember if I considered it. I obviously did not ask the nursing staff to carry it out... (At orientation), I assumed there was an ECG, every ED would have an ECG machine. I wasn't given a formal orientation, 'this is where we keep our ECG and this is how we use it'. I hadn't personally done one since I left medical school... Generally speaking in every other ED, I've worked at, that is something that is done prior to me seeing the patient, or if I requested one would be carried out by the nursing staff.* [57]

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[52] Transcript 562.
[53] Transcript 565.
[54] Transcript 566-7.
[55] Transcript 568.
[56] Ibid.
[57] Transcript 569.

90. Dr Moore's notes of her consultation with Elizabeth, became part of exhibit 18 at pages 107-8. See also the summary provided in respect of her treatment of Elizabeth as set out in paragraphs 5 and 6 above.

The Hot Tub evidence of Professor Kelly and Dr Kambourakis.

91. Following the receipt of the medical records and statements, which formed part of the Inquest brief, an expert opinion was obtained from vascular surgeon Dr Anthony Kamborakis. Thereafter the RWH having considered the brief, sought the expert opinion of Professor Anne-Maree Kelly, in which certain of the assertions made earlier by Dr Kambourakis were challenged.

92. After a consideration of these matters, which included input from the legal representitives of the RWH, I determined that a series of questions would be put to both witnesses who would then be given time to sit together and confer on these matters, and to advise the Court and interested parties, as to their collective view, if that was possible, with the questioning of each to then follow.

93. This process known as a *hot-tub*, took place during the inquest, on 7 July 7, 2017, with the answers provided by the two witnesses set out in writing. I set out below both the written questions and answers provided during this process. This was supplemented by oral evidence provided by both witnesses, which is recorded from transcript 427.

94. Q. *How is an assessment of a patient complaining of chest pain/rib pain normally performed? What investigations are carried out and what equipment is required? If a patient with chest pain/rib pain is also pregnant, does this alter how the assessment is conducted in anyway? If so why and how?*

    Ans. *a) Chest pain has lots of causes, from conditions of the skin and rib cage to those involving lung, heart or major blood vessels.*

    -The information gathering process (history & examination) are a hypothesis testing exercise aimed at considering and excluding potential diagnoses, leading to the development of a different diagnosis list and risk stratification (probability assigned) for those potential diagnoses.
    -The choice of investigation depends on the differential diagnosis list and balancing risks and benefits.
    -If the likelihood of a diagnosis is very low and the risks of further investigation are considered to be more than the benefit of identifying & treating the unlikely condition, not further testing may be chosen.
    b) In pregnancy there are some additional considerations

    - Some rare conditions (such as aortic dissection) occur more often in pregnancy and need to be considered

    - In late pregnancy, the development & well being of the baby is a consideration

    - Radiation exposure for both mother & baby and its associated long term risks influence ordering & choice of investigations

95. Q. *What model of assessing chest pain did Monash Hospital or a non-obstetric Emergency Department employ in 2012? Is it still the same today? How would this differ to the assessment that was carried out on Ms Gorman at the RWH?*

Ans. *We would like to answer this question from the perspective of a metropolitan ED in Victoria rather than a particular practice setting.*

The model of assessment would be broadly similar to that previously described & there has been no major change between 2012 & now.
That said, in busy metropolitan ED there may be process in place whereby nurses initiate ECG, blood tests, pain relief or cardiac monitoring before a patient is seen by a doctor. The difference is largely based on workload and casemix rather than the clinical picture per se.
Emergency physicians would be reluctant to order a chest xray in pregnant patients unless there is a clear reason to do so.
We do not consider ECG a mandatory test in young, otherwise well patients with isolated chest wall/pleuritic chest pain.

-Pulmonary Embolism, Risk Factors, Signs and Symptoms

96. Q. *What proportion of pregnant women are at risk of developing pulmonary embolism? What are the risks factors? Did Ms Gorman present with any of these risk factors in isolation or combination? If so, was enough weight attached to Ms Gorman's presenting risk factors?*

Ans. *a) If one excludes pulmonary emboli occurring after delivery, research suggests that the rate of PE is of the order of 1-3/10,000.*

This is slightly higher than age matched women but not markedly so.

b) Risk factors for PE can be looked at two ways – those associated at a population level with PE and those that are confirmed to carry a higher risk in patients attending emergency departments with potential PE.

Risk factors identified include:

- *Previous PE or DVT – The strongest risk factor*
- *High BMI – varying data but BMI >35 quoted and not confirmed no useful ED risk factor*
- *Malignancy*
- *Recent surgery or major trauma*
- *Immobility – eg. Hospital admission or leg cast. Not clear what length of immobility is relevant. Some research says >72 hours*
- *Smoking – population risk factor not useful in ED risk stratification*
- *Heart failure or stroke*
- *Exogenous oestrogen*
- *Pregnancy*

Among pregnant patients these factors are associated with increased risk of PE:

- *Multiparity*
- *Pre-eclampsia*
- *Ante or post natal haemorrhage*
- *Gestational diabetes*

- *Hyperemesis*

It should be noted that these have not been confirmed as risk factors useful in assessment of patients attending ED with potential PE.

In our practice, we would not usually consider hyperemesis a significant risk factor and would regard previous hospital admission as a flag for a potential missed diagnosis rather than for PE.

It should be noted that among pregnant women investigated for potential PE, the rate of confirmed diagnosis is 2-6%.

This is a rare diagnosis and most doctors will see few if any in their practice life-times.

c) Based on the clinical record and Dr Moore's statement it is our view that appropriate weight was given to the potential risk factors in Ms Gorman.

97. Q. *Did Ms Gorman present with any signs and symptoms indicative that she may have had a pulmonary embolism? Is pain a symptom of a PE? If so, how is this typically described by a patient? What is the underlying cause of the pain of PE? In Ms Gorman's case is it possible to say whether the pain on the night of presentation to the RWH was likely due to a PE? (Please refer to autopsy report to assist with this questions and to Dr Moore's statement, page 20.6).*

Ans. *a) The only symptom or sign in Ms Gorman potentially indicative of PE was belated, potentially pleuritic chest pain.*

There was no collapse, no respiratory symptoms, normal circulation, no symptoms or signs of DVT and a normal heart rate for a pregnant patient.
b) Pain is a symptom of potential PE. It is usually sharp and worse on breathing. This type of pain is not specific to PE, there are a number of other causes.
Uncommonly, other types of pain as described by patients with PE and it can also be painless.
c) The cause of the pain is irritation of the pleura – the lining around the lung.
d) It is difficult to say if the pain at the first RWH attendance (3 Sept 2012) was likely due to PE.
With the benefit of hindsight, it is probably more likely than not that the pain was due to PE.

That said, based on what was known by Dr Moore, it is our opinion that PE was an unlikely cause of the pain; in other words other diagnoses were as likely or more likely.

-Assessment and Management of Ms Gorman

98. Q. *Was the staff assessment and management of Ms Gorman adequate? Could/should nursing staff have performed an ECG based on Ms Gorman's presentation?*

Ans. *We consider the nursing assessment of Ms Gorman to be adequate. We consider an ECG by nurses to be a non-essential test given the presentation.*

99. Q. *Was Dr Moore's clinical assessment appropriate and adequate in exploring a report of chest/rib pain or to exclude a differential diagnosis of pulmonary embolism? Please explain?*

Ans. *Based on the information contained in the clinical record and Dr Moore's statement and taking into consideration her level of training and experience and the setting in which she was practicing, in our opinion Dr Moore's clinical assessment was appropriate and*

adequate in exploring the reported chest/rib pain and to exclude a differential diagnosis of PE.

i. The history she obtained and physical exam were reasonable. The logic she applied in deciding that risk of PE was very low seems reasonable. There was very localized and reproducible chest pain, no respiratory symptoms, no evidence of DVT and a plausible alternative diagnosis.

100. Q. *What investigations are necessary to establish/exclude a pulmonary embolism? Would it have been reasonable or necessary in the circumstances to have conducted any of these investigations? Can changes on an ECG inform a clinician that a pulmonary embolism is or may be present? What is the likelihood that an ECG would have been abnormal in a manner suggestive of PE during this assessment? Should an ECG have been performed in Ms Gorman's case on the 3 September 2012?*

Ans. *a) Investigation is not 100% accurate. It both misses some cases and overcalls some cases.*

In the non-pregnant patient, the most common investigation strategy is establishing probability of PE (often using a validated risk stratification tool). Then if further tests are needed these may include blood tests and/or unaging studies.
In the pregnant patient, there are various approaches to investigation – none as yet fully validated. They also include determination of probability and may then employ blood tests, ultrasound of the legs or lung unaging in various orders.
b) In our opinion practitioners vary in their approach to a case like this because of lack of clarity regarding the most accurate investigation strategy, concern regarding outcome of missed diagnosis, potential impacts of radiation on mother & child and the risk of false positive tests resulting in unnecessary treatments with their own risks of complications.
While there may have been subtle differences in the way we would have approached this case (including the option of including Ms Gorman in shared decision making regarding further testing) we do not consider Dr Moore's approach to have been unreasonable.
c) ECG is not helpful to confirm/rule out PE. Any changes are usually non-specific and a normal ECG does not rule out PE.
In our opinion, at the first RWH attendance on 3 Sept 2012, ECG was not an essential test given the presentation and is very unlikely to have changed decision making or management.

101. Q. *Hypothetically, if investigations revealed a pulmonary embolism, what would have been the management/treatment? And within what time frame would this treatment needed to have been implemented for it to have had a positive effect in Ms Gorman? Further, what is the likelihood that, had Ms Gorman been diagnosed with a pulmonary embolism during her presentation to RWH, that her outcome could have been different?*

Ans. *The treatment of pulmonary embolus in a pregnant patient would have been:*

a) Administration of subcutaneous injection of anticoagulant medication for the duration of the pregnancy.

b)The patient may have been admitted to hospital for observation (either in an obstetric/gynae ward or general medical ward, depending on the policies of the health service)

Immediate treatment prevents further clot formation, but does not resolve existing clot, which can still break off and travel into the lungs after treatment commences.
If admitted, there may have been opportunity for earlier recognition and management of her deterioration, but cannot state with certainty if the outcome would have been different.

-Staffing at WEC and Escalation of Care

102. Q. *Are you able to make any comment in relation to the nature (seniority and specialty) of supervision available to Dr Moore at the time of her assessment of Ms Gorman (Dr Moore's supervisor, Dr Gu was at the time an obstetrics/gynaecology registrar at the end of her 2nd year)? And more generally the staffing structure at the RWH ED in 2012.*

103. Ans. *The purpose of the ED is to assess and treat patients with a variety of emergency presentations, some who are critically unwell.*

In order to do so, there needs to be access to:

-Emergency medicine skills

-Doctors appropriately trained in emergency medicine.

-Women's ED is focused on maternal and perinatal issues, and the focus is on management of these conditions.
-A proportion of patients will have critical illness from other causes, and it is important that skills to provide care are available.
-There are several models of providing support and to access critical care services quickly:

- *On site / available emergency medicine trained staff*
- *On-call staff*
- *Mechanisms to access services quickly – e.g. emergency transport, streamlined referrals.*

Dr Gu, as an O&G trainee is likely to have had similar emergency experience as Dr Moore. Her experience would certainly have been valuable for maternal and perinatal issues, but it would have been useful to also have access to emergency medicine advice in addition.

104. Q. *Do you consider that obstetric emergency departments should have senior emergency medicine staff available to consider non-obstetric presentations? Do you consider there was readily accessible support (nursing and medical) to support Dr Moore's decision making?*

105. Q. *Should Ms Gorman's case have been escalated so that a more senior clinician reviewed the case on the basis that it was a second visit to an emergency department within a short time frame (i.e., 48 hrs) or due to her risk factors and presenting signs and symptoms? What is the current practice in your respective hospitals regarding recurring visits and discharge by junior doctors?*

106. A. *It is recognised that repeat ED attendance for the same condition within 72 hours is associated with misdiagnosis at the first attendance, and that symptoms/disease states may evolve and progress.*

Many EDs have systems in place to flag such patients:

E.g. Note at triage

Patient reviewed by registrar or above

It is noted that Ms Gorman's symptoms on 3 Sep were not the same as the first ED attendance at Northern, even though the presentations were less than 72 hours apart.

The ability to consult a senior colleague with emergency experience would be desirable.

Current practice in both our institutions would reflect the above.

-Policy, Guidelines and Procedures

107. Q. *Would you like to make any comments with regards to any RWH or Ambulance Victoria policy, guidelines or procedures that were or were not in place at the time of this incident? Further, that have been implemented and/or adopted since this incident? And lastly have you identified any areas which still require attention and consideration for change having regard to all the information contained within the coronial brief.*

Ans. *RWH*

Although adding ECG as part of guidelines could be useful in isolated cases, it would not have identified or prevented diagnosis of pulmonary embolus.

AV

Difficult area.

It was reasonable to suspect ruptured ectopic pregnancy.

We have concerns about patients who are obviously critically unwell being taken to centre without critical care facilities.

The ability to have direct clinician to clinician consultation (between ambulance an ED) early in the transport process would have aided good decision making about the best destination.

Melbourne has 4 major obstetric units co-located with general hospitals

RWH (adjacent to RMH)

Mercy (adjacent to Austin)

Monash Medical Centre

Sunshine

Two have separate EDs: RWH and Mercy.

There should be a formal process or memorandum of understanding between the two hospitals regarding being able to provide coordinated management of critically ill patients.

108. Q. *Did you identify anything at all which resulted in missed opportunities in Ms Gorman receiving optimal assessment, diagnosis, treatment and management? If so please explain.*

Ans. *1. Appropriate medical staffing in ED, with ready access to emergency medicine specific advice.*

2. Improved inter-hospital collaboration between Women's Hospital and Royal Melbourne Hospital.

-Ambulance Victoria Questions

109. Q. *Do you agree the paramedics' view was that Ms Gorman's presenting symptoms were obstetric/gynaecological in nature?*

Ans. Nil.

110. Q. *AV's Clinical Practice Guideline CPG A0105 – Time Critical Guidelines (Medical) at that time specifically directed paramedics to take patients to the nearest appropriate hospital.*

On that basis, would you agree that at that time, the most appropriate hospital for many patients experiencing a suspected ruptured ectopic pregnancy would have been at the RWH?

Ans. *This is difficult.*

Suspicion of ectopic pregnancy was reasonable on that basis, choice of RWH is appropriate.

Based on the seriousness and critical nature of her presentation, however, there is a need to ensure and smooth and timely access to critical care trained staff and facilities.

