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 Rebecca Eileen Richardson,

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

a) The identity of the deceased is Rebecca Eileen Richardson (Mrs Richardson);

b) Mrs Richardson died of natural causes;

c) Mrs Richardson's cause of death was acute myocardial infarction due to a stenotic coronary vessel; and

d) Mrs Richardson died between 7 and 9 May 2019 at East Devonport, Tasmania.

Introduction

In making the above findings I have had regard to the evidence gained in the comprehensive investigation into Mrs Richardson's death. The evidence includes:

- Police Report of Death for the Coroner;
- Affidavits as to identity and life extinct;
- Affidavit of the Forensic Pathologist, Dr Terry Brain, who conducted the post-mortem examination;
- Affidavit of the forensic scientist, Mr Neil McLachlan-Troup, of Forensic Science Service Tasmania setting out the toxicological results;
- Affidavit of Mrs Janet Jones, mother of Mrs Richardson;
- Affidavits of Mr Alan Jones, father of Mrs Richardson;
- Affidavit of Sergeant Alexander Bonde;
- Affidavit of Constable Patrick Roberts;
- Affidavit of Constable Chelsea Becker;
- Affidavit of First Class Constable Joshua Wood;
- Mrs Richardson's medical records obtained from the North West Regional Hospital (NWRH) and the Launceston General Hospital (LGH);

- Report of Dr Anthony Bell MB BS MD FRACP FCICM, coronial medical advisor; and
- Response of Dr Helen McArdle, Acting Executive Director of Medical Services North West Regional Hospital (NWRH) to questions posed by Coroner's Associate Sergeant Genevieve Hickman.

Although Mrs Richardson died of natural causes her mother and father and Mr Richardson have raised concerns about the quality of medical care provided by the NWRH when compared with the LGH. My investigation has considered this issue.

Background

Mrs Richardson was born Rebecca Eileen Jones in Devonport on 29 July 1989. She was aged 29 years, had been married and was separated, and she had one child to her husband Mr Chris Richardson at the time of her death. At that time she was unemployed and lived alone at East Devonport in Tasmania.

Mrs Richardson was born to Alan and Janet Jones and she had two sisters. She grew up and went to school on the North West coast of Tasmania and she subsequently met and married Chris Richardson. They had the one daughter together and Mr Richardson had children from a previous relationship. Mrs Richardson worked, during her life, in the hospitality industry on the North West coast and later became a disability pensioner after suffering from a number of serious health conditions. She had separated from her husband and for a while was living under the same roof however prior to her death she moved into her own accommodation.

Health

Mrs Richardson's health was very problematic. At the age of 6 years of age she was diagnosed with type I diabetes mellitus. By 2007 there had been a number of admissions for diabetic ketoacidosis. In 2008 consideration was given to Mrs Richardson suffering from an eating disorder. By 2010 Mrs Richardson was suffering from ischaemic heart disease, and she had suffered a NSTEMI[1]. In that year she also suffered a TIA[2]. In or about 2015 she was diagnosed with an opiate misuse disorder. By 2016 Mrs Richardson had been diagnosed with gastroparesis and autonomic neuropathy. At some stage Mrs Richardson underwent a permanent percutaneous gastrostomy whereby a flexible feeding tube was placed through

[1] Non-ST-elevation myocardial infarction. It is a less severe form of heart attack than a STEMI because it inflicts less damage on the heart. However, both are heart attacks and require immediate medical care.
[2] A transient ischaemic attack (TIA) or "mini stroke" is caused by a temporary disruption in the blood supply to parts of the brain. The disruption in blood supply results in a lack of oxygen to the brain.

the abdominal wall and into the stomach. Such a device is used when a person's oral intake is insufficient. In addition, Mrs Richardson suffered from hypertension, multiple pulmonary embolism and as a result an inferior vena cava embolic filter was inserted. In addition, she suffered from peripheral neuropathy, nephropathy and depression. She was also extensively investigated for chronic abdominal pain and in 2018 she underwent a hysterectomy for endometriosis. As a result, she required treatment for surgical menopause. She also had iron deficiency anaemia which caused a number of symptoms.

