IN THE CORONERS COURT
OF VICTORIA
AT MELBOURNE

Court Reference: COR 2017 2579

FINDING INTO DEATH WITHOUT INQUEST

Form 38 Rule 63(2)
Section 67 of the Coroners Act 2008

Findings of:	Simon McGregor, Coroner
Deceased:	**Jessica Higgins**
Date of birth:	15 July 1983
Date of death:	4 June 2017
Cause of death:	Hypoxic ischaemic encephalopathy complicating mixed drug toxicity
Place of death:	Austin Hospital 145 Studley Road, Heidelberg, Victoria

INTRODUCTION

1. Jessica Higgins was a 33-year-old woman who lived in Watsonia with her mother, Margaret Phillips, at the time of her death.

2. Ms Higgins suffered chronic pain and had a long history of treatment with opioids. In May 2017 she underwent an inpatient admission for a ketamine infusion with the aim of reducing her opioid use. She was discharged on 23 May.

3. On 26 May Ms Phillips found Ms Higgins unresponsive on a couch in their home. Ms Higgins was resuscitated and taken to hospital but she did not recover. She was declared deceased on 4 June 2017.

THE PURPOSE OF A CORONIAL INVESTIGATION

4. Ms Higgins' death was reported to the Coroner. It appeared to be unexpected, unnatural or to have resulted, directly or indirectly, from an accident or injury and so fell within the definition of a reportable death in the *Coroners Act 2008.*

5. The role of a coroner is to independently investigate reportable deaths to establish, if possible, identity, medical cause of death and surrounding circumstances. Surrounding circumstances are limited to events which are sufficiently proximate and causally related to the death. The purpose of a coronial investigation is to establish the facts, not to cast blame or determine criminal or civil liability.

6. Under the Act, coroners also have the important functions of helping to prevent deaths and promoting public health and safety and the administration of justice through the making of comments or recommendations in appropriate cases about any matter connected to the death under investigation.

7. The Coroner's Investigator, Senior Constable Romualdo Pelle prepared a coronial brief of evidence in this matter. The brief includes statements from witnesses, including family, the forensic pathologist who examined Ms Higgins and treating clinicians. I have also had access to medical records and additional information from several of Ms Higgins' treating practitioners.

8. After considering all the material obtained during the coronial investigation, I determined that I had sufficient information to complete my task as coroner and that further

investigation was not required. Whilst I have reviewed all the material, I will only refer to that which is directly relevant to my findings or necessary for narrative clarity.

9. I have based this finding on the evidence contained in the coronial brief. In the coronial jurisdiction facts must be established on the balance of probabilities.[1]

10. In considering the issues associated with this finding, I have been mindful of Ms Higgins' basic human rights to dignity and wellbeing, as espoused in the *Charter of Human Rights and Responsibilities Act 2006*, in particular sections 8, 9 and 10.

BACKGROUND

11. Beginning in 2006, Ms Higgins was employed as a supervisor for a bus service for disabled children. Over the following years she had a series of workplace issues resulting in chronic back pain. These impacted her ability to work and she last worked in December 2012.[2]

12. From around 2007, Ms Higgins' primary medical practitioner for her chronic pain management was Dr David Bolzonello of the Alphington Sports Medicine Clinic.[3] She initially saw him from a period of care from July 2007 to March 2008 and returned in March 2010 after a recurrence of lower back pain.[4]

13. When Dr Bolzonello was unavailable, Ms Higgins also saw Dr Anthony Sellars, a General Practitioner at the Mount Street Medical Centre. Dr Sellars had discussed Ms Higgins' case with Dr Bolzonello and was aware of her complex situation and the difficulties that arose in finding a lasting solution to treat her pain.[5]

14. At this time Ms Higgins had been prescribed the opioid pain reliever oxycodone (under the trade name Oxynorm) and the benzodiazepine diazepam (under the trade name Valium). She informed Dr Bolzonello that previous trials of pregabalin (under the trade name Lyrica) and amitriptyline (under the trade name Endep) had not been successful.[6]

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1 This is subject to the principles enunciated in *Briginshaw v Briginshaw* (1938) 60 CLR 336. 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 as to those matters taking into account the consequences of such findings or comments.

2 Statement of Margaret Phillips dated 18 August 2017, Coronial Brief; Statement of Dr Clayton Thomas dated 20 August 2017, Coronial Brief.

3 Statement of Dr Anthony Sellars dated 23 May 2019, Coronial Brief.

4 Statement of Dr David Bolzonello dated 26 September 2017, Coronial Brief.

5 Statement of Dr Anthony Sellars dated 23 May 2019, Coronial Brief.

6 Statement of Dr David Bolzonello dated 26 September 2017, Coronial Brief.

15. Dr Bolzonello involved a number of specialists in Ms Higgins' care. These included spinal surgeon Mr Michael Johnson and pain specialist Dr Clayton Thomas. After a number of opinions, Ms Higgins underwent a L5/S1 spinal fusion in November 2013 performed by Mr Johnson.[7]

16. According to Dr Bolzonello: '*Ms Higgins postoperative course was stormy with multiple attendances to Epworth Hospital ED [Emergency Department]. She had repeat scanning all reassuring and was discharged each time on increased doses of Oxycontin [oxycodone]. Following time to settle, I would reduce the dose over time.*'[8]

17. Other surgical options were attempted as well as a ketamine infusion to attempt reduction of centrally mediated pain and to also attempt opioid reduction. Dr Bolzonello states that throughout 2015 and 2016 a goal of treatment was to reduce her medication use generally and in particular to reduce her use of opioids.[9]

