IN THE CORONERS COURT
OF VICTORIA
AT MELBOURNE

Court Reference: COR 2017 5077

FINDING INTO DEATH WITHOUT INQUEST

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

Findings of:	Simon McGregor, Coroner
Deceased:	**Mr L**
Date of birth:	1971
Date of death:	3 October 2017 or 4 October 2017
Cause of death:	I(a) Combined effects of plastic bag asphyxia and helium gas inhalation
Place of death:	Castlemaine, Victoria

INTRODUCTION

1. Mr L was a 45-year-old man who lived in Castlemaine at the time of his death.

2. Mr L did not attend work on 4 October 2017 and his employer raised concerns about his welfare with police. On 5 October 2017 Victoria Police forced entry to his unit and found him deceased, with a bag over his head and a hose leading from a gas cylinder into the bag.

PURPOSE OF A CORONIAL INVESTIGATION

3. Mr L's death was reported to the coroner as it appeared to be unnatural and was therefore a 'reportable death' for the purposes of the *Coroners Act 2008*.

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

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

6. The Coroner's Investigator, Leading Senior Constable Gary Nichols of Victoria Police, prepared a coronial brief in this matter. The brief includes statements from witnesses including family, the forensic pathologist who examined Mr L, treating clinicians and investigating officers.

7. After considering all the material obtained during the coronial investigation I determined that I had sufficient information to complete my task as coroner and that further investigation was not required. Whilst I have reviewed all the material, I will only refer to that which is directly relevant to my findings or necessary for narrative clarity.

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

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

CIRCUMSTANCES IN WHICH THE DEATH OCCURRED

10. Mr L had a history of mental illness which included bipolar affective disorder. This had resulted in multiple inpatient admissions due to attempts at taking his own life.[2]

11. In the time leading up to his death, he was under a Community Treatment Order and was being monitored for his compliance with lithium treatment. As of his last lithium measurement on 1 September 2017 his level was within the normal therapeutic range. His General Practitioner does not recall him expressing any suicidal thought or intent.[3]

12. On 2 October 2017 Mr L went to Red Fox Party Supplies in Bendigo and asked to hire a cylinder of helium gas for filling balloons. He chose a Size E cylinder of Balloon Gas supplied by BOC, which is advertised as being able to fill approximately 300 balloons.[4]

13. Red Fox Party Supplies staff asked him if he wished to purchase balloons, but he said he did not. (This was not considered unusual, as many customers supply their own balloons.) He recorded his name in their Hire Book and paid for a period of one week. He then brought the cylinder home in his own vehicle.[5]

14. Mr L occasionally worked for a window cleaning business run by Mr J B. On 3 October 2017 Mr L worked on a job for Mr B, and the two of them spoke at around 11.00am. Mr B recalls that Mr L seemed '*edgy*' and '*a little bit down*'.[6]

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[1] This is subject to the principles enunciated in *Briginshaw v Briginshaw* (1938) 60 CLR 336. The effect of this and similar authorities is that coroners should not make adverse findings against, or comments about, individuals unless the evidence provides a comfortable level of satisfaction as to those matters taking into account the consequences of such findings or comments.

[2] Statement of Dr Dominic Blanks (undated), Coronial Brief.

[3] Statement of Dr Ian Jones dated 11 January 2018, Coronial Brief.

[4] Statement of Sharon Pontelandolfo dated 30 January 2018, Coronial Brief.

[5] Ibid.

[6] Statement of J B dated 27 January 2018, Coronial Brief.