Mrs Jones says when her daughter became unwell or was suffering from diabetic ketoacidosis, she would ordinarily become delirious. When she was admitted to the LGH they would treat the diabetic ketoacidosis first and then address any mental health issues as her mental state was severely affected by her illnesses. Mrs Jones says when Mrs Richardson was discharged from the LGH she would come home well. During an admission to the hospital, she would be admitted to either the intensive care unit (ICU) or an acute medical unit (AMU). By comparison Mrs Jones says when her daughter went to the NWRH she would often be home within 4 hours, they would provide her with fluids and anti-nausea medication, but she would come home still very unwell and vomiting. She believed her daughter received *"much more adequate"* treatment at the LGH than at the NWRH. Mrs Richardson's father and her husband have made similar comments. Mr Jones says when his daughter became unwell, she could become disorientated and non-coherent. It was extremely common for her to vomit which could last a number of days.

The Police Report of Death for the Coroner suggests both Mrs Richardson's mother and her general practitioner, Dr Fisher, have said Mrs Richardson was not proactive in managing her health conditions and Dr Fisher described her as a *"non-compliant diabetic"* who would present to an emergency department vomiting due to hyperglycaemia. This could occur as a result of Mrs Richardson forgetting or failing to take her insulin.

On 21 February 2019 Mrs Richardson was admitted to the acute medical unit of the LGH for diabetic ketoacidosis. She was managed by the AMU team and reviewed by a dietitian and a nutritionist. Mrs Richardson was discharged on 25 February 2019 with a plan which included a follow-up appointment.

On 17 March 2019 Mrs Richardson was admitted to the LGH for uncontrolled abdominal pain and vomiting. There was no evidence of diabetic ketoacidosis or bowel obstruction. The percutaneous feeding tube had a site infection and that was changed. During this admission there were multiple admissions to ICU from the medical ward. Mrs Richardson was discharged from the hospital on 4 April 2022 with a plan to continue a course of antibiotics,

to follow up with her GP when required and to present to the Emergency Department (ED) if there were any further issues.

Circumstances Leading to Mrs Richardson's Death

On 6 May 2019 Mrs Richardson was transported by ambulance to the ED of the NWRH arriving at 10:06 AM. History was provided of 3 hours of severe abdominal pain and persistent vomiting with no change in bowel habits. On examination Mrs Richardson's pulse rate was normal at 110 bpm and her blood pressure was 150/100 mm Hg, her respiratory rate was normal, and she was afebrile. She did not appear unwell and was not dehydrated. Her chest was clear, and an examination of her abdomen did not reveal any abnormalities. Her blood glucose was 26 mmol/L (normal 4.0 – 7.8 mmol/L[3]) and the ketone[4] level was 0.9 mmol/L (a level in excess of 3.0 mmol/L is likely to result in diabetic ketoacidosis). Her blood tests were unremarkable except for leukocytosis which were thought likely due to a stress response to excessive vomiting. Mrs Richardson was asked about cannabis use and she said she had 2 joints that day prior to vomiting and that she was a regular user. A diagnosis of cannabis induced vomiting was made. This was discussed with her, and the notes say she understood the conversation. Intravenous fluids were administered, and she was hydrated appropriately. At 14:30 hours it was noted Mrs Richardson had left the ED. She was subsequently found on the floor of the surgical ward, and she was wheeled back to the ED. On examination she was assessed as alert, orientated, that she had capacity but there was frequent retching. She refused a further assessment and because she was assessed as having capacity there was no legal basis by which she could be detained.

Ambulance Tasmania (AT) were called to McDonald's in Burnie at 5:31 PM to attend to Mrs Richardson who complained of abdominal pain. Her heart rate was measured at 156 bpm and her respiratory rate was measured at 28 bpm. She would not let officers from AT further assess her and she removed the blood pressure cuff so that measurement was thought to be inaccurate. What occurred in the ED is summarised in the nursing notes in the following terms:

"…She has ended up at McDonald's who called an ambulance as she was drinking water and vomiting whilst in the restaurant. AT returned Rebecca back to us. She walked into the department and attempted to walk straight into cubicle 1 at her own accord and did not wait to be triaged in the ambulance bay. She then walked out to the waiting room toilets, took all her clothes off, trashed the ED toilets with wet paper towels. With ongoing encouragement Pt eventually put her clothes

[3] Diabetes Australia website.

