IN THE CORONERS COURT
OF VICTORIA
AT MELBOURNE

Court Reference: 2015 2496

FINDING INTO DEATH WITH INQUEST

Form 37 Rule 60(1)
*Section 67 of the **Coroners Act 2008***

Inquest into the Death of:	Madeleine Therese Sobb
Delivered On:	1 March 2019
Delivered At:	65 Kavanagh Street Southbank 3006
Hearing Dates:	10 & 11 October 2018
Findings of:	Caitlin English, Coroner
Police Coronial Support Unit:	Senior Sergeant Jen Brumby

I, Caitlin English, Coroner having investigated the death of Madeleine Therese Sobb

AND having held an inquest in relation to this death on 10 & 11 October 2018

at Melbourne

find that the identity of the deceased was Madeleine Therese Sobb

born on 21 November 1989

and the death occurred on 22 May 2015

at the Alfred Hospital, 55 Commercial Road, Melbourne, Victoria

from:

I(a) AIRWAY OBSTRUCTION COMPLICATING LARYNGEAL DILATION FOR THE TREATMENT OF SUBGLOTTIC STENOSIS IN A WOMAN WITH SPONDYLO-EPI-METAPHYSEAL DYSPLASIA

in the following circumstances:

Background & chronology

1. Ms Madeleine Therese Sobb was a 25-year-old woman who was living and working in Melbourne at the time of her death on 22 May 2015.

2. Ms Sobb had a history of spondylo-epi-metaphyseal dysplasia, a genetic condition which resulted in her having severe physical abnormalities of her skeleton and airways. As a result, Ms Sobb had an extremely short stature and used a motorised wheelchair for mobility, but she was able to walk short distances unaided. She had a myriad of complications associated with her condition including serious tracheal collapsibility, subglottic stenosis, severe progressive thoracolumbar scoliosis, oesteopenia and hyperhidrosis. In addition to these complications Ms Sobb also suffered from asthma.

3. Despite Ms Sobb's physical restrictions she was able to lead a very full and productive life successfully completing tertiary qualifications in 2014 and working and living independently in Melbourne (her family is based in NSW). At the time of her death Ms Sobb was working as a Project Officer at Youth Disability Advocacy Services, Youth Affairs Council of Victoria in Melbourne.

4. In mid May 2015 Ms Sobb became unwell with a respiratory infection. She consulted her general practitioner and was prescribed antibiotics and prednisolone. On 18 May 2015 at approximately 11.00pm Ms Sobb was conveyed to The Alfred hospital via ambulance with worsening symptoms of shortness of breath as a result of her respiratory infection. She was admitted through the emergency department and was diagnosed with infective exacerbation of asthma due to a respiratory

illness. Ms Sobb was admitted to the Intensive Care Unit (ICU) in the early hours of 19 May 2015 for overnight airway management and non-invasive ventilation. The treatment prescribed was antibiotics and antiviral medication, salbutamol nebulisers and intravenous (IV) steroids hydrocortisone in addition to intermittent non-invasive ventilation for respiratory exhaustion.

5. Ms Sobb remained in the ICU overnight on 19 May 2015 and was reviewed by an Ear, Nose and Throat (ENT) specialist on 20 May 2015. This clinical examination documented that despite the subglottic stenosis, her airway was currently stable. The doctor recommended to continue prednisolone and to commence adrenaline nebulisers if there was any acute worsening in respiratory symptoms.

6. During a review on 20 May 2015 in the ICU respiratory doctors concluded Ms Sobb was experiencing an exacerbation of asthma symptoms prompted by a viral illness. The consultant decided she was suitable for transfer to the ward. At approximately 4.30pm that day Ms Sobb was transferred from ICU to the ward. Owing to her infection, she was placed in isolation in her own room.

7. Ms Sobb was transferred to ward Air 4 which was the unit for allergy, asthma and immunology. The respiratory department had 4 units at this time each assigned to specific respiratory condition. The unit's title had no relevance to the disease severity or complexity, but rather referred to the underlying diagnosis and organisational unit of the treating physician.

8. Ms Sobb was reviewed by nursing staff on the ward at approximately 9.00pm and found to be stable. Her sister, Julia Bates decided to stay overnight on the ward with her in order to provide her with support and physical assistance as required throughout the night.

9. Between midnight and 7.00am on 21 May 2015 Ms Sobb experienced violent coughing episodes.[1] At around midnight she asked to be given an adrenaline nebuliser. The medication order for adrenaline nebulisers required the notification of and approval by a medical officer prior to being administered.

10. The next morning at about 8.30am Ms Sobb was reviewed by the ENT team and was found to be in respiratory distress. A Medical Emergency Team (MET) call was made summonsing the attendance of the respiratory team and a senior ICU registrar. Ms Sobb was found to be in respiratory failure and the plan was to perform a balloon dilation of her airway. Ms Sobb was transferred to theatre where she underwent a number of procedures including two failed attempted intubations followed by an emergency tracheostomy attempted at 11.45am, with a tube inserted at

[1] The evidence describing Ms Sobb's episodes of coughing is inconsistent between that of Ms Bates who remained with her sister overnight and that of the nurses on duty.

12.30pm. Ms Sobb experienced a cardiac arrest at 12.30pm. She was stabilised and transferred back to ICU.

11. On 22 May 2015 at 1.00pm Ms Sobb underwent a brain scan which confirmed the absence of cerebral circulation. Ms Sobb was confirmed brain dead and was a deceased organ donor.

Coronial investigation

12. Ms Sobb's death was reported to the coroner as it appeared to be unexpected, and following a medical procedure, and so fell within the definition of a reportable death in the Coroners Act 2008.

13. 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.

14. A coronial brief was prepared which includes statements from family members, medical staff as well as from the forensic pathologist and the neuropathologist who examined Ms Sobb after her death.

15. As part of the coronial investigation, and in response to letters of concern received from Ms Sobb's family, I sought advice from the Coroners Prevention Unit (CPU)[2] regarding the appropriateness of Ms Sobb's clinical care. Following this advice, an expert report was obtained by the Court from Dr Antony Tobin.[3]

Identity

16. On 22 May 2015, Margaret Sobb identified her daughter Madeleine Therese Sobb, born 21 November 1989.

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

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[2] 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.

