CORONER'S COURT
OF NEW SOUTH WALES

Inquest:	Inquest into the death of Maluovailoa Tafau
Hearing dates:	22, 23 & 25 August 2022
Date of Findings:	14 October 2022
Place of Findings:	Coroner's Court of New South Wales, Lidcombe
Findings of:	Magistrate Derek Lee, Deputy State Coroner
Catchwords:	CORONIAL LAW – cause and manner of death, Patient Self-Referral Form, patient self-referral for health assessment, infective endocarditis, rheumatic heart disease, access to adolescent health records
File number:	2017/142803
Representation:	Mr H Chiu, Counsel Assisting, instructed by Ms B Clark (Crown Solicitor's Office) Mr J Harris for Justice Health & Forensic Mental Health Network, instructed by M B Ferguson (Hicksons Lawyers) Mr C Wozniak (Smythe Wozniak Legal) for the family of Maluovailoa Tafau

Findings:

Maluovailoa Tafau died on 9 May 2017 at Blacktown Hospital, Blacktown NSW 2148.

The cause of Maluovailoa's death was cardiac arrest due to complications of infective endocarditis against a background of rheumatic heart disease.

Maluovailoa died of natural causes whilst on remand in lawful custody. Approximately two months before Maluovailoa was transferred to hospital there was a missed opportunity to investigate symptoms that he had previously reported. Such investigation may have confirmed a diagnosis of infective endocarditis, resulting in the institution of earlier treatment which likely would have altered the eventual clinical course.

Recommendation:

To the Chief Executive, Justice Health & Forensic Mental Health Network:

I recommend that consideration be given to whether adolescent health records of adult patients in custody should be made more readily accessible to treating clinicians and, if so, how such access can be facilitated.

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1. Introduction

1.1 Maluovailoa (or Malu as he was known to his family and friends) Tafau was a 20-year-old young man who entered lawful custody at a correctional centre on 17 December 2015. In September 2016 and January 2017 Malu completed a form identifying that he had a heart murmur, sharp chest pain, a fever and that his condition was worsening. By completing these forms Malu was, in essence, referring himself for a medical consultation. However, no consultations ever took place.

1.2 On 26 April 2017, Malu appeared so unwell that arrangements were made to convey him to hospital by ambulance. Malu was subsequently admitted to hospital and over the next 12 days his presenting condition was managed, and further medical investigations were conducted.

1.3 In the early hours the morning on 9 May 2017, Malu suffered an unwitnessed fall whilst using the bathroom. He was helped to a wheelchair but suddenly became unresponsive. Malu was noted to be in the cardiac arrest and resuscitation efforts were commenced. Despite these efforts, Malu could not be revived and was tragically pronounced deceased a short time later.

2. Why was an inquest held?

2.1 Under the *Coroners Act 2009* (**the Act**) a Coroner has the responsibility to investigate all reportable deaths. This investigation is conducted primarily so that a Coroner can answer questions that are required to answer pursuant to the Act, namely: the identity of the person who died, when and where they died, and what was the cause and the manner of that person's death.

2.2 When a person is charged with an alleged criminal offence, or sentenced after being convicted of a criminal offence, they can be detained in lawful custody. By depriving that person of their liberty, the State assumes responsibility for the care of that person. Section 23 of the Act makes an inquest mandatory in cases where a person dies whilst in lawful custody. In such cases the community has an expectation that the death will be properly and independently investigated.

2.3 A coronial investigation and inquest seeks to examine the circumstances surrounding that person's death in order to ensure, via an independent and transparent inquiry, that the State discharges its responsibility appropriately and adequately. This type of examination typically involves consideration of, where relevant, the conduct of staff from Corrective Services New South Wales (**CSNSW**) and Justice Health & Forensic Mental Health Network (**Justice Health**).

