



FINDING OF INQUEST

An Inquest taken on behalf of our Sovereign Lady the Queen at Kingscote and Adelaide in the State of South Australia, on the 29th, 30th and 31st days of August 2011 and the 18th day of June 2012, by the Coroner's Court of the said State, constituted of Mark Frederick Johns, State Coroner, into the death of William John Gripton.

The said Court finds that William John Gripton aged 62 years, late of Lot 143, Burdon Drive, Browlow, Kangaroo Island, South Australia died at the Royal Adelaide Hospital, North Terrace, Adelaide, South Australia on the 13th day of May 2008 as a result of multi organ failure due to atypical pneumonia. The said Court finds that the circumstances of his death were as follows:

1. Introduction and cause of death

- 1.1. Mr William Gripton was 62 years of age when he died on 13 May 2008. His cause of death was multi organ failure due to atypical pneumonia and I so find¹.
- 1.2. Mr Gripton lived on Kangaroo Island and was admitted to the Kangaroo Island General Hospital on 11 May 2008. He was evacuated from Kangaroo Island by a retrieval team from the Royal Adelaide Hospital late on the evening of 12 May 2008 and died in the Royal Adelaide Hospital on 13 May 2008. The Inquest focussed on his treatment in the Kangaroo Island General Hospital.

2. Background

- 2.1. Mr Gripton had a past medical history of polio as a child and this affected his left leg. Later in life he developed post polio syndrome. Otherwise he enjoyed generally good health and rarely saw a doctor.

¹ Exhibit C2a and Transcript, page 342

- 2.2. On Thursday 8 May 2008 Mr Gripton attended the Kangaroo Island Medical Clinic and saw Dr James Doube. Dr Doube recorded in his notes that Mr Gripton had an upper respiratory tract infection of a few days duration. He noted that Mr Gripton's temperature was normal and his blood pressure when sitting was a normal $120/75$. Dr Doube gave a statement that he thought the condition was viral in origin. He noted that Mr Gripton's chest was clear and he was not bringing up any sputum. He did not believe that a course of antibiotics would be of any benefit as the causative agent was a virus. Despite this he provided Mr Gripton with a prescription for amoxicillin to take in the event that he deteriorated and, in particular, if he developed a productive cough or fevers suggesting a secondary bacterial infection². Dr Doube said that he was called by Mr Gripton's wife on 9 May 2008 as she was concerned about his wellbeing. She was concerned about his increasing fatigue and that he had vomited once. Dr Doube thought this was consistent with the viral infection and that rest and maintaining fluid intake would be appropriate. He did not think that it was necessary to commence antibiotics at that stage³.
- 2.3. On the evening of Friday 9 May 2008 Mrs Gripton was again concerned and rang the Kangaroo Island General Hospital to ask the nurse on duty, Jan Pengilly, if she could possibly obtain the antibiotics from the hospital as the chemist was closed. RN Pengilly said that this was not possible and suggested that if Mrs Gripton was worried, she should bring Mr Gripton to the hospital. Mrs Gripton filled the prescription at 9am on Saturday 10 May 2008 and Mr Gripton was commenced on the amoxicillin shortly thereafter.

3. Mr Gripton is admitted to Kangaroo Island General Hospital

- 3.1. By Sunday 10 May 2008 at approximately 2:30pm Mrs Gripton considered that Mr Gripton was no better and decided to take him into the hospital. They arrived at the hospital at about 2:45pm and Mrs Gripton noted that Mr Gripton was having trouble breathing. He was taken into the hospital on a wheelchair and given some oxygen⁴.
- 3.2. Soon after arriving at the hospital Mr Gripton was seen by Dr Steyn. Dr Steyn carried out a physical examination and noted that an ECG which had been taken on admission was normal. He also noted that Mr Gripton looked unwell and was pale. He noted

