IN THE CORONERS COURT
OF VICTORIA
AT MELBOURNE

Court Reference: COR 2018 1213

FINDING INTO DEATH WITHOUT INQUEST

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

Findings of:	Sarah Gebert, Coroner
Deceased:	Melanie Diane DOHERTY
Date of birth:	30 September 1988
Date of death:	15 March 2018
Cause of death:	*Mixed Drug Toxicity*
Place of death:	Monash Medical Centre, 246 Clayton Road, Clayton, Victoria
Relevant matters:	*Best Possible Medication History, Medication Reconciliation*

INTRODUCTION

1. Melanie Diane Doherty,[1] born on 30 September 1988, was 29 years old at the time of her death. She and her partner, Peter Howell lived with her mother, Michelle McDonald.

2. Melanie is survived by her son, James who was born on 15 January 2018.

3. On 15 March 2018, Melanie was found unresponsive on the floor of her room at the Queen Elizabeth Centre (**QEC**) and died the same day at the Monash Medical Centre (**MMC**).

THE CORONIAL INVESTIGATION

4. Melanie's death was reported to the coroner as it fell within the definition of a reportable death in the *Coroners Act 2008* (**the Act**). Reportable deaths include deaths that are unexpected, unnatural or violent or result from accident or injury.

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. Victoria Police assigned Senior Constable Melanie Vandenberg (**SC Vandenberg**) to be the Coroner's Investigator. SC Vandenberg conducted inquiries on my behalf[2], including taking statements from witnesses and submitting a coronial brief of evidence. The coronial brief comprises of statements including from Melanie's treating health practitioners, the forensic pathologist who examined her and investigating police, as well as other relevant documentation.

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[1] Referred to in my finding as 'Melanie' unless more formality is required.
[2] The carriage of the investigation was transferred from Deputy State Coroner English.

8. As part of the investigation, this case was also referred to the Coroners Prevention Unit (**CPU**).[3] The CPU were asked to review Melanie's admission and care at the QEC proximate to her death.

9. In the course of the coronial investigation copies of Melanie medical records were obtained and Eastern Health, Monash Health and QEC all provided statements and responded, where relevant, to my proposal for recommendations arising from the investigation.

10. This finding draws on the totality of the coronial investigation into Melanie's death, including evidence contained in the coronial brief and information provided by the CPU. 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. In the coronial jurisdiction, facts must be established on the balance of probabilities.[4]

Background

11. Melanie had a history of hereditary coproporphyria with typical symptoms of abdominal pain, nausea and skin manifestations; epilepsy; infective endocarditis in 2015; cardiac tricuspid regurgitation; asthma; cancer of the cervix; and hepatitis C. Melanie did not have a formal psychiatric diagnosis however there are suggestions she experienced periods of elevated mood, depression and anxiety. In addition, Melanie had a complex pain disorder and substance use disorder including injectable and PRN (when necessary) opioid use. Melanie had multiple admissions and outpatient clinic appointments across multiple health services including Eastern Health, Monash Health, St Vincent's Hospital, and Austin Health in the year preceding her death.

12. On 9 October 2017, when 16 weeks pregnant, Melanie completed nine of a 10-day opioid withdrawal program at the Monash Health Community Residential Withdrawal Unit and Addiction Medicine Unit. She was transferred to hospital on the 10th day for investigation of abdominal pain. The discharge summary included a recommended comprehensive treatment plan for Melanie after the baby was born and noted:

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[3] 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.

[4] 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.

Pethidine and other PRN opiates/opioids were ceased, and in view of her use patterns, PRN opioids should only be used in hospital and with biochemistry confirming acute porphyria episodes. Permits are required for any PRN opiates.

13. Melanie was admitted to Monash Health and Maternity Services several times from October in 2017, including with acute porphyria and/or for observation of her high-risk pregnancy. She was admitted on 6 January 2018 and gave premature birth to James (28.3 weeks) on 15 January 2018. James was admitted to the neonate intensive care unit until 21 February 2018.

14. Melanie was discharged from hospital on 17 January 2018 and as part of the comprehensive discharge planning for her, Monash Health contacted her general practitioner (**GP**) Dr Anand Singh to discuss his ongoing monitoring of Melanie and prescribing of opioid replacement therapy.