Pain management leading up to May 2017

18. In 2016 Ms Higgins began to have recurring falls. These would result in ED attendances after which her opioid doses would be increased.[10]

19. On 10 February 2017 Ms Higgins was admitted to the Victorian Rehabilitation Centre under the care of Dr Thomas for pain management in order to prevent further falls. The attendance was arranged by Dr Peter Courtney, a pain specialist who performs specialised pain interventions including neuromodulation.[11]

20. This admission lasted until 18 February. During this time, her medication included 40mg twice daily of a controlled-release formulation of oxycodone (under the trade name Oxycontin) along with between 40mg to 60mg per day of immediate-release oxycodone.[12]

21. On discharge, her medications included 40mg twice daily of controlled-release oxycodone and a maximum of 30mg daily of immediate-release oxycodone. She was also prescribed 215mg twice-daily of pregabalin (under the trade name Lyrica), a maximum of six tablets

[7] Statement of Dr David Bolzonello dated 26 September 2017, Coronial Brief.
[8] Statement of Dr David Bolzonello dated 26 September 2017, Coronial Brief.
[9] Statement of Dr David Bolzonello dated 26 September 2017, Coronial Brief.
[10] Statement of Dr David Bolzonello dated 26 September 2017, Coronial Brief.
[11] Statement of Dr Clayton Thomas dated 20 August 2017, Coronial Brief.
[12] Statement of Dr Clayton Thomas dated 20 August 2017, Coronial Brief.

daily of 665mg controlled-release paracetamol and three-daily 2mg tablets of diazepam (under the trade name Valium).[13]

22. Between February and May 2017 Ms Higgins received prescriptions of oxycodone from both Dr Bolzonello and Dr Sellars. Dr Bolzonello held a permit from the Department of Health and Human Services to prescribe the Schedule 8 medication oxycodone to a maximum daily dose of 80mg. Dr Sellars did not hold a permit.[14]

23. The exact dosage of oxycodone prescribed by the two practitioners over this time is unclear from medical records. However, at times it exceeded 80mg per day.[15]

24. Dr Sellars notes that at around this time Ms Higgins presented a number of times requesting repeat prescriptions for various reasons, including nausea which caused her to vomit her medications, car break-ins resulting in medications being stolen and leaving medications in Phillip Island and Bright.[16]

25. During this time, Ms Higgins had a trial of spinal cord stimulation supervised by Dr Courtney. She reported significant improvement in pain and function, but was uncertain about implanting a permanent device.[17]

26. According to Dr Bolzonello, prior to consideration of implantation of a permanent spinal cord stimulator, Ms Higgins agreed to pursue opioid reduction. He adds that '*Ms Higgins was aware through my education to her and her own reading that the medication itself could be the cause of her severe pain i.e. opioid hypersensitivity syndrome*'.[18]

27. In a letter dated 2 May 2017, Dr Thomas stated that '*I would like to deal with her medication under a ketamine infusion for a duration of seven days … in order to get her off the OxyContin and rotate her onto [methadone] tablets. She was not able to tolerate Norspan [a buprenorphine transdermal patch]. She will need to be on some form of opioid*

[13] Medication Profile dated 17 February 2017, Victorian Rehabilitation Centre Medical Records.
[14] Statement of Dr David Bolzonello dated 19 July 2019, Coronial Brief; Statement of Dr Anthony Sellars dated 23 May 2019, Coronial Brief.
[15] Statement of Dr David Bolzonello dated 19 July 2019, Coronial Brief; Statement of Dr Anthony Sellars dated 23 May 2019, Coronial Brief.
[16] Statement of Dr Anthony Sellars dated 23 May 2019, Coronial Brief.
[17] Statement of Dr David Bolzonello dated 26 September 2017, Coronial Brief.
[18] Statement of Dr David Bolzonello dated 26 September 2017, Coronial Brief.

replacement. The [methadone] would be reasonable pending her ability to tolerate it, side effects, etc.'[19]

28. The ketamine infusion had two purposes. First, ketamine acts as pain relief. Secondly, ketamine assists with the process of withdrawing from opiates. In Ms Higgins' case, Dr Thomas states that '*[t]he aim of the ketamine infusion was not likely to lead to an improvement of pain but allowed us to wean her off her high-dose opioid analgesics*'.[20]

Ketamine infusion and opioid rotation

29. Ms Higgins was admitted to the Victorian Rehabilitation Centre on 16 May 2017 and she began an infusion of ketamine at 4mg/hour. This was to increase over seven days to a maximum dose of 32mg/hour.[21]

30. To commence the opioid rotation, Ms Higgins' oxycodone medication was converted to 'morphine equivalents': her total of 140mg daily oxycodone became 210mg morphine.[22]

31. Dr Thomas describes the second phase of the transition as follows:

> '*The rotation from 210mg Morphine to [methadone] is not straight forward. A general rule guiding the rotation is a one to five ratio. She would therefore expect to be on 40 mg per day [methadone]. She was started on 5 mg twice per day on 17th [May] 2017.*'[23]

32. Medical records confirm that Ms Higgins received 5mg methadone twice daily, at 8.00am and 8.00pm, on every day from 17 May to 22 May. Beginning on 20 May, her records note that she was prescribed a maximum of two 5mg doses of '*prn*' (as needed) methadone daily. She took one 5mg dose on 20 May, two on 21 May and two on 22 May.[24]

33. On 22 May a plan was made to increase her maximum of '*prn*' methadone to three 5mg doses per day. Despite this plan being documented at that time, nursing notes reflect her

