



IN THE CORONERS COURT
OF VICTORIA
AT MELBOURNE

COR 2020 005492

FINDING INTO DEATH WITHOUT INQUEST

Form 38 Rule 63(2)

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

Findings of:	AUDREY JAMIESON, Coroner
Deceased:	Veronica Lesley Roberts
Date of birth:	23 December 1944
Date of death:	5 October 2020
Cause of death:	1(a) Ischaemic heart disease in the setting of unstable type 2 diabetes mellitus and a recent insulin administration error
Place of death:	Peninsula Health, The Mornington Centre, 24 Separation Street, Mornington, Victoria, 3931

INTRODUCTION

1. On 5 October 2020, Veronica Lesley Roberts was 75 years old when she died at the Mornington Centre, Peninsula Health, following a medication administration error. At the time of her death, Veronica lived in Somerville with her husband, James.
2. Veronica's medical history included ischaemic heart disease, NSTEMI¹, systolic heart failure, peripheral vascular disease, iron deficiency anaemia, chronic kidney disease and type 2 diabetes mellitus, which was poorly controlled.

THE CORONIAL INVESTIGATION

Report of death to the Coroner

3. On the morning of 5 October 2021, a clinician from Peninsula Health called Coronial Admissions and Enquiries (CAE) at the Victorian Institute of Forensic Medicine (VIFM) to enquire as to whether Veronica's death was reportable². The caller advised that Veronica had died following a medication error, but they did not feel that the error had contributed to the death and considered that the most likely cause was an ischaemic event. Following a discussion with Forensic Pathologist Dr Joanna Glengarry and noting that Veronica's blood sugar was normal at 2am and she had normal mentation at 5am, the CAE advised that the death was not reportable.³
4. Subsequently, a Medical Certificate of Cause of Death was issued listing Veronica's cause of death as ischaemic heart disease and type 2 diabetes mellitus with the contributing conditions of hypertension and chronic kidney disease.⁴
5. On the evening of 5 October 2020, following a discussion Veronica's son, Lloyd Roberts, geriatrician Dr Ziqiu Ming called CAE to discuss the circumstances of her death. Dr Ming noted that he agreed with the initial reporting doctor's opinion that the drug administration error did not contribute to the death, and the death was due to natural causes. He was advised that the death was not considered reportable.⁵

¹ NSTEMI is a Non-ST elevation myocardial infarction.

² 'Reportable death' is defined in section 4 of the *Coroners Act 2008* (Vic) and includes deaths that appear to have been unexpected, unnatural or violent or to have resulted, directly or indirectly, from accident or injury.

³ VIFM contact log, entry dated 5 October 2020, 10:42.

⁴ Medical Certificate of Cause of Death, dated 5 October 2020.

⁵ VIFM contact log, entry dated 5 October 2020, 17:13.

6. On 6 October 2020, Lloyd submitted concerns of care to the Court, in which he requested that the Court investigate her death as a reportable death.⁶
7. On 18 October 2020, based on Lloyd's concerns and the preliminary advice of Forensic Pathologist Dr Melanie Archer from the VIFM, Coroner Darren Bracken resolved to investigate the death as a reportable death. He did not require the body to be transferred to VIFM as he did not deem a physical examination of the body to be necessary in order to investigate the root cause of the medication error.

Purpose of the coronial jurisdiction

8. 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.
9. 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.
10. Veronica's death was initially investigated by Coroner Darren Bracken. I assumed carriage of the investigation in November 2021 for the purposes of further investigation and making findings.
11. This finding draws on the totality of the coronial investigation into the death of Veronica Lesley Roberts. 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.⁷

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

Circumstances in which the death occurred

⁶ These concerns will be expanded on further under the heading 'Family Concerns'.

⁷ 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.