[3] Dr Tobin's report formed part of the coronial brief and he was not called as a witness at the Inquest.

Cause of death

18. On 27 May 2015, Dr Gregory Young, a Forensic Pathologist practising at the Victorian Institute of Forensic Medicine, conducted an examination and provided a written report dated 10 August 2015. In that report, Dr Young formulated that a reasonable cause of death was *'I(a) Airway obstruction complicating laryngeal dilation for the treatment of subglottic stenosis in a woman with spondylo-epi-metaphyseal dysplasia.'*

19. I accept Dr Young's opinion as to cause of death.

Request for Inquest

20. Ms Sobb's family requested an inquest be held into her death and submitted a Form 26 dated 6 September 2015.

21. The request for Inquest raised four concerns for exploration at inquest. Firstly, the timing of Ms Sobb's discharge from intensive care to the ward, secondly, the lack of medical review on the ward during the evening and night of 21 May 2015, thirdly, the lack of medical review whilst the adrenaline nebuliser was administered at midnight on 21 May 2015 and fourthly, the events leading to the MET call at 8.00am on 21 May 2015.

Coroners Prevention Unit Review

22. As noted, as a result of the matters raised regarding medical management in the request for inquest, I requested CPU to review Ms Sobb's clinical care whilst at the Alfred Hospital.

23. The CPU review noted the concerns raised by Ms Sobb's family, as well as a meeting they had with a team from Alfred Health on 26 May 2015.[4]

24. Alfred Health conducted a multi-disciplinary team review of Ms Sobb's death. A summary report of the issues identified and resulting recommendations was provided to the CPU by Alfred Health.

25. The recommendations made following Alfred Health's review were as follows:

    Management of patients requiring an adrenaline nebuliser:

    a. Alfred Health is to develop a guideline to instruct staff on the use of an adrenaline nebuliser;
    b. Relevant clinical staff at Alfred Health are to be advised of the new guideline through an organisation-wide Clinical Alert.

    Management of patients who have been recently discharged from ICU:

[4] Coronial Brief - Letters and materials provided by Ms Sobb's family at pp1-19.

a. Overnight medical clinical lead is to receive a list of all ICU patients who have been transferred to general wards within the previous 12 hours;
b. General ward staff are to notify the Overnight Clinical Lead (medical) if there is a change in the condition of any patient recently discharged from ICU.

Facilitating overnight stay for carers of patients with complex needs and disabilities:

a. Alfred Health planned implementation of a program to improve awareness of its Guideline on 'Managing Patients with Complex Needs and Disabilities', which details the process required to review and approve a carer's request to stay overnight.

26. Following the CPU review, an expert report was obtained from Dr Antony Tobin, an intensive care physician who reviewed the primary medical records and advised whether the clinical care of Ms Sobb was appropriate.[5]

27. Dr Tobin's expert report viewed the decision to discharge Ms Sobb from ICU to the ward as reasonable. He noted system shortcomings regarding the discharge process between ICU and the ward and his concerns formed part of the scope considered at the Inquest.

28. In response to Dr Tobin's report, Alfred Health provided two further statements. Janet Weir-Phyland, Chief Nursing Officer and Executive Director for Nursing Services at the Alfred Hospital, noted non-compliance with the Alfred Health Guidelines[6] and Dr Tim Leong Deputy Director, Head of Quality at the Alfred Hospital noted the recommendations by a senior clinical committee, which he advised have all been implemented, as follows:

a. A guideline is to be developed to instruct staff on the safe use of adrenaline nebuliser, this is to include:
    i. Who can order it;
    ii. Where it can be administered;
    iii. What the escalation process is once administered; and
    iv. Monitoring requirements.
b. A clinical alert is to be developed and distributed to all Medical and Nursing staff regarding the use [of] an adrenaline nebuliser and the development of the new guideline.

[5] Coronial Brief p 40.
[6] Coronial Brief p 47.

c. To reinforce with ICU staff that prior to discharge/transfer from ICU all patient medication charts are to be reviewed to ensure all medications are appropriate for administration in general ward areas.

d. Clinical lead is to receive a list of all ICU patients who have been transferred to the ward in the last 12 hours and the after hours cover hospital medical officer (HMO) / ward are to escalate to the Clinical lead any change in condition of recently (12 hours) discharged patients from ICU.

e. An implementation program is to be developed for the Managing Patients with Complex Needs and Disability guideline.

f. Disability working group to scope:

    i. Alert to social worker for all newly admitted persons with disabilities and special needs,

    ii. Automated e-referral to social work department.

g. An automated anaesthesia information system has been rolled out so that all patient data is on file.

h. The development of a 'Welcome to Alfred Patient Education' video to include 'Let me know' education.[7]

Directions Hearing

29. A directions Hearing was held on 27 October 2017.

The scope of the Inquest was determined as:

a. The circumstances of Ms Sobb being transferred from ICU to the ward with focus on the actual handover process;

b. The care and management of Ms Sobb on the ward with particular focus on the observations taken that night, the administration of the adrenaline nebuliser, (and this included consideration of whether Ms Sobb's deterioration on 21 May 2015 at 8.30am was precipitous); and

c. Ms Sobb's individualised care with specific reference to her disability.

[7] Coronial Brief p 61.

Inquest

30. An Inquest was held on 10 and 11 October 2018. The Inquest heard from seven witnesses over two days.

31. This finding does not purport to recite all of the evidence heard at Inquest, only that which is relevant to the statutory requirements, namely the identity, cause of death and circumstances as set out in section 67 of the Coroners Act 2008. Circumstances of death must be relevant and proximate to the death. The circumstances focus on the issues forming the scope of the inquiry at inquest.[8]

32. In the coronial jurisdiction facts must be established to the standard of proof which is the balance of probabilities.[9]

33. Prior to the Inquest commencing, Alfred Health, through its lawyers by letter dated 8 October 2018, made the following concessions:

> *'The handover [to] the ward in regard to the administration of the adrenaline nebuliser could have been improved to specifically state that medical review was required if the adrenaline nebuliser was administered'; and*
>
> *'That [Ms Sobb] should have been reviewed by a doctor before or as soon as possible after the administration of the adrenaline nebuliser'.*

