
**CORONER'S COURT**

**OF NEW SOUTH WALES**

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| **Inquest:** | Inquest into the death of Andrea LESTER |
| **Hearing dates:** | 14 – 18 November 2022 |
| **Date of findings:** | 21 December 2022 |
| **Place of findings:** | Coroner's Court of New South Wales |
| **Findings of:** | Magistrate Kennedy, Deputy State Coroner |
| **Catchwords:** | CORONIAL LAW – Wollongong Hospital, tracheostomy, subarachnoid haemorrhage, thunderclap headache, PICA, speaking valve, tracheostomy cap, Swedish nose, tracheostomy management, multidisciplinary team |
| **File number:** | 2018/00190647 |

**Representation:**

Ms E Sullivan, Counsel Assisting the Coroner instructed by Ms R Hubbard (Department of Communities and Justice)

Mr M Johnston, Johnston Legal on behalf of Family, Sarah and Bradley Lester.

Ms V Thomas instructed by Ms J Power, Crown Solicitor's Office, on behalf of Illawarra Shoalhaven Local Health District

Mr N Dawson, New Law, on behalf of RN Christine Gomes, RN Caitlin Harley & RN Megan Sims

Mr R Coffey instructed by Ms L Kearney, Avant Mutual, on behalf of Dr Raj Singh & Dr Elyce Rossiter

Ms K Johnston, Meridian Lawyers, on behalf of Dr Lernik Sarkissian

**Findings:**

I make the following findings pursuant to s81 of the *Coroners Act* 2009 NSW:

**Identity:** Andrea Lester

**Date of death:** 19 June 2018

**Place of death:** Wollongong Hospital, Wollongong NSW

**Cause of death:** Hypoxic brain injury related to tracheostomy complications in form of airway occlusion from sputum plugging and/or tube dislodgment

**Manner of death:** Complications of tracheostomy care

**Recommendations**

To the Chief Executive of the Illawarra Shoalhaven Local Health District (**ISLHD**):

**Recommendation 1**

That the role of the Intensive Care Unit (**ICU**) Consultants (or representatives of ICU on the Tracheostomy Review Team) – as set out in the *'ISLHD Tracheostomy Review Team – Terms of Reference'* (November 2022) – must include a requirement to attend a bedside Multi-Disciplinary Team review on patients who have tracheostomies on outlying wards (such as Ward C4 West - Neurological and Neurosciences Ward) (**Ward C4 West**) as necessary.

**Recommendation 2**

That the role of Ear, Nose and Throat (**ENT**)/Head & Neck (**ENT/H&N**) Clinical Nurse Specialist (**CNS)** 2 role, in the ISLHD be increased from a part-time to a full-time position (ongoing).

**Recommendation 3**

That the Executive Director of Nursing and Midwifery Services will ensure that the nursing staff who are available to provide care for patients with a tracheostomy in Ward A5, Ward C4 West, and any other wards within the Wollongong Hospital (other than ICU) who have tracheostomy patients, are competent in tracheostomy management and, in doing so, will have regard to competency assessments undertaken by the ENT/H&N CNS 2.

**Recommendation 4**

That the Executive Director of Nursing and Midwifery Services will ensure the Nurse Unit Managers are aware of the obligation to ensure that the nursing staff rostered and allocated to care for patients with a tracheostomy in Ward A5, Ward C4 West and any other wards within the Wollongong Hospital (other than ICU) who have

tracheostomy patients are competent in tracheostomy management.

**Recommendation 5**

That recommendations (1) to (4) be actioned as a matter of urgency, given the significant clinical risk associated with tracheostomy management on outlying wards (such as Ward C4 West) that do not frequently have such patients.

**Recommendation 6**

That the Chief Executive of the Illawarra Shoalhaven Local Health District give consideration to the use of appropriate equipment for constant monitoring of oxygen levels with alarm systems when weaning tracheostomy patients who have decreased levels of consciousness or cognitive impairment.

**Non-publication orders:** Nil

## FINDINGS

### Background of Ms Lester

1. This inquest is looking carefully at the care and treatment of Andrea Lester. It is important to firstly reflect upon the person herself, the individual who is at the centre of these proceedings, and to remember the person that she was.

2. Ms Lester and her brother Mark were born in Hull, England. The family moved to Australia in November 1972, initially living in Windang, and later moving to Mount Warrigal. Ms Lester went to Oak Flats High School, finishing her HSC in 1986. She later worked in various retail and hospital jobs, including Shellharbour Workers Club and the Port Kembla Leagues. Most recently, she was working at a general store and bottle shop in Lake Illawarra. Ms Lester was very well known for her work ethic, and in particular her ability to work hard to support her family.

3. In around December 2017, Ms Lester met Michael Hellmund. They were living together at a residence in Mount Warrigal. Mr Hellmund was a supportive and

caring partner and they were enjoying a new and very happy relationship together.

4. Up until March 2018, Ms Lester had been fit and healthy with no significant health issues. The events that followed were as unexpected as they were sudden. She was only 49 years of age when she died.

5. Ms Lester is greatly missed by her children, family, partner and friends. In the family statement, her daughter, Sarah Lester, described a vibrant, energetic and entertaining mother, always ready with a laugh. She was a committed mother, friend to her children and a great support.

6. Ms Lester suffered from a complex aneurysm, which was undiagnosed for a period of time. Ultimately she required complex neurosurgery which left her brain injured and unable to swallow. This necessitated the insertion of a tracheostomy tube through the front of the neck and into the windpipe. This provided an air passage to allow breathing and to protect her airways from secretions, given her inability to swallow.

7. A plan was put in place for the management of that tracheostomy, the end goal being the removal of the tracheostomy when independent management of secretions had been achieved, allowing safe independent breathing. As the hospital sought to wean Ms Lester from the tracheostomy, there was a failure to follow the plan, and, contrary to the plan determined by the Multi-disciplinary Team (**MDT**), a tracheostomy cap was placed on the tracheostomy, rendering the tracheostomy unworkable.

8. There were a series of systematic errors which it is important to explore in this inquest, and a series of improvements have been identified as a result of the tragic loss of Ms Lester.

**Chronology of events**

9. The helpful agreed Chronology of key events was as follows (adapted slightly):

10. In March 2018, Ms Lester was living with her partner Michael Hellmund in Mount Warrigal. Ms Lester and Mr Hellmund had been in a relationship for around 6 months and had been residing together since December 2017. Ms Lester has two adult children from her previous marriage to Steven Lester. At the time of Ms Lester's death, her daughter Sarah Lester was 25 years old and her son Bradley Lester was 22 years old.

11. Ms Lester had been a patient of Dr Raj Kala Singh (**Dr Singh**), a General Practitioner at the Centre Health Complex Medical Practice, Barrack Heights (**Centre Health Complex**), since June 2008. Ms Lester had a limited prior

medical history and appeared to have generally been in good health prior to her death.

**Events leading up to admission to Hospital**

12. On 27 March 2018, Ms Lester took the day off work as she was suffering from headaches, pain in her neck and vomiting.

13. On 28 March 2018, Ms Lester attended Dr Singh's practice, Centre Health Complex, with her son, Bradley Lester. However, Bradley recalls being told that she arrived a day early. The receptionist advised Ms Lester to return the following day for her appointment. Ms Lester said "please I am really bad," but she was turned away.

14. On 29 March 2018, Ms Lester returned to visit Dr Singh at the Centre Health Complex in relation to acute neck pain, headaches and nausea. At this consultation, Dr Singh prescribed Ms Lester with 20 tablets of 50mg Tramadol. The following notes are recorded from that consultation:

> "Right side recurrent neck pain Now acutely painfully in Flexion and rotation. Headaches and nausea. No paersthesia in upper extremities"
>
> …
>
> Reason for contact:
>
> Pain
>
> Actions:
>
> Prescription added: TRAMAL CAPSULE 50mg 1 stat p.r.n
>
> …
>
> Explained encourage gradual mobilisation, review if persistent"

15. Of this consultation, Dr Singh states that Ms Lester:

> "… complained of constant right-side neck pain, headache and nausea. Her neck was painful in flexion and rotation movements. Ms Andrea Lester did not have any upper limb paraesthesia. On palpation there was a diffuse distribution of neck tenderness. Her blood pressure was 132/86 and her pulse was 87 beats per minute. I performed a neurological examination. My findings were unremarkable. I advised Ms Andrea Lester to take medication Tramal 50mg daily If needed for the painful neck strain, to gradually increase her neck movements, and to come back or go to the hospital if the pain was persistent or getting worse"

**Friday, 30 March 2018 - Ms Lester's first admission to Shellharbour Hospital**

16. On 30 March 2018 at around 7:00 am, Mr Hellmund took Ms Lester to the Emergency Department (**ED**) at Shellharbour Hospital due to her continued headaches, neck pain and vomiting and she was triaged at around 7:32 am.

17. At around 8:00 am, Ms Lester was examined by Dr Elyce Rossiter, Senior Medical Officer (**SMO**). Ms Lester reported that she had been suffering from a stiff neck for a few weeks, and some frontal and occipital headaches.

18. Dr Rossiter stated that Ms Lester did not report a sudden onset of a severe headache ('thunderclap' headache) that is typical of, and would have made her suspect, a subarachnoid haemorrhage.

19. Dr Rossiter reported that Ms Lester denied any symptoms such as visual changes, photophobia, sensation changes or weakness in her limbs. Ms Lester reported symptoms of lethargy, generalised body aches, feeling hot and sweaty, nausea and vomiting. She checked Ms Lester's vital signs, which were within the normal range, and conducted a neurological examination and a cardiology examination. Dr Rossiter found the results of these examinations to be normal. She concluded that Ms Lester was suffering from a muscular strain of her neck with an associated viral illness.

20. Dr Rossiter states that it is her routine practice to involve a senior doctor in the care of all patients that she sees in the ED, and believes she would have done so on this occasion, prior to recommending discharge.

21. Following assessment, Ms Lester was discharged at 9:15 am by Dr Rossiter. A discharge letter to Dr Singh, prepared by Dr Rossiter, stated the following:

> "… Andrea presented with neck pain and frontal and occipital headache associated with feeling sweaty, muscle pains, lethargy, nausea and vomiting. On examination in the emergency department her observations were stable and she was afebrile, her neurological examination was unremarkable. She had a full range of neck movements that elicited pain in her neck radiating to her shoulders. She was tender to palpation to over her sinuses with otherwise normal ENT examination. Impression was a neck muscle strain with a viral illness."
>
> *Plan on discharge*:
>
> "1. Continue regular paracetamol and nurofen, tramadol pm
>
> 2. Represent to hospital if worsening fevers, develops sensation changes or weakness in the arms, worsening neck stiffness with photophobia and visual changes.
>
> 3.Follow up with GP Dr Singhal in the next 2-3 days, see earlier if develop nasal discharge ? sinusitis"

**Thursday, 5 April 2018 – Ms Lester's second consultation with Dr Singh**

22. On 5 April 2018, Ms Lester returned to see Dr Singh. Ms Lester reported to Dr Singh that she had been having ongoing fatigue, night sweats, headaches, loss of appetite and body aches. Dr Singh's medical notes of this consultation were:

"Thursday April 5 2018 09:04:15 Dr. R. K. Singh.

Visit type:

Surgery Consultation
severe fatigue , body aches, always drowsy loss of appetite Headache, hot sweat at night, Attended hoospital but no medication . ? Flu lungsclear but started coughing BP 139/91 pulse 79 regular , Now 7 days, try Antibiotics

Reason for contact:

RTI (Respiratory Tract Infection)

Actions:

Prescription added: KEFLEX CAPSULE 500mg 1 t.i.d. Prescriptions printed:

KEFLEX CAPSULE 500mg 1 t.i.d.

review after 3 days as her son also getting Flu now"

23. Of this consultation, Dr Singh states:

> "When I saw her on 5 April 2018, Andrea Lester complained mostly of fatigue, but she also complained of body aches, drowsiness, headache, hot sweats at night and loss of appetite. She said she had started coughing. She told me that her son also had flu at that time. On examination, her lungs were clear on auscultation. I performed neurological and cardiovascular examinations. My findings were unremarkable. Her blood pressure was 139/91 and her pulse was 79 beats per minute and regular. My impression was that she could have a viral Infection of her respiratory tract.
>
> I contacted Shellharbour Hospital and requested a copy of the Discharge Summary for Ms Lester attendance on 30 March 2018. I noted that the Emergency Doctor's findings were consistent with my findings"

24. Dr Singh believed Ms Lester might have contracted a respiratory tract infection and prescribed her antibiotics (Keflex) for possible secondary infection. Dr Singh advised Ms Lester to return for review in two to three days' time or to re-present to hospital if her condition became worse.

**Saturday, 7 April 2018 – Ms Lester's second admission to Shellharbour Hospital**

25. On 7 April 2018, Ms Lester was admitted to Shellharbour Hospital after Mr Hellmund found her at home "*moaning in bed … her head at the feet part of the bed, she appeared to be crunched into [a] ball …".* Ms Lester had also wet herself. When Mr Hellmund tried to talk to her, it was "*like she was in a daze*". Mr Hellmund immediately drove Ms Lester to Shellharbour Hospital. Upon arrival, Mr Hellmund assisted Ms Lester to walk into emergency where she was given a wheelchair, triaged and admitted at around 10:49 am.