We have identified three possible ways to achieve this:

1. Direct AV to transport critically ill patients to hospital with critical care facilities.

2. AV to hospital real time communication re destination. This would allow clarification of the appropriate destination, and/or enable staff to mobilise additional resources and support.

3...

111. For the answers provided in the witnesses subsequent joint oral testimony, see transcript from pages 427-506.

Associate Professor Margaret Truesdale.[58]

Coroners assistant.

-The role of the Women's Emergency Centre.

112. Professor Truesdale offered that the WEC focusses on acute obstetric and emergency gynaecological problems. And was not a general emergency department, *and as such endevours to triage all patients who do not fit the niche demographic patient presentation type, to be directed to attend RMH ED.*
Furthermore, given the nature of the clinical conditions of patients who present to WEC there is a higher rate of re-presentation of patients as this corresponds with the natural progression of many conditions (such as pelvic bleeding consistent with miscarriage, endometritis pelvic pain,etc)... As a general emergency physician I therefore agree with the general premise that all patients who return should be seen by a more senior doctor; however for many, if not most of WEC's patients the re-presentation is consistent with the natural progression of the patients condition, and therefore would not require the involvement of a senior doctor (consultant or registrar), for review. Hence often a telephone discussion such as the one described by Dr Moore is undertaken. [59]

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[58] Professor Truesdale was at the time of the matters under examination, an emergency specialist employed five hours per week at the RWH. Her job was to supervise the liason for the Emergency Registrars at the RWH, who were undergoing training in emergency medicine at the RMH.
She also held the position of Director of the Emergency Department at RMH.
At the time of her testimony, 5 July 2017, she had become the Co-Director of the Womens Emergency Care Centre, (WEC), while remaining at the RMH as a senior emergency physician. Her qualifications and experience are further set out in her statement at exhibit 4 and from transcript 120.
[59] Ibid page 3.

-The management of Elizabeth Gorman.

113. In her role as an expert in emergency medicine, (and the current Co-Director of the WEC), Professor Truesdale had been asked to comment on the role of Dr Moore who as above, saw Elizabeth at the WEC, on the evening of 3 September, 2012.

114. Professor Truesdale noted that Elizabeth's presentation was an uncommon event in the WEC and went on to question whether a review undertaken by someone of Dr Moore's training and experience was appropriate.

When considering a possible role to be taken by other staff:

However such a further review would (also) *have been undertaken by an O and G trainee registrar, and not an emergency medicine trainee, or an emergency physician.*

... the majority of nursing staff are midwives , the medical staff are drawn from the specialties of both emergency medicine and obstetrics and gynaecology, both specialists and trainees and no single person has expertees in both emergency medicine and obstetrics and Gynaecology at the Fellowship level. [60]

115. Professor Truesdale additionally offered that in regard to such a presentation, a clinical suspicion by Dr Moore for pulmonary embolus should have properly been recorded in her assessment, with further investigations then undertaken to seek to exclude same.

There is agreement within the radiology department at the Women's that in such a case, in the first instance a chest x-ray would have been performed, followed possibly by a CT Pulmonary Angiogram, (CTPA) *or ventilation perfusion scan,* (VQ) *in a pregnant woman. Both of these latter investigations were not available at the RWH, and could only be indertaken at the RMH.*[61]

116. She commented (agreeing with Dr Kambourakis), that there were gaps in the documentation provided by Dr Moore and that it would have been appropriate to include documentation of a list of differential diagnosis as well as, *specific negatives for thromboemolic disease and details of her conversation with Dr Ying Gu.*[62]

In her further testimony on the issue of establishing a differential diagnosis, Professor Truesdale stated that when someone presents with chest pain, there are a myriad of diagnosis which one needs to think about as potential diagnosis, *and then work through all of them.*

I teach junior doctors to ask , 'what is the diagnosis, what is the differential diagnosis and what else in the area could cause harm or potential morbidity, to the patient if you miss that diagnosis'.

117. For a person with chest pain these can include acute myocardial infarction, cardiomyopathy, pulmonary embolism, musco skeletal pain, general rib thoracic pain, pneumonia, bronchoitis and many others. One needs to eliminate each of these before reaching a conclusion and you do that, *by clinical means, or investigative means.*[63]

118. Q. *Dr Moore wrote in her notes, 'denies calf pain'... she says there, 'unwell yesterday, with severe vomiting Ended very forceful... Ended up in Northern for IV hydration.*

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[60] Exhibit 4 page 4.
[61] Exhibit 4 page 4.
[62] Exhibit 4 page 2.
[63] Transcript 127.

Following this the onset of right rib pain, worse on movement and coughing. Denied shortness of breath or chest pain. No FHX, (no family history), of DVT or clotting problems. Was her history taking adequate?

Ans. *I would have documented more about the type of pain, where it radiated to... what other features of the pain were present and then I would also have liked the relevant negatives, more relevant negatives than were actually shown, such as ruling out the differential diagnosis of pneumonia for example, no fever, no chills, no coughing up of phlegm, no haemoptysis, for example... they would be the things I would ask about for pneumonia... Cardiomyopathy or congestive heart failure, I would ask a different set of questions and so on...* [64]

119. Q. *If a pulmonary embolism was under consideration by Dr Moore, what additional information would you have liked to have seen written in this progress note?*

Ans. *Any evidence of recent travel, overseas travel, prolonged periods of being in bed. Smoking history. General activity over the last little while. If she had coughed up any pink frothy sputum. If she had had any other pain in the chest, and so forth.*[65]

120. Q. *Pain in other parts of the body?*

Ans. *Yes. Pain, radiation of pain, also pain in the calf, any physical exercise or change which might have bought pain to the calves.*

Coroner.

121. Q. Dr Moore, *appears to have given some consideration to pulmonary embolism, but your evidence is that the notes do not contain evidence of a sufficiently fulsome examination of that particular possibility?*

122. Ans. *I am an emergency physician... of many years experience... I also tend to be someone who writes quite a lot.*

123. Q. *You also say from... that there was an insufficient examination of the other potential dignosis that may have been examined in this presentation?*

Ans. *In my opinion, yes...* [66]

Coroner's assistant.

124. At triage Professor Truesdale further considered that a patient presenting with chest pain should have a vital set of observations carried out. *This would include, blood pressure pulse rate, oxygen saturation, tempreture, pain score, oxygen saturation and respiratory rate... we have the six but I don't see the pain score.*[67]

125. The presentation at triage was assessed at 4, *which tells us that the patient has a condition, which is considered non life threatening, that the patient should be seen within one hour of presentation/ arrival time, as per the... Australasion score system.* So then the patient would be taken for assessment by a nurse and then the Doctor would attend and take a history and conduct an examination formulating a diagnosis differential, with any required investigations at that time to be indicated. In regard to the taking of an ECG Professor

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[64] Transcript 129
[65] Ibid.
[66] Transcript 130.
[67] Transcript 131-2. Existence of record of painscore (recorded as being 7 out of 10), was also located.

Truesdale again affirmed that in her opinion, *an ECG should be taken in resepect of any patient who presents with chest pain to an emergency department.* [68]

Q. *At the RMH is that initiated by the nursing staff?*

Ans. *Nursing staff predominantly, but sometimes we have to ask for it if we feel it is necessary, but most of the time that's initiated by nursing staff.*

Q. *Was that the practise in 2012?*

Ans... *I expect that it would have been the practise... for patients who present with chest pain.*

Q. *But certainly at the RWH there are facilities to conduct an ECG?*

Ans. *Yes, there are.*

126. Professor Tuesdale further testified that an ECG would have been helpful to exclude a differential diagnosis such as a myocardial infarction.

One of the most important things to exclude is a myocardial infarction, which is demonstrated by ECG changes, if it's ST elevation or non-stemi, it will not be indicated. There are changes that can be associated, such as left ventricle hypotrophy, such as bundle branch, ot conduction defects such as arrhythmias and such as fast heart rates on tachycardia.

127. In regard to indicating a pulmonary embolism, the ECG, *can be very varied... they can range from zero to the classic, which we are taught in medical school, which I have seen* (just) *twice in my entire 29 year career, which is an S1Q3T3... that's a classic pulmonary embolus change. The most common PE change is tachycardia, which means fast heart rate.*

128. Q. ... *do you know why after reviewing the record... why an ECG wasn't conducted on this occasion?*

Ans. *I don't have an explanation.* [69]

129. Q. Talking about thromboembolic disease and a conversation with a registrar Dr Ying-gu, *when you say specific negatives... what do you mean* ?

Ans. *So specific negatives in the context of... that if the answer is no it becomes relevant, it is a sort of double confirmation. So for a PE, specific negatives are, no family history of pulmonary embolism or thromboembolic disease... no haemoptysis... that means blood clots being coughed up, no fever or chills, because you can present with a low grade fever with PE. No sustained period of lying down or inactivity, such as travel or bus or a long period of time in bed. No recent surgery, no increased cestrogen, particularly from the oral contraceptive pill, or other estrogen sources. No pregnancy. Smoking is also relevant.*

130. Q. *Any comment in regard to BMI?*

Ans. *Well if someone is morbidly obese, then they probably have a lower level of activity... don't walk around as much. So that is something I would follow.* [70]

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[68] Transcript 132-33.
[69] Transcript 134.
[70] Transcript 135-6. See also reference to additional aspects of a presentation, which may indicate the presence of a PE, with a family history of PE, or deep vein thrombosis thought to be particularly relevant.

131. Q. ... *so these are the considerations you would expect, a clinician to think about, if they are wanting to rule out if they are wanting to rule out a PE as a diagnosis?*

Ans *Yes, I think I have covered them all... there might be one ot two I have not mentioned.* [71]

132. In regard to Dr Moore and her level of skill and experience and how she could be expected to cope with a patient presenting with a possible PE, Professor Truesdale considered that patients who presented at the RWH with an easily identifiable and non-threatening non-O & G emergency, would be referred to the RMH.

She continued:

In this particular case the patient presented with chest pain and the agreement is that because chest pain can be obviously a serious diagnosis, the patient would be taken into care into the RWH, while initial assessment stabilisation is undertaken, so therefore because of the ramifications that chest pain, for example, could be an acute myocardial infarction, you don't want to be sending someone even 200 meters to the RMH, when you have some care there... so maybe make an intitial assessment and send.

This was not a case of acute myocardial infarction... so the Dr has stated she had experience in an emergency department... which I assume would be part of her intern training at a minimum, she would have been expected to be able to do an initial assessment of a patient with chest pain. It is one of the first assessments that we learn as medical students, to bring that assessment together, ask the relevant questions, and to then plan an approach... Dr Moore had several options. She could either have reached her own conclusions. She could have referred to an in hospital registrar, O&G or anaesthetic fellow, or she could have spoken to the physician on call... at the RWH... And the physician on call, if she had have been consulted would then have made some comments, some of which could have been referred to the RMH, or for management at the RMH.[72]

... if you wanted to send the patient across for an admission at the RMH, the first step is to go to the physician on call at the RMH. Reason being, you have had a discussion with a senior doctor, because often the person who is receiving the patient at RMH may well be a registrar. Or alternatively, if you just wanted quick advice, such as reading an ECG then the RMH ED is happy to facilitate that. [73]

133. The further aim is to ensure that patients who have been seen at the RWH do not necessarily have to be seen again at the RMH ED.[74]

Coroner.

134. Q. ... *I have some difficulty with the notion that someone who has to consider a number of potentially critical issues around a variety of possible causes for a presentation, may simply be swamped by that consideration, and that the potential urgency of the situation requires instead a reference to a senior Emergency Medicine Specialist, so as to help sort out those variety of potential working diagnosis, in an orderly way. I mean it would take a long time to go through the testing to assess the liklihood of any one of these diagnosis... but the possibility is that the rather inexperienced resident on duty overnight at the RWH is swamped,*

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[71] Transcript 138.
[72] Transcript 142. Note the difference between Dr Moore and Professor Truesdale as to Dr Moore's rights to speak directly to a Consultant Physician. (See Dr Moore's evidence on her understanding of this matter at paragraphs 55 and 56 above).
[73] Transcript 142.
[74] Transcript 143.

which may lead to it taking too long to sort out before a relatively serious progression of the condition occurs?

135. Ans. *At any time... could seek additional help. Secondly there is nothing stopping anyone from doing a basic history and examination and if subsequent tests and investigations were to be suggested or performed, a ventilation/perfusion scan or a CTPA, it would only be performed at the RMH. But you are talking about senior decision making processes, the physician on call is actually the person who is able to make these decisions.*[75]

-Changing guidelines.

136. Professor Tuesdale also advised that in May 2016, certain practises within the WEC were changed with the publication of a requirement concerning the management of chest pain. Noting that there was no existing clinical practise guidelines, *it would be expected that as part of a clinical assessment, routine bedside investigations including an ECG, would be conducted...*[76] She agreed (with Dr Kambourakis) that this was an appropriate change. Professor Truesdale testified that there were currently more than 100 guidelines at the RMH ED, which are controlled by emergency department protocols, policies and a guidelines committee, which are reviewed every three to five years.

137. They, *relate to specific patient conditions, such as overdose of Panadol; such as pulmonary embolism; such as cardiomyopathy and congestive heart failure... specific conditions... you want something which is three pages at the very most. It can be readily accessible by junior doctors mainly, because they are the ones that need it... These are all electronically stored at the RMH ED computer system.* [77]

-Changing staff.

138. Since the death of Elizabeth Gorman in 2012 there has been an increase in the staffing of Emergency medicine specialists at the RWH. *A typical week now has a consultant emergency physician or an obstetrician gynaecologist in the emergency department for one shift, and there is nearly always a level 4 obstetric and gynaecology senior trainee, present in the emergency department. These doctors are supported by emergency medicine trainees and from the inpatient service 24 hours a day, there are obstetrics and gynaecology registrars, anaesthetic fellows or senior registrars present in the hospital. Furthermore a general physician and a surgeon are available after hours for the Hospital, by telephone for advice, or for recall.*[78]

139. Professor Truesdale was further asked to comment on the then Director of WEC, Dr Yuen's comments about the extensive responsibilities of Dr Moore on the night shift on 3 September 2012. Brief page 201-2, *on duty for the whole of the hospital, liable to be called to any ward during that period.*

140. Ans. *Difficult for me to answer normally there would be two HMO's at that time. One for obstetrics and one for gynaecology... and both are answerable to the ED for patients who come in. At about that time I put forward a case, because on average there were about seven patients coming into the ED to be seen overnight, that there should be a Dr specifically dedicated to the ED and that business case was successful at the beginning of last year, so we*

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[75] Transcript 144-45.
[76] Ibid page 5.
[77] Transcript 123.
[78] Exhibit 4 page 6.

do have an individual HMO now present in the ED at night for those approximately seven to eight patients who come in each night. [79]

141. Q. *Dr Yuen says that between the hours of 2100 when night shift commences and 2am, other medical staff rostered in the ED, emergency medicine trainee registrars and obstetric and gynaecological medical officers. So in terms of there being staff available within the hospital it seems there were rather a light load of experienced medical officers who may be able to assist someone with the sort of problem that Dr Moore had ?*

Ans. *Very difficult to judge... Certainly an emergency medicine trainee should be very competent in the analysis of chest pain, if there were an emergency medicine trainee on duty I would expect... anaesthetic fellows to be very competent as well and both of those doctors as per Dr Yuen's statement were present, I understand.*

142. Q. (Was the process in place at the time, likely to be), *rather overwhelming ... or do you think the systems that were available in 2012, such as I have read to you from Dr Yuen's statement, were satisfactory in providing an appropriate level of support ?*

Ans. *I don't know Dr Moore. I would expect an intern or a HMO to be able to take a competent history about chest pain and to consider differential diagnosis at that time, and at that point in time, to discuss the matter with a more senior doctor, that is the process at the RMH.*

143. As to the possible distinction between rib pain and chest pain, and the ability of a young Doctor to be able to distinguish between the two, Professor Truesdale stated that she found it, *very difficult to distinguish between the two. I therefore would imagine that other doctors would also find it difficult to differenciate between thoracic pain, rib pain, muskoskeletal pain, or other pain of the chest.*[80]

Coroners assistant.