Issue 1: Ms Sobb's transfer from ICU to the ward and the handover process

34. Dr Christopher Hebel, The Alfred Hospital ICU Senior Registrar, was the ICU senior registrar on day shifts on 19 and 20 May 2015 when Ms Sobb was a patient in ICU. The ICU consultant was Dr Hockings. On 20 May 2015, Dr Hockings considered Ms Sobb to be suitable for discharge to the ward.[10]

35. Professor Antony Tobin was asked to prepare an expert report considering aspects of Ms Sobb's clinical care whilst at The Alfred Hospital. As part of that, and in the context of concerns raised by Ms Sobb's family about the appropriateness of her discharge from ICU, he was asked to review the decision to discharge Ms Sobb from the ICU. In Dr Tobin's opinion the decision was '*very*

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[8] Part of the challenge of determining the scope of an Inquest is the requirement to comply with the legislative focus of section 67 balanced with the relevant concerns raised by the family. For example, the family was extremely concerned that a chest x ray taken of Ms Sobb on 20 May 2015 was not reviewed by ICU or ward staff as there is no documentation to that effect in her medical record. Dr Hebel gave evidence stating he could be '*99% certain that people involved in looking after Ms Sobb that day will have looked at that chest x ray.*' (Transcript 24).

[9] 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.

[10] Coronial Brief, p 85.

reasonable'[11] to discharge Ms Sobb from ICU. Based on this opinion, the decision to discharge Ms Sobb from ICU did not form part of the scope of the Inquest.

36. Dr Tobin was also asked about the process for discharge from ICU.

37. Dr Tobin noted there are recommendations around requirements for handover in the national standards on clinical handover, which are not prescriptive, as follows:

    a. Comprehensive written discharge summary (including patient's problems, care delivered in the ICU and a list of ongoing problems, investigations and therapies provided);

    b. Verbal handover between the ICU doctor and the ward doctor;

    c. Face to face handover between ward nurses and ICU nurses at the time of transfer;

    d. A checklist should ensure all critical information is transferred at the ward level;

    e. For patients discharged within normal working hours the ward home team should be either present at the time of the ward transfer or review the patient prior to leaving the hospital for the day to ensure that the patient is stable, and that treatment plans and orders are appropriate and in place. Post discharge, it is good practice for the treating medical team to review all patients discharged from ICU on their arrival in the ward.[12]

38. The handover requirements detailed in Dr Tobin's report are a useful guide when considering Ms Sobb's discharge from ICU. The Alfred Health Guideline ICU Discharge dated 13 December 2012, which was the policy in place at the time Ms Sobb was a patient at The Alfred Hospital, was also a reference point.

(a) Comprehensive written discharge summary

39. Dr Hebel gave evidence at the Inquest.[13] He stated the ICU junior registrar on shift completed the ICU discharge summary, on instructions from the senior medical team.

40. In his report Dr Tobin noted that the ICU discharge summary *'does not comment on the use of adrenaline nebulisers (when to use, what clinical implications this may have for monitoring/ongoing treatment), nor does it summarise the airway plan for intubation that had been documented elsewhere in the medical notes.'*[14]

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[11] Coronial Brief p 41.
[12] Coronial Brief p42

[13] Dr Hebel made two statements, Exhibits 4 & 5.
[14] Coronial Brief p 42.

41. Dr Hebel conceded that the use of the adrenaline nebuliser should have been referred to in the ICU discharge summary.[15]

42. Dr Steven McGloughlin, Director of Intensive Care and Hyperbaric Medicine at Alfred Health, gave evidence at the Inquest. He also agreed that the adrenaline nebuliser as a 'prn' (which means 'as required'), medication should have been included in the ICU discharge summary.[16] He agreed with Dr Tobin's report that '*...ICU discharge...should've included a requirement for the patient to be reviewed by medical staff if adrenalin nebulisers were given to assess the need for closer monitoring or airway intervention. That this was not explicit in the notes may have led to a lack of appreciation amongst the nursing and medical staff on the wards of the potential for threatened airway.*'[17] Dr McGloughlin agreed it would have been a good idea to have an airway plan for intubation in or referenced in the discharge summary.[18]

43. The concession by Alfred Health at commencement of the Inquest that '*The handover [to] the ward in regard to the administration of the adrenaline nebuliser could have been improved to specifically state that medical review was required if the adrenaline nebuliser was administered;*' tacitly acknowledges this information should have been specified in the ICU discharge summary.

44. In evidence it was accepted by Doctors Hebel and McGloughlin that the ICU discharge summary should have included reference to the adrenaline nebuliser.

(b) Verbal handover between ICU doctor and ward doctor

45. Dr Hebel believed the medical consultant from the accepting team, AIR 4 medical team, reviewed Ms Sobb in ICU. Although Dr Hebel could not recall who reviewed Ms Sobb, he believed it would have been a consultant because of Ms Sobb's '*clinical background and the risks outlines*'[19] and stated he recalled the consultant attending ICU for the review. A note in the medical records confirms the attendance of the consultant.[20]

46. However, following this review by the consultant, there was no verbal or face to face handover between ICU doctors and the home team doctors, although the home team was telephoned and advised when Ms Sobb was being discharged.

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[15] Transcript (T) p 35.
[16] T 148.
[17] T 148.
[18] T 149.
[19] T 22.
[20] Coronial Brief volume 2 p 31.

47. As part of the discharge, Dr Hebel recalled he notified the External ICU doctor of Ms Sobb's discharge and asked that doctor to notify the Overnight Hospital Clinical Lead[21] when they started nightshift, of Ms Sobb's discharge to the ward.

48. Dr Hebel agreed there was a gap of one hour between the External ICU doctor finishing their shift at 7.30pm and the commencement of the shift at 8.30pm of the Overnight Hospital Clinical Lead. His reason for wanting the Overnight Hospital Clinical Lead to be aware of Ms Sobb on the ward was because she was a high-risk patient, in that she had a complex history.[22]

49. The identity of the doctor he contacted has not been established.

50. Dr Elisa Licari gave evidence. She was the External ICU Senior Registrar on day shift which concluded at 7.30pm on 20 May 2015. Dr Licari could not recall whether she received a call from Dr Hebel notifying her of Ms Sobb's discharge from ICU. The Night External ICU Registrar started at 7.30pm. It was her evidence that if she had been contacted by Dr Hebel, she would have written it on her personal handover paper and given it to the Night External ICU Registrar to inform the Overnight Hospital Clinical Lead, who did not commence shift until 8.30pm.

