IN THE CORONERS COURT
OF VICTORIA
AT MELBOURNE

COR 2016 005924

FINDING INTO DEATH WITHOUT INQUEST

Form 38 Rule 63(2)

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

Findings of:	AUDREY JAMIESON, Coroner
Deceased:	Beryl Eileen Brindley
Date of birth:	28 September 1942
Date of death:	11 December 2016
Cause of death:	1(a) Diabetic ketoacidosis
Place of death:	Sale Hospital, 155 Guthridge Parade, Sale, Victoria, 3850
Keywords:	Aged care, diabetic

INTRODUCTION

1. Beryl Eileen Brindley was 74 years of age at the time of her death. She is survived by her children Graeme and Vicky Brindley and her grandchildren.

2. Mrs Brindley had a history of Type I diabetes mellitus having been diagnosed at the age of 12 years. The nature of the condition meant that she produced no insulin.

3. Mrs Brindley was a resident at Opal Lakeview residential aged care (**RAC**) facility (and hereinafter referred to as the facility) at Lake Entrance. The facility is operated by Domain Aged Care (Victoria) Pty Ltd (and hereinafter referred to as Domain Aged Care).

4. On 11 December 2016, Mrs Brindley died at Sale Hospital from diabetic ketoacidosis (**DKA**), shortly after her transfer from Bairnsdale Hospital. She was admitted to Bairnsdale on 10 December 2016 and previously refused transport to the hospital. Mrs Brindley's family was not informed of her deteriorating condition until she was admitted to the hospital.

5. Mrs Brindley's death was not initially reported to the Coroner by the facility or Sale Hospital. In light of the circumstances surrounding her mother's death, Graeme contacted Coronial Admissions and Enquiries (**CAE**) staff and raised concerns about the medical care and management of his mother's diabetes leading up to her death. Graeme also provided a copy of Mrs Brindley's death certificate along with his letter of concern.

What is Diabetic Ketoacidosis[1], DKA?

6. DKA[2] is an acute, potentially life-threatening emergency that most often occurs in people with Type I Diabetes. It is normally characterised by hyperglycaemia[3] and acidosis[4]. People experiencing DKA can deteriorate very quickly and develop an altered state of consciousness and reduced cognitive function making identification, communication and correction of complications more difficult.

7. Symptoms of the metabolic changes associated with emerging DKA include polyuria[5], polydipsia[6], thirst, nausea and vomiting, abdominal pain and weight loss.

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[1] Coronial Brief of Evidence (**CB**), Expert Report by Dr Mark Kennedy.
[2] Diagnostic criteria for DKA are blood glucose > 15 mmol/L, pH < 7.30, HCO < 18mmol/L, and ketones present in capillary blood and/or urine.
[3] High blood glucose, with blood glucose level >15 mmol/L and is due to a relative or absolute lack of insulin.
[4] Low blood pH.
[5] Increased frequency of passing urine.

8. Signs of the metabolic changes associated with emerging DKA include altered conscious state, dehydration, Kussmaul breathing[7], tachypnoea[8] and ketotic breath[9]. Clinical signs of dehydration include poor skin turgor, tachycardia, hypotension[10], dry mouth and tongue, oliguria[11] or anuria[12]. It is recognised that signs can be more subtle in the elderly and that the mortality associated with DKA is higher in elderly adults with diabetes.

THE CORONIAL INVESTIGATION

9. Upon receiving Mrs Brindley's death certificate and the letter of concern from Graeme, on-duty forensic pathologist, Dr Michael Philip Burke from the Victorian Institute of Forensic Medicine (**VIFM**) reviewed Mrs Brindley's death certificate and the events leading to Mrs Brindley's death. Following consultation with Dr Burke I determined that the death of Beryl Eileen Brindley was a reportable death in accordance with section 4(2)(a) of the *Coroners Act 2008* ("the Act").

10. Section 4(2)(a) of the Act, defines that a *reportable death* includes a death that *appears to have been unexpected, unnatural or violent or to have resulted directly or indirectly, from an accident or injury*. Mrs Brindley's death was deemed unexpected.

11. 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.

12. 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.

13. Victoria Police assigned Senior Constable Christopher Skiba (SC Skiba) to be the Coroner's Investigator for the investigation of Mrs Brindley's death. SC Skiba conducted inquiries on my behalf, including taking statements from witnesses – such as family, the forensic

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[6] Increased drinking.
[7] Deep sighing breaths or laboured breathing.
[8] Rapid breathing.
[9] Typically, the odour of acetone can be detected on the breath.
[10] Low blood pressure.
[11] Reduced urination.
[12] Lack of urination.

pathologist, treating clinicians and investigating officers – and submitted a coronial brief of evidence.

14. As part of my investigation, advice was sought from the Health and Medical Investigation Team (**HMIT**) within the Coroners Prevention Unit[13](**CPU**), for an assessment of Mrs Brindley's care and management in the period proximate to her death. Given the advice from CPU, I also commissioned a further aspect of expert review, to assist me in determining the adequacy of care and management provided to Mrs Brindley. The expert review was also commissioned to determine prevention opportunities in Mrs Brindley's death, with a view to making recommendation if appropriated.