[4] When the body has to use fat for fuel, a by-product called ketones develops in the blood. In small amounts, ketones are not harmful. However, if ketone levels build they can become toxic and can lead to diabetic ketoacidosis which is potentially life threatening.

back on and allowed me to obtain a BSL and ketone. BSL hi[5], ketones 2. Pt initially accepting of care that was needed to be provided and was brought back into cubicle 1. It was here that I contacted after-hours nurse manager and requested a sitter as per her management plan to assist in the care of Rebecca. It should be noted that the department was busy +++ at this time and we requested Rebecca to please be compliant and help us help her. However Pt then began to walk around the department again, into other patient's cubicles, becoming aggressive with staff at times. Screaming that she wanted to go to the bathroom, attempting to take her clothes off. Pt was seen by Paris[6] who explained to patient that she is required to be compliant whilst in the department. He also explained to her that he would like to commence the DKA[7] pathway. Pt stated to Paris that she wanted to leave. Pt was escorted out to the waiting room and a code black was called as again she was attempting to go to the toilets and vomit. The police were contacted again to assist removal of Rebecca from hospital grounds… I did question with Neeraj[8] the possibility of Rebecca's behaviour could be secondary to a medical or psych condition however he stated that it is behavioural."

Dr Pearce's notes indicate Mrs Richardson was persistent in wanting a shower and drinking water which she would then vomit up. As per her management plan continued vomiting was not permitted because of the potential for an oesophageal injury. It was explained to her they wanted to manage her hyperglycaemia, dehydration and pain. The notes reveal she would verbally agree to have the treatment but then she would get out of the cubicle and be disruptive. He gave her 3 opportunities to stay in her assigned cubicle, but she continued walking around the ED. He asked her to leave if she did not want treatment and she left. Due to her behaviour, he was unable to assess her.

Constable Becker and First Class Constable Wood attended the NWRH in response to a call which had been received. They were informed by hospital staff Mrs Richardson was no longer welcome at the hospital due to her behaviour. Mrs Richardson was requesting to go to the toilet however police advised her she was not welcome back inside the hospital. She sat in the back of the police vehicle while police attempted to organise transport home. Mrs Richardson was asked by police not to go inside the hospital, and she initially complied before attempting to enter the hospital. A decision was then made to transport her to the Burnie station to use the toilet but because they were aware she had been throwing up they waited for Constable Roberts and Senior Constable Askew to arrive in the police divisional van. On its arrival Mrs Richardson was transported to the Burnie station where she used the toilet on 2 occasions, vomiting in the interim, before leaving the station with her property

[5] Recorded elsewhere in the notes at 25 mmol/L.
[6] Dr Paris Pearce.
[7] Diabetic Ketoacidosis.
[8] Dr Neeraj Shrestha.

and a taxi voucher which had been supplied by the NWRH. She walked off towards McDonald's in Burnie.

Subsequently Constable Becker and First Class Constable Wood re-attended the NWRH at approximately 7:00 PM as Mrs Richardson had returned. Constable Becker spoke to one of the doctors and was advised Mrs Richardson was diabetic and was experiencing medical issues however was refusing treatment. The Constable was advised by the doctor Mrs Richardson was of sound mind and coherent and able to make a decision with respect to her medical treatment. Police, instead of arresting her, offered to take her home. However, as a result of her behaviour police believed she was unable to look after herself because she was under the influence of either alcohol, or a drug and she was therefore taken into custody. She returned to the Burnie police station at about 7:25 PM. Police then contacted Mrs Richardson's friend, Natasha Holland, who advised her behaviour was not abnormal and was possibly a side-effect of her diabetes. She was unable to assist with transport. Neither was her husband who said he was unable to collect her, but he gave Sergeant Bonde the contact details of Mr Jones with whom contact was made and he agreed to come and collect his daughter.