51. Dr Licari agreed that this process, a personal practice rather than a hospital directive or policy, was a '*downfall*' in the context of care for ICU patients.

52. Dr Licari advised the process had now changed and the ICU senior registrar is advised by telephone and electronically of any ICU patient who has been discharged that they should be aware of.[23]

53. Dr Licari's evidence about the electronic medical record documenting a follow up list was confirmed by Dr McGloughlin.[24]

54. Dr Hebel also stated that in addition to the consultant review and informing the afterhours ICU external, '*...ideally ENT and anaesthetics should have been informed by myself or guaranteed to have been informed by my junior registrar.*'[25]

55. The Alfred Hospital ICU Discharge Guideline states at 5.1(b):

> (vi) *The Parent unit Registrar and/or Consultant are notified of the discharge and a full handover is given.*

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[21] Dr Hebel explained that at The Alfred Hospital, the overnight hospital clinical lead is a highly trained ICU registrar often who has a pre-existing specialist degree. (T 30).
[22] T 29.
[23] T94-5
[24] T 140.
[25] T 42.

56. The lack of a verbal or face to face medical handover was not in compliance with the Alfred's own ICU discharge process as outlined in its Guideline.

57. The evidence supports the finding there was no handover between the ICU doctor and the ward doctor.

(c) Face to face handover between ward nurses and ICU nurses at the time of transfer

58. Dr Hebel advised there was a nursing face to face handover between the ICU and the ward nurses.

59. Dr McGloughlin clarified that the medical handover occurs prior to the nursing handover. The nursing handover occurs at '*a specific moment in time, when the nurse delivers the patient to the ward.*'[26]

60. The evidence supports that the nursing face to face handover occurred.

(d) A discharge checklist should ensure all critical information is transferred at the ward level

61. In his evidence, Dr McGloughlin referenced the ICU Discharge Guideline in place at the time of Ms Sobb's admission.

62. The ICU Discharge Guideline[27] refers to a '*discharge checklist.*'

63. The Guideline states at 5.1(b):

> (i) *the discharge checklist will be reviewed by nursing and medical staff to highlight any outstanding issues;...*
>
> (viii) *when the ICU discharge check list is completed and checked to ensure all outstanding tasks have been completed the patient will be flagged 'ready to go.'*

64. Dr McGloughlin described this checklist as '*...completed by a combination of medical and nursing staff...*' and agreed that it is normal practice for it to form part of the medical records.[28]

65. Ms Sobb's discharge checklist was not able to be located, nor was the discharge checklist template that was used at the time.

66. The checklist was referred to in evidence at Inquest and was to be provided following the hearing. Lawyers for Alfred Health advised:

> '*Unfortunately, after extensive searches the Hospital has been unable to locate the ICU discharge checklist utilised for Ms Sobb. Investigations revealed that the checklist was a document "not to*

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[26] T 135.
[27] Exhibit 12
[28] T 130-1 The discharge checklist was not in Ms Sobb's medical records and inquiries following the conclusion of the Inquest revealed neither it, nor the template ICU checklist utilised at the of her death, was able to be located.

be scanned" meaning that it was not included in the patient's medical record. This explains why there was no checklist in Ms Sobb's medical record.

The Hospital has also been unable to locate the template ICU discharge checklist utilised at the time of the death. However, they have been able to locate the document which was updated in September 2017 (copy attached).'[29]

67. No explanation was offered as to why the checklist would not be scanned. Dr McGloughlin agreed it would normally form part of the medical records.

68. An updated discharge guideline [30] has since been amended to include: 4. ICU Discharge process (a) viii) When the ICU discharge checklist is completed, '*This step must be reviewed by the Patient Access Nurse.*'

69. Dr McGloughlin agreed that '*another person explicitly having to check the discharge checklist, is...a good thing to add.*'[31]

70. The evidence supports the finding there was no ICU discharge checklist in Ms Sobb's medical record.

(e) Review of patients discharged from ICU

71. Dr Tobin stated '*For residents discharged within normal working hours the ward home team should be either present at the time of the ward transfer or to review the patient prior to leaving the hospital for the day to ensure that the patient is stable, and that treatment plans and orders are appropriate and in place. Post discharge, it is good practice for the treating medical team to review all patients discharged from ICU on their arrival in the ward.*'[32]

72. Dr Tobin notes in his report, *'There are no notes to state that this occurred.'*

73. The evidence at Inquest and Ms Sobb's medical file supports the finding that a doctor did not see Ms Sobb following her discharge from ICU at 4.30pm on 20 May 2015 until the ENT ward round at approximately 8.00am the following morning.

74. Dr Tobin noted that ICU ward follow up is generally decided on a case by case basis. And was of the view '*it is reasonable that Ms Sobb was not flagged for overnight review by an ICU nurse or an ICU doctor.*'

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[29] Email from Laura, Pascoe, Senior Associate, K&L Gates 31 October 2018
[30] Alfred Health Guideline: ICU Discharge approval date September 2015 Exhibit 12.
[31] T 158.
[32] T 22.

75. Dr Tobin went on to note: '*I would however reiterate my belief that all patients discharged from ICU should be reviewed on the ward by the home team...on the day of ICU discharge although I acknowledge this is prudence based not evidence based.*'[33]

76. Dr McGloughlin was asked about the lack of notes indicating Ms Sobb was reviewed on the ward by the medical team. He acknowledged the lack of notes and stated: '*...my understanding of the ward policy is that it's not mandatory that the...home team do review the patient on the ward...it's recommended, but not mandatory.*'[34] He stated: '*It's reasonable to say that the home team would review the patient soon after their arrival.*'[35]

77. Dr McGloughlin acknowledged:

> '*...I think ideally someone would've seen her in the ...evening period after discharge in a high risk discharge...no doubt I would've preferred if that is what I'd found when I read the notes...as a high risk discharge it's not unreasonable to think that someone would've seen this...*'[36]

78. The evidence supports that Ms Sobb was not reviewed by a doctor following her discharge from ICU until the ENT review at 8.00am the following morning and this was not in accordance with Dr Tobin's view of prudent care.