15. This finding draws on the totality of the coronial investigation into the death of Beryl Eileen Brindley, including the coronial brief compiled by SC Skiba, further statements, expert reports, the transcript of a Direction Hearing[14] and the final submissions of the interested parties. Whilst I have reviewed all the material, I will only refer to that which is directly relevant to my findings or necessary for narrative clarity. In the coronial jurisdiction, facts must be established on the balance of probabilities.[15]

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

Background circumstances

16. Mrs Brindley's extensive medical history included recognised complications of diabetes and several comorbidities: peripheral vascular disease, impaired vision, right hip replacement, depression, atrial fibrillation, kidney transplant (1990), sepsis (2012), hypothyroidism and osteoporosis.[16]

17. On 9 June 2012, Mrs Brindley was admitted to Opal Lakeview from Windsor Park Nursing Home in Western Australia. Her diabetic condition was complex, and her nursing notes indicated she required comprehensive specialist nursing care.

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[13] The Coroners Prevention Unit (**CPU**) assists the Coroner with research in matters related to public health and safety in relation to the formulation of prevention recommendations, as well as assisting in monitoring and evaluating the effectiveness of the recommendations. The CPU also reviews medical care and treatment in cases referred by the Coroner. The CPU is staffed by healthcare professionals, including practising physicians and nurses, who are not associated with the health professionals under consideration and are, therefore able to give independent advice to the Coroner.

[14] Held on 7 November 2019.

[15] 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.

[16] CB, Statement of Dr Kay Khaing Win.

18. Her medical needs were attended to by general practitioners (**GPs**) at the Cunninghame Arm Medical Centre (**CAMC**), Drs Kay Khaing Win[17], Greg Hayes, and Jane Greacen (until August 2016).[18]

19. In May 2016, Mrs Brindley and her son signed a "*Statement of Choices for the Non-competent person. A record of future health wishes*". The document acknowledged that she *"has been assessed as not having legal capacity to appoint a Medical Enduring Power of Attorney or make medical decisions independently"*. It also recorded she would like cardiopulmonary resuscitation (**CPR**) attempted and life-prolonging treatments only if medical practitioners expected a reasonable outcome in terms of continuing mobility and cognitive output at her ordinary levels.

20. On 4 October 2016, Mrs Brindley was found to have a *"small almost healed scab on the back of her left calf"* measuring 1cm by 1cm that was tender to touch. Dr Win was responsible for Mrs Brindley's wound care and management.

21. Between October and December 2016, Mrs Brindley was placed on a sliding insulin scale. The regime involved measurement of blood glucose level[19] (**BGL**) four times daily[20] and the administration of 10 units of Levemir[21] in the morning and four units in the evening. However, the orders regarding the administration of her insulin also said that if her BGLs (in mmol/L[22]) were recorded within the normal range of 14 and 20 mmol/L, additional doses of 4 units of pro re nata[23] (**PRN**) Novorapid[24] are to be administered, with a further unit if the BGL increased to more than 20mmol/L.

22. In addition to managing her diabetic condition, the management of Mrs Brindley's behaviour proved to be challenging at times. She regularly expressed her "desire" to be involved with determining her insulin regime as she was concerned about protecting *"the transplanted kidney and to keep her [blood sugar levels] BSLs as low as possible"*.[25] In

[17] Ibid. According to Dr Win in her statement, she was mainly responsible of Mrs Brindley's wound care and management.
[18] Ibid. Dr Win commenced attending to Mrs Brindley's care since May 2015, while Dr Greacen was away and eventually taken over as her usual GP.
[19] Blood glucose level (**BGL**) and blood sugar level (**BSL**) are used interchangeably in this Finding for the purpose of retaining the original wordings extracted from the evidence.
[20] At 7.30am, 11.30am, 4.30pm and 7.30pm.
[21] A basal Insulin.
[22] Millimoles per litre.
[23] Taken as needed.
[24] A rapid acting or short acting meal-time Insulin.
[25] CB, Statement of Dr Jane Greacen.

doing so, she regularly checked her BGLs using a talking glucometer and became *"aggressive and manipulative [towards staff] if she felt her BSLs were too high"*.[26]

23. Mrs Brindley was also unhappy with the quality and range of food provided to her and the residents. She told Dr Greacen that she would occasionally refuse the meals and sometimes *"would eat only an apple"*. Her daily BGL readings were erratic with increasing numbers of episodes of hypoglycaemia[27] as well as hypoglycaemic blackout.[28]

Circumstances in which the death occurred

24. On 7 December 2016, at 8.00am, Registered Nurse (**RN**) Davinder Kaur checked on Mrs Brindley and took her BGL, which was 20.0mmol/L, before breakfast. RN Kaur administered three units of Novorapid because of the high blood sugar reading and faxed the readings to Dr Win as she unable to reach Dr Win.

25. On the same morning, Graeme visited his mother at the facility. He recalled his mother being *"cognitive…was breathing, talking, conversing with no [visible] pain or detriment"*.

26. At 11.55am, Dr Win attended the facility and reviewed Mrs Brindley. Dr Win noted that her BGLs had some *"ups and downs"* and her Novorapid dosage was to be altered. Dr Win then scheduled an appointment for Mrs Brindley to see Dr Hayes for further diabetic treatment.

27. At 12.59pm, the progress notes recorded that staff made an appointment for Mrs Brindley to see Dr Hayes on 13 December 2016. A further entry at 1.03pm recorded that a telephone message about the appointment was left for Graeme after he had left the facility. There were no further records of BGL checks for the remainder of that day.

28. On 8 December 2016, RN Chipo Muvirimi noted Mrs Brindley's BGL at 8.30am was 25mmol/L, and she administered her usual long-acting insulin plus five units of Novorapid.

29. At 9.40am, Mrs Brindley's BGL was taken again. By this time, it was 31mmol/L and five units of Novorapid was administered. The RN attempted to contact Dr Hayes to discuss the reading but could not do so. The readings were faxed to Dr Hayes and another eight units of Novorapid was administered at 11.40am.

