IN THE CORONERS COURT
OF VICTORIA
AT MELBOURNE

Court Reference: **COR 2018 0747**

FINDING INTO DEATH WITHOUT INQUEST

Form 38 Rule 60(2)
Section 67 of the Coroners Act 2008

Findings of:	**MR JOHN OLLE, CORONER**
Deceased:	**LIANA PICKUP**
Date of birth:	**2 MARCH 1985**
Date of death:	**14 FEBRUARY 2018**
Cause of death:	**MIXED DRUG TOXICITY (METHADONE, OXYCODONE, DESMETHYLVENLAFAXINE, QUETIAPINE, OLANZAPINE AND BENZODIAZEPINES)**
Place of death:	**844 SYDNEY ROAD** **COBURG NORTH VICTORIA 3058**

HIS HONOUR:

BACKGROUND

1. Liana Pickup was born on 2 March 1985. She was 32 years old at the time of her death.

2. Liana had a history of mental ill health which started in her teenage years. She had multiple psychiatric inpatient admissions due to deliberate self-harm and had previously attempted suicide by overdosing on prescription medication.

3. In early 2016 Liana moved to a residential care facility in Brunswick where she met her partner. Whilst at the facility, Liana was issued with a service dog for emotional support.

4. Liana was a patient of a General Practitioner (**GP**) in Brunswick since early 2016. She presented with complex mental illness (bipolar affective disorder, borderline personality disorder and schizoaffective disorder), chronic back pain attributable to spondylolisthesis and dependence on her prescription medications. She was noted to be a difficult patient to manage due to fluctuations in her mood and her history of threatening self-harm when reductions to her medications were suggested. She requested that the GP take over her medical management due to her previous prescriber retiring. At this time, Liana was prescribed oxycodone 70mg (baseline) to 90mg (as needed).

5. Liana's GP stated that he believed Liana's medications were excessive for her pain and anxiety levels, so progressively reduced her opiates and benzodiazepines each month and commenced dispensing these medications through a weekly Webster pack. Her Webster pack was controlled by staff at the residential care facility after it was discovered she was irregularly dosing and giving medication to other residents.

6. During 2017, Liana's GP referred her a pain clinic (though she had not yet secured an appointment at the time of her death), an alcohol and drug rehabilitation centre and NorthWest Mental Health (NWMH).

7. On 8 June 2017, Liana attended the alcohol and drug rehabilitation centre for pain and opioid assessment. The psychiatrist advised that Liana would benefit from gradual reduction of oxycodone, random Urine Drug Screening and weekly dispensing combined with physiotherapy and review from a pain clinic. However, he noted:

> [...] the presence of aberrant behaviours such as frequent unsanctioned dose escalations, obtaining scripts from multiple doctors, obtaining medication from non-medical sources, injection of oral formulations, prescription forgery and selling of

prescription drugs may need possible treatment with Buprenorphine/Naloxone (Suboxone).

8. On 20 June 2017, Liana attended NWMH for assessment accompanied by her community mental health case worker. The Consultant Psychiatrist told Liana's GP that she required psychological work such as Dialectical Behaviour Therapy as her main long-term treatment for mental illness as she was currently not engaged with this and focused primarily on medications, however, Liana was reluctant to engage.

9. On 25 September 2017, Liana was admitted to an Inpatient Psychiatric Unit after increased auditory hallucinations in the context of ongoing methamphetamine use. Lorazepam 2mg was added to her medications to manage agitation and was ceased on 6 October 2017 when she was discharged.

10. In December 2017, Liana, her partner and the service dog moved to a motel in Coburg. By this time, her oxycodone had been reduced to 30mg daily, her diazepam had been ceased and she was prescribed oxazepam 30mg allowed four times per week. She was now able to self-manage her Webster pack.

11. In January 2018, Liana attended NWMH accompanied by her case worker for review. The Consultant Psychiatrist reported that Liana was using methamphetamine and cannabis heavily, reported psychotic symptoms or suicidal ideation to be prescribed more medications, and continued to decline other psychological or drug and alcohol treatment. Clonazepam was added temporarily to her ongoing psychiatric medications (quetiapine, desvenlafaxine, olanzapine and lithium) to assist with methamphetamine withdrawal. Liana's GP did not agree that adding clonazepam to her current medications was appropriate, and therefore clonazepam prescribing was managed by NWMH.

THE PURPOSE OF A CORONIAL INVESTIGATION

12. Liana's death constituted a '*reportable death*' under the *Coroners Act 2008* (Vic), as her death occurred in Victoria, and was both unexpected and unnatural.[1]

13. The jurisdiction of the Coroners Court of Victoria is inquisitorial[2]. The purpose of a coronial investigation is independently to 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.

