IN THE CORONERS COURT
OF VICTORIA
AT MELBOURNE

Court Reference: COR 2015 5464

**FINDING INTO DEATH WITH INQUEST**

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

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| Findings of: | **CORONER JACQUI HAWKINS** |
| Deceased: | JAMES PICKUP |
| Delivered on: | Thursday 26 April 2018 |
| Delivered at: | Coroners Court of Victoria,<br>65 Kavanagh Street, Southbank |
| Hearing date: | 13 March 2018 |
| Counsel assisting the Coroner: | Senior Sergeant Jenette Brumby, Police Coronial Services Unit |
| Representation: | Mr Paul Halley of Counsel representing Eastern Health, instructed by Ms Barbara De Brouwer of Minter Ellison |

**CORONER HAWKINS:**

**BACKGROUND**

1. James Pickup was a 59 year old man who died on 26 October 2015 after complaining of having shortness of breath (SOB) and having attended the Angliss Hospital by ambulance the day before he died. Mr Pickup lived at home with his loving wife, Valerie.

2. Mr Pickup had a history of obesity (BMI 38), hypertension, hypercholesterolaemia, bipolar disorder, obstructive sleep apnoea and heavy smoking. He saw his general practitioner (GP) regularly for check-ups and medications. He last saw his GP on 2 September 2015 for mental health issues and he regularly consulted a psychologist.

3. On 25 October 2015, Mr Pickup called an ambulance as he had been suffering from shortness of breath for the previous two days and struggled under exertion. Ambulance Victoria transported him to the Angliss Hospital for further investigation.

4. Once at the Angliss Hospital, the nursing assessment noted that he had been breathless on minimal exertion since the previous day. His oxygen saturations was 96%, he had a heart rate of 89 beats per minute, his blood pressure was 111/93 and his temperature was 36.6 degrees Celsius.

5. Dr Peak Chan Looi[1], Registrar at the Angliss Hospital performed a physical examination on Mr Pickup and noted that he had arrived by ambulance with a two day history of shortness of breath. There was no cough, chest pain, fever or syncope. There was mild ankle swelling. The past medical history was noted. His vital signs were normal and examination was normal.

6. Dr Looi ordered an electrocardiogram (ECG) which showed some subtle abnormalities that were non-diagnostic, and a chest x-ray reported increased lung volumes with a background in keeping with chronic obstructive pulmonary disease (COPD). There were no signs of pleural effusion or heart failure. Blood tests were normal. There was no troponin or D-dimer

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[1] Dr Peak Chan Looi is also known as Dr Peak Looi Chan, however for the purposes of this Finding and in accordance with her medical registration with Australian Health Practitioners Regulation Agency (AHPRA) she will be referred to as Dr Looi.

performed and the working diagnosis was of COPD. Dr Looi noted that COPD had not previously been diagnosed.

7. Mr Pickup was discharged home at 4.14pm with the suggestion that he should be reviewed by his GP and have an echocardiogram to rule out heart dysfunction, and respiratory function tests to elucidate if there was COPD.

8. On 26 October 2015 at 9am, Mr Pickup was at home when he complained of shortness of breath to his wife while walking down the hallway, collapsed unexpectedly and fell to the floor. An ambulance was called and cardiopulmonary resuscitation (CPR) was commenced however Mr Pickup was unable to be resuscitated and he was pronounced deceased.

## THE PURPOSE OF A CORONIAL INVESTIGATION

9. Mr Pickup's death constituted a '*reportable death*' under the *Coroners Act 2008* (Vic) (the Coroners Act), as his death occurred in Victoria, and was unexpected.[2]

10. The jurisdiction of the Coroners Court of Victoria is inquisitorial[3]. The purpose of a coronial investigation is to independently investigate a reportable death to ascertain, if possible, the identity of the deceased person, the cause of death and the circumstances in which death occurred.