[26] Ibid.
[27] Especially in the early mornings.
[28] CB, Statement of Dr Jane Greacen.

30. Shortly after, Dr Hayes called the facility and ordered an increase of Levemir to 10 units twice daily[29] and Novorapid to five or eight units, according to Mrs Brindley's BGL.

31. At 2.00pm, Mrs Brindley's BGL was taken again, by this time it was more than 33mmol/L. A further check was also done with another machine to make sure it was not an error. Dr Win was contacted in relation to the high reading, and she ordered administration of another eight units of Novorapid, which happened at 2.50pm.

32. At 4.30pm and 7.30pm, Mrs Brindley's BGLs remained at more than 33mmol/L. An out-of-hours GP, Dr Mina Tadrous, was contacted. Dr Tadrous ordered RN Muvirimi to administer another eight units of Novorapid on each occasion and requested her to check Mrs Brindley's BGL at around 8.30pm.

33. At 9.20pm, Mrs Brindley's BGL remained at greater than 33mmol/L. Six units of Novorapid were administered as per Dr Tadrous' previous instruction. RN Leah Sinclair then contacted Dr Tadrous again to notify her of the readings. Dr Tadrous suggested that Mrs Brindley's persistent high readings would require an insulin infusion at Bairnsdale Hospital.

34. The progress notes recorded that Mrs Brindley *"refused to be transferred to the hospital"* when offered the option and instructed staff to *"keep her fluids up"*.

35. Later at 10.35pm, Mrs Brindley's BGL decreased slightly to 29.2mmol/L. RN Sinclair noted the reading as still being high and she was to be monitored continuously.

36. In the early hours of 9 December 2016, RN Sinclair observed Mrs Brindley sleeping comfortable overnight but noticed that she looked flushed when she was up toileting at 3.30am. The RN recorded her temperature as 36.7°C.

37. At 3.10pm, RN Muvirimi recorded that Mrs Brindley's BGL continued to be high, *"though at 0800 [am] it was 30.1[mmol/L]"* and she had been administered eight units of Novorapid on each occasion of BGL check at 8.00am, 11.00am and 2.00pm. Dr Win was contacted several times but was unable to be reached.

38. At 3.20pm, Dr Win returned the calls from the facility and requested that Mrs Brindley be transferred to an acute care setting. The progress notes recorded that Mrs Brindley again refused the transfer. Dr Win then ordered a full urine test and a blood ketone test.

[29] From 10 units in morning and 4 units in evening.

39. The urine test result was recorded as normal, accompanied by a note that Dr Win to be notified. There was, however, no record of blood ketones being tested or whether the urine samples included ketones.

40. At 5.00pm and 7.00pm, Mrs Brindley's BGLs were greater than 33.3mmol/L and additional eight units of Novorapid were administered during two respective checks. Dr Win was informed of the readings by telephone and requested the night duty RN to check Mrs Brindley's BGL after midnight, between 2.00am and 3.00am.

41. At around the same time, at 7.00pm, Mrs Brindley again refused transport to hospital when offered.

42. On 10 December 2016, at 3.39am, RN Sinclair recorded Mrs Brindley's BGL was greater than 33.3mmol/L at 2.55am and eight units of Novorapid was administered. She also noted that Mrs Brindley was unstable on her feet when and was assisted to the toilet earlier in the night.

43. At 4.05am, Mrs Brindley's BGL was taken again, by this time it remained at greater than 33.3mmol/L and she appeared tired and weak. There was no record of administration of insulin on this occasion.

44. At 6.45am, staff observed Mrs Brindley became lethargic and was mumbling, her BGL was noted to be greater than 33.3mmol/L and an ambulance was called. At 7.13am, RN Vicki Clarke left a voice message for Mrs Brindley's daughter-in-law to inform her of Mrs Brindley's hospital transport.

45. The subsequent progress note entry at 8.30am before Mr Brindley's hospital transport indicated her vitals were within their normal range: *"temperature 36.5, pulse 70, respiratory rate 18 and blood pressure 110/65"*.

46. At approximately 9.30am, Mrs Brindley was transferred by ambulance to Bairnsdale Hospital. Ambulance paramedics described her condition at the time of transfer as "critically unwell" and she appeared confused.

47. Upon admission, Mrs Brindley was found to have *"a BSL of 67[mmol/L], ketones 5.6, pH of 7 and bicarbonate of 7 with systolic hypotension"*, with a diagnosis *"severe ketoacidosis"*.

She was commenced on an Actarapid infusion and given 6 litres (L) of intravenous fluid, but her systolic blood pressure dropped to 70 mm Hg[30].

48. Due to the high complexity in managing Mrs Brindley's condition, her treating physicians decided to transfer her to the Critical Care Unit of Sale Hospital for further medical care and treatment.

49. Mrs Brindley remained hypotensive on admission to Sale Hospital with a blood pH of 7.19 and BGL of 40mmol/L. Despite active treatment and intensive care monitoring, her condition did not improve.

50. Following discussions with Graeme and treating physicians about Mrs Brindley's prognosis, a decision was made to cease all active treatment.

51. In the early hours of 11 December 2016, Mrs Brindley was redirected to comfort care. She passed away at 10.40am.

Identity of the deceased

52. On 11 December 2021, Beryl Eileen Brindley, born 28 September 1942, was visually identified by his son, Graeme Brindley.

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

Medical cause of death

54. On 21 December 2016, Senior Forensic Pathologist Dr Burke from the VFIM, conducted an autopsy on the body of Beryl Eileen Brindley. Dr Burke also reviewed a post-mortem computed tomography (**CT**) scan and referred to the Victoria Police Report of Death (Form 83), E-Medical Disposition Form, and nursing records from Opal Lakeview. Dr Burke provided a written report of his findings dated 19 January 2017.