26. Around 11:17 am, Dr Milan Zecevic recorded the following notes in connection with a diagnosis of a Subarachnoid haemorrhage (**SAH**):

> "Chief Complaint:
> CP
> Details:
> minimal Hx from patient who is confused
> BIB her partner who has known her since last Nov17
> 12 days ago complained of headache/neck pain/feeling hot and cold/lethargic/seen LMO who suspected viral illness/expectant Mx
>
> seen in AE-?MSP-discharged home on tramadol/nurofen last taken ~~1 week ago symptoms continued until 34 days ago (headache) still went to LMO who started her on Keflex".

27. At around 11:30 am, Dr Derek Glenn reported on a brain CT scan and a CT carotid angiogram. The scans indicated findings consistent with a basal subarachnoid haemorrhage, thought to be related to the irregular 8 x 5mm aneurysm arising from the subarachnoid portion of Ms Lester's left vertebral artery.

28. Dr Glenn's clinical impression was noted to be "seizure and vasospasm in context of SAH secondary to left vertebral artery aneurysm. Stable, not requiring EVD currently."

**Transfer to Wollongong Hospital**

29. At around 12:55 pm, Ms Lester was transferred from Shellharbour Hospital via NSW Ambulance to Wollongong Hospital. At 2:16 pm, a (retrospective) progress note was entered by Dr Lauren Green, Registrar, which included the following notes:

> "48F, t/f Shellharbour with WFNS grade 2/Fisher grade 2 SAH likely secondary to left vertebral artery aneurysm
>
> **HPI (from pt and her partner)**
> Sudden onset severe neck/occipital pain 2 weeks ago
> worst pain of life
> associated with nausea for several days which has resolved
> radiated from head down to shoulders
> associated with lethargy
> saw GP and presented to ED, treated with tramadol and keflex
> Seizure
> Pt awoke at 6am, smoked and then returned to bed, partner left to visit mother for an hour
> When partner returned she was post-ictal: Incontinent of urine, foam at lips, drowsy, nil lip/tongue biting, unable to speak
>
> Denies photophobia
>
> Denies any recent chest pain/palpitations/fevers
>
> CT from Shellharbour does not adequately show COW"

**Saturday, 7 April 2018 - Transfer from Wollongong Hospital to Prince of Wales Hospital**

30. Dr Green discussed Ms Lester's condition with the on-call neurosurgery consultant Dr Day and they decided to refer her to the Prince of Wales Hospital (**POWH**) under the care of Dr Jacob Fairhall and registrar Dr Sharon Kemp. Ms Lester was given an anticonvulsant medication and commenced on post-SAH therapy.

31. At around 4.45 pm, Ms Lester was airlifted via helicopter to the POWH. Upon her arrival at the POWH, Ms Lester arrived in a serious but stable condition. Ms Lester remained in the POWH ICU from 7 April 2018 until 2 May 2018.

32. At around 9:00 pm, Dr Chris Davidoff, Neurosurgery Registrar, and Dr Jacob Fairhall, Neurosurgeon, performed emergency neurosurgery to insert an external ventricular drain.

33. Following this, around 12:00 am on 8 April 2018, Dr Andrew Cheung performed endovascular repair of the ruptured aneurysm, chemical and balloon angioplasty vasospasm treatment of severe bilateral middle cerebral artery and right anterior cerebral artery vasospasm, moderate to severe left anterior cerebral artery and left vertebral artery vasospasm; and moderate right vertebral artery vasospasm.

34. An Interventional Neuroradiology Operation Report dated 7 April 2018 includes the following notes:

> "Cerebral DSA, endovascular repair of left PICA aneurysm with sacrifice of left PICA, chemical and mechanical angioplasty for vasospasm. Clinical details: Delayed presentation subarachnoid haemorrhage with initial haemorrhage 2 weeks ago and second haemorrhage 7/4/2018. CTA hydrocephalus, severe vasospasm and left PICA/VA aneurysm. WFNS grade 2. GCS 13. For OT-EVD followed by endovascular repair of aneurysm and treatment of vasospasm". On 10 April 2018, Ms Lester was extubated at around 12:00 pm . On 11 April 2018, Ms Lester was re-intubated. The following progress note was entered by Sandy Kyaw at 7:22 am (as written): "Extubated 10/4 morning Poor cough. Unable to clear oral secretions. Initially maintaining good saturation on NP 2-4 L 02 /HF NP FiO2 30% FiO2 requirements are going up gradually overnight to 60% despite of, sitting upright, frequent suctioning and chest physio. Very weak cough with reduced AE overall. Otherwise, GCS 15, obeying commands, and moving all four limbs, answering questions appropriately. Nil change in neurology. ICP remain low. EVD draining - 5 ml/hr Decision was made for reintubation. # Intubation notes Sedation - midazolam 5 mg, fentanyl 50 mcg, propofol 20 mg intubated using Glidescope Mac 3 blade. Noted blood at the back of the pharynx likely from frequent airway suctioning. Good video laryngoscopic view. Size 8 ETT, 24 at lip. capnograpic trace + , equal AE on ausculatation. #Art line insertion -Difficult due to previous multiple art line In both radial and dorsalis pedis with likely thrombose arteries. USG guided Radial art line inserted at mid arm"

35. On 12 April 2018, Ms Lester underwent a percutaneous tracheostomy procedure for bulbar dysfunction and inability to swallow secretions. Following this, Ms Lester was ventilated via a size 7 non-fenestrated Portex tracheostomy.

36. On 18 April 2018, Ms Lester underwent surgery to remove her right sided external ventricular drain and underwent insertion of a left sided external ventricular drain.

**Wednesday, 2 May 2018 - Transfer from POWH to Wollongong Hospital**

37. On 2 May 2018 at around 3:30 pm, Ms Lester was discharged from POWH and transferred to Wollongong Hospital. At 4:45 pm, the following discharge summary was entered by Andrew Luo, Junior Medical Officer (**JMO**):

> "Delayed presentation of PCA aneurysm rupture with vasopasm requiring sacrifice. - Transferred to POWH, for Neurosurgical and /NR interventions
> Placed on Keppra prior to transfer
> 7/4 POWH EVD placed with PICA embolization by Neurosurgery
> -8/4 - Cerebral DSA, Endovascular repair of Left PICA aneurysm with sacrifice of Left PICA, chemical and mechanical angioplasty for vasospasm, by Dr Cheung, INR SBP aimed between 140-160 thereafter -17/04 CTB/CTA - no change in bleed/hydrocephalus, ongoing marked cerebral vasospasm 18/04 - NSx changed EVD due to fungal infection
> Completed 21 days of Nimodipine.
>
> 2) Failed extubation. Weak Cough c. aspiration of secretions 10/04. - CXR demonstrating mucus plugging of proximal bronchial tree with collapse.
> Failed extubation and was re-intubated.
> Tracheostomy inserted for bulbar dysfunction and unable to swallow secretions, not for respiratory distress or decreased GCS. 12/4/17
> 18/04 - developed VAP with LLL collapse/consolidation. Completed course of IV Abx - 6 days JV Augmentin.
>
> 3) Extensive R arm thrombus; extending R SC vein to R BC vein on CT Angiogram.
> Secondary to subclavian line.
> On therapeutic heparin infusion commenced 16/04; ceased for EVD change on 18/04. Heparin recommenced
> Changed to therapeutic clexane 28/4
> Will require at least 6 weeks and reimaging.
>
> 4) Fungal Ventriculitis - Candida parapsilosis CNS Infection- associated EVD Infection
> CSF MCS grew Candida parapsilosis 17/4 on two CSF MCS.
> Subsequent CSF MCS negative culture from 18/4
> With ID consultation, commenced amphotericin on 17/4 Flucytosine added 18/4. IV ceased after 2 weeks total on 2/5
> 2/5/18 Stepped-down to PO fluconazole 800mg loading dose, then 400mg daily: Aim 6 weeks treatment, pending ID review and normal results from repeat LP at that time
> Needs Follow-up with ID department at Wollongong in 6 weeks after 2/5/18
> Examination prior to transfer:
> CNS: Reusable, Whilst awake she is interactive and able to move all 4 limbs to command. Adequate amount of strength 4+/5 globally. Non verbal due to tracheostomy.
> CVS: 139/85 MAP 106HR 76, SR, HSD, Calves soft not tender
> Resp:Sats 99% 2L SW, RR 17, Tolerating hours without ventilation. Only on 1 /L Min oxygen decreased ale + creps L base, transmitted upper airway sounds GIT:Abdomen SNT, BS present
> Lines:Mild erythema at insertion site in Right femoral line.

Discharge Plan
Follow up with Dr Cheung (INR) in 2 months in his rooms.
Transfer to care of Dr Day, Wollongong.
Continue anticoagulation total 6 weeks anticoagulation. Now currently on Clexane. Consider re-imaging after 6 weeks completed.
Monitor for signs of infection
Follow up with Infectious diseases in 6 weeks -will likely need total 6 months of oral fluconazole.
Wean tracheostomy as able, this was for bulbar dysfunction and inability to swallow secretions (not for decreased GCS)
Weekly ophthalmology reviews for fundoscopy to check for fungal retinitis. Last review 24/4/18: no signs of fungal retinitis")".

38. Upon her arrival at Wollongong Hospital, Ms Lester was admitted to ICU. Ms Lester's tracheostomy remained in situ during her discharge from the POWH; her transfer back to Wollongong Hospital ICU on 2 May 2018; during her time in Wollongong Hospital; and in the days prior to her death in Wollongong Hospital.

39. Between 2 May 2018 and 25 May 2018, Ms Lester remained in the ICU in Wollongong Hospital. The tracheostomy team treating Ms Lester at this point in time included Denbi- Lee Thomson, speech pathologist, Sue Miech, tracheostomy Clinical Nurse Consultant (**CNC**), Clare Kendrick, speech pathologist, and an ENT doctor.

40. During Ms Lester's ICU admission, it became apparent that her ongoing heavy secretion load required regular suctioning of the tracheostomy tube. On 5 May 2018, Ms Lester's tracheostomy tube was changed to a fenestrated size 7.

41. At a MDT review in respect of Ms Lester on 22 May 2018, it was noted that her secretion management was improving with commencement of glycopyrrolate. The plan was for ongoing cuff deflation trials. After a speech pathology review on 24 May 2018, it was noted that Ms Lester had experienced increased secretions after glycopyrrolate had been withheld but appeared to be tolerating cuff deflations. The plan was for ongoing cuff deflation trials.

**Friday, 25 May 2018 - Transfer from ICU to the Neuro High Dependency Unit, Wollongong Hospital**

42. On 25 May 2018, after three weeks in Wollongong Hospital ICU, Ms Lester was transferred to the Neurosurgical Unit within Wollongong Hospital. Ward C4 West operated a Neuro High Intensity Nursing Unit (**NHD Unit**), which was an 8 bed unit over two rooms, with a case load of acute stroke and high acuity neurosurgical patients.

43. Ms Lester's care was transferred from the ICU doctors to Dr Maurice Day, who at the time was the head of the Department of Neurosurgery at Wollongong Hospital. At the time of transfer, the plan was to discharge Ms Lester to a rehabilitation facility at Port Kembla but it did not accept patients with a

tracheostomy. It was therefore necessary to wean Ms Lester from the tracheostomy. That was the aim of her treatment on the ward.

44. Ms Lester required medical review on the evening of her discharge from ICU for low oxygen saturation levels, in the context of high sputum load. Her oxygen saturation improved with suctioning and re-inflation of her tracheostomy cuff.

45. In the NHD Unit, the issues relating to Ms Lester's tracheostomy secretions continued. During the period of 25 May 2018 to 5 June 2018, the MDT continued trialling Ms Lester with the cuff down for the tracheostomy, but there were ongoing secretion problems requiring suctioning multiple times on shift and staff identified a high risk of sputum plugging.

46. On 26 May 2019, Anthony Le, JMO, entered the following Progress note:

> "trial of cuff down on tracheostomy earlier today
> tolerated well this afternoon, saturating well
> having ongoing Issues with high secretion load and poor swallow
> ongoing review by SP and tracheo CNC
> recently commenced glycopyrolate TDS for secretions
> nursing staff noted desaturation to 91 % with nil increase
> nurse able to suction yellow-green sputum from trache site
> nurse put the cuff back up and gave supplemental O2 at 2L and sats returned to 96%".

47. On 28 May 2018, Anna Habeck-Fardy, JMO entered the following Progress note:

> "Neurosurgery WR
> Alert
> Thumbs up given to team Moving all limbs
> Plan
> -continue 2-hour periods of cuff down
> -mobilise with physio
> occupational therapy input re baseline ongoing speech pathology".

48. On 4 June 2018, Ms Lester was reviewed by Ms Thomson, speech pathologist, Ms Youngblutt, physiotherapist and Ms Geale, physiotherapist. It was noted that Ms Lester had tolerated up to 12 hours of cuff down over the previous weekend. The treatment plan was for cuff down for up to 24 hours as tolerated.