[1] Section 4, definition of 'Reportable death', *Coroners Act 2008.*
[2] Section 89(4) *Coroners Act 2008.*

14. It is not the role of the coroner to lay or apportion blame, but to establish the facts.[3] It is not the coroner's role to determine criminal or civil liability arising from the death under investigation, or to determine disciplinary matters.

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

16. 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.

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

18. 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.

19. 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*.[4] 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.

[3] *Keown v Khan* (1999) 1 VR 69.
[4] (1938) 60 CLR 336.

MATTERS IN WHICH THE CORONER MUST, IF POSSIBLE, MAKE A FINDING

Identity of the Deceased pursuant to section 67(1)(a) of the *Coroners Act 2008*

20. Liana Pickup was visually identified by Ian Lewis on 14 February 2018. Identity was not in issue and required no further investigation.

Medical cause of death pursuant to section 67(1)(b) of the *Coroners Act 2008*

21. On 19 February 2018, Dr Melanie Archer, Forensic Pathology Registrar supervised by Dr Victoria Francis Forensic Pathologist at the Victorian Institute of Forensic Medicine, conducted an examination on Liana's body and provided written report dated 10 May 2018, concluding a reasonable cause of death to be "I(a) Mixed drug toxicity (methadone, oxycodone, desmethylvenlafaxine, quetiapine, olanzapine and benzodiazepines". I accept her opinion in relation to the cause of death.

22. Toxicological analysis of post mortem specimens detected oxycodone[5], methadone[6] and its metabolite, desmethylvenlafaxine[7], oxazepam[8], the metabolite of diazepam[9], the metabolite clonazepam[10], quetiapine[11], olanzapine[12], methylamphetamine[13] and its metabolite, lithium[14] and paracetamol.

23. Dr Archer commented that there is considerable overlap between those blood concentrations of methadone that are therapeutic and those that are seen in overdose. The combination of methadone with multiple other central nervous system depressant drugs is likely to act in an additive and potentially synergistic manner.

24. Dr Archer noted the greatest risk for methadone toxicity is in people who have just started Methadone Maintenance Program. The highest risk of death is within the first week, with these persons most likely to develop toxic responses compared to those on long term maintenance programs.

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[5] Oxycodone is a semi-synthetic opioid narcotic analgesic related to morphine used clinically to treat moderate to severe pain.
[6] Methadone is a synthetic narcotic analgesic used for the treatment of opioid dependency.
[7] Desmethylvenlafaxine is indicated for the treatment of depression.
[8] Oxazepam is a sedative/hypnotic drug of the benzodiazepines class.
[9] Diazepam is a sedative/hypnotic drug of the benzodiazepines class.
[10] Clonazapm is a nitrobenxodiazepine clinically used for the treatment of seizures.
[11] Quetiapine is an anti-psychotic drug used in the treatment of schizophrenia.
[12] Olanzapine is indicated for the treatment of schizophrenia and related psychoses. It can also be used for mood stabilization and as an anti-manic drug.
[13] Methylamphetamine is a strong stimulant drug that acts like the neurotransmitter noradrenaline and the hormone adrenaline. It is commonly known as "speed" or "ice".
[14] Lithium is used for the treatment of manic and endogenous depression and psychoses.

Circumstances in which the death occurred pursuant to section 67(1)(c) of the *Coroners Act 2008*

25. On 7 February 2018, Liana attended an appointment with her GP and stated that she wanted to replace her oxycodone with methadone. The GP supported this decision as it would enable a more gradual dose reduction. He advised that she finish her current Webster pack and arranged for review on 13 February 2013 after her last dose of oxycodone. On this date, Liana disclosed smoking methamphetamine every two to three weeks to assist with constipation, and smoking cannabis nightly. Liana's GP also requested a urine drug screen.

26. On 13 February 2018, Liana's GP obtained a permit to treat her with methadone maintenance therapy (MMT). Liana was prescribed 20mg methadone daily, with the plan of increasing by 2.5mg daily per three days to a maximum of 35mg daily. The methadone was to be dispensed as supervised doses at a pharmacy in Coburg. Liana's GP planned to review her seven days later, on 20 February 2018.

27. Following her appointment with her GP on 13 February 2018, Liana attended the pharmacy in Coburg with her partner for her first dose of methadone. She was administered 20mg of liquid methadone under supervision of the pharmacist at 4.55pm. Immediately following this, the couple returned home and Liana went straight to bed.