144. Q *You say that you concur with Dr Kambourakis opinion that an ECG, 'should be performed as part of the evaluation of a pregnant patient presenting with chest pain'. And you say, 'there is an established practice where all ECG's are read by a ACEM emergency medicine trainee or an emergency physician in the WEC or failing them being available, if there is uncertainty by another doctor in the interpretation of an ECG then help may be sought by faxing an ECG and discussing same with the emergency physicians at the RMH',-so when was that practise established?*

Ans. *Any patient who presents with chest pain should have an ECG as part of the work-up. The practise at that time was different to what it is now because I changed the process when I became director in 2014. At that time ECG's were put into a drawer and were subsequently (reviewed) by the Cardiology service at the RMH.*

I would now expect any doctor to be able to determine if an ECG is normal. If there is any doubt they can contact the RMH and have an ECG discussion with an emergency physician or registrar.[81]

-Triage Nurse duties

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[79] Transcript 145-6. See also later evidence of Dr Mark Garwood in regard to availability of medical staff at a variety of levels, and specialities, within the whole of the hospital, that night.
[80] Transcript 147.
[81] Transcript 148-9.

145. As to the duties of a triage nurse who was responsible for receiving calls, in 2012, Professor Truesdale stated that there had been a long term arrangement as to what the RWH cohort of patients was. *Primarily patients with womens problems and neo-nates (newborn) of less than 14 days of corrected age. Otherwise the nursing staff know to redirect the patient to the Children's unless the baby is in extremis, in which case they will be bought to the emergency department.*

There was quite a significant discussion when the RWH moved to the co-located site in June 2008, of the flow between the two hospitals, and emphasis was made that our cohort of niche patients still existed at the RWH but just the process for patients to be redirected to the RMH if safe to do so... so the nurses response is to a women's problem or alternatively a problem with more severity such as they have a very very low blood pressure or are suffering from chest pain, and therefore shouldn't be moved until an alternate,... the crews decide where the patient is to be taken. They are meant to report in to their central place... and to recall their receiving hospital, if the patient is in a critical or extremis circumstance... such as a patient with... breathing difficulties or who on their cardiograph shows changes consistent with a heart attack.

A patient who would be typically called in for the RWH would be a patient who has a recent history of pregnancy for example who is bleeding horrendously, or a patient who is about to deliver their baby...[82]

146. There are no set questions that a triage nurse should ask. It is an open airway, which people can scan and listen to so you try and avoid public conversations.

147. Professor Truesdale was then asked to listen to, and comment upon exhibit 3(b) the recording and the transcript, exhibit 3(b) (1), of the conversation between the Ambulance Victoria clinician Mr Carroll, and the RWH Duty Triage nurse, concerning Elizabeth Gorman.

Q. *Was the information conveyed to the triage nurse,* (including, *"now they are having trouble getting a blood pressure"*) *sufficient to confirm to the triage nurse that this patient should be presenting at the RWH?*

Ans. *It is a difficult question to answer... they have said she is pregnant so that element is appropriate... they say querring ruptured ectopic... it's the right niche. The problem is that they are saying they are having trouble getting blood pressure. "She's cold pale and sweaty, which implies that she is very hypotensive." And the best place in my opinion for a resuscitation in the acute setting is the RMH ED... in someone who is that hypotensive...*

148. Q. *This is a call from the Ambulance Victoria clinician who is not in the ambulance. So he is sitting at ESTA and picks up the phone and rings the RWH?*

Ans. *Well normally that would be a closed line, in which case more questions could have been asked... mentions blood pressure mentions cold pale and sweaty... but there are no actual obs given at any point in time... its customary they actually give obs over the phone... a pulse rate and a heart rate and usually more obs if they possibly can. I don't know what was going on that night... usually having trouble getting blood pressure... means... having trouble getting blood pressure, because they are very hypotensive.*

149. Q. *The triage nurse mentions, 'hoping they put a line in her' ?*
Ans. *Anyone who is hypotensive you would hope that they have an intravenous access so that*

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[82] Transcript 154.

they can put fluid in and they... will have commenced the rescusitation, which is within the mantra of the ambulance officers role. [83]

150. Professor Truesdale further confirmed that under a protocol headed Clinical Interface Protocol, The Royal Melbourne Hospital and the Royal Women's Hospital May 2012, was applicable at the time under consideration.[84] This dictates that the patient under consideration for transfer, should be seen by the emergency registrar or gynaecological registrar, with help then sought by the relevant Royal Womens consultant, which is either a surgical physician or obstetrician, and then reviewed by the relevant Royal Melbourne registrar and/or consultant, which I note tends to confirm Dr Moore's evidence about this matter.

151. Had the clinical suspicion of a PE existed at the Women's, the after hours radiographer would have been called in and an x-ray would be done, which did not occur. [85] An ECG, which also did not occur, would be able to be done by staff within the ED, who would also be expected to be able to be able to interpret the ECG. [86]

152. Professor Truesdale further testified that in September 2012 and now, guidelines in regard to the diagnosis and treatment of a PE existed at the RMH only, but that these were not directly accessable by staff at the RWH. These could be accessed by RWH staff making contact with staff at the RMH ED. *You would have to suspect the diagnosis to search for the guideline.* [87]

Mr Ajensztat.

153. Professor Truesdale was then asked about the questioning of the patient by Dr Moore. Her view was that more detailed questioning would have assisted with understanding the possible contribution of such conditions as pneumonia and acute myocardial infarction, and the re-interpretation of the differential diagnosis.

154. In regard to her statement that, *had the clinical suspicion for a pulmonary embolus featured more in Dr Moore's assessment as a possible differential diagnosis, then further investigations to exclude the diagnosis would normally have been undertaken.* Professor Truesdale considered that there were several potential diagnosis relating to chest pain that should have been undertaken, to try and exclude that possibility. *I know what I would have done if Dr Moore consulted me. I can only read what Dr Moore put on paper... if there is a clinical suspicion of pulmonary embolism, it must be excluded whether the patient is pregnant or not pregnant.* [88]

155. An ECG is not particularly helpful in excluding a pulmonary embolus but it can be used to exclude other potentially serious possibilities.

156. The next investigation she would do would be an x-ray if at the RWH. If at the RMH the approach would be different.[89]

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[83] Transcript 162.
[84] Transcript 166 , exhibit 4(a) (2).
[85] Transcript 169.
[86] Transcript 172.
[87] Transcript 175.
[88] Transcript 182.
[89] Transcript 180. I believe this was a reference to the earlier evidence that at the RWH radiology department was closed at the time being a.h. and that while an x-ray was needed before an approach to the RMH radiologist could occur, that would also require the calling into the calling in of the on call radiologist at the RWH, to first take chest x-rays.

157. Professor Truesdale further agreed with Dr Kambourakis statement in his report that, clinical symptoms or signs alone should not be relied on to exclude or diagnose pulmonary embolism.

If the patient is pregnant, it is not enough on signs alone in my opinion... (If PE it is part of the differential diagnosis in a pregnant woman) *... my opinion is that you need a definitive test, which is a CTPA or VQ in a pregnant woman.*[90]

158. Q. *Do you agree that in hindsight the presentation on 3 September was evidence of the progression of a PE at that time?*

Ans. *I can't be certain. I think it could be likely but I can't be certain...*

Q. *More likely than not ?*

Ans. *Yes.*[91]

159. Professor Truesdale then spoke of the possibilities that may have occurred if a small embolus identified on 3 September had been treated. This included the possibility that a small embolus if treated may have prevented the propogation or extension of the thrombus.[92]

Q. *Are you able to make any comment upon the likely effect of any treatment in September 2012, for PE, if it had been instituted ?*

Ans. (On 3 September... I think the answer), *would be speculative.*[93]

160. Professor Truesdale was additionally questioned about the decision to bring Elizabeth to the WEC rather than to the RMH ED.

... usually it is the officer in the van who makes the decision. This is different from many other ambulance services where the clinician at the centre is the one who directs where the patient goes to.[94]

Mr Burnett.

161. Professor Truesdale confirmed that she was a part-time employee at the RWH in September 2012 and had no *direct or indirect* involvement with the care provided to Elizabeth. She became a Director of the WEC in June 2014. And that she did not have personal knowledge of the ED provided orientation for RMO's in September 2012. Her statement was also prepared in response, *to a court request that she consider and comment upon an earlier report from Dr Kambourakis.*

162. Professor Truesdale also confirmed that she was not involved in the review of this death set up by the previous Director of Medical Services, Dr Bessell, which included representation from Ambulance Victoria, as well as the RMH.

163. Q. *Would it come as a surprise to you to know that as a result of that review the RWH concluded that the clinical assessment by Dr Moore was appropriate?*

Ans. *Everyone is entitled to their opinion... I know what my practise is as a senior emergency physician, what I would do if I were before a patient who presented with pleuratic sounding chest pains... If Dr Moore had presented the patient to me in real time as a senior emergency physician, I would have asked her for more details, asked her to consider what is her*

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[90] Transcript 184.
[91] Transcript 186.
[92] Transcript 187.
[93] Transcript 188.
[94] Transcript 189.

diagnosis and what other things in that area could lead to morbidity for that patient. I would then by a step-wise process eliminate what I could by history and nearly always I go and see the patient myself and I actually make notes in the electronic record of my patients. That is my systematic process of what I do. [95]

164. And further, *I don't take issue with the fact that she has written in her statement in paragraph 6 that there is a differential diagnosis of PE... but I don't think she excluded it because personally, I do not believe you can exclude it on history alone... Once you have entertained the diagnosis you need to actually do a more definitive test. It is well known... that a calf examination is very difficult to determine whether a DVT is present or not.*

165. Q. *She records in her notes at 107, 'denies calf pain' and then... 'no family history of DVT' ... and then over the page do you see, 'soft calves'?*

... So if you read these notes it is quite clear to you that she has examined the patient's calves?

Ans. *Yes however as I said before it is very difficult to assess normal calves, and the prence of DVT or otherwise.*

166. Q. *Yes, but you would be extremely critical of my client if she hadn't examined the calves, would you not?*

Ans. *Yes, I would be.*

167. Q. (Suggest)... *it is a proper examination when one is considering a differential diagnosis of PE?*

Ans. *It is an appropriate clinical examination. It does not exclude the diagnosis of PE in my opinion.*[96]

168. Q. *Professor Kelly says in her report (and evidence) that Dr Moore's clinical assessment was 'appropriate and adequate. She collected a satisfactory history and conducted a thorough clinical examination. Her decision not to further investigate Ms Gorman appears to be based on reasonable logic.' ... she is an imminent authority emergency medicine?*

Ans. *I would agree that Professor Kelly, Dr Kambourakis and myself are all senior emergency physicians.*

169. Professor Truesdale was then further examined about her opinion, and that contained in a medical text on emergency medicine of which Professor Kelly was a co editor.

Q. *They say at p 232, 'the diagnosis of PE is difficult and relies on the estimate of probabilities rather than any definitive test' ?*

Ans. *As I said before no one single test is 100%, even a CTPA or a VQ scan. There are multiple things that you put together. Your experience and gestalt (intuition born of training and experience), and the information you obtained from objective tests is how you would actually get the final answer.*

170. Q... *Do you agree it is challenging and difficult?*

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[95] Transcript 191.

[96] Transcript 196-8. Further radiological examination such as a VQ to examine oxygen perfusion, or a CPTA to look for evidence of blood clotting in the lung is also required leading to a possible conclusion that a PE is, or is not, occurring.

Ans. *Yes, therefore you must have a low threshold for excluding it... there is no 100% individual test to exclude a PE in the negative form. It is only when it is present and you see it on the VQ or the CTPA that you have a positive diagnosis. However if you go through in a structured manner and you have done the relevant investigations and it is negative, you have done the best that you can do.* [97]

171. Q. *There is a danger with CTPA scan for example because it is high in radioactivity?*

Ans. *It is not that high per se.*

172. Q. *There is a danger to the foetus and unborn child if you are doing that sort of test. You want to be pretty sure before you do a CTPA, to subject a pregnant woman to a CTPA?*

Ans... *what I say is if you look after the mother and you look after the child, if you miss a diagnosis of a PE and it has severe consequences then you have not looked after the mother and therefore not looked after the child. The radiation per se for a thorax is not that high, because you would shield the abdomen, particularly as at 11 weeks, the foetus would still be within the pelvic brim and you could shield it. So yes there is some radiation but you would do your best to protect everyone.*[98]

173. In further testimony Professor Truesdale reinterated that a patient presenting in an ED with a PE was an unusual event, with actual presentations at the RMH, (not the RWH), occurring every two weeks, while presentations in which PE is treated as a differential diagnosis, (to be excluded), occuring every day.[99]

174. Q. *Dr Moore will say she was employed by the hospital as an obstetrics and gynaecology resident medical officer, and that's what you understand?*

Ans. *Yes.*[100]

175. Q. *In 2012 that's what she was employed at and she was in her fourth year after graduation?*

Ans. *If that is what is said I accept that...*

176. At that time she would be responsible for both ward and emergency as would the other resident or HMO.

Q. *She will say that at that prior to the time she went on emergency that she received no specialist training at the RWH in regard to emergency medicine, prior to going on roster at the emergency ward?*

Ans. *I have no way of knowing you would have to ask Dr Yuen that.*

Q. *From the time of your apt in 2014, you have implemented a face to face orientation with Doctors that are coming into the WEC?*

Ans. *Yes.*

177. *Q. And in regard to radiology for chest pain cases it is required for an ECG to be taken in a situation where there is rib or chest pain?*

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[97] Transcript 201-2. See further discussion on this subject led by Mr Burnett for Dr Moore, from transcript 206-9.