Because of her behaviour in the station and the fact she was scratching and clawing at officers who were attempting to assist her Sergeant Bonde directed she be placed into a holding cell for her own safety and that of the officers. At this time Sergeant Bonde then contacted Dr Neeraj Shrestha a consultant at the ED at the NWRH seeking information with respect to Mrs Richardson's medical conditions. He was advised by the doctor Mrs Richardson had received some treatment today by way of fluids but became uncooperative and then she did not want treatment and continued to drink water and throw up. A decision was made that she was causing too many issues at the hospital, and she was asked to leave. They believed the vomiting had been caused by smoking cannabis. The doctor advised Sergeant Bonde Mrs Richardson had insulin with her and that is what she needs for treatment of her diabetes.

At about 9:25 PM Mrs Richardson was released into the care of her father. Mr Jones says when he arrived at the police station his daughter was in the holding cells. *"She was surprised I was there but happy to come home with me."* He says she came back to his house and stayed with him the night. On the way home she vomited once in his car, and he says she wasn't too bad, and she told him she had taken her insulin. He could see she had an insulin pen in her bag. He woke her up on Tuesday morning[9] and she seemed a little sleepy because she had not gotten much sleep. He says she was keen to go home and *"sleep it off"*. He says a

[9] 7 May 2019.

few days of rest and sleep would assist her to get better. He drove her home that morning and walked her to the door and he says although you could tell she had been sick she seemed much better. Mrs Jones drove past her daughter's house on the Tuesday afternoon to check on her and noted the lights were on, but she did not go inside because Mrs Richardson liked her privacy when she was recovering. On Thursday, 9 May 2019 Mr Jones went to check on Mrs Richardson because his wife had told him she had not been on Facebook, and nobody had heard from her. Mr Jones found her deceased in the bath.

Investigation

Police received a call to attend at 7:51 AM on 9 May 2019 and found Mrs Richardson laying on her back in the bath tub which was empty. The tap to the bathroom sink was running and the plug was out. She was observed to have bruising to both forearms and upper arms, a scratch on the right elbow, a graze on the right thigh and bruising and possible grazing to both knees. Multiple medications were found in various places throughout the home and police found a lot of food products throughout the house including a number of bottles of Coca-Cola, packet noodles, lollies, muesli bars, shapes and crumpets all which had been practically eaten. The fridge was mouldy on the inside and contained no fresh food. All it contained was prescribed insulin. Mrs Richardson's house keys were found in her dressing gown pocket. Cannabis was also located. Mrs Jones advised police it was normal for her daughter to sit in a warm bath when she became unwell.

The forensic pathologist, Dr Terry Brain, conducted a post-mortem examination on 10 May 2019. He noted the contents of the Police Report of Death for the Coroner and reviewed somebody worn camera footage of the police attendance at the NWRH. This shows hospital security restraining Mrs Richardson at one stage. He believes this would have caused the bruising and scratching described by police. Tissue was taken for histology along with blood for toxicology. He says in his report as at 5 August 2019 toxicology was helpful in as much as diabetes was not an obvious cause of death. His opinion as to Mrs Richardson's cause of death is acute myocardial infarction due to a stenotic coronary vessel; that is the left anterior descending coronary artery had stenosis to the extent of 60%. Significant contributing factors were some old heart scars, type I diabetes and early bronchopneumonia. I accept Dr Brain's opinion.

Toxicological testing found 3 prescribed medications at therapeutic or sub therapeutic levels. Another 3 medications are mentioned in the report however routine screening by Forensic Science Service Tasmania cannot determine the presence or absence of those drugs. Acetone was detected and that is normally found in blood and urine as it is naturally produced and disposed of in the human body through normal metabolic processes. Acetone

levels are often markedly elevated during fasting or diabetic states or during diabetic ketoacidosis. The report says this latter condition can result in coma or death if it remains untreated. When acetone concentrations are elevated during fasting or diabetic states or during diabetic acidosis they are typically between 60 and 90 mg/L in blood and urine, but they may be as high as 700 mg/L in diabetic ketoacidosis. Symptoms of toxicity may be evident in blood acetone concentrations at between 100 and 400 mg/L and concentrations greater than 550 mg have been associated with fatalities. In this case the concentration was 186 mg/L. In addition, THC which is the major psychoactive constituent of cannabis was detected. Alcohol and/or other illicit drugs were not detected.

