CORONERS ACT, 2003

SOUTH *AUSTRALIA*

FINDING OF INQUEST

An Inquest taken on behalf of our Sovereign Lady the Queen at Adelaide in the State of South Australia, on the 12th, 13th and 14th days of June 2018 and the 12th day of July 2018, by the Coroner's Court of the said State, constituted of Mark Frederick Johns, State Coroner, into the death of Wayne Brian Mitchell.

The said Court finds that Wayne Brian Mitchell aged 49 years, late of 93 Hill Street, Murray Bridge, South Australia died at Murray Bridge, South Australia on or about the 16th day of November 2015 as a result of ischaemic heart disease with coronary artery thrombosis. The said Court finds that the circumstances of his death were as follows:

1. Introduction and cause of death

1.1. Wayne Mitchell was 49 years of age when he died on or about 16 November 2015. He was found in his home on 19 November 2015 and the condition of his body was consistent with death having occurred some days before. He was last seen on 16 November 2015 and although I cannot be certain, the evidence is strongly suggestive that he died on that day, probably in the evening. An autopsy was carried out by a pathologist from Forensic Science South Australia who gave the cause of death as ischaemic heart disease with coronary artery thrombosis[1], and I so find.

2. Background

2.1. Mr Mitchell had just commenced his shift as a packer at the Big W distribution Centre at Monarto on 16 November 2015 when he experienced chest pain which radiated to his jaw. He was dizzy, clammy and short of breath. A co-worker contacted the first

[1] Exhibit C2a

aid officer, Mr Rumak[2], who then attended the area where Mr Mitchell had been working. Mr Rumak spoke with Mr Mitchell who complained of chest pains and that he felt a bit cold and clammy. After a minute or so Mr Mitchell said that he felt better, but Mr Rumak insisted that an ambulance be called. He took Mr Mitchell to the first aid room. Mr Mitchell insisted on walking to the first aid room and refused an offer of a wheelchair. Shortly after another first aid officer, Ms Fiedler, attended the room and took Mr Mitchell's blood pressure and checked his vital signs. She also called for an ambulance to attend and regularly checked Mr Mitchell until their arrival. She also handed over Mr Mitchell's care to the paramedics when they arrived. Mr Rumak and Ms Fiedler completed a brief report of the episode in the Big W work injury/illness register[3]. Under the heading 'description of illness or injury' they wrote:

> 'Chest pain, jaw pain, pale, clammy, nauseous.'

2.2. Steven Moon was the Operations Manager on duty at the distribution centre that day and he gave evidence at the Inquest. He was in a meeting when he was alerted to the situation in the first aid room. Mr Moon arrived in the room at approximately 10:15am and saw that Mr Mitchell was sitting down and being made comfortable. Mr Moon thought that Mr Mitchell appeared to be alright. Mr Moon said that after the ambulance departed with Mr Mitchell he followed in his own vehicle as part of his duty of care under the policies of Big W. He said that Mr Mitchell seemed to be okay when he got into the ambulance and that the ambulance took him to the Bridge Clinic in Murray Bridge. Mr Moon accompanied him and recalled that Mr Mitchell was on a stretcher with monitoring equipment on his chest. Mr Moon said that he sat with Mr Mitchell while the nurses and a doctor treated him. He said that Mr Mitchell showed the doctor a rash that he had on his chest just above his sternum and on his left arm. Shortly afterwards the doctor told Mr Mitchell that he was cleared to go but that he should have the rest of the day off. At that point Mr Mitchell told Mr Moon that he was feeling fine and that his chest pains had stopped. Mr Mitchell was apparently concerned about the rash on his chest and thought that it may have been a spider bite. The doctor checked Mr Mitchell for any puncture marks, but could find nothing.

2.3. Mr Moon said that when the doctor finished with Mr Mitchell he said that he was cleared to go, but should have the rest of the day off, and that Mr Mitchell also needed

[2] Exhibit C8
[3] Exhibit C8a

to have blood taken for testing. After the blood samples were taken Mr Moon said that they were free to go and he offered to drive Mr Mitchell to his home and then make arrangements to return his car from the carpark at Big W Monarto. Mr Mitchell declined the offer and asked to be driven back to work so that he could drive himself home. In the car on the way back to Big W Mr Mitchell seemed coherent and better. He talked about his dog and his father and Mr Moon asked numerous times about the chest and jaw pain and Mr Mitchell denied having any further symptoms. Mr Mitchell went to his car and drove away having told Mr Moon that he was heading straight home.