[19] Letter from Dr Clayton Thomas to Allianz Australia dated 2 May 2017, Victorian Rehabilitation Centre Medical Records.
[20] Unsigned statement of Dr Clayton Thomas typed 30 April 2019, Coronial Brief.
[21] Infusion Orders dated 16 May 2017, Victorian Rehabilitation Centre Medical Records.
[22] Unsigned statement of Dr Clayton Thomas typed 30 April 2019, Coronial Brief.
[23] Unsigned statement of Dr Clayton Thomas typed 30 April 2019, Coronial Brief.
[24] Medication Chart, Victorian Rehabilitation Centre Medical Records.

requesting diazepam and methadone for her pain at around 9.15pm on 22 May but it was not provided.[25]

34. Her ketamine infusion was ceased at 12.00am on 23 May. She requested doses of methadone and diazepam, which were provided.[26]

35. She was provided her 8.00am regular dose of 5mg methadone that day. She did not receive any more doses of methadone before her discharge from the Victorian Rehabilitation Centre at 1.10pm.[27]

36. At the time of her discharge, Ms Higgins was on a number of medications, mostly for pain relief. Some of these were the same as she had been taking on her admission: 215mg twice-daily of pregabalin and a maximum of six tablets daily of 665mg controlled-release paracetamol. Instead of taking 2mg diazepam three times daily, she was prescribed 5mg tablets of diazepam to be taken a maximum of three times a day, as required.[28]

37. She was no longer prescribed any oxycodone. Her opioid pain relief was now in the form of methadone. Her prescription was for 10mg tablets of methadone with the following instructions as documented in her medication profile on discharge: '*Take HALF a tablet TWICE a day, in addition take HALF a tablet every SIX hours when required[.] Maximum of 3 tablets in 24 hours*'.[29] These instructions were printed on the box of 20 methadone tablets she was given at discharge.[30]

38. Dr Thomas has stated that the '*every SIX hours*' portion of these instructions was '*incorrectly written by the pharmacy*', and that a proper description of her dose on discharge was '*a regular dose of 5 mg twice per day and allowed up to 5 mg three times per day in addition*'.[31]

[25] Progress Notes dated 22 May 2017, Victorian Rehabilitation Centre Medical Records.
[26] Progress Note dated 23 May 2017, Victorian Rehabilitation Centre Medical Records; Medication Chart, Victorian Rehabilitation Centre Medical Records.
[27] Progress Note dated 23 May 2017, Victorian Rehabilitation Centre Medical Records; Medication Chart, Victorian Rehabilitation Centre Medical Records.
[28] Medication Profile dated 23 May 2017, Victorian Rehabilitation Centre Medical Records
[29] Medication Profile dated 23 May 2017, Victorian Rehabilitation Centre Medical Records
[30] Photograph, Coronial Brief.
[31] Statement of Dr Clayton Thomas dated 9 July 2019, Coronial Brief.

39. When Ms Higgins was receiving her medications at discharge, she requested that she be given them when her family were not present, as she stated her family became anxious when they saw how many medications she was prescribed. Staff complied with this request.[32]

40. There is no documentation of any emergency post-discharge plan being made for Ms Higgins in the event that the prescribed methadone did not manage her pain.

41. A Nursing Discharge Summary was sent to Dr Sellars as Ms Higgins' nominated General Practitioner. It noted '*Nil significant improvement in pain*'.[33]

Opioid medication post-discharge

42. After Ms Higgins returned home from her admission, her mother began to notice that her medications made her '*drowsy and disoriented*', that she slurred her speech and that she would often fall asleep at various times including whilst sitting at the dinner table.[34]

43. Ms Phillips was concerned at the level of drugs Ms Higgins was taking. In particular, she had the impression that Ms Higgins was made so drowsy by her medication that she was not fully aware of when she had taken her pills and how many pills she was taking.[35]

44. Ms Higgins saw Dr Bolzonello at the Alphington Sports Medicine Clinic on 25 May. He noted that her current prescription was '*[Methadone] 5mg BD [twice per day] Allowed to take extra 5mg up to 15/day (25mg total)*'. He did not make any note relating to drowsiness but did include the comment '*Feels better than before*'. He also noted that she was taking '*[Diazepam] 5mg tds [three times daily] prn [as needed]*'.[36]

45. Dr Bolzonello recorded that Ms Higgins was seeing Dr Thomas the next Tuesday (30 May) and that she had sufficient tablets of methadone to last until that time.[37]

46. Ms Higgins called Dr Thomas at 1.55pm on 26 May. He did not make a note of the phone call at the time, but later recalled the conversation as follows:

> '*[W]e had a discussion about Ms Higgins' pain and the side effects from the medication, as well as the reasonableness of bumping up the medication. She felt*

[32] Progress note dated 23 May 2017, Victorian Rehabilitation Centre Medical Records.
[33] Nursing Discharge Summary dated 23 May 2017, Victorian Rehabilitation Centre Medical Records.
[34] Statement of Margaret Phillips dated 18 August 2017, Coronial Brief.
[35] Statement of Margaret Phillips dated 18 August 2017, Coronial Brief.
[36] Progress note dated 25 May 2017, Alphington Sports Medicine Clinic Medical Records.
[37] Progress note dated 25 May 2017, Alphington Sports Medicine Clinic Medical Records.

that pain was still intrusive and in discussion we together elected to increase the dose of her methadone.'[38]

47. Ms Higgins then called Dr Bolzonello. Dr Bolzonello did not make a note of this phone call at the time, but he made a retrospective note on 29 May. In that note, he described the call as follows:

> '*Called me Friday for script as had called Clayton Thomas to say pain wasnt in control. She advised me Clayton had suggested a whole tab (10mg) instead of half. I confirmed this with [him] by text message. Script was written Friday for [methadone] 10mg tds [three times daily].*'[39]