2.4 In this context it should be recognised at the outset that the operation of the Act, and the coronial process in general, represents an intrusion by the State into what is usually one of the most traumatic events in the lives of family members who have lost a loved one. At such times, it is reasonably expected that families will want to grieve and attempt to cope with their enormous loss in private. That grieving and loss does not diminish significantly over time. Therefore, it should be acknowledged that the coronial process and an inquest by their very nature unfortunately compels a family to re-live distressing memories several years after the trauma experienced as a result of a death, and to do so in a public forum. This is an entirely uncommon, and usually foreign, experience for families who have lost a loved one.

2.5 It should also be recognised that for deaths which result in an inquest being held, the coronial process is often a lengthy one. The impact that such a process has on family members who have many unanswered questions regarding the circumstances in which a loved one has died cannot be overstated.

3. Malu's personal background

3.1 Inquests and the coronial process are as much about life as they are about death. A coronial system exists because we, as a community, recognise the fragility of human life and value enormously the preciousness of it. Understanding the impact that the death of a person has had on those closest to that person only comes from knowing something of that person's life. Therefore, it is important to recognise and acknowledge the life of that person in a brief, but hopefully meaningful, way.

3.2 Unfortunately, very little is known about Malu's life. He was born in Samoa on 9 March 1997 and later migrated with his parents to Australia when he was a child.

3.3 By all accounts, Malu was raised in a loving home. The death of his mother at a relatively young age from a heart attack in November 2012 no doubt had a profound impact on Malu and his siblings.

3.4 At the end of the evidence in the inquest, two of Malu's sisters shared some heartfelt words describing the enormous loss that Malu's family have experienced from his untimely and unexpected passing at such a young age. They spoke of the distress in seeing Malu visibly deteriorate and no longer physically resembled the brother that they knew before he entered custody.

3.5 There is no doubt that Malu is deeply missed by his family and loved ones. It is distressing to know that the latter stages of Malu's life did not in any way reflect who he was as a young man, son, brother and friend.

4. Malu's medical and personal history

4.1 Malu reportedly commenced smoking cannabis at the age of 12. In November 2012, Malu's mother died from a heart attack when she was only 40 years old. Following this, Malu reportedly started smoking crystal methamphetamine, and would smoke it three or four days per week between 2015 and 2016. Malu also commenced drinking alcohol at the age of 15.

4.2 Malu completed high school up to Year 11 when he was suspended for truancy and fighting. He later found work as a labourer in the construction industry.

4.3 In 2013, Malu was diagnosed with a significant heart murmur whilst in custody at Cobham Juvenile Detention Centre. On 31 July 2013, Malu was seen by Dr Paul Thomas who referred him for a cardiology assessment. Notes from this consultation indicate that Malu had a pan systolic murmur but was asymptomatic, and that the cardiology assessment was focused in particular on the mitral valve.

4.4 Malu was booked for an echocardiogram on 8 November 2013. However, he was subsequently released from detention on 20 October 2013. Upon release, details of the echocardiogram

appointment and appropriate referrals were given to Malu. Despite this, there is no evidence that Malu ever attended the appointment.

5. Malu's custodial history

5.1 As noted above, Malu's first interaction with the criminal justice system occurred in 2013. On 16 December 2015, Malu was charged with a number of alleged robbery offences. He was refused bail and received into CSNSW custody on 17 December 2015.

5.2 Malu was initially housed at the Metropolitan Remand and Reception Centre (**MRRC**). An initial screening assessment noted no current health issues or conditions and Malu was found to be suitable for "*normal*" cell placement.

5.3 On 4 January 2016, Malu was transferred to Long Bay Hospital. An initial screening form noted no health issues. On 22 February 2016, Malu was reviewed by a drug and alcohol nurse. He reported drinking alcohol daily prior to entering custody but made no reference to any illicit drug use. Malu was subsequently referred for drug and alcohol counselling.

5.4 On 14 April 2016, Malu was transferred to Goulburn Correctional Centre. On 15 September 2016, Malu completed a Patient Self-Referral Form (**PSRF**) in which he wrote:

> I'm currently suffering from a heart murmer [sic] and I get sharp chest pain in a daily baises [sic], I'm feeling very concerned about this matter. If I could be seen as soon as possible, it'll be much appreciated, thank you.