[98] Transcript 202-3.

[99] Transcript 205.

[100] See her evidence at paragraphs 51-2 above.

Ans. *Chest pain. ... the reason why that is in there is because it's the process that I developed with the radiology team in order to get through ... to get the definitive investigation at the RMH, As I explained... they (the RWH) have the ECG. They take a history examination, ECG, chest x-ray and then speak with the radiologist whether for a more formal investigation. So that is more a process information. But anyone with chest pain, as I have said before, have an ECG... The (ECG) aspect is purely to get a process done in order to get a VQ or a CTPA because ... there seemed to be some disquiet what ever you want to say, there seemed to be obstructive behaviour by the radiologist (at the RWH) to get definitive investigations done to rule out PE... The radiologists were trying to say, 'well no ... do you really think it could be a PE, Oh it is very expensive to get the investigation done', ect ect.*[101]

The billing from the RMH goes back to the RWH.

I implemented this after discussions to get over the obstructions and the lack of streamlining... Two separate emergency physicians came to me during January, February saying, 'We are being obstructed ridiculously. Can you do something please'? [102]

178. Q. *Dr Moore will say that as of Septermber 2012, there were no formal guidelines or protocols at the RWH ED, instructing her to carry out ECG's or chest x-rays, for pregnant patients with rib pain ...?*

Ans... *there is still no protocol as to what to do because... assessment of chest pain is an elementary... the only thing you can do is look for an educational guide to specific guidelines, which have been available well prior to 2012, which will say how to examine for cardiomyopathy, CCF, thoracis aneurism dissection, AMI and PE, and other things...*

A process is something to facilitate an end result. A guideline is something of a representation. Both are not compulsory. [103]

179. Professor Truesdale then elaborated on why in her opinion a patients reference to '*rib*' or to '*chest pain*', should be treated similarly.[104] She also agreed that the radiology dept at the RWH closed each day at 5pm or at 5.30PM and that to the best of her knowledge that position had not changed since 2012.
180. Q. And that it was shut by the time that Ms Gorman presented?

Ans. *But there is an on-call radiographer who can be called in and there's an on call radiologist.*

181. In regard to the staffing of the WEC, and the hospital more generally, Professor Truesdale stated that she had increased the number of obstetricians and gynaecologists on staff; and that the ED is now staffed by an emergency physician or an obstetrician gynaecologist seven days a week, except for one weekend ...?

There's also more senior level four radio obstetrician gynaecology trainee present in the department-this is a step up from the career medical officers who were more in the department at this time. So I have increased the seniority of the doctors in the department... I believe we should always get the best candidates and these were the best candidates and these were the best candidates offering when natural attrician was taking place.

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[101] Transcript 212-3.
[102] Transcript 213.
[103] Transcript 214.
[104] Transcript 215-6.

Finally in regard to Dr Moore, I would say she has made an attempt at each (taking a history, doing a physical examination, making an assessment), *but not differential diagnosis, and that the full information is not documented.*

182. Q. *But if you read her statement, which I have read to you, she* (says that) *has made a differential diagnosis of PE?*

Ans. *Yes, she may also have had this hindsight outcome bias.*

Ms Hodgson.

183. Q. *Do I understand that the RWH radiologist was saying, 'well I want a chest x-ray before I will go to the next stage'?*

Ans. *Yes, there was some talk about wanting a D-dimer,* (test). *They subsequently agreed that a D-dimer was irrelevant.*

184. Q. *Is it now the case that people understand that they need the chest x-ray for radiology and then they can move to the CTPA or VQ?*

Ans. *After they have spoken with the radiologist and the radiologist then liases with the RMH for the tests to be done… That's the process that is in place now... and that has been emailed to all staff and is... part of the orientation package.*[105]

Coroner.

185. Q. *So are pregnant women undertaking chest x-rays in this situation?*

Ans. *Yes, absolutely... The chest x-ray will be done at the RWH. CTPA or VQ will be done at the RMH... I was the co-sponsor of this, together with Dr Duwatnah.*

Ms Hodgson.

186. Q. *And is it the case that not much has changed but significantly, now it is communicated to all staff what needs to happen?*

Ans. *Yes.*

Q. *In respect of getting the right tests done at the right time?*

Ans. *Yes.*

187. In regard to the opinion evidence given by Dr Kambourakis and Professor Kelly, Professor Truesdale agreed that they were both eminently qualified and experienced experts in this field.

Q. … *tell the court ...why you say that three imminently qualified and incredibly well experienced Emergency physicians come to different conclusions?*

Ans. *Because to diagnose a PE is a difficult challenging diagnosis. There is not a single absolute test that can give you a 100% diagnosis without going to CTPA or VQ, even if you were to do an ultra-spound of the legs which Professor Kelly alludes to you are not looking at the pelvic veins so I personally don't agree with that. So it's a different diagnosis. There are many mimicries of a PE, just on history and PE that can be the actual diagnosis, without it*

[105] Transcript 217.

being a PE, because it is obviously another diagnosis. But it is something that needs to be considered and excluded to be safe for a patient.

188. Professor Truesdale also offered that there was a lot of literature on the subject… with scientists trying to work out what are the various probabilities… *trying to get it simple for us, and unfortunately it is not a simple diagnosis…*[106]

Dr Mark Garwood.[107]

189. Dr Garwood is now the Chief Medical Officer at the RWH. He was not employed in any capacity at the RWH at the time under consideration. Dr Garwood stated that at the time she examined Elizabeth, on 3 and 4 September 2012, Dr Moore was a post graduate year 4 medical officer, with prior general emergency department experience who had completed a six month residency in Obstetrics at RWH.[108]

190. Dr Garwood stated that having regard to Professor Truesdale's opinion that an ECG should be performed when evaluating pregnant patients presenting with chest pains, that from 2 May 2016 all doctors on WEC rotation have been taught accordingly. This process has also been incorporated into the WEC orientation orientation package, which is provided to all doctors working in the WEC. [109]

In regard to *time critical* patients Dr Garwood further informed that the term was, so far as he knew, not used in Victorian Hospitals but as a term of art by AV employees, to describe patients who were on route to a hospital and who either required immediate rescusitation, or where an immediate need for rescusitation would soon exist.

The RWH instead used triage categories in relation to time priorities relative to the patients need to be seen in the WEC, by a doctor. These are in accordance with the Australian Triage scale as endorsed by the Australia's Triage Scale, as endorsed by the Australasian College of Emergency Medicine.

191. Dr Garwood provided a further statement in respect of the staffing at the WEC on the night of 3/4 September 2012. The WEC was staffed from 1300-2200 by a second year obstetrics and gynaecology registrar, an emergency physician registrar, a hospital Medical officer (HMO) and an intern on a 10 week WEC rotation from the RMH. There was also a second year obstetrics and gynaecology registrar who worked from 7.30 to 22.00 hrs.

More widely across the RWH in respect of Obstetrics and Gynaecology there was a registrar and two residents working from 1300 to 2200in the Delivery Suite/Receiving Obstetrics. In the Receiving Gynaecology allocation there was a senior registrar and resident working from 1700 until 22.20 hrs.

The overnight shift from 21.30 hrs on 3 September to 8.30 hrs on 4 September for obstetric and gynaecology included two night registrars including Dr Gu, and two night residents including Dr Moore… The registrar sic, nominated as HMO2 (in this case Dr Moore), was responsible for WEC presentations and ward calls. The handbook states that they are to contact the registrar if admission is required or if they need senior advice or review.[110]

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[106] Transcript 228-9. See Dr Garwoods extensive history in hospital administration as set out at transcript 364-5.
[107] Dr Mark Garwood is the Chief Medical Officer at the RWH.
[108] See paragraphs 53 to 56 above.
[109] Exhibit 7 page 2.
[110] Exhibit 17 page 2.

192. Dr Garwood was further requested to review the statement of his predecessor Dr Christine Bessell who were not available to testify.[111] and of Dr Nicola Yuen, the former WEC director. I note here that in regard to Dr Bessells statement, see exhibit 7(a), Dr Garwood did not accept Dr Bessell's evidence concerning the circumstances, which led to the decision to bring Elizabeth to the RWH.

193. Concerning the former WEC director, Dr Nicola Yuen's evidence, (found at brief page 20.12), Dr Garwood first confirmed that as of September 2012 the RWH had no specific guideline in relation to chest pain and having an ECG performed where there has been an indicator of chest pain. He further confirmed that it was Professor Truesdale's view that it wasn't possible to differenciate between chest pain of cardiac origen and rib pain.

Q. *Do you agree with that assessment?*

Ans. *Professor Truesdale is an Emergency Physician. My background is as a clinician in psychiatry... ECG's are often routine parts of the examination for chest pain that is thought to be of cardiac origin.*

194. Dr Garwood was later asked about his understanding of the advice incoming staff would receive in connection with the use of ECG's, as at September 2012. Dr Garwood replied that he had no reason to disbelieve Dr Yuen's statement to the effect, *that there were no procedures or guidelines in place at that time.* [112]

Mr Burnett.

195. Dr Garwood then testified as to the RWH review investigation of Elizabeth's treatment, chaired by Dr Bessell, which determined that Dr Moore's care of Elizabeth was appropriate.

Q. *And that she had considered a potential differential diagnosis adequately?*

Ans. *That's right.* [113]

He had not been part of the formulation of the root cause analysis report, but had read it and agreed that the RWH stood by the conclusions of the report. [114] Specifically that at that time, *there were no protocols or guidelines suggesting the need for an ECG for women complaining of chest and rib pain.*

The position on an absence of such guidelines was also adopted in her statement by Dr Yuen as set out at brief page 20.13. and Dr Bessell at brief page 21.

Dr Garwood further confirmed that the investigation report had examined the issue and recommended the protocol change, also recommended by Professor Truesdale.[115]

196. Dr Garwood was then questioned about Dr Moore's position that she had not received any face to face instructions when she was rostered on to the ED at the RWH. Dr Garwood stated that that position was consistent with statements he had read on that matter.

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[111] See directions hearing 5 May 2017.
[112] Transcript 353-4.
[113] Transcript 355.
[114] Transcript 356.
[115] Transcript 357.

197. In regard to the staffing at the hospital on 3/4 September 2012, Dr Garwood was asked whether he agreed that at any point there may not have been a doctor in the ED depending on the need for their services, else where in the hospital

He responded agreeing with the questioner that from the roster, *there were two people potentially providing services to the ED or WEC... but that as Dr Moore said, she had come down and reviewed Mrs Gorman and gone away and then come back...*

There were about 90 beds in the hospital, excluding neonatal. The patients were divided into between four and five wards. The women who are labouring were in the labour wards. *The RMO's were responsible for the ED and also the wards. The obstetrics and gynaecology registrars were there as well, and the HMO's were supervised by the registrar's, but the first responders to the ED would have been the two HMO's of whom Dr Moore was one.* [116]

Q. *You don't challenge Dr Moore that she was the only doctor in the ED when Mrs Gorman came in?*

Ans... *I wouldn't take issue with it, no.* [117]

Ms Hodgson.

198. Dr Garwood was then questioned about his view of the converstation which took place between the RWH triage nurse and the AV clinician Stewart Carroll.

Q *What were the expectations in 2012 of triage nurses at the WEC.*

Ans. *I specifically looked into this matter. And the conditions that applied in 2012, currently still apply, and there is annual competency training which is based on Australian Triage guidelines, both for general medicine and for Obstetrics and Gynaecology...*

Q... *what do you say about the triage nurses response that day?*

Ans... *I think that the information that was provided then, it was not unreasonable that the patient was accepted by the RWH at that point.*

Q. *With the benefit of hind sight and knowing what the vital signs were, knowing the competencies of your hospital and the strengths of your hospital, what do you say the appropriate destination would have been... ?*

Ans... *my opinion would be the RMH.*[118]

Court.

199. Dr Garwood was then asked to comment on expectations as to the level of experience and qualification for an RMO's working in the WEC.

He responded... *What I can say is that I expect... that it would have been the case that probably that position could have been held by someone who potentially was an HMO2 in that position. We have actually changed it since last year, and we are only recruiting HMO3's and above...*

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[116] Transcript 362.
[117] Transcript 363.
[118] Transcript 366-7.

200. Dr Garwood further advised on the range of more senior doctors in the hospital or on call on the night under examination.[119] He referred also to the further availability of medical staff at the RMH.

The usual pathway for that, which is fairly standard in hospitals, is to go through the medical hierarchy, so if it was a Resident, they would consult with their Registrar, and get an opinion from them, and then the next step, would be to go to the Consultant on call for the Womens, and if they were requiring engagement, or you know, to contact or to have an input from someone at the RMH, the Consultant would ring the Consultant at the RMH.[120]

201. Q. *If Dr Moore determined she needed further assistance..., would she have reasonably gone to Dr Gu... even though her specialty was not in General Medicine?*

In response Dr Garwood acknowledged the conflict and stated, *I think often with hospitals, people go to the person that is the next person above them, which was Dr Gu. They would then be able to go, if they had, you know, if it was indicated, they could have got the general physician on call... (he/she) would have been the person that they would have spoken to.*

Q. *Is this still the system that is in practice ?*

Ans. *Yes.*[121]

202. Dr Garwood was then asked to comment upon the efficiency of what he had earlier described as going through, '*the medical hierarchy*'.
203. In response Dr Garwood defended the system, pointing out that Dr Gu had probably been a Dr for seven or eight years, and would have had a broader experience with medicine and surgery before entering obstetrics and gynaecology. *Certainly people are able to speak to any Doctor that is on at night, in terms of support whether it's at the RWH or any other hospital.*

My understanding is that Dr Moore had worked for six months at the RWH the year before. If she had wished to do that, she certainly could have spoken to the anaesthetic registrar who was on, if that was relevant... But the hierarchy I have described exists in all public hospitals in Victoria...

204. Q. *Well it is specific to the Women's in the sense that the Women's is a specialist hospital rather than a larger hospital, with a broader base of patients and a broader base of disciplines?*

Ans... *If Dr Moore had any concerns and wanted further information, she could well have gone through Dr Gu and spoken to the Consultant Physician on call.*[122]

In later testimony on this matter, Dr Garwood added that he thought, *Dr Moore did a thorough examination and documentation and she had excluded pulmonary emboli based on her examination and history. There... certainly are people to talk to if that had been something she felt she needed... Certainly, I got the impression when your Honour raised it earlier... was that people were in a 'gatekeeping' role and that's not the way it is. I mean people are very permeable... we have no difficulty at all with people ringing our on call staff, talking to the other staff that are there. Had Dr Moore felt that it was required she certainly would have been able to do that.*

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[119] Transcript 371 and his subsequent statement dated 26 July 2017, which became exhibit 17.
[120] Transcript 372.
[121] Ibid.
[122] Transcript 375.