11. It is not the role of the coroner to lay or apportion blame, but to establish the facts.[4] It is not the coroner's role to determine criminal or civil liability arising from the death under investigation, or to determine disciplinary matters.

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

13. For coronial purposes, the circumstances in which death occurred refers to the context or background and surrounding circumstances of the death. Rather than being a consideration of all circumstances which might form part of a narrative culminating in the death, it is confined to those circumstances which are sufficiently proximate and causally relevant to the death.

14. The broader purpose of coronial investigations is to contribute to a reduction in the number of preventable deaths, both through the observations made in the investigation findings and by

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[2] Section 4 *Coroners Act 2008.*
[3] Section 89(4) *Coroners Act 2008.*
[4] *Keown v Khan* (1999) 1 VR 69.

the making of recommendations by coroners. This is generally referred to as the 'prevention' role.

15. Coroners are also empowered:

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

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

    (c) to make recommendations to any Minister or public statutory authority on any matter connected with the death, including public health or safety or the administration of justice. These powers are the vehicles by which the prevention role may be advanced.

16. All coronial findings must be made based on proof of relevant facts on the balance of probabilities. In determining these matters, I am guided by the principles enunciated in *Briginshaw* v *Briginshaw*.[5] The effect of this and similar authorities is that coroners should not make adverse findings against, or comments about individuals, unless the evidence provides a comfortable level of satisfaction that they caused or contributed to the death.

## CORONIAL INQUEST

### Family concerns

17. In November 2015, Mr Pickup's stepdaughter Pieta Berrie wrote to the Coroners Court with concerns about Mr Pickup's care at the Angliss Hospital, namely that he had attended the Angliss Hospital the day before he died and that he did not have a troponin or D-dimer test which can identify any possible heart or clotting issues. Ms Berrie submitted that if these tests had been performed, Mr Pickup's death may have been prevented.

18. As a consequence of this letter of concern, statements were obtained from the treating clinicians that sought information about Mr Pickup's admission to hospital.

19. After conducting a preliminary enquiry a decision was made to close the investigation with a finding without inquest. Mrs Pickup wrote to the Coroners Court on 14 May 2017 with further questions as to why Mr Pickup's presenting symptoms did not warrant further investigation or at least consideration of pulmonary embolus as a differential diagnosis.

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[5] (1938) 60 CLR 336.

20. These further concerns prompted me to investigate further and seek an opinion from an independent expert.

**Expert Opinion**

21. In July 2017, the Coroners Court engaged Dr David Eddey, Staff Specialist in Emergency Medicine at The Geelong Hospital, to provide an expert opinion in relation to the care and management of Mr Pickup.

22. Dr Eddey was critical of the diagnosis and decision making process and considered there may have been a mis-diagnosis.

**Mention hearing**

23. On 11 October 2017, I held a mention hearing to assist me to determine whether or not an Inquest was needed. The evidence at the time was unclear as to whether or not Dr Looi had assessed Mr Pickup for a pulmonary embolus. I adjourned the matter to allow Eastern Health to seek clarification from Dr Looi and to respond to the criticisms of Dr Eddey. I indicated that depending on the hospital's position in relation to the criticisms, the evidence would need to be tested in an inquest.

24. On 9 November 2017, the Coroners Court received a further statement from Dr Looi which indicated that had she considered pulmonary embolus as a likely diagnosis, it would have been recorded in her notes. The absence of this in her notes meant that she did not consider a pulmonary embolus as a likely diagnosis and therefore did not use the risk scoring criteria of the Wells score and PERC rule.

25. On 10 November 2017, Associate Professor Graeme Thomson clarified his position and noted that:

> *Dr Looi considered, on the basis of her clinical assessment and the chest x-ray findings, that an exacerbation of chronic airways disease was a reasonable explanation for Mr Pickup's symptoms and that there was nothing else to specifically make pulmonary embolism or any other important diagnosis likely.*[6]

26. On the basis of this evidence, I determined that it was appropriate to take the matter to inquest.

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[6] Exhibit 7 – Statement of Associate Professor Thomson dated 4 November 2016, coronial brief

## Witnesses

27. The following witnesses were called to give *viva voce* evidence:

    - Dr David Eddey, Emergency Physician, Geelong Hospital;
    - Dr Peak Chan Looi, Registrar, Eastern Health; and
    - Associate Professor Graeme Thomson.

