IN THE CORONERS COURT

OF VICTORIA

AT MELBOURNE

Court Reference: COR 2012 0485

FINDING INTO DEATH WITH INQUEST

Form 37 Rule 60(1)

*Section 67 of the **Coroners Act 2008***

Inquest into the Death of: SHANNON JAMES LEES (PEAT)

Delivered On:	16 July 2014
Delivered At:	Coroners Court of Victoria
	Level 11, 222 Exhibition Street
	Melbourne 3000
Hearing Date:	16 July 2014
Finding Of:	AUDREY JAMIESON, CORONER
Police Coronial Support Unit	Leading Senior Constable King Taylor
Appearances	Ms Jan Moffat on behalf of Melbourne Health

I, AUDREY JAMIESON, Coroner having investigated the death of **SHANNON JAMES LEES (PEAT)**

AND having held an inquest in relation to this death on 2 May 2014

at MELBOURNE

find that the identity of the deceased was **SHANNON JAMES LEES (PEAT)**

born on 22 April 1988

and the death occurred on 6 February 2012

at 131 Bladin Street, Laverton 3028

from:

1 (a) MULTI DRUG OVERDOSE INCLUDING TRAMADOL AND METHADONE

in the following circumstances:

1. On 2 May 2014 and 16 July 2014, a mandatory inquest under section 52(2)(b) of the *Coroners Act 2008* (Vic) (the Act) was held into the death of Mr Shannon James Lees (Peat), because immediately before his death, Mr Lees was "a person placed in....care" as it is defined in the Act. Mr Lees had been an involuntary inpatient at the Sunshine Hospital Mental Health Facility under section 10 of the *Mental Health Act 1986* (Vic) immediately prior to his death.

BACKGROUND AND CIRCUMSTANCES

2. Mr Lees was 23 years of age at the time of his death. He lived alone in Furlong Street, St Albans and had a medical history that included asthma and schizoaffective disorder in the context of polysubstance abuse and antisocial personality disorder traits.

3. On 5 February 2012, Mr Lees absconded from the Adult Mental Health Rehabilitation Unit (AMHRU) at Sunshine Hospital (Melbourne Health) by jumping over a fence with the assistance of a chair. According to Registered Nurse Greg Crane, Mr Lees absconded between 13.05 and 13.20pm.

4. After leaving the AMHRU, Mr Lees encountered an acquaintance, Mr Caine Howden, in Sunshine. Mr Howden reported this meeting occurred in the early afternoon. Mr Lees

attended Sunshine Railway Station with Mr Howden and encountered Ms Louise Pourgoutzidis, whom he had known for some years.

5. Mr Lees and Mr Howden travelled to Footscray and met Mr Howden's friend, Mr Michael Hedger. Mr Lees called Ms Pourgoutzidis in an attempt to obtain cannabis, and arranged to visit her at her bungalow in Laverton. Mr Lees and Mr Howden arrived at Laverton Railway Station – closed circuit television (CCTV) footage confirms that they arrived at the station at 4.45pm. They looked for Ms Pourgoutzidis's home but could not find it. Mr Lees called Ms Pourgoutzidis from a public telephone at Laverton Railway Station. She came to meet them with her friend Mr John Gordon and Ms Pourgoutzidis observed Mr Lees to be substance affected at this stage. The four returned to her bungalow in Laverton.

6. Whilst at the bungalow, Mr Lees reportedly threatened Mr Gordon regarding his behaviour towards Ms Pourgoutzidis; Mr Gordon left the bungalow and did not return that night.

7. After multiple requests by Mr Lees to obtain cannabis, Ms Pourgoutzidis left the bungalow and returned with cannabis and Mr Lees, Ms Pourgoutzidis and Mr Howden smoked the cannabis. At approximately 7.30pm, Mr Howden left the bungalow to return home. At this time, Mr Lees was asleep and snoring loudly.

8. Ms Pourgoutzidis believed she awoke at approximately 2.00am on 6 February 2012, heard Mr Lees snoring and observed him to be asleep on her couch. She returned to sleep, woke up in the early afternoon, and found Mr Lees unresponsive. She contacted Emergency Services at approximately 1:25pm and Paramedics arrived soon after but were unable to render medical assistance to Mr Lees, as he had been deceased for some time.

FORENSIC PATHOLOGIST EXAMINATION AND EVIDENCE

9. Dr Paul Bedford, Forensic Pathologist at the Victorian Institute of Forensic Medicine, performed a post mortem examination, reviewed a post mortem CT scan and reviewed the Victorian Police Report of Death, Form 83. Dr Bedford noted that the post mortem examination did not identify a natural cause of death or evidence of a trauma-related death. Toxicological analysis of blood retrieved post mortem identified a number of drugs including methadone and tramadol. Dr Bedford also noted the presence of antiepileptic drugs, however did not identify evidence to suggest that Mr Lees' death was associated with a seizure. Dr Bedford ascribed the cause of Mr Lees' death to a multidrug overdose including tramadol and methadone. Mr Lees was not prescribed methadone.

POLICE INVESTIGATION

10. The circumstances of Mr Lees' death have been the subject of investigation by Victoria Police. Police obtained statements from Mr Lees' mother, Ms Julie-Anne Peat, step-father Ms Sam Farraro, Ms Pourgoutzidis, Mr Howden, Mr Gordon, Mr Hedger, Consultant Psychiatrists Dr Naveen Thomas and Professor Christos Pantelis of Mid West Area Mental Health Service and Psychiatric Nurses Ms Colleen Claver, Ms Angela Maher, Ms Rhonda Pirie, Mr Greg Cane and Mr Malcolm Park (AMHRU). Police did not identify evidence of third party involvement.

11. There were a number of inconsistencies reflected in the statements obtained from Ms Pourgoutzidis, Mr Howden, Mr Gordon and Mr Hedger. The inconsistencies related to the sequence of events and consequently the approximately timing of events. The timing of events in the course of the investigation was, to the extent that it was possible, corroborated through objective evidence such as CCTV.

12. The evidence indicated that Mr Lees had telephoned Mr Farraro at approximately 12.00pm on 5 February 2012 and told Mr Farraro that he wanted to kill himself and discussed details of his estate. Mr Farraro noted that Mr Lees had spoken similarly on previous occasions and tried to calm him. There is no other evidence relating to Mr Lees expressing suicidal ideation in the time immediately prior to his death.

13. The Police investigation identified that Ms Pourgoutzidis had been prescribed methadone.

CORONERS PREVENTION UNIT

14. The Coroners Prevention Unit (CPU)[1] reviewed the circumstances of Mr Lees' death on behalf of the Coroner. The CPU specifically looked at the role that a takeaway methadone dose for opioid replacement therapy played in his death, including the broader issues associated with takeaway methadone doses. The CPU also reviewed the monitoring of Mr Lees prior to his absconding from the AMHRU at Sunshine Hospital on 5 February 2012.

[1] 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, as well as assisting in monitoring and evaluating the effectiveness of the recommendations.

Social history

15. Mr Lees' childhood experiences included family breakdown. He remained in school until year seven, and in school was diagnosed with conduct disorder and attention deficit hyperactivity disorder. His mother was awarded full custody when he was 10 years old, however he was separated from his family by the Department of Human Services (DHS) when he was 14 years old after he became involved in criminal conduct.

16. Mr Lees commenced regular cannabis use at the age of 10, and at various stages used ecstasy, inhalants, amphetamine, methamphetamine and prescription medications (particularly benzodiazepines). In 2005, he was diagnosed with schizophrenia and substance abuse at Orygen Youth Health. From 2005, he was managed on a Community Treatment Order (CTO) by the Mid West Area Mental Health Service's Mobile Support and Treatment Service (MWAMHS-MST). He was admitted to the Sunshine Acute Adult Psychiatric Inpatient Unit (SAAPU) on three occasions for drug induced psychosis and situational crisis.[2]

Relevant treatment history

17. On 2 November 2011, Mr Lees was discharged from SAAPU on a CTO. On 3 November 2011, he was taken by police to the Sunshine Hospital Emergency Department under Section 10 of the *Mental Health Act 1986* (Vic) after he was found to have broken into his mother's neighbour's house and set up the neighbour's furniture on the front lawn; he reportedly told police that "Asian neighbours left me the house, $50,000 money and their furniture". His CTO was revoked and he was re-admitted to SAAPU's High Dependency Unit (HDU) as an involuntary patient.