Issue 2: The care and management of Ms Sobb on the ward, including observations taken, the administration of the adrenaline nebuliser and consideration of whether Ms Sobb's deterioration on 21 May 2015 at 8.30am was precipitous

(a) Observations

79. Sun Suk Shim was the nurse working night shift responsible for Ms Sobb's care on the ward from 9.00pm on 20 May 2015 until 7.00am the following day. Ms Shim had worked in the respiratory ward at The Alfred Hospital for seven years and was very familiar with caring for patients with respiratory conditions.

80. The evidence confirms Ms Sobb was not seen by a doctor on the ward following her discharge from ICU at 4.30pm until 8.00am the following day.

81. Ms Shim was taken through the 'timeline of events'[37] and confirmed the medication regime administered to Ms Sobb on her shift.

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[33] Coronial Brief p 42.
[34] T 134.
[35] T 135.
[36] T 159.
[37] Exhibit 7

82. Although she did not record them, Ms Shim stated she checked and observed Ms Sobb on an hourly basis.[38]

83. Ms Sobb's sister Ms Bates who stayed with her overnight gave evidence she could not recall the observations being '*hourly*' and stated, '*...that's what I was concerned about, given that she had just come out of ICU, I felt that she would need closer monitoring.*'[39]

84. Ms Shim recorded observations at 2400H and 5.30H. The Alfred Hospital Guideline required observations to be made four-hourly and Ms Shim stated she was aware of that policy.

85. It was conceded in the statement by Janet Weir-Phyland that '*The frequency at which Ms Sobb's observations were documented in the medical record on 21 May 2015 was not in compliance with the Alfred Health Guideline.*'[40]

86. Ms Shim explained, especially at night time, when a patient is sleeping and stable, rather than disturb them, she did not want to wake Ms Sobb up at the time to take the observations. She still did an hourly visual check.[41]

87. The policy at the Alfred Hospital requires observations to be taken four hourly, meaning Ms Sobb should have been checked at 4.00am.

88. Ms Bates gave contrary evidence disagreeing that Ms Sobb was resting or sleeping at 4.00am '*...with her only restful time being when she was sleeping, as I've documented from about 6 am onwards.*'[42]

89. The Associate Nurse Manager on the ward, Casey Higgs was asked about not taking observations because a patient was asleep. She stated: '*...given someone who has come out of ICU I would say no that's not a - sleeping's not a suitable reason to not do observations.*'[43]

90. I accept the concession by Alfred Health that the observations documented were not in compliance with the Alfred Health Guideline. Further, I do not accept the explanation given that the patient was 'asleep' as an adequate reason for noncompliance with the Guideline.

(b) Adrenaline nebuliser

91. Although Ms Shim had administered adrenaline nebuliser in the past, she agreed it was not '*normally*' used on the ward. She stated '*...I just contact the doctor to, to review the patient. Review*

[38] T 76.
[39] T 120.
[40] Coronial Brief, p 47.
[41] T 77-78.
[42] T 123.
[43] T 183.

the medication whether it's okay to give or not. But the patient either in ICU is not new medication for her...the doctor said is okay to give and vital signs okay, is not...unstable...That's why...the doctor confirmed to give by phone.'[44]

92. Ms Higgs states because Ms Sobb had been having adrenaline nebulisers in ICU and it was something Miss Sobb had requested, '*...we didn't feel like it was an urgent matter at that time, at midnight.*'[45] Ms Higgs stated she personally reviewed Ms Sobb when she asked for the adrenaline nebuliser.

93. Ms Shim stated Ms Sobb requested the adrenaline and that Ms Sobb had shortness of breath, and then clarified Ms Sobb complained of '*having shortness of breath.*'[46] Ms Shim stated as she had eight patients, she did not note a '*significant*' breathing change, and opined Ms Sobb asked for it '*for comfort.*'[47] She noted Ms Sobb's breathing was '*a little bit better*' after having the adrenaline nebuliser.

94. Ms Bates described that, following the adrenaline nebuliser, it '*...eased the violence...*'[48] of Ms Sobb's coughing.

95. Ms Shim did not make a note which doctor she spoke to about the adrenaline '*...because I didn't catch... the doctor names.*'[49]

96. Dr McGloughlin agreed that Ms Shim, who called the doctor, should have made a notation of the person that she spoke to. He stated '*...the teaching is...if you speak with someone you should document the opinion from it.*'[50]

97. Nurse Higgs agreed stating, with respect to documentation, '*...signing and documenting that she had contacted the HMO would be something I would expect her to write in her medical notes...*'[51]

98. In his expert report, Dr Tobin stated: '*The provision of the adrenaline nebuliser may have been the appropriate therapy but it should have raised concerns and led to a review by medical staff.*'[52]

99. Dr Hebel's evidence was he prescribed the adrenalin nebuliser as a 'prn' and that a doctor was to be notified prior to it being given. Although he had an expectation that the doctor who was notified about administering the adrenalin nebuliser *would* also physically review Ms Sobb, he agreed this

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[44] T 79-80.
[45] T 185.
[46] T 83.
[47] T 83-84
[48] T 122.
[49] T 90.
[50] T 171
[51] T 186.
[52] Coronial Brief p 43.

was not specified. In his evidence he added, *'it would be like saying 'Don't touch a hot kettle.'*[53] He agreed he did not write it down because he expected that it would occur.

