MAGISTRATES COURT *of* TASMANIA

CORONIAL DIVISION

# Record of Investigation into Death (Without Inquest)

*Coroners Act* 1995
*Coroners Rules* 2006
*Rule* 11

I, Robert Webster, Coroner, having investigated the death of Terence John Carroll

**Find, pursuant to Section 28(1) of the *Coroners Act* 1995, that**

a) The identity of the deceased is Terence John Carroll (Mr Carroll);

b) Mr Carroll died in the circumstances set out below;

c) Mr Carroll's cause of death was sepsis/mediastinal empyema (abscess) which arose out of a perforation of the oesophagus during an oesophagoscopy; and

d) Mr Carroll died on 8 June 2019 at Latrobe, Tasmania.

**Introduction**

1. In making the above findings I have had regard to the evidence gained in the comprehensive investigation into Mr Carroll's death which includes:
   - Police Report of Death for the Coroner;
   - affidavits as to identity and life extinct;
   - affidavit of the forensic pathologist Dr Donald Ritchey;
   - medical records of Mr Carroll obtained from the Valley Road Medical Centre;
   - medical records of Mr Carroll obtained from the Tasmanian Health Service (THS);
   - affidavit of Scherie Ann Johnston;
   - THS final root cause analysis report (the RCA); and
   - report of the coronial medical advisor Dr Anthony Bell MB BS MD FRACP FCICM.

2. My draft findings along with Dr Bell's report and the RCA were sent to Mr Magdi Ghali, Consultant Ear, Nose and Throat Surgeon and Head and Neck Surgeon and to the THS for comment. Mr Ghali responded on 14 July 2022 whereas Associate

Professor Kathleen Atkinson the Executive Director of Medical Services for THS North West responded on behalf of the THS on 17 August 2022.

3. Mr Carroll suffered an iatrogenic rupture of the oesophagus. My investigation has focused upon the medical care he received.

**The Coronial Jurisdiction**

4. Before looking at the circumstances surrounding Mr Carroll's death something should be said about the role of the coroner. In Tasmania, a coroner has jurisdiction to investigate any 'reportable death'.[1] A 'reportable death' includes a death where the death occurred in Tasmania and it was unexpected or where the death occurred during a medical procedure or after such a procedure where the death may be causally related to that procedure, and a medical practitioner would not, immediately before the procedure was undertaken, have reasonably expected the death.[2] Mr Carroll's death meets that definition.

5. When investigating any death, a coroner performs a role very different to other judicial officers. The coroner's role is inquisitorial. She or he is required to thoroughly investigate a death and, if possible, answer the questions s28 of the C*oroners Act* 1995 asks. Those questions include who the deceased was, how he or she died, what was the cause of the person's death and where and when it occurred. This process requires the making of various findings, but without apportioning legal or moral blame for the death. A coroner is required to make findings of fact from which others may draw conclusions.

6. A coroner does not have the power to charge anyone with crimes or offences arising out of the death the subject of investigation. Nor does a coroner have power to determine issues associated with inheritance or other matters arising from the administration of deceased estates.

7. As noted, one matter that the *Coroners Act* 1995 requires is that a finding be made about how death occurred. It is well settled this phrase involves the application of the ordinary concepts of legal causation. Any coronial inquiry necessarily involves a consideration of the particular circumstances surrounding the particular death so as to discharge the obligation imposed by section 28(1)(b) upon the coroner.

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[1] See s21 of the *Coroners Act* 1995.
[2] See s3 of the *Coroners Act* 1995.

8. A coroner may comment on any matter connected with the death into which he or she is enquiring. The power to make comment *"arises as a consequence of the [coroner's] obligation to make findings … It is not free ranging. It must be comment "on any matter connected with the death" … It arises as a consequence of the exercise of the coroner's prime function, that is, to make "findings"*.[3]

9. The standard of proof applicable to a coronial investigation is the civil standard. This means that where findings of fact are made a coroner needs to be satisfied on the balance of probabilities as to the existence of those facts. However, if an investigation reaches a stage where findings may reflect adversely upon an individual, the law is that the standard applicable is that set out in the well-known High Court case of *Briginshaw v Briginshaw*, that is, that the task of deciding whether a serious allegation is proved must be approached with great caution.[4]

**Background**

10. Mr Carroll was 71 years of age, retired and he resided in an independent living unit at the Karingal residential aged care facility operated by Baptcare in Devonport at the date of his death. He was born in Carlton, Victoria and commenced work at approximately 14 years of age. He had previously been married to Marilyn Bielleman, aka Quillerat, between 1974 until they divorced in about 1988. Ms Bielleman had one daughter when she first met Mr Carroll (Ms Scherie Johnston), and together they had 2 more children; Danielle and Rodney. Mr Carroll has 10 grandchildren and 11 great grandchildren.