15. That night, Mr B contacted Mr L to discuss another job for the following day. However, he did not receive confirmation from Mr L that he would be available.[7]

16. The call log on Mr L's phone indicates that he had no contact with any person after this time.[8]

17. Mr B arrived at Mr L's unit to pick him up at 7.30am. However, Mr L did not come out and did not answer phone calls or text messages. Mr B went off to do the job, but returned afterwards. He noted that Mr L's car was outside the building and that the doors were locked and the blinds down. Mr B contacted police with concerns for Mr L's well-being.[9]

18. Victoria Police attended the address at 11.45pm. When they received no answer to knocking, they went to Castlemaine Property Group and obtained a key to the unit. However, the key they were given did not open the front or rear door. Throughout the day they made attempts to contact Mr L's family to determine if they had heard from him.[10]

19. On the following day, 5 October, police returned to the unit. Senior Constable Rod Webster gained entry through a window and found Mr L lying on a bed with a bag over his head and a hose leading from a helium cylinder to the bag.[11]

20. Mr L had left a note expressing his lack of hope for the future but apologising to his loved ones for his actions.[12]

IDENTITY AND CAUSE OF DEATH

21. On 5 October 2017, Susan Duncan, the property manager of Mr L's unit, visually identified his body. Identity is not in dispute and requires no further investigation.

22. On 6 October 2017, Dr Matthew Lynch, a Forensic Pathologist practising at the Victorian Institute of Forensic Medicine, conducted an external examination of Mr L's body and reviewed a post mortem computed tomography (CT) scan. Dr Lynch completed a report, dated 10 October 2017, in which he formulated the cause of death as '*I(a) Combined effects of plastic bag asphyxia and helium gas inhalation*'.

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[7] Ibid.
[8] Photographs 90-92, Coronial Brief.
[9] Statement of J B dated 27 January 2018, Coronial Brief.
[10] Statement of Senior Constable Rod Webster dated 5 January 2018, Coronial Brief.
[11] Ibid.
[12] Photograph 29, Coronial Brief.

23. Toxicological analysis of post mortem samples taken from Mr L indicated that he had consumed the benzodiazepine diazepam (Valium) prior to his death. The analysis did not test for levels of lithium, and so it is unclear whether Mr L had been compliant with his lithium treatment between 1 September 2017 and his death.

24. I accept Dr Lynch's opinion as to the medical cause of death.

COMMENTS

25. I have received advice from the Coroners Prevention Unit (CPU)[13] regarding the prevalence of suicides by helium inhalation and possible avenues for prevention of deaths such as Mr L's.

26. There has been a steady increase in the rate of helium suicides over the time period from 2000 to 2018. In the five-year period from 2000 to 2004, there were five such deaths. In the five-year period from 2014 to 2018, there were a total of 55.

27. There is no information indicating how Mr L became aware of helium inhalation of a suicide method or where he learned how to effectively carry it out. However, such information is readily available to research, and has been promoted as a peaceful and painless suicide method by 'right-to-die' groups since at least the 1990s. In particular, the *Peaceful Pill Handbook* published by Exit International provides instructions for suicide using helium and a plastic 'Exit bag'.

28. As it does not appear feasible to prevent people from learning how to end their lives by helium inhalation, prevention efforts by Coroners have focussed on limiting the availability of helium. Australian and New Zealand Coroners have made a number of recommendations and comments in relation to this issue.

New Zealand Coroner Ian Smith's recommendations

29. In 2011, New Zealand Coroner Ian Smith made a finding expressing concern about the availability and lack of regulation for accessing helium in New Zealand. He made two

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

recommendations to New Zealand government bodies to reduce the chance of similar deaths occurring in the future.[14]

30. He recommended to the Minister of the Environment that regulators should consider that helium could be classified as '*Hazardous/Toxic to the Health of the public*'.

31. He also made a recommendation to the Minister of Consumer Affairs:

'*That a review be undertaken regarding the recreational sale of helium gas to the public in particular to consider that this gas should be an age restricted sale. Recreational sale of the gas should be by way of a container that has a restrictor valve that is irremovable; and/or as to whether recreational sale of gas should be only in terms of a helium/oxygen mixture*'.