48. At 2.56pm on 26 May Dr Bolzonello sent a text message to Dr Thomas reading '*Just confirming you have advised Jessica to increase [methadone] from 5 mg to 10 mg [tds (three times daily)]*'.[40] At 2.58pm Dr Thomas responded '*Correct*' and at 6.05pm Dr Bolzonello replied '*Tx*'.[41]

49. On that day, Ms Higgins attended Watsonia Pharmacy and was dispensed one box of 20 tablets of 10mg methadone from Dr Bolzonello's script, with the instructions '*Take ONE tablet THREE times a day*'. The script had no repeats.[42]

CIRCUMSTANCES IN WHICH THE DEATH OCCURRED

50. That night, Ms Phillips went to bed at around 1.00am, at which time Ms Higgins was sleeping on a couch.[43]

51. After Ms Phillips woke up the next morning, 27 May 2017, she noticed that Ms Higgins was still on the couch and that her lips were unusually blue. She called for her children to help and contacted emergency services at 10.26am, who told her to begin CPR. Ms Phillips and her daughter performed CPR until emergency services arrived.[44]

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[38] Statement of Dr Clayton Thomas dated 9 July 2019, Coronial Brief.
[39] Progress note dated 29 May 2017, Alphington Sports Medicine Clinic Medical Records.
[40] The initial text concluded with '*10 mg Todd*' and was followed by a text reading '*Tds*'. I interpret this as '*Todd*' being an unintended autocorrection for '*tds*' which Dr Bolzonello amended with his following text.
[41] Screenshot attached to statement of Dr Clayton Thomas dated 9 July 2019, Coronial Brief.
[42] Watsonia Pharmacy Patient History, Correspondence in Austin Health Medical Records.
[43] Statement of Margaret Phillips dated 18 August 2017, Coronial Brief.
[44] Statement of Margaret Phillips dated 18 August 2017, Coronial Brief.

52. Ambulance and MFB paramedics took over CPR. Paramedics continued CPR until 10.54am, at which time Ms Higgins' heart resumed circulating blood spontaneously.[45]

53. Ms Higgins' blood pressure was supported via adrenaline infusion and she was placed on a ventilator and transported to Austin Hospital by ambulance.[46]

Austin Hospital

54. Ms Higgins arrived at the Austin Hospital Emergency Department at 12.04pm. She was stabilised and transferred to the Intensive Care Unit (**ICU**) with a provisional diagnosis of opioid-related respiratory depression resulting in cardiac arrest.[47]

55. Over the following days, repeated clinical examinations suggested that she had suffered a severe hypoxic brain injury. An MRI scan on 31 May and an electroencephalogram on 1 June confirmed this. On 2 June, Ms Higgins was reviewed by ICU, Clinical Toxicology and Neurology services who all agreed that she had sustained a devastating hypoxic brain injury.[48]

56. After discussion with Ms Higgins' family about Ms Higgins' prospects for recovery, the decision was made to withdraw active life-support measures.[49]

57. Ms Higgins was declared deceased at 2.13pm on 4 June 2017.[50]

IDENTITY AND CAUSE OF DEATH

58. On 2 June 2017, after the decision had been made to withdraw active life-support, Ms Higgins' sister Virginia Maher completed a statement confirming her identity. Identity is not in dispute and requires no further investigation.

59. On 7 June 2017, Dr Matthew Lynch, a Forensic Pathologist practising at the Victorian Institute of Forensic Medicine, conducted an autopsy upon Ms Higgins' body and reviewed a post mortem computed tomography (CT) scan, a medical deposition and the Police Report of Death for the Coroner.

[45] Statement of Benjamin Reardon dated 8 September 2017, Coronial Brief.
[46] Statement of Benjamin Reardon dated 8 September 2017, Coronial Brief.
[47] Statement of Dr Shaun Greene dated 3 October 2017, Coronial Brief.
[48] Statement of Dr Shaun Greene dated 3 October 2017, Coronial Brief.
[49] Statement of Dr Shaun Greene dated 3 October 2017, Coronial Brief.
[50] Statement of Dr Shaun Greene dated 3 October 2017, Coronial Brief.

60. Dr Lynch noted evidence of widespread hypoxic brain injury. He also found evidence of bronchopneumonia, which likely followed respiratory depression, and focal acute pyelonephritis.

61. Dr Lynch provided a written report, dated 18 July 2017, in which he formulated the cause of death as '*I(a) Hypoxic ischaemic encephalopathy complicating mixed drug toxicity'*.

62. I accept Dr Lynch's opinion as to cause of death.

63. As Ms Higgins died some time after the overdose which led to her death, toxicological analysis of post mortem samples would not give useful information as to what substances she had consumed prior to her death, and there were no ante mortem samples sufficiently close to the time of her overdose to be useful.

64. Nonetheless, considering the circumstances of her death I am comfortable in concluding that she had taken only her prescribed medications prior to her death. Considering Ms Phillips' concerns that Ms Higgins may have been so affected by her prescribed levels of medication that she was not aware of how much she was taking, I accept the possibility that she may have consumed more than the prescribed quantity.

Intent

65. There is no evidence that Ms Higgins had any intentions of self-harm at this time. There is also no evidence that she was using any illicit drugs or any drugs which had not been prescribed to her.

66. I find that Ms Higgins died as the unintended consequence of the consumption of her prescribed medications.

REVIEW OF CARE

67. It is possible that Ms Higgins' death was directly caused by taking her prescribed doses of medications. Another possibility put forward by Ms Phillips is that Ms Higgins took more than her prescribed doses due to confusion caused by the medications taken at the prescribed doses.