Dr Bell noted the findings of Dr Brain and the toxicology results. From the records and affidavit material Dr Bell noted Mrs Richardson would develop diabetic ketoacidosis mainly due to a failure to self-administer insulin. Such an event appears to start with abdominal pain and vomiting which are usual symptoms for this condition. He says the presentation to the NWRH on 6 May 2019 was of abdominal pain but there was no clinical or biochemical evidence of diabetic ketoacidosis. He notes Mrs Richardson was alert and active. There was no evidence of cerebral dysfunction but rather a behavioural problem. He says the second presentation was more difficult. There was continued abdominal pain and vomiting. The respiratory rate was elevated and there was a tachycardia both of which are signs of diabetic ketoacidosis. No other observations were possible due to Mrs Richardson's refusal to have treatment. Dr Bell says diabetic ketoacidosis is not usually associated with delirium and thought disorder however in its late stages the level of consciousness is decreased. Therefore, unusual behaviour is usually a behavioural issue however he notes the management plan at the LGH indicates behaviour issues were often present when Mrs Richardson had diabetic ketoacidosis. This corroborates what her parents say and what Ms Holland told Sergeant Bonde.

Dr Bell says the most likely scenario is Mrs Richardson had not taken sufficient insulin, and this was possibly due to not eating and vomiting which result in a reduced food intake coupled with less insulin being administered which resulted in a high blood glucose level. This leads to polyuria[10] and polydipsia[11] and with vomiting and an inability to hydrate. Dehydration is known to be a factor in sudden cardiac death due to coronary artery disease with myocardial ischaemia/infarction.

[10] Polyuria is excessive or an abnormally large production or passage of urine (greater than 2.5 L or 3 L over 24 hours in adults).
[11] Polydipsia is a condition where there is excess consumption of fluids due to excessive thirst leading to polyuria with diluted urine and, ultimately, hyponatremia.

The acetone level may have indicated ketoacidosis but the level is not in the acidosis induced fatal range. This interpretation is complicated by the unknown time of death in relationship to the time of the post-mortem examination. Ketoacidosis indicates the increase in ketone bodies in the blood due to insulin deficiency. Acetone production increases due to post-mortem decomposition changes and accordingly the elevated acetone level may relate to post-mortem changes or ketoacidosis.

As to the patient management guidelines he says those at the LGH were well considered and indicate a sound management plan. He says in relation to the LGH management plan these guidelines appear to have helped staff manage a difficult medical case. They, he says, do not appear to have been available to the NWRH. There is no alert notice in any of the records he inspected. He notes an ED management plan for the NWRH was prepared with respect to Mrs Richardson and he notes that plan lists behaviours which will result in her being asked to leave and if she refuses then security will be called to escort her from the premises. The decision to escort Mrs Richardson from the ED at NWRH appears to follow page 9 of that hospital's guidelines and in his view that was appropriate. His conclusion is the guidelines need to be easily accessible and recorded in alert notices on the digital medical record. He says Mrs Richardson's management at the NWRH in a difficult situation and without the help of the LGH guidelines was reasonable and the decision to escort her from the NWRH followed its guidelines.

Dr Bell concludes Mrs Richardson died of complications of diabetes myelitis type I which caused her sudden cardiac death. In those circumstances the presence or absence of ketoacidosis is a moot point. He did not believe there were any medical issues with her care. I accept Dr Bell's opinions.

As mentioned, there were 2 management plans in existence. The first was developed by the NWRH on 27 January 2017 and updated on 24 July 2017. The more recent management plan was developed by the LGH and it is dated 19 December 2018; that is almost 18 months after the NWRH plan was updated. When questioned about the 2 plans the Acting Executive Director of Medical Services of the NWRH, Dr McArdle, said they are not substantially different. Both plans set out a detailed summary of Mrs Richardson's health difficulties and her current medications and the NWRH plan then sets out an advised approach to Mrs Richardson in the ED which consists of 12 points the final one listing 5 behaviours which will lead to her being asked to leave the ED and if she refuses being removed by security. The eighth point says that if her pathology and imaging is normal then she is to be discharged home with follow-up by her GP however if those investigations are abnormal then she needs to be managed including admission as appropriate. The plan goes

on to suggest non pharmacological strategies, medications and dosages, ambulance management and ward management.