In regard to a recommendation which might emphasise the importance of access, *I think it actually happens in practice... that's why we have hierarchy's of people on, we have people having access to people who are more experienced than they are, where they can seek advice. That's the system we have at the RWH... it is very similar to what applies at other hospitals where people can go up the tree...* [123]

Ms Hodgson.

205. Under questioning from Counsel for the RWH, Dr Garwood spoke about the history of his hospital and its co-location with the RMH at its present site by 2008, the Clinical Interface Protocol (from 2011 on), and of the advantages that these arrangements produced. [124]
206. Dr Garwood further testified as to the capacity of the WEC to deal with resuscitation.

I suppose again with Mrs Gorman with blood pressure very low and requiring rescusitation, we are in a position to do that. I think we actually were able to do that on the occasion of September 4, but she unfortunately came in in a state, which was perhaps beyond what we were expecting based on the information that we'd had and we intervened very quickly at that point. She was obviously very unwell for two hours that she was with us and then we stabilised her and then after review by the cardiothorasic surgeons, that she could be transferred to the RMH and she'll have the theatre there for the removal of the embolus... [125]

207. Dr Garwood further asserted that the RWH was able to deal with medical emergencies like a post partum haemorrhage, which matter would usually occur in a birthing suite immediately after giving birth, or a ruptured ectopic pregnancy.

They're not patients we would transfer to the RMH. We would rescusitate them as required and then... stabilise things where we get them up to theatre as quickly as possible to do the definitive procedure in terms of locating the ectopic and doing what you then needed to do.

208. Dr Garwood was then asked to comment on the difficulties described by Professor Truesdale in Doctors being able to get RWH radiologists to carry out the testing that they wanted. And of the need for example for a chest x-ray to be carried out at the RWH, before other testing might be carried out at RMH. Dr Garwood agreed that this occurred and was standard, *before you might go on and request, the CPTA or other investigations, the CTPA... or the VQ scan or whatever else you want to do.* There was no difficulty in getting this work done, but it was not so easily achieved if the request occurred over night. [126]

Coroners Assistant.

209. You might also have to wait for results depending on the workload of the Radiology Department at the RMH, and for instance the availability of their CT scanner. In regard to a chest x-ray and the time likely to be taken to undertake that work at the RWH, it should be able to be completed within one hour, depending upon how urgently the testing was required.[127]
210. Dr Garwood was further questioned about the role of the RWH triage nurse who spoke to Mr Carroll and her part in the decision to receive Elizabeth at the RWH.

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[123] Transcript 390.
[124] Transcript 376-80 and Clinical Inerface Protocol at exhibit 4(a) 1-3.
[125] Transcript 380.
[126] Transcript 382-3.
[127] See brief page 123, which indicates that a chest x-ray was sought for Elizabeth at the RWH, after her second admission on 4 September, at 21.00 hours, and carried out at 21.52 bours.

Mrs Gorman was about 10 minutes away at that point... clearly was coming... they wouldn't wish to delay and as I've said our ability to resuscitate people with that story is actually very good, so it wouldn't have been beyond our capability. We are certainly very aware of what our... niche service, which I think is quite right... we had a clear scope of practise that we understand very well and that would have fitted in with that but when you hear that the vital signs were much worse than that, clearly they would have a point where you'd say well look... that would take precedence over what the cause was.

And further, *we would not normally get patients from AV in that clinical condition. They would not normally come to the RWH.* [128]

Court.

211. Q. *Finally the other observation made earlier was that the 2013 protocol for the emergency care arrangement between the RWH and the RMH (introduced following the events under examination), doesn't seem to focus sufficiently on matters which are, 'time critical'.*

It talks about stabilising those persons in emergency care and ultimately, 'if the primary condition is not obstetric-gynaecological, transfer directly to the RMH or as per clinicians mutual agreement.' It seems rather vague as to matters which are time critical. It doesn't seem to be consistent with AV's guidelines as to whom they should present to the hospital... ?

Ans. *We actually have a very developed relationship with RMH. If we feel someone needs to be over there immediately, we get them transferred. We don't necessarily need to have their staff come and see them...*

Ambulance Victoria Paramedic, Gary Cuthbertson.

Coroners Assistant.

212. Gary Cuthbertson (Gary), commenced afternoon shift duty at the Ambulance Victoria Sunbury branch, on 4 September 2012, with co-paramedic Dean Jones. He was the senior officer within the team.[129]At 7.29pm they received a call to attend at Gladstone Park, case number 70130.[130]

213. The job was relayed as, *a sick person, no priority symptoms case,* and they were dispatched to the Gladstone Park address, *on a non-urgent code 3 basis.*[131] *On a code 3 we move off straight away. It's a non-urgent matter but usually... the limit is about one hour, but we were on the road from Sunshine Hospital, so we knew it wouldn't take us that long.*

They arrived at 7.39pm. They were at the patients side at 7.40pm, and loaded at 7.55pm. [132] *They arrived at the RWH at 8.25pm and went through triage at 8.30pm.*

214. When the paramedics entered her home they found her, *extremely unwell. She was sitting... the effort of breathing... She looked pale and sweaty. She looked distressed...* She spoke in short sentences, *but enough to realise she was completely oriented. She was making sense... but distressed.*[133]

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[128] Transcript 387-8.
[129] Transcript 66. Mr Cuthbertson further testified that he had been a paramedic with Ambulance Victoria for 21 years,12 of which were as a MICA Paramedic. Transcript 79.
[130] See Gary Cuthbertson's statement at exhibit 3 page 1, and exhibit 3(a), the VACIS Patient Record for Elizabeth Gorman.
[131] Transcript 57.
[132] Exhibit 3 (a) page 2. Transcript 58.
[133] Transcript 59-60.

215. Q. *And she informed you she was 11 weeks pregnant and experiencing pain and nausea over the last two days. When she said that... did she indicate where the pain was?*

Ans... *when asked the best recollection I have when she mentioned it, it's like the worst period pain she'd ever had, which shocked,- which I couldn't relate to, but I understand, I've heard it many times.*

That indicated to me low abdomen, pelvic area... ah yeah, lower abdomen pelvic area. I can't recall, did she point... But if she said that I realised she was sick and I just moved on quickly.[134]

216. Q... This is from your Patient Care Record at brief 112:

Yesterday developed back and shoulder pain. Seen at the RWH, treated with Endone. Today pain and nausea continues. Became acutely unwell with severe hypogastric abdominal cramping, called ambulance.

Ans. That was, *information obtained from Elizabeth during the assessment... I recall now that she told me that yesterday she had experienced back pain and shoulder pain.*

Q. *Did she tell you whether or not the back pain and shoulder pain were still continuing, or had it changed?*

Ans. *I didn't delve deeply into the nature of the pain. The priority to me was her breathing. She was breathing far too fast and her numbers were way out, as in her oxygen saturation was low... Blood pressure was low and heart rate was high... and pulse was... very high indicating something serious was going on.*

So I tend to treat them, more than the pain itself.[135]

Q. *You did a pain scale and it was eight out of ten?*

Ans. *Yes... radiating down both legs.*

She had pain... she had a pulse reading of 78%, her blood pressure was at 80 millimetres of mercury... I'd expect it to be 100-160... typically I have found that the heart rate will go up with pain.

... I thought it was cardiac or something... I had the blinkers on so that's not right, let's move, let's try and find out a little more on the way, she needs hospital now.

So I didn't probably do as thorough an examination that I needed to... but I thought her priority was to move quickly... Yeah in my mind she needed hospital and not anything I could offer.[136]

Q *So you assessed her in a time critical situation?*

Ans *Yeah... Purely on numbers she fitted the time critical guidelines. The elevated heart rate, low blood pressure, elevated respiratory rate and the effort she was putting in, none of that was normal. And all of it indicated that she was well outside the bounds of a healthy person and it just fit the time critical guidelines that I have been trained for, for years.*

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[134] Ibid 60.
[135] Transcript 61-2.
[136] Ibid 64-5.

217. Q. *In your statement you have written, 'this clearly indicated that Ms Gorman was "time critical" and expired expedient transfer to the nearest high level emergency hospital', and you have loaded Mrs Gorman into the ambulance. So you were treating her in the back of the ambulance...*

Ans. *Yes I was.*

Q. *While your off-sider Dean sat in the front?*

Ans. *Yes.*

Q. *Then you actually requested the assistance of a MICA Paramedic?*

Ans... *well I'd had 12 years as a MICA before this job. I was actually trying to think in my head, 'What would MICA offer her'... so whether they weren't available or they were too far away, I made a decision let's just move. To the best of my knowledge there was no one nearby who could assist me.*

We gave her oxygen, put in an IV line... kept re-assuring her... She, to me, was improving.

She didn't want pain relief.

218. Q. *You were in court and heard her mother testify that she would be reluctant to take medication because of the pregnancy.*

Ans. *That might have been an issue... it could have been yes.*

219. Q. *And then you contacted the AV clinician, reference statement...*

Ans. *See in... I wrote that I probably did... when a message came back Dean relayed it to me to go to the Women's.*[137]

This was a signal 1 notification,

Q. *So ordinarily who relays a signal one to the clinician or the receiving hospital?*

Ans. *It is a 50/50. If I have time if it is a cardiac patient who has stabilised I will do it. If I am busy, I will ask my partner to do it... it probably was me... But the answer came back I remember Dean telling me we are going to the Women's. So I said OK... We don't go to the Royal Women's routinely. Working in Sunbury, most of our obstetric patients would go to Sunshine.*[138]

220. Q. *So you then at 7.55pm departed the address and you have transported her to the RWH on an urgent code I basis?*

Ans. *Mmm. I can't recall if we spoke to the (AV) clinician, or whether we spoke directly with (RWH)... She was improving and for me heading down the road I was happy with that.*

221. Q. *You made multiple observations? Initially at 7.14pm pulse rate of 164, blood pressure 80, Temperature of 37.3. Her skin was cool, pale and clammy. Her ECG rate was 164, sinus tachycardia. Her respiratory rate 44, and she was anxious, distressed, her chest appears clear and her oxygen saturation on room air was 78?*

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[137] Ibid 67-8. Subsequent evidence which included a recording and transcript, exhibit 3(b)(1), establishes that direct contact between the witness and MICA clinician Carroll did occur and that Mr Carroll directed the RWH destination.

[138] Transcript 68.

Ans. *That was the initial one, yes... So no oxygen provided at that stage... there was no recordable blood pressure... It wasn't a priority... I tried to get it, I couldn't get it. I know it is still low... let's get a stretcher in here.* [139]

222. Q... *Later at 8.05 her pulse was 160, blood pressure 80 systolic, her ECG was 160, still sinus tachycardia, Respiratory rate was 44. She was still mildly anxious. Oxygen saturation of 81, remains the same... and her pain is now 2 out of 10.*

Ans. *Yes she put it at a tolerable level... she was quiet and was talking to me.*

And later I was notified of the direction to go to the RWH at 20.04. So that would have been at about the time we loaded. A minute or two after we would have got the call back.

223. Q. *Is it fair to say that at the time you made this call you were still of mind that this was an urgent matter and there was a serious issue in regard to her respiratory system?*

Ans. *Yes. Yes... Yeah, see to my mind it was the RMH or the RWH and I left it to the clinician to guide me on that.* [140]

The observations at 8.20pm had her vital signs much the same as before, with her pain level down to 2 out of 10. Her heart rate remained elevated and her blood pressure at 90 systolic. *She'd improved, but not greatly... the numbers didn't indicate a dramatic change... and that was a concern to me, even though she was far more relaxed...*

Q. *Is this someone who is presenting with a pulled muscle?*

Ans. *Not with those numbers. I'd be very surprised.*[141]

224. Q. *You were seeking instructions as to whether to go to the Women's Hospital, or to some other hospital?*

Ans. *Yes, to my mind it was the Royal Melbourne or the Royal Women's and I left it to the clinician to guide me on that.*[142]

And later, *I was uncertain which way to head.*

225. Q. *Had you taken patients who required a high level of care to the RWH previously?*

Ans. *Maybe once, many years earlier. I had taken a post-partum haemorrhage there.*

226. Q. *That was clearly an obstetric emergency.*

Ans. *Yes.*

227. Q *Were you confident that in relation to Ms Gorman, that it was related to an obstetric emergency?*

Ans. *Ah, No... that's why I went to clinician...I think my intention would have been to head to Melbourne, until I heard back clearly, 'Women's', 'OK we'll go there'.*

Q. *Why do you say the Melbourne?*

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[139] Transcript 70-1.
[140] Transcript 74.
[141] Transcript 76.
[142] Transcript 73-4.

Ans. *Ah. Because it is the highest level and it is a hospital I've taken many patients over the years, presenting in a time critical condition.*

And later,

There is always a dilemma in obstetric cases. It could be obstetric related. It might not have been. But there is always that cloud in my mind, that's why I defer to a higher level.[143]

228. Mr Cuthbertson was then questioned in regard to the tape recording of his conversation with duty MICA clinician, Stuart Carroll. Mr Cuthbertson agreed that during that conversation he had said the words, *'Query ectopic, ectopic possible, a bit of an unknown story'*

Q. (From the tape), *the clinician Stuart was going make a phone call to the RMH and then get back to you if things were to change, but at this point of time... 'continue on to RWH'. Is that how you interpreted that information?*

Ans. *Yes that is how I understood it... now listening to that call that he was definitely to call the Royal Melbourne... and if there was an issue then redirect us. Because they are near each other, it wouldn't be a big change.*

229. Q. *Did you ever get redirected to the RMH?*

Ans. *No.*

Q. *On arrival did you make any observations at the time of handover as to the level of preparedness at the RWH?*

Ans. *Not that I can recall... I handed her over to... in the usual fashion, pointing out my concerns about her heart rate and her blood pressure... I think there were two nurses who I explained the situation to. They'd assisted me to move her over to the bed.*[144]

230. And concerning his earlier experiences at handover at the RMH in the ED,

Every case is slightly different. I've bought a lot of cardiac patients in and there is more to be done. Or trauma... where there is a lot more to be done. So it is hard to judge. But it seemed to me that they accepted my handover and that was really the end of my concern.

Q. *Did you observe like a flurry of activity?*

Ans. *Not greatly, no... It is hard for me to judge.* [145]

231. In conclusion the witness confirmed that he was now aware that clinical practise guidelines concerning the choice of destination had changed. *I haven't studied clearly what the changes are, I would still default to asking the clinician.*[146]

Mr Ajensztat.