68. Although I cannot find that either scenario is more likely than the other, I am satisfied that Ms Higgins' death was caused directly or indirectly by the prescription of medications, in particular methadone, in circumstances where her methadone dose had been increased on the

day before her fatal overdose and she had been provided with a script for 20 tablets of 10mg methadone.

69. Due to these concerns, I requested that case investigators from the Coroners Prevention Unit (**CPU**)[51] review the evidence relating to Ms Higgins' death and provide advice on the course of my investigation.

70. Based on their advice, I directed that letters be sent to convey a number of specific concerns to Dr Thomas, Dr Bolzonello and Dr Sellars. All three practitioners responded to my concerns.

71. Their responses were thorough and considered. I do not accept every point they have raised with respect to my concerns, but I acknowledge that they have acted in good faith and with the intention of ensuring that they provide the best possible care to other patients in the future.

Ketamine infusion for opioid rotation

72. The nursing discharge summary for Ms Higgins' inpatient admission from 16 May to 23 May reports '*Nil significant improvement in pain*'.[52]

73. Dr Thomas was asked to comment on whether this should have raised concerns about Ms Higgins' opioid rotation. He first noted that his interpretation of her records was that her pain scores were slightly better over the course of her stay, but he agreed that one could also reasonably draw the conclusion that pain had not improved.

74. Despite this, he noted that the ketamine infusion had a dual purpose of pain reduction and for benefit in the withdrawal process for oxycodone. He submitted that the ketamine infusion '*certainly had allowed us to wean her off her high-dose opioid medications*' and so achieved that purpose.

75. I accept Dr Thomas' submission, and I accept that Ms Higgins' limited pain reduction during her ketamine infusion was not a cause for concern regarding the possibility of later overdose.

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[51] The Coroners Prevention Unit (CPU) was established in 2008 to strengthen the prevention role of the coroner. The unit assists the Coroner with research in matters related to public health and safety and in relation to the formulation of prevention recommendations. The CPU also reviews medical care and treatment in cases referred by the coroner. The CPU is comprised of health professionals with training in a range of areas including medicine, nursing, public health and mental health.

[52] Nursing Discharge Summary dated 23 May 2017, Victorian Rehabilitation Centre Medical Records.

Consideration of escalated risk

76. There is evidence that rotation to methadone from another opioid is particularly risky where there has been a recent escalation in opioid consumption.[53]

77. Dr Thomas was asked to comment on whether this particular risk had been considered in determining whether Ms Higgins should be rotated from oxycodone to methadone at that time.

78. In his response, Dr Thomas went into higher detail about his decision-making process. He acknowledged throughout that Ms Higgins was a high-risk individual considering the quantities of opiate medication she was taking.

79. He also drew attention to her 'trajectory' of increasing oxycodone use before her opioid rotation and the role this played in his decision to rotate her to methadone use.

80. From Dr Thomas' response, I am satisfied that he was fully aware of Ms Higgins' heightened vulnerability and risks following rotation under ketamine infusion. I am satisfied that his decision to perform the rotation at that time was sound and well-informed.

81. That consciousness of heightened risk, however, should have made Dr Thomas more careful in his involvement in Ms Higgins' care post-discharge.

Change in dosage on 26 May 2017

82. In Dr Bolzonello's clinical note he made on 25 May 2017, he recorded Ms Higgins' prescription as '*[methadone] 5mg BD [twice daily] Allowed to take extra 5mg up to 15/day (25mg total)*'. This was also Dr Thomas' understanding of Ms Higgins' methadone prescription on her discharge from the Victorian Rehabilitation Centre.

83. If Ms Higgins contacted Dr Thomas and Dr Bolzonello on 26 May about her current dosage being insufficient, it is reasonable to assume that she was taking the maximum quantity of her as-needed doses, and so taking 25mg methadone per day.

84. On 26 May, Dr Bolzonello wrote a new script for 10mg methadone to be taken three times daily, with no specified allowance for as-needed doses. If this replaces the entirety of her

[53] Zimmermann et al, "Rotation to Methadone after Opioid Dose Escalation" (2005) 19(2) *Journal of Pain & Palliative Care Pharmacotherapy* 25.

previous prescription, including both regular and as-needed doses, then her regular dose would be 30mg methadone per day.

85. This appears to have been Dr Bolzonello's understanding of the change being made to Ms Higgins' methadone dose on 26 May 2017. Dr Thomas also states that this was his understanding, although he considers Ms Higgins' previous dose to have been a likely 20mg per day rather than a presumed 25mg per day.

86. Dr Bolzonello has submitted that this rate of change in dosage, from 25mg daily to 30mg daily, was within accepted guidelines. I accept this submission as a general statement, although it may not apply when considering Ms Higgins' sedation levels prior to the change in dosage.

Communication surrounding change in dosage on 26 May 2017

87. The interpretation of Ms Higgins' changing dose set out above does not sit easily with Dr Bolzonello's text message to Dr Thomas discussing changing Ms Higgins' prescription from '*5 mg to 10 mg [tds]*'.

88. The change referred could be interpreted as replacing only the regular 5mg twice-daily portion of her previous dosage with 10mg three-times-daily, or as replacing only the 5mg three-times-daily portion of her previous dosage which was being taken as needed with 10mg three-times-daily. Either interpretation would represent a significant and clearly unsafe increase in her dosage of methadone.

89. The disjunction between Dr Bolzonello's and Dr Thomas' understanding of Ms Higgins' changing dose and the text message communication between them leads to two questions.

90. First, what was communicated to Ms Higgins and what was her understanding of her dosage following the conversation?

91. If Dr Bolzonello's and Dr Thomas' conversation with Ms Higgins employed a similar ambiguous shorthand, there was ample opportunity for her to become confused and take a higher dose of methadone than was intended to be prescribed. Such confusion might have led to her death.