12. On 24 August 2020, Veronica was found on the floor by James, who called emergency services. She had been unwell for the prior two days with vomiting. She was conveyed by ambulance to the Frankston Hospital, where she was diagnosed with hyperglycaemic hyperosmolar state and found to have a non-ST elevation myocardial infarction, urinary tract infection and acute kidney injury.
13. Veronica's clinical course was further complicated by delirium. After four days in the Intensive Care Unit, she was stabilised and moved to the acute ward.
14. Veronica was receiving 15 units of Glargine⁸ insulin each morning. Her blood sugar levels (**BSL**) were labile during her admission, between 6 and 27 mmol/L, and she experienced episodes of hypoglycaemia. The difficulty with BSL control was considered to be related to her noncompliance with medication and poor oral intake.⁹
15. On 22 September 2020, Veronica was transferred from Frankston Hospital to the Mornington Centre¹⁰ due for ongoing management, resolution of delirium and discharge planning. The medical records indicate that at times, Veronica refused blood tests, medications, food and insulin.
16. Veronica's BSL was consistently elevated for a few days prior to 4 October 2020. At 1:36pm on 4 October 2020, Veronica's insulin was increased to 20 units mane (in the morning). This was inputted into Cerner, the Electronic Medical Record (**EMR**) used by Peninsula Health.
17. At 2:30pm, 20 units of insulin were administered to Veronica, in addition to the 15 units that were administered that morning. At 9pm, her BSL was 16.8 mmol/L.
18. At 2am on 5 October 2020, Veronica's BSL was 6.2 mmol/L and she was provided a drink of thickened cordial. At 5am, staff attended and provided her with personal care. She was 'alert and talking to staff'.

⁸ Glargine or Lantus insulin has a prolonged duration of action, therefore is only prescribed as a daily dose and administered at the same time.

⁹ Peninsula Health medical records, p 944.

¹⁰ The Mornington Centre is a purpose built 90-bed geriatric evaluation and management unit.

19. At 6:40am, Veronica was found unresponsive in her bed. The medical record states ‘nil pulse detected, BGL at this time 1.8’¹¹. Resuscitation was not attempted¹² and Veronica was declared deceased.

Identity of the deceased

20. On 5 October 2020, Veronica Lesley Roberts, born 23 December 1944, was visually identified by her son, Lloyd Roberts, who completed a Statement of Identification.
21. Identity is not in dispute and requires no further investigation.

Medical cause of death

22. Forensic Pathologist Dr Melanie Archer from the VIFM examined the circumstances surrounding the death of Veronica Roberts on 16 October 2020 and provided a written report of her findings dated 11 November 2020. In doing so, Dr Archer considered the Medical Certificate of Cause of Death, medical records from Peninsula Health, concerns submitted by Lloyd Roberts and the Victoria Police Report of Death (Form 83).
23. Dr Archer provided a summary of the circumstances in which Veronica’s death occurred, as outlined above. She noted that there were no ante mortem toxicology samples available from Peninsula Health for analysis.
24. Dr Archer provided an opinion that the medical cause of death was 1 (a) ISCHAEMIC HEART DISEASE IN THE SETTING OF UNSTABLE TYPE 2 DIABETES MELLITUS AND A RECENT INSULIN ADMINISTRATION ERROR.
25. In a statement to the Court, Dr Ming disagreed with Dr Archer’s description of the incident and cause of death, though he qualified this by saying he believed commenting on the findings of a Forensic Pathologist was outside the scope of his role as a geriatrician.

¹¹ Peninsula Health medical records, p 1055 - 1056.

¹² Veronica’s resuscitation plan dated 22 September 2020 stated ‘*NOT for CPR (cardiopulmonary resuscitation) or intubation – Not for code Blue, For MET Call*’. This plan had been discussed and agreed upon with her family.

26. Dr Ming commented that they were unable to confirm or exclude the contribution of hypoglycaemia to Veronica's death, as the finger prick test with the BSL result of 1.8 was likely conducted post mortem. She had a normal BSL at 2am on 5 October 2020, and was alert and talking to staff at 5am, around 1.5 hours before her death. He noted that Glargine insulin has a steady distribution rate.

FAMILY CONCERNS

27. In requesting the Coroner investigate the death of his mother, Lloyd Roberts outlined concerns related to the administration of the extra insulin dose on the afternoon of 4 October 2020 and noted that this appeared to at least be a potential precipitant to her death. Lloyd provided his qualifications and identified that he was an intensive care specialist.

28. Lloyd's concerns included, *inter alia*:

- There may have been an error in writing the new Glargine dose for the incorrect start date, and the systems which would have otherwise caught his error failed.
- The nurse administering the second dose of Glargine would likely not have been aware of the earlier dose, due to the manner in which the Cerner electronic medication charting system is set out.
- Cerner is used at multiple other Victorian hospitals and thus the contributing factors and issues that relate to the use of that system are broader than just at Peninsula Health.