² Exhibit C3a and Exhibit C6

³ Exhibit C3a

⁴ Exhibit C1b

that Mr Gripton's oxygen saturations were low on arrival but improved after he was nebulised and provided with oxygen to approximately 95-96%. Dr Steyn directed that Mr Gripton be admitted. Dr Steyn assessed Mr Gripton as having a lower respiratory tract infection. He directed that Mr Gripton be given an immediate dose of the antibiotic cephalothin and for that to be continued thereafter. That was to be given intravenously. Dr Steyn also prescribed intravenous fluids. He directed that bloods be taken to be sent to the IMVS in Adelaide for analysis. Arrangements were made for that to happen that afternoon. Dr Steyn gave consideration to a chest X-ray during his initial consultation with Mr Gripton but decided that it should be performed the next day as he did not think an immediate X-ray of the chest would alter his management of Mr Gripton.

4. Blood results received 2130 hours on 11 May 2008 - Dr Steyn is called

- 4.1. At 2130 hours that evening, the IMVS faxed the results of Mr Gripton's blood analysis to the Kangaroo Island General Hospital. A nursing note made at that time by RN Walker states that the blood results had been received and that most of the results were abnormal. It noted a potassium level of 5.3 and a sodium level of 127. The note said that RN Walker telephoned Dr Steyn to notify him of the results. Dr Steyn directed that she continue care and that the bloods be repeated the next day. The note continues that RN Walker took observations of Mr Gripton. He reported feeling a little better and his observations were:

'Pulse 101
 SP02 98% on 3 litres of oxygen
 Temperature 36.3°
 Blood pressure ¹⁰⁴/₇₅'

- 4.2. A further nursing note at 2400 hours recorded that Mr Gripton's blood pressure was low at ⁸⁸/₆₈. His oxygen saturations were 98% on two litres of oxygen. His temperature, pulse and respirations were unremarkable. RN Walker was concerned about the low blood pressure. At 0130 hours RN Walker noted that his blood pressure remained low. She stood him up and he was lightheaded. He was placed on telemetry for blood pressure and oxygen saturation monitoring. She noted that if he deteriorated any further she would call the doctor on-call.

5. RN Walker calls Dr Steyn at 0230 hours on 12 May 2008

- 5.1. At 0230 hours on 12 May 2008 RN Walker remained concerned that Mr Gripton's blood pressure had remained consistently low since midnight. She contacted Dr Steyn about the matter. Dr Steyn responded that he was happy with Mr Gripton's current intravenous fluid rate in light of Mr Gripton's known renal impairment. Dr Steyn was asked what he meant by that expression. He had earlier given evidence that the IMVS blood results at 0930 hours the previous day indicated to him, particularly the creatine level, that Mr Gripton was most probably having either acute or a chronic renal impairment⁵. He later explained that he had told the nurse that the current intravenous rate was satisfactory in light of renal impairment, because he was concerned to strike a balance between giving Mr Gripton either too little fluids or too many fluids. He said that potentially Mr Gripton's kidney was not working the way it should. He said that if he gave Mr Gripton too much fluid he might go into a combination of cardiac and renal failure.

6. Dr Steyn attends Kangaroo Island General Hospital 0800 hours on 12 May 2008

- 6.1. The next significant event in the narrative is that Dr Steyn attended to examine Mr Gripton at approximately 0800 hours the following morning, 12 May 2008. Dr Steyn had available to him at that time the various observations which had been made by RN Walker up until 0600 hours. Those observations had remained reasonably consistent through the night. Mr Gripton had been afebrile and his oxygen saturations had been, for the most part, satisfactory with the exception of a relatively low 94% at 0300 hours. Significantly, his blood pressure had remained low for the whole night, dipping as low as ⁸⁴/₆₃ at 0600 hours⁶. Dr Steyn gave an account of his interaction with Mr Gripton. It was not clear that any other person was present during this examination. In all probability they were alone. Dr Steyn said that he explained to Mr Gripton that the nursing staff had expressed concerns about his urine output. He informed Mr Gripton that it was important for him to know whether Mr Gripton did or did not pass urine, because that was a very big indicator of his wellness. He said that if it was correct that Mr Gripton had not passed urine, it would be necessary to send him to Adelaide. Dr Steyn said that Mr Gripton assured him that he had been to

⁵ Transcript, page 214

⁶ Exhibit C7, page 33

the toilet independently during the night. Dr Steyn commented that his acceptance of Mr Gripton's account was 'unfortunate'⁷.