92. Unfortunately, the lack of documentation of Dr Bolzonello's and Dr Thomas' discussions with Ms Higgins makes it impossible to conclusively determine what she was told about her new prescribed dosage.

93. Secondly, was the text message exchange with Dr Thomas an adequate basis for Dr Bolzonello to write a new script to Ms Higgins?

94. This is an issue of practice for both Dr Bolzonello and for Dr Thomas. I consider that the use of such unclear language, especially considering the absence of documentation in medical records, limited the information available to the two physicians when determining whether or not to increase Ms Higgins' dose.

95. Dr Thomas did not record his clinical decision-making or communicate it to Dr Bolzonello, except through the intermediary of Ms Higgins calling Dr Bolzonello after she had spoken to him. Dr Bolzonello acted on assumptions about Dr Thomas' clinical decision-making in deciding to increase Ms Higgins' dosage and write her a new script for methadone tablets.

96. This limited sharing of information allowed Dr Bolzonello and Dr Thomas to act on unwarranted assumptions regarding Ms Higgins' state when determining jointly that her dosage of methadone should be increased.

97. I find that in this respect Dr Bolzonello and Dr Thomas practised in a manner that placed the public at risk of harm. The care they exercised was below the standard reasonably expected.

Lack of in-person review

98. As discussed above, in his response to my concerns Dr Thomas characterised the change in Ms Higgins' methadone dosage as moving from '*a likely dose of 20mg to 30mg per day*'.[54]

99. He then stated that:

> '*Although increasing Ms Higgins' methadone dosage from approximately 20mg to 30mg is not a large increase, on reflection I accept that it would have been wise to review Ms Higgins in person prior to advising her GP of the dose increase. If there was any evidence of sedation, then I would not have increased the dose. Given that she had seen Dr Bolzonello the day before on 25 May 2017, I accepted that this was not the case.*'[55]

100. As discussed above, I accept that Dr Bolzonello considered the change in Ms Higgins' dosage to be from 25mg per day to 30mg per day.

[54] Statement of Dr Clayton Thomas dated 9 July 2019, Coronial Brief.
[55] Statement of Dr Clayton Thomas dated 9 July 2019, Coronial Brief.

101. Ms Phillips' description of Ms Higgins' sedation in the days before her fatal overdose is vivid. It is likely that, had Ms Higgins been reviewed on that day, her dangerous levels of sedation would have been clear.

102. However, as no in-person review occurred on 26 May 2017, one cannot be certain that Ms Higgins' would not have been able to present as alert for at least the duration of the review.

103. What is certain is that this was a missed opportunity to detect whether Ms Higgins' methadone dose was causing dangerous side effects and whether increasing it would put her in danger of overdose. Their brief and ambiguous text message conversation was not sufficient for them to have a shared understanding of her condition, or for Dr Bolzonello to be clear on Dr Thomas' clinical reasoning in approving the increase in dosage.

104. This is an issue of practice for both Dr Bolzonello and for Dr Thomas. I consider that the failure to require an in-person review before increasing her dosage impaired the ability of both practitioners to properly assess the dangers of this increase. This contributed substantially to Ms Higgins' risk of fatal overdose, which was realised.

105. Dr Bolzonello and Dr Thomas have accepted, in a qualified form, that their decision to increase Ms Higgins' prescription without reviewing her in person was suboptimal. Dr Thomas' description of his decision-making has been quoted above, and Dr Bolzonello states that:

> '*Whilst I accept that it would have been ideal to review Ms Higgins in person on 26 May 2017, in circumstances where I had reviewed her the day prior and noted no concerns with regards to her medication, where I did not consider there to be any risk in increasing Ms Higgins' maximum daily dose of methadone by 5mg and where she was to be reviewed by Dr Thomas on 30 May 2017, I was comfortable with providing her with the prescription.*'[56]

106. In light of the full circumstances which I have discussed above, especially the lack of communication regarding clinical decision-making, I do not think these qualified acknowledgements fully address the severity of the failures in Ms Higgins' care.

107. I find that in this respect Dr Bolzonello and Dr Thomas practised in a manner that placed the public at risk of harm. The care they exercised was below the standard reasonably expected.

[56] Statement of Dr David Bolzonello dated 19 July 2019, Coronial Brief.

Post-discharge planning

108. The Faculty of Pain Medicine of the Australian and New Zealand College of Anaesthetists has published a 'Proposal for practice guideline' on '*Low dose ketamine infusion in the management of chronic non-cancer pain*'.[57]

109. The principles to guide the administration of ketamine infusions identified in this document include '*Clear pathway for follow-up*' and '*Clear line(s) of communication with patients' primary health practitioner(s)*'. The outlined proposal for best practice includes '*Emergency after-discharge plan, especially for recrudescence of "pain"*'.

110. There is no evidence of such an emergency post-discharge plan existing for Ms Higgins after she left the Victorian Rehabilitation Centre on 23 May, beyond Ms Higgins being invited to contact Dr Thomas if needed. Both Dr Bolzonello and Dr Thomas were invited to respond to my concerns that no such plan existed, and neither presented any evidence to the contrary.

111. As it occurred, Dr Thomas and Dr Bolzonello responded to Ms Higgins' request to treat her returning pain by way of two separate telephone conversations with Ms Higgins and an ambiguous text-message exchange.

112. As seen above, this process left crucial information as to Ms Higgins' state unknown. I consider that if a structure for information sharing and communication had been laid out on 23 May, it would have reasonably involved in-person review before significant increase in dosage.