49. On 5 June 2018, Ms Lester was reviewed by Ms Youngblutt physiotherapist, Ms Geale physiotherapist, Ms Coates physiotherapist, Ms Jolivet physiotherapist and the Neurosurgery team. They decided to trial a tracheostomy cap for the first time, requiring Ms Lester to breathe through her nose and mouth. Initially, Ms Lester was oxygenating well but struggled with the cap on. The cap was removed and a suction was performed, revealing a sputum plug in the airway. Five minutes later, Ms Lester became acutely dyspnoeic, and cyanosed ("colour turning blue"), with "thick sputum plug retrieved" on suctioning. She improved with these measures and with re-inflation of her tracheostomy cuff.

50. The impression was that the size 7 tracheostomy tube was too large for Ms Lester to breathe around and the ENT was requested to conduct a review the size of the tracheostomy.

51. On 6 June 2018, Ms Youngblutt saw Ms Lester for further review. Ms Youngblutt found Ms Lester's cuff was inflated but the speaking valve was in place, preventing Ms Lester from breathing easily and causing her difficulty with coughing or clearing her secretions. Ms Youngblutt removed the speaking valve, performed a suction and deflated the cuff. After around 5 minutes of monitoring, Ms Youngblutt found that Ms Lester's oxygen was low. Ms Youngblutt administered Ms Lester oxygen and contacted the neurosurgery team to arrange a review. Ms Youngblutt left Ms Lester with nursing staff on 2 litres of oxygen with the cuff deflated.

52. Following this, Ms Youngblutt lodged an Incident Management Report and spoke to the Nursing Unit Manager (**NUM**) about the use of the speaking valve. Ms Youngblutt reviewed Ms Lester again in the afternoon to do physiotherapy with her and provide bedside education to the nursing staff on the use of the speaking valve, including highlighting the education charts in the room provided by the tracheostomy CNC.

53. On 7 June 2018, Ms Lester was reviewed by the MDT. Ms Thomson, Speech pathologist, entered the following Progress note:

> "Ongoing increased sputum load, NS needing to suction hourly overnight' predominately only within the trache. NS report 1 x deep suction required
>
> Noted inconsistent timing of glycopyrelate administration likely impacting on amount of secretions. Last glycopyrelate given at 5:10, due again at 10:00 however had not been given when team present at 11 :30- PT to follow up with NS re same.
>
> Patient noted to demonstrate on ongoing cough into the hub and through the trache. Query impact of space around the trache to allow increased clearance to patients oral cavity"

54. The overall impression was that Ms Lester continued to tolerate cuff down with speaking valve in situ and that the need for suctioning and sputum load was impacted by inconsistent timing of glycopyrrolate. The plan included aiming to have the cuff down with speaking valve in situ as tolerated, but no use of the tracheostomy cap.

55. Kate Hogan, Registered Nurse (**RN**) also reviewed Ms Lester. RN Hogan became aware that Ms Lester did not tolerate capping on 5 June 2018; that her sputum load had increased; she required more frequent suctioning for secretions and nebulised saline; and had been commenced on IV antibiotics. RN Hogan noted that Ms Lester's tracheostomy management and observation

chart at the time did not reflect the amount of sputum that she was producing. She spoke to the nursing staff and directed them to accurately document the frequency of suctioning required.

56. At around 3:00 pm on 7 June 2019, Ms Lester was reviewed by ENT Registrar Dr Lernik Sarkissian, who confirmed that a tracheostomy change was appropriate. A smaller tracheostomy tube allows for increased passage of air between the tube and the tracheal walls on exhalation. Potential benefits of down-sizing a tracheostomy tube include: improved patient comfort; reduced pressure on the tracheal mucosa by reducing the tube external diameter; facilitation of speech and improved swallowing. However, a smaller tracheostomy tube may also increase the work of breathing, as the resistance to air flow is increased through a smaller diameter tube.

57. The team determined that this was appropriate and Dr Sarkissian attended to the tracheostomy change and downsized Ms Lester to a 6mm fenestrated cuffed portex tracheostomy. Ms Lester was stable throughout the change. After 1 hour, the cuff was deflated. The plan was to continue with the cuff down unless Ms Lester's respiration was compromised; and for the speaking valve to not be applied until the following day. Ms Lester's alert sign was updated.

58. On 8 June 2018 (a Friday), Ms Thomson, speech pathologist, reviewed Ms Lester. The speaking valve was in situ. She noted improvements in voice quality and that Ms Lester continued to tolerate the cuff down. She entered the following progress note (as written):

> "Recommendations:
> Tracheostomy:
> Aiming cuff down with speaking valve in situ as tolerated
> Please remove speaking valve prior to cuff relnflatlon- If not tolerating cuff down
> Please prompt patient to cough and swallow If indications of wet voice quality
> NBM with NGT
> Regular mouthcare
>
> *Suctioning as required*"

59. On 8 June 2018, Ms Youngblutt attended upon Ms Lester. She noted that Ms Lester had her tracheostomy changed to a smaller size and that she was also changed to a fenestrated inner tube. The plan was for Ms Lester to have the cuff deflated with the fenestrated tube in to increase the amount breathing through her mouth and nose. Ms Youngblutt entered the following Progress note:

> "Ongoing review to wean trache aiming to keep cuff down, fenestrated inner in and speaking valve on over long weekend in view of decannulating next week"

60. Ms Youngblutt stated however that the fenestrated tube was not used overnight due to a miscommunication between nursing staff. Ms Lester was saturating oxygen well with a good cough. Ms Youngblutt applied the speaking valve and monitored her for 15 minutes. Ms Youngblutt also provided bedside education to nursing staff on the correct use of the speaking valve.

61. Ms Youngblutt reviewed Ms Lester again at about 2:00 pm. There was no change in Ms Lester's condition and the treatment plan for the weekend was to have the speaking valve on with the cuff deflated and a fenestrated tube for 24 hours, with a view for removal of the tracheostomy tube the next day (on 13 June 2018). The ENT team, Neurosurgery team and Speech pathology team determined that if Ms Lester tolerated this then it may have been appropriate for decannulation the following week.

62. On 10 June 2018 at 3:05 pm, Dr Green entered the following progress note:

> "Vitally stable, afebrile
> Nil changes since yesterday
> Plan: Continue current"

63. It is noted that Saturday 9 June 2018 to Monday 11 June 2018 was a 'long weekend' and Monday, 11 June 2018 was a public holiday.

64. On Sunday, 10 June 2018, at 9:33 pm, Bonnie Yau RN entered the following nursing progress note

> "… Airway: maintaining own tracheostomy insitu, cuff down, fene[s]trated inner tube insitu, patient coughed up copious whitish – yellowish sputum, suction atten[d]ed with non fene[s]trated inner tube insitu … patient can speak single word … Disability alert, conscious, knows in the hospital, stated wants to go to heaven, tried to remove the trachy [numerous times], throwing away the Swedish nose numerous times … needs to be at the patient's bedside all the time"

65. By that evening, Ms Lester had been placed in Room 2, opposite the nurses' station for close monitoring.

66. At 8:39 pm on 11 June 2018, RN Hegarty recorded that Ms Lester had been very agitated during the late afternoon and was voicing that she would like to have her tracheostomy and nasogastric tube out.

67. On Tuesday 12 June 2018 at 1:49 am, Natalie Hemar RN entered the following progress note:

> "…Breathing via trachy very productive early in night requiring frequent suctioning inner tube cleansed frequently sputum thick and tenacious …
>
> Plan: as per team await decannulation of trachy continued allied health input"

68. At 8:55 am, Claire Connelly JMO entered the following Progress Note:

"Plan
Trachy out today - rehab referral if successful"

69. At about 10:00 am on 12 June 2018, Ms Youngblutt (returning after the long weekend) reviewed Ms Lester and found that the speaking valve had not been used by the nursing staff over the weekend; she stated that there was no clear documentation as to the reasons why the treatment plan was not followed over the weekend. Ms Youngblutt stated that the nursing staff informed her they had not been handed any information about the use of the valve, and nursing staff entries were inconsistent about the amount of suctioning required.

70. During Ms Youngblutt's review, Ms Lester was oxygenating well on 2 litres of oxygen with a strong cough. Ms Youngblutt contacted the ENT registrar, Dr Sarkissian, senior ICU physiotherapist Rebecca Hooper and the tracheostomy CNC Kate Hogan to discuss treatment options. It was agreed that because the plan for the long weekend had not been followed, it was not appropriate to continue with the decannulation of the tracheostomy that day. The decision was made to trial the speaking valve again and a fenestrated tube and reassess decannulation the following day.

71. Ms Rebecca Hooper, Senior Critical Care Physiotherapist (working in the Critical Care Unit) was involved in Ms Lester's care during the period she was in ICU at Wollongong Hospital prior to transfer to the NHD Unit (on 25 May 2018). Ms Hooper recalled being contacted by Ms Youngblutt on 12 June 2018, although could not recall the specifics of the conversation. Ms Hooper provided advice based on the information in Ms Lester's file and information provided by Ms Youngblutt. Ms Hooper states:

"Zara informed me that the original plan from the trache team from Friday was for the speaking valve to be on over the weekend to assess suitability for possible decannulation on12 June 2018. As it was unclear from the notes and nursing handover whether or not this plan had been carried out, Zara and I discussed with ENT Registrar and opted for a further 24hr trial of speaking valve and fenestrated inner and cuff down to assess for suitability for decannulation the next day".

72. RN Caitlin Harley worked a night shift from 9:30 pm on 12 June 2018 to 6:00 am on 13 June 2018. She also made an entry at 1829 hrs, recording that Ms Lester had pulled out her nasogastric tube and bull-ring, had removed her clothes multiple times during the shift and was very restless and unsettled. Ms Lester was nursed in a single room close to the nursing station with the lamp left on so she could be clearly observed from the nursing station]. At 10:29 pm on 12 June 2018, she entered the following progress note:

"Patient has required suctioning multiple times on shift through trachea"

**Events of Wednesday, 13 June 2018 onwards**

73. On Wednesday, 13 June 2018 at around 6:30 am, Cristine Gomes RN received a bedside handover from RN Harley. Ms Lester was one of four patients she had been allocated that shift. RN Gomes was told that Ms Lester was due for decannulation that day and that the cuff had been down continuously for approximately a week; RN Miller also told her that she had suctioned Ms Lester a couple of times overnight and Ms Lester had been pulling or touching her tracheostomy at times and had completely pulled out her nasogastric tube. Ms Lester remained in a single room opposite the nurses station.

74. At 7:08 am, a progress note entered by Anna Habeck-Fardy JMO (during a Neurosurgery Ward round attended by Registrar Dr Craig Vonhoff, Dr Green and Dr Connelly) noted, amongst other matters:

> "Sleeping but rousable
> 7/7 of antibiotics completed Moving all limbs
> **Plan**
> cease Augmentin
> ongoing allied health input, including chest physio as per respiratory team
> decannulate as per trache team."

75. RN Gomes was also present for this neurosurgical team review; she states that they "verbally confirmed to trial for decannulation that day".

76. At 7.30 am, RN Gomes assessed Ms Lester and attended to her tracheostomy care. She states:

> "Initially when I checked Ms Lester's vital signs her oxygen saturations were 88% with the oxygen saturation probe on her finger. Using sterile gloves and changing Ms Lester's inner cannula to the non-fenestrated inner cannula, I used a suction catheter to suction Ms Lester. There was minimal to moderate thin white sputum suctioned. I then replaced the fenestrated inner cannula and cleaned the previous one that was in. I then placed it in the sterile container on the tracheostomy trolley. At this time I replaced a Swedish nose. Ms Lester's oxygen saturation increased to 99%"

77. RN Gomes states that she then performed a routine trolley check, including of all the tracheostomy equipment. She recalled, relevantly, 2 red caps, but did not recall seeing a speaking valve on the trolley. RN Gomes discarded one red cap in an open container and left the one in a closed container.

78. From 8:30 – 9:00am, the "usual" Electronic Patient Journey Board meeting was held, involving discussions regarding patients' care and management plans. During the meeting, Ms Youngblutt noted that Ms Lester's decannulation of her tracheostomy was due to take place that day.

79. At around 9:00 am, RN Gomes states that she administered Ms Lester's subcutaneous Enoxaparin (65mg) *[an anti-coagulant medication]*. She attended to Ms Lester's tracheostomy care, trialling her for decannulation tolerance by

removing the Swedish nose and placing the red cap on her tracheostomy. She states that she has "done this many times before for patients who are being trailed for decannulation". RN Gomes asked Ms Lester to practice talking; she had a quiet raspy voice but answered questions (albeit 'inappropriately', according to RN Gomes this was normal given Ms Lester's brain injury). RN Gomes noted that Ms Lester appeared to be in good spirits, smiling and was "keenly responsive".

80. RN Gomes states that she remained with Ms Lester for 15 minutes after applying the red cap and monitored her oxygen saturations. She noted the reading was about 97% when the probe was on her ear at room air; there were nil signs of respiratory distress and the tracheostomy appeared secure and 'midline'.

81. Ms Youngblutt also says that she next attended Ms Lester at about 9:00 am. She says that she spoke with the nursing staff who reported Ms Lester had required suctioning overnight but nothing further in the morning. At the time of the review, Ms Youngblutt says that Ms Lester had the tracheostomy cap in place which was not the recommended treatment; the recommendation was to have the speaking valve in place. Ms Youngblutt says that she spoke to the nursing staff, who reported that they thought the cap in place was the speaking valve. The nurse (whom Ms Youngblutt does not identify in her statement, but is likely RN Gomes) reported the cap had been on since she started her shift earlier that morning with no issues. On review, Ms Lester was saturating on room air at 98%, swallowing her oral secretions and the inner cannula was clear.