232. Mr Cuthbertson's further evidence was that due to the time critical nature of Elizabeth's presentation at home, that he wanted, *to get moving and that he would assess on route. So little things get missed.*

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[143] Transcript 77-8.
[144] Transcript 80-1.
[145] Transcript 82-3.
[146] Transcript 88.

233. He could not remember if he had examined the lower abdomen. *Routinely I do but... because her airway seemed,-her breathing was the main priority to me and no blood pressure... so I can't recall 100%.*[147]

234. In regard to the suggestion that Elizabeth may have an ectopic pregnancy, that had been his initial thinking, on arrival due to her presentation, *being so many weeks pregnant, and so severely shocked and the high heart rate and no blood pressure, but I had nothing to prove that... I routinely just put that down as my thought process... In this case it was more this could be an ectopic pregnancy, I haven't experienced before, but that's my train of thought...*[148]

Further Mr Cuthbertson did not consider the possibility of pulmonary embolism (PE)... and in retrospect that he could now see some parallels between Elizabeth's presentation and those few earlier cases of PE, of which he had had experience.

In hindsight now, yes, I can see the extreme shortness of breath, the high anxiety, the high heart rate and yes there would be similarities.[149]

Mr Grant.

235. Mr Grant referred to earlier questioning of the witness concerning the expert opinion of Mr Kambourakis to the effect that given Elizabeth's:

'... clinical state and non-likely obstetric gynaecological presentation, it would have been more appropriate to take Ms Gorman to the RMH'.

236. Q... *were you thinking that this case was not likely to be obstetric?*

Ans. *I wasn't certain...Even on my call I said to Stuart, 'Unknown what do you...', I was hoping he would get back to me and say where to go.* [150]

In response to further questioning Mr Cuthbertson said that the ambulance response time, (arriving 10 minutes after a code 3 call) was well within time.

237. Q. *It was only when you got there that the ballgame changed?*

Ans. *Yes. That's what I thought of... in hindsight I would have loved to have been there six hours earlier.* [151]

238. Q. *This morning Mr Devitt told the court that 'From the way the officers were talking I understood that the RMH was "backed up", so they decided to take her to the RWH as she had been there the night before'.*

Ans. *Ah routinely I would say to family and people travelling along that we will head towards a hospital, but just be aware we may be diverted due to a hospital being on bypass, being backed up...But it wasn't why I went to the Women's.*

239. Q. *Can you specifically recall whether that comment was made on the night?*

Ans. *Not on that night. Ah that's what I routinely say, so I can't say I said it then... If the Melbourne was backed up and we were directed to a major hospital, I'd ask the clinician,*

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[147] Transcript 93.
[148] Transcript 93-4.
[149] Transcript 95.
[150] Transcript 96.
[151] Transcript 97.

'Where is the next appropriate level', whether it is St V's, the Alfred, Footscray or wherever...

I have no recollection...that I used those words when I spoke to Mr Devitt. [152]

Ambulance Victoria MICA Intensive Care Paramedic Stewart Carroll.

Coroners Assistant.

240. Mr Carroll is employed as a Clinical Support Officer within Ambulance Victoria. On the evening of 4 September 2012, Officer Carroll worked as an ambulance clinician and was consulted by Mr Cuthberson as to the best destination for Elizabeth.

They told him that, *their patient was a 35 year old woman who was 11 (weeks) pregnant. She had a three-day history of lower back pain, and now had severe lower abdominal pain. The patient was pale, cool and clammy with an un-recordable blood pressure. Her pulse rate was 162 bpm.*[153]

241. He agreed with Mr Cuthbertson, that Elizabeth was at the time of the officer's arrival at her home, in a critical situation, and that she required urgent hospital attendance. [154]
242. He could not recall if the crew had told him that they suspected a ruptured ectopic pregnancy or whether he assumed that. *I can recall that they were seeking guidance from me as to where best to go. And they did mention the RWH or the RMH.* Reference to the transcript later indicated that Mr Carroll was told, *Query a possible ectopic pregnancy possible.*[155]
243. Mr Carroll was then referred to Exhibit 3(b)(1) a transcript of his conversation with Gary Cuthbertson, and his advice, that he would double check with the RMH, *but how about we load for the Women's and I'll page you if you need to change hospitals. So head to the Women's. If there is a change to that I will page you.*

Mr Carroll then confirmed that in fact he did not make such a call...

I chose not-I would have chosen not to make that phone call to the Royal Melbourne Hospital, because I would have believed that- I would have known that it would have cost me time... It possibly would have cost me maybe two minutes, three minutes of my time. There are a lot of other... things happening that are calling upon me immediately and the reason I would have... beyond time cost was that I would have felt that a consultant doctor that I would have had to have spoken to would have probably said, 'Well, just confirming that you have in a woman who is in child baring age with an early pregnancy, and is presenting time critical with a possible ruptured ectopic pregnancy, therefore shouldn't you take a patient to a facility that cares for Maternal emergencies' ? So that would have been why I did not make a phone call to the Royal Melbourne, but I bore that decision myself to simply ask them.

244. Q. *You have just assumed... that whoever received your call would have said, No keep going to the RWH... And you didn't know for sure that this patient was suffering from a ruptured ectopic pregnancy?*

Ans. *Oh no of course...*

245. Q. *It could have been a myriad of other conditions that she was suffering from at that time?*

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[152] Transcript 98-9.
[153] Exhibit 5 page 2. Transcript 237.
[154] Transcript 237.
[155] Transcript 237-8.

Ans. *Oh most definitely. However, we are taught... with our clinical judgement, to use a thought process which is a, 'pay-off'. Make sure that you attend to what maybe the most serious, life threatening condition, as a first assumption, if you will. That's the safest position for any member of the community. Yep.*

246. Q. *Did you feel you had enough information to go by, to make those decisions?*

Ans. *Yes.*

Q. *Was there any other additional information that would have been helpful to you?*

Ans. *No.*[156]

247. Following an adjournment to allow the witness to review the statement of expert witness Dr Kambourakis:

We in ambulance make decisions with very limited information, and the provisional diagnosis was reasonable at that point. I guess the question for myself, a non-medical person, (was) should you have consulted with a Doctor, a consultant level Doctor, regardless of the information presented to you, that would have been a sounder safer position for me to have consulted by phone...

Whether they (Consultant Doctors) *had any further information other than what is before them, such as pulse, blood pressure, perfusion, patient presentation* (which they had) *and given that RWH is qualified to be able to deal with maternal gynaecological emergencies, one position is that they* (RWH WEC), *would be able to deal with this...*[157]

248. Mr Carroll further agreed with an observation made by Mr Tony Amour of Ambulance Victoria.

In my view, the most appropriate hospital for many patients experiencing a suspected ruptured ectopic pregnancy was an obstetric hospital, such as the RWH, however I am not of the opinion in circumstances where the patient is severely shocked and in need of immediate resuscitation, as was Ms Gorman, that the RWH, was a more appropriate hospital than the RMH.[158]

249. In respect off seeking advice on questions concerning appropriate destination Mr Carroll stated that in his experience Doctors take more time than they should because of asking, *legitimate questions*, about matters concerning which, he as the MICA clinician, has no knowledge.

So I am not in a position to say... I will say, 'Look the information I have is the only information I have on hand. And can you just assist me with what is the best destination please'. [159]

250. Q. *Should you have asked more questions of the paramedics on this day?*

Ans. Ah, yes... (but reasonable) *to think that the intensive care paramedic was giving me all the information that he had...*[160]

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[156] Transcript 240-41, and his following evidence on his decision making to 250.
[157] Transcript 250.
[158] Transcript 251.
[159] Transcript 254.
[160] Transcript 255.

Q. *Mr Cuthbertson on his testimony was seeking advice from you as to what the appropriate provisional diagnosis might be?*

Ans... *My recollection of the radio transmission was that he was seeking direction as to 1) the most appropriate destination given that there was a provisional diagnosis of a possibility that this was a rupture ectopic, rather than deferring to me as to what the provisional diagnosis was.*

251. Q. *In his evidence yesterday he (Cuthbertson) said he would have felt more comfortable going to the RMH... He'd only ever taken I think, two patients previously in such a dire condition to the RWH...*

Ans. *Most ambulance paramedics will be more comfortable going to a hospital they go to more regularly... I can certainly understand that because the RMH is much better equipped than the RWH...*[161]

252. Q. *Have you ever rang the RMH to relay a signal one job and been told that it isn't appropriate to bring the patient here?*

Ans. *I haven't been no...That's generally not the push back.*

253. Q. *In her condition, clinically unstable...would you have expected to have been turned away by the RMH?*

Ans. *No.*

254. In further response to a question asking about the significance of his understanding that she had been to the RWH seeking treatment on the previous day Mr Carroll stated that, *it was a factor, but it certainly wasn't ahead of the clinical presentation.* [162]
255. The witness was then further asked about the protocol in place at that time concerning hospital transfer CPG AO 105, Brief 206-10, which from Mr Grant, was applicable in 2012.

Court

256. Q. *So to be clear, you are saying that under 105, on the information you had at that time, that Ms Gorman should have gone to the RMH?*
Ans. *Yes.*[163]

Mr Ajensztat.

257. Q. Is it right to say as things currently stand that you have no independent recollection on what happened on the night of 4 September 2012?

Ans. *Correct... My evidence is based on listening to the recordings. There were two recordings. The phone call to the RWH and the radio transmission from the crew.*

Q. *None of your readings has triggered an actual memory of what happened this night?*

Ans. *No.*

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[161] Transcript 256.
[162] Transcript 258.
[163] Transcript 261-2.

258. Mr Carroll also confirmed that his re-statement of events as recorded in his own statement, [164] was assisted by other witness statements, documents and recordings, rather than from his own recollection of the night in question.

He was also aware that Mr Cuthbertson was no longer a working MICA Paramedic, *but I've worked with him on many occasions over the years.*[165]

259. Mr Carroll was then taken to the transcript of his conversation with Mr Cuthbertson, exhibit 3(b)(1), and it was suggested that Mr Cuthbertson was saying, *that he really didn't know what was going on here.* Mr Carroll expressed agreement.

Q. *So when in your statement you say you trusted his clinical judgement what part of his clinical judgement were you referring to?*

Ans… *I think that's a fair point.*

Q. Do you mean to say at paragraph 19 that your decision making or your reasoning was that, *given Ms Gorman had been at the Royal Women's on the previous evening and it was merely 14 hours or so later… that given that short intervening period of time, it's likely that it would have been the same issue?*

Ans. *No… what I mean was that given the clinical features of her presentation, plus the clinical features of her presentation now, it sounded like they may have been indeed been part of the same landscape.*

260. Q… *did you not consider Mr Cuthbertson to be suggesting to you that there was some new element in her presentation at the time you were being asked to give advice?*

Ans. *She presented the previous evening with lower back pain. There is a new element… additional clinical feature in terms of pain, now abdominal pain she is profoundly shocked.*

Q. *Do I understand your evidence to be that the emergence of lower abdominal cramping was to your mind probably part of the same issue?*

261. Ans. *I would say this is something, and I would still say today, this is something that would immediately need to be excluded by a Doctor… in my mind there was a reasonable likelihood that the earlier presentation was part of this current clinical picture.*

Ms Hodgson.

262. In regard to his understanding of the differences between the ED at RMH and the Women's Emergency Centre (WEC) and the difference between the patients seen at each, Mr Carroll explained that the RMH accepted emergency cases generally while the WEC would care, *for obstetric gynaecological and maternal related issues.*

In regard to resuscitation, *from cardiac arrest, the WEC is far less equipped… than the RMH.*[166]

263. Q. *In terms of someone with compromised vital signs… (recordings set out) the information you had… Did you understand that the WEC was able to deal with patients in that presenting condition, who also had a presentation of some kind of women's health issue or pregnancy issue?*

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[164] Exhibit 5, undated.
[165] Transcript 266.
[166] Transcript 270.

Ans. *Yes I would expect... that they would be able to deal with a life threatening emergency surrounding that picture, I would have thought, yes.*

Q. *But as you said earlier if it was some sort of cardiac emergency or those sorts of things, I understand your evidence to be that RMH would be the more appropriate hospital to go to?*

Ans. *Yes.*

264. Q. *From the call with Mr Cuthbertson, certainly from the recording you'd been given information about her heart rate of 162.*

Ans. *Yes.*

Q. *And her blood pressure of initially 80, but now 'un-recordable'. Can I ask you to explain, 'un-recordable'.*

Ans. *It often can't be felt at the wrists... and so an un-recordable blood pressure would be a systolic blood pressure... the high one that should be over 100, is likely to be under 65...*

Q. *Can I take you to your conversation with the triage nurse, 'Systolic pressure under 100?'*

Ans. *Yes you wouldn't feel it if it was under 65... if it gets below 65 you are not going to be able to feel a pulse at the neck... It's so low that it can't be felt.*

265. Q. *In regard now to your call to the RWH... letting them know there is a patient coming in, this is you in conversation?*

Ans. *Yes.* [167]

Mr Carroll further agreed that he had information that her systolic blood pressure was 80 and then became, *un-recordable.*[168]

Q. *Why would you describe this as 'low blood pressure' and then 'having trouble getting blood pressure in there'?*

Ans. *No. I would normally relay the facts simply as they were... I accept that all of the details were not passed on as I heard on the phone from Gary.* [169]

266. Mr Carroll further testified that under the system now in place, there can be direct communication between the hospital and the ambulance in transit.[170]

Mr Grant.

267. Mr Carroll additionally testified that he had dealt with two ectopic pregnancies over a ten year period. These occurred between 1990 and 1995 before his appointment as an intensive care paramedic.

268. Q. *Do you have knowledge or experience of the presenting symptoms or experience of the presenting symptoms of a patient with a ruptured ectopic pregnancy?*

Ans. *Ruptured is the key term there because with rupture you get bleeding, and the continuum of profound shock is normally part of that picture... Diffused abdominal pain, but it's often*

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[167] See transcript 273 and his undated statement at exhibit 5.
[168] Systolic pressure in the pressure in your blood vessels when your heart beats.
[169] Transcript 273.
[170] Transcript 274.

very severe and the symptoms of haemorrhagic shock. So a higher pulse, low blood pressure, cold pale, clammy skin.