55. The post-mortem examination revealed evidence of severe systemic vascular disease. There was ischaemic heart disease, cerebrovascular disease, and bilateral renal artery stenosis.

56. There was no evidence of any injury that would have contributed to or caused Mrs Brindley's death.

[30] Millimetres of mercury.

57. Toxicological analysis of post-mortem samples identified the presence of acetone, fentanyl, midazolam, sertraline, metoclopramide, and paracetamol.

58. Dr Burke ascribed the medical cause of death to 1 (a) diabetic ketoacidosis.

FAMILY CONCERNS

59. On 13 December 2016, Graeme wrote to the Court via electronic mail ("e-mail") to enquire if his mother's death was considered reportable. In the same e-mail, Graeme expressed his concerns about the management and care of his mother diabetic condition, given the severe and exacerbated nature of his mother's diabetic condition at the time of her hospital admission.

FURTHER INVESTIGATIONS

Aged Care Complaints Commissioner Investigation

60. Mrs Brindley's family also lodged a complaint against Domain Aged Care to the Aged Care Complaints Commissioner (**ACCC**). Specific concerns raised were that, between 7 and 10 December 2016:

    i. Mrs Brindley's next of kin was not informed of the changes in her health status and deteriorating condition and;
    ii. Opal Lakeview did not appropriately manage Mrs Brindley's diabetes, given her glucose levels were unstable and seriously elevated.

61. A *"Feedback on the Resolution Process"* report dated 5 July 2017 was later provided by the ACCC. ACCC acknowledged that it was evident from the records that between 7 and 10 December 2016, the staff at the facility monitored Mrs Brindley's BGLs in accordance with her medical directive and as recommended by her medical practitioners consulted in relation to her ongoing elevated BGLs.

62. Regarding the adequacy of communication, the ACCC found that the facility did not take sufficient action to ensure Mrs Brindley's family was made aware of the changes in her health condition and subsequent deterioration.

63. In light of the internal review and subsequent improvement actions undertaken by Domain Aged Care and the ongoing coronial investigation at the time, the ACCC concluded that it had ended its resolution process of the concerns raised. The ACCC also noted it is not within its scope to consider the management and care of Mrs Brindley's diabetic condition.

Adequacy of family communication

64. Given the ACCC's investigation, I considered that the issue of adequacy of communication by the facility with Mrs Brindley's family with respect to the state of her diabetic condition in the three days leading up to her hospital admission had been addressed and did not necessitate me to explore this concern further.

CPU REVIEW

65. As part of its review, the CPU considered three main issues. In the first instance, the medical care and management provided to Mrs Brindley concerning her diabetic condition, and secondly, the appropriateness of staff intervention and lastly whether her elevated BGLs had impaired her decisional capacity.

Overview of Mrs Brindley's diabetic management

66. The CPU noted that the overall management of Mrs Brindley's diabetes focused on a "tight" blood glucose control and may be unsafe for older people as such method put them at risk of hypoglycaemia and other associated risks. This is especially given that hypoglycemia has serious consequences and is associated with falls, short-term cognitive changes, or dementia. Elderly patients may not display the typical warning symptoms of hypoglycemia seen in other patients and consequently hypoglycemia can be missed, and treatment delayed.

67. Records from Domain Lakeview indicate that between 26 November and 7 December 2016, Mrs Brindley's BGL was recorded at more than 15mmol/L on four out of 54 occasions and was recorded at more than 4 mmol/L on five out of 54 occasions.

68. The CPU noted that while a BGL of between 4 and 15 mmol/L is a recommended safe range for most of older adults, specific blood glucose ranges and haemoglobin A1c[31] (HbA1c) targets should be personalised according to an individual's risk profile and life expectancy to better manage the BGL.

69. Overall, the CPU concluded the regime and targets utilised by medical and facility staff were appropriate and in keeping with current guidelines. They appear to have maintained good blood glucose control, as demonstrated by her HbA1c levels and blood glucose records.

Pre-hospital admission diabetic management

[31] HbA1c is a blood test that is used to help diagnose and monitor people with diabetes.

70. However, the CPU found that the management of Mrs Brindley's diabetes in the period proximate to her death was inadequate and not in keeping with a reasonable standard of care. In particular, the CPU noted that Mrs Brindley's persistently high BGLs between 7 to 10 December 2016 would commonly be regarded as a medical emergency. The CPU also noted that the blood glucose meter used at the facility is limited to readings of up to 33.3mmol/L indicating that Mrs Brindley's actual BGLs were likely to have been much higher than the maximum capable reading.

71. The CPU outlined that the only record in the progress notes of a medical practitioner attending Mrs Brindley was at 11:55am on 7 December 2016. Apart from recording that her BGL was fluctuating, there were no relevant observations taken and there was no comment upon Mrs Brindley's general condition or consideration of any other medical problems during this attendance.

Appropriateness of staff intervention

72. When asked to comment on whether Mrs Brindley should have been transferred to hospital the facility's manager, Janice Ford stated there were no were *"no doctor's orders or observations to the effect that Mrs Brindley was incompetent to under and make decision for herself"*, when asked to comment whether Mrs Brindley should have been transferred to a hospital on 8 December 2016.

73. Ms Ford further outlined that in the absence of such orders or observations, the facility relied upon the C*harter of Recipient's Rights and Responsibilities* to allow Mrs Brindley to maintain her independence and to accept responsibility for her actions and choices and to maintain control over her life.