29. He stated '*It is uncertain whether the drug error which I understand preceded her death was the proximate cause, but I would hope that coronial investigation would help ensure that systems changes are actioned at Peninsula Health to reasonably prevent their recurrence affecting other patients and families.*'

REVIEW OF CARE

Internal review

30. Associate Professor Shyaman Menon, Executive Director of Medical Services and Clinical Governance at Peninsula Health, provided a statement explaining the health service's response to the incident.

31. Peninsula Health met with Veronica's family on 5 October 2020. The events surrounding her death and the medication error were discussed, and her family requested that the administration of the second dose of insulin on 4 October 2020 be formally reviewed.
32. On 20 December 2020 Peninsula Health commenced an In Depth Case Review (**IDCR**).
33. The sequence of events leading to the medication error was identified as follows:
- At 8:11am on 4 October 2020, Veronica was administered 15 units of insulin as per her order.
 - At 1:56pm, her dose was changed to 20 units 24-hourly. The intent was to start the 20-unit dose on 5 October, but the first dose date and time was not updated in Cerner. The use of an "hourly" type frequency¹³ meant the first dose was rounded to 2pm, 4 minutes after the order was placed.
 - The medical officer placing the order thought she had made an adjustment for the dose to appear the following day. When a 24-hourly screen order comes up, staff must scroll down to see the date and time. Staff must "refresh" Cerner after any medication actions to confirm the changes have come through as intended.
 - At 2:27pm, Veronica was administered 20 units of insulin. The Early Medication Warning alert in Cerner was triggered but was overridden.
 - The nurse administering this dose documented overriding the alert as 'as per doctor'. However, the doctor reported that no one had confirmed the second dose with her.
34. The IDCR identified staff knowledge/skills, alarm fatigue, Veronica's medical history and policy/guidelines not having been followed as contributing factors to the incident.

¹³ It was unclear why an "hourly" frequency was used as the default sequences available in Cerner do not suggest its use, but the IDCR considered that it may have been prescribed this way initially and continued to be "copied" or "cancelled/reordered" to generate subsequent orders.

35. The IDCR panel considered the most likely scenario was that the medical officer making the 20-unit order had likely used a “cancel/reorder” action in Cerner to place the new order. They may not have known that they were required to “refresh” the order and review it to ensure it was saved correctly. Failure to do so was a missed opportunity to identify the error.
36. Members of the IDCR panel were anecdotally aware of other occasions where this had been an issue. However, it was noted that this is difficult to quantify as the errors were often picked up by staff before the error was made, and the order subsequently altered.
37. With regard to the overriding of the Early Medication Warning alert, the IDCR panel noted that two nurses administered the second dose of insulin, one of whom was involved in the administration of the first dose. The nurses could not recall who had overridden the alert, and the nurse involved in administering the first dose did not question the additional dose.

Factors contributing to medication error

38. There was certainly an element of human error in this case. Having considered the concerns raised by Veronica’s son, I determined to investigate further the context in which this human error occurred – that is, did the use of the Cerner EMR create an environment in which errors were more prone to occur?
39. At my request, a comprehensive statement was provided by Hy Ke Lim, Director of Digital Health Applications at Peninsula Health.¹⁴ Mr Lim described the use of the Cerner EMR with regard to medication administration and included screenshots of Veronica’s medication chart.
40. Mr Lim noted that the insulin administered at 8:11am would have been readily available on screen for review. Medications are sorted alphabetically with active and inactive medications viewable together, and there is no need to scroll to match active and inactive medications. Inactive or complete medications appear in grey, where active medications display in colour.

¹⁴ Statement of Hy Ke Lim, dated 8 November 2022.

41. The below screenshot shows Veronica's insulin orders.¹⁵ The screenshot suggests that the new, 20-unit dose of insulin would have appeared directly below the prior, 15-unit dose that had been administered that morning.