11. During Mr Carroll's life he was primarily employed as a butcher. He also performed other work which included truck driving and floor cleaning. The senior next of kin, Ms Johnston, estimates he drank between 6 to 10 stubbies of beer each day and he smoked between 15 to 20 cigarettes per day.

12. In about 2019 Ms Johnston noticed Mr Carroll was displaying signs of dementia. He saw a specialist from the mainland, Dr Sharma, and was diagnosed with that condition. He underwent an assessment conducted by the aged care assessment team (ACAT) prior to entering the Karingal residential aged care facility. Ms Johnston says that it was not until Mr Carroll was in care and attending doctors appointments regularly that the extent of his health problems were realised.

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[3] See *Harmsworth v The State Coroner* [1989] VR 989 at 996.
[4] (1938) 60 CLR 336.

**Health**

13. Mr Carroll's medical records disclose he had a medical history which included hypertension, acute renal failure, vitamin D deficiency and hyperlipidaemia (high cholesterol). In 2013 and 2015 Mr Carroll underwent an oesophagoscopy and dilation procedure which revealed a mid oesophagus tight (benign) stricture (an abnormal tightening of the oesophagus) and chronic laryngitis.

14. In addition, the records reveal Mr Carroll suffered from bilateral cataracts, long-term alcohol dependence and Alzheimer's disease. ACAT documentation indicates Mr Carroll frequently forgot to eat regularly and this resulted in weight loss. Mr Carroll was independent with all transfers and mobility but required supervision and assistance with meals, shopping, domestic assistance, social support, personal care, appointments, money management and transport. Since he moved into his unit at the Karingal residential aged care facility, Ms Johnston assisted Mr Carroll with all of these tasks. In addition she paid his bills, cleaned his unit and performed any errands he required.

**Details of the Medical Treatment Received by Mr Carroll in 2019**

15. On 17 January 2019 a referral was received at the Mersey Community Hospital (MCH) outpatients clinic from Mr Carroll's general practitioner requesting a medical assessment of long-term mild hyponatraemia which is a serum sodium concentration of below 135 mmol/l. Symptoms this condition can cause include nausea and vomiting, headache, confusion, loss of energy, drowsiness and fatigue, restlessness and irritability, muscle weakness, spasms or cramps and seizures. The hospital records indicate this condition had been endured since in or about 2014.

16. On 30 January 2019 Mr Carroll attended the outpatients clinic for investigation and an opinion in relation to this condition. It was noted Mr Carroll had lost approximately 8 kg in weight in the past year, his cognition had declined, he was not smoking but he continued to consume 6 to 8 beers per day. The medical registrar's impression was this condition was multifactorial and caused by intermittent dehydration and undernutrition. It was thought that proton pump inhibitors, which are medicines that work by reducing the amount of stomach acid, may be contributory and the plan was also to rule out any malignancy. The medical plan included a CT of the chest to rule out malignancy and a referral to rule out gastrointestinal cancers. The notes record Mr Carroll's family was looking at high-level care to assist with nutrition and he was

discharged from the medical clinic and this information was sent to his general practitioner.

17. On 5 February 2019 a referral was sent from Mr Carroll's general practitioner to an ear nose and throat (ENT) specialist seeking an assessment.

18. On 6 February 2019 a CT of the chest and upper abdomen were performed. The radiologist reported there was *"… some eccentric and concentric thickening of the lower oesophagus from just below the level of the tracheal bifurcation down to the upper aspect of the sliding hiatus hernia."* The radiologist advised an endoscopy was required to exclude malignancy, particularly if there were any symptoms relating to swallowing. The radiologist's report was sent to the referring medical registrar and to Mr Carroll's GP.