15. Melanie was admitted to Monash Health on 19 January 2018 with post-partum abdominal pain, right breast actinomycosis and substance use disorder and discharged on 20 February 2018. The Drugs and Poisons Regulations was notified Melanie was a drug dependent person.

16. On admission Melanie had been prescribed the opioid tapentadol and methadone at 140 mgs twice daily. Following review, tapentadol, diazepam and zopiclone were ceased and methadone was increased to 150 mgs twice daily. Dr Singh was to provide ongoing scripts and monitoring. The discharge medication list dated 19 February 2018 included these medication changes. There is also a record that Melanie's own supply of methadone, levetiracetam 1000 mgs (1.5 tablets twice daily) and antipsychotic olanzapine 5 mgs (one at night) were returned to her. There were newly prescribed medications including antiemetic domperidone 10 mgs, antibiotics and contraception.

17. While in hospital the quetiapine was weaned and ceased because it was thought to be influencing the coproporphyria, however Melanie requested Dr Singh to recommence quetiapine which he did soon after her discharge.

18. Monash Health psychiatry consultation liaison referred Melanie to the Yarra Ranges community mental health team (**CMHT**). Over the following five weeks the CMHT offered two assessment appointments and recorded multiple attempts to contact her. Dr Singh was notified her case was closed on 6 February 2018.

19. On 19 February 2018 Dr Singh was contacted by Monash Health and informed of the cessation of tapentadol, diazepam and zopiclone. According to the Pharmaceutical Benefit Scheme (**PBS**) report, he provided no further scripts for any of these medications. Dr Singh continued to manage the prescribing of methadone and had made an application to obtain a permit for methadone prescribing to her. Melanie saw Dr Singh on 2 March 2018 and 9 March 2018, and she was not provided with any medication scripts. She received an injection of ketorolac, a non-steroidal anti-inflammatory medicine. On 14 March 2018, Dr Singh provided a script for methadone 150 mgs BD (twice daily) for the period of 14 – 22 March 2018 directly to the pharmacy. A full bottle of methadone prescribed by Dr Singh was dispensed as a takeaway dose on 7 March 2018 to be taken the same day.[5]

20. On 11 March 2018 Melanie was admitted as a boarder to Eastern Health Angliss Hospital because James was in the special care nursery and they were subject to a Child Protection supported planned admission to QEC on 13 March 2018 when James was ready for discharge.

21. Melanie, as a boarder, did not require a formal admission, however due to her history and prescribed opioids, the Hospital Medical Officer (**HMO**) met with Melanie who stated she was taking levetiracetam, tapentadol, quetiapine and methadone and told her the doses. After consulting a recent discharge summary (date unknown), the HMO prescribed quetiapine 200mgs nocte (at night); levetiracetam 1000mgs BD; tapentadol 50mgs modified release BD and methadone 150mgs nocte (community dosing).

22. It was noted that tapentadol was not a currently prescribed medication for Melanie at the time of her admission and the dose of levetiracetam had been 1500mgs BD since November 2017. Both medicines were administered as prescribed during Melanie's admission.

23. Melanie was not reviewed prior to discharge. She gave the takeaway methadone bottles she had to the nursing staff which were stored according to the requirements for Schedule 8 medications. On 12 March 2018, an Eastern Health doctor increased her dose of methadone to 150mgs BD.

24. On 13 March 2018 Melanie and James were discharged to the QEC residential program for a 10-day program aimed at improving parenting skills. Maternal Child Health Nurse (**MCHN**) Elizabeth Strahan and Early Parenting Practitioner (**EPP**) Marilyn De Rozairo met Melanie and found her polite, attentive, and affectionate to James.

[5] Located in Melanie's room following her death.

25. On 14 March 2018 MCHN Strahan and EPP De Rozairo worked night shift with EPP Wendy O'Keefe. MCHN Strahan checked client medication sheets and noted Melanie had all medications administered as prescribed and that Melanie did not have any prescribed medications over the nightshift.

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

Circumstances in which the death occurred

26. At 1.00am on 15 March 2018 MCHN Strahan noted that Melanie was awake but tired when she fed James and finished about 2.05am. MCHN Strahan completed hourly client checks overnight. She spoke to Melanie at 4.15am while Melanie was in the bathroom and suggested she get some sleep because she had not slept much over the previous two nights.