Time View	5/10/2020 0000 - 2359	4/10/2020 0000 AEST - 2359 AEDT	3/10/2020 0000 - 2359
insulin aspart (novoRAPID FlexPen) 4 unit(s), Subcutaneous, Disposable Pen, midday, First dose 26/09/2020 12:00:00			
insulin glargine (Optisulin) 15 unit(s), Subcutaneous, Cartridge, 24 hourly, First dose 30/09/2020 09:00:00		15 unit(s) @0811	15 unit(s) @0837
			↑ Blood Glucose, Capillary - Non Lab: 19
insulin glargine (Optisulin) 20 unit(s), Subcutaneous, Cartridge, 24 hourly, First dose 04/10/2020 14:00:00		20 unit(s) @1427	

42. While the descriptions and screenshots provided by Mr Lim appear clear to me, I accept that the layout of the Cerner EMR must be to some level unclear in practice, given not only the concerns raised by Lloyd, himself a medical professional, but also the fact that an error did occur in this case. I also note the anecdotes raised at the IDCR indicating this had been a prior issue at Peninsula Health.

Failure to identify that two doses of insulin was inappropriate

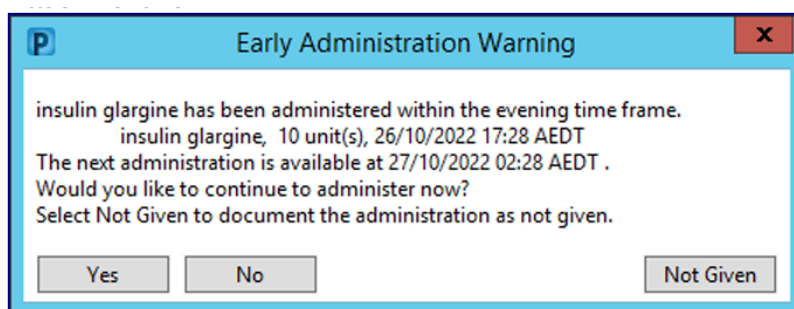
43. The nurses administering the second dose of insulin appeared to have not properly read the electronic medication chart which showed the previous dose having been administered at 8:11am. Or, if they had read the chart, they did not question why Veronica was to receive a second dose that same day.
44. The same nurse was involved in the administration of both doses of insulin. I am unable to speculate as to why they did not question the additional dose but note that there are a variety of factors at play in a busy hospital setting including knowledge factors such as a potential lack of medication knowledge, personal factors including complacency and fatigue and context factors such as heavy workloads and interruptions.

Overriding of Early Administration Warning

45. The Early Administration Warning pop up was also overridden. Alarm fatigue occurs where clinicians are exposed to numerous and frequent safety alerts and as a result become desensitised to them and I accept the finding of the IDCR that this was a contributing factor.

¹⁵ Both doses are pictured in grey as they are now inactive or complete.

46. Without discounting the very real effect of alarm fatigue, it remains that the Early Administration Warning was, in this case, one of the last avenues to prevent the medication error, after the medication order had been placed for the wrong frequency and the nurses had not picked up on the fact that insulin had already been administered that day. Because of this, I cannot suspend all criticism for the decision, whether conscious or not, to override the alert.
47. The below screenshot is an example of the Early Administration Warning. In this instance, a nurse would have clicked “Yes” and given the reason for doing so as “as per doctor”.



Use of 24-hourly order to prescribe

48. The medical officer prescribing the 20-unit dose of insulin thought they had made an adjustment for the dose to appear the following day when placing the order. As identified in the IDCS, they did not “refresh” the screen after they had done so and scroll down to confirm the date and time for the dose. Although the direction to ‘refresh’ the EMR screen is included in Peninsula Health’s medication management policy, I consider the fact that the medical officer did not do this to be more so a function/downfall of the Cerner system rather than a case of human error.
49. Whilst it may be only one click of a button, it seems cumbersome in such a busy and hectic environment as a hospital to require clinicians to remember to refresh a screen in order to see if an error has been made, rather than have it be easily visible as and when they are placing the order.