19. On 8 February 2019 Mr Carroll attended an appointment with the ENT specialist, Mr Ghali, who had previously conducted investigations for severe stricture and dysphagia in Mr Carroll. He noted Mr Carroll*"… drinks a lot and this is the precipitating factor."* Mr Ghali also noted Mr Carroll was losing weight and had difficulty swallowing solids. Examination revealed chronic pharyngitis and Mr Ghali's impression was a severe stricture had recurred and would require an oesophagoscopy and dilation.

20. On 18 March 2019 Mr Carroll attended the pre-admission clinic at the North West Regional Hospital (NWRH).

21. On 20 March 2019, a laryngoscopy, oesophagoscopy and oesophageal dilation was performed at the NWRH by Mr Ghali. The operation report says the oesophagoscopy revealed a very tight mid to lower oesophageal stricture at 25 cm which was dilated using the Savary-Gilliard guidewire and dilator.[5] To achieve a satisfactory result, Mr Ghali said Mr Carroll would require a series of repeat dilations. The surgeon's assistant noted a tight stricture was identified and the oesophagus was dilated with 12, 14, and 16 mm sized dilators by Mr Ghali who used the Savary-Gilliard guidewire and dilator. Mr Carroll was commenced on a proton pump inhibitor and an antibiotic. Post operatively his observations were stable and he was discharged in the company of his daughter at approximately 18:15 hours.

22. Ms Johnston says in her statutory declaration when she and her mother picked Mr Carroll up from the hospital he was curled up on a bed, still in his gown. They had to

[5] This brand of dilator is probably the most commonly used, it is made from plastic, has a tapered tip and comes in multiple sizes.

dress him. Ms Johnston had wanted Mr Carroll to stay under supervision overnight and had indicated that on the pre-admission form. She was concerned he would be too fragile on discharge. She was subsequently advised he would not be able to stay after day surgery because no beds were available. During the journey home Mr Carroll was unable to get comfortable in the back seat of the vehicle. Ms Johnston dropped her mother home and then took Mr Carroll home. She says he was unsteady on his feet, he was hot and clammy and his breathing was laboured. He wanted to go to bed but could not get comfortable. He kept rubbing the lower left side of his ribs and then got up and sat in his chair. He returned to bed but was there for only 5 minutes before he got up again. Mr Carroll's daughter, Danielle, then turned up to look after Mr Carroll. However, after Danielle and Ms Johnston discussed his condition they decided to call an ambulance. They were advised by ambulance personnel that because Mr Carroll's blood pressure was so low and he was such a *"tiny person"* they would convey him to the MCH.

23. At 20:44 hours that same day Mr Carroll presented to the MCH emergency department by ambulance. He was noted to be a poor historian, he had a productive cough with associated left-sided chest pain, and shortness of breath. He denied any fever. Observations were taken and it was noted Mr Carroll had epigastric tenderness over the left haemothorax and reduced air entry in the left mid/lower lobes. The medical officer's impression was Mr Carroll was suffering from a chest infection and it was determined he needed to rule out oesophageal perforation with pneumomediastinum and mediastinitis. A chest x-ray showed left basal consolidation with a moderate hydro pneumothorax and air fluid level. This x-ray also showed aortic arthrosclerosis and chronic obstructive lung disease.

24. At 22:33 hours Mr Carroll was reviewed by the medical registrar who was left with the impression Mr Carroll suffered from left sided chest pain (left pleural effusion) and functional decline. He was admitted to the general medicine ward.

25. At 9:45 hours the next day on a medical ward round it was noted Mr Carroll had reduced breath sounds on the left side on auscultation and left-sided pleural effusion. The history taken was Mr Carroll had been looked after by his daughter for the past 21 days, he had consumed 6 to 8 beers and he may have lost 5 kg over the past year. A computer tomography pulmonary angiogram (CTPA) was ordered.

26. The CTPA was performed and the report notes *"… oesophageal tumour with oesophageal rupture and a large left hydro pneumothorax associated with collapse of left*

*lung."* The results were discussed by the medical team at the MCH and then with a surgical registrar at the Launceston General Hospital (LGH) who advised the team to insert a chest drain and then transfer Mr Carroll to the LGH. A chest drain was inserted into the fourth intercostal space at 17:22 hours on 21 March 2019 to drain the leaking oesophageal fluid and associated pneumothorax.