Findings of Coroner Audrey Jamieson and ACCC response

32. On 22 February 2016, Victorian Coroner Audrey Jamieson made findings into a death by helium inhalation. She did not make a recommendation, but made comments which she distributed to the Australian Competition and Consumer Commission (ACCC) for their consideration.

33. In particular, Coroner Jamieson commented that:

'*Presently, the sale of pure helium gas is largely unregulated. Helium is a division 2.2 non-flammable, non-toxic gas according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. In general use it is relatively safe, however when it is concentrated and inhaled, the gas is lethal as it replaces breathable oxygen.*

Given the increasing number of deaths involving the use of pure helium, I am concerned that its unregulated sale may pose a growing risk for vulnerable persons in the Victorian community. The sale of pure helium, sold as a party supplement, may constitute an unsafe product worthy of investigation by the Australian Competition and Consumer Commission.'

34. In a letter dated 13 May 2016, Neville Matthew of the ACCC responded to Coroner Jamieson's comments. He indicated that:

'*The most effective restriction of access to potentially harmful drugs and poisons (including gases) is typically achieved through scheduling in the Standard for the Uniform Scheduling*

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[14] Certificate of Findings (Case ref CSU-2009-WGN-000571) dated 19 August 2011 (Coroner Ian Smith).

of Medicines and Poisons (SUSMP or Poisons Standard). The Australian Government Department of Health, Therapeutic Goods Administration administers the Poisons Standard. It is given effect by each State and Territory through their own laws that determine where consumers can buy a particular drug or poison (including gases), and how it is to be packaged and labelled.

I have asked my staff to look into the process for making an application for amendment of the Poisons Standard. If the ACCC is able to initiate such an application I intend to raise this issue with our state and territory co-regulators and proceed accordingly.'

35. In November 2016 Coroner Jamieson made another finding in a helium inhalation suicide, which she ordered to be distributed to the ACCC and to the Therapeutic Goods Administration.

36. On 19 April 2017 Coroner Jamieson delivered her findings in the death of Lauren Pilkington, another suicide by helium inhalation. In this finding, Coroner Jamieson made a formal recommendation:

'*In light of recurrent deaths involving helium gas, and with the aim of preventing like deaths, I recommend that the Australian Competition and Consumer Commission consider working to restrict the ease of access to helium gas, by members of the Australian public.*'

37. Mr Matthew responded on behalf of the ACCC on 4 May 2017. He stated that the ACCC had '*commenced an investigation into the extent of this method of suicide in Australia and the availability of helium gas cylinders to the public. Based on this work, we are exploring regulatory and non-regulatory options for the control of this type of product, as a way of preventing or reducing its use as a suicide agent.*'

38. Mr Matthew stated that the ACCC was preparing a paper on options for regulating helium which was to be submitted to the TGA's Advisory Committee on Chemicals Scheduling (ACCS).

Application to amend the Poisons Standard

39. The ACCC made an application to the ACCS dated 3 August 2017 which advocated for two new controls to reduce the risk of helium being used in suicide. These controls were to be supported by new entries in the Poisons Standard.

40. The first proposed control was that helium gas sold or hired to consumers in pressurised canisters from domestic purposes must contain an 'aversive', a bittering chemical which would make helium inhalation intolerably unpleasant.

41. The second control was that helium gas hired or sold for commercial or industrial uses should be included in Schedule 7 of the Poisons Standard. This would prohibit public access to helium prepared and packaged for commercial and industrial uses.

42. This ongoing process was noted in a finding from Coroner Rosemary Carlin on 4 October 2017 and a finding from Coroner Jamieson on 1 February 2018. Coroner Jamieson specifically commented that she made no recommendation because she was awaiting the outcome of the ACCS application.

43. On 5 February 2018 the delegate of the Secretary to the Department of Health published an interim decision on the scheduling of helium. They noted that they had received one submission in support of the proposal, and seven submissions from other parties opposing the proposal.