2.4. Mr Moon said that Mr Mitchell had mentioned the jaw pain to the doctor, but later conceded under questioning by counsel for Dr Valerio that he may have been mistaken about that, and that Mr Mitchell may instead have communicated that information to someone other than the doctor. In my opinion the Big W staff involved in Mr Mitchell's care that day all acted very appropriately and handled the situation extremely well.

2.5. I next heard from Intensive Care Paramedic, Simon Harvie. He said that he and his partner were dispatched at 1009 hours to Big W at Monarto. They arrived at the patient at 1022 hours and he was sitting up in bed on oxygen and looked comfortable. Mr Harvie received a handover from one of the first aiders who told him that the symptoms had lasted for five minutes before they started to resolve and that pain had radiated to the jaw. Observations taken by the paramedics at 1025 hours were in the normal range. Mr Harvie said that although the symptoms had resolved it was best for Mr Mitchell to see a doctor. Mr Harvie had arranged for an ECG monitor to be attached to Mr Mitchell and the results of that procedure did not show any abnormality. Mr Harvie said that he told Mr Mitchell that it was necessary for bloods to be obtained to see if there was anything abnormal despite the normal ECG. Mr Harvie said that Mr Mitchell was taken to the Bridge Clinic pursuant to an arrangement between the ambulance service, the Murray Bridge Soldiers' Memorial Hospital and the Bridge Clinic dated May 2011[4]. The document details those patients who should be taken to the Murray Bridge Soldiers' Memorial Hospital and those who should be taken to the Bridge Clinic. Because Mr Mitchell's chest pain had resolved at the time of transport by the ambulance service, the document provided that he should be taken not to the hospital but to the Bridge Clinic and that is what occurred[5].

[4] Exhibit C14b
[5] Exhibit C14b, paragraphs 3.2.2 and 3.3

2.6. Mr Harvie said that the ECG printouts were handed over to the Bridge Clinic on arrival and a copy was not retained by the ambulance staff in accordance with their then policy. The South Australian Ambulance Service (SAAS) patient report form that was completed by Mr Harvie for Mr Mitchell[6] contained a note under the heading ‘ECG Analysis’ stating ‘SR'. Mr Harvie said that that meant sinus rhythm and indicated that he did not find any abnormalities at all in the ECG readout.

2.7. At 1055 hours Mr Harvie had taken a second set of observations from Mr Mitchell and they were very similar to the first set of observations. Mr Harvie described them in his evidence as ‘pretty normal’.

2.8. Mr Harvie said that on arrival at Bridge Clinic they were met by a female nurse to whom he handed over the events as set out in the patient report form. He could not recall handing over to the doctor, but acknowledged that this may have occurred. He did draw the ECG printout to the attention of the nurse. Mr Harvie explained that the SAAS practice at that time was that they did not do a second printout of the ECG result. That practice has now changed and SAAS does retain a copy for its records. That new process is reflected in a document entitled ‘Completion and management of clinical records’[7]. Again there was some uncertainty about the subject of the jaw pain. Mr Harvie first said that he would have handed over to the doctor the information concerning the jaw pain because it was pertinent, but later acknowledged in cross-examination that he had no specific recollection of passing that information to the doctor and it was possible that he did not. However, he did include that information quite clearly in the SAAS patient report form. Mr Harvie said that he was very surprised when he learnt of Mr Mitchell’s death:

> 'Because there's always the potential that it's something that's lasted for a short period of time which - and with chest pain even though it was showing the classic signs of a heart attack there's multiple other reasons for having chest pain and because that had passed and not come back or got worse reduced the likelihood, in my mind, that it was anything significant and he was looking quite well and happy. We - I felt like I had a good rapport with him and had a good chat on the way. Being out at Monarto spent sort of more time than what you would spend with patients just in the Murray Bridge area so yeah, it was surprising with how he presented that - when I learnt that he passed that that outcome had happened.' [8]

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[6] Exhibit C14a
[7] Exhibit C14c, paragraph 3.3.4
[8] Transcript, page 85

3. The evidence of Dr Valerio

3.1. Dr Valerio obtained his primary medical qualification in the Dominican Republic in 2004. Subsequent to that he completed a three year program in the United States of America called Family Medicine Residency. He obtained registration with the Medical Board of Australia in 2014 and commenced work at the Bridge Clinic in early September 2014. He was initially given limited registration which meant that he had to practice under the supervision of the partners at the Bridge Clinic.