27. Mr Carroll arrived at the emergency department of the LGH at 18:45 hours and after review from the surgical team he was transferred to theatre at 23:36 hours. It appears he was admitted to the ICU at 20:41 hours. The gastroenterologist found at least 2 discrete deep, full thickness iatrogenic perforations around the 30 cm mark. A fully covered oesophageal stent was then placed over a guide wire under fluoroscopy to seal the oesophagus. The diagnosis was mid oesophageal stricturing with severe multifocal iatrogenic oesophageal perforation distal to the stricture.

28. After this procedure Mr Carroll was transferred to the intensive care unit. Histology of the stricture revealed an oesophageal adenocarcinoma. Overnight 900 mL of fluid was drained from the left intercostal tube. Parenteral nutrition that is intravenous feeding was commenced on 25 March 2019. On 26 March 2019 a gastrografin swallow showed no oesophageal leak and clear fluid was commenced.

29. On 28 March 2019 Mr Carroll underwent a video assisted thoracoscopic procedure due to his failure to improve. This was performed by Mr Pande. Foreign material and fluid was removed from the pleural cavity and a second intercostal catheter was inserted. A chest x-ray on 30 March 2019 showed the oesophageal stent, 2 left-sided chest tubes, left lower lobe consolidation and possibly a left-sided pleural effusion. There was a small right-sided effusion with right parahilar consolidation. By 1 April 2019 Mr Carroll was eating a soft diet but there was episodic delirium. The anterior left chest tube was removed. On 3 April 2019 a consultant physician review was performed. Mr Carroll was in a delirious state on a background of dementia related to alcohol abuse. An albumin level of 11 g/L was regarded as a poor prognostic marker in that it signified malnutrition. Over the next 12 days there was no improvement. Radiation oncology and medical oncology considered Mr Carroll too frail to have the cancer treated. A meeting was then held with Mr Carroll's family and a decision was made to cease curative measures. Mr Carroll was transferred on 15 April 2019 to the MCH to be closer to his family. He was transferred into the care of the general medicine and palliative care team. He passed away on 8 June 2019.

**Investigation**

*(i) Post Mortem*

30. A post-mortem on Mr Carroll was performed by Dr Donald Ritchey, a very experienced forensic pathologist, on 12 June 2019. Dr Ritchey performed both an external and internal examination. Routine sections were taken for histological examination.

31. Dr Ritchey notes Mr Carroll was admitted to hospital the day following rigid oesphagoscopy for a believed benign stricture. Dr Ritchey describes the stricture as an alcoholic stricture. He says the procedure was complicated by perforation of the oesophagus. Mr Carroll was then transferred to the LGH for ongoing ICU care until a palliative approach was adopted. He was then returned to the MCH where he died on 8 June 2019 which Dr Ritchey notes was approximately 3 months following his admission.

32. Dr Ritchey says the autopsy revealed a normally developed, cachectic (physical wasting with loss of weight and muscle mass due to disease) elderly man. There was a large volume abscess within the posterior mediastinum (empyema). There was granulation tissue and pus surrounding the distal oesophagus at the site of the perforation and there was a wire stent in the distal oesophagus that appeared normally positioned and patent. Dr Ritchey says people who smoke and who are alcoholics are at increased risk of developing pathology of the oesophagus including cancer and its complications.

33. He concludes that the cause of death was sepsis caused by the mediastinal empyema (abscess) which complicated the perforation of the oesophagus that occurred during the rigid oesophagoscopy. Significant contributing factors were adenocarcinoma of the oesophagus, emphysema and alcoholism. I accept Dr Ritchey's opinion.

*(ii) RCA of the THS*

34. Given the circumstances in which Mr Carroll died, the THS conducted an investigation into the treatment he received and provided an RCA report. The panel who conducted the investigation found after Mr Carroll was reviewed in the outpatient clinic of the MCH, a computed tomography (CT) was ordered to exclude malignancy and the results were provided to the GP and medical registrar. Mr Ghali reviewed Mr Carroll 2 days later but the results of the CT were not communicated to him or

reviewed at the pre-admission clinic on 18 March 2019. The procedure was then booked.

35. The panel reviewed Mr Carroll's medical record from the date of the procedure and noted the procedure which was performed. Mr Ghali used a rigid scope and the oesophagus was dilated to 16 mm with the Savary-Gilliard guidewire and dilator. The panel noted the surgeon was very experienced with the rigid oesophagoscope and had performed 2 rigid scopes previously on Mr Carroll with no complications. The panel discussed the risks associated with rigid scopes one being oesophageal perforation and identified this procedure was not widely performed by many surgeons and was an exclusive treatment modality for surgeons with Mr Ghali's qualifications. The panel determined it remained an acceptable practice for an experienced surgeon to perform this procedure.