44. The main points of opposition were the following:

    (a) There was an occupational health and safety risk to people who work with helium regularly and the general public who might inhale the aversive. Moreover the use of an aversive could '*endanger or destroy the balloon industry*'.

    (b) Helium is only dangerous if intentionally misused. Moreover, the discharge of helium from a gas canister is not the 'path' to suicide; a person also requires use of other equipment (piping and a regulator or face mask or similar).

    (c) Compliance with the proposed Schedule 7 listing of helium could be very costly for small businesses.

    (d) Many inert gases have similar asphyxiation properties to helium, so scheduling helium '*is unlikely to solve the problem, but will shift the focus to another [inert gas]*'.

45. The delegate accepting the reasoning of the submissions made in opposition. They published their final decision on 10 April 2018, refusing the proposal. They noted that:

'*The interim decision to not schedule helium recognises the importance of helium in many industry sectors, the economic benefits of those sectors and the fact that the correct and*

legitimate use of helium does not meet the scheduling criteria. A thorough analysis was taken and a pragmatic outcome was achieved to ensure a balanced regulatory framework is maintained on helium.'

Ongoing ACCC efforts

46. When the ACCC made their application to the ACCS, they noted that they were also pursuing other strategies to reduce helium inhalation suicide:

'*Separate to this scheduling proposal, the ACCC is consulting with the bottled gas industry about possible amendments to the simple valve and nozzle presentation on helium canisters available to the public. The aim is to alter the presentation of the canister to make the gas more difficult to remove from the canister. Changes may include the need to repeatedly depress a part to keep the gas flowing. These changes will mean that someone impaired with alcohol or other drugs e.g. sedatives, will be less able to complete the suicide act and will also stop the flow of gas once the user is unconscious. These changes may also reduce the likelihood of children being able to release helium from the canister, given that these products are in the home.*'

47. The interim decision refusing the ACCC's proposal included a recommendation that the ACCC continue to work with the bottled gas industry for these purposes.

48. On 9 March 2018, Mr Matthew of the ACCC wrote to the State Coroner of Victoria regarding these efforts:

'*We have had preliminary discussions with Australian gas manufacturers and suppliers. However, as most of the bottled helium sold through retail outlets is believed to be imported the ACCC considers that approaches to retail suppliers may be more effective.*

The ACCC will write to major retailers of bottled helium gas sold for party supplies to encourage voluntary safety improvements to the valves and nozzles of gas cylinders. The ACCC will refer to the concern held by Victorian Coroners and will copy the correspondence to key advocates in Australian mental health, including Professor Patrick McGorry AO, Executive Director of Orygen, which is the National Centre of Excellence in Youth Mental Health.'

49. The Court has received no further correspondence regarding these efforts.

50. On 30 May 2019 I made a finding into a suicide by helium inhalation which I distributed to the ACCC to inform their efforts in this area and re-emphasise its importance.

Dilution of helium with other gases

51. The interim decision refusing the ACCC application for helium to be included in the poisons standard included some discussion of the possible use of 'Heliox' as an inflation gas for balloons:

'*Australia New Zealand Industrial Gas Association (ANZIGA) members have provided informal advice that approaches considered in NZ and the UK have included the use of 'Heliox' (79% helium + 21% oxygen) as an inflation gas for balloons and the inclusion of aversives. The NZ Ministry of Business, Innovation & Employment consulted their local gas industry about the 'Heliox' approach in March-April 2016.*

Advice from ANZIGA is that in NZ there was concern about flammability issues with balloons inflated with 'Heliox', especially as helium is likely to leach from a balloon faster than oxygen, leaving the highly flammable oxygen in the balloon.'

52. This concern about flammability, although speculative, may be valid if a combination of helium and pure oxygen is used as a balloon gas.

53. However, some helium tanks sold for use in balloon inflation already contain a mixture of helium and other gases. Balloon Time notes that their tanks contain a mixture of '*helium and air with not less than 80 percent helium*'. BOC, the supplier of the helium cylinder used by Mr L, notes that the cylinder contains gas mixture impurities of '*Air (N2 or O2) 3.0%*'.