5.5 A notation on the PSRF indicated that Malu was called three times to attend the Health Centre but did not do so.

5.6 On 30 January 2017, Malu was transferred to Parklea Correctional Centre (**Parklea CC**). On 6 February 2017, Malu completed a second PSRF in which he wrote the following:

> Iv [sic] had a fever for nearly a month now and I keep getting worse and worse and my temperature keeps rising and make [sic] me feel drowsy and weak. Iv [sic] lost nearly 10 kilos of weigh because of off it [sic]. Thank you.

5.7 A notation on this PSRF indicated that Malu was unable to be located on the Justice Health Patient Administration System (**PAS**), an electronic system used for the management of inmate patients and, relevantly, to make bookings for such patients to be seen by a medical officer and other clinicians.

6. Transfer to Hospital

6.1 At about 11:50am on 26 April 2017, Malu was taken to the Parklea CC Health Centre after CSNSW staff observed him to appear unwell. Malu reported that he had been taking medication prescribed to other inmate patients to help him sleep, and had been smoking buprenorphine for a few weeks. He also reported having been diagnosed with a heart murmur when he was 16 years old.

6.2 Justice Health staff noted that Malu was pale and dry with bilateral pitting oedema to his lower limbs. His temperature was recorded to be 37.9°C and he was found to be tachycardic with a heart rate of more than 120 beats per minute (**bpm**). An electrocardiogram (**ECG**) identified abnormal findings.

6.3 An ambulance was called and Malu was transferred to the emergency department at Blacktown Hospital, arriving at 1:48pm. On assessment, Malu was found to have central chest pain with associated palpitations and dyspnoea, with lower limb oedema bilaterally. Otherwise, Malu showed no signs of a fever and his blood pressure and oxygen saturation were within normal limits. However, a bedside echocardiogram identified a vegetative lesion over the mitral valve.

6.4 An initial diagnosis of infective endocarditis was made and Malu was commenced on intravenous antibiotics, including flucloxacillin, benzypenicillin and gentamicin. A chest x-ray revealed that Malu's heart appeared enlarged, and a battery of tests were ordered.

6.5 Malu was later emitted to the cardiology ward at around 4:00pm. There he was assessed by Dr Dechaboon Changsirisirivathanathamrong (Dr Bernie Changsiri) who diagnosed Malu with sepsis and infective endocarditis.

6.6 At around 12:16am on 27 April 2017, Malu was reviewed by Dr Sasha Morris after he complained of epigastric abdominal pain. Dr Morris prescribed paracetamol and ordered a further ECG. No significant findings were identified and it appears that Malu's pain resolved following administration of paracetamol. Subsequent observations noted that Malu was stable and alert, and empirical antibiotics for infective endocarditis were continued.

6.7 On 28 April 2017, Malu's blood test results were positive for Streptococcus Sanguinis. Following a consult from the infectious diseases team, flucloxacillin was ceased but benzypenicillin and gentamicin were continued. Observations throughout the remainder of the day noted that Malu was afebrile and stable, with no complaints of shortness of breath or discomfort.

6.8 At around 3:21am on 29 April 2017, Malu's heart rate was noted to be 130 bpm when he mobilised to the bathroom. He reportedly expressed some anger because he was unable to sleep and had been given paracetamol for his fever.

6.9 On 29 April 2017, a transthoracic echocardiogram was conducted which revealed the following:

(a) Severely dilated left atrium;

(b) Evidence of flow reversal confirming presence of severe mitral regurgitation;

(c) Perforation of the anterior mitral valve leaflets with a severe posteriorly directed regurgitant jet; and

(d) Thickened mitral valve leaflets with a number of vegetations attached to the anterior leaflet of the mitral valve.

6.10 Dr Changsiri requested a cardiothoracic review from Westmead Hospital and ordered a trans-oesophageal echocardiogram (**TOE**).