28. The next day, Liana awoke at 9.30am. At approximately 11am, she returned to the pharmacy with her partner for her second dose of methadone. She was again administered 20mg of liquid methadone under supervision of the pharmacist. According to her partner, Liana said that she "felt woozy" and believed that she was administered a higher dose of methadone than the previous day. The couple returned home at approximately midday and shortly afterwards, Liana went to bed complaining of abdominal pain. A few minutes later, her partner checked on her in bed and found her unresponsive. Emergency Services were called. Paramedics arrived shortly afterwards and Liana was declared deceased at 1.10pm.

29. Attending police found a larger number of medications some of which were prescribed to Liana including, olanzapine, clonazepam, prednisolone, prochlorperazine, sumatriptan, two webster packs, a blister pack, tin, snap lock bag and two plastic receptacles containing various unknown tablets.

Investigation into medical care

30. Commencement on methadone is known as a hazardous time as it increases the risk of overdose for several different reasons.[15] The Coroners Prevention Unit (**CPU**) conducted a review in October 2016 and identified that for the period 2000-2013, 58 methadone-involved overdose deaths occurred in the context of the deceased commencing or re-commencing MMT within seven days of death.

Access to methadone and dose escalation

31. In 2014 the Commonwealth Department of Health released its updated *Clinical Guidelines and Procedures for the Use of Methadone in the Maintenance Treatment of Opioid Dependence*. These included the following recommendations for patients who are being treated in the community with methadone:

> All doses of methadone should be supervised, where possible, and a clinician (doctor, nurse, pharmacist) should review the patient daily during the first week of treatment, corresponding to the greatest risk period for methadone-related overdose. The review provides an opportunity to assess intoxication (e.g. sedation, constricted pupils) or withdrawal symptoms, side effects, other substance use and the patient's general well-being.
>
> Commence with 20 to 30mg daily. Lower doses (e.g. 20mg or less) are suited to those with low or uncertain levels of opioid dependence, with high risk polydrug use (alcohol, benzodiazepines) or with severe other medical complications. Higher doses (30-40mg) should be considered with caution if clinically indicated, at the discretion of the prescriber. Consultation with a specialist is recommended before commencing patients at doses greater than 40mg because of the risk of overdose.
>
> Dose increases should be made following review of the patient and should reflect side effects, features of withdrawal (suggesting not enough methadone) or intoxication (suggesting too much methadone or other drug use), ongoing cravings and substance use.

[15] Literature pertaining to the risks of overdose when commencing MMT is summarised in the CPU report for the death of Claire Martin (COR 2014 3714) and can be provided if requested.

Dose increments of 5 to 10mg every three to five days will result in most patients being on doses of between 30 and 50mg by the end of the first week, and 40 to 60mg by the end of the second week.[16]

32. Several elements of the methadone prescribing to Liana were consistent with the 2014 *National Clinical Guidelines*. Liana's General Practitioner commenced her on 20mg daily, which level was permissible under the National Clinical Guidelines and recommended for patients with high-risk polydrug use (Liana was dependent on benzodiazepines, regularly used methamphetamines and had a history of unsanctioned prescription drug use). The planned dose increment of 2.5mg in three days was permissible under the National Clinical Guidelines (although Liana had only received two doses of 20mg methadone prior to her death, so dose escalation is not a relevant issue). Dosing was all supervised, requiring Liana to present at the Healthline Pharmacy Coburg each day.

Methadone in combination with psychoactive drugs

33. At the time that Liana was commenced on methadone, her current medications prescribed by her General Practitioner (except for clonazepam which was prescribed by NWMH) were

- Clonazepam 0.5mg, one twice a day.
- Desvenlafaxine 100mg, two daily.
- Ibuprofen 400mg, one twice a day.
- Lithium carbonate 250mg, five at night.
- Buprenorphine patch 10mcg/h, one weekly dispensed at Lygon Discount Chemist.
- Olanzapine 25mg, 5mg in the morning and 20mg at night.
- Oxazepam 30mg, one at night four nights per week in Webster pack.
- Oxycodone hydrochloride 30mg, daily in Webster pack (prescription ceased day methadone commenced).
- Quetiapine 300mg, three at night in Webster pack.
- Sumatriptan 50mg, one daily if required for migraines.

[16] Gowing L, Ali R, Dunlop A, Farrell M, Lintzeris N, Clinical Guidelines and Procedures for the Use of Methadone in the Maintenance Treatment of Opioid Dependence, Canberra: Australian Government Department of Health and Ageing, August 2003, p.15.

34. As stated by Forensic Pathologist Dr Archer, the concurrent use of methadone with multiple other CNS depressant drugs has an additive CNS depressant effect. In this case, introducing methadone to a pre-existing combination of CNS depressants, each of which has its own pharmacodynamics and pharmacokinetics (how drugs effect the body and are processed by the body) is a potential issue. However, whether or not this was an issue in the death of Liana was masked by her use of drugs that were not prescribed.