18. Whilst in SAAPU, Mr Lees was observed to be extremely aggressive, agitated and destructive, and was placed in seclusion on several occasions. He had a number of altercations with other patients and threatened staff repeatedly, on some occasions physically assaulting them. He also threatened self-harm and suicide on several occasions. Clinical notes of interest given the means by which he subsequently absconded included:

    a. a note dated 11 November 2011 reports that Mr Lees "helped another patient AWOL from ward by helping over the fence"; and

    b. a noted dated 23 November 2011 reports that Mr Lees threatened to "cross the wall and run away" if not allowed to smoke.

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[2] Information obtained from the SAAPU Mental Health Discharge Summary dated 5 December 2011 completed upon Mr Lees' transfer to AMHRU.

19. Mr Lees received several rounds of electro-convulsive therapy (ECT) treatment at the Sunshine Hospital between 18 November 2011 and 2 December 2011. On 5 December 2011, he was transferred from SAAPU to AMHRU.

20. Mr Lees initially appeared to settle in well at AMHRU. Progress notes relating to the first week indicate that he was generally courteous to other patients and responsive to staff direction. From approximately 11 December 2011, there were frequent reports (up to several times per day) of him arguing with other patients, threatening to damage property, and disrupting the ward. His aggression towards staff re-emerged including several assaults, and he assaulted patients on several occasions and threatened self-harm.

21. On 5 January 2012, whilst Mr Lees was still at AMHRU, an administration order was granted at Sunshine Magistrates' Court for Mr Lees' finances to be managed by the State Trustees. When Mr Lees was informed of the decision, he accused staff of wanting to steal all his money, but settled soon after.

22. On 20 January 2012, Mr Lees did not return on time after ground leave and his ground leave was consequently cancelled for some days. The ban on ground leave was extended after several instances of poor behaviour, including an incident on 3 February 2012 when he was found to have been taking ground leave whilst banned, and was caught on surveillance camera stealing food and drink from the café at Sunshine Hospital.

23. On 5 February 2012, Mr Lees was observed to be upset and crying while speaking with his mother on the telephone. He told staff that he wanted to get out of AMHRU, and was observed walking around the courtyard fence. Staff noticed he was missing at approximately 1.20pm, having last seen him at 1.05pm. Registered Nurse Greg Crane stated: "I went to the courtyard and discovered a dining room chair up against the fence/exit door to courtyard. I returned the chair inside AMHRU".

24. Staff concluded that Mr Lees had most likely used this chair to abscond over the fence. Following a ward search and ground search, at 2.05pm AMHRU staff notified Victoria Police that Mr Lees had absconded.

25. Prior to 5 February 2012, there was some indication in AMHRU that Shannon Lees had contemplated absconding over the wall. Specifically, a note dated 12 December 2011 reported that Mr Lees was "threatening childishly to jump the fence" and a note dated 20 December 2011 reported that Mr Lees was "in courtyard and chair and bin returned to ward via staff". This latter

note would appear to indicate he took a chair and bin into the courtyard from the ward, though it is not clear whether this was part of an abortive earlier absconding attempt.

Previous deaths related to absconding from treatment facilities

26. The CPU searched the text of all Victorian coronial findings and Form 83 summaries of circumstances on the National Coronial Information System (NCIS), using the search-term combination "Sunshine" and "abscond", and identified two previous deaths that occurred after an inpatient absconded from a mental health facility in Sunshine by climbing over a courtyard wall.

27. The first death was that of Mr David Simon Dughetti (COR 2004/4310), who was an inpatient at the Sunshine Acute Psychiatric Unit. This unit has higher security and patient acuity than the rehabilitation unit from which Mr Lees absconded. Mr Dughetti absconded between 8.00pm and 8.10pm on 5 December 2004 by climbing over the courtyard wall in circumstances were it was not clear how he negotiated the wall. Deputy State Coroner Iain West concluded in this matter:

> As it appears he was able to abscond by climbing a courtyard wall, it is recommended that appropriate action be taken in order to prevent a similar occurrence.

28. The second death was that of Mr Mark Ronald Connolly (COR 2009/4013), who was an inpatient in the Low Dependency Unit of the Sunshine Adult Acute Psychiatric Unit. Again, this unit has higher security than the AHMRU. He absconded between 4.15pm and 4.30pm on 17 August 2009, apparently using a chair to scale the courtyard fence. Deputy State Coroner Iain West made the following recommendation:

> As previously indicated, I am satisfied that Mr Connolly absconded by climbing over the courtyard wall. It is recommended that the wall be modified in such a way as to prevent climbing over it and/or to secure any courtyard furniture so that it cannot be used as a climbing aid.

29. It is unclear whether these deaths have any bearing on the circumstances of Mr Lees' death. However, in light of an apparent established history of inpatients absconding over courtyard walls from mental health facilities in Sunshine, I determined that a Directions Hearing (DH) was appropriate in the circumstances.

Court Proceedings

30. A DH was conducted on 14 February 2014 to determine what measures, if any, had been taken by Melbourne Health (formerly North Western Mental Health (NWMH)) in response to Mr

Lees' death. I acknowledge the statement of Gary Monkley, Area Manager, Mid West Area Mental Health Service, Melbourne Health dated 2 December 2013, which details structural improvements undertaken to the courtyard fence to minimise the potential for patients to scale the perimeter fence. The scope of works included the supply and installation of 1.0-metre high perforated mesh screen panels above the existing timber fence, making the fence a total of 4 metres in height. The screen faces in toward the courtyard and sits in line with the current acoustic boards to prevent access to any climbing points.

31. In the course of the DH, Ms Moffat, appearing on behalf of Melbourne Health informed the Court that the alterations detailed in Mr Monkley's statement meant a change of the top of the fence to a 45-degree angle that rendered the fence "virtually" impossible to scale. I am satisfied that these changes were done in a timely way, are an appropriate measure to mitigate against the known risks and were done with the goal of preventing a like occurrence in the future.

32. I acknowledge that a unit focused on rehabilitating a patient to live in the community must strike a balance between appropriate risk management and avoiding a prison-like environment. Mr Lees had used a dining room chair to scale the courtyard wall - presumably, he removed it from the dining room to enable his jumping the fence. I consider it unrealistic to propose these chairs be bolted to the dining room floor.

33. Ms Julie-Ann Peat was unable to attend the 14 February 2014 DH and a summary inquest was listed for 2 May 2014 to which a legal representative for Melbourne Health and Ms Julie-Ann Peat attended. Ms Peat raised a number of issues, including an assertion that her son was forced to ingest methadone, that she made a number of calls to AMHRU on 5 February 2012 to communicate that her son had expressed his intent to escape.

34. The legal representative from Melbourne Health accepted that further statements would be obtained from the staff on duty on the morning of 5 February 2012 in response to Ms Peat's assertions regarding her telephone calls. Melbourne Health were also asked to confirm the piece of furniture Mr Lees used to climb over the fence, as Ms Peat alleged that he had not used a dining room chair, rather a larger piece that would have arguably been more obvious to staff.

Further information

35. Melbourne Health provided additional statements from AMHRU Program Manager Malcolm Park, AMHRU Registered Psychiatric Enrolled Nurses Tan, Maher, Pride and Claver.