74. The CPU noted there was no reference by Mrs Brindley in her advanced care plan that she was opposed to hospital admissions if required. The CPU commented that from a practical medical point of view, her advanced life care plan would not preclude treatments for extreme hyperglycaemia and its underlying cause. Necessary treatments in a hospital would be life-prolonging with a reasonable chance of recovery to her previous state of health, particularly if commenced early.

75. While Mrs Brindley's refusals to hospital admission were recorded in the progress notes, the CPU highlighted that there was no documentation of the detail of the discussion staff had with her. Particularly, how informed she was regarding the consequences of staying in the care of the facility and not receiving hospital treatment.

76. There was also no record of a doctor attending Mrs Brindley to personally assess her medical condition and to inform her of the need to go to hospital or the risks of not doing so.

77. Based on these factual findings, the CPU noted that there seemed to be no sense of urgency concerning Mrs Brindley's prolonged hyperglycaemia as this condition as such would ordinarily be considered a medical emergency.

Mrs Brindley's decisional capacity

78. The issue of the extent of Mrs Brindley's cognitive capacity to make decisions and the extent to which she would understand any advice given regarding whether she should be admitted to a hospital for further medical investigation was also an issue that was raised.

79. Dr Greacen believed that Mrs Brindley's judgement was diminished by her depression and stated that she did not want to be hospitalised *"as it reminded her of the death of her husband"*.[32] In contrast Dr Kay Win believed that Mrs Brindley was competent to make decisions regarding her care and treatment.[33]

80. Ms Ford states that a *"Cultural and Spiritual Assessment"* undertaken on 7 December 2016 indicated that Mrs Brindley had "no or minimal cognitive impairment".[34] It was unclear on the evidence during the investigation how such an assessment was carried out.

81. The CPU stated that it is difficult to appreciate how Dr Greacen came to her view, given there were no records of any physical observations, fluid balance or an assessment of Mrs Brindley's mental state.

82. The CPU found that Mrs Brindley's BGLs were recorded at more than 33.3mmol/L on the three occasions where she was advised to be admitted to a hospital.

83. The CPU stated that the persistently high blood glucose of this magnitude for a prolonged period of approximately 48 hours would likely affect the cognitive ability in an elderly adult with multiple co-morbidities, such as Mrs Brindley.

Proposed recommendations

[32] CB, Statement of Dr Jane Greacen.
[33] CB, Statement of Dr Kay Win.
[34] CB, Statement of Janice Ford.

84. In light of the circumstances surrounding Mrs Brindley's death, the CPU considered several potential areas in improving care and prevention when managing a diabetic resident such as Mrs Brindley in the RAC. They include:

i. Implementation of specific medical trainings on diabetes assessment, management, and appropriate response to a diabetic resident with uncontrolled hyperglycaemia.

ii. Implementation of accepted expert guidelines for the management of diabetes in an aged care setting, such as the utilising the *McKellar Guidelines for Managing Older People with Diabetes in Residential and Other Care Settings 2014*.

iii. Implement an improved diabetes chart for use in unwell diabetic residents to better incorporate all relevant information in one place to assist with maintaining an overview of treatment and response.

iv. Implementation of bedside testing for blood ketones as a means of better monitoring a sick diabetic.

v. Implementation of policies and guidelines to ensure medical assessment of medical and cognitive state in patients refusing to go to a hospital where there is no prior advanced care directive to the contrary

EXPERT OPINION

85. In furtherance of the views expressed in the CPU review, two expert reports were obtained by the Court from Dr Mark Kennedy and Professor Trisha Dunning, who provided their opinions on the appropriateness of care provided to Mrs Brindley in the period proximate to her death, particularly regarding the medical management of his elevated BGLs between 7 and 10 December 2016. They also provided comments and recommendations on how diabetic patients can be better managed in RAC facilities.

86. Dr Kennedy is a GP, Foundation Chair of the Primary Care Diabetes Society of Australia and a Foundation member of the Royal Australia College of General Practitioners (**RACGP**) Diabetes Specific Interest Group. He also published various articles on the care and management of older people with diabetes in aged care settings.

87. Professor Dunning is a published expert in diabetes care, particularly in the aged care setting. She co-authored the *McKellar Guideline*[35], a widely utilised diabetic care and management guideline in aged care settings.

88. Both Dr Kennedy and Professor Dunning, in summary, supported the concerns outlined in the CPU report. They identified a number of deficiencies in both personal practice and systemic issues.

Did Mrs Brindley receive the care she required?

89. Both Dr Kennedy and Professor Dunning stated that the overall level of care provided was inadequate. Professor Dunning further expressed concerns about the lack of knowledge and competence of care providers and inadequately trained staff.

90. Other issues identified by the experts concerning Mrs Brindley's care and management of her diabetic condition included:

(a) the obvious "large gaps" in the ongoing monitoring of Mrs Brindley's complex diabetic condition;

(b) No "sick day" plan was provided for Mrs Brindley; and

(c) No clear policies or guidelines were used to manage their diabetic residents as well as to determine and manage the staffing levels and skills of its staff.[36]

Mrs Brindley's medical and nursing records

91. Professor Dunning and Dr Kennedy's noted the progress notes, medical assessments, and management plans were inadequate in detail and volume. There was an absence of any detail relating to vital sign monitoring such as temperature, blood pressure and respiratory rate, something essential for the optimal care of a diabetic patient complicated by other significant comorbidities.[37]

92. Consequently, they could not determine whether there was sick day plan in place for Mrs Brindley. They also could not ascertain from the records whether strategies to manage diabetic residents at the facility were implemented, including the level of staffing mix.