- 6.2. Dr Steyn could not have been entirely reassured by Mr Gripton's responses because he said he 'gave Mr Gripton a fluid challenge'⁸. He said that Mr Gripton was given 400ml of fluids over a relatively short period. This is evidenced by a nursing note⁹ that the intravenous fluids were to increase to 400ml per hour for one hour and then return to 125ml per hour. Dr Steyn explained that the purpose of this was:

'To basically increase his intravascular volume and give him a better – or improve his blood pressure.'¹⁰

Dr Steyn said that he had also ordered that a chest X-ray be performed. The purpose of the chest X-ray was to confirm a diagnosis of pneumonia. At that point Dr Steyn went off duty for the rest of the day. His intention was to reassess Mr Gripton that evening.

- 6.3. Dr Steyn said that he went fishing but that he had a mobile phone on which he could be contacted at all times. He said that he did not receive any contact via mobile phone that day.
- 6.4. Dr Steyn did not make any arrangement with any other doctor for Mr Gripton's continued care during the period of his intended absence that day.
- 6.5. Dr Steyn did not give specific instructions to the nursing staff to inform him of the outcome of the fluid challenge. He did not give any specific instructions to advise him as to the outcome of the chest X-ray. It was his plan to assess the X-ray when he returned that evening¹¹. When asked whether he gave any instructions to nursing staff about what was to happen about the outcome of the fluid challenge, he said that he had informed the staff about the plan to load Mr Gripton with fluid with the purpose of assessing his fluid output. He said that if there had been no urine output in response to that exercise, he would have expected to be informed.

⁷ Transcript, pages 220-221

⁸ Transcript, page 221

⁹ Exhibit C7

¹⁰ Transcript, page 221

¹¹ Transcript, page 222

- 6.6. Dr Steyn was specifically asked if he left any instructions with nursing staff to inform him of the outcome of the fluid challenge. His response was equivocal:

'I spoke with a nurse who went ahead and did the fluid challenge.'¹²

He was asked if he specifically told the nurse that he expected to have the results provided to him within two hours and responded that he could not recall. I am of the opinion that it is unlikely that he gave any such instruction. He clearly did not give any instruction to be notified urgently of the outcome of the chest X-ray.

- 6.7. Mr Gripton's nursing notes duly record the administration of the fluid challenge.
- 6.8. RN Florence was on duty from 0700 hours until 1530 hours that day. She said that she gave the 400ml fluid challenge at the beginning of her shift¹³. RN Florence made a note at 1140 hours referring to the fluid challenge and also to a number of other matters, including a shower that Mr Gripton had later in the morning. Although the note is made at 1140 hours, it is clear from her evidence that the fluid challenge was conducted much earlier than that. It is reasonable to assume that it was performed shortly after 0800 hours. This is corroborated by the fact that Mr Gripton's blood pressure briefly responded at 1000 hours to reach ¹⁰⁰/₇₀. Thereafter it returned gradually to its previous low levels.

7. **RN Jones notices Mr Gripton's deterioration**

- 7.1. RN Jones gave evidence that she returned to the hospital for a shift starting at 1600 hours¹⁴. She said that there were only two patients on the ward¹⁵, one of whom was Mr Gripton. At the commencement of her shift she had to spend some time with a staff member whom she was mentoring. She had not been told that there was anything requiring urgent attention regarding Mr Gripton so it was not until approximately 1630 hours that RN Jones became aware of Mr Gripton's then condition. She said that as soon as she saw him she was concerned and:

'... went into panic mode, trying to keep calm and gave him oxygen, it was just awful.'¹⁶