113. This is speculative, however, and the details to be included in such a plan would be subject to clinical judgment.

114. It is difficult to compare the actions of Ms Higgins' treating practitioners on her discharge to accepted professional standards, as standard practice for ketamine infusions appears to be varied. The proposal for guideline discussed above notes that '*There is substantial clinical variation in the use of ketamine infusions for chronic non-cancer pain*' and that '*There is a paucity of quality evidence concerning the use of ketamine infusions in patients with chronic non-cancer pain*'.

[57] Faculty of Pain Medicine, Australian and New Zealand College of Anaesthetists '*Proposal for practice guideline: Low dose ketamine infusion in the management of chronic non-cancer pain*' (2016).

115. Indeed, Dr Thomas himself appears to be a leading practitioner in the field. He advises that he '*admits up to six patients per week for ketamine infusion opioid wean and rotation*' and is a Fellow of the Faculty of Pain Medicine.[58]

116. In order to prevent deaths such as Ms Higgins' from occurring in the future, it would be appropriate for the Faculty of Pain Medicine to consider what can be learned from Ms Higgins' death in their ongoing work of developing standards and best practices for ketamine infusion.

117. A clear lesson to be taken from these tragic events is the importance of planning for the post-discharge period in vulnerable patients, with a focus on the structured sharing of information.

Schedule 8 Prescribing

118. One issue which became clear in my review of Ms Higgins' clinical course leading up to her admission for a ketamine infusion was that Dr Bolzonello and Dr Sellars were prescribing oxycodone outside the bounds of Dr Bolzonello's permit to prescribe oxycodone at a maximum of 80mg per day.

119. Dr Bolzonello had acknowledged that he provided prescriptions to Ms Higgins that exceeded the daily maximum dose provided by that permit. Dr Sellars states that he was acting under the assumption that he was able to prescribed drugs of addiction in the absence of Dr Bolzonello pursuant to Dr Bolzonello's permit, but he now understand that this is incorrect as he did not work at the same practice.

120. Both Dr Bolzonello and Dr Sellars have given evidence that they have undertaken further education as to the current legislation and regulations regarding prescription of Schedule 8 substances. Dr Bolzonello in particular advises that he now uses the SafeScript system as part of his standard practice.

121. The quantities prescribed were not, in themselves, irresponsible. Dr Bolzonello and Dr Sellars were clearly making efforts to control Ms Higgins' oxycodone use, and all practitioners involved were aware of the heightened risk Ms Higgins' trajectory of opioid use posed.

[58] Unsigned statement of Dr Clayton Thomas typed 30 April 2019, Coronial Brief.

122. Although Dr Bolzonello's and Dr Sellars' practices with respect to permits may have been flawed, I do not find that they contributed to Ms Higgins' death. I am satisfied by the efforts they have made to reflect on and improve their practices.

Quality of clinical notes

123. A consistent frustration throughout my investigation into Ms Higgins' death was the quality of clinical notes. In particular, Dr Bolzonello's notes were often lacking in detail and sometimes made retrospectively. A particularly glaring issue is that the text message conversation between Dr Bolzonello and Dr Thomas on 26 May 2017 was not recorded in either of their medical records.

124. Both Dr Bolzonello and Dr Thomas have acknowledged issues with their practices with regard to documentation. Both have also provided evidence that they have undertaken further education and amended their practices to improve in the future. I am satisfied that they have taken this issue seriously and have made appropriate efforts to improve.

125. Dr Bolzonello was informed of my concern that he might not have been able to confidently determine Ms Higgins' treatment course relying on notes with a low level of detail. He responded as follows:

> '*Ms Higgins had been my patient since 2007 and was a patient with whose treatment course and progress I was well familiar. I frequently reviewed Ms Higgins and further, she was one of only two patients for whom I held a Schedule 8 permit at the time. As noted above, I accept that my progress notes may not have always adhered to the relevant criteria, but I do not consider that this impacted the treatment I provided to Ms Higgins following her discharge from the VRC.*'[59]

126. I accept Dr Bolzonello's submission, and I do not find that the quality of his notes negatively impacted Ms Higgins' care.

COMMENTS PURSUANT TO SECTION 67(3) OF THE ACT

127. Ms Higgins' clinical course was long and complex, and her treating practitioners were clearly committed to her care. They had great knowledge and experience and, until the tragic events following her discharge on 23 May 2017, appear to have provided a high standard of treatment.

[59] Statement of Dr David Bolzonello dated 19 July 2019, Coronial Brief.

128. Weaning sufferers of pain off of opioid medications is very difficult, and Ms Higgins' practitioners' attempts were made difficult by the reported increases in her dosage when she attended Emergency Departments.

129. Nonetheless, there was a clearly identifiable flaw in clinical decision-making when Dr Thomas and Dr Bolzonello decided to increase her methadone dosage from an effective 25mg daily to 30mg daily on 26 May 2017. This error does not appear to have stemmed from any lack of substantive knowledge or experience, but from a lack of information about Ms Higgins' state at that time.

130. The issue, then, was not substantive judgment but communication. Dr Thomas states at one point '*[i]f she was reporting excessive sedation or other side effects there is no way I would have recommended to increase her methadone*'.[60] Nonetheless, Ms Higgins was suffering such sedation and side effects, and her dosage was increased without this fact being known and considered.

131. Dr Thomas and Dr Bolzonello missed an opportunity to detect such sedation or confusion when they both agreed that her methadone dosage should be increased without reviewing her in person. The poor quality of communication between the two of them regarding this joint decision contributed to this error.