3.2. At the outset of his evidence Dr Valerio said that he wanted to take the opportunity in open court to apologise to Mr Mitchell and his family and he said that he recognised that his management of Mr Mitchell was not at the standard that he would expect of a medical practitioner and '*undoubtedly a better management would have most likely resulted in Mr Mitchell's survival*'[9].

3.3. Dr Valerio made notes of his consultation with Mr Mitchell as follows:

> 'Sudden epigastric pain today whilst lifting some heavy boxes at work. Radiated to the neck. He felt dizzy, faint, white and SOB[10]. The episode resolved before the ambos got there and no treatment was given. Tobacco for 34 years, daily drinker and coffee drinker.
> BP per ambos
> low risk for MI
> ECG - nil sinus rhythm
> Bloods, trops and follow up as OP' [11]

Dr Valerio said that when he saw Mr Mitchell the latter was sitting and had a Woolworths person with him. Dr Valerio spoke to an ambulance officer and received a handover but he could not recall when giving evidence what he was told. He was referred to his notes[12] which commenced at 11:13am. He said that the information about tobacco smoking, drinking and coffee consumption was obtained from Mr Mitchell and all other information came from the ambulance officers. He said that Mr Mitchell looked well and was not in pain. Indeed, Mr Mitchell wanted to return to work. Dr Valerio said that he suggested Mr Mitchell take the day off but that he would need to return to that Dr Valerio could '*work on his lifestyle choices*' by which he was referring to his smoking and drinking[13]. He said that he thought that Mr Mitchell was

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[9] Transcript, page 100
[10] Short of breath
[11] Exhibit C7
[12] Exhibit C7
[13] Transcript, page 110

low risk for myocardial infarction and acknowledged that his assessment in this respect was wrong in hindsight. He noted the normal sinus rhythm as a result of his examination of the ambulance officer's ECG trace and formed the view that it was normal. He did not do his own ECG. The bloods he ordered were so he could follow up Mr Mitchell as an outpatient to deal with his lifestyle choices, as Dr Valerio described them. The troponins he said he added for completeness.

3.4. In his evidence Dr Valerio acknowledged that his notes were very incomplete in that a lot of history is missing from what would be considered to be standard history taking[14]. He said that he examined Mr Mitchell's chest using a stethoscope and that there were no abnormal heart sounds. He also listened to Mr Mitchell's lungs, also with the stethoscope, and said that the lungs were clear. He acknowledged that he failed to record the fact of, and the result of, these examinations and acknowledged that this was another deficiency in his note taking[15]. He looked at the observations that had been taken by the nurse at the clinic on Mr Mitchell's arrival[16] and apart from a slightly elevated blood pressure noted nothing abnormal. He said that the ambulance ECG was enough to satisfy him that Mr Mitchell was not having a cardiac event.

3.5. Dr Valerio acknowledged that he did not arrive at a diagnosis and did not note a diagnosis. He only described Mr Mitchell's symptom, namely relieved chest pain. He acknowledged that he should have had a working diagnosis.

3.6. Dr Valerio said that because Mr Mitchell was not to be admitted to hospital and was to be released home the clinic did not retain the ECG trace that had been taken by the paramedics, nor did the clinic retain the SAAS patient report form. This was in accordance with the then practice of the Bridge Clinic. That practice has been amended since this episode and the clinic now retains both categories of the document which in my opinion is most appropriate.

4. <u>The troponin results</u>

4.1. At 3:31pm Dr Valerio received a telephone call from SA Pathology to advise him of Mr Mitchell's troponin result which was 45ng/L. Dr Valerio gave evidence that his understanding of the significance of that result at the time was wrong. His

[14] Transcript, page 112
[15] Transcript, page 113
[16] Exhibit C7a

understanding was based on a misconception of a standard notation appearing at the foot of the SA Pathology report which states that:

> 'Troponin T 30-100ng/L may indicate myocardial damage. In a patient with suspected acute coronary syndrome, recommend repeat testing in 4-6 hours. A significant change in troponin level is suggestive of acute myocardial infarction.'

His interpretation of that note was that if a patient had a reading in the range of 30-100ng/L, but Dr Valerio did not suspect acute coronary syndrome, there was no need for further action. It was only if the troponin levels were in that range and he did suspect acute coronary syndrome that he needed to admit the patient for further action. Also, if he did not suspect acute coronary syndrome but the reading was greater than 100ng/L then he had to admit the patient for further action. He acknowledged in his evidence that his understanding was wrong[17]. Accordingly, Dr Valerio took no further action in relation to that result.