RN Jones was particularly concerned because of Mr Gripton's very poor oxygen saturation levels. Those levels had been recorded as 74% at 1400 hours and 76% at

¹² Transcript, page 254

¹³ Transcript, page 169

¹⁴ Transcript, page 73

¹⁵ Transcript, page 75

¹⁶ Transcript, page 76

1600 hours by RN Pengilly. These levels are, according to all the evidence, extremely low and represent an emergency. RN Pengilly gave evidence that she was concerned as to whether the machines were giving an accurate indication of Mr Gripton's true oxygen saturations because he did not appear as unwell as she would have expected at those readings¹⁷. RN Pengilly was relatively inexperienced at that time. She said that in retrospect she believed that she should have contacted a doctor when she noted the first low saturation of 74% at 1400 hours¹⁸.

7.2. RN Jones made contact with the on-call doctor, Dr van der Linden-Dhont.

8. Dr van der Linden-Dhont attends the hospital

8.1. Dr van der Linden-Dhont said that he saw Mr Gripton at around 1730 to 1745 hours that afternoon¹⁹. He said that at that time Mr Gripton was still able to talk to him in groups of words rather than in individual words²⁰. At a very early point he decided that it was necessary to send Mr Gripton to Adelaide. He changed the antibiotic cephalothin to benzyl penicillin and rulide. He said that benzyl penicillin is the antibiotic of choice for a lobar pneumonia which is what he thought Mr Gripton had, and that rulide covers an alternate group of infective agents as a potential backup²¹. Having made that assessment and putting in place the necessary orders for Mr Gripton to be transferred to Adelaide, Dr van der Linden-Dhont left the hospital²². He was called back to the hospital when Mr Gripton's condition deteriorated again. On returning to the hospital Dr van der Linden-Dhont prepared a letter of transfer for the Royal Adelaide Hospital. He also prescribed Lasix for pulmonary oedema. When Mr Gripton deteriorated further at a later point in the evening, Dr van der Linden-Dhont intubated and ventilated him²³.

8.2. As I have noted, Dr van der Linden-Dhont arranged for Mr Gripton to be transferred to Adelaide by the Royal Flying Doctor Service. In view of Mr Gripton's further deterioration, this arrangement was changed and the Royal Adelaide Hospital agreed that Mr Gripton would be retrieved by helicopter with an intensive care doctor and paramedic available on that flight. The retrieval team arrived shortly after 2300 hours

¹⁷ Transcript, pages 19-20

¹⁸ Transcript, page 49

¹⁹ Transcript, page 258

²⁰ Transcript, page 259

²¹ Transcript, page 260

²² Transcript, page 261

²³ Transcript, page 263

and Mr Gripton arrived at the Royal Adelaide Hospital at 0045 hours on 13 May 2008. On arrival at the Royal Adelaide Hospital he was found to be in overwhelming sepsis, he had renal failure, hepatic failure and was suffering refractory shock and had high oxygen requirements. He was immediately placed on dialysis and received aggressive support, but that morning became hypertensive and bradycardic. CPR was commenced but Mr Gripton could not be saved and died at 0941 hours in the Royal Adelaide Hospital.