100. Dr Hebel explained that adrenaline nebuliser is not commonly used on the ward but more usually used in acute environments. It is also not commonly written 'as required' but was in Ms Sobb's case to give her some autonomy around the use of it on the ward and also to individualise her care on the ward.[54]

101. Dr Nadine De Alwis, the ENT registrar stated, *'...the adrenaline nebuliser given...immediately for me that would have been a flag for a review. My teaching and EMT training is that the nebuliser is given as an adjunct to theatre and I never just sit on someone who's had adrenaline ...then we cover the paucity of observations...I noticed from 12 o'clock 'til 5.30. So that was a long period of no documented observations.'*[55]

102. Dr De Alwis was of the view that adrenaline nebuliser should not be given as a phone order '*And if you are to give it as a phone order they need immediate medical attention by a doctor...in fact, I think that should be a MET call, a Medical Emergency Response Team call if you're giving adrenalin overnight.'*[56]

103. In her evidence Dr Licari, now ICU consultant at Alfred Health, stated that if a patient was given an adrenaline nebuliser on the ward '*I would expect the patient to receive medical review...generally I think that if a patient requires an adrenaline nebuliser...it means that there is concern regarding possible obstruction of the airway and in my opinion, that requires a medical review.'*[57] Dr Licari was aware of the new policy that now requires, in the majority of cases that where an adrenaline nebuliser is used, that a doctor review the patient.

104. In examination Dr Licari stated she could understand that, because Ms Sobb had requested the adrenaline nebuliser, and there was no clinical concern from the nurses, why a 'junior cover' doctor probably did not think she needed a medical review.[58]

105. Dr McGloughlin agreed with Dr Licari on this point.[59]

106. I accept the concession by Alfred Health:

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[53] T 32.
[54] T 33.
[55] T 198-199.
[56] T 200.
[57] T 98 -9
[58] T 101.
[59] T 144.

'The handover [to] the ward in regard to the administration of the adrenaline nebuliser could have been improved to specifically state that medical review was required if the adrenaline nebuliser was administered'; and

'That [Ms Sobb] should have been reviewed by a doctor before or as soon as possible after the administration of the adrenaline nebuliser.'

107. I find the evidence supports the finding that the nursing notes should have documented the name of the doctor who authorised the administration of the adrenaline nebuliser for Ms Sobb.

108. Although I accept Dr Hebel's evidence as to why he prescribed the adrenaline nebuliser as 'prn' for Ms Sobb, I find that prescribing the adrenaline nebuliser as 'prn' without further explanation may have sent 'mixed messages' to nursing and medical staff about the importance and seriousness for the patient of it being administered.

109. There is now a new policy at The Alfred so that there is a requirement for a doctor to review the patient where adrenaline nebuliser is administered.[60]

(c) Precipitous decline?

110. In his expert report, Dr Tobin took the view that:

'*Based on the documentation in the notes and the observations recorded it would appear that management was adequate and that her* (Ms Sobb's) *deterioration around 8am was precipitous.*'

111. He went on to note:

'*The observation chart suggests acute deterioration at 8am in the morning as does the fact that there were no additional nebulisers given after midnight (above the regular charted ones). Against this is the nursing note at 3am that states that Ms Sobb had respiratory distress requiring extra nebulisers and the adrenaline nebuliser around midnight with some improvement following this. The observation chart does not reflect this deterioration or improvement. It is not possible to form an opinion as to whether there was deterioration between midnight and 8am from the charts.*' [61]

112. With respect to Ms Sobb's care, Dr Hebel agreed a medical review following the adrenaline nebuliser would have been advisable. But he did not accept it was a 'missed opportunity' to catch a decline in her condition and believed her significant deterioration occurred in the morning of 21 May 2015.[62]

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[60] Coronial Brief p 62 'Drug guideline: Nebulised adrenaline for upper airway obstruction.'
[61] Coronial Brief p 43.
[62] T 37-8.

113. Dr Hebel stated he believed her clinical condition remained on the ward '*similar how to she was at discharge from ICU*' or '*at a safe level on the ward*'[63] although he agreed the use of the adrenaline nebuliser '*would be deemed as a deterioration.*'[64]

114. He acknowledged this should have prompted a medical review, but also added he had prescribed it to Ms Sobb to give her '*...control without the anxiety provoking emergency call situation,*' and that her clinical observations remained at a safe level on the ward.

115. He went on to say:

> '*The lack of review has not led to an adverse outcome...* [*Ms Sobb's*] *...observations remained "stable" Not normal, but "stable". And then there was an acute change in the morning around the coughing episode that has led to the emergency call and the urgent action from anaesthetics and from ENT'.*
>
> *'I guess, could things have been more documented?' 'Yes'. 'But I don't believe it has affected the unfortunate incident that's occurred around the peri procedural problems.*'[65]

116. Dr Licari was asked about the overnight care, and whether she could see any signs Ms Sobb was deteriorating that ought to have been picked up by the nurse overnight. She stated, Ms Sobb had deteriorated by 8.20am and Ms Sobb's respiratory rate at that time concerned her.[66] Other than that, there was nothing else that raised a concern she was deteriorating.

117. Dr Licari attended the MET call for Ms Sobb on the morning of 21 May 2015. She stated that that it was very obvious to her that Ms Sobb needed to be re-admitted to ICU.[67]

118. Dr McGloughlin was also asked to review Ms Sobb's observations from 20 May 2015 taken at 2100H, and 21 May 2015 at 2400H and 5.30H. He noted, '*In terms of a severe marker that would need urgent review, there isn't something there, but it's noted that the heartrate is slightly above normal.*'[68] He stated '*...the most important thing in her case would have been to clinically assess and look at how Madeleine was...because the observations are not remarkably deranged.*'[69]

119. Ms Bates was with Ms Sobb on the ward on the evening of 20 May 2015 and stayed throughout the night as she was concerned about Ms Sobb's condition and fatigue.[70]

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[63] T 37 & T40.
[64] T 47
[65] T 62.
[66] T 102.
[67] T 97.
[68] T 154.
[69] T 155.
[70] T 110.