27. According to MCHN Strahan she conducted a room check at 5.15am and found James was crying. Melanie was lying on the floor and did not respond to her calling her name or a gentle nudge[6]. Further investigations revealed that Melanie was not breathing.

28. Triple Zero was called and cardiopulmonary resuscitation was commenced. Triple Zero contacted MCHN Strahan via the Team Leader phone and directed resuscitation until Ambulance Victoria arrived at 5.35am. Melanie was transferred to MMC by 6.58am and admitted to the intensive care unit. A CT scan was consistent with a hypoxic brain injury and the decision for supportive care was made. Melanie passed away at 2.05pm[7].

29. An investigation of Melanie's death was commenced and police were advised that, while cleaning Melanie's room, staff located a 200 mL bottle of Methadone containing approximately 150mL of liquid (prescribed to Melanie on 7 March 2018), an empty blister pack (10 tablets) of diazepam (not prescribed to Melanie) and a small clear zip lock bag containing 6 whole unknown white tablets and a quantity of crushed white substance and 2 loose white tablets (found in Melanie's purse).

Identity of the deceased

30. On 15 March 2018, Michelle McDonald visually identified her daughter, Melanie Diane Doherty, born 30 September 1988.

31. Identity is not in dispute and requires no further investigation.

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[6] Statement of Elizabeth Strahan dated 17 October 2018.
[7] Statement of Dr Wisam Al-Bassam dated 14 August 2018.

Medical cause of death

32. Forensic Pathologist (Registrar) Dr Melanie Archer from the Victorian Institute of Forensic Medicine (**VIFM**)[8], conducted a post mortem examination on 19 March 2018 and provided a written report of her findings dated 9 July 2018.

33. Dr Archer noted the following in her report,

It appears likely that the deceased took a mixture of drugs in addition to the drugs already prescribed for her. Several of the agents detected in toxicology samples (morphine, methadone, diazepam, quetiapine, pethidine, tapentadol) had the potential to depress the central nervous system and respiratory centres.

Quetiapine and methadone can also prolong the QT rhythm of the heart, therefore creating a risk for cardiac arrhythmia.

The medical records received include a drug chart from the Queen Elizabeth Centre. This shows that the last administration of methadone was 16:45 hours on the 14 March 2018. Pethidine was last given on the 13 March 2018. MS-Contin, quetiapine and levetiracetam were all apparently last administered around 20:30 hours on 14 March 2018. Diazepam is not included in the drug chart. Discussion with the VIFM toxicology department confirms that this raises the possibility that the deceased has self administered at least some of the drugs detected on post mortem toxicology. The circumstances of the case are also indicative that this has occurred, namely the finding of drugs in the deceased's possession.

Post mortem toxicology was performed using antemortem specimens collected by Monash Health (15/03/18 at 07:55 hours) as well as post mortem toxicology specimens. However, the antemortem blood specimen was collected at least approximately 2-1/2 hours following the deceased's cardiac arrest. It is therefore possible that the initial levels of some drugs measured may have had higher peak blood concentrations.

The combination of drugs present in the deceased's system at the concentrations measured in antemortem specimens were sufficient to cause death due to central nervous system and respiratory depression, however, individual prescribing history and personal tolerance must be considered. This case is also particularly complex given that some drugs (morphine,

[8] Under the supervision of, Dr Joanna Glengarry, specialist forensic pathologist.

midazolam and frusemide) were administered during emergency treatment post cardiac arrest.

Enquiries with the Department of Human Services reveal that at the time of her death, there was no permit to treat with methadone. It is unclear from medical records whether Ms Doherty was continuing methadone use after a period of discontinuation. However, there is increased risk of sudden death for persons commencing or recommencing on methadone within the first one to two weeks.

There was no detection of ethanol (alcohol), the heroin metabolite 6-monoacetylmorphine, codeine, synthetic cannabinoids or synthetic cathinones.