6.11 On the morning of 1 May 2017, Malu was noted to be afebrile and stable after having found to be febrile and tachycardic overnight. He was reviewed by Dr Changsiri shortly before midday and informed of his infective endocarditis. Treatment with possible surgery was discussed and a plan was formulated to obtain a cardiothoracic consult regarding valve replacement. In addition, and infectious diseases review noted that Malu was suffering from mitral valve strip endocarditis and that the existing antibiotic treatment was continued.

6.12 On 2 May 2017, the TOE was performed which revealed the following findings :

(a) a very large, elongated vegetation over the anterior mitral valve leaflets;

(b) severe mitral regurgitation; and

(c) evidence of moderate pulmonary hypertension.

6.13 Dr Changsiri later discussed the TOE results with a cardiothoracic registrar from Westmead Hospital. A brain, chest and abdomen/pelvis CT scan was suggested to look for evidence of embolisation. A head and abdomen CT later that evening found evidence suggestive of a large septic infarct/embolic in the spleen.

6.14 On 3 May 2017, arrangements were made for Malu to undergo mitral valve replacement at Westmead Hospital on 10 May 2017. A coronary artery bypass graft workup was also ordered.

6.15 In the early hours of the morning on 6 May 2017, Malu complained of shortness of breath. His vital signs were noted to be within normal limits and whilst he was also noted to be tachycardic, there was no significant change from previous heart rate measurements.

6.16 On 7 May 2017, Malu's vital signs were again found to be within normal limits and he reported no discomfort. However, later in the evening, Malu complained of chest pain on his left side. An ECG showed a sinus tachycardia and Malu was given paracetamol. He later reported that the pain had subsided and reported no other discomfort.

6.17 On 8 May 2017, Malu again complained of pain on the left side of his chest, which later subsided. He also complained of shortness of breath and that he had a productive dry cough overnight. Later that evening, Malu's vital signs were found to be within normal limits. However, he was expressing concerns regarding the forthcoming heart valve replacement surgery and appeared to be "*quite anxious*". At around 10:00pm, Malu was noted to be sitting up in bed, breathing somewhat heavily and swaying before he collapsed to the ground. Nursing assistance was sought and Malu was returned to his bed. Following the attendance of a doctor, Malu was given some medication for anxiety and noted to be tachycardic (although he had been persistently tachycardic during his admission) with his vital signs still within normal limits. At around 10:30pm, Malu appeared to settle after being offered paracetamol and temazepam, the latter of which was administered at 11:01pm.

6.18 At around 12:15am on 9 May 2017, Malu asked to use the toilet, which was about 4 metres from his bed. He was observed to be sweating at the time. After being in the toilet for several minutes, a CSNSW officer heard a vomiting sound from within. The door was opened and Malu was checked on. He indicated that he was alright and the door was closed again. A short time later, the CSNSW officer heard the toilet door open and the sound of a thump.

6.19 Malu was found lying on the ground, sweating profusely and attempting to get up. However, he was unable to do so and fell back down on his side, mumbling loudly in distress. The nursing call button was activated and when nursing staff members arrived a short time later, Malu was found sitting on the floor looking pale, and unable to stand up. Two CSNSW officers attempted to assist Malu to his feet but he was unable to stand on his own. He was helped to a wheelchair and moved back into his bed.

6.20 However, in the process of doing so, Malu went limp and became unresponsive. He was also observed to stop breathing for a short period of time before then breathing rapidly in short breaths. Nursing staff activated a call to the Medical Emergency Team (**MET**), administered oxygen and assessed Malu's vital signs. The MET arrived a short time later and found Malu to be initially combative, removing his oxygen mask and not cooperating with staff. He was also found to be initially sinus tachycardic before later becoming bradycardic. Malu subsequently became unresponsive, with no spontaneous breathing and no palpable pulse. Cardiac arrest was confirmed at 12:25am and cardiopulmonary resuscitation (**CPR**) efforts were initiated. Multiple rounds of CPR were performed with adrenaline also being administered. These efforts continued for over an hour with no reversible cause for the cardiac arrest identified. Following consultation with the on-call cardiologist, a decision was made to cease CPR at 1:35am and Malu was tragically pronounced deceased.