## MATTERS IN RELATION TO WHICH A FINDING MUST, IF POSSIBLE, BE MADE

### Identity of the Deceased

28. On 26 October 2015, Mr Pickup was visually identified by his wife Mrs Valerie Pickup. His identity was not in dispute and required no further investigation.

### Medical cause of death

29. On 28 October 2015, Dr Paul Bedford, a Forensic Pathologist at the Victorian Institute of Forensic Medicine conducted an autopsy on Mr Pickup's body and reviewed the Form 83 Victoria Police Report of Death, the e-medical deposition, the Angliss Hospital medical records and the post mortem computed tomography (CT) scan.

30. Dr Bedford reported that the autopsy revealed evidence of major pulmonary emboli leading to death. This causes death by clots, usually from the deep veins of the calves, breaking off, travelling to the lungs and occluding the major vessels into the lungs. An enlarged heart and obesity was also noted.

31. Dr Bedford provided an opinion that the medical cause of death was 1a) PULMONARY EMBOLUS and that his death was due to natural causes.

### Circumstances in which the death

32. The purpose of the inquest was to understand the circumstances which led to Mr Pickup's death. The key focus of the inquest was whether the medical treatment and management of Mr Pickup at the Angliss Hospital on 25 October 2015 was reasonable and appropriate. The following issues were explored at Inquest:

    a. Was pulmonary embolism considered as a differential diagnosis?

    b. Should pulmonary embolism have been considered as a differential diagnosis?

c. Should the WELLS score and PERC testing criteria have been considered?

**Was the medical treatment and management of Mr Pickup reasonable and appropriate?**

***Was pulmonary embolism considered as a differential diagnosis?***

33. Dr Looi did not recall the events surrounding Mr Pickup's presentation to the Angliss Hospital and she relied on the contemporaneous notes made at the time of the presentation.

34. Dr Looi made a diagnosis of COPD based on obtaining a medical history, conducting a thorough investigation, and ordering and interpreting an x-ray and ECG. Dr Looi's evidence was that she did not consider pulmonary embolus as a likely diagnosis because of Mr Pickup's presentation, history of smoking and the x-ray findings.[7] Further, according to Dr Looi there was no work of breathing, Mr Pickup was speaking in full sentences and he did not have low oxygen saturation.[8] In her opinion, Dr Looi felt COPD was a reasonable working diagnosis.[9]

35. Mr Pickup was subsequently discharged with a recommendation for a lung function test and an echocardiogram. Dr Looi admitted that she could have treated Mr Pickup with a bronchodilator, but did not consider the treatment was necessary given the patient's presenting symptoms.

36. Dr Looi explained that other differential diagnoses she considered was congestive heart failure because Mr Pickup presented with shortness of breath and did have some ankle swelling,[10] however, she considered COPD was reinforced with the chest x-ray.

37. Had she suspected a pulmonary embolus as a likely diagnosis, Dr Looi said she would have recorded it in the medical records and consulted a senior colleague about her suspicions and investigated it further.[11] Pulmonary embolus was not recorded in the notes, nor was a Wells or PERC score, which according to her, means that she did not consider it.[12] Dr Looi confirmed in evidence that if she had considered a pulmonary embolus, then she would have applied the Wells and PERC scores. She acknowledged if the PERC rule was applied it would have prompted a rule-in criteria to have a D-dimer.[13] Dr Looi's evidence is that had