36. Mr Park confirmed that Mr Lees' unescorted ground leave was cancelled on 3 February 2012, and a plan was in place to suspend leave until review by Dr Naveen Thomas on 6 February 2012

(that is, his leave was suspended for two days), at which time leave would be reinstated if Mr Lees was assessed by Dr Thomas as being low risk of harm to self or others. Mr Park explained that leave is granted incrementally based on risk assessment and is ongoing and increased when clients can demonstrate they are using it responsibly.

37. Mr Park explained that as Mr Lees' risk of harm to self or other had not increased when his leave was suspended (rather he had behaved irresponsibility), his visual observations were not increased and he had free access to the courtyard area.

38. Mr Park explained that he could not identify evidence that any of the staff on duty on 5 February 2012 received a call from Ms Peat prior from her son absconding from the unit. AMHRU Registered Psychiatric Nurse Angela Maher documented in Mr Lees' file that she spoke with Ms Peat soon after he absconded, between 1.30pm and 2.00pm. Ms Peat had been informed of her son having absconded by the Nurse Unit Manager Colleen Claver and had telephoned the AMHRU and spoke to Nurse Maher. According to Nurse Maher's notes, Ms Peat expressed that she supported her son having some day leave so that she could give him work to do. There is no record during this conversation (or the conversation with Nurse Claver) of Ms Peat mentioning that she had called earlier to inform staff that her son would abscond. Nurse Maher documented the conversation in the file at approximately 2.00pm on 5 February 2012.

39. Mr Park noted that AMHRU staff routinely document phone calls from carers, friends and family of clients if the information is relevant to the client's care. He explained that many calls are received to enquire after the general welfare of clients but these conversations are not routinely recorded.

40. Mr Park further explained that although staff were aware that Mr Lees might have been thinking of absconding as documented by Nurse Maher on 5 February 2012 (that Mr Lees 'stated he wants to get out of here, observed walking around fence in courtyard'), Mr Lees had been having regular unescorted leave and utilising it well prior to the stealing incident, therefore the risk of harm to community members was considered not to have changed. Mr Park stated that had it been evident that the risk of harm to self of others was increased, staff could employ various strategies to avoid him absconding, such as locking courtyard doors, increasing visual observations or seclusion, however at the time Mr Lees did not meet the criteria for these more restrictive interventions.

41. Mr Park said that when AMHRU staff were searching for Mr Lees after they realised he was missing on 5 February 2012, they located a plastic chair in the patient courtyard near the fence. Mr Park has confirmed with AMHRU that no couch was located in the courtyard. Mr Park noted that the couches at AMHRU have been designed for a psychiatric unit and are extremely heavy so that patients cannot move them. Mr Park also said that the couches would not fit through the single doorway to the courtyard.

42. Nurses Tan, Pride, Claver and Maher said in their statements that they did not receive telephone calls from Ms Julie-Ann Peat on 5 February 2012 prior to him absconding.

43. Mr Monkley provided an additional statement dated 27 May 2014 and informed that Western Health enquired with Communications Australia and Optus, who have confirmed that all internal servers, external contractor data, and the service provider are unable to source or provide data for any incoming calls to the Western Health from the relevant operating system.

44. I accept on the totality of the evidence that it is unlikely that Mr Lees was able to move a couch into the courtyard – they were heavy to move independently, could not fit through the door access to the courtyard, and a couch was not located in the courtyard after it was realised that Mr Lees had absconded.

45. On the evidence available to me, I am unable to determine whether Ms Peat telephoned the AMHRU unit on 5 February 2012 to warn of her son's intention to abscond.

Assessment, monitoring and treatment

46. Review of Mr Lees' medical records indicates that Mr Lees had a complex and difficult combination of psychiatric diagnoses, with associated behaviours, often criminal, aggressive and threatening. His care was provided by the then NWMH, specifically the SAAPU and AMHRU. The admissions to both SAAPU and AMHRU were responsive and timely and the assessment of mental state examination, risk assessments, multidisciplinary reviews, rehabilitation care planning and engagement with Mr Lees and his mother appear to have been executed in a manner that is compliant with clinical standards. There was evidence of attempts to transition Mr Lees back into the community, but with assessment of risk and ongoing support. The use of medications and review of their effectiveness were also within prescribing and clinical guidelines.

47. Some material suggests that Ms Pourgoutzidis may have provided the methadone to Mr Lees at Sunshine Railway Station. Alternatively, or in addition, he could have accessed the methadone (either with or without her knowledge and consent) after she stored it in the fridge at her

bungalow. I am unable to find with any degree of certainly which of the above scenarios actually took place. However, as already indicated, I find likely that the methadone contributing to Mr Lees' overdose death was diverted from Ms Pourgoutzidis, who was dispensed several takeaway doses for opioid replacement therapy on 5 February 2012.

Methadone for opioid replacement therapy in Victoria

46. The death of Mr Lees is one of several deaths that Victorian Coroners have recently investigated where the deceased fatally overdosed on methadone diverted from an opioid replacement therapy client to whom it was dispensed as a takeaway dose. I note in particular Coroner Kim Parkinson's findings into the deaths of Melissa Irwin (court reference 2009/5712 delivered on 16 December 2011), Damien Perceval (court reference 2009/2063 delivered on 28 September 2012) and Christina Mifsud (court reference 2012/2601 delivered on 1 October 2013); and Coroner Jacinta Heffey's finding in the death of Helen Maree Stagoll (court reference 2010/1624 delivered on 29 October 2013).

47. As part of Coroner Heffey's investigation into the death of Helen Maree Stagoll, Her Honour held a five-day inquest where she heard evidence on takeaway methadone diversion from those involved in the death, from Turning Point addiction specialist Dr Matthew Frei, and from staff of the CPU who researched methadone dose diversion. Her finding included several addenda that reviewed the available literature and data on opioid replacement therapy, the risks associated with takeaway methadone dosing, and Victorian methadone overdose deaths.

48. Coroner Heffey clearly established through her investigation and finding that the diversion of takeaway methadone from opioid replacement therapy clients to others who fatally overdose, is a public health issue stemming from a systemic failure in the regulation of client access to takeaway methadone. Essentially, Coroner Heffey identified that inappropriate clients are given access to takeaway methadone, which they intentionally divert to others and/or store unsafely in such a way that others can access it without difficulty, resulting in overdose deaths. I have taken the view that Mr Lees' death was yet another fatal result of this systemic failure.

49. Consequently, I consider it is appropriate for me to make recommendations regarding the regulation of access to takeaway methadone in Victorian opioid replacement therapy programs. Before doing so, I set out briefly the material on which I rely to formulate the recommendations, drawing heavily from Coroner Heffey's finding and addenda in the death of Helen Maree Stagoll.

Methadone for opioid replacement therapy

50. An opioid dependent person is at risk of a range of poor social and health outcomes, including overdose death. Opioid replacement therapy (also known as opioid substitution therapy, opioid maintenance treatment, and maintenance pharmacotherapy for opioid dependence) is an evidence-based therapy to reduce these risks.

51. In somewhat reductive terms, the short-term goal of opioid replacement therapy is not to 'cure' the client's opioid dependence, but rather to shift the client away from unsafe opioid use (for example the use of 'street' opioids that have unknown strength, provenance and quality; use of multiple opioids; injection of opioids; intermittent and binge use) by providing access to regular doses of a substitute opioid at a known strength under clinical supervision which does not need to be injected. Once the client's dependence has stabilised on the safer substitute opioid, cravings are managed and the client subsequently does not need to spend large amounts of time seeking drugs, longer-term treatment goals (which might eventually include total withdrawal from all opioid use) can be pursued.

52. Methadone is approved for use in opioid replacement therapy because it is a long-acting synthetic opioid that, when taken orally, is effective at reducing cravings for other opioids. A broad range of evidence shows that methadone administered regularly under clinical supervision is an effective treatment for opioid dependence. Flow-on benefits include facilitating client engagement with other treatments, decreasing engagement in criminal activity, decreasing time spent in drug-seeking activities, stabilising the client's life, and reducing the risk of overdose death.