The deceased also had acute early inflammatory changes and contraction bands in the heart muscle, as well as focal early inflammation of the large bowel. These changes can result from the combined effects of ischaemia, catecholamines (e.g. from adrenaline administration), multiorgan failure and reperfusion injury. Such changes can be seen with a survival period after cardiac arrest and are favoured not to represent pre-existing pathology.

34. Dr Archer provided an opinion that the medical cause of death was *Mixed Drug Toxicity.*

35. I accept Dr Archer's opinion.

CPU REVIEW

36. The CPU conducted a review of the available evidence including Melanie's medical records[9] and identified as an area of concern, and a potential prevention opportunity, the lack of best practice medication safety practices across Eastern Health and QEC.

Best Practice Medication History – Medication Reconciliation

37. The Australian Commission for Safety and Quality in Healthcare, the National Prescribing Service, NSW Clinical Excellence Commission, and the World Health Organisation 2014 Action on Patient Safety High 5s Medications reconciliation standard operating procedures, all identify best practice in medication reconciliation including the requirement to obtain and confirm a best possible medication history. A Best Practice Medication History (**BPMH**) is a requirement of Standard 4 Medication Safety of the National Safety and Quality in Healthcare Standards which applies to Eastern Health and in the Australian Council of

[9] Eastern Health, Monash Health, QEC and the Main Street Medical & Skin Centre.

Healthcare Standards EQUiP6 standards to which QEC has referenced its Medication Management Procedure (1.2.4)[10].

38. A BPMH has four steps:

- Obtain a BPMH by interviewing patient/carer, referral letters or other sources;
- Verify the history with one or more sources;
- Reconcile BPMH with prescribed/ordered medications, resolve discrepancies; and
- Supply accurate and current medicines information to patient/carer, receiving clinician and provide a current medications list with any changes.

39. The CPU noted that the medical records provided by Eastern Health for 2017 and 2018 contain discharge summaries for February 2017 and July 2017 without medication information recorded in them.[11] The corresponding episode medications charts do not reflect the medications Melanie and the HMO reported as current at the time of her admission as a boarder.[12]

40. As already noted, Melanie was not reviewed prior to discharge, nor were further queries made about her stated medication regime except for methadone. On 12 March 2018, Melanie's dose of methadone was increased to 150mgs BD.

41. The CPU noted that according to the medical records no medication reconciliation for other medications was completed nor is there firm evidence that a BPMH was obtained other than with regards the methadone doses and how Melanie was dosed (Eastern Health Opioid Pharmacotherapy procedure).

42. The contributing factors identified by Eastern Health included that Melanie was a boarder, that it was the weekend and no pharmacist was available.

43. Medications at discharge from Eastern Health (inpatient) on 11 March were:

- Methadone – 150 mgs nocte increased to 150mgs BD following reconciliation;
- Levetiracetam – 1000 mgs BD;

[10] EQuIP6 Medication Management Module, page 5.
[11] Eastern Health medical records pages 105 – 109 and 295 – 299.
[12] Eastern Health medical records pages 110 – 112 and 136-137 and 149.

- Quetiapine – 200 mgs nocte; and
- Tapentadol MR – 50 mgs oral BD.

44. The medication at admission to QEC on 13 March 2018 were:

- Methadone – 150 mgs BD (community pharmacy);
- Pethidine – 100 mgs injection PRN;
- Levetiracetam – 1000 mgs BD;
- Quetiapine – 200 mgs nocte; and
- Oxycodone – 10 mgs daily PRN,

45. The CPU noted that between Melanie's discharge from Eastern Health with James to QEC, she was able to have recommenced as prescribed medications non-current schedule 8 opioids intramuscular pethidine and modified release oxycodone which were administered within the initial 24 hours of her admission.

46. The evidence suggests that Melanie secreted an extra bottle of methadone and a quantity of diazepam but gave the pethidine ampoules and oxycodone directly to the staff who administered them.

47. The CPU noted that if best practice medication reconciliation and BPMH had been completed at Eastern Health and at QEC, and Dr Singh or other current sources of prescribed medications had been used to verify Melanie's self-reported current medications, it is unlikely she would have been prescribed or administered tapentadol, oxycodone and pethidine.