[7] Transcript of evidence, p47 & p50
[8] Transcript of evidence, p58
[9] Transcript of evidence, p58 & p60
[10] Transcript of evidence, p51
[11] Transcript of evidence, p46
[12] Transcript of evidence, p47
[13] Transcript of evidence, p53

she suspected a pulmonary embolus, she would have also sought an opinion from a consultant and then been guided by the consultant's recommended pathway.[14]

38. According to Dr Eddey and Associate Professor Thomson, the diagnosis of COPD was reasonable considering the medical examination and history. Associate Professor Thomson said that he can understand why a diagnosis of COPD was made, with the presenting symptoms of history of smoking, no other particular disease and the chest x-ray results.[15] In a statement provided to the Court, Associate Professor Thomson stated: "*my view, as an Emergency Physician of some 30 years standing, is that most Emergency Department doctors would have accepted the diagnosis of airways disease and not actively considered pulmonary embolism because there was no particular reason to do so*". [16]

***Should pulmonary embolism have been considered as a differential diagnosis?***

39. The evidence was that pulmonary embolus can have a spectrum of symptoms which range from no symptoms to sudden death.[17] Consistent with this, is that Mr Pickup's presentation was atypical. Dr Looi's evidence was that "*besides his age and his symptoms, there was no other clinical signs or observations that would make [her] suspicious of a PE.*"[18]

40. In contrast, Dr Eddey and Associate Professor Thomson both considered that a pulmonary embolus should have been considered as a possible differential diagnosis.

41. Dr Eddey said COPD was one of a number of reasonable diagnoses.[19] However, Dr Eddey considered the diagnosis was tenuous due to the sudden and acute onset of the shortness of breath.[20] He said that an acute presentation of someone who is suddenly short of breath on minimal exertion is not consistent with someone who has gradually developed lung disease, such as COPD. [21] He said COPD usually develops over time.[22] The history of the onset of the symptom and the progression of the symptom is important in any diagnosis.[23]

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[14] Transcript of evidence, p48-49
[15] Transcript of evidence, p73
[16] Exhibit 7 – Statement of Associate Professor Thomson dated 4 November 2016, coronial brief, p11
[17] Transcript of evidence, p25
[18] Transcript of evidence, p60
[19] Transcript of evidence, p36 &40
[20] Transcript of evidence, p40
[21] Transcript of evidence, p12
[22] Transcript of evidence, p12
[23] Transcript of evidence, p13

42. In evidence, Associate Professor Thomson agreed that the short period of time of the development of Mr Pickup's symptoms would make you question whether something else was going on.[24]

43. Dr Eddey said that a doctor with reasonable experience would keep an open mind and would have considered shortness of breath as a cardinal symptom of pulmonary embolus, especially if it is not otherwise explained.[25]

44. Dr Looi said faced with the same clinical situation today, she would have considered a broader differential diagnosis, which would include a pulmonary embolus.[26]

***Should the WELLS and PERC testing criteria have been considered?***

45. Initially there was some confusion around whether or not Dr Looi had considered pulmonary embolus as a differential diagnosis because a comment was made in her statement about the PERC and Wells score. This was rectified at inquest, when Dr Looi confirmed that she had not considered pulmonary embolus and therefore had not applied the Wells score and the PERC rule.

46. Diagnostic testing for pulmonary embolus is not required if there is no clinical suspicion.[27] However, it is accepted clinical practice that if there is a clinical suspicion, then you apply the Wells score and then, if indicated, you apply the PERC rule. The Angliss Hospital has a document entitled "Investigation Pathway for Pulmonary Embolism".[28] When applied, the Wells score will assist to determine whether a pulmonary embolus is low, intermediate or high risk. If the patient is intermediate or high risk, a clinician would conduct further investigations and order the necessary tests. If the risk is determined to be low, a clinician would then apply the PERC rule. The PERC rule has a list of eight criteria, with either a positive or negative result. If there is a positive result to any one of the criteria, a clinician is required to order a D-dimer blood test.