82. At around 9:30am, when RN Gomes was leaving the ward for her morning tea break, she had a "quick conversation" with Ms Youngblutt who was reviewing Ms Lester. RN Gomes recalled this conversation as follows:

> "Zara, the physiotherapist asked me where the speaking valve was. I told her there was no speaking valve on the tracheostomy trolley, only red caps. She said that Ms Lester was supposed to use the purple speaking valve because she had not tolerated the red cap when the physiotherapist and Acting Head and Neck Clinical Nurse Specialist 2, Kate Hogan, had reviewed Ms Lester the previous week. I told Zara I had never seen a purple speaking valve before, and that I had only ever seen a white speaking valve. I also told her there were no white or purple speaking valves on Ms Lester's tracheostomy equipment trolley, only the red cap, and that is what I used. I then went on my break".

83. RN Gomes states that, at around 9:45 am, she walked past Ms Lester's room and saw that the physiotherapist was still with her. She then tended other patients.

84. At around 10:00 am, Megan Sims, NUM, was conducting rounds of the ward and walked past Ms Lester's room. Ms Sims noted that Ms Lester was in the upright position, looked safe and was perfused.

85. After reviewing Ms Lester, Ms Youngblutt called Ms Hooper (the Senior Critical Care Physiotherapist) who indicated that it was safe to keep the cap on Ms Lester's tracheostomy as she had been tolerating it well, was saturating well on room air and appeared comfortable. This was to be the next step in the weaning process. Ms Youngblutt stated that she was on the phone to the ENT team to confirm that Ms Lester's tracheostomy could be decannulated when she heard the respiratory arrest alarm from Ms Lester's room.

86. Ms Hooper recalls this conversation as follows:

> "Again I did not see Andrea, I just provided advice over the phone based on the information in her file and verbally given to me by Zara. Zara reported that at some point since her review the day prior the speaking valve had been replaced with a trache cap by nursing staff. According to Zara, Andrea was self-ventilating on room air (since midnight as per medical chart) and her observations were stable with nil signs of secretion retention or change in respiratory condition. Zara and I agreed that it was appropriate to keep Ms Lester as she was with the trache cap in situ with the plan that Zara would contact the ENT Registrar to recommend decannulating her that day. At the time of Zara's assessment, Andrea was showing no signs of respiratory distress, had no signs of sputum retention and was maintaining SpO2 on room air with the trache cap in situ. For this reason, we both deemed she was suitable to remain with the trache cap in situ as well as for decannulation from a respiratory perspective".

**Ms Lester is discovered unresponsive**

87. At some point during the morning, at around 10:18 am, Kerry-Anne Hegarty RN was on the phone at the nurses' station, which had sight of Ms Lester's bed. RN Hegarty noticed Ms Lester was sitting up in bed and very pale. RN Hegarty went to Ms Lester to see if she was okay and discovered Ms Lester was cyanosed, non-responsive, with her head slumped into her shoulder and drool coming out of her mouth. RN Hegarty noted that Ms Lester's tracheostomy was in place with the red cap applied.

88. RN Hegarty immediately hit the emergency buzzer and lay Ms Lester on her back. Ms Hegarty commenced CPR and called for help. RN Gomes ran when she heard the arrest alarm and sought to assist with CPR by performing chest compressions.

89. At 11:19 am, RN Hegarty entered the following note retrospectively:

> "Was walking by patients room, looked pale and cyanosed.
> Attended to patient called out name and gave painful stimuli – nil response.

Arrest buzzer pressed in patient room. CPR commenced straight away while help was on their way. Cardiac arrest team arrived".

90. Ms Youngblutt also responded to the alarm, attended the room and found Ms Lester was blue and pale on her bed, with RN Hegarty performing chest compressions and several nurses standing at the bedside. Ms Youngblutt realised that the tracheostomy was still in with the cap on. No airway management was being performed and Ms Lester was not receiving any oxygen. Ms Youngblutt instructed the nurses to remove the cap as she got the suctioning equipment. Ms Sims removed the cap and suctioned the tracheostomy. Shortly after, the emergency respiratory team arrived and took over care of Ms Lester.

91. Dr Alex Lai also responded to the arrest call and arrived at Ms Lester's room around 3 minutes later. Dr Lai saw that CPR had started and one of the nurses was using a ventilation bag to attempt to ventilate Ms Lester through her tracheostomy tube. Dr Lai recalled that the tracheostomy tube may have been partially dislodged when he arrived at Ms Lester's room, but noted it is difficult to say when the tracheostomy tube became dislodged.

92. Dr Patrick Kroek, Anaesthetics Registrar arrived at Ms Lester's room at about the same time as Dr Lai and took over management of Ms Lester's airways. Dr Kroek had difficultly ventilating Ms Lester through the tracheostomy tube and a decision was made to remove the partially dislodged tracheostomy tube, apply occlusive dressing to the tracheostomy site, and use the bag valve mask over her mouth and nose for better ventilation. During the discussion and management of the above airway issues, the team continued with standard CPR protocol.

93. The following progress note was subsequently entered by Dr Lai:

"Patient found unresponsive by ward staff-> unclear downtime, noted to be cyanotic Arrest call made

CPR commenced

Reportedly able to bag patient via attaching bag to trache

On ICU team arrival CPR in progress1st rhythm check -> PEA

Anaesthetics reg in attendance -> able to bag patient with BVM

Trache tube noted to be partly dislodged Removed and occlusive dressing applied

Difficult IV Access ->·IO inserted via R shin

Fluid bag + adrenaline bolus delivered via IO".

94. At the time of the above events on 13 June 2018, Ms Lester's bed was within view of the nurses' station in Ward C4 West. At some earlier stage, her hospital bed had been moved from the usual position in her room so that she was visible

to the nurses' station. As a result, it appears Ms Lester did not have access to an emergency buzzer.

**Transfer to ICU and emergency neurosurgery**

95. Ms Lester was intubated and transferred to ICU; and at around 6:25 pm, Ms Lester underwent emergency surgery to insert a 6cm EVD and to remove scar tissue from a burr hole to release pressure on her brain. CT brain scans on 13 and 14 June 2018 revealed increased hydrocephalus compared with previous studies.

96. On 16 June 2018, an MRI was conducted. The result was that 'hypoxic ischaemic insult should be the primary consideration'. It was clear that Ms Lester had suffered a severe hypoxic ischaemic insult and had a very poor prognosis.

**19 June 2018 - Removal of life-support**

97. On 19 June 2018, Ms Lester's life support was turned off. Tragically, Ms Lester died at 8:43 am, approximately twenty minutes after being extubated.

98. No autopsy was conducted.

**Form A – 'Report of Death of a Patient to the Coroner'**

99. In the 'Report of Death of a Patient to the Coroner', Dr Costello provided an opinion as to the cause of death as 'high sputum load caused airway obstruction, severe hypoxic brain damage in patient with tracheostomy and poor bulbar function…Death may be related to tracheostomy'. This report also states: "… hypoxic brain injury led to death – most likely [related] to sputum plugging" and raises the "differential" cause of death as "seizure".

**SUMMARY OF THE EVIDENCE**

**Understanding Ms Lester's medical condition**

100. Counsel Assisting provided a very helpful summary relating to Ms Lester's medical condition, which I now extract based on the evidence set out by the expert Associate Clinical Professor Martin Krause (**Professor Krause**). Professor Krause provided a very helpful presentation to the Court on 17 November 2022, in which he set out relevant anatomical matters and features of Ms Lester's presentation.

101. Ultimately, Professor Krause explained that Ms Lester suffered an uncommon and complex disease, being a subarachnoid haemorrhage due to left posterior inferior cerebellar artery aneurysm. Ms Lester's treatment at POWH on 7 April 2018 was complex given the location and nature of the aneurysm. This

treatment led to a brainstem and cerebellar stroke, which caused swallowing difficulties. The inability to swallow made it necessary to protect Ms Lester's airways with a tracheostomy.

102. Professor Krause provides the following relevant background information to understand the nature of her condition:

a) ***PICA dissecting aneurysm***: an aneurysm is an "unusual widening of an arterial blood vessels" It reflects a disturbance of the vessel wall integrity. The underlying cause of an aneurysm partially depends on the type of aneurysm. Hypertension, smoking, alcohol consumption and certain drugs are modifiable risk factors for most aneurysms/SAH.

b) ***Subarachnoid haemorrhage:*** most cerebral aneurysms become symptomatic by rupture causing an aneurysmal subarachnoid haemorrhage (**aSAH**). Cerebral aneurysm rupture is the most common, but not the only cause of SAH. Ms Lester suffered an SAH, being a haemorrhage into the subarachnoid space.

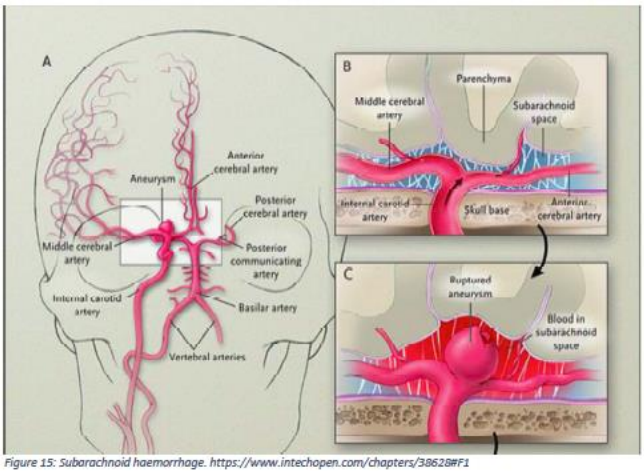

Figure 15: Subarachnoid haemorrhage. https://www.intechopen.com/chapters/38628#F1

A SAH typically presents with a thunderclap headache. Other symptoms might include nausea, vomiting, neck pain and stiffness on moving the neck forward (meningism), photophobia, loss of consciousness, focal neurological deficits or seizure. A sentinel headache sometimes precedes the more severe SAH. A sentinel headache presents with sudden but less severe headaches, variable occurrence of other symptoms. Diagnosis of SAH is based on history, clinical examination and technical investigations.

c) ***Hydrocephalus*:** The SAH led to a hydrocephalus (an abnormal build-up of fluid in the ventricles deep within the brain. Hydrocephalus is treated by a temporary external ventricular drain (EVD). This creates a pathway for pathogens outside the body to enter the skull/central nervous system – which may cause an infection like ventriculitis (pathogens in the ventricles).

d) ***Posterior inferior cerebellar artery (PICA)*** – this is the lower cerebellar artery, which is one of three arteries that supply blood to a part of the brainstem and cerebellum.

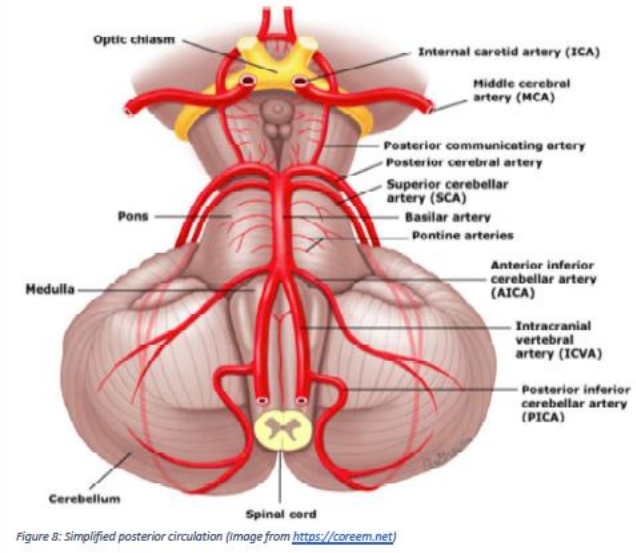

*Figure 8: Simplified posterior circulation (image from https://coreem.net)*

103. Ms Lester had an irregular, broad based left PICA aneurysm which seemed to involve the entire vessel. She was predisposed to a stroke, having regard to certain risk factors including her gender, age and on account of her smoking and also alcohol intake.

104. Professor Krause states: "I suspect that Mrs Lester had a dissecting aneurysm of the Vertebrobasilar circulation (PICA). This aneurysm has a high risk of rupture." It is also associated with higher mortality and often leads to disability in survivors. In oral evidence, Professor Krause confirmed that the did not know exactly which type of aneurysm Ms Lester had suffered, but found the features of neck pain over a three-week period consistent with a dissecting artery.

105. Ms Lester's aneurysm was over 8.3 x 5.6 mm (based on the CT-angiography).

106. Aneurysms arising from the PICA are very rare; as noted above, they have a higher rupture risk and often an unfavourable outcome. Mortality rates of up to 80% have been reported with dissecting cerebral aneurysm of the posterior circulation. They are very rare (accounting for 0.5 to 0.7% of all intracranial aneurysms). Ms Lester's PICA aneurysm was treated with coils (where the

vessel is occluded from inside with detachable coils). She then suffered a dorsolateral medulla oblongata stroke - likely as a result of her treatment - which damaged part of her brainstem and impaired her ability to swallow, coordinate movements and dilate her left pupil, among other symptoms. This is known as Wallenberg syndrome. In oral evidence, Professor Krause explained that although people with this syndrome may recover some function, he has never seen anyone fully recover.