Q. *Do you recall where those patients were taken to?*

Ans. *They were taken to the RWH.*

Q. *Was there external bleeding in these cases?*

Ans. *No.* [171]

269. Q... *What did you base your provisional diagnosis of a ruptured ectopic pregnancy upon?*

Ans.... *Well I felt that it may be a ruptured ectopic, and I felt that needed to be excluded. Given that she was 11 weeks pregnant I felt that the RWH would be an appropriate facility to look after that.*

270. Mr Carroll then further affirmed that in his role as a clinician, *in the coms room, he was often busy*. He is still similarly employed. Going back to when these matters occurred (2012), he felt that it was a lot busier then.

Now we don't send as many ambulances, lights and sirens, so there are more ambulances available to go and there is less work on the emergency dispatch side of things. But it was quite common... back in that period that we would need to call additional staff into the control room in that specific role, to assist with the workload.[172]

Court.

271. Q. Just looking again at this discussion that took place with the nurse at the RWH, you were saying and reporting from your colleague, '*that the patient is suffering from low abdominal pain, low blood pressure, and now they are having trouble getting blood pressure, and that she is cold and sweaty and not bleeding'. At that point did you understand, or did you consider that there was a possibility that she was going into cardiac failure, or that she was in cardiac failure?*

Ans. *Well although I can't specifically recall, I don't think so. I think given the way that the dialogue and so forth, it would be a reasonable thing for me to have thought that it was a busy night, and I was somewhat wanting to be, to get things done, and I was probably thinking about other things that needed to be attended to at that time.*

272. Q. *But on the face of that information, would you now consider that this sort of presentation might lead to cardiac failure?*

Ans. *If the patient...If an experienced practitioner like Officer Cuthbertson could not find a blood pressure, yes that's a very serious recurrent state.*

David Natoli.[173]

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[171] Transcript 276.

[172] Transcript 278. See also discussion by Mr Gant of current day AV practise in regard to the triaging of Code 3 calls at transcript 279.

[173] David Natoli is a clinical support officer with Ambulance Victoria who was currently sitting as a clinical review specialist. Mr Natoli had not prepared a statement but was called at the request of Ambulance Victoria, in the absence of AV colleague, a Mr Tony Amour, who had prepared a statement but was unavailable to testify. Mr Natoli was directed to read the statement of his colleague and adopt those parts with which he agreed, but to be certain to inform of those areas of the (Amour) statement with which he did not agree. See transcript 282.

Coroner's Assistant.

273. Q. (Having listened to the recording of the conversation) *do you have any comment to make in relation to the information that was being transferred from the ambulance officer's to the clinicians in terms of was there enough, should there have been more...?*

Ans. *Given the situation and given the past experience of information transfer from crews through a clinician, that seemed adequate... they gave the patient's current presentation, observations , how she presented, and immediate past history and they were unsure of exactly what was going on...*

Court.

274. Q. *There are two issues... One is where to go, but there is a primary issue. ' I'm not sure what is going on'. Is that the sort of question typically asked of a clinician?*

Ans. *Ah it's not typically asked... normally in relation to crews talking to clinicians, they would tell us we are loading to a particular hospital with a particular patient and they would pass details through the radio process. Prior to that we would get the information off them and then have to pass that information by phone to the receiving hospital, as in the case of the RWH at that time.*

275. Q. *This was a somewhat different situation?*

Ans. *That's correct.*

Q. *Would that be an unusual matter for a clinician to have to deal with, at that time?*

Ans ... *we are often called upon to say which, is the appropriate receiving hospital for this patient...*

276. Q. *I am trying to put myself in Mr Carroll's position and understand whether it was unusual, and therefore whether he might have inadvertently misunderstood and gone or reverted to what he usually did, which was to advise and make arrangements around which destination should be the objective?*

Ans. *Sitting in Mr Carroll's position as I have done before, and the information that was received... notifying the hospitals to see which one you think you should go to, is part of the role of the clinician, it doesn't happen very often, but it does happen occasionally.*

277. Q. *There were two processes that were going on here. I think you have acknowledged that that is the case?*

Ans. *Yes.*

Q. *One was seeking advice about 'what was wrong, what's happening'. And the second was based upon what you might tell me about that matter, 'where should we go'... And I am trying to focus on the first of these here and asking you whether this unusual request for advice by the ambulance officers, whether that may have got lost in the pressured environment in which Mr Carroll was working, with greater focus then given to the second question, 'where should we go'. And perhaps the first question required more focus than was given?*

Ans. *Having listened to the tape and listening to the conversations my belief is that the main concern of the crew was ... Ms Gorman is very sick. We are not exactly sure what is causing*

it... I do not believe they were after a diagnosis of what was going on with Ms Gorman- but more as to which hospital should we be heading to with this patient. [174]

Coroner's Assistant.

278. Q. You stated earlier (Transcript 283) that you were sitting a little on the fence in regard to (Mr Armour's) last conclusion that, '*I am not of the opinion in the circumstances…* (as set out and in need of immediate resuscitation as was Ms Gorman), *that the RWH was a more appropriate hospital than the RMH' Does the information now lead to a conclusion that one was more suitable?*

Ans. *I believe it could still go either way...*

And later, *yes and the reason I am saying I am unsure, still sitting on the fence, is that I am unclear of ... are they and were they (at RWH), able to deal with that adequately, and then move on to the next stage.*[175]

279. In regard to the assistance <u>now</u> provided to ambulance officers Mr Natoli confirmed the existence of a spreadsheet available to drivers, which related to hospitals and their capabilities, and was updated regularly. This information lists all metropolitan public and private hospitals with emergency departments, and talks about whether they have, *a whole range of different sub-specialties.*[176]

The RWH is highlighted in red and under the emergency department section there is an which indicates that the emergency services offered are specialised.

280. It also indicates at page 216 that there are further limitations and that the ED will not accept patients with associated non-gynaecological trauma, acute psychiatric, or patients who are drug or alcohol affected. [177]

(The hospital), *deals with obstetric patients and neonatal intensive care patients... I believe this document is on the VACIS tablet that we have, and also they often consult via the clinician as mentioned before... in regard to hospital destinations. Because this also changes regularly, or new hospitals come on stream as well.*[178]

281. Mr Natoli further explained that it was a normal procedure for a clinician to advise a clinician to head towards the RWH, *and if things are to change that he was going to get back to them.*

The receiving hospital would be notified of the pending arrival of a patient, as in this case, which was a signal 1 call.

282. Q. *Is it typical that a clinician would actually contact a hospital, to see whether or not it's appropriate to bring a patient in?*

Ans. *It is not unusual to do that.*[179]

283. In further testimony Mr Natoli offered that it would have been more appropriate for the ambulance crew to offer a full set of vital signs including heart rate, initial, current and usual

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[174] Transcript 288-9.
[175] Transcript 290. See the further response at transcript 297, where the witness states, *it would still be the same as around 2012 that they should have the systems in place to deal with a* (physiologically) *compromised patient.*
[176] Transcript 292 and brief page 215, which became part of exhibit 18. See also discussion confirming that this spreadsheet was not in use at the time of Elizabeth's death at transcript page 297
[177] Transcript 294.
[178] Transcript 295.
[179] Transcript 296.

heart rate, initial and current blood pressure, respiratory rate and level of consciousness. And the ETA and current presentation. He also agreed that the focus of the Doctors treating her would be to stabilise her, and suggested that the RMH would deal with patients in need of resuscitation, *much more often than the RWH.... And they would be much more used to the processes, procedures and resuscitation protocols in dealing with these,* (matters). [180]

284. Mr Natoli was then referred to the CPG protocol at Brief page 200, headed Obstetric Emergencies, and at page 205, which states that in respect of patients in the metropolitan area, When transporting a baby born out of hospital, or a woman in labour: …

all patients who meet the time critical criteria, should transported to the RMH in preference if within 45 minutes, if > than minutes transport, to nearest level of highest level of trauma service. (Mr Natoli agreed that Ms Gorman's presentation met the time critical requirement).

Transport all patients > 24 weeks gestation with any trauma of (read or?) potential harm to unborn child to RMH.

Q. Reading on, *to the nearest major hospital capable of accepting obstetric patients, including the RMH, the Austin or the Monash Clayton.*

Ans. *Yes that's correct.*

Q. *It doesn't say anything about the RWH?*

Ans. *But it is a major –it's a hospital capable of accepting obstetric patients... they are saying you can also take them to the Melbourne... it might be time critical and she needs to go to an appropriate receiving hospital… It is saying that the RMH would be an appropriate destination for that kind of patient.*[181]

285. Q. *Mr Armour also talks about this protocol CPG at brief page 49 paragraph 15, and he talks about obstetric emergencies that meet the time critical trauma guideline, should be transported to the RMH in preference… Do you say that's not relevant because there was no trauma as such?*

Ans. *Yes in this instance I don't believe it is relevant.*[182]

286. Q. *So in relation to that CPG- The obstetric emergency 101, has there been any alteration to that protocol.*

Ans. *Some minor... but no major changes.*[183]

287. In regard to changes, which may have been instituted at the RWH since Elizabeth's death concerning the exchange of information between RWH and Ambulance Victoria officers, Mr Natoli was not personally aware of any changes.

Q. *You have not received any sort of information in relation to the specific capabilities in terms of emergency medicine at the RWH...*

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[180] Transcript 299-301. In the course of considering an objection to this latter question I ruled that the question of which of the RWH and RMH, was the appropriate hospital to receive Elizabeth at the relevant time, was impacted by the ability of both hospitals to provide appropriate service by way of resuscitation.
[181] Transcript 304-5. See further discussion with AV representative at transcript 306.
[182] Transcript 306.
[183] Ttanscript 307.

Ans. *That's correct.* [184]

288. Q. *In relation to the recommendation that has been accepted about the installation of radio's at the RWH and the ability for ambulances to directly communicate to the RWH staff, that has taken place?*

Ans. *That's correct.*

289. Q. *He, Mr Armour states that Ms Bessell's recommendation b) has been addressed and that CPG 105, "identifies patients with a medical time critical condition and less than adequate perfusion require triage to the nearest appropriate facility, with notification and consideration of MICA area medical support". How has that assisted?*

Ans. *That guideline was upgraded and updated including the trauma section and the obstetric patients ... other cases have occurred where trauma patients have been taken to the RWH where it was more appropriate to bring them to RMH... So the guidelines have been altered to make sure that the trauma patients need to be transported to the RMH.*

Court.

290. Q. *See CPG00101 at brief page 205 and the Hospital Services and Capabilities guide at brief 216.*

It seems that that CPG00101 did not include the RWH as a destination for someone who had a severe medical complication... and that appears to be consistent with what I understand is being said in this guideline... in regard to the RWH. CASA will not accept patients with associated non-gynaecological trauma...

Ans... *I've sought some further clarification from one of the individuals who is also involved with the guidelines. In relation to the hospital specialties list, the RWH does have a receiving area for emergency patients... with related obstetric issues and it doesn't outline the level of what time, 'criticality', that they should have before they should or should not go there.*

The clarification I have received is that if the patient is fitting into the time critical guidelines... because of their presentation... such as Ms Gorman, that they should go to a hospital such as the RMH, the Austin or Monash if close enough, because they have a relationship to a maternity obstetrics hospital. But they also have an emergency Department, which is more used to dealing with patients who are extremely unwell.[185]

Ms Hodgson.

291. Q. *So as you understand it this protocol (Ambulance Victoria CPG 105-TIME CRITICAL at brief page 206-10), was in place , drafted in 2010, certainly in place by 2011, and in place at the time that ambulance officers picked up Ms Gorman.*

Ans. *That's correct.*

292. Mr Grant for Ambulance Victoria then also confirmed that these were the protocols in place in 2012, with, *the time critical guidelines first introduced in 2008...*[186]

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[184] Transcript 308.
[185] Transcript 316.
[186] Trsanscript 325-7.

Ms Hodgson, *And I certainly don't differ from the position... that the RMH was the appropriate hospital on the evening.* [187]

293. Q ... *you have the copy of the spreadsheet, in relation to the RWH? CASA, the Centre Against Sexual Assault, will not accept pateints with an associated non-gynacological trauma, acute psychiatric or drug and alchohole affected.*

Ans. *Yes anything trauma related shouldn't go into* (CASA).

294. Q. *Dr Bessel was the executive director of medical services at the RWH. She was asked by the Court whether the death of Mrs Gorman was reviewed within the Hospital, and by what process or committee? She says that a review was conducted, which included participation by staff from the RWH and AV... There were three recommendations that referred to Ambulance Victoria... One was that AV Clinicians are provided with a spread sheet containing information relating to the hospital services and capabilities. This spreadsheet in fact provides clinicians and paramedics with information about the capabilities of the RWH?*

Ans. *It does provide the capabilities, to the depth of the capabilities.*

295. Q. *So if we go back to Mr Armour's statement at paragraph 25, AV'S time critical guidelines identify that patients with medically time critical conditions and less than adequate perfusion require triage to the nearest appropriate facility. So does that not inform paramedics about the capabilities or the profeciencies of the RWH to respond to that in relation to whether it is a better place, or a general hospital is a better place... where a patient is time critical?*

Ans. *Yes.*

296. Q. *In relation to the information provided by the clinician to the triage nurse see exhibit 3(b)(1) page 2, ... I think you said it would be more appropriate to have a full set of vitals.*

Ans. *That's correct.*[188]

297. Q. *Apart from saying 'low blood pressure' and 'having trouble getting blood pressure', those things aren't communicated are they?*

Ans. *That's correct.*[189]

298. Q. *In terms of communicating that a patient is time critical what are the sort of things would you expect to hear?*

Ans. *As I mentioned, you would give that range of vital signs... if the hospital hasn't got a cell call where they can talk directly to them... in the past we just had a small note pad. A receiving hospital,* (would expect) *ETA, heart rate blood pressure, respiratory rate and then you might throw in other small bits and pieces...* [190] *For the RWH that's been a major change... It was in situ for a number of major hospitals and has now been rolled out across more hospitals including the RWH.* [191]

299. Since this incident there has been a major change with communication now directly between the paramedic in the van, and the hospital. It would have been more appropriate to communicate those signs. A way to communicate that this was a time critical patient.

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[187] Transcript 328.
[188] Transcript 332-3.
[189] Transcript 334.
[190] Transcript 334.
[191] Transcript 335.

Q. From the paramedic to the clinician we get the number being '*80*' and then we get, '*unrecordable*'... *but to the RWH from the clinician, we get low blood pressure and now having trouble getting a blood pressure?*

Ans. *Which is an indicator in general that I am not getting a blood pressure... implying that its low, or unrecordable.*

Q. *But 'having trouble getting it' is not as clear as 'unrecordable' is it?*

Ans. *It's not as clear.*[192]

Mr Grant.

300. *I have been with AV as a MICA paramedic for 12 years, and acted in that role for two to three years before that... Currently half our time is rostered as a clinician in the communication room.*

301. Q. *Know the ratio of AV patients headed to the RWH against say the RMH.*

Ans. *Less than 1 in 100.*

Part of the job was also to review PCR's of crew members we oversight, so that might be 100-150 PCR's a month. This includes reviews of the call taking sections of a case.