[35] Dunning T, Duggan N, Savage S, *McKellar Guidelines for Managing Older People with Diabetes in Residential and Other Care Settings*. Geelong: Centre for Nursing and Allied Health, Deakin University and Barwon Health, 2014.
[36] CB, Expert Report by Dr Mark Kennedy; Expert Report by Professor Trisha Dunning.
[37] Ibid.

Sick day management

93. Sick day guidelines describe standard processes for managing diabetics during illnesses and apply to diabetics' self-care in the community, aged care facilities and correctional facilities. They support people and carers to act in the early stages of illnesses to prevent severe deterioration, hospitalisation, and death.

94. Sick day plan for Type I diabetes includes frequent blood glucose testing, a one to two hourly blood glucose testing or testing of urine ketones, maintaining fluid intake, continuing insulin, and increasing insulin doses, if necessary.[38]

95. Both Dr Kennedy and Professor Dunning noted Mrs Brindley's nursing records contained mostly recordings of her blood glucose range, there were no records of additional vital signs such as blood pressure, body temperature, patient fluid and dietary intake, hydration status, fluid balance charts and records of observation of cognitive status.[39]

96. Professor Dunning suggested that nursing staff might be benefitted if standard sick day guidelines were implemented. She stated in that way Mrs Brindley's ketoacidosis *"may have been remediable"* if staff were able to recognise in advance the significance of the persistent hyperglycaemia and accompanying symptoms.[40] An early transfer to a hospital could then be arranged.[41]

97. Dr Kennedy noted that there was no blood ketone measurement at any stage throughout that period. He noted further from the nursing notes that while a urinary ketone test was conducted, there was no evidence of a urinalysis chart to support the conduct of such a test.

98. Although Dr Win's recommendation for requesting a blood ketone testing was consistent with most guidelines for managing ketoacidosis, Dr Kennedy noted that the results were seemingly not followed up to ensure whether Mrs Brindley was in ketoacidosis.

99. Noting Mrs Brindley had a clear pattern of increasing blood glucose, which could indicate deterioration Professor Dunning commented that it is vital for nursing staff to monitor the emerging blood glucose and ketone pattern rather than reacting to individual blood glucose test.[42] She highlighted that Mrs Brindley's GPs and the out-of-hours GP may not have

[38] Ibid.
[39] CB, Expert Report by Dr Mark Kennedy; Expert Report by Professor Trisha Dunning.
[40] CB, Expert Report by Professor Trisha Dunning.
[41] Ibid.
[42] Ibid.

recognised the emerging pattern of deterioration, given they were only informed about one or more blood glucose levels outside the reportable range.[43]

Policies and guidelines in managing diabetic residents

100. Upon reviewing all of the available evidence, Dr Kennedy and Professor Dunning noted it was unclear if the facility used any diabetic care guidelines to manage their diabetic residents and hyperglycaemia. It was also unclear if the facility has a policy that provides for staffing levels and qualifications.

101. Dr Kennedy noted further that although the facility may appear to have covered many facets of diabetes management, the actual recordings did not reflect the same.

Advance care planning

102. Regarding the utility of an Advance Care Directive (**ACD**) for a diabetic resident, Dr Kennedy and Professor Dunning commented that as part of the sick day plan, a directive could provide clear and tailored instructions of care and treatment when a person lacks decisional capacity in medical emergencies

103. Mrs Brindley's *Statement of Choice* signed in May 2016 did not appear to have been tailored specifically to her diabetic condition, instead it was a care plan documenting her preference to be resuscitated if she was likely to return to her usual status.

104. Neither Dr Kennedy nor Professor Dunning was critical of the facility having the conversation with Mrs Brindley when she first entered the facility in 2012. Professor Dunning said she believed an ACD helps health care professionals to decide when to escalate care and help the family to informed decisions as to further medical treatment.[44]

Mrs Brindley's cognitive capacity

105. Both Dr Kennedy and Professor Dunning were of the opinion that Mrs Brindley decisional capacity was impaired and that she lacked the capacity to determine for her own welfare when she refused hospital transfer given her persistently elevated BGLs.[45]

106. Dr Kennedy and Professor Dunning explained in their respective reports that while experiencing hyperglycaemia, one will develop *"[an] altered state of consciousness"* and

[43] Ibid.
[44] CB, Expert Report by Dr Mark Kennedy; Expert Report by Professor Trisha Dunning.
[45] Ibid.

develop further complications such as dehydration.[46] Dehydration can also *"contribute to delirium and cognitive changes"* and *"affect problem-solving and decisional capacity"*.[47]

107. They noted further that medical studies have indicated that delayed cognitive performance and motor functions, and that increasing decisional errors are demonstrable from blood glucose levels as low as 15 mmol/L or more.

Conclusion

108. Having regard to Mrs Brindley's medical condition and the circumstance surrounding her deterioration, the Court appointed experts considered there to be areas where provisions of care and documentation of management and care could be improved.

109. While both experts acknowledge the challenges of managing diabetic residents in RAC facilities, they noted these challenges can be overcome by appropriate management protocols, effective record-keeping, and excellent communication between facility staff, treating health practitioners and families.

110. Professor Dunning noted that following Mrs Brindley's death, Opal Aged Care has taken subsequent actions. The changes implemented included staff education, a review of the rosters and plans to employ a permanent registered nurse responsible for diabetes care plans.

DIRECTION HEARING

111. A Direction Hearing was held on 7 November 2019, in order to progress my investigation and enable parties to raise further matters that might warrant the holding of an Inquest, or an In-Chambers Finding, given my investigation, thus far, had essentially identified that the standard of care and management provided to Mrs Brindley was inadequate and arose from systemic issues.