Restorative measures

50. Dr Ming provided a statement in which he advised of some of measures in place at the time of Veronica’s death, to prevent prescribing and administration errors with regard to APINCH medications. In the Australian acute healthcare sector, high-risk medicines are commonly classified using the ‘APINCH’ acronym:

- A** Antimicrobials
- P** Potassium and other electrolytes
- I** Insulin
- N** Narcotics (opioids) and other sedatives
- C** Chemotherapeutic agents
- H** Heparin and other anticoagulants

51. Those existing measures/controls included

- *The use of Cerner electronic medication management, including order sentences to promote safe prescribing*
- *The use of insulin trade names when prescribing to reduce the potential for prescribing and administration errors*
- *Medication reconciliation on admission and transitions of care (by pharmacist)*
- *Prioritisation of medication reconciliation for patients who fulfil “high risk” criteria (including APINCH)*
- *Incident management system and monitoring of medication incidents*

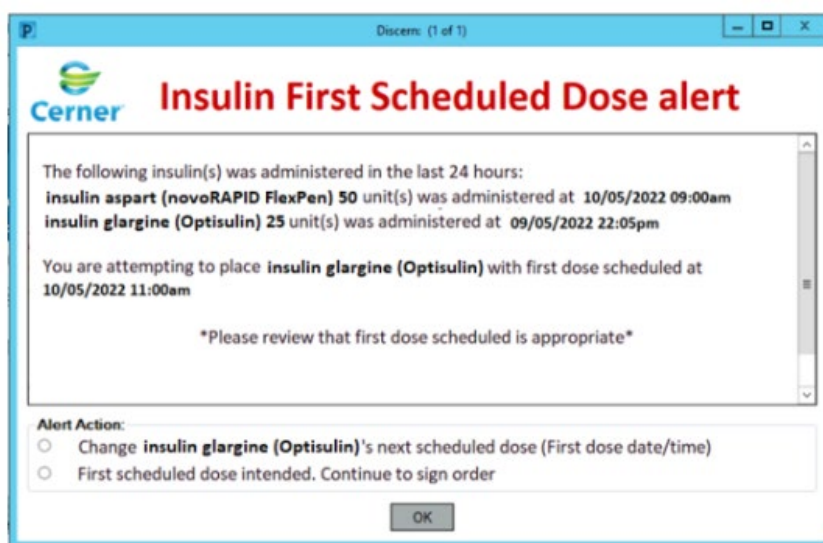
52. And, with regard to insulin specifically, a pop-up alert to prompt prescribers to review the dose of insulin when more than 50units are prescribed

53. In response to the incident, the IDCR developed recommendations that I consider would assist in preventing the occurrence of like-incidents. The recommendations arising from the IDCR were:

- a) *Incorporate learning from this incident into the revision of the Medication Error Prevention program.*
- b) *Develop this incident into a case study for use in education and training.*
- c) *Explore the use of an alert for the prescriber if the first dose lands in the minimum interval for a 24-hourly order.*
- d) *Request Cerner review a previous recommendation submitted by Peninsula Health to make use of the minimum interval at the point of ordering medications and provide a summary of this incident as supporting evidence.*

e) *Create video learning modules for prescribing and administration of medications.*

54. I have been advised that recommendations (a), (b) and (e) have been actioned. Recommendations (c) and (d) remain outstanding.
55. Mr Lim advised that Peninsula Health had undertaken feasibility for the use of alert if the first dose lands in the minimum interval for a 24-hourly order, per recommendation (c).
56. Original feasibility studies explored whether a pop-up alert could be developed for any medication being ordered, where prescribers will be alerted if the 'first dose date/time' falls within the minimum interval of a previous dose of the same medication. The original design was found to be too taxing on the system resulting in performance degradation.
57. Two possible approaches then followed:
- A generic insulin alert - At the point of signing a new insulin order, display an alert listing all insulins administered in the last 24 hours (minimum interval periods are not assessed)
 - A specific insulin alert - At the point of signing a new insulin order, display an alert if the same insulin has already been administered, and the new insulin order is scheduled to start within the minimum interval of the already administered dose(s).
58. Following consultation, a generic insulin alert was developed and went live in September 2022. The pop-up alert similar to the one shown below would appear when any insulin was charted, and there had been an administration of an insulin in the prior 24 hours.