53. However, methadone is potent and highly addictive in its own right, and can cause death when misused (just like any other opioid). Therefore, provision of methadone for opioid replacement therapy needs to be carefully regulated, to maximise its benefits in facilitating treatment of opioid dependent clients while minimising associated risks that can lead to overdose and death, such as injection, diversion to non-clients, consumption outside clinically established dosing schedules, and consumption in combination with other central nervous system depressants.

Regulation of opioid replacement therapy in Victoria

54. In Victoria, provision of opioid replacement therapy is regulated through the *Drugs Poisons and Controlled Substances Act 1981* (Vic) and *Drugs Poisons and Controlled Substances Regulations 2006* (Vic). Drugs and Poisons Regulation at the Victorian Department of Health is

responsible for administering the legislation.[3] To this end, Drugs and Poisons Regulation has published the Policy for Maintenance Pharmacotherapy for Opioid Dependence ('the Policy', first published in 2006, fully revised in 2013) to guide providers - including both prescribing clinicians and dispensing pharmacists - in the requirements they must meet under legislation when providing opioid replacement therapy, as well as practice standards they should meet (but which are not legislated).

55. Maximising the benefits and minimising the risks of opioid replacement therapy, is explicitly recognised as a central goal of the Policy (see p.9 of the 2006 Policy, and p.6 of the 2013 revised Policy).

Supervised and takeaway methadone dosing

56. Under the Policy, methadone for opioid replacement therapy in Victoria can be dispensed in one of two ways: on a supervised basis, where the client attends a dosing point (usually a pharmacy) every day and consumes the methadone at that point; or on a takeaway (unsupervised) basis, where the client is dispensed a quantity of methadone that is taken away from the dispensing pharmacy for consumption over one or more days.

57. The Policy describes in detail the purported benefits of takeaway dosing, including less disruption to family and work life (as the client does not need to attend a dosing point every day) and increased social and health benefits. According to the Policy, clients prefer takeaway to supervised dosing, and takeaway doses are an effective incentive and reward for engaging in treatment. Conversely, the Policy also acknowledges the risks inherent in providing takeaway doses, such as methadone hoarding, consumption outside recommended dosing schedules, injection, diversion, and access by third parties. Therefore, a range of measures are identified that prescribers and dispensers should put in place to balance these risks and benefits: for example, requiring that clients meet certain criteria before being eligible for takeaway dosing, requiring that takeaway doses are dispensed in childproof containers, and making the level of allowable takeaway dosing contingent on the client's degree of stability in treatment.

58. Addendum A (pp.7-12) to Coroner Heffey's finding in the death of Helen Maree Stagoll, comprehensively reviews the risks and benefits of takeaway dosing as described in the Policy,

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[3] Originally, the legislation was administered by the Drugs and Poisons Regulation Group at the Victorian Department of Human Services. After the Victorian Department of Health was created in 2009, the Drugs and Poisons Regulation Group was transferred here and maintained its responsibility for Schedule 8 drugs. Recently the word "Group" was dropped from its name, so at present Drugs and Poisons Regulation is the name of the Victorian Department of Health entity responsible for regulating Schedule 8 drugs including methadone for opioid replacement therapy.

as well as the countermeasures recommended to manage the risks while maximising the benefits; therefore I do not revisit the material in detail within this finding.

The fatal consequences of takeaway methadone dose diversion in Victoria

59. As I have already noted, Mr Lees' death was one of many recent Victorian overdose deaths involving takeaway methadone that was diverted (either intentionally or unintentionally) to the deceased from an opioid replacement therapy client.

60. During the investigation into the death of Helen Maree Stagoll, Coroner Heffey requested assistance from the CPU to establish the extent to which diverted takeaway doses are implicated in methadone overdose deaths. The CPU conducted a pilot study of 124 relevant deaths that were investigated by Victorian coroners in 2010 and 2011, and identified the methadone source in 68 deaths (54.8%). The pilot study, which is described in detail in pp.20-27 of Addendum A to the finding, established that:

    a. among the 68 deaths where the methadone source was identified, in 61 deaths the methadone had been dispensed for opioid replacement therapy, and in the remaining seven deaths the methadone had been dispensed to treat pain.

    b. the 61 opioid replacement therapy deaths included 11 involved methadone dispensed at a dosing point and 50 involved takeaway methadone doses consumed at another location; and

    c. the 50 deaths involving takeaway methadone dispensed for opioid replacement therapy, comprised 29 where the fatal dose was dispensed to the deceased, and 21 where the dose was dispensed to somebody other than the deceased (that is, diversion had occurred).

61. The CPU noted that the full extent of diverted methadone involvement was likely to be greater than could be confirmed in the pilot study, because among the 56 deaths where the CPU could not positively identify the methadone source, in 42 deaths no practitioner held a current Schedule 8 permit to prescribe methadone to the deceased.[4]

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[4] The lack of permit is recognised to be evidence consistent with diversion; see for example Pilgrim J, McDonough M, Drummer O, "A review of methadone deaths between 2001 and 2005 in Victoria, Australia", *Forensic Science International*, no 226, vol 1-3, 2013, p.217. However, there are reasons why a person might be prescribed methadone in Victoria (either for analgesia or for opioid replacement therapy) without a current valid Schedule 8 permit. For example, the prescribing might be for short-term pain relief, or the client might be in the process of switching between opioid replacement therapy providers and the new provider's permit not yet processed.

62. For the purpose of my investigation into the death of Mr Lees I requested that the CPU re-visit the 2010-2011 pilot study, further review the 56 deaths where the methadone source could not be identified to determine whether subsequent investigations shed more light on the methadone source, and extend the analysis to encompass methadone overdose deaths investigated by Victorian Coroners in 2012 and 2013. The CPU completed the further study and provided a report that I have annexed as Appendix A to this finding. The CPU reported that:

a. 270 methadone overdose deaths were investigated by Victorian Coroners between 2010 and 2013; the CPU was able to confirm the methadone source in 184 (68.1%) of the deaths.

b. among the 184 deaths where the methadone source could be confirmed, the methadone was dispensed for opioid replacement therapy in 161 deaths and for pain in 23 deaths.

c. the 161 deaths involving methadone for opioid replacement therapy included 14 deaths where the methadone was dispensed for supervised dosing, and 147 deaths from takeaway methadone. This latter group comprised 89 deaths where the takeaway methadone was dispensed to the deceased, and 58 deaths where it was diverted to the deceased.

d. the most common source of diverted methadone dispensed on a takeaway basis for opioid replacement therapy was friends and acquaintances of the deceased; and

e. in 69 (80.2%) of the 86 deaths where the methadone source could not be confirmed, no doctor held a valid permit to prescribe methadone to the deceased.

63. The CPU identified a total of 58 Victorian methadone overdose deaths between 2010 and 2013 where the methadone source was confirmed to be a diverted takeaway opioid replacement therapy dose. Additionally, there were 69 deaths where the methadone source could not be confirmed however no doctor held a current valid permit to prescribe methadone to the deceased; a proportion of these are likely to involve diverted takeaway methadone.

Deaths as a symptom of systemic failure

64. The updated CPU data in Addendum A, showing that at least 58 Victorian methadone overdose deaths (and potentially up to 127 deaths) between 2010 and 2013 involved diverted takeaway methadone for opioid replacement therapy, supports a conclusion that there is a systemic failure in the regulation of access to takeaway methadone, enabling a large number of opioid

replacement therapy clients to intentionally divert their methadone to others and/or store it unsafely in such a way that others can access it without difficulty, which has resulted in an unacceptably high frequency of overdose deaths.