47. According to Dr Eddey, if the Wells score had been applied in Mr Pickup's case, he would have scored as low risk and therefore the PERC rule would apply. Due to Mr Pickup being

[24] Transcript of evidence, p75
[25] Transcript of evidence, p26
[26] Transcript of evidence, p50
[27] Transcript of evidence, p34
[28] Exhibit 9 – Coronial brief, p56

aged over 50, he would have scored positive to the test and therefore a D-dimer test ought to have been considered. [29]

48. Associate Professor Thomson stated that as a consultant you do not have to apply the Wells score or PERC rule, you can use your 'clinical gestalt'. Clinical gestalt was described by Associate Professor Thomson as drawing on your clinical experience and a 'gut feeling'.[30] Dr Eddey agreed it was a gut feeling, based on experience. He added many senior doctors and consultants have this and use it to assist with diagnosis.[31] Dr Eddey's evidence was that in this situation, if a clinician had used their clinical gestalt, then there would be a high level of suspicion and they would have ordered the tests.

49. Associate Professor Thomson commented that junior staff are still developing their clinical gestalt and that is why the Angliss Hospital recommends the use of the Wells score and the PERC rule to provide guidance to them on when to request further investigations.[32] At the Angliss Hospital, junior doctors are advised to discuss cases with a consultant, if there is a risk of pulmonary embolus. The consultant may then review the patient, to make their own assessment and use their clinical gestalt.[33]

50. In his opinion, Associate Professor Thomson said the majority of junior staff would not have considered a pulmonary embolism in these circumstances.[34] He also commented that even if a D-dimer had been ordered, junior medical staff are not able to accurately interpret the results.[35] According to Associate Professor Thomson, experience is how you learn to interpret what a clinician has found[36] and the more experienced you get, the better you are at pattern recognition.[37] Symptoms such as acute onset of shortness of breath, is one where you may want to think more broadly.[38]

51. Associate Professor Thomson commented that:

> *the lesson that can be learned from this is that some cases do not follow expected courses. This is something that is picked up with experience. It is difficult to quantify*

[29] Transcript of evidence, p15
[30] Transcript of evidence, p76
[31] Transcript of evidence, p29
[32] Transcript of evidence, p72
[33] Transcript of evidence, p75
[34] Transcript of evidence, p72
[35] Transcript of evidence, p77
[36] Transcript of evidence, p78
[37] Transcript of evidence, p79
[38] Transcript of evidence, p79

*the value of intuition or to teach it but that was what was possibly needed in this case."*[39]

52. Dr Eddey commented that it is vital for an emergency physician to keep an open mind and consider differential diagnoses broadly, because the mere fact that someone presents to an emergency department means that they are at an increased risk.[40]

53. Ms Pieta Berrie, on behalf of the Pickup family submitted that as Mr Pickup presented to the emergency department during the day, they find it difficult to understand why Dr Looi did not discuss his circumstances with a consultant.

**CONCLUSIONS**

54. Mr Pickup's presentation to the Angliss Hospital was atypical. He presented with a non-specific symptom of a two day history of sudden onset of shortness of breath. Dr Looi examined Mr Pickup and ordered a chest x-ray and ECG and made a diagnosis of COPD.

55. The evidence of Dr Eddey and Associate Professor Thomson is COPD was a reasonable diagnosis in the circumstances. However, the issue with Mr Pickup presenting with a sudden onset of shortness of breath with no history, is not usually explained by COPD. Their opinion, as experienced emergency physicians, was that the sudden onset of shortness of breath should have triggered a higher level of suspicion, including consideration of a pulmonary embolus as a differential diagnosis.