5. <u>Expert overview - Dr William Heddle</u>

5.1. An expert report was obtained for the Court's assistance from Dr William Heddle, Cardiologist[18]. Dr Heddle noted the post-mortem report and said that the significant finding in his opinion was the apparent atherematous haemorrhage within the left main stem becoming occlusive with thrombus extending into the proximal portion of left anterior descending coronary artery. He noted that the histology showed pulmonary autolysis with extensive left ventricular fibrosis and this was confirmed especially in the posterior wall consistent with some past coronary artery events. This would be in territory other than the left anterior descending most probably the right coronary artery with the autopsy showing at least moderate atheroma in the right coronary artery. Dr Heddle made the following observations:

> 'In response to the specific questions:
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> (1) **Appropriateness or otherwise of the GP not applying the chest pain protocol because Mr Mitchell's chest pain had resolved**. The chest pain protocol does need to be applied whether or not chest pain has resolved and the existence of cardiovascular risk factors, in particular, hyperlipidaemia and cigarette smoking and the presence of multiple other symptoms with the chest discomfort, specifically the nausea, sweating and shortness of breath, with the patient being pale and clammy immediately raises suspicion of a serious disorder, such as myocardial infarction.

[17] Transcript, pages 121-122
[18] Exhibit C22

(2) **During raised Troponins and other risk factors should an ECG be undertaken and also should Mr Mitchell have been referred to hospital?** Unequivocally a repeat ECG should have been done and the patient should have had at minimum repeat ECG and Troponins within six hours after referral to the local hospital or if there had been any ECG changes and if the elevated Troponin on the first test had been noted, referral to the ICCNet would have been the next appropriate move, as the deceased almost certainly would have required urgent if not emergency retrieval to a major hospital where emergency or urgent coronary angiography could be undertaken depending upon whether an ST elevation or non ST elevation myocardial infarction.

(3) **What is the likely outcome that Mr Mitchell's death could have been prevented?** There is a strong possibility that if the patient had been kept in hospital, had repeat ECGs and Troponins done, or if the ICCNet had been notified because of the chest pain and elevated Troponin, the patient may have survived. Left main coronary artery occlusion and myocardial infarct carries a high mortality but if it is recognised early with appropriate action undertaken, there is a reasonable chance of survival.' [19]

6. Dr Valerio’s involvement with AHPRA

6.1. Following Mr Mitchell’s death a referral was made to the Australian Health Practitioner Regulation Agency. Following that referral Dr Valerio gave two sets of undertakings to AHPRA in June 2016 and March 2017 to undertake remedial education[20]. Dr Valerio had face to face meetings with Associate Professor Young for the purposes of a one-on-one education program. A/Professor Young noted the identification of required reading to be undertaken by Dr Valerio and subsequent discussions in relation to that material. A/Professor Young also met Dr Valerio for a session in relation to evaluating and interpreting a series of ECGs relevant to patients presenting with chest pain[21]. A/Prof Young summarised his assessment of Dr Valerio by saying that he felt that the education program had addressed the issues that may have been relevant to the case of Mr Mitchell and had been a useful learning exercise for Dr Valerio. In addition to the work with A/Professor Young, Dr Valerio attended three specific CPD sessions and workshops directly concerning cardiac issues[22].

6.2. In December 2017 AHPRA advised Dr Valerio that it would revoke the undertaking which required him to be under supervision and to undergo education and he now holds a full and unrestricted registration with the Medical Board.

[19] Exhibit C22, page 2
[20] Exhibits C9a and C18
[21] Exhibit C11
[22] Exhibit C19

6.3. It has been submitted on behalf of Dr Valerio by his counsel that Dr Valerio is a better and more skilful practitioner than he was in November 2015. Whether that is so is a matter that can only be judged in the light of future events. However, in view of the actions taken by AHPRA and Dr Valerio's compliance with that agency's requirements, I make no recommendations in this matter.

7. Conclusion

7.1. Dr Valerio failed to follow the chest pain protocol and should have acted on the troponin result as soon as it was communicated to him. I have no hesitation in accepting Dr Heddle's evidence that had he done so there is a strong possibility that Mr Mitchell may have survived.

Key Words: Medical Treatment; Country Areas - Medical Services; AHPRA

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

Seal the 12th day of July, 2018.

State Coroner

Inquest Number 21/2018 (2103/2015)