65 In Coroner Heffey's finding into the death of Helen Maree Stagoll, Her Honour proposed that the underlying cause of the systemic failure might be a shift over time in how both clients and clinicians perceive takeaway dosing. Up until 2006, takeaway dosing was very much an exception in Victoria. The policy at the time allowed for no takeaway doses for the first two months after commencing treatment, then only one takeaway dose per week thereafter, with three takeaway doses on consecutive days permitted in exceptional circumstances and only for one week per month.[5] In 2006, the new Policy was introduced, increasing the quantity of takeaway methadone doses a client could access to five per week depending on assessment of client stability and length of time in treatment.[6] Coroner Heffey wrote (p.20):

> It could persuasively be argued that the pendulum has swung too far in favour of minimizing harm to participating clients, taking short cuts to attract them into and retain them in the programme and to respond to their particular needs. This approach has created an expectation in the minds of the participants that they should be entitled to takeaway doses within a very short time of being accepted into the programme. As a result of this process, third parties have been able to access a dangerous drug that, in too many cases, has ended in their deaths.

66 I note parenthetically at this point, that the overall pattern of methadone overdose deaths in Victoria since 2000 supports this conclusion. Between 2000 and 2006, the annual frequency of fatal methadone overdoses fluctuated between 22 and 34 deaths per year. Then, between 2007 and 2011, after the new Policy was introduced, the frequency of deaths increased steadily each year, reaching 70 to 74 deaths between 2011 and 2013 (see Figure A in Appendix A to this finding). There are potentially a range of explanations for the steady, sustained and significant increase in Victorian methadone overdose deaths since 2006,[7] but the greatly increased access to takeaway dosing is likely to be a major contributing factor.

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5 This information is drawn from Fraser S, Valentine K, Treloar C, MacMillan K, "Methadone maintenance treatment in New South Wales and Victoria: Takeaways, diversion and other key issues", National Centre in HIV Social Research, 2007, p.29.

6 For a detailed discussion see Addendum 1 (pp.9-11) to Coroner Heffey's finding in the death of Helen Maree Stagoll.

7 For a detailed discussion see Addendum 1 (pp.23-27) to Coroner Heffey's finding in the death of Helen Maree Stagoll.

67. A further issue explored by Coroner Heffey in her finding - as well as by other Victorian Coroners in recent finding - was an apparent discrepancy between the theory and reality of the Policy.

68. In theory, the Policy provides a sound framework for maximising the benefits and minimising the risks of opioid replacement therapy, identifying a broad range of relevant considerations that should be taken into account when making clinical decisions about a client's access to takeaway methadone. If prescribers and dispensers were able to follow the policy and evaluate client suitability for takeaway dosing by using the lengthy pro forma checklist included in the Policy (p.26 of the 2006 Policy, p.51 of the 2013 revised Policy), then I believe there is little doubt that the central aims of minimising the risks while maximising the benefits of opioid replacement therapy would be met in Victoria.

69. However, the unfortunate reality appears to be that neither prescribers nor dispensers are in a position to apply the Policy to their clients because many of the key clinical indicators for client stability and takeaway dosing eligibility rely purely on client self-report rather than objective evidence.

70. An exchange of recommendations and responses between Coroner Kim Parkinson and the Victorian Department of Health in 2010 is particularly useful to illustrate the difference between the theory and reality of the Policy. The exchange commenced with Coroner Parkinson's finding in the death of Melissa Irwin, who died after overdosing on a diverted takeaway dose prescribed and dispensed to another person for opioid replacement therapy. Coroner Parkinson concluded that Melissa Irwin was able to access the methadone because it was not safely stored. In her finding delivered 16 December 2010, she commented:

> An issue arises in this case as to the appropriateness of the storage of the methadone at the premises and the supervision by any authority of the safety of that storage. The ready availability of the methadone in this case has contributed to [Melissa Irwin's] death. [...] The guidelines do not specifically identify who is responsible for the oversight of matters such as safe storage or what steps are required to be taken to ensure safety prior to take away doses being allowed. To leave the decision making and storage arrangements solely in the hands of the addicted person seems to be an approach which is fraught with risk, given the unreliability often associated with persons suffering with substance addiction.

71. Consequently, Coroner Parkinson recommended:

Recommendation 1. That regulatory authorities establish a clear mechanism of supervision of the safety arrangements for storage of take away dosage of methadone.

Recommendation 2. That there be a prohibition upon take away methadone dosage unless a responsible regulatory authority is satisfied that safe storage arrangements are in place in the premises in which the drug is to be stored.

72. The (undated) Victorian Department of Health response to these recommendations, signed by then Secretary Fran Thorn, indicated the following:

> The *Drugs, Poisons and Controlled Substances Act 1981* (the Act) and its associated regulations empower the department to mandate storage conditions for drugs and poisons to the point of dispensing or supply to the intended consumer. That is to say that neither the Act nor the regulations mandate storage conditions for drugs and poisons in individual places of residence.
>
> It is not practically possible for the department to oversee the safe storage of take-away doses by pharmacotherapy clients in their private residences. The presence of a safe storage facility, such as a lockable cupboard, in no way guarantees that a client will store take-away doses within that lockable facility at all times. This proposed regulatory role for the department is therefore not possible to enforce.

73. In other words, while safe methadone storage is a requirement for takeaway dosing eligibility under the policy, the Department acknowledged it is only a 'paper' requirement and in practice, prescribers can only rely on client self-report to establish adherence. Coroner Heffey discussed this situation at length in her finding in the death of Helen Maree Stagoll (see particularly pp.12-13), noting that "a client is not likely to confess to" engaging in activities such as methadone dose diversion, unsafe methadone storage and living in unstable accommodation, all of which would jeopardise access to takeaway dosing.

Fixing the system

74. The most recent major Victorian coronial finding to address diversion of takeaway opioid replacement therapy methadone, was Coroner Jacinta Heffey's finding in the death of Helen Maree Stagoll.. In this finding, Coroner Heffey's central recommendation was:

> A. That the Victorian Department of Health urgently review its policy with respect to the takeaway dosing component of the Opioid Replacement Therapy programme, taking into account the number of deaths that have occurred due to the widespread availability of

methadone in the community and the lack of any real safeguards to protect vulnerable third parties from the risks associated therewith.

75. Coroner Heffey directed an additional 12 recommendations to the Victorian Department of Health regarding various improvements to the regulation of takeaway dosing in Victoria. The recommendations covered a wide range of areas including the need to review the takeaway dosing component of the Policy, the need to gather better data on who is accessing takeaway methadone, the need to better understand methadone dose diversion behaviour among opioid replacement therapy clients, and the desirability of commencing new clients on the less dangerous combination of buprenorphine and naloxone rather than methadone.

76. The response to most of Coroner Heffey's recommendations from Department Secretary Dr Pradeep Philip, dated 31 January 2014, could be fairly characterised as unsupportive. However, Dr Philip did respond positively to the central recommendation, explaining that an Advisory Group for Drugs of Dependence had been convened in the past to review the Policy with respect to takeaway dosing, and that:

> Given the concerns raised by the Coroner and the new data presented in her findings regarding diversion of methadone, the Department will request that the Advisory Group give further consideration to this recommendation.

77. I note that in Dr Philip's more recent response to my recommendations in the death of Kirk Ardern, who overdosed on methadone dispensed to him as a takeaway dose (case number 2010/2254, finding delivered on 7 April 2014, response from Dr Pradeep dated 16 June 2014), Dr Pradeep confirmed that the Department of Health has reconvened the Advisory Group to consider "a number of issues" related to the Policy.

COMMENTS

Pursuant to Section 67(3) of the Coroners Act 2008, I make the following comment(s) connected with the death:

78. In conducting my investigation into the death of Shannon Lees, I have given consideration not only to the circumstances of the death, but also to evidence, findings, recommendations and responses emerging from other coroners' recent investigations into overdose deaths involving diverted methadone, as well as research conducted by the CPU at my direction. On the basis of the material before me, I have drawn several general conclusions regarding takeaway methadone dosing.

79. First, I accept the Victorian Department of Health's position as expressed in the Drugs and Poisons Regulation Policy for Maintenance Pharmacotherapy for Opioid Dependence ('the Policy', first published in 2006, fully revised in 2013), as well as in several of the Department's responses to Victorian Coroners' findings over the past four years, that takeaway dosing can play an important role in treating opioid dependent people. I support Coroner Heffey's position in that I do not advocate for the cessation of takeaway dosing. Rather, my concern is that access to takeaway methadone must be adequately regulated to maximise the benefits while minimising the risks - a central goal of the Policy.