56. Counsel for Eastern Health submitted that it was reasonable for Dr Looi to consider and make a diagnosis of COPD and also, in the absence of a consideration of a diagnosis of pulmonary embolus, it was also reasonable not to order a D-dimer blood test. Further, having considered and made a diagnosis of COPD, it was reasonable for Dr Looi to discharge Mr Pickup home and into the care of his general practitioner for further investigation.[41] Counsel for Eastern Health submitted that although Dr Eddey described the diagnosis of COPD as tenuous, based largely on the two day acuity of onset, such testimony does not provide a basis for finding Dr Looi's management was unreasonable.[42]

57. On behalf of the Pickup family, Ms Berrie submitted that pulmonary embolus should have been considered as a differential diagnosis due to the acuteness of Mr Pickup's presentation and especially in the context of having no such past history of COPD. This would have

[39] Exhibit 3 – Statement of Associate Professor Thomson dated 4 November 2016, coronial brief, p11
[40] Transcript of evidence, p20
[41] Submissions on behalf of Eastern Health dated 23 March 2018
[42] Submissions on behalf of Eastern Health dated 23 March 2018

required Dr Looi to conduct further investigations, including performing a D-dimer test and seeking advice and opinion from a consultant. Ms Berrie submitted that if Dr Looi had considered Mr Pickup's presenting condition, his patient history, clinical assessment, and pathology results, then the discharging diagnosis of COPD could not stand alone. Ms Berrie believed that a differential diagnosis should have been considered including a pulmonary embolus. Further, she considered if a pulmonary embolus had been tested for, it would have found the pulmonary embolus and may have prevented Mr Pickup's death.

58. I am satisfied on the evidence before me that based on her experience, Dr Looi did not consider pulmonary embolism as a differential diagnosis. Whilst Dr Looi had a number of years' experience as a doctor in an emergency department, she did not have the full benefit of clinical gestalt, as this is something that develops over time and with experience.

59. I acknowledge that pulmonary embolus can be difficult to diagnose due to its sometimes non-specific presentation. Consequently, I agree with submissions on behalf of Eastern Health and the evidence of Dr Eddey and Associate Professor Thomson that COPD was a reasonable diagnosis. However, I consider Dr Looi's failure to consider pulmonary embolus as a potential differential diagnosis, based on the sudden onset of shortness of breath, which resulted in further investigations not being conducted, was a missed opportunity in this case. I acknowledge that Dr Looi said if faced with the same clinical situation today, she would have considered a broader differential diagnosis, which would include a pulmonary embolism.[43]

## COMMENTS PURSUANT TO SECTION 67(3) OF THE *CORONERS ACT 2008*

60. I acknowledge and endorse Associate Professor Thomson's comments that Angliss Hospital have used Mr Pickup's death as a teaching opportunity. The death of Mr Pickup highlights the importance of junior clinicians in an emergency department taking the time to step back from their patient, and look at the bigger clinical picture. This case should be used as an example in hospitals to demonstrate the importance of listening to the patient and taking a basic medical history, considering the medical history in the context of the immediate presenting problem, seeking an opinion from consultants to obtain the benefit of their clinical gestalt, having an open mind and considering broadly about what is presented before them, when determining a differential diagnosis.

[43] Transcript of evidence, p50

**FINDINGS**

61. Having investigated the death of Mr James Pickup and having held an Inquest in relation to his death on 13 March 2018 at Melbourne, I make the following findings, pursuant to section 67(1) of the *Coroners Act 2008*:

    (a) that the identity of the deceased was James Pickup, born on 30 May 1956; and

    (b) that Mr Pickup died on 26 October 2015, at 1 Dariao Court, Ferntree Gully, Victoria, from 1a) PULMONARY EMBOLUS;

    (c) in the circumstances set out above.

62. I convey my sincerest sympathy to Mr Pickup's family for their loss.

63. Pursuant to section 73(1) of the *Coroners Act 2008,* I order that this Finding be published on the internet.

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

    (a) The family of Mr Pickup.

    (b) Eastern Health;

    (c) Dr Peak Chan Looi;

    (d) Dr David Eddey; and

    (e) Associate Professor Graeme Thomson.

Signature:

**JACQUI HAWKINS**
**CORONER**
Date: 26 April 2018