36. The consent for medical procedures/treatment was reviewed and the panel was satisfied the risks and complications, including oesophageal perforation were discussed with Mr Carroll.

37. The panel also discussed the safe use of this particular dilator for oesophageal dilation and noted the distal end of the guidewire had to be well distal to the stricture for the dilation to be performed and preferably in the gastric antrum. If the stricture prevented positioning of the distal end of the guide wire under direct vision from the endoscopy, then this should be performed under fluoroscopy and the position should be confirmed immediately prior to each passage of the dilator. The panel suggested the use of smaller calibre or ultra slim gastroscopes may avoid the requirement for fluoroscopy as these implements can often traverse tighter strictures and enable accurate guide wire placement under direct vision. The panel agreed it was best practice to inspect the oesophagus endoscopically post dilation to determine both the adequacy of the procedure and detect any significant complication such as an inadvertent perforation. The panel concluded that Savary-Gilliard dilators require an experienced surgeon and careful control of the guide wire by both the surgeon and nursing staff to prevent the inadvertent migration and malposition of the wire during the course of the procedure. This is likely to occur when withdrawing and exchanging dilators. Feedback from Mr Ghali notes the stricture appeared benign with no evidence of any ulceration or tumour at the top part, a guide wire passed safely through the stricture and the Savary-Gilliard implement was used to dilate the stricture. Mr Ghali said unfortunately on this occasion there was a complication

possibly due to either the malignancy or the severe stricture and the dilation to 16mm.

38. The panel concluded the lesion was blindly dilated via a rigid scope and that it is likely that oesophageal injury occurred as a result of the tip of the Savary-Gilliard wire, having inadvertently migrated proximally from its appropriate location in the gastric antrum to the oesophagus just beyond the tumour. As a result when the dilations were performed the bougie passed over the wire but was not safely directed into the stomach, but rather, impacted the oesophageal wall and caused the perforations.

39. The panel then discussed the post-operative recovery of Mr Carroll and it was noted he was hypertensive in the post anaesthetic care unit (PACU). He was reviewed by an anaesthetist and nursing staff were advised to monitor his blood pressure. His last blood pressure was recorded at 170/80 mmHg and he was transferred to the day unit for discharge. Feedback from the PACU reported Mr Carroll was assessed to have no pain or bleeding and was eager to be discharged. He was discharged at 18:15 hours. However, it was noted there were no post-operative vitals taken before he left hospital and the discharge of vital sign score had been calculated from results taken in the PACU.

40. Given Mr Carroll's BMI of 17, his impaired cognition, self-neglect and general frailty, the panel considered whether he should have remained in hospital overnight. He had been assessed as not meeting the existing criteria for an overnight stay on the anaesthetic score at pre-admission. However the panel determined, given the issues identified, an overnight stay in hospital would have been in his best interests.

41. Mr Carroll re-presented to the emergency department of the MCH 2 hours and 34 minutes after discharge from the NWRH with chest pain, productive cough and associated left-sided chest pain. The panel noted the attending medical officer's impression was to query if Mr Carroll had a chest infection and to rule out an oesophageal perforation. His care was transferred to the medical team. It was noted the CTPA was not performed until 21 March 2019 and it was not until then that treatment was initiated for a perforated oesophagus and he was transferred to the LGH. Accordingly, the panel determined there was a delay in diagnosing an oesophageal perforation and hydropneumothorax even though this diagnosis was considered by the emergency doctor at the MCH.