112. I was assisted by my then solicitor, Hayley Challender. Julia Frederico of Counsel appeared on behalf of Domain Aged Care while Mrs Brindley's son, Graeme, was present in court without appointing a Counsel for representation. Dr Win was informed of the holding of the Direction Hearing and did not make an appearance herself or by a legal representative.

[46] Ibid.
[47] Ibid.

113. At the Direction Hearing, I indicated that I believe I had sufficient evidence to finalise my investigation without proceeding to obtain further evidence at a public hearing, subject to hearing from Domain Aged Care and the GPs as to whether they accept the views expressed in the CPU review and the opinions of the two experts or whether they wish to provide any evidence to the contrary.

114. Ms Frederico submitted that Domain Aged Care was interested in assisting me in exploring the subsequent actions done in respect of the management and care of diabetic residents in its facilities and how these changes should prevent similar deaths such as Mrs Brindley's.[48] Ms Frederico also submitted that her client had no intention of obtaining their own expert opinion contrary to my view and hence, indicated Domain Aged Care has no specific preference of proceeding this matter to an Inquest.[49]

115. I indicated to Ms Frederico that I anticipated Domain Aged Care to put further evidence of restorative and preventative measures implemented in writing by way of a written submission.

116. I then concluded at the Direction Hearing that the available evidence enabled me to finalise the matter by means of an In-Chambers Finding, subject to the receipt of the concessions and submissions.

POST DIRECTION HEARING

Domain Aged Care response

117. On 12 December 2019, the Court received a written submission and concession from on behalf of Domain Aged Care.

118. Domain Aged Care conceded that it did not appropriately manage Mrs Brindley's unstable and elevated BGLs between 7 and 10 December 2016 and stated it has accepted the clinical evidence as to Mrs Brindley's competence to refuse a hospital transfer. As such, Domain Aged Care also conceded that a hospital transfer should have been better initiated earlier, and there should have been better communication concerning Mrs Brindley's deterioration.

[48] Court File (CF), Mention Hearing Transcript.
[49] Ibid.

119. In relation to the CPU's proposed recommendations[50] and the experts' opinion, Domain Aged Care advised that it has implemented a series of systemic enhancements and improvements to the facility and across its RAC facilities.

120. Without detailing the particulars of each enhancement and improvement, they overall addressed the identified issues in the expert reports by:

- Optimising the care that it provides to its diabetic residents, including identifying clinical deterioration, escalating deteriorating residents' care, and recognising declining competence;
- Better communicate with the family of residents regarding changes in residents' condition; and
- Encourage the completion of an Advanced Care Plan to help guide staff in determining whether and when to transfer residents to a hospital in the absence of informed consent to do so.

121. Notably, in relation to the identification and care of deteriorating residents, Domain Aged Care advised that it has taken the following initiatives across its RAC facilities, including Lakeview:

(i) The implementation of a modified Between-the-Flags (**BTF**) framework, which is known as "*Escalation Protocol– Recognition of a Deteriorating Resident"*, that expressly links abnormal blood glucose levels and reduced cognition to a clinical escalation pathway and the need to contact residents' representatives;

(ii) Procuring bespoke alterations to Domain's care software to identify abnormal blood glucose readings and send immediate automatic notifications of same to care managers for appropriate clinical escalation,

(iii) The implementation of an updated *Clinical Care Policy* that incorporates materials aspect of the *McKellar Guidelines* around managing of severe hyperglycaemia.

(iv) Implement a revised Specialised Nursing Care Policy that provides for sick day management.

(v) Ongoing education and an escalation protocol that includes BGL ranges and escalation protocol.

[50] As mentioned earlier in paragraph 84.

122. In detailing these initiatives, I acknowledge Domain Aged Care has also provided me with evidence of the implementation of the policies by way of annexures to its written submission.

123. Given Dr Win's absence from the Direction Hearing and to allow her an opportunity to be heard in anticipation of the adverse comments and recommendations previously identified, I determined to seek an additional statement from Dr Win.

124. In August 2020[51], the Court received an additional statement from Dr Win's legal representative on behalf of Dr Win.

125. Dr Win's statement mainly addressed the discrepancy in the evidence of medical care various GPs provided to Mrs Brindley concerning her diabetic condition. Dr Win stated she was responsible for providing Mrs Brindley ad hoc medical care whereas, Dr Hayes was responsible of Mrs Brindley's diabetic management plan.

COMMENTS

Pursuant to section 67(3) of the Act, I make the following comments connected with the death.

1. In her statement provided to the Court, Dr Greacen acknowledged that Mrs Brindley's diabetic condition was complex and that the care and services provided by Opal Lakeview at the time of Mrs Brindley's residency were lacking. Dr Greacen explained such a concern was made known to Mrs Brindley who was advised to transfer to another RAC facility with *"more appropriate services"*.

2. Moreover, Dr Greacen noted that during her professional involvement with Opal Lakeview, there was a frequent turnover of nursing and management staff. The information systems at the facility were "complex" and which Dr Greacen stated her colleagues at the CAMC and herself found it *"difficult to work with Opal Lakeview"*.

3. As well, there was the issue of Mrs Brindley's refusal to be transferred to the hospital on three occasions. In part, there was likely a lack of appreciation on Mrs Brindley's part of the severity of her high BGLs and how adverse this could be to her wellbeing without specialised medical attention.

[51] The Court has spent considerable time locating Dr Win, who had moved her practice elsewhere soon after Mrs Brindley's death.