120. Ms Bate's view regarding deterioration overnight was as follows:

> *'...it was evident by the fact that when we got to the ward...there wasn't much coughing happening, but then throughout the entire night, coughing virtually non-stop.'*[71]

121. Ms Bates described that between midnight and 7am, *'Madeleine's coughing was violent and unstoppable. It had reached a level of discomfort that she had only ever experienced twice before in her life.'*[72]

122. Ms Higgs stated that when she reviewed Ms Sobb as she had requested the adrenaline nebuliser, she noted, *'I didn't observe any symptoms that would indicate the need for it'*[73] and, 'I didn't get any indication that she was in distress at that time...I don't recall seeing any coughing.[74]

123. When asked how she could not have noted Ms Sobb's coughing, Ms Higgs explained: *'coughing is an expected thing from someone with a virus'* and, *'being a respiratory ward, everyone coughs'* and, *'it was part of her viral illness.'*[75]

124. Although Ms Sobb managed to get some restful sleep between 6.00am and 7.30am she awoke suddenly coughing violently and *'was administered adrenaline nebuliser again.'*

125. Ms Bates stated that during this nebuliser, the ENT team arrived whilst on their normal rounds. Nadine, the ENT registrar, observed that Madeleine had experienced an extremely difficult night and her condition was not improving. Nadine could not understand why ICU had not been contacted by ward staff throughout the night. She was equally concerned that ICU had not made contact with the ward throughout the night.[76]

126. 'Nadine' was identified as Dr Nadine de Alwis, the ENT registrar and she confirmed in her evidence Ms Bates' recollection of her response to seeing Ms Sobb. Although Dr de Alwis had not seen Ms Sobb the day prior in ICU, her colleague Dr Goldblatt had seen her: *'a completely [different] clinical picture from the day prior.'*[77]

127. It was Ms Bate's view that Ms Sobb's deterioration was *'throughout the night.'* She stated: *'...it's difficult to say from a medical point of view as to when the deterioration happened...I feel that to say that her condition hadn't deteriorated and that she was virtually perfectly okay throughout the night minus the midnight request for adrenaline and the 7am, she wasn't, she wasn't fine. She was*

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[71] T 124.
[72] T 111.
[73] T 177.
[74] T 178 & 179.
[75] T 189.
[76] T 114.
[77] T 201.

coughing relentlessly, and I feel ...that wasn't observed adequately. That that amount of coughing for that amount of hours is not going to increase fatigue and possibly...cause deterioration that may not show up in the observations.'[78]

128. When asked his view whether anything could have or should have been done differently overnight by the nurses that would have perhaps changed the outcome for Ms Sobb, Dr McGloughlin stated '*...looking at the observations it appears that deterioration was quite precipitous at 7 to 7.30...*'.[79]

129. Dr McGloughlin was asked about the sudden deterioration how or why that occurred.

He stated: '*...I can see two pathways. One is there was a missed deterioration overnight but there's nothing objective to suggest that but it is possible that there was deterioration that wasn't either documented or noted. I guess from a 'medical perspective' her airway was very, very narrow and it is very possible that a cough of a relatively small amount of sputum that without a narrow airway would not cause ...a very dramatic and quick deterioration. So there is a reason because of her unfortunate combination symptoms of the narrow airway...and the infection...you could deteriorate very quickly.*'[80]

130. Ms Higgs was asked whether anything in the observations caused her any concerns. She stated:

'*...her heart rate is bordering on high but it ...has been high, particularly the night before...but at the time I don't believe anything indicated anything at the time.*'[81]

131. Dr de Alwis had a different view: '*...as I've said, the adrenaline nebuliser was a big flag because I just wouldn't give anyone an adrenaline nebuliser without a review from medical staff. So, and adrenaline can mask the observations and that's why we don't use it as a treatment per se other than as an adjunct or a bridging medication towards a definitive airway procedure. Because it buys you time. So what happens is, that it might buy Madeleine time but then she precipitously...falls in a bundle and becomes distressed and that is what happened, is what I felt happened.*'[82]

132. In my view the evidence is equivocal as to whether Ms Sobb's deterioration was precipitous on the morning of 21 May 2015 or the result of an overnight gradual decline. I am not able to say one way or the other. Whilst Dr Tobin in his report initially notes the deterioration as precipitous, he goes on to state it is '*not possible to form an opinion as to whether there was deterioration between midnight and 8am from the charts.*'

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[78] T 125 - 126.
[79] T 171.
[80] T 174.
[81] T 185 -186.
[82] T 201.

133. It was noted in the course of the evidence that observations alone do not necessarily capture a patient's progress. Dr McGlouhglin noted the most important thing is to clinically assess Ms Sobb and look at how she was '*because the observations are not remarkably deranged.*'

134. Unfortunately, Ms Sobb was not assessed by a doctor when the adrenaline nebuliser was administered nor at any time during the evening of 20 May 2015 until 8am on 21 May 2015 the next morning.

135. I find that given it was accepted she was a high-risk patient, recently discharged from ICU and administered an adrenaline nebuliser at midnight, following the administration of the adrenaline nebuliser she should have been reviewed by a doctor. This has been conceded by Alfred Health. Dr Tobin was of the view it was '*prudent*' that she be seen by the home team on the day of discharge from ICU and Dr McGoughlin was of the view it was '*reasonable*' that the home team review her soon after arrival. On the evidence Ms Sobb missed potentially two medical reviews following her transfer to the ward.

136. There was also the reality of reduced care overnight. Dr McGloughlin agreed with Dr Tobin's statement that:

> '*Reduced seniority and staffing levels are a reality overnight in most hospitals. With this reduced supervision and experience, errors of knowledge or judgement may occur, in which changes that might alter more* [*experienced*] *clinicians to act may be missed.*'[83]

137. I accept Dr Tobin's conclusion that although her clinical instability might not have been appreciated as soon as it otherwise may have been, Ms Sobb's death following transfer to the operating theatre should not '*be linked to any system shortcomings I may have identified in the time between Ms Sobb's ICU discharge and the MET call.*'[84]

Issue 3: Ms Sobb's individualised care with specific reference to her particular disability

138. In her evidence Ms Bates detailed reluctance from the Alfred Hospital staff to allow her to stay overnight on 20 May 2015 with Ms Sobb, although ultimately, she was able to stay.

139. She stated it was explained to her that it was not 'protocol' for family members to stay with patients on the ward unless they are [under] 16 years of age or very sick.[85] Ms Bates described feeling like '*an inconvenience, not welcomed.*'[86]

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[83] T 145.
[84] Coronial Brief pp44-45.
[85] T 110.
[86] T 110.

140. The Alfred Health multi-disciplinary team review following Ms Sobb's death made recommendations which included facilitating overnight stay for carers of patients with complex needs and disabilities.

141. The Alfred Health review recommendations included planned implementation of a program to improve awareness of its Guideline on 'Managing Patients with Complex Needs and Disabilities,' which details the process required to review and approve a carer's request to stay overnight.