107. Professor Krause was able to date the SAH to 27 March 2018, this was the day Ms Lester did not go to work because of her headache and pain, she was vomiting and felt sick. When she went to Dr Singh on 29 March 2018, he was able to indicate in evidence that her SAH and PICA aneurysm were present. They would have been detectable with diagnostic investigations at that time.

108. Even if Ms Lester had been diagnosed at that early stage, the treatment required would have been the same, that is, the difficult operation would still have been required to be performed.

109. Professor Krause provided a summary of the complications suffered by Ms Lester. He opined that her aneurysm was located at the origin of the PICA. To stop the haemorrhage the PICA was sacrificed by obstructing the artery at the origin, this stopped the blood flow to the dorsolateral medulla oblongata and parts of the cerebellum resulting in an ischaemic stroke. This resulted in Wallenberg syndrome.

> "Ms Lester was so unfortunate to suffer many complications. She had a likely re-bleed on 7 April 2018. She was diagnosed with hydrocephalus on 7 April 2018. The DSA identified vasospasm of multiple brain arteries. She experienced an ischemic stroke as a result of her treatment. She further developed a fungal ventriculitis likely as a result of her hydrocephalus treatment. She developed an extensive right arm deep vein thrombosis which is another complication of her treatment. She experienced recurrent plugging of her breathing tube and pneumonia."

110. In relation to the tracheostomy, there is reference in the weaning process to two kinds of capping systems. These were defined as follows:

- A **tracheostomy cap** is a cap that is placed over the tracheostomy tube and occludes the opening of the tracheostomy tube. This blocks air from entering the tube and forces the patient to breathe in and out through the nose and mouth. It is common practice, in determining whether a patient with a tracheostomy tube is ready for decannulation, to perform a capping trial. This involves placing a cap over the tracheostomy tube for a period of time to see whether the patient is able to breathe through the nose and mouth and around the tracheostomy tube.

- A **speaking valve** has a one-way mechanism whereby the valve opens on inspiration, allowing air to enter the airway via the tracheostomy. This valve then closes on expiration, forcing air into the upper airway and larynx, therefore allowing for phonation and speech (especially in exhalation). The use of a speaking valve is dependent on the patient being able to safely manage with the cuff deflated. In essence, the valve allows you to breath in using it, but breathing out must be done through natural airways.

**TREATMENT BY DR RAJ KALA SINGH**

111. As set out above, Dr Singh saw Ms Lester on two occasions, he did not send her for a CT scan, nor consider a diagnosis of SAH based on her presentation. He attended at inquest and gave evidence as Ms Lester's treating GP.

112. Dr Hester Wilson, clinical expert in general practice, provided an independent expert opinion on the treatment provided by Dr Singh. Dr Wilson indicated that SAH is uncommon, with a rate of 1 in 10,000 people in Australia, and that is it the cause of only 5% of cerebrovascular accidents. The most telling symptom is what she and Professor Krause refer to as the thunderclap headache. Ms Lester did not present to Dr Singh with that symptom. Ms Lester also presented with a full range of neck movement, no photophobia, loss of consciousness or other common reported symptoms.

113. As to the consultation on 29 March 2018, Dr Wilson's opinion, which I accept, was that Dr Singh's diagnosis and management were adequate. She did note that his notes were brief, and Dr Singh himself agreed that his notes could have been more fulsome. Nothing turns however on that fact in these proceedings.

114. Dr Wilson noted that when Ms Lester represented on 5 April 2018 that her symptoms were consistent with a viral respiratory tract infection. Dr Singh had the knowledge that she had presented to the emergency department. The ED diagnosis of muscle strain and viral infection were consistent with his own diagnosis. Dr Wilson found that his diagnosis and management was also adequate on that occasion.

115. Overall, the evidence supports a finding that Dr Singh's conduct, treatment and care was appropriate and adequate in accordance with the expert opinion.

**ADEQUACY OF CARE AT SHELLHARBOUR HOSPITAL**

116. Dr Elyce Rossiter saw Ms Lester on 30 March 2018. She was a Senior Resident medical officer, and had four years of experience at the time. She held limited recollection of Ms Lester, but she explained that this was most likely because the initial consultation did not present as troubling for her. She took a history from Ms Lester and was told that Ms Lester was suffering from a stiff neck over the last few weeks, and that Ms Lester had turned her head three days prior

and felt a pain in her neck, she also reported experiencing some frontal and occipital headaches. Ms Lester denied concerning symptoms such as visual changes, photophobia or sensation changes in her limbs. She reported being lethargic, general body aches and pains, feeling sweaty and hot and some vomiting that had improved. She did not describe the classic "thunderclap" headache that might have alerted Dr Rossiter to consider a subarachnoid haemorrhage.

117. Dr Rossiter performed a thorough examination, Ms Lester had vital signs within normal range and she was afebrile. She noted that Ms Lester looked tired, but could provide her own history and follow instructions. Examination found no localised tenderness and a normal full range of motion in her neck, with no evidence of stiffness. Ms Lester reported pain radiating from her neck down to her shoulders. A neurological, cardiology and respiratory examinations were unremarkable.

118. Dr Rossiter explained that her usual practice was to involve a senior doctor in the care of each patient that she consulted in ED, and gave evidence that she would have done so before recommending discharge. No record of that consultation was found in her notes however. The diagnosis Dr Rossiter formed was that Ms Lester was suffering from a muscular strain of her neck with an associated viral illness. She instructed her to return if there was any worsening of symptoms.

119. Ms Lester was a "fast track" patient, where patients are seen and are likely to be discharged home. She was triaged category 4, and Dr Rossiter was of the view that she spent an hour on Ms Lester's case.

120. Associate Professor Sally McCarthy, Emergency Physician, provided an independent view of Ms Lester's treatment by reviewing Ms Lester's care at Shellharbour Hospital. In her report she indicated that headache is a common presentation to ED, representing 2% of all presentations. Of these only 1-3% are due to spontaneous SAH. When trying to identify SAH only 50% will present with the classic thunderclap headache, often described as the worst pain in the patient's experience.

121. Professor McCarthy opined that she would have liked to see more thorough notes from Dr Rossiter, and Dr Rossiter readily agreed with this. Her overall view was that Ms Lester did not present with the report of the sudden onset of severe headache, and other features were not typical SAH features including nausea, the type of neck pain described and a full range of neck movement being available to Ms Lester. She opined that Dr Rossiter would have been reassured finding no signs of a serious underlying neurological issue, by the corroborating findings of the GP of a diagnosis of viral illness and Ms Lester's ability to self-report leading her to diagnose a viral illness.

122. At the time, Dr Rossiter was not physically supervised by a specialist emergency physician. The opinion of Professor McCarthy was that the treatment of Ms Lester by Dr Rossiter was reasonable by a doctor working in ED with the level of Dr Rossiter's experience. Professor McCarthy She indicated that this diagnosis is often missed by junior doctors, and it requires the expertise of a specialist emergency physician to pick up the clues that were available in Ms Lester's case. She said this:

> "a significant risk in patients who do have typical features of SAH is that the diagnosis is not considered in the first place. The risk is higher for patients seen by less experienced ED doctors who do not have extensive specialty emergency medicine training and experience required for a heightened suspicion and detection of possible serious underlying pathology in a non-specific presentation."

123. Ultimately, Professor McCarthy found that the care and treatment provided given the atypical clinical presentation was adequate given the staff that were available. However, she said that if a specialist emergency physician had been available on site she considered a different decision regarding the likely underlying diagnosis and investigations may have been made. In making this statement she pointed to the inconsistency in Ms Lester's presentation these being:

a. Headache accompanied by neck pain and recurrent vomiting which no cause had been identified
b. Vomiting if associated with gastro should have been associated with other positive findings on examination
c. Neck pain was not associated with trauma
d. Headache and neck pain could not be alleviated with paracetamol/ibuprofen or tramadol
e. Report of stiff neck
f. No previous history of headaches or neck pain
g. Illness came on rapidly
h. She had represented

124. On that basis, the diagnosis was not adequate given the clues that should have prompted diagnostic testing, again not by Dr Rossiter but by a specialist. Professor McCarthy is critical therefore only of the failure to have a senior staff specialist on site or available.

125. Dr Rossiter presented as a very impressive witness. She was very quick to recognise the areas that could have been improved including note taking. She presented as a careful and caring medical practitioner. I accepted that she would have consulted with a senior doctor before discharging Ms Lester. Dr Rossiter has taken steps to educate herself in the area of medical presentation of headaches, and said she had learned a great deal from Ms Lester's presentation that she takes with her into her general practice. I accept that Dr

Rossiter's care and treatment of Ms Lester was adequate given her level of experience and Ms Lester's atypical presentation.

126. Professor Krause was critical of the treatment that Ms Lester received at Shellharbour Hospital. As expressed by Professor McCarthy those criticisms relate to the adequate provision of senior doctors to provide supervision of cases. Those concerns have been addressed by Shellharbour Hospital. It has considered ways to improve supervision and enable senior staff to be available. The evidence is that the staffing in relation to senior medical staff at Shellharbour Hospital is now properly commensurate with other comparable emergency departments within New South Wales. That is, the level of care a patient can expect is equivalent to other small regional emergency departments. This is a critical step that arises from the loss of Ms Lester, to ensure more experienced doctors would review a case like Ms Lester in the future.

## ADEQUACY OF CARE AT WOLLONGONG HOSPITAL

### Treatment in ICU

127. Regardless of the fact that Ms Lester's diagnosis was not detected at an earlier time, the treatment (being the operation) was always necessary and unavoidable, and was always going to be a very difficult operation fraught with dangers.

128. Ms Lester however, given all the complications made a good recovery considering the underlying disease. Professor Krause noted that she was able to move her arms and legs. Dr McCarthy noted that she was making a steady recovery from the SAH and it would have been expected that she would continue to improve. She was talking, awake and alert. Professor Krause said that although she would be unlikely to fully recover, given that she was young, she could move her limbs and it was very early in the recovery period that she would recover enough to live an independent life.

129. The tracheostomy was put in place to address the bulbar dysfunction and inability to swallow secretions, however the plan was even from the Prince of Wales Hospital included weaning from the tracheostomy, with the obvious hope and goal to have her managing independently.

130. The aim was to transfer Ms Lester to a rehabilitation hospital, however she could not be moved until the tracheostomy was removed, thus the aim was to work on weaning her from it. As described, this is the process of slowly moving to have cuff down, and speaking valve attached which allows the patient to breath in, but use independent breath out to use the vocal chords. Eventually the adding of a solid cap would require full independent breathing without

utilising the tracheostomy. At that point, with successful independent elimination of secretions, the tracheostomy could be removed.

131. On 5 May 2018, Ms Lester's tracheostomy was changed from a size 7 cuffed unfenestrated tube to a portex size 7 uncuffed fenestrated tube. She commenced cuff down trials in ICU on 18 May 2018 when her CPAP ceased. ICU made this plan with the involvement of the clinical nurse speciality and speech pathology input.

132. On 21 May 2018 RN Thompson monitored a cuff deflation trial over 30 minutes, which recorded that the trial went well, but there was ongoing concern regarding aspiration risk given Ms Lester's poor swallow. RN Thompson was following up with ENT review and ICU to determine strategies for reducing secretion loads.

133. On 22 May 2018 Ms Lester was reviewed and there was a further cuff deflation trial for 30 minutes. Her oxygen levels and respiratory rate were stable during the trial although her swallow was audible.

134. On 22 May 2018 a decision was made to commence Ms Lester on regular glycopyrrolate to manage her secretions. She underwent another supervised cuff deflation trial on 22 May 2018. On 23 May 2018 she was reviewed by the ICU team and it was noted that the cuff was down and she was tolerating it well, but there was ongoing issues with secretions. They determined the plan was to take the cuff down twice daily for two hours.

135. On 24 May 2018 she was reviewed by RN Thompson who supervised a 30 minute cuff deflation trial. She was comfortable, although there was a withholding of glycopyrrolate as a result ICU team directed that the nursing staff administer it during cuff deflation. She was reported by nursing staff to be managing that without any reduction in oxygen levels.

136. On 25 May 2018 the ICU team made a plan for Ms Lester to have the cuff down for as long as she could tolerate. She was reported to tolerate 4 hours. She was then discharged from ICU onto the ward.

137. Submissions were made that the overall treatment should be looked at in the management of the tracheostomy. That is, from the insertion of the tracheostomy at the POWH the intention was to work towards weaning her from it. The initial plan was passed to Wollongong Hospital ICU and, from ICU, the plan went with Ms Lester to the ward.

**TREATMENT ON WARD C4 WEST**

138. Ms Lester was transferred to the care of Dr Maurice Day who was the head of the Department of Neurosurgery at Wollongong Hospital. At the time, the plan

was to discharge Ms Lester to rehabilitation at Port Kembla Hospital. She was initially placed in the NHD Unit. This operates as an 8 bed unit split over two rooms, with 2-3 nurses overseeing the 8 beds depending on day or night shift requirements, within Ward C4 West.