132. This relates to the individual practices of Dr Bolzonello and Dr Thomas. For this reason, I consider it appropriate to make a notification to the Australian Health Practitioner Regulation Agency about the quality of care they exercised.

133. This failure is also a specific instance of the dangers in poor communication for patients in the vulnerable period post-discharge from a ketamine infusion for opioid rotation. To prevent such opportunities from being missed in the future, further guidelines and standards should be developed for treating patients in this situation.

Faculty of Pain Medicine, Australian and New Zealand College of Anaesthetists

134. As I discussed above, the Faculty of Pain Medicine of the Australian and New Zealand College of Anaesthetists has published a 'Proposal for practice guideline' on '*Low dose ketamine infusion in the management of chronic non-cancer pain*'.[61] The development of

[60] Statement of Dr Clayton Thomas dated 9 July 2019, Coronial Brief.
[61] Faculty of Pain Medicine, Australian and New Zealand College of Anaesthetists '*Proposal for practice guideline: Low dose ketamine infusion in the management of chronic non-cancer pain*' (2016).

this proposal followed a recommendation from Coroner Audrey Jamieson in her finding into the death of Margaret McCall.[62]

135. This proposal has not yet been finalised into an endorsed guideline. Juliette Whittington, the Acting General Manager of the Faculty of Pain Medicine, has advised that '*a document development group has been reviewing the current clinical evidence to expand the document and make it a professional document for our Faculty fellows*'.[63]

136. I commend the work of the Faculty of Pain Medicine in this area, and I anticipate the completion of this document.

137. The circumstances of Ms Higgins' death demonstrate crucial lessons which should be considered by the Faculty of Pain Medicine in finalising this document. In particular, Ms Higgins' tragic outcome shows the importance of specific plans being made to communicate clinical decision-making and to decide what information is required before making decisions such as increasing dosage of opioid medications.

138. I will make a recommendation below that the Faculty of Pain Medicine address this issue specifically as they finalise this guideline.

NOTIFICATIONS

139. Division 3 of the *Health Practitioner Regulation National Law* governs the making of voluntary notifications to the Australian Health Practitioner Regulation Agency (**AHPRA**).

140. Section 144(1) sets out the grounds on which a voluntary notification about a registered health practitioner may be made to AHPRA. These include:

…

(b) That the knowledge, skill or judgment possessed, or care exercised by, the practitioner in the practice of the practitioner's health professions is, or may be, below the standard reasonably expected.[64]

141. I direct that AHPRA be notified that the care exercised by Dr Thomas was below the standard reasonably expected on the following grounds:

[62] This finding is available on the Coroners Court of Victoria website with the Case ID COR 2012 4064.
[63] Email from Juliette Whittington to the Court dated 20 March 2020.
[64] *Health Practitioner Regulation National Law Act 2009* (Qld) Sch 1, s 144.

(a) That he failed to document and communicate to Dr Bolzonello his clinical decision-making on 26 May 2017 other than in the ambiguous text message conversation discussed above and through the intermediary of Ms Higgins; and

(b) That on 26 May 2017 he, jointly with Dr Bolzonello, decided to increase Ms Higgins' dosage of methadone to 30mg daily without either practitioner reviewing her in person.

142. I direct that AHPRA be notified that the care exercised by Dr Bolzonello was below the standard reasonably expected on the following grounds:

(a) That he failed to obtain information on Dr Thomas' clinical decision-making on 26 May 2017 other than in the ambiguous text message conversation discussed above and through the intermediary of Ms Higgins; and

(b) That on 26 May 2017 he, jointly with Dr Thomas, decided to increase Ms Higgins' dosage of methadone to 30mg daily without either practitioner reviewing her in person.

RECOMMENDATION

143. Pursuant to section 72(2) of the *Coroners Act 2008*, I make the following recommendation connected with the death:

> That the **Faculty of Pain Medicine of the Australian and New Zealand College of Anaesthetists** include in their forthcoming guidelines on ketamine infusion specific guidance on post-discharge planning that addresses how to communicate clinical decision-making surrounding changes in dosage of opioid medication and what information will be required before making any such changes.

FINDINGS AND CONCLUSION

144. I express my sincere condolences to Ms Higgins' family for their loss. I also wish to acknowledge the distress the prolonged coronial process has caused them.

145. Having investigated the death, without holding an inquest, I make the following findings pursuant to section 67(1) of the *Coroners Act 2008*:

(a) The identity of the deceased was Jessica Higgins, born 15 July 1983;

(b) The death occurred on 4 June 2017 at Austin Hospital, 145 Studley Road, Heidelberg, Victoria, from hypoxic ischaemic encephalopathy complicating mixed drug toxicity; and

(c) The death occurred in the circumstances described above.

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

(a) Ms Margaret Phillips, senior next of kin;

(b) Dr David Bolzonello, care of Ms Cindy Tucker, Kennedys Law;

(c) Dr Clayton Thomas, care of Ms Madhavi Ligam, Avant Law;

(d) Dr Anthony Sellars;

(e) Mrs Pauline Chapman, Austin Health;

(f) Mrs Linda Shelley, the Victorian Rehabilitation Centre;

(g) WorkSafe Victoria, care of Mr Steve Jacobs, Wisewould Mahony;

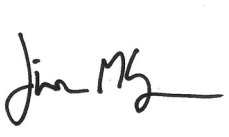
(h) Mrs Janet Tucci, Adviceline Injury Lawyers;

(i) Australian Health Practitioner Regulation Agency;

(j) Faculty of Pain Medicine, Australian and New Zealand College of Anaesthetists; and

(k) Senior Constable Romualdo Pelle, Coroner's Investigator.

Signature:



SIMON McGREGOR

CORONER

Date: 16 April 2020