142. I was provided with the Alfred Health Guideline 'Managing patients with complex needs and disabilities', October 2015.[87] The Guideline 'Patient visiting (Adult visitors)'[88] contains a process for overnight visitation.

143. With respect to Ms Sobb's medical and nursing care being individualised with regards to her disability, Ms Shim gave evidence she could not recall Ms Sobb as having a physical disability.[89]

144. Ms Bates described it as being very difficult for Ms Sobb to sleep and that she spent part of the previous night in ICU sitting in her wheel chair to facilitate her breathing in an upright position. She did the same thing whilst on the ward during the evening of 20 May 2015.

145. Ms Bates stated: *'Madeleine spent all night trying to get comfortable enough to sleep...At one point, she gave up trying to get comfortable in bed and reverted back to sitting upright in her wheelchair.'*[90] There was no evidence of any alternative arrangements being offered regarding the bed or pillow configuration to assist Ms Sobb remaining upright in order to sleep. It was Ms Bate's evidence that struggling to sleep left Ms Sobb extremely fatigued.

146. On questioning from Ms Katotas representing Alfred Health, Ms Shim stated Ms Sobb was in isolation and a high-risk patient who had been transferred from ICU. It was suggested her care was 'individualised' in that she had set up the observation machine facing the Ms Sobb's door way, so it could be observed from the hallway in order to *'monitor her'*. I am of the view this arrangement pertained to Ms Sobb being in isolation rather than it being individualised care in light of her disability.

147. Dr Hebel explained that he prescribed the adrenaline nebuliser, which is not commonly used on the ward but more usually used in acute environments. He noted he prescribed it 'as required' in Ms Sobb's case to give her some autonomy and control around the use of it on the ward, to avoid an emergency call situation and also to individualise her care on the ward.[91] I am of the view that this

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[87] Coronial Brief p 66.
[88] Exhibit 13.
[89] T 85.
[90] T 111.
[91] T 33.

did individualise her care taking into account her disability, however as previously noted, did not sufficiently alert staff to the significance of the adrenaline nebuliser being administered.

148. Dr McGloughlin agreed that Ms Sobb's assessment by the consultant on the medical team in ICU prior to her discharge could be accepted as '*individualised care*' for Ms Sobb as it was a '*complicated case.*' [92]

149. Ms Bates also referenced her concerns about Ms Sobb's discomfort at the number of people in her room during the MET call and being directly addressed when she was in '*great respiratory distress.*' Ms Bates noted medical staff did not introduce themselves to her '*...or consult me about Madeline's needs. As Madeleine's sister, I felt I had invaluable information to offer.*'[93]

150. As Ms Sobb was an adult it was appropriate she be addressed directly by staff and this was acknowledged by Ms Bates. These issues are questions of judgement and in the course of care at the relevant time.

Improvements implemented at Alfred Health

151. Dr Hebel acknowledged that '*Formal documentation of the handover process and persons notified would improve retrospective review of the circumstances.*'[94]

152. Dr Leong's statement noted '*there is always a medical verbal handover to the home team on ICU discharge in addition to the printed discharge summary.*' [95]

153. There is an updated ICU discharge policy including the requirement that the discharge checklist be completed and that '*This step must be reviewed by the Patient Access Nurse.*'[96]

154. Dr McGloughlin confirmed the recommendation providing that the '*Clinical lead is to receive a list from ICU of all patients who have been transferred to the ward in the last 12 hours and afterhours Cover HMO/wards are to escalate to overnight clinical lead any change in condition of recently (12 hours) discharged patients from ICU*'[97] had been implemented but required the clinical lead doctor to look at the list and notice '*that's an ICU discharged patient.*'[98] This appears to put the onus on both the covering doctor and the clinical lead. The covering doctor needs to be aware that the patient is recently discharged and to notify the clinical lead, and the clinical lead doctor needs to be aware (either by being informed by the covering doctor) or by checking the list.

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[92] T 165.
[93] T 115.
[94] Exhibit 5.
[95] Coronial Brief p 60.
[96] Coronial Brief p 100, Exhibit 12 - Guideline updated September 2015.
[97] CB 61
[98] T 168.

155. There is a new guideline to instruct staff on the use of the adrenaline nebuliser, and the requirement that a patient be reviewed by a doctor before or as soon as possible after the administration of the adrenaline nebuliser. Relevant clinical staff at Alfred Health were to be advised of the new guideline through an organisation wide Clinical Alert.

156. Ms Phyland also advised that all nursing staff are required to complete a learning package on commencement and continuous learning opportunities are provided. The Alfred Health Guideline on Minimum Standard of Measuring and Documenting Adult Physiological Observations was updated in March 2016.

157. I am satisfied the recommendations from the Alfred Health review have been implemented, as well as the recommendations in response to Dr Tobin's report detailed in Dr Leong's statement referred to above in paragraph 28. These address many of the issues considered at Inquest and the shortcomings in Ms Sobb's care have been noted in my consideration of the evidence.

158. I gave consideration to making a recommendation that a patient discharged from ICU be reviewed by the home team within a certain number of hours. I decided against making such a recommendation as I formed the view that Ms Sobb's case was an extreme case and that there are many patients discharged from ICU who are well and stable and do not need a review overnight. To recommend a timeframe for a review is probably not in the best interests of the hospital running efficiently and doctors being free to review those patients in need of attention.

159. I am not able to identify any other prevention opportunities or opportunities for systems improvement.

160. I convey my sincere condolences to Ms Sobb's family for their loss.

Finding and Conclusion

161. I find that Madeleine Therese Sobb died on 21 May 2015 from I(a) Airway obstruction complicating laryngeal dilation for the treatment of subglottic stenosis in a woman with spondylo-epi-metaphyseal dysplasia in the circumstances detailed above.

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

Thomas and Margaret Sobb, Senior Next of Kin.

Senior Sergeant Jenette Brumby, Coroner's Assistant.

K & L Gates on behalf of Alfred Health.

HWL Ebsworth on behalf of Dr Elisa Licari.

Mrs Sarah Crane, Comminsure.

Dr Julian Walter, MDA National Insurance.

Mrs Pauline Chapman, Austin Health.

Signature:

CAITLIN ENGLISH
CORONER
1 March 2019