Drug sources

35. Except for clonazepam which was prescribed by NWMH, Liana's GP prescribed all the medications that contributed to her death. However, Liana had a history of irregular dosing and giving her medication to others, and police located a number of receptacles with loose unknown tablets at her home. Furthermore, diazepam was detected in toxicological analysis but had not been prescribed to Liana since 26 September 2017.

36. It is therefore possible that Liana was stockpiling her medication and using it in ways not indicated and outside the instruction of her GP. In addition to the detection of diazepam in toxicological analysis, this possible scenario is supported by the higher level of oxycodone detected (0.4mg/L) which is not consistent with her having ceased using oxycodone as prescribed the day prior to commencing MMT. Additionally, the presence of unknown pills generally means we don't know if Liana was using those pills. The presence of methamphetamine in urine also cannot be discounted. The introduction of methadone and its contribution in Liana's death is therefore confounded by this issue.

Methadone dispensing

37. Liana was dispensed her first dose of 20mg methadone at 4.55pm on 13 February 2018, and her second dose at 11am the following morning; a gap of only 18 hours. The World Health Organisation notes that:

> Methadone has a long half-life (30 hours) and displays wide variations between individuals. The duration of analgesic effect is much shorter. Methadone takes five to seven days to reach steady state.[17]

38. Additionally, the respiratory depressant effect of methadone (its main toxic effect) can last for up to 48 hours after a single dose.[18]

[17] World Health organisation, WHO Analgesic Ladder: Methadone – safe and effective use for chronic pain, *Best Practice Journal* 2008, Issue 18.

39. The appropriateness of dispensing Liana her methadone at 4.55pm and then 11am the following day is not clear. This timeframe of less than 24 hours poses questions as to whether Liana could have experienced extra methadone toxicity at the time of her death. However, evidence suggests that Liana did not use all drugs as directed and stockpiled medications, and it would therefore be impossible to identify the timing of her methadone dispensing as a contributing factor.

Witness to overdose

40. According to her partner, after her first dose of methadone, Liana went straight to bed and slept for approximately 15 hours. After her second dose of methadone, Liana told him that she "felt woozy" and went straight to bed complaining of abdominal pain. Her partner was present throughout this time but did not recognise her sedation as a sign of overdose.

41. A Victorian study of pharmaceutical opioid-involved overdose deaths established that at least 20% of these deaths occurred in circumstances where another person, usually the deceased's partner or family member, witnessed signs or symptoms of the overdose. The researchers concluded that targeted overdose awareness and response training for partners, friends and family of people prescribed strong opioids, including training in administration of naloxone, could potentially reduce overdose death.[19]

Conclusion

42. Based on the above, there may have been potential issues regarding Liana's methadone prescription, however, these are confounded by Liana's own unsanctioned drug use and use of amphetamines in a context of stockpiling, such that it is impossible to say that her death was related to her commencement on methadone.

FINDINGS

43. Having investigated the death of Liana Pickup and having considered all of the available evidence, I am satisfied that no further investigation is required.

44. On the basis of the available evidence, I am not satisfied to the requisite standard that Liana Pickup intentionally ended her own life, but was the unintentional result of the deliberate ingestion of drugs.

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[18] Drummer OH, Opeskin K, Syrjanen M, Cordner S, "Methadone toxicity causing death in ten subjects starting on a methadone maintenance program", *The American Journal of Forensic Medicine and Pathology*, 13(4), 1992, pp.346-350.

[19] Ogeil RP, Dwyer J, Bugeja L, Heilbronn C, Lubman DI, Lloyd B, "Pharmaceutical opioid overdose deaths and the presence of witness", *International Journal of Drug Policy*, 55 (8-13), 2018.

45. I make the following findings, pursuant to section 67(1) of the *Coroners Act 2008*:

(a) that the identity of the deceased was Liana Pickup, born 2 March 1985;

(b) that Liana Pickup died on 14 February 2018, at 844 Sydney Road, Coburg North from mixed drug toxicity (; and

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

RECOMMENDATIONS

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

47. That the Department of Health and Human Services consult with the Victorian branch of the Royal Australian College of General Practitioners, the Drug and Alcohol Clinical Advisory Service, and other appropriate expert bodies, regarding how a program could be designed and implemented to facilitate overdose awareness and naloxone administration education being delivered to the partners and family members of people being prescribed strong opioids, and particularly people engaged in opioid replacement therapy.

48. I convey my sincerest sympathy to Liana's family and friends.

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

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

(a) Liana's family, senior next of kin;

(b) Investigating Member, Victoria Police; and

(c) Interested Parties.

Signature:

MR JOHN OLLE

CORONER

Date: 10 October 2019