The LGH plan is in my view more detailed in respect of what needs to be done in relation to Mrs Richardson's medical management when she presents to the ED. While her difficult behaviours are acknowledged the plan does not discuss her being asked to leave and/or her being removed by security. In so far as an admission for treatment is concerned the plan suggests she be moved from the ED to an inpatient ward as a matter of priority and that an acute medical unit admission is to be considered if appropriate. In addition, the endocrinology team should be notified of the admission. She should not be discharged while vomiting or unable to tolerate oral intake. Implementation of the NWRH plan means that if her pathology and imaging is normal then she was to be discharged even though she may be vomiting and be unable to tolerate oral intake. At the LGH an early medical referral for at least an overnight admission is recommended once initial steps to treat and stabilise her condition have been undertaken.

Dr McArdle says the NWRH management plan was followed in all respects apart from the writing up of her regular medications on a drug chart by the treating doctor at the time of assessment in the ED. Both plans were on the digital medical record and while the NWRH plan was located on the cover sheet of that record the LGH plan was located under the emergency tab in the record and not on the cover sheet where they are usually located. Dr McArdle says while the LGH plan *"was theoretically available it is unlikely that the clinicians in the NW knew that it was there."* Once a management plan is approved, she says it should be placed on the cover sheet of the digital medical record so that all other hospitals and outpatient services have access to it. In addition, there is an alert put on the system to alert clinicians the patient has a management plan. The process in both the Mersey Community Hospital and NWRH is that the allergies and alerts sheet are placed on the notes clipboard so that clinicians can see them but this did not occur with the LGH plan as it was placed in the ED tab. Dr McArdle says there is no policy with respect to notifying the original author of a plan about plan changes; that is there is no policy that the author of the NWRH plan be advised about the changes in the LGH plan *"although in practice we would expect this to occur."* It clearly did not occur in this case.

Comments and Recommendations

In my view the implementation by each hospital of their respective plans has resulted in what the family has experienced that is the LGH would treat Mrs Richardson first and then address her mental health issues and behavior and once discharged she would come home well. At the NWRH she would often be home within a few hours after presenting to the ED

and after having been given fluids and anti-nausea medication. She would still be unwell. I therefore agree with Mrs Jones that the treatment provided by the LGH was better than that provided by the NWRH. This is a product of the LGH management plan being more detailed in respect of what needs to be done with respect to Mrs Richardson's medical management when she presents to the ED.

It seems the nurses' view that there was a possibility of Mrs Richardson's behaviour being secondary to a medical or psychiatric condition was correct and Dr Shrestha's opinion that it was behavioural was incorrect. The approach of the LGH, given the contents of its management plan, was to treat her behaviour as secondary to any medical condition she presented with which no doubt led to better treatment outcomes.

If the LGH's guidelines had been available to the NWRH and implemented on 6 May 2019 I am unable to say whether there would have been a different outcome to that which transpired. The reason for this is Mrs Richardson refused to be fully assessed and she refused treatment which included the DKA pathway. Mrs Richardson was assessed as competent in being able to make a decision as to whether or not to accept or refuse treatment. In those circumstances the doctors at the NWRH could not force her to be assessed and/or receive the treatment which was discussed with her. Mrs Richardson then indicated she want to leave and so she was escorted to the waiting room however a code black was called as she again attempted to go to the toilet and vomit. Police were therefore contacted to assist with her removal from the hospital. In those circumstances there was nothing staff at the NWRH could do to treat her.

The only **recommendation** I make is that if a patient's medical management plan changes, then the original author should be notified and the new plan should appear on the cover sheet of the digital medical record.

The circumstances of Mrs Richardson'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.

I convey my sincere condolences to the family and loved ones of Mrs Richardson

Dated: 31 May 2023 at Hobart in the State of Tasmania.

Robert Webster
Coroner