139. Consistent with the plan, the cuff deflation trials continued in the ward. On 26 May 2018, Ms Lester was able to tolerate the cuff down for 2 hours during the day two times. There were minimal amounts of secretions suctioned over the course of 26 and 27 May 2018.

140. The following staff who provided care to Ms Lester attended the inquest and gave evidence.

    a. Megan Sims, Nursing Unit Manager;
    b. Kerry-Anne Hegarty, Registered Nurse
    c. Christine Gomes, Registered Nurse;
    d. Denbi-Lee Thomson, speech pathologist;
    e. Caitlin Harley, Registered Nurse;
    f. Kate Hogan (relieving ENT/Head & Neck CNS 2);
    g. Dr Lernik Sarkissian; and
    h. Zara Youngblutt, physiotherapist.

**Evidence of Megan Sims**

141. Megan Sims is a NUM and has been working as a Registered Nurse for 28 years. Between 4 June and 7 June 2018, Ms Sims was the NUM of the NHD Unit, the monitored 8 bed unit located with Ward C4 West. During this time, she would assist in facilitating patient care generally but would not directly care for patients.

142. Ms Sims explained that the ward takes acute stroke and high acuity neurosurgical patients. In her oral evidence, Ms Sims noted that tracheostomy patients were rare on the ward with only one patient in each 6 months. She explained that the ward had 36 patients at the time that Ms Lester was there and she was aware of Ms Lester because she was located in a room near the nurse's station, the bed was positioned near the door so she could be seen from the station.

143. Ms Sims did not maintain any clinical records regarding Ms Lester and had returned to work on 4 June 2018 after two weeks' leave. Ms Sims recalls attending the 'journey board meeting' on the morning of 13 June 2018 and discussion about Ms Lester's decannulation. She attended upon her at around 10:00 am: at this time, she recalled that Ms Lester was "sitting upright, looked pink and looked fine". Ms Sims next recalled the arrest pager going off, she

went to the room, by the time she arrived a number of other staff were already attending to Ms Lester and they had pushed her bed into the room to facilitate oxygen.

144. Ms Sims was responsible for rostering for the ward, in particular the afternoon shift, and explained that she would determine the roster for a tracheostomy patient by rostering nursing staff who felt confident to look after a tracheostomy patient – usually a senior who had been on the ward for a while. Ms Sims felt Ms Lester was fine to be on the ward and that her staff were competent to look after patients who had a tracheostomy.

**Evidence of Kerry-Anne Hegarty**

145. Kerry-Anne Hegarty became a Registered Nurse in 2014 and obtained a Clinical Honours at the University of Tasmania and a Master of Clinical Nursing, specialising in Neurosurgery, at Edith Cowan University. As at May 2018, RN Hegarty had been working in Wollongong Hospital for approximately two and a half years and had been in Ward C4 West for around four and a half months.

146. RN Hegarty first attended upon Ms Lester on 28 May 2018, and subsequently on 29 May, 11 June and 13 June 2018. She recalled that Ms Lester was a patient with a tracheostomy, she had a significant brain injury, ongoing issues with secretions and was very agitated. She described Ms Lester as 'a climber, constantly pulling tubes.' This was part of the complication of Ms Lester's brain injury.

147. RN Hegarty told the Court that the plan following the weekend of 11 June 2018 was to decannulate Ms Lester with the cuff down but felt she would question any plan to proceed to a capping trial over a weekend when management was not working the NUM or Educator, for example; and the support would have to come from the afterhours doctor or the ICU liaison, who would be available over the phone if you had a question but otherwise had very extensive, busy roles covering the whole hospital including any arrest calls.

148. RN Hegarty told the Court that she did not have any experience capping at that time.

149. On 13 June 2018, RN Hegarty recalled that she was looking after Ms Lester and had been on the phone when she looked over to her room and noticed Ms Lester was not okay. She described Ms Lester and "unresponsive, very pale, head slumped and drooling." She got no response from Ms Lester so hit the arrest button and commenced CPR. At this time, Ms Lester's tracheostomy had the cap on.

**Evidence of Cristine Gomes**

150. Cristine Gomes has been a Registered Nurse since 2008. She had worked at Wollongong Hospital since January 2008. RN Gomes had experience working with patients with tracheostomies whilst working in Ward C4 West and the NHD Unit. She also gave evidence that the wards only received around two tracheostomy patients each year.

151. In her oral evidence, RN Gomes was forthright and told the court that education of staff on the ward regarding tracheostomy patients was 'poor.' She told the Court that when she was more junior, the CNC would spend more time educating her, but in recent years, education opportunities were less available. RN Gomes relayed that the education was generally by the bedside, looking at the patient 'real time' on the ward, but in between caring for a patient with a tracheostomy "there wouldn't be any training." She explained that the CNC would do bedside training with any staff available that day and then they were instructed to pass this information onto the other staff who were not there.

152. In this context, RN Gomes was allocated to look after Ms Lester on around two occasions including on the morning of 13 June 2018. She recalls receiving a brief handover from RN Harley (Caitlin Harley) and recalled a 'passing comment' that Ms Lester had required suctioning overnight.

153. RN Gomes noted that Ms Lester's bed had been repositioned within her room, so she could not access her call bell; this was done following a risk assessment. In her view, as Ms Lester was cognitively impaired, she was not able to use the call bell properly and it was safer to have her in a highly visible location.

154. RN Gomes believed Ms Lester had passed the first stage of weaning, with cuff down, and was ready for decannulation. Whilst she had been told that Ms Lester required suctioning overnight, she said:

> "it wasn't expressed as though the patient had more than usual secretions, it wasn't relayed that the patient required an unusual amount suctioning overnight or anything out of the ordinary" and "overnight the patient is not as able to swallow secretions compared to when alert so generally required more assistance suctioning overnight."

155. RN Gomes told the Court that she now understands that tracheostomy caps are generally red, and speaking valves could be white or purple. She agreed she did not have that level of understanding on 13 June 2018 due to the lack of education. For example, RN Gomes also accepted that she wrote 'speaking valve' on the tracheostomy management chart on 7 June 2018 but could have been confused about her terminology and should have written 'Swedish nose.'

156. On 13 June 2018, RN Gomes recalled attending upon Ms Lester in the morning to provide her medications injected into her stomach, as Ms Lester had pulled out her nasogastric tube the previous evening and could not be administered oral medications.

157. RN Gomes said she knew the plan was to work towards decannulation and that a patient needed to do capping trials as part of that - so she had put the red cap on Ms Lester and stayed with her to observe and monitor for respiratory distress during this time.

158. RN Gomes advised that she did not take the cap off following this, as the physiotherapist had arrived.

159. RN Gomes also recalled that she had a conversation with the physiotherapist about the equipment, specifically because she was questioned about the purple speaking valve. RN Gomes accepted that she would not have applied a cap, if she knew the plan was to apply a speaking valve: she would not have ignored that plan.

**Evidence of Denbi-Lee Thomson**

160. Ms Thomson was employed at Wollongong Hospital as a speech pathologist from May 2017, and she now works for Central Queensland Health in a speech pathology role. As at the time of Ms Lester's care, Ms Thomson had been working at Wollongong Hospital for slightly over 12 months, although she had 6 years' speech pathology experience.

161. Ms Thomson had completed a tracheostomy competency package in Geelong, Victoria, prior to her employment at Wollongong Hospital. She completed a further competency at Wollongong Hospital upon her arrival. She gave very helpful and informative evidence in the inquest, and was clearly invested in achieving the best outcome for Ms Lester. She presented as a committed, experienced speech pathologist and had provided extensive and thoughtful care to Ms Lester.

162. Ms Thomson first took over care as Ms Lester's speech pathologist on 9 May 2018, whilst Ms Lester was still admitted to ICU. It was her role to assist in the weaning process is to monitor a patient's ability to communicate and swallow.

163. Ms Thomson documented ongoing issues with Ms Lester's secretion. In her oral evidence, Ms Thomson agreed that the plan should not have been to continue to wean Ms Lester if there was concern regarding a possible chest infection.

164. Ms Thomson last saw Ms Lester on 8 June 2018. Ms Thomson reviewed her notes and recalled that Ms Lester had undergone a downsize of her

tracheostomy tube following ENT review, the speaking valve was applied and it was difficult for the ENT to assess her vocal cord function at that time.

165. Ms Thomson recalled that the downsizing had improved Andrea's voice quality, she was able to cough and swallow, Ms Lester was tolerating downsize from an airway patency point, and the plan the team made was to continue monitoring and if she was progressing, then to continue with the plan.

166. Ms Thomson accepted the matters put to her in relation to Dr Macken's report, including, with hindsight, that there was a question if Ms Lester was ready for weaning at all. Ms Thomson agreed that it did not appear Ms Lester's secretions were under control and she had been provided with Glycopyrrolate irregularly.

167. Ms Thomson agreed that there was a need for a comprehensive tracheostomy management team and formalised process to coordinate the management of patients with tracheostomies.

**Evidence of Caitlin Harley**

168. Caitlin Harley completed a Bachelor of Nursing in 2016 and became a Registered Nurse in 2017. As at June 2018, RN Harley had worked in Ward C4 West for approximately 3 months. Prior to working there, RN Harley had experience working with tracheotomy patients in the Head & Neck ward in Wollongong Hospital. RN Harley had completed a competency assessment during this time, and felt confident looking after patients with tracheostomies.

169. RN Harley gave evidence that she had a limited recollection of Ms Lester and primarily relied on upon her clinical notes. RN Harley looked after Ms Lester on 12 June 2018 whilst working nightshift from 9.30pm to 6am (a double shift), under a 'team nursing model' – that is, a nurse to patient ratio of 1 to 8.

170. At the commencement of her shift, RN Harley received a handover from the casual nurse. RN Harley recalled that Ms Lester required suctioning multiple times during her shift, and noted that she had been confused and attempting to climb out of her bed at times.

171. RN Harley recorded suctioning Ms Lester at around 8:00 pm, 9:00 pm and at around 4:00 am overnight. The last entry recorded that Ms Lester's secretions were thick, copious, yellow and required tracheal suctioning.

172. RN Harley completed her shift at 6:00 am that morning and believed that she would have done a bedside handover to the nurse looking after Ms Lester that day.

**Evidence of Kate Hogan**

173. Kate Hogan graduated as an intensive care Registered Nurse around 16 years ago. As at June 2018, she was employed at Wollongong Hospital as the acting Head & Neck CNS from 4 June 2018 to 29 June 2018.

174. RN Hogan had received a handover from Sue Miech regarding approximately five patients who also had a tracheostomy or laryngectomy at the time. RN Hogan described the role as very busy and very autonomous.

175. RN Hogan gave evidence that she recalled introducing herself to Ms Lester, but otherwise was largely reliant on clinical records and her usual practice rather than memory.

176. As the role was only part-time (five days a fortnight), RN Hogan was not working on 6 June 2018 when the "near miss" with the speaking valve and cuff inflated arose with Ms Lester.

177. RN Hogan returned to work on 7 June 2018, but told the Court she was not informed of what had occurred. She agreed it indicated a serious deficit on the ward in managing tracheotomy patients - had she known, she would have shifted her priority away from her other wards or duties to provide the staff further education.

178. On 7 June 2018, RN Hogan also noted that there was an issue with the staff failing to administer glycopyrrolate at regular intervals, and that suctioning recorded in the tracheostomy charts did not correlate with her observations of Ms Lester at that time.

179. RN Hogan returned to work on 14 June 2018: she described hearing what had happened to Ms Lester as "the worst thing in the world you can hear", reiterating that everyone is trying to do what is in the best interests of the patient.

180. RN Hogan explained that she completed the AIMS incident reports because of the deficits in education of the staff, as demonstrated on both 6 June and 13 June 2018. Following the incident, she conducted education sessions (entitled 'Tracheostomy Care') with some staff on the ward on 25 June 2018.

**Evidence of Dr Lernik Sarkissian**

181. Dr Sarkissian was the ENT Registrar at Wollongong Hospital at the time of Ms Lester's admission, having worked there since February 2017. Dr Sarkissian was part of the MDT providing advice on the management of the tracheostomy.

182. In his oral evidence, Dr Sarkissian apologetically told the Court that he had no recollection of Ms Lester as a patient.

183. As the plan had been to decannulate Ms Lester, Dr Sarkissian said in evidence that this is what they were working towards. A proper assessment was needed before they could in fact decannulate, and he noted a number of tests and investigations that he would need to have undertaken before moving to decannulation. He agreed that notes may have read in way to suggest this is what was going to happen, where in reality he said it was a plan, but certainly not prescriptive until the team was fully satisfied. I was again satisfied that Dr Sarkissian was careful in his treatment of Ms Lester. He aimed with the team to try and achieve decannulation after the long weekend, but I accept that he would have first satisfied himself that she was managing her secretions safely before removing the tracheostomy.

184. Dr Sarkissian provided very helpful and informative evidence during the inquest.

185. In relation to the decision to downsize Ms Lester's tracheostomy, Dr Sarkissian explained this would have been so Ms Lester could breathe around the cannula and swallow better. He agreed that he would want to see consistent records relating to suctioning, including how often Ms Lester needed suctioning, and agreed that the plan could have been documented more clearly.