6.21 At 4:45pm on 9 May 2017, Dr Changsiri made a progress note entry in which he recorded that Malu likely had a sudden disintegration of "*an already damaged mitral valve precipitating acute cardiac decompensation and possible neurological decompensation from infective valve embolisation*".

7. The postmortem examination

7.1 Malu was later taken to the Department of Forensic Medicine where a postmortem examination was performed by Dr Elsie Burger, forensic pathologist, on 15 May 2017. That examination identified the following relevant findings:

(a) Features of infective endocarditis with large vegetations on the mitral valve and in the left atrium of the heart.

(b) Microscopic evaluation of the mitral valve showed features suggestive of underlying rheumatic valvular disease.

(c) A septic embolus, most probably from one of the vegetations, in the left anterior descending coronary artery.

(d) A markedly enlarged heart with signs of acute inflammation in the interstitium with various small foci of early necrosis or fibrosis.

(e) Escherichia coli, Rahnella aquatilis and Enterococcus gallinarum were cultured from blood culture specimens, with all three organisms associated with infection in humans.

7.2 Dr Burger ultimately opined that the cause of Malu's death was complications of infective endocarditis on a background of rheumatic valve disease.

8. What issues did the inquest examine?

8.1 Prior to the commencement of the inquest a list of issues was circulated amongst the sufficiently interested parties, identifying the scope of the inquest and the issues to be considered. That list identified the following issues:

(1) The mechanism of Malu's death, including the significance of the septic embolus found at autopsy.

(2) The timing of Malu's planned cardiac bypass surgery, on 10 May 2017, to replace his mitral valve.

(3) Whether any cardiac deterioration, either from an embolus or from mitral valve rupture, was detectable in the hours or days prior to Malu's death.

(4) The adequacy of the policies and procedures for continuity of care between Justice Health and subsequent medical service providers when detainees are released from custody.

(5) The adequacy and appropriateness of Justice Health's response to Malu's Patient Self-Referral Forms of 15 September 2016 and 6 February 2017.

(6) The adequacy and appropriateness of Justice Health's systems and procedures for assessing and responding to inmates with underlying health conditions and/or inmate self-referral forms, as at September 2016 and February 2017.

(7) The adequacy and appropriateness of Justice Health's current systems and procedures for assessing and responding to inmates with underlying health conditions and/or inmate self-referral forms, including the implementation of any changes since February 2017.

8.2 Each of the above issues is discussed in detail below, and it will be convenient to consider some of the issues together and in chronological order.

8.3 In order to assist with consideration of some of the above issues, an independent expert opinion was sought from Associate Professor Mark Adams, consultant cardiologist and Head of Cardiology, Royal Prince Alfred Hospital.

9. What was the cause of Malu's death?

9.1 Associate Professor Adams considered it very likely that Malu had suffered from rheumatic fever during childhood or his early teenage years. As a consequence he later developed rheumatic heart disease. Associate Professor Adams considered it most likely that Malu suffered his acute infection with Group A streptococcus during his childhood in Samoa. Further, Malu had almost certainly developed rheumatic heart disease by the time he was 16 years old when he was noted to have a heart murmur whilst in juvenile detention.

9.2 One of the later sequalae of rheumatic heart disease, apart from valve dysfunction (which occurs once the acute phase of rheumatic fever resolves), is the increased risk of developing infective endocarditis. This is a condition where there is infection on cardiac valves or other cardiac tissue. The symptoms of infective endocarditis are often non-specific and that can be difficult to diagnose early.

9.3 However, Associate Professor Adams described Malu as having fairly classic symptoms and signs of infective endocarditis with 10 kg of weight loss, fevers and lethargy, signs of a loud heart murmur, race temperature and the peripheral oedema being present. The diagnosis was confirmed with blood cultures growing strep sanguinis and a TOE confirming the presence of a larger vegetation on the mitral valve.