9. Dr Joyner - expert evidence

- 9.1. Dr Peter Joyner was requested by counsel assisting me to provide an expert report²⁴.
- 9.2. Dr Joyner was of the opinion that the blood test results at 2130 hours on 11 May 2008 led him to the conclusion that Mr Gripton had become ill with pneumonia and was showing signs of multi organ involvement, moving him into a category of patients of significant concern²⁵. Dr Joyner was concerned that when Dr Steyn was contacted at 0230 hours the following morning with concerns about Mr Gripton's hypotension, he did not initiate any further reassessment, re-examination or intervention.
- 9.3. Dr Joyner expressed the opinion that the last possible time that Mr Gripton's life may have been saved would have been by urgent intervention on the morning of 12 May 2008 by way of transfer to the Royal Adelaide Hospital for intensive assessment and treatment²⁶.
- 9.4. Dr Joyner was also concerned about the lack of communication by Dr Steyn as to his expectations with regard to the outcome of the fluid test. Dr Joyner suggested that it would have been appropriate in what he described as an 'ideal world' for Dr Steyn to have given the written direction for an increase to 400ml per hour and to notify him in two hours if there was no renal output.
- 9.5. Dr Joyner summarised the clinical deterioration of Mr Gripton as follows:
 - 'A. That is an interpretation you could place on the sequence of events, going from being mildly unwell, more progressively unwell, and then suddenly deteriorating very markedly, and then dying very soon with multi organ failure, is a lot more consistent with there being an aggressive infective process, which may have been difficult to deal with, whatever had been provided.

²⁴ Exhibit C16a

²⁵ Exhibit C16a

²⁶ Exhibit C16a

Q. The chances of survival at whatever stage might not have been great.

A. Correct.'²⁷

10. Should Dr Steyn have acted differently?

10.1. There is a question as to when Mr Gripton's deterioration should have been recognised and acted upon. Ideally, that would have occurred at 0230 hours on 12 May 2008 when a picture of renal and liver dysfunction had been obtained from the blood results from the IMVS and when a picture was emerging of a drop in blood pressure and further deterioration. Ideally at that point a decision would have been made that Mr Gripton should be transferred to the Royal Adelaide Hospital first thing in the morning.

10.2. On the other hand, Mr Gripton was a very stoical patient. There are numerous transcript references to his toughness and stoicism and his tendency to underplay his symptoms. At one point RN Jones stated:

'He was a very remarkable man, because Andy told me that he walked for the x-ray and that was the next day. So he must have had a really strong heart because it's pretty incredible to walk in the condition he was in, with no oxygen. So he was a remarkable man.'²⁸

That description of Mr Gripton fits very well with Dr Steyn's description of their conversation at the bedside on the morning of 12 May 2008. It will be remembered that at that time Dr Steyn informed Mr Gripton that if his urine output was as low as the nursing staff appeared to think it was, it would be necessary for him to be removed from the island. It is reasonable to assume that Mr Gripton downplayed his symptoms at that point also, giving Dr Steyn what the latter described as an unfortunate reassurance, that Mr Gripton was better than he really was.

10.3. Nevertheless, in my opinion, Dr Steyn should have made specific arrangements for the outcome of the fluid challenge to be relayed to another medical practitioner, if not himself. Similarly, it would have been appropriate to have arranged for the outcome of the chest X-ray to be conveyed to himself or another practitioner as soon as it was available.

²⁷ Transcript, page 341

²⁸ Transcript, page 101, See also Transcript, page 77

10.4. Dr Joyner gave evidence of improvements in the Country Health directorate. He said that Mr Gripton's case serves to accentuate the necessity of implementing a system to provide for the recognition and response to clinical deterioration in acute health care. Dr David Rosenthal, Clinical Safety Advisor with Country Health SA, made an affidavit in which he deposed to the creation of a steering group relating to deteriorating patients. He noted that the core members of the group are himself, Dr Joyner, Dr P Chapman, Ms L Olsen and others. The group was formed to standardise practice in identifying the deteriorating patient and then escalating patient care. The role of the group is to look at systems that have been applied in other states and territories, with a view to providing education to all Country Health staff in the use of an early warning score system that would enable early detection of deteriorating patients.

11. Recommendations

11.1. This work is commendable. I recommend that the Department of Health support the continuation of the work of the Deteriorating Patients Steering Group with a view to the implementation of systems for the detection and subsequent management of deteriorating patients²⁹.

²⁹ Exhibit C9a and Transcript, pages 288-290

Key Words: Country Areas - Medical Services

In witness whereof the said Coroner has hereunto set and subscribed his hand and

Seal the 18th day of June, 2012.

State Coroner

Inquest Number 30/2011 (0649/2008)