**Evidence of Zara Youngblutt**

186. In 2018, Ms Youngblutt was working at Wollongong Hospital as the Acute Neurosciences Senior Physiotherapist. Ms Youngblutt had experience with patients with tracheostomies, both on Ward C4 West but more so during her time working in ICU.

187. In her oral evidence, Ms Youngblutt told the Court she had a reasonable recollection of Ms Lester as she had looked after her for quite some time, including specifically in relation to the 6 June and 13 June incidents.

188. Ms Youngblutt stated that her primary function (as part of the MDT) was to ensure Ms Lester had the necessary physiotherapy intervention and importantly, that she was able to cough or clear secretions.

189. Ms Youngblutt recalled that there was no formal tracheostomy team or formal process in relation to caring for patients with a tracheotomy, describing the process as 'ad hoc'. She felt that was an issue and had raised it with senior staff at the time. Ms Youngblutt noted that patients with tracheotomies were complex, and although there were experienced nurses on Ward C4 West, there were varying levels of expertise and casual staff: overall nursing staff could be very variable.

190. Ms Youngblutt said she would sometimes attend upon Ms Lester up to four times a day to ensure she was well monitored during the weaning process, irrespective of whether she required physiotherapy at that time or not.

191. In this context, Ms Youngblutt recalled two specific incidents with Ms Lester where equipment had been used incorrectly. On 6 June 2018, Ms Youngblutt told the Court she had been walking past Ms Lester's room and discovered she had the cuff inflated and a cap on, an incident she accepted could cause death. Following this incident, Ms Youngblutt submitted an AIMS Incident report.

192. Similarly, on 12 June 2018, Ms Youngblutt discovered the speaking valve had not been used over the weekend (as it should have) and there was no clear documentation as to why this had occurred. Ms Youngblutt also told the court that documentation kept in relation to Ms Lester's secretions was inaccurate and it was "really unclear about how many secretions she did or didn't have." Ms Youngblutt formed a clinical view that Ms Lester had a strong cough, but it was difficult for her to assess unequivocally.

193. Ms Youngblutt impressed as a dedicated, careful and committed physiotherapist. She raised her own concerns with the lack of structure in the treatment of Ms Lester. She raised the alarm about the lack of knowledge within the treating nursing staff and the errors that had been made. For some reason her complaint was downgraded to low risk, when it clearly was of high risk. She did all she could to properly care for Ms Lester in the circumstances, and was in my view professional, diligent and committed to the proper care of Ms Lester.

194. Significantly, Ms Youngblutt was also present on 13 June 2018 and attended upon Ms Lester that morning (around 9:00 am) to discover she had the tracheostomy cap on instead of the speaking valve. She raised this concern with the nursing staff, who relayed that they didn't understand the different between the two items and thought it was the speaking valve; and "Ms Lester had it on for all shift."

195. Ms Youngblutt assessed Ms Lester and she seemed to be resting comfortably at that time, and I accept that she was when seen by Ms Youngblutt, and so she left to phone her supervisor, Rebecca Hooper, and the ENT registrar (Dr Sarkissian) to properly discuss what to do next.

196. At this time, Ms Youngblutt heard the arrest alarm and returned to Ms Lester's room to assist with CPR efforts. Upon her arrival, she discovered no one was conducting airway management so she removed the cap and got the suctioning equipment. Ms Youngblutt also noticed at this time that Ms Lester's tracheostomy was dislodged.

## EXPERT EVIDENCE

### *Dr Lewis Macken*

197. Dr Macken is a Senior Staff Specialist in ICU at Royal North Shore; he has been a specialist in intensive care medicine for 15 years. Dr Macken provided two helpful reports and also gave extensive oral evidence.

198. In his report, Dr Macken identifies that caring for patients with a tracheostomy is challenging, and such patients are at high-risk of having complications from their tracheostomies. These are vulnerable patients. The process by which such patients are cared for in all healthcare facilities requires constant review and refinement.

199. Importantly, Dr Macken states that Ms Lester was cared for by clinical staff who were diligent in their approach and had her best interests at heart. The approach by all individual staff was attentive and thorough. The area highlighted of concern, outlined through his evidence, was the proper coordination of her care while on ward.

200. Patients with a tracheostomy tube have healthcare requirements that involve many disciplines, including medical, nursing and allied health care and this care demands strong communication between clinicians. Thus, most hospitals now have formalised tracheostomy teams, rather than care by a single clinician.

201. Although decannulation was seen as a major goal, Ms Lester did not pass the milestones required to allow for safe decannulation. Dr Macken states:

> "Although she had a vigorous cough, it is likely she was continually aspirating as a result of bulbar dysfunction from her PICA stroke after the SAH. Her chest radiology showed persistent left lower lobe collapse/consolidation, and it is likely that her chest was colonised with Pseudomonas aeruginosa, as she had positive sputum cultures on more than one occasion. She underwent nasendoscopy by the ENT team on 22/5/18, at which time it was found that Ms Lester had "poor management of secretions" and "left arytenoid oedema". Her next ENT review was on 7/6/18, when her tracheostomy was downsized and nasendoscopy was again performed. On this review, assent was given for removal of the tracheostomy tube in six days' time. A more prudent approach would be to review a patient with a tracheostomy just prior to the time of decannulation, to ensure that there has not been significant clinical change in the intervening days."

202. Dr Macken identified the following shortcomings in Ms Lester's tracheostomy care.

- Firstly, Ms Lester did not meet the requirements for safe decannulation. She still required frequent suctioning in the days prior to her death, and the cap on her tracheostomy required removal for suctioning. There

was evidence of treatment for a chest infection the week before her death, and antibiotics had only ceased the day before. She still required regular glycopyrrolate was still being used at the time of the incident. Based on these factors it was Dr Macken's view that a patient is ready for decannulation only when airway secretions are controlled, and the aspiration risk is minimal. He did not find this to be the case for Ms Lester.

- Secondly, and relatedly, Ms Lester's clinical state did not satisfy the usual prerequisites to allow safe weaning of her tracheostomy, and she did not satisfy the usual prerequisites to allow safe decannulation of her tracheostomy. She did not meet the criteria described in the local health policy: ISLHD Policy: Tracheostomy Clinical Management Policy and Procedures for Adult Inpatients (ISLHD CLIN PD 01 – July 2017), per section 6.8. Importantly she did not tolerate continuous cuff deflation for a 24-48 hr period without the need for tracheal suctioning; and she did not meet the criteria of absence of respiratory/chest infection and minimal suctioning requirements.

- Thirdly, the challenges of Ms Lester's care would have benefited from senior medical involvement and bedside review. He was of the view that she "most likely" required more time to allow for further recovery of her bulbar function.

- Fourthly, given the issues with Ms Lester's cognitive challenges after the SAH, her inability to use the call bell to get assistance, it may have been more appropriate for Ms Lester to have been readmitted to the NHD Unit, when it was determined she required closer supervision – especially during the capping of her tracheostomy. Alternatively, she should have been provided with one to-one nursing supervision in her room.

- Fifthly, knowledge and familiarity with tracheostomy management was in need of improvement during the time that Ms Lester was an inpatient on Ward C4 West. Infrequency of tracheostomy patients made skill maintenance difficult for staff. This is demonstrated by the critical incident on 6 June 2018 with the speaking valve on but the cuff inflated – a practice contraindicated which has led to deaths. The response to the incident appeared not to recognise the significance of the error regarding cuff inflation with a speaking valve in, describing the consequence as "minor".

- Finally, Ms Lester's care would have benefited from a more formalised approach in management of her tracheostomy – many clinicians were involved without a clear overall coordinator. The ENT team consulted

when requested to attend, but more regular reviews were required. Patients with a tracheostomy require a formalised and systematic weaning and decannulation plan, which must be individualised to the patient's clinical circumstances.

***Oral evidence***

203. In oral evidence, Dr Macken gave evidence that as an intensivist working in ICU, he works with tracheostomies every day and is part of the MDT for Royal North Shore Hospital. Tracheostomy procedures as part of head and neck surgery are simpler to manage because the issue is one of protection of airway, without the comorbidities found in neuro surgical presentations. He impressed the importance of an organised multidisciplined approach to a case like Ms Lester. That was clearly missing in Ms Lester's treatment. The group of practitioners involved in her care did the best they could in the circumstances they were given.

204. However, it was not a formal organised process. Dr Macken agreed that there is not a one size fits all approach, and that there are many different approaches. But the approach must be properly coordinated and communicated.

205. When making changes to the plan, or progressing forwards with weaning Dr Macken indicated that there is an aim of ensuring high level decision making, incorporating the different perspectives and opinions of the whole team.

206. At the point of aiming for decannulation after the long weekend, Dr Macken said he had concerns that Ms Lester would have been suffering inflamed lungs as a result of her inability to swallow and fluid regularly entering her lungs and irritating them. Dr Macken wanted to see objective assessment of swallow, that is by use of a camera to view her swallowing ability. He said this was supported by the fact that she still required the nasogastric tube.

207. Under cross-examination, Dr Macken agreed that he was in a different position to those treating Ms Lester and also had the benefit of hindsight. He also accepted that his identification of shortcomings were from the perspective of an intensivist. Dr Macken pointed out that the weaning guideline used in the 'Clinical Practice Guide – Care of adult patients in acute care facilities with a tracheostomy – October 2021' (ACI Guideline) (Annexure A, as taken from Northern Sydney LHD) was "quite prescriptive" as to its requirements, although he accepted that one should not just follow a prescriptive plan regardless of presentation.

208. However, Dr Macken was of the view that there remained a question as to whether Ms Lester was ready for even the basic stage of cuff deflation trials. He would anticipate more objective evidence of swallowing by the conducting

of formal studies should have occurred. He did not find evidence, even with the speech pathologists' assessments on 13 different occasions that her swallowing had reached a clinically acceptable level. Ms Lester had been in hospital for 2 months and was still having a great deal of secretions with a significant brain injury apparent.

209. Dr Macken was also confident that Ms Lester had pneumonia – given the imaging changes he noted, it is hard to definitively diagnose but if someone improves on antibiotics as Ms Lester did, it was a "pretty good indication she had bacterial pneumonia". In this case, any such infection was on top of the chronic lung injury from aspirating.

## Findings

210. The medical and nursing staff attending to Ms Lester within Ward C4 West at Wollongong Hospital were caring, professional and had Ms Lester's best interests at heart. They were seeking to be attentive and thorough to her needs. All the clinicians who gave evidence presented credibly and were able to reflect on what had occurred and where matters could improve. They are in the business of life saving. There is no suggestion that any individual bears or carries responsibility for the events on 13 June 2018.

211. The inquest identified significant deficiencies in Ms Lester's care. Systemic issues within the Wollongong Hospital highlighted the lack of a formal organised coordinated multidisciplinary team. People went on leave, understandably, the direction to nursing staff about the plan was not made clear and there was no proper education of the equipment to be used with the tracheostomy. There was no following of the plan that was actually in place. There was no plan to put the cap on 13 June 2018. It should not have been there. No one had authorised its trial at that time. The wrong equipment was available on the trolley, and used. A warning had occurred only a week prior when the speaking valve was left in place with the cuff inflated, when that also had not been authorised, nor would it ever be authorised given the danger it presented.

212. I accept Dr Macken's evidence that Ms Lester was not yet ready for decannulation, given the ongoing issues with her uncontrolled high secretion load; frequent need for suctioning, which I find was under-documented and, I accept, her very recent chest infection. The medical records demonstrate that Ms Lester was not independently managing her secretions consistently, and was not ready for decannulation. This fact highlighted the need for regular bedside consultation by a doctor as part of the MDT to ensure careful review of that critical information.

213. Further I accept that Ms Lester did not meet the prerequisites in the local health policy – Tracheostomy Clinical Management Policy and Procedures for Adult Inpatients (ISLHD CLIN PD 01 – July 2017) for decannulation, including as to the absence of respiratory/chest infection and minimal suctioning requirements.

214. Ms Lester had failed her previous capping trial, necessitating specific interventions to improve her prospects before re-attempting such a trial; there was even a question as to whether she had passed the cuff deflation requirements, given the ongoing secretions and suctioning.

215. There was limited senior medical involvement and bedside review with respect to Ms Lester's tracheostomy care, and the goal of decannulation was pursued without a formal review. Most likely, it seems Ms Lester required further time to improve her bulbar function; I accept there was a need for objective evidence as to the status of her swallow, given her significant brain injury.

216. Ms Lester was a special and unique patient. She was vulnerable given her brain injury. She was in an altered state as she struggled to recover. She would become agitated and pull at her tubes, dislodging one only the night before which evidence in the inquest disclosed would have taken much force on her part. That danger alone put her at high risk of dislodging her own tracheostomy requiring close supervision. She could not use the call bell. She was reliant on hospital staff to monitor her and protect her from secretions. Given the challenges presented by Ms Lester including her cognitive impairment and issues with the call-bell, she required closer supervision during any capping trials, most likely one-on-one nursing.