48. After her admission to the Monash Health withdrawal unit in October 2017, Melanie was weaned off opioids other than methadone which had over time been increased from methadone 40 mgs to methadone 150mgs BD and, with clinical effectiveness. Administration of other opioids was to only occur in hospital and with biochemistry confirming acute porphyria episodes. The CPU noted that in circumstances where a practitioner may have chosen to prescribe these medications, the clinical rationale would be noted, and it would have been done knowing the risks and, potentially attracted increased monitoring.

49. Melanie had been a patient of the Main Street and Medical Skin Clinic since 2011 and with Dr Anand Singh from June 2012. The CPU considered that the care provided by Dr Singh was appropriate and given Melanie's complex presentations and comorbidities, was based on proactive specialist referrals and advice and in consultation with Melanie. As already noted, Dr Singh was a source of verification for Melanie's BPMH, as he would have provided her current prescribed medications and have been in a position to explore any discrepancies.

50. The CPU further noted that irrespective of a person being a boarder or self-administrating medications, knowing what medication was relevant, how much and its safe use by a boarder within the hospital, would be a basic safety action.

51. Based on the CPU advice, I considered that a prevention opportunity was identified and engaged with Eastern Health and QEC regarding the CPU conclusions and potential recommendations. Both agencies provided constructive responses.

52. I also note that Eastern Health completed an internal investigation into the Melanie's death which did not identify a root cause but made a finding with regard to the lack of admission processes for boarder mothers which resulted in a review of the Admission Management Standard to include boarders admissions (including admission status, criteria, care and documentation; all changes are communicated to relevant obstetric and maternity staff and following assessment, a care plan is documented)[13]. Eastern Health said that their recommendations aimed to align the management of medication for boarders with management processes and standards used by Eastern Health for its admitted patients.

53. Whilst I have accepted the conclusions set out by the CPU, following consideration of all the evidence, I am not able to conclude that Eastern Health or QEC caused or contributed to Melanie's death.

[13] Statement provided by Medico-Legal Officer Dr Yvette Kozielski on 3 October 2019.

RECOMMENDATIONS

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

Queen Elizabeth Centre

a. Queen Elizabeth Centre review the current processes and clinical staff training for recording and managing medications for residential program participants, that includes best practice best possible medication history steps, medication reconciliation processes and clinical staff responsibilities.

Eastern Health

b. In circumstances where a parent needs to stay with their baby at Eastern Health prior to the baby's discharge, and Eastern Health is aware that the parent has medication requirements, Eastern Health will offer admission to the parent. As a consequence, the parent's assessment and care plan, including medication management as appropriate, will be managed and documented consistently with Eastern Health practices. Should the parent decline admission, they will be unable to stay overnight at Eastern Health.[14]

FINDINGS AND CONCLUSION

55. Pursuant to section 67(1) of the *Coroners Act 2008* I make the following findings:

(a) the identity of the deceased was Melanie Diane Doherty, born 30 September 1988;

(b) the death occurred on 15 March 2018 at the Monash Medical Centre, 246 Clayton Road, Clayton, Victoria, from *Mixed Drug Toxicity*, and

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

56. Having considered all of the circumstances, I am satisfied that her death was the unintended consequence of the ingestion of drugs she consumed.

57. I convey my sincere condolences to Melanie's family for their loss and the tragic circumstances in which her death occurred.

[14] This recommendation was proposed by Eastern Health following engagement with the Court.

58. Pursuant to section 73(1B) of the Act, I order that this finding (in a redacted format) be published on the Coroners Court of Victoria website in accordance with the rules.

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

Mr Peter Howell, Senior Next of Kin

Ms Michelle McDonald, mother of Melanie Doherty

Monash Health

Chief Psychiatrist

Eastern Health

Queen Elizabeth Centre

Monash Medical Centre

Dr Anand Singh

Senior Constable Melanie Vandenberg, Victoria Police, Coroner's Investigator

Signature:

SARAH GEBERT

CORONER

Date: 24 May 2021

NOTE: Under section 83 of the ***Coroners Act 2008*** ('the Act'), a person with sufficient interest in an investigation may appeal to the Trial Division of the Supreme Court against the findings of a coroner in respect of a death after an investigation. An appeal must be made within 6 months after the day on which the determination is made, unless the Supreme Court grants leave to appeal out of time under section 86 of the Act.