302. Q. *Do you recall any cases where the the clinicians have been found wanting...*

Ans. *There have been cases where there have been issues with process.*

303. Reference cases where process failure had occurred, *in those instances there would be training packages right across the board, or changes to clinical work instructions...*[193]

Q. *Are you aware of any bulletins being issued in regard to patient destination hospitals?*

Ans. *Yes ... in regard to stroke destination hospitals, hospitals being able to do telemedicine for stroke assessments, destination hospitals in relation to trauma...*[194]

304. Q... *when there is a change to a clinical practise guideline, a CPG is developed or is changed, how are those changes announced?*

Ans. *Either via Bulletins in training days in the written CPG's made until that time.*

Court.

305. Q. *I just wanted to refer you back to your discussion with Ms Hodgson concerning the spreadsheet at what is page 216 of the brief, the document setting out the restictions in regard to the transport of people to various hospitals, particularly to RWH and CASA. Does this directive apply only to CASA or to the RWH as a whole.*

Ans. *Knowing the RWH, it would also include non-gynalogical trauma conditions.*[195]

306. As to other areas of concern the witness stated that in relation to receiving capabilities at the RWH with time critical patients, *it's a greyish area still, which I think needs clarification and that needs to be communicated to the clinicians and to ambulance personal as well.*[196]

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[192] Transcript 336.
[193] Transcript 339.
[194] Transcript 340.
[195] Transcript 343.
[196] Transcript 344.

FINDING.

-Admission and Management at WEC on the night of 3 September.

307. On all the evidence I am satisfied that following her initial review of Elizabeth, Dr Moore considered a Pulmonary Embolus as a differential diagnosis. Based largely on her own testimony I leave open the question of whether she gave consideration to the taking of an ECG, as part of her investigation into that matter. [197]

308. The question which arises is whether Dr Moore took an appropriate course in conducting her investigation with a view to excluding a PE, which by general remit is a difficult presentation.[198] After a consideration of all of the evidence, including that of Clinical Director Dr Bessell's, critical incident review, the hot tub evidence of Professor Kelly and Dr Kambourakis, the evidence of Associate Professor Truesdale, and Counsels' submissions, I find that Dr Moore did not explore the matter to a sufficient degree this having regard to the reasonable needs of a patient presenting with *chest/rib pain,* for emergency treatment at that time, for what was an uncertain and potentially catostrophic condition.

309. Rather I find that it was not appropriate to exclude the possibility of a cardiac condition or PE without first exploring the above listed possibilities in greater detail than occurred in this instant.[199] Dr Moore's assertion that having regard to her vital signs, *I know this woman doesn't have a PE just by looking at her,* and her additional conclusion that this was musculo-skeletal pain, rather than one of a series of other possibilities was not well based.[200] This was so in part because of the inherent difficulty that existed in successfully seeking an accurate and reliable description of the location of such pain, and also because of the absence of clear evidence that the pain was caused by trauma.

310. PE and cardiac issues in pregnancy are not common, but both have the potential to be a threat to life and require consideration and basic investigation in a patient presenting with pain in the chest, regardless of the precise site of pain. In the absence of some clear evidence of trauma to the chest having caused injury to that region, I find that an ECG examination of Elizabeth would have been appropriate. Following the results of that inquiry, a direction for a further radiological investigation at the RWH and later at the RMH, including but not limited to a chest x-ray, would also have been warranted.[201]

311. This is not to say that responsibility for a thorough assessment of Elizabeth lay solely with her Doctor. While it is unclear whether Dr Moore considered performing an ECG her assessment would have been assisted by the routine performance of an ECG by her nursing colleagues. It is also relevant that at the time there was no RWH guideline suggesting that such an examination should occur.[202]

312. Professor Truesdale's evidence concerning the availability of senior staff whom Dr Moore may have consulted should she have determined to do so, is also relevant.[203] See however Dr Moore's different understanding of her limits on her level of access to the on call physician, as set out at paragraphs 55-56 above.

313. Further the absence of emergency staff senior to Dr Moore in the ED was itself a barrier to Dr Moore's complete assessment of Elizabeth and meant that she was required to make the decision that she needed to consult, or take further advice. I find that Dr Moore was not

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[197] See paragraph 89.
[198] See paragraphs 187-8.
[199] See paragraphs 116-20 and 124-131.
[200] See paragraph 86.
[201] See paragraph 115.
[202] See paragraph 136 above concerning guidelines introduced in the WEC in May 2016.
[203] See paragraph 132 and the note at footnote 72.

sufficiently trained or experienced to understand whether she needed to take that advice.[204] Given that this decision also required her to contact another possibly busy member of staff, working outside the ED, represented a further barrier for her to receive advice.

314. It is appropriate to note here that Dr Moore's failure to record a mention of the matter to Dr Gu, and Dr Gu's failure of recall concerning that reference, weighs against my accepting the evidence that such a reference actually occurred.[205] However even if it did occur it is relevant that Dr Gu was not qualified to provide Dr Moore with either direction or supervision in such a case.

315. I also note Dr Garwood's evidence concerning the pathway that would have had to be taken to secure the additional radiological examination at RMH, referred to by Professor Truesdale above. Professor Truesdale's and Dr Garwood's evidence as to the obstacles that existed to the securing of such approval is also relevant. [206]

316. There are at least three issues which arise from these arrangements. The first is that through no fault of her own Dr Moore was a junior resident who had a limited experience in gynaecology and obstetrics and emergency medicine, who had been put into a situation for which she was not well qualified. Specifically she had not been trained in emergency medicine to the degree that it might have been reasonably expected she would appreciate Elizabeth's particular risks, and understand how to deal with such a presentation.

317. It is also the case that while on night shift she was not provided with a sufficient level of supervision and on her evidence that at the relevant time she had received little or no instruction as to how to look for solutions to such a problem.[207]

318. In combination then Dr Moore's evidence concerning the absence of instruction provided to her at her induction as to alternative sources of information, together with the evidence of Dr Garwood about the pathway Dr Moore would have needed to negotiate through to the possibility of her speaking to a RWH physician created a considerable challenge for any young HMO called in to work over night in the WEC. This was especially so in respect of a potentially non O&G matter of uncertain derivation.

319. As a result I conclude that the arrangements in place at the WEC for diagnosis and delivery of emergency services at the time of Elizabeth's arrival, were inadequate. I am also satisfied that the responsibility for these failures was that of the RWH and I note the particular difficulties, which confronted Dr Moore as discussed above.

320. I additionally find that on the evidence it is likely that a more thorough clinical assessment at the WEC and the radiology departments at RWH and the RMH on 3 September would have led to the identification of a progressing PE and the resulting opportunity to undertake appropriate treatment for that condition, (this if such a testing request had indeed been able to get past the road blocks, which had arisen within the system that have been identified as existing at that time).[208] I further find that on the evidence presented the possibility that such treatment would have proved successful, is speculative and has not been established.[209]

-AV's decision on 4 September to return Elizabeth to the RWH, rather than to the RMH.

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[204] See paragraph 64 above. As to the potential difficulty faced by Dr Moore while working in the WEC see also Dr Garwoods view at paragraph 197.

[205] See discussion at transcript for Directions hearing (2), held on 5 May 2017 at page 26.

[206] See paragraphs 177 and 208-9 above. See also the evidence of Professor Truesdale concerning the then manner of assessing the results of ECG testing, set out at paragraph 144 above.

[207] See paragraphs 69-70 above and Dr Garwoods acceptance of this position at paragraph 196.

[208] See paragraphs 144, 177 and 208-9, above.

[209] See paragraph 159 above.

321. Ambulance paramedic Mr Cuthbertson did not recall whether while on route towards the Parkville hospital precinct, either he or the vehicle driver had spoken of the fact that the RMH was '*backed up... and that they were heading to the RWH*'. What I find was in fact the mention of this matter, (overheard by Mr Devitt), supports the existence of an early belief by Mr Cuthbertson that the RMH rather than the Women's was indeed the appropriate and therefore their probable destination.[210] The use of those particular words at that time and Mr Cuthbertson's recorded conversation with Mr Carroll were also consistent with the former's evidence, that he always treated his own suggestion of a ruptured ectopic pregnancy, as no more than an uncertain possibility.

322. Mr Cuthbertson and Mr Carroll both had lengthy experience as MICA Officers, and little or no experience of ectopic pregnancy. I find that both men were familiar with the AV protocol in respect of time critical cases then in use, which I note had for a considerable time been central to their work practise.[211] It is also relevant that both had a lengthy history of transporting time critical patients to the RMH, and not to the RWH. I am again satisfied that Mr Cuthbertson's query about ectopic pregnancy was no basis for Mr Carroll to make a provisional decision that Elizabeth should be transported to RWH.

323. Given her presentation at the time of loading I further consider that Mr Cuthbertson might reasonably have viewed the later indication of Mr Carroll's thinking, that Elizabeth should be carried to the RWH unless... , with some concern. [212] I note that there was no voice as to such a concern at that time and accept that Mr Cuthbertson's focus was on his patient's care, rather than their intended destination.

324. Mr Carroll's subsequent decision not to make contact with RMH but to instead rely on what I find was his flawed reasoning concerning that decision, and then to elevate Mr Cuthbertson's earlier speculation to a provisional diagnosis was a procedural error and central to the events which followed. They being that on the issue of destination Mr Cuthbertson had understood from Mr Carroll that he intended to seek further advice, and was entitled to rely on that undertaking and subsequently the implications of his not receiving any further direction.[213]

325. As later conceded by AV's Mr Natoli and Mr Grant, the decision to transport Elizabeth to the RWH was in error. Under the guidelines then in place Elizabeth should have been transported to the RMH.[214]

326. An additional opportunity to redirect on this issue arose when a member of triage staff at the RWH was made aware that on loading Elizabeth had a very low if not an *unrecordable blood pressure*, and was exhibiting further evidence of acute hypotension. I consider that at that point it may have been appropriate for that staff member to further question Mr Carroll as to the detail concerning Elizabeth's vital signs, and as to why it was intended to bring her to the Womens, rather than to the Royal Melbourne. However I have heard very little as to the standards and protocols then in place for the receipt of such advice by a triage nurse at the RWH, and make no further comment about this matter.

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[210] See paragraphs 217 and 219 above.

[211] See paragraph 182 above. See also Mr Grants agreement that such a guideline was in place from 2008 and at the time of these events, as discussed at paragraph 256 above.

[212] See evidence of Mr Cuthbertsons's state of mind concerning the seriousness of the presentation at that time at paragraph 216-7 above.

[213] See paragraphs 223-29.

[214] See paragraphs 290-92 above.

COMMENT.

327. I note that under current arrangements it is possible for AV officers with boarded patients to make contact confidentially and directly with receiving hospitals while on route. It is also the case that there is an improved level of clarity supported by agreement made following Dr Bessell's enquiry between the RMH and the RWH, as to which presentations are appropriate for transport to which particular ED.

328. Also relevant is the considerable improvement in the staffing arrangements within the WEC made since the time of Elizabeth's passing,[215] and the improvements secured by Professor Truesdale and WEC Co-Director, Dr Harvinder Kaur, in respect of the units timely access to the RMH's radiology department.

329. I have also considered the evidence provided by both Dr Garwood and Professor Truesdale concerning the history and independence of both hospitals and the current and improved provision of emergency services achieved hy the WEC.

330. In my view however that is not the end of the matter. Having regard to my duties under section 72(2) of the Act, and to all of the evidence, I consider that further iinprovements in the process of triaging patients to the two concerned hospitals should now be considered. Underlying this view is a belief that absent appropriate decision making in the highly pressured environment that is often the norm through an AV boarding and carriage, that there is real possibility that problems of the sort referred to by Mr Natoli may again emerge in cases like Elizabeth's, where the need for rescusitation is imminent and the cause of the underlying condition remains an unknown.

331. I also note that the reference to time critical cases, which is found within the AV working protocol, is not a concept that receives particular attention in the arrangements now in place between the two hospitals, that focus on the the Australian Triage scale as endorsed by the Australasian College of Emergency Medicine, which is a service standard applicable to all Hospital ED's.[216]

332. It is also relevant that the several areas in which the WEC maintains expertees, may not arise exclusive of problems relevant to other areas of medical science, which can co-exist and require individual planning and prioritisation.

333. Following from these matters and having regard to the particular advantage gifted to the people of Victoria by virtue of the proximity of the RWH and the RMH, I find that the evidence establishes that the public interest would be served by seeking to achieve a greater centralising in the area of patient triage, than that which currently exists.

334. I find that such an approach would better assist consistency in approach for AV and MICA officers as well as the staff at both hospitals and help ensure that decision making about medical history and presentation can lead directly to the most appropriate hospital admission, with the best available expert attention to follow. I further suggest that a union on this issue, which is similar to that which exists in respect of certain other specialist hospitals in Melbourne, might be achieved with out incurring significant cost and without compromising issues of hospital governance and financial independence.

RECOMMENDATION.

335. I recommend that the Directors of Emergency Services at the RWH and the RMH together with Ambulance Victoria under the guidance of the Secretary of the Department of Health and Human Services meet to consider the feasibility of a single triage point at the RMH, this

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[215] See paragraph 181 above.

[216] See the Australian Triage Scale also the discussion above at paragraphs 190 and 211.

to determine whether a female patient should be triaged for admission to the RWH (WEC) or the RMH.

CONCLUSION.

336. In conclusion I wish to thank all witness and Counsel and Solicitors for their assistance during the course of the inquest. I also thank Leading Senior Constable Tracey Ramsey for her preparation of the Inquest brief and presentation of the case.

I direct that copies of this finding be provided to,

Mr A Devitt.

Mrs B Gorman.

The Director(s) of Medical Services at the Women's Emergency Centre.

The Director of Nursing, Royal Women's Hospital.

The Chief Executive, Royal Women's Hospital.

Dr S Moore.

The Director of Emergency Medical Services, Royal Melbourne Hospital.

The Chief Executive, Royal Melbourne Hospital.

The Chief Executive, Ambulance Victoria.

Mr G Cuthbertson.

Mr S Carroll.

Professor A M Kelly.

Dr G Kambourakis.

Leading Senior Constable Tracey Ramsey.

The Manager Coroners Prevention Unit, attention Dr S Neate and R Bergman.

The Chief Executive, Safer Care Victoria.

The Secretary Department of Health and Human Services, in the State of Victoria.

The Minister for Health, in the State of Victoria.

Signature:

PETER WHITE

Coroner

Date: 27 September 2018

Coroners Court of Victoria