217. There was poor knowledge and familiarity with tracheostomy management on Ward C4 West during Ms Lester's admission due to the infrequency of tracheostomy patients, making skill acquisition and maintenance difficult. This was demonstrated by the severity of the critical incident occurring on 6 June 2018 with the cuff inflated and speaking valve on. This incident was classified as 'minor' on the incident management system, notwithstanding that this practice can lead to death. It appears that staff did not know the difference between a speaking valve and tracheostomy cap. No action was taken to immediately address this urgent issue

218. There was a lack of formal approach to the management Ms Lester's tracheostomy: numerous clinicians had involvement but no one had a clear coordination or supervision role. As noted by Dr Macken, a patient with a tracheostomy requires "a formalised and systematic weaning and decannulation plan, which must be individualised to the patient's clinical circumstances." Ms Lester never received this.

219. Ms Lester was improving and making progress. Had the deficiencies identified above not existed, Ms Lester may well have continued on her positive rehabilitation trajectory and I accept on balance that there was cause for optimism in this regard.

**Discussion of need for Recommendations**

220. In the four and a half years since Ms Lester's death, the ISLHD has taken steps in terms of addressing certain issues connected with Ms Lester's death, including based on an internal review conducted into the ED at Shellharbour Hospital in the aftermath of her death, and also in terms of the tracheostomy management provided to Ms Lester in Wollongong Hospital during the period 26 May to 13 June 2018.

221. In particular, the ISLHD has been responsive to suggestions proposed by Dr Macken with respect to tracheostomy care and procedures.

222. The Court received two statements from Dr Peter Jansen, the Executive Director of Medical Services and Clinical Governance for ISLHD and he gave evidence. This provided helpful insight into the improvements already achieved. It also highlighted the self-regulation ability of the ISLHD to act quickly to make improvements. They can be described as follows:

    a. Shellharbour Hospital ED has increased its senior medical coverage across all shifts since Ms Lester's death. Staffing changes were implemented over 2018/2019 such that the ED now has a specialist led service. The ED has recruited at Registrar and RMO level to reduce staffing variability due to locum dependence. They have also increased numbers of medical staff shifts per day with Specialists now rostered 2-3 shifts per day 7 days a week and on availability on call 24 hours, 7 days a wee. This supervision within Shellharbour Hospital ED is now consistent with the usual practice in ED's across NSW. There is a commitment to ongoing review of staffing needs at Shellharbour Hospital ED as the "service continues to expand and develop.

    b. On 18 October 2018, a memorandum was sent by the ISLHD executives to all staff within the LHD, and to team leaders and department heads for discussion at team meetings. It directed all JMOs to discuss all patients they intend to discharge from ED with the appropriate SMO. Dr Jansen stated that Shellharbour Hospital ED now ensures that there is one senior doctor to the level of Fellow of Australian College of Emergency Medicine on all shifts seven days per week, except from midnight to 6:00 am. Those more senior doctors will generally have availability during their shifts to supervise care given by more junior staff

and personally review patients prior to discharge on a case by case basis in line with other emergency departments across NSW.

223. Dr McCarthy, for her part, comments that the changes to medical staffing at Shellharbour Hospital ED, with the implementation of an emergency specialist led service, increased permanent staff recruitment and reduced locum staff, as well as the "comprehensive changes" to the management of patients with tracheostomies within the ISLHD (as outlined by Dr Jansen) "are necessary and would be expected to reduce the likelihood of similar events recurring." However, she also notes that "implementation of these changes should be accompanied by ongoing periodic audit and case review to ensure positive changes are sustained".

224. The use of monitoring equipment for constant monitoring of oxygen levels with alarm systems may have alerted staff of the decrease in Ms Lester's oxygen level. There were different views on the reliability and practicality of such equipment, but sufficient concern was raised for consideration to be given to its use. Particularly in cases where a patient is cognitively impaired or unable to use call for assistance.

225. Sue Miech was a very inspirational witness. Her commitment to her role and to the protection of vulnerable patients like Ms Lester was very impressive. She was not present for much of Ms Lester's treatment. In terms of a review of tracheostomy processes and procedures within Wollongong Hospital, the following changes that she raised were:

a. *Tracheostomy Review Team (**TRT**):* following Ms Lester's death, the MDT in the form of a Tracheostomy Review Team was formalised with "weekly multi-disciplinary team meetings" to discuss all tracheostomy patients admitted to the Hospital. The TRT is comprised of Ms Miech, a senior speech pathologist, ICU and ward physiotherapists, and an ICU Consultant. The Terms of Reference for the TRT were received into evidence; that document had recently been amended to ensure the institution of a quorum requirement (mandating the attendance of a medical officer). Ms Miech explained the operation of the improved TRT model but candidly noted a significant structural problem in that ICU Consultants would not attend MDT beside reviews for patients outside the ICU ward. There may be a number of practical reasons for this failure, but a failure it remains.

b. *Implementation of a standardised template for documentation for beside rounds for tracheostomy patients*: the clinical records of the MDT providing care for Ms Lester in relation to her tracheostomy were difficult to follow. Ms Miech developed a template which sets out key information in a user-friendly electronic record forum for all tracheostomy patients

(including as to the reason for the tracheostomy, the type of tracheostomy, the plans for cuff deflation trials etc). She also developed a document to provide a uniform approach to tracheostomy handover between wards using the 'Trache Transfer Form'.

c. *Implementation of 'head of bed' tracheostomy alerts*: following the internal review, the ISHLD implemented a range of alerts, including where a speaking valve, or tracheostomy cap is situ, and also as to the distinction between a cap and speaking valve; in response to comments from Dr Macken, the ISLHD has considered the addition of a further 'head of bed alert for management of tracheostomy emergencies', which was implemented on [4 March 2021]; this is now prominently displayed on the emergency trolley of any ward with a tracheostomy patient. Ms Miech also provided helpful evidence about the 'Head of Bed' safety signs, and the increased prominence of such alerts.

d. *Improvements to Local Health Policy and Procedure*: Ms Miech's evidence was that following a review, in consultation with the ISLHD Clinical Governance Unit, it was determined that the ACI Clinical Practice Guideline (*Care of adult patients in acute care facilities with a tracheostomy*) should be adopted as the LHD's policy on tracheostomy management. Ms Miech then prepared a short local policy (*Care of Patients with a Tracheostomy Tube*) setting out key information, and containing a link to the ACI Guideline.

e. *Enhanced education and training*: Ms Miech provided evidence of improved training and education programs delivered within the ISLHD since Ms Lester's death, including:

    i. An education package for nursing and medical staff which includes seven units of 'Six Minutes of Intensive Teaching' on certain tracheostomy related topics (including indications for a tracheostomy tube, cuff management, 'what is a cap vs a speaking valve and instructions for applying each', amongst others); these provide a concise one page summary on each topic;

    ii. Since 2019, a nursing competency assessment tool for tracheostomies;

    iii. Education seminars held since COVID-19, following which there was an increased requirement for tracheostomy knowledge within the ISLHD;

iv. Targeted workshops for medical registrars who attend after hours arrests to ensure they are familiar with what to look out for with tracheostomy emergencies.

226. Ms Miech is a clear asset to Wollongong Hospital. The changes that she herself has implemented are to be commended. She acts in a part time role, and yet has been able to achieve a great deal, but it is apparent that she requires ongoing support to ensure best practice in relation to tracheostomy care. She highlighted the problem between policy and implementation of policy. A policy will not save lives, but the proper implementation of a good policy may. The inquest heard clear evidence that the MDT is not functioning as it is intended, and steps should be taken urgently to ensure there is compliance. Ms Miech noted that "there is still a lot of work to be done and this has been a valuable exercise for what we can do better."

227. It is hoped that the ISLHD will listen to the matters raised by its own clinicians and answer their concerns. Submissions were made on behalf of the nursing staff, with concern being raised that by requiring nurses to obtain specialist training in areas such as tracheostomy, the hospital would be pushing the problem back onto the nursing staff to obtain yet more qualifications. This is a valid point. However, to allow a nurse to be placed in a position where they cannot undertake their role safely is not acceptable. These committed and impressive individual nurses should not be placed in a position where they are not fully armed with the skills and training necessary to undertake the work they are being asked to perform. It is unfair to them.

228. Ms Lester's family are devastated by the loss, but it was clear that many staff within the hospital were also left very distressed by the ultimate outcome in this matter. The lack of system failed Ms Lester and the hospital staff.

229. I agree with the submission made on behalf of Ms Lester's family that in this case, although the various staff did their best for Ms Lester, some of the nursing staff were at times ill equipped through a lack of training and experience to manage Ms Lester's complex needs relating to the tracheostomy as far as use of the relevant equipment and record keeping.

230. The very comprehensive and helpful submissions on behalf of the ISLHD points to the hard work and professional care that was afforded to Ms Lester by various individuals. It fairly accepts however that there is evidence of significant deficits in the knowledge of members of some nursing staff on ward C4 West, and accepts that the serious incident of 6 June 2018 could have had catastrophic consequences. It is accepted that although there was a multidisciplinary team, it was not structured or properly formalised.

231. The conduct of the interested parties in the inquest was one of working with the Court to recognise the harm done and work to improve systems for the future. It was a very thoughtful and considered approach brought particularly by the ISLHD and this assistance allowed proper, manageable and productive recommendations to be drafted. This although sadly not for the benefit of Ms Lester, will be for the benefit of others because of her.

232. The recommendations made in consultation with the represented parties are made in the hope they will engender better teamwork, education, training and knowledge. The family statement so beautifully read by Ms Lester's daughter painted the picture of the person that she was. A hard worker. A person with good spirit, the spirit that could be seen by her children as she faced this enormous task of recovery. Who still showed a sense of humour in the face of great adversity. Her family needs the comfort of knowing that changes will come as a result, and the community rightly deserve change. The Andrea Lester described by her daughter was kind, giving and thoughtful, and has now been the person to put a spotlight on existing problems and assist in creating solutions for others.

## RECCOMENDATIONS

To the Chief Executive of the Illawarra Shoalhaven Local Health District:

### Recommendation 1

That the role of the Intensive Care Unit (**ICU**) Consultants (or representatives of ICU on the Tracheostomy Review Team) – as set out in the *'ISLHD Tracheostomy Review Team – Terms of Reference'* (November 2022) – must include a requirement to attend a bedside Multi-Disciplinary Team (**MDT**) review on patients who have tracheostomies on outlying wards (such as Ward C4 West - Neurological and Neurosciences Ward) (**Ward C4 West**) as necessary.

### Recommendation 2

That the role of Ear, Nose and Throat (**ENT**)/Head & Neck Clinical Nurse Specialist 2 (**ENT/H&N CNS 2 role**), ISLHD be increased from a part-time to a full-time position (ongoing).

### Recommendation 3

That the Executive Director of Nursing and Midwifery Services will ensure that the nursing staff who are available to provide care for patients with a tracheostomy in Ward A5 (General Surgical Ward), Ward C4 West, and any other wards within the

Wollongong Hospital (other than ICU) who have tracheostomy patients, are competent in tracheostomy management and, in doing so, will have regard to competency assessments undertaken by the ENT/H&N CNS 2.

**Recommendation 4**

That the Executive Director of Nursing and Midwifery Services will ensure the Nurse Unit Managers are aware of the obligation to ensure that the nursing staff rostered and allocated to care for patients with a tracheostomy in Ward A5 (General Surgical Ward), Ward C4 West and any other wards within the Wollongong Hospital (other than ICU) who have tracheostomy patients are competent in tracheostomy management.

**Recommendation 5**

That recommendations (1) to (4) be actioned as a matter of urgency, given the significant clinical risk associated with tracheostomy management on outlying wards (such as C4 West) that do not frequently have such patients.

**Recommendation 6**

That the Chief Executive of the Illawarra Shoalhaven Local Health District give consideration to the use of appropriate equipment for constant monitoring of oxygen levels with alarm systems when weaning tracheostomy patients who have decreased levels of consciousness or cognitive impairment.

**Acknowledgements**

To Andrea Lester's Children, participation in these matters are very difficult. It was a reflection of the strength of the family that they brought compassion and understanding for the staff who cared for their mother. The family statement was both moving and compelling, educating us all on who Andrea Lester really was.

To the representatives of the interested parties, it was greatly appreciated and useful that you brought solutions to this inquest. The witnesses were managed with respect, care and understanding and such useful recommendations would not have been achieved without this impressive approach.

To the OIC, Sergeant Gerard Manouk, who prepared the initial brief and attended at inquest, for the hard work and dedication he put into this matter.

Finally to the Counsel assisting team. Ms Sullivan and Ms Hubbard put in countless hard hours to present the inquest for Ms Lester in a way that has resulted in solid outcomes for improvements going into the future. Much of the findings were assisted by the diligent preparation and presentation. Thank you.

## FORMAL FINDINGS

I make the following findings pursuant to s81 of the *Coroners Act 2009* NSW:

| | |
|---|---|
| **Identity** | Andrea Lester |
| **Date of death** | 19 June 2018 |
| **Place of death** | Wollongong Hospital, Wollongong NSW |
| **Cause of death** | Hypoxic brain injury related to tracheostomy complications in form of airway occlusion from sputum plugging and/or tube dislodgment |
| **Manner of death** | Complications of tracheostomy care |

I extend my sincere condolences to the family and friends of Andrea for the loss of such a significant person in their lives.

I close this inquest.

Deputy State Coroner

Magistrate Kennedy

**Date**: 21 December 2022