80. Second, I am concerned that far too many Victorians have recently died by overdosing on diverted methadone that was dispensed as a takeaway dose to an opioid replacement therapy client. The frequency of deaths - at least 58 confirmed deaths between 2010 and 2013, and probably far more than this - is evidence that current regulation of access to takeaway methadone in Victoria does not adequately manage the risk of dose diversion. The longer-term trend in overall Victorian methadone overdose deaths, which were relatively stable at between 22 and 34 per year in 2000-2006, then increased steadily after access to takeaway dosing was expanded, reaching 70-74 deaths per year in 2011-2013, also evidences this concern.

81. Third, I welcome the indication from Victorian Department of Health Secretary Dr Pradeep Philip that the Advisory Group for Drugs of Dependence has been reconvened to review the Policy for Maintenance Pharmacotherapy for Opioid Dependence in the light of recent Victorian Coroners' findings.

82. Fourth, I note that Victorian opioid replacement therapy clients are able to access greater quantities of takeaway methadone than clients in other States. Comparison with a sample of policies in other States assists to demonstrate the permissiveness of the Victorian system:

    a. the current Western Australian guidelines allow for the client to receive up to three takeaway doses per week, no more than two of which can be consecutive, and only after the client has been stable in treatment for two years;

    b. in Tasmania, the maximum number of takeaway methadone doses a client can receive is two non-consecutive doses per week; these can be accessed only after at least six months of continuous clinical stability in the program; and

c. in New South Wales, the maximum number of takeaway doses a client can access (after eight months of continuous stability) is four weekly including no more than two consecutive doses.[8]

83. The following commentary from the Tasmanian policy is particularly illuminating regarding the rationale for restricting takeaway dosing in that State:

> To improve patient safety and ensure the appropriate prescription and use of opioids, the TOPP [Tasmanian Opioid Pharmacotherapy Program] is necessarily conservative and maintains that many of the patients on the program will not be suitable for takeaway doses. The program acknowledges that, while some patients are suitable for and may benefit from takeaway doses, they can be unsafe for a large proportion of patients. [...] The ADS [Tasmanian Alcohol and Drug Services] estimates that only 5-10% of opioid pharmacotherapy patients will be suitable for a limited number of takeaway doses after a period of stabilisation. The Tasmanian Opioid Pharmacotherapy Program is primarily a supervised dosing program.[9]

84. I consider it safe to assume that Tasmania's and other States' takeaway methadone dosing policies are evidence-based, and indeed are most likely based on the same body of evidence that underpins the Victorian Policy for Maintenance Pharmacotherapy for Opioid Dependence. The fact that experts in other States have interpreted this evidence to arrive at different conclusions to Victoria regarding how much takeaway methadone a client should be able to access, suggests to me that there is scope for the Victorian Department of Health's Advisory Group for Drugs of Dependence to consider whether there is an evidence-based rationale to reduce the number of takeaway doses permitted to Victorian clients.

85. Given Dr Philip's indication that the Advisory Group has been reconvened to consider the Victorian Policy for Maintenance Pharmacotherapy for Opioid Dependence, I am not minded to make numerous or detailed recommendations in this regard. However, on the basis of the above four general conclusions, I consider there is a compelling evidence-based case to reduce access to takeaway methadone from current levels in order to reduce the current excessive frequency of harms and deaths associated with diversion and misuse of takeaway methadone.

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8 For a detailed discussion and comparison between Australian states' takeaway methadone policies, see Addendum 2 to Coroner Heffey's finding in the death of Helen Maree Stagoll.

9 Tasmanian Government Department of Health and Human Services, *Tasmanian Opioid Pharmacotherapy Program, Policy and Clinical Practice Standards*, May 2012, p.92.

RECOMMENDATIONS

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

1. That the Victorian Department of Health request the Advisory Group for Drugs of Dependence review the circumstances of Shannon Lees' death, the discussion and comments included in this finding, and the data on Victorian methadone deaths included in Appendix A to this finding, when considering whether the current takeaway dosing advice in the Victorian Policy for Maintenance Pharmacotherapy for Opioid Dependence adequately balances client benefits with risks to public health and safety.

2. That the Victorian Department of Health request the Advisory Group for Drugs of Dependence consider the probable impact on pharmacotherapy clients and the broader public, of revising the *Policy for Maintenance Pharmacotherapy for Opioid Dependence* so that an opioid replacement therapy client is eligible to receive at most two takeaway methadone doses per week and no consecutive takeaway doses. Given the current significant harms associated with methadone takeaway dose diversion, the Advisory Group for Drugs of Dependence should ideally report publicly on its conclusions, so the Victorian public is informed as to the rationale for the Advisory Group and Department of Health's stance on access to takeaway methadone.

FACTORS CAUSING OR CONTRIBUTING TO DEATH

The evidence supports a conclusion that Mr Lees died on 6 February 2012 and that the cause of his death was multidrug overdose including tramadol and methadone. Mr Lees had a history of polysubstance abuse. There was no evidence to suggest any other cause or contribution to his death. The Police investigation did not identify any evidence of third party involvement in his death.

In all the circumstances, I am satisfied that there would be no benefit from conducting a full inquest into Mr Lees' death or obtaining any further medical or other evidence, as neither would assist me to further understand the medical issues before me or the cause of Mr Lees' death which resulted from multidrug overdose including tramadol and methadone.

FINDING

I accept and adopt the medical cause of death as ascribed by Dr Paul Bedford and I find that Shannon James Lees (Peat) died from multidrug overdose including tramadol and methadone in circumstances where I am satisfied that he has suffered the unintentional consequences of intentionally and voluntarily

ingesting substances that were not prescribed to him. There is no compelling evidence to indicate that Mr Lees intended to take his own life.

AND I further find that there is no relationship between the cause of Ms Lees' death and the fact that he was "a person placed in care".

AND I am satisfied with the restorative and preventative steps taken by Melbourne Health in response to Mr Lees' death in adding one metre of height and angled tops to the courtyard fence.

AND I further find that the care received by Mr Lees whilst an inpatient at the Adult Mental Health Rehabilitation Unit of Sunshine Hospital (Melbourne Health) was reasonable and appropriate and I make no adverse finding in this respect.

I acknowledge the extensive research and synthesis of data performed by the Coroners Prevention Unit.

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

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

Ms Julie-Anne Peat

Mr Shannon Lees

Ms Jan Moffat, Donaldson Trumble Lawyers on behalf of Melbourne Health

Dr Mark Oakley Browne, Chief Psychiatrist

Mr Matthew McCrone, Chief Officer, Drugs and Poisons Regulations, Department of Health

Dr Pradeep Philip, Secretary, Victorian Department of Health

Ms Jenny Kelsall, Executive Officer, Harm Reduction Victoria

Sam Biondo, Executive Officer, Victoria Alcohol and Drug Association

Mr John Ryan, Chief Executive Officer, Penington Institute

Detective Senior Constable M Drew

Signature:

AUDREY JAMIESON

CORONER

Date: **16 July 2014**

Coroners Court of Victoria

Appendix A

Coroners Prevention Unit (CPU) data summary on methadone sources in Victorian methadone overdose deaths, 2010-2013

1. Background

1.1 Coroner Jamieson's investigation

Coroner Audrey Jamieson directed that the Coroners Prevention Unit (CPU) prepare certain material regarding methadone overdose deaths to assist her investigation into the death of Shannon Lees. Specifically, Coroner Jamieson directed the CPU to review its previous pilot study of the sources of methadone that contributed to Victorian methadone overdose deaths in 2010 and 2011, and use the Drug Overdose Deaths Register to extend the analysis of methadone sources to encompass methadone overdose deaths in 2012 and 2013.