59. However, the Endocrinology team expressed concerns that the alert may distract prescribers, lead to confusion and increase hesitancy in prescribing insulin. Subsequent consultation revealed perceptions that the alert would contribute to alarm fatigue and a risk of diminishing awareness and vigilance when charting other high-risk medications without an alert.
60. The pop-up alert has since been removed and IDCR action to explore the introduction of the same has been closed.
61. Mr Lim advised that on 29 October 2015 he raised with Cerner an idea for the system to make use of built in “minimum interval” periods to adjust the “first dose date/time”. This idea was declined by Cerner and placed in a “Not planned” status.
62. Following recommendation (d) of the IDCR, Mr Lim logged a new idea with Cerner on 6 May 2021. This idea was *for the system to warn clinicians if the First dose date/time of a new medication order lands within the minimum interval of the last time the same medication was administered*. This idea remains open for discussion and there is no evidence of progression or development by Cerner.
63. I consider that Mr Lim’s idea for improved functionality may assist in preventing like incidents and I will make a recommendation addressed to Cerner to this effect.

COMMENTS

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

Veronica’s death

64. I accept the findings of the Peninsula Health’s IDCR and concur with the identified contributing factors of staff knowledge/skills, alarm fatigue, Veronica’s medical history and policy/guidelines. As I have discussed above, I consider the use of an Electronic Medical Record to be an additional contributing factor.
65. I consider the response of Peninsula Health to the incident to be appropriate and believe that the recommendations arising from the IDCR will go some ways to preventing like-incidents from occurring in the future. However, as identified by Lloyd in his concerns about his mother’s death, the fact that the use of the Cerner EMR was a contributing factor means that the issue is potentially bigger than Peninsula Health, requiring a whole of health system approach to reduce future incidents.

High-risk medicines and electronic medical records in Victoria

66. A 2016, the report '*Targeting Zero: Supporting the Victorian hospital system to eliminate avoidable harm and strengthen quality of care*'¹⁶ was published following a review of the then Department of Health and Human Services' (DHHS) governance of quality and safety in Victorian hospitals. The report made specific recommendations on changes to digital technology in health as a way to support the flow of clinical and patient information.
67. Around this time, DHHS released a report titled 'Digitising Health'¹⁷ that detailed a strategy and plans on how digital health projects were to be implemented in Victorian health services. Victoria operates as a federated model of health. This means that rather than mandate the implementation of a specific and standardised platform, local health services were able to make procurement decisions based on their individual requirements, in compliance with standards and defined specifications.
68. The 2016-17 DHHS digital strategy broadly noted a need to expand current EMR systems to replace paper-based records such as discharge summaries and medication charts (the national inpatient medications chart) and to integrate bedside vital signs monitoring.
69. Providing clear, standardised medicine information in an electronic format certainly has the potential to reduce errors. However, in Victoria, the use of different EMRs in different health services, combined with documented usability issues may increase the risk of patient harm. Different EMRs mean they are not standardised, and individual health services have fewer means of correcting usability issues and risk complicating the system by making service-specific variations.
70. In 2021, I made findings following my investigation into the death of Carlene Salveson,¹⁸ in which I found that the recent transition to an EMR contributed to the failure of not providing Ms Salveson with venous thromboembolism prophylaxis. I made the following recommendation:

¹⁶ Duckett S. 'Targeting Zero. Supporting the Victorian hospital system to eliminate avoidable harm and strengthen quality of care.' Report of the Review of Hospital safety and quality Assurance in Victoria.

¹⁷ The Department of Health and Human Services 'Digitising Health How information and communication technology will enable person-centered health and wellbeing in Victoria.'

¹⁸ COR 2018 005744.

In the interests of public health and safety and to prevent like deaths, I recommend that the Chief Digital Health Officer of Victoria coordinate with clinical and safety leaders in Victoria and nationally, including Safer Care Victoria, the Australian Commission on Safety and Quality in Health Care and Therapeutic Goods Administration, to review how Electronic Medical Records and Electronic Medication Management systems present and manage high risk medicines.

71. Following the recommendation, the Department of Health convened a national eHealth High Risk Medicine Safety Advisory Group, comprising of jurisdictional clinical and safety representatives from Australia, including Safer Care Victoria, the Therapeutic Goods Administration and the Australian Commission into Safety and Quality in Health Care. The advisory group has the following functions:
 - Providing expert advice and guidance on presentation, management, issues and risks related to high-risk medicines in electronic medical record (EMR) and electronic medication management (EMM) systems; and
 - Developing natural recommendations and mitigation strategies which improve presentation and management of high-risk medicines in EMR and EMM systems.
72. The advisory group coordinated a national review of the display, prescribing and monitoring practices of high-risk medicines in clinical systems. This included the commissioning of a comprehensive literature review and environmental scan conducted by the University of Sydney, culminating in the *eHealth High Risk Medicine Safety – Rapid Literature Review and Environmental Scan report*.
73. Following this extensive consultation process, the *Electronic Medication Management – Prescribing High-Risk Medicine Guidance* was developed. The guidance document is designed to support the sector by offering recommendations for improving high-risk medication management in clinical systems and has been disseminated to key stakeholders.
74. The guidance document includes the following recommendations for hospitals:
 - *Ensure that features are well-designed and align with user workflows to increase acceptance and effective use of strategies.*
 - *Adopt a user-centred approach in the development and implementation of strategies.*