4. Regarding Mrs Brindley's refusal of a hospital transfer, it was not limited to an irrational fear she had about her husband's death. As discussed by the experts, a person with BGL as high as 15mmol/L would display effects of delayed cognitive performance and motor functions and increasing decisional errors. There is clear and cogent evidence available that that Mrs Brindley lacked decisional capacity on every occasion she refused a hospital transfer.

5. In most RAC-related adverse events investigated by the Court, there were usually a combination of system error and human oversights. It is evident that in this matter poor communication, poor documentation, and a lack of safeguards in decision-making resulted in a number of missed opportunities to diagnose the deterioration in condition being suffered by Mrs Brindley.

6. Having regard to the changes made by Domain Aged Care, I am not minded to making any recommendations for changes to guidelines and policies adopted by the RAC facilities across its portfolio. Guidelines and policies are essential and provide accountability and uniformity of practice to assist staff, and health care professionals make safe decisions. Guidelines and policies do not provide a guarantee that they will be able to address every scenario that may arise with all its residents.

7. Of more importance are the clinical decisions made by appropriately skilled staff and health care professionals, which relates pivotally to their experience and training. In that respect, I note the evidence of Professor Dunning, who was supportive of the changes made by Domain Aged Care shortly after Mrs Brindley's demise in 2017, in particular, focusing on staff education and staffing level.

8. In her report, Professor Dunning commented that *"Mrs Brindley's story highlights a wider issue in residential aged care"* and further highlighted a recurring theme of concern across all RAC facilities:

   "There is global evidence that safety and quality in aged care varies considerably…older people in aged care homes are some of the most vulnerable care recipients in all countries and have complex needs that are compromised by lack of knowledge and competence of care providers".

9. Professor Dunning informed me that the two key areas, namely the "governance processes" and "education and competence", need to be addressed at a RAC facility level to improve the quality and safety of specialised care, particularly diabetes care.

10. In that respect, I considered that since Mrs Brindley's death in 2016, there were significant governmental and other aged care sector related initiatives taken to improve the Aged Care Quality Standards and address the shortcoming in aged care in relation to staff training needs to be specialised.

11. Taking into consideration the recent recommendations by the Royal Commission into Aged Quality and Safety[52] and the latest Government's Response[53], I am also not minded any recommendations to the Department of Health and Ageing and Safer Care Victoria.[54]

12. I endorse the recommendations and comments made in my recent Finding of my investigation into the death Philip Charles Hodges[55] as they are relevant to the circumstances of this matter.

FINDINGS

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

    a) the identity of the deceased was Beryl Eileen Brindley, born 28 September 1942;

    b) the death occurred on 11 December 2016 at Sale Hospital, 155 Guthridge Parade, Sale, Victoria, 3850;

    c) I accept and adopt the medical cause of death ascribed by Dr Michael Philip Burke and, I find that Beryl Eileen Brindley, a woman with a medical history of type I diabetes mellitus, died from diabetic ketoacidosis.

2. AND although the available evidence does not enable me to make a Finding as to whether an earlier medical review and intensive treatment would have prevented Beryl Eileen Brindley's death, on the evidence available to me, I find that earlier proactive intervention and diagnosis of ketoacidosis would have afforded her the opportunity of a better outcome.

I convey my sincere condolences to Mrs Brindley's family and friends for their loss.

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[52] Royal Commission into Aged Care Quality and Safety, *Final Report: Care, Dignity and Respect*, 1 March 2021. https://agedcare.royalcommission.gov.au/publications/final-report

[53] Australian Government Department of Health, *Australian Government Response to the Final Report of the Royal Commission into Aged Care Quality and Safety*, May 2021. https://www.health.gov.au/resources/publications/australian-government-response-to-the-final-report-of-the-royal-commission-into-aged-care-quality-and-safety

[54] See my *Comments* in the *Finding into the Death without Inquest of Philip Charles Hodges*, COR 2017 1781. I have discussed and outlined extensively, the standing initiatives and processes by multiple governmental agencies in developing specific clinical standards to address common clinical risks.

[55] Ibid.

Having regard to the potential educative value of this Finding for the wider community, but in particular, the Aged Care sector, pursuant to section 73(1A) of the Act, I order that this finding be published on the internet in accordance with the rules.

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

Graeme Brindley

Ingrid Nunnink, Gilchrist Connell, Lawyers for Dr Kay Win

John Makris, Kingston Reid, Lawyers for Domain Aged Care (Victoria) Pty Ltd

Director—Regulatory Policy, Australian Aged Care Quality Agency

Aged Care Complaints Commissioner

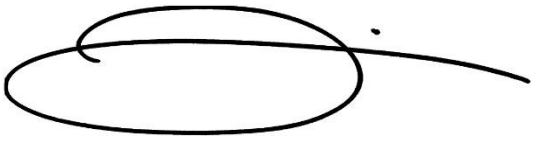
Chief Clinical Advisor, National Commission of Aged Care Quality and Safety

Chief Allied Health Officer, Safer Care Victoria

Australian Government Minister for Health, the Honourable Mark Butler, MP

Senior Constable Christopher Skiba, Coroner's Investigator, Victoria Police

Signature:



AUDREY JAMIESON

CORONER

Date: 14 October 2022

NOTE: Under section 83 of the ***Coroners Act 2008*** ('the Act'), a person with sufficient interest in an investigation may appeal to the Trial Division of the Supreme Court against the findings of a coroner in respect of a death after an investigation. An appeal must be made within 6 months after

the day on which the determination is made, unless the Supreme Court grants leave to appeal out of time under section 86 of the Act.