1.2 The Drug Overdose Deaths Register

The CPU developed and maintains a register of drug overdose deaths investigated by Victorian coroners. A drug overdose death is defined as a death for which the acute toxic effects of one or more drugs played a causal or contributory role.[1] Deaths for which no acute toxic effects contributed but other drug effects (such as behavioural effects or chronic effects) may have contributed, are excluded from the Register.[2]

The CPU draws on the determination of the death investigators (coroner, forensic pathologist and forensic toxicologist) to identify relevant deaths, and codes certain information regarding each death into the Drug Overdose Deaths Register. Coded information includes the specific drugs that the expert death investigators identified as playing a causal or contributory role. The information contained in the Drug Overdose Deaths Register is regularly revised as coroners progress and complete their investigations. Therefore, overdose death data generated from the Register can change over time.

1.3 CPU pilot study on methadone sources in methadone overdose deaths

In September 2012, while assisting Coroner Jacinta Heffey with her investigation into the death of Helen Stagoll (Court reference 2010/1624), the Coroners Prevention Unit (CPU) conducted a pilot study of all overdose deaths investigated by Victorian coroners between 2010 and 2011 where methadone played a causal or contributory role ('methadone overdose deaths'). The aim was to

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1 The CPU definition of the term 'drug' is largely consistent with the Australian Bureau of Statistics (ABS) definition, encompassing substances that "may be used for medicinal or therapeutic purposes, or to produce a psychoactive effect". Like the ABS, the CPU excludes tobacco and volatile solvents such as petrol and toluene from its definition of a drug. However, the CPU considers alcohol to be a drug, whereas it is excluded under the ABS definition. See Australian Bureau of Statistics, "Drug-induced deaths: a guide to ABS causes of death data", 8 August 2002, p.2.

2 For example, if a person fatally assaulted another person while his or her mental state is affected by methamphetamine, this death would be excluded. Likewise, if a person drowned after stumbling off a pier while heavily intoxicated by alcohol and quetiapine, this would be excluded. Only drug overdose deaths are included.

identify where each deceased obtained the methadone that contributed to his or her death, and therefore generate insight into the frequency of overdose deaths involving methadone that had been dispensed to an opioid replacement therapy (ORT) client as a takeaway dose and diverted to the deceased.

The CPU used its Drug Overdose Deaths Register to identify 124 methadone overdose deaths investigated by Victorian coroners in 2010 and 2011, and reviewed a range of material for each death including the Victoria Police coronial brief, reports from the forensic medical investigation, and (for closed cases) the coroner's finding, to establish the source of the contributing methadone in each death. The following four variables were coded:

- Why the methadone was prescribed (for analgesia or for opioid replacement therapy).
- How the methadone was dispensed (for supervised consumption at a dosing point, or as a takeaway dose for unsupervised consumption elsewhere).
- The person to whom the methadone was dispensed (the deceased or another person).
- Whether a doctor currently held a permit to prescribe methadone to the deceased.

If the CPU was able to code all four variables from the available evidence, the methadone source was deemed to have been positively confirmed. If one or more variables could not be coded on the available evidence, the methadone source was deemed to be unknown.

Major study findings were:

- The CPU positively confirmed the methadone source in 68 of the 124 deaths (54.8%).
- In 61 of the 68 deaths the methadone had been dispensed for ORT, and in the remaining seven deaths the methadone had been dispensed to treat pain.
- Among the 61 ORT methadone deaths, 50 involved takeaway methadone; these included 29 deaths where the takeaway dose was dispensed to the deceased, and 21 where the takeaway dose was diverted to the deceased.
- Of the 56 deaths where the CPU could not positively identify the methadone source, in 42 deaths no practitioner held a current Schedule 8 permit to prescribe methadone to the deceased. The lack of permit is potentially evidence of diversion, and indicates that the actual frequency of overdose deaths involving diverted ORT methadone may be far greater than the 21 confirmed deaths.[3]

Overall, while the CPU was only able to confirm positively the methadone source in 54.8% of the deaths, the partial data suggested that takeaway ORT doses were probably the major source of contributing methadone in Victorian methadone overdose deaths, and that diversion of takeaway methadone was a significant phenomenon.

2. Methadone sources in methadone overdose deaths, Victoria 2010-2013

2.1 Case identification

On 2 April 2014, the CPU used the Drug Overdose Deaths Register to extract all methadone overdose deaths investigated by Victorian coroners in the period 1 January 2000 to 31 December 2013. Figure A shows the annual frequency of Victorian methadone overdose deaths, 2000-2013. The annual frequency was relatively stable at between 22 and 34 deaths during the period from 2000 to 2007, then steadily rose between 2007 and 2011, reaching what appeared to be a new plateau of 70 to 74 deaths per year in 2011-2013. Figure 1 also shows that 270 deaths in total occurred between 2010 and 2013.

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3 The full study findings and detailed analyses are reported in pages 20-27 of Addendum A to Coroner Heffey's finding, which was delivered on 29 October 2013 and is available via <http://www.coronerscourt.vic.gov.au/home/coroners+written+findings>.

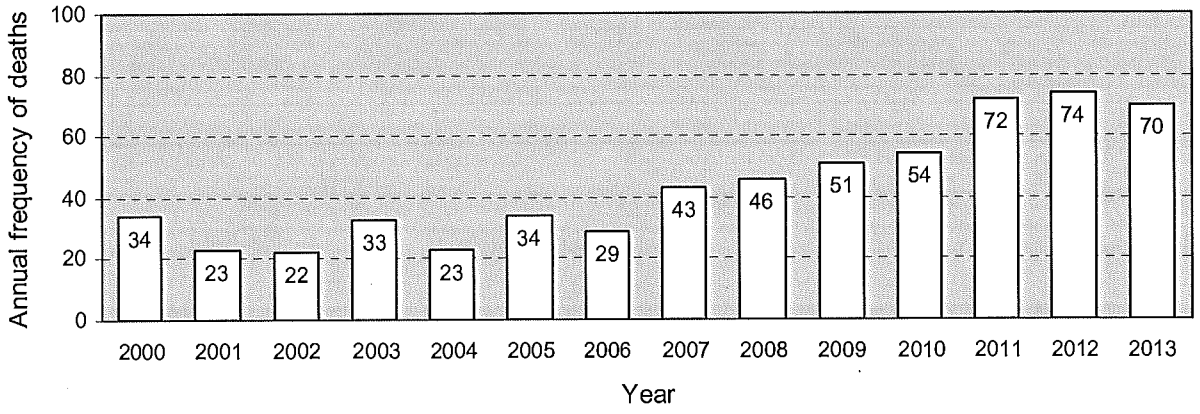

Figure A. Annual frequency of methadone overdose deaths, Victoria 2000-2013.

2.2 Coding

As already explained, the CPU previously (in September 2012) reviewed coronial material for the methadone overdose deaths occurring in 2010 and 2011 to identify methadone sources. Four variables were coded: (1) the reason why the methadone was prescribed; (2) the person to whom the methadone was dispensed; (3) whether the dispensing was for supervised or takeaway consumption; and (4) whether a doctor held a current permit to prescribe methadone to the deceased.

For the present study, the CPU revisited this initial September 2012 coding, and re-coded the four variables for all 2010-2011 methadone overdose deaths where (a) the investigation had been open when the initial coding was done but was subsequently completed, and/or (b) the CPU was unable to confirm the source of methadone in the initial coding. The CPU then examined available coronial material for the methadone overdose deaths occurring in 2012 and 2013, and coded the four variables for each death.

2.3 Results

The CPU was able to code all four variables (and therefore confirm the methadone source) in 184 (68.1%) of the 270 Victorian methadone overdose deaths that were investigated by Victorian coroners between 2010 and 2013. Table 1 shows an overall summary of the methadone sources where confirmed, as well as the presence or absence of a permit to prescribe methadone to the deceased where the methadone source could not be confirmed.