54. Presuming that '*air*' in both of these cases has roughly the same composition of atmospheric air (around 78% nitrogen, 21% oxygen and a remainder of other gases), there is clearly some combination of helium, oxygen and other gases which is considered safe to use for balloon inflation without concerns for flammability.

55. Such a mixture may not prove as effective as Heliox in reducing the lethality of inhaling balloon gas. The lethality of helium inhalation is due to the lack of oxygen reaching the lungs. This causes unconsciousness and then, after a time, death. The use of Heliox as a helium replacement was recommended as it contains approximately the same level of oxygen as air, and as such would provide the same amount of oxygen to the lungs as would the breathing of normal air.

56. The use of a mixture containing a smaller proportion of oxygen would be less effective at providing oxygen to the lungs, but could nonetheless be beneficial. Although breathing such a mixture might still lead to eventual unconsciousness and death, this would likely take a longer time than when breathing pure helium.

57. It is valuable to reduce or delay lethality even if it cannot be entirely negated. If there is more time between a person beginning to inhale balloon gas and becoming unconscious, this allows more opportunity for them to reconsider their decision to end their life. If there is more time between a person becoming unconscious and their death, there is more opportunity for someone else to discover them and intervene.

58. Different combinations of gases will have different degrees of suitability for admixture to helium in balloon gas. For this reason, I will recommend that the ACCC undertake a study of this issue.

Limiting access to high-purity helium

59. Mr L obtained the helium cylinder used in his suicide from a party supply store where it was hired out specifically as balloon gas. Although it is possible for people to obtain helium gas directly from suppliers in a purer form, limiting the availability of high-purity helium gas through party supply retailers would still have a positive effect.

60. The ACCC's previous approaches have not, it appears, fully considered the possibility of other mixtures of gas which might be safer forms of balloon gas. If the results of a study identify a safe and viable mixture, I suggest that the ACCC consider if any of their previously contemplated approaches could be adapted to include new requirements for the composition of balloon gas.

61. I also intend to recommend that Consumer Affairs Victoria consider what regulatory approaches might be feasible in the regulatory environment of the State of Victoria, including requiring dilution of helium with other gases as well as approaches already considered by the ACCC at the Commonwealth level.

FINDINGS

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

    (a) The identity of the deceased was Mr L, born in 1971;

    (b) The death occurred on 3 October 2017 or 4 October 2017 at Castlemaine, from the combined effects of plastic bag asphyxia and helium gas inhalation; and

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

RECOMMENDATIONS

1. Pursuant to section 72(2) of the *Coroners Act 2008*, **I recommend:**

    that the Australian Competition and Consumer Commission undertake a study of different combinations of helium, oxygen, nitrogen and other gases to consider their safety, their suitability for use as balloon gas and their effectiveness in reducing or delaying the lethality of balloon gas inhalation.

2. Pursuant to section 72(2) of the *Coroners Act 2008*, **I recommend:**

    that Consumer Affairs Victoria consider what regulatory approaches to reducing the accessibility of helium as a means of suicide might be feasible in the regulatory environment of the State of Victoria, including requiring helium be mixed with other gases for sale as balloon gas as well as approaches already considered by the ACCC at the Commonwealth level.

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

I direct that the published version of this finding have personal identifying information of the deceased and Mr B removed. I also direct that specific information describing the mechanical means of Mr L's suicide be removed.

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

(a) Senior next of kin;

(b) Australian Competition and Consumer Commission;

(c) Secretary, Department of Health;

(d) Chair, Advisory Committee on Chemicals Scheduling, Therapeutic Goods Administration;

(e) Consumer Affairs Victoria; and

(f) Leading Senior Constable Gary Nichols, Victoria Police, Coroner's Investigator.

Signature:

SIMON McGREGOR
CORONER
Date: 17 JULY 2014