42. The panel found the perforation was caused due to the guide wire migrating at the time of dilation distal to the tumour. In order to control the risk of this occurring in the future the panel made a number of recommendations which are as follows:

- There needs to be careful selection of patients for this surgical procedure where they are frail and vulnerable. In this case every effort should be made to ensure relevant pathology and diagnostic imaging results are available at the pre-admission clinic and to the treating clinicians prior to performance of the procedure. A patient's fragility may be assessed using an approved fragility assessment tool.[6] In addition, patients are to be referred to the multi-disciplinary team for case assessment and planning in the event a malignancy is suspected and/or confirmed;

- Before dilating an oesophageal stricture it is a requirement that the characteristics of the stricture are identified adequately prior to dilation to ascertain the location, underlying pathology and length/complexity. Where there is a high degree of suspicion for malignancy, the initial procedure should include biopsy and histological confirmation;

- Ultraslim flexible gastroscopes should be purchased and formal training should be provided to staff;

- Those performing the procedure are required to ensure the tip of the guide wire is appropriately located and remains in that location during the procedure. This can be achieved by direct sight or indirect sight via fluoroscopy of the location of the tip of the guidewire;

- If the necessary equipment is not available at the time of surgery, then the procedure should be deferred or the patient referred to another facility;

- Patients, especially where they are frail, are to be considered for an overnight stay if their vital signs are not stable before discharge. Therefore, patients will be admitted for an overnight stay if their vital signs deteriorate or there is an increase in pain post operatively;

[6] E.g. The Carlson Fragility index.

- Consultation with the state-wide endoscopy network should be considered in order to develop appropriate procedures and guidelines in the North West for treatment of patients requiring oesophageal dilation;

- Frail patients are to be closely monitored post operatively before discharge; and

- Patients presenting to the MCH in the 24 to 48 hour period following surgery should be assessed by the treating surgical team wherever possible and transferred to an appropriate facility.

43. The panel's recommendations were endorsed by both the Chief Operating Officer and Executive Director of Operations for the north/north-west of the THS and all the recommendations have been implemented.

*(iii) Review by Dr Bell*

44. Dr Bell reviewed all of Mr Carroll's medical records and the RCA report produced by the THS. He says the medical registrar's assessment on 30 January 2019 was reasonable. The plan for a CT scan to look for malignancy was reasonable especially in the presence of clubbing; that is increased curvature of the nail plate which was found at this time. The CT scan suggested oesophageal cancer and the GP referred the patient to an ENT specialist. Dr Bell's preference would have been for a referral to a gastroenterologist.

45. Mr Ghali had previously dilated the oesophageal strictures in Mr Carroll. He may not have seen the CT scan. The RCA says the CT scan results were not communicated to Mr Ghali and specific correspondence as to that is missing from the records supplied by the THS. Dr Bell says there was no attempt to establish the diagnosis of cancer prior to dilation. This is important because specific features of the oesophageal stricture as well as comorbid illnesses can increase the risk of oesophageal dilation. Dilation should be avoided or performed with caution in the case of a potentially malignant stricture.

46. Dr Bell says Mr Ghali proceeded to conduct the oesophageal dilation which was reported to look benign. He considered the rupture was due to the cancer, severity of the stricture and the dilation to 16 mm although this is not an excessive dilation under usual conditions i.e. where there is no malignancy. Dr Bell notes Mr Ghali is highly experienced in performing the procedure with a rigid oesophagoscopy.

47. The MCH notes of 20 March 2019 at 22:33 hours indicate that by that time the oesophageal dilation was known to have occurred. Clinical examination found a plural effusion confirmed on chest x-ray. Dr Bell says the diagnosis of oesophageal rupture should have been made at that time. Due to the nature of this condition this is a medical emergency situation. Delay in recognition lead to delay in appropriate therapy. Dr Bell says this was poor to substandard medical practice.

48. Management at the LGH was of a good standard. The referral to palliative care was the best option. Rupture of the oesophagus causing mediastinitis (inflammation of the tissues in the mid chest) is difficult to cure even in a young and well patient. There was no reasonable prospect of treatment of the cancer to prolong Mr Carroll's life.

49. Dr Bell therefore concludes there was a failure of information flow involving the CT scan result reaching Mr Ghali. This failure led to the inadequate definition of the characteristics of the stricture before dilation. This failure is acknowledged in the RCA.

50. Oesophageal rupture is a recognised complication of oesophageal dilation and the surgeon was very experienced. Dr Bell says the rupture probably relates to the presence of the cancer and the patient's overall cachectic state. A very tight stricture is better managed with 1 or 2 size dilations with each surgery.

51. Finally Dr Bell says the RCA includes the development of guidelines for treatment of patients requiring oesophageal dilation. Also included is a recommendation on review by the treating team. He concludes these guidelines appear appropriate.