Among the 184 deaths where the methadone source could be confirmed, the methadone was dispensed for ORT in 161 deaths and for pain in 23 deaths. Examining the ORT methadone sources in more detail:

- The methadone was dispensed as a takeaway dose in 147 deaths, and was dispensed for supervised dosing in 14 deaths.
- Among the 147 takeaway methadone deaths, the methadone was dispensed to the deceased in 89 deaths, and diverted to the deceased in 58 deaths.

The CPU established that in 69 (80.2%) of the 86 deaths where the methadone source could not be confirmed, no doctor held a valid permit to prescribe methadone to the deceased. The lack of a valid permit is evidence consistent with methadone diversion,[4] although there are some reasons why a person might be prescribed methadone in Victoria (either for analgesia or for opioid replacement therapy) without a valid Schedule 8 permit. Therefore, while the true number of

4 See for example Pilgrim J, McDonough M, Drummer O, "A review of methadone deaths between 2001 and 2005 in Victoria, Australia", *Forensic Science International*, no 226, vol 1-3, 2013, p.217.

methadone overdose deaths in Victoria between 2010 and 2013 that involved diverted takeaway ORT methadone is likely to be greater than the 58 confirmed cases, the CPU is unable to indicate exactly how much greater.

Table 1: Frequency of methadone overdose deaths by methadone sources, Victoria 2010-2013.

Methadone source	Frequency of deaths
Methadone prescribed for ORT	
Supervised dose dispensed to deceased	14
Supervised dose diverted to deceased	0
Takeaway dose dispensed to deceased	89
Takeaway dose diverted to deceased	58
All deaths where methadone was prescribed for ORT	*161*
Methadone prescribed for Pain	
Dispensed to deceased	19
Diverted to deceased	4
All deaths where methadone was prescribed for pain	*21*
Methadone source not confirmed	
Valid permit held for deceased	14
No valid permit held for deceased	69
Permit status not known	3
All deaths where methadone source was not confirmed	*86*
All methadone overdose deaths	***270***

2.4 Methadone diverters

To explore further the 58 overdose deaths where the methadone was diverted to the deceased, the CPU coded (where known) the relationship between the methadone diverter and the deceased, and whether the deceased was residing with the diverter (cohabiting in the same home or living in the same building) at the time of the fatal overdose.

Table 2: Relationships and living arrangements between methadone diverters and people who overdosed on diverted takeaway ORT methadone, Victoria 2010-2013.

Methadone diverter relationship with deceased	Deceased residing with diverter	Deceased not residing with diverter	Unknown whether deceased residing with diverter	All
Friend/acquaintance	12	16	3	*31*
Partner	9	1	0	*10*
Relative	3	1	0	*4*
Unknown	0	0	13	*13*
All	*24*	*18*	*16*	*58*

Table 2 shows the cross-tabulation of relationships and living arrangements. The CPU could establish the relationship between methadone diverter and deceased in 45 (77.6%) of the 58 overdose deaths involving diverted ORT methadone. The main findings were:

- In most deaths where the methadone diverter was known, it was a friend or acquaintance of the deceased (31) rather than a partner (10) or relative (4).
- As would be expected, in most cases where the deceased sourced methadone from a partner or relative, the deceased and source were residing together (12) rather than apart (2).

- Among deaths where the methadone diverter was a friend or acquaintance, the deceased was not residing with the diverter in most deaths (16), although the two were residing together in a significant minority of deaths (12).
- Among the 13 deaths where the relationship between diverter and deceased could not be established, the predominant scenario was that the deceased was found with bottles of takeaway ORT methadone that had intact labels indicating they were dispensed to another person, but the investigation did not establish the relationship between this person and the deceased. The other recurrent scenario was that the deceased obtained a bottle of methadone syrup with the label at a street-based drug market, and the CPU could not establish whether the source and deceased knew one another.

2.5 Locations of fatal overdoses

The CPU examined the locations where the 270 Victorian methadone overdose deaths occurred between 2010 and 2013, to establish whether takeaway ORT dose diversion was more prevalent in metropolitan Melbourne or regional areas. Table 3 shows the frequency of deaths by location and methadone source.

Table 3: Frequency of methadone overdose deaths by location and methadone source, Victoria 2010-2013.

Methadone source	Metropolitan Melbourne	Regional	All
Methadone prescribed for ORT			
Supervised dose dispensed to deceased	11	3	14
Takeaway dose dispensed to deceased	68	21	89
Takeaway dose diverted to deceased	45	13	58
Methadone prescribed for Pain			
Dispensed to deceased	15	4	19
Diverted to deceased	1	3	4
Methadone source not confirmed			
Valid permit held for deceased	9	5	14
No valid permit held for deceased	53	16	69
Permit status not known	3	0	3
All methadone overdose deaths	***205***	***65***	***270***

Methadone overdose deaths involving diversion of takeaway ORT methadone were clearly more prevalent in metropolitan Melbourne (45 deaths, 77.6%) than regional areas (13 deaths, 22.4%). However, approximately 75% of Victoria's population lives in metropolitan Melbourne,[5] so the rate of methadone overdose deaths per head of population was therefore very similar between the two areas and is not a notable finding.

2.6 Demographics of the deceased

The final analysis the CPU conducted was to examine the ages of the 58 deceased who overdosed on diverted ORT takeaway methadone and the 89 deceased who overdosed on takeaway ORT methadone dispensed to themselves. The CPU was interested to establish what age ranges were represented among those who fatally overdosed on diverted ORT methadone; the age ranges of those who overdosed on takeaway ORT methadone dispensed to themselves were included for comparison.

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5 2011 Australian Bureau of Statistics (ABS) data indicates that the population of metropolitan Melbourne was 4,108,837 people, whereas regional Victoria's population was 1,428,211 people.

Figure B shows the distribution of age groups among the 58 deceased who overdosed on diverted ORT takeaway methadone, and the 89 deceased who overdosed on takeaway ORT methadone dispensed to themselves. The distribution by age is approximately similar between the two groups, with most deaths occurring in the 35 to 44 age group. However, there is a pronounced skew towards younger deceased among the diverted ORT takeaway methadone group, including five deceased who were under 18 years of age.

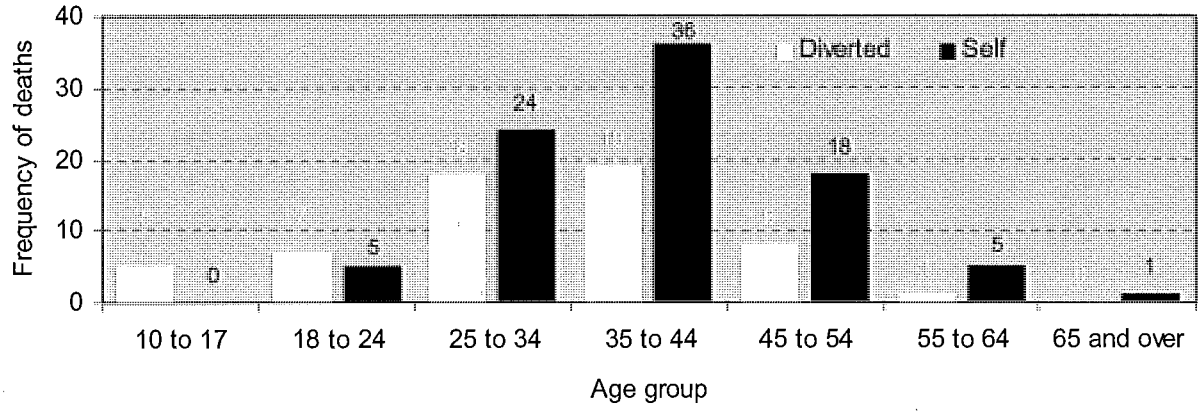

Figure B. Frequency by age group of deaths among those who fatally overdosed on diverted ORT takeaway methadone and ORT takeaway methadone dispensed to self, Victoria 2010-2013.