- *Implement clear and effective communication and dissemination strategies when introducing a new strategy.*
- *Exercise caution when implementing new strategies, as there is limited robust evidence, particularly from comparative studies, on their effectiveness in reducing adverse events.*
- *Conduct initial piloting before scaling up strategies, and have mechanisms in place, such as feedback loops, for ongoing monitoring and evaluation.*

75. It also highlights the most common strategies employed by health services across Australia for each high-risk medication, as identified in the literature review and environmental scan. In relation to insulin, these include:

- *Displays brand, formulation and concentration details to ensure accurate selection and avoid confusion*
- *Mandatory fields for documentation such as dose, form and relevant lab values (e.g. blood glucose) before insulin prescribing and administration*
- *Predefined orders grouped together for specific clinical purposes to assist in appropriate prescribing of insulin*
- *Providing prescribing prompts for consideration, such as to confirm accurate dosing, detect maximum doses, and prevent duplicate orders*

76. I commend the advisory group and each of the consulting agencies and bodies for their commitment to improving high-risk medication safety within EMR and EMM systems. Whilst I am unsure if the advisory group will continue in some form, I have received the assurance of Safer Care Victoria that they will continue to monitor the issue of high-risk medications in EMM and EMR systems in collaboration with the Department of Health and commit to informing the sector when opportunity arises.

RECOMMENDATIONS

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

- (i) With the aim of preventing like deaths and promoting public health and safety, I recommend that Oracle Health progress the idea logged by Peninsula Health on 6 May 2021 – *for the system to warn clinicians if the First dose date/time of a new medication order lands within the minimum interval of the last time the same medication was administered* – as a priority, and report back to Peninsula Health as to the feasibility of the idea and the timelines for implementation.
- (ii) With the aim of preventing like deaths and promoting public health and safety, I recommend that Peninsula Health review the *Electronic Medication Management – Prescribing High-Risk Medicine Guidance* and *eHealth High Risk Medicine Safety – Rapid Literature Review and Environmental Scan report* and consider whether any further measures can be implemented at a hospital level to reduce the risk of high-risk medication errors.

FINDINGS AND CONCLUSION

1. Pursuant to section 67(1) of the *Coroners Act 2008* I make the following findings:
 - a) the identity of the deceased was Veronica Lesley Roberts, born 23 December 1944;
 - b) the death occurred on 5 October 2020 at Peninsula Health, The Mornington Centre, 24 Separation Street, Mornington, Victoria, 3931;
 - c) I accept and adopt the medical cause of death ascribed by Dr Melanie Archer and I find that Veronica Lesley Roberts died from ischaemic heart disease in the setting of unstable type 2 diabetes mellitus and a recent insulin administration error;
2. AND, while I am unable to ignore the element of human error in the insulin administration incident, I find that the use of an Electronic Medical Record and Electronic Medical Management system contributed to the accidental administration of the additional dose.
3. AND FURTHER, having regard to the available evidence and noting that the body of Veronica Lesley Roberts was not physically examined, I am unable to determined whether the insulin administration error was contributory to her death;
4. AND FURTHER, consequently, I am unable to find whether or not Veronica Lesley Roberts' death was preventable.

I convey my sincere condolences to Veronica's family for their loss.

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

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

James Roberts, Senior Next of Kin

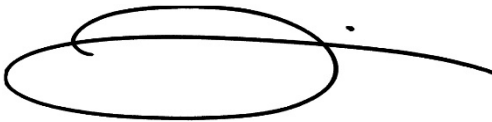
Peninsula Health

Oracle Health

Safer Care Victoria

Victorian Department of Health

Signature:



AUDREY JAMIESON

CORONER

Date: 22 May 2025



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.