*(iv) Response by Mr Ghali*

52. Mr Ghali acknowledged receipt of the documents which were forwarded to him and acknowledged they were thorough and accurate. He confirms the result of the CT scan, which was arranged, was not of made available to him at the time of his consultation on 8 February 2019. Mr Ghali notes Mr Carroll previously had a very good response to dilation of his oesophageal stricture in 2015, he had gained weight and was discharged from Mr Ghali's care until his presentation on 8 February 2019. The tight stricture was noted during the scope and it was decided to dilate the oesophagus. Mr Ghali says he could not see any malignancy at the upper end of the stricture and the plan was to dilate it and perform a repeat scope at a later date. He notes Mr Carroll developed a perforation which required his referral to the LGH and stenting of the perforation.

*(v) Response by the THS*

53. The letter from Associate Professor Atkinson provides some updated information from the North West Department of General Surgery and Ear, Nose and Throat Surgery with respect to the systems and processes in place for the management of frail elderly patients with dysphagia who potentially require oesophageal dilation. Since 2019, with the increased use of technology, surgical teams meet either face-to-face or virtually during periods of a COVID – 19 outbreak. Each surgery is reviewed and all complications are examined. Either Associate Professor Atkinson or her deputy attend these meetings accompanied by a member of the Northwest Quality and Patient Safety Team. Relevant discussions, findings or recommendations are documented and system-wide issues are referred for discussion at the regional Peak Mortality and Morbidity committee which Associate Professor Atkinson chairs.

54. What now occurs with respect to the procedure which was performed on Mr Carroll is that all relevant past history, imaging and pathology would be available for a team discussion and additional medical assessment for example cardiology, oncology or palliative care might be sought. The procedure to be performed would be discussed in detail at the weekly surgical team meeting prior to the procedure with the full general surgery team including the theatre manager. This I am told ensures appropriate equipment is available well prior to the procedure and that post-operative admission is planned and booked.

55. Additional criteria have been added to the pre-assessment checklist that incorporates pre-and post-operative planning, pre-anaesthetic nursing, fragility assessment and an anaesthetic fitness rating as well as a clinical assessment as to the patient's suitability to be discharged home. Assessments are also made with respect to the patient's social circumstances and whether they can be safely discharged home. Where a patient is assessed as high risk or is likely to need additional observation, a plan is made to admit the patient overnight.

56. Frail elderly patients likely to be at risk of perforation will be carefully assessed by the whole team including the anaesthetists. Where there is a high risk, it is likely surgery would be delayed until such a patient could be assessed by a multidisciplinary team including gastroenterology and radiation oncology. Where the risk of assessment was considered to be very high, referral to the gastroenterology team at the LGH would be advised for assessment, biopsy, and staging, possibly with some preoperative radiotherapy being considered prior to any dilation or stenting.

57. In addition, interim guidelines to guide theatre booking and specialist teams are currently in draft and out for consultation. These guidelines are based on recognised clinical care standards developed by the Gastroenterological Society of Australia. Finally theatres in the north-west have purchased smaller paediatric and ultraslim gastroscopes for use in treating benign strictures.

**Comments and Recommendations**

58. In summary, oesophageal rupture is a recognised complication or risk associated with an oesophageal dilation procedure. Given this fact, Mr Ghali's experience as a surgeon and Dr Bell's opinion that the rupture probably relates to the presence of cancer and Mr Carroll's poor physical state, then the only conclusion I can draw is that Mr Ghali's treatment of Mr Carroll was of a proper standard.

59. It was substandard medical practice, in my view, for the CT results not to be communicated to Mr Ghali and the delay in the diagnosis of the oesophageal perforation at the MCH was also substandard because that delay then resulted in a delay in the provision of appropriate therapy. The medical care which Mr Carroll received from the time he arrived at the LGH was appropriate and to the proper medical standard.

60. The recommendations set out in the RCA which I have been told have all been implemented and the further improvements which have been outlined in the response received from the THS lead me to conclude that any delay in the diagnosis of an iatrogenic perforation of the oesophagus is now far less likely to occur. This means the more timely provision of appropriate medical treatment.

61. The circumstances of Mr Carroll's death are not such as to require me to make any further comments or recommendations pursuant to Section 28 of the *Coroners Act* 1995.

62. I convey my sincere condolences to the family and loved ones of Mr Carroll.

**Dated:** 26 October 2022 at Hobart in the State of Tasmania.

**Robert Webster**
**Coroner**