9.4 The evidence disclosed three possibilities as to the cause of Malu's heart failure resulting in his collapse in the early hours of the morning on 9 May 2017:

(a) Dr Changsiri considered that the mechanism of cardiac failure was likely to have been sudden catastrophic mitral valve rupture. Associate Professor Adams considered that it would be reasonable to assume that Malu's collapse was due to sudden valve rupture as this is the more common cause of deterioration in Malu's clinical setting. However, Associate Professor Adams noted that no clear catastrophic valve event was identified at autopsy, and instead a clearly new embolic event in the coronary arteries was identified.

(b) In one of his reports, Associate Professor Adams described one of the ways that Malu could have developed heart failure. Associate Professor Adams opined that Malu likely suffered a myocardial infarction due to an embolus to his heart, which was confirmed at autopsy with an embolus found in the left anterior descending (**LAD**) coronary artery. Associate Professor Adams noted that this was not present when a coronary angiogram had been performed on 4 May 2017.

(c) Associate Professor Adams also considered an embolus could have formed from the vegetation, travel to and settled in the LAD coronary artery. However, even if LAD obstruction did not occur, the embolus would most likely have reduced blood flow, leading to ischaemia in the heart and triggering decompensation in a patient with decompensated heart failure.

9.5 Associate Professor Adams considered the clear temporal relationship between the LAD embolus not being present at angiography on 4 May 2017 but being present at autopsy to be the most significant finding. However, Associate Professor Adams was ultimately unable to express a

definitive opinion as to which of the two ways that Malu could have developed heart failure, as described above, is more likely.

9.6 Notwithstanding, Associate Professor Adams considered that Malu's collapse on 9 May 2017 was not detectable in the hours or days prior. Associate Professor Adams described this as an acute deterioration with a low chance of recovery once it occurred. This is particularly the case in a hospital, like Blacktown Hospital, without on-site cardiothoracic surgery and without the ability to provide advance support with extracorporeal membrane oxygenation circuits.

9.7 **Conclusions:** The available evidence does not establish the exact mechanism that caused heart failure resulting in Malu's cardiac arrest in the early hours of the morning on 9 May 2017. Notwithstanding, there is sufficient evidence, both from the clinical course and the findings at autopsy, to conclude that Malu died following cardiac arrest due to complications of infective endocarditis against a background of rheumatic heart disease. There is no evidence to suggest that Malu's heart failure resulting in his collapse could have been predicted in the hours or days prior to 9 May 2017.

10. Justice Health response to the Patient Self-Referral Form in September 2016

10.1 Malu completed the first PSRF on 15 September 2016 (**2016 PSRF**). It was placed in a locked box in the wing that he was housed. Similar boxes were located in other wings and were used to collect PSRFs completed by inmates. The 2016 PSRF was collected by Registered Nurse (**RN**) Gail Fernandez, a Justice Health primary health care nurse, on 17 September 2016 although she has no specific memory of it. However, RN Fernandez gave evidence that, in accordance with her usual practice, it is likely that she put Malu on the list of inmates to be seen at the Goulburn CC clinic that day. Further, given that the 2016 PSRF identified that Malu was complaining of chest pain, it is likely that he would have received priority to be seen at the clinic.

10.2 RN Fernandez gave evidence as to the usual practice that would be followed in order to request that an inmate attend the clinic. First, a CSNSW officer would call Malu's name over the loudspeaker in the yard on three separate occasions. Second, if there was no response to these calls then contact would be made with the wing where Malu was housed so that the request could be communicated to him directly.

10.3 RN Fernandez wrote the words "Called x 3 D.N.A." on the 2016 PSRF meaning that Malu had been called three times and did not attend the clinic. RN Fernandez gave evidence that she was told by the CSNSW officer who called Malu's name that Malu declined to attend the clinic. However, RN Fernandez could not be certain whether Malu declined to attend, or whether he simply did not attend for some unknown reason. The annotation of "D.N.A." does not distinguish between these two possibilities.

10.4 Notwithstanding, in accordance with usual practice at Goulburn CC at the time, when Malu did not attend the clinic RN Fernandez removed him from a waitlist of patients to be seen.

10.5 Justice Health issued the *Patient Self Referral for Health Assessment in the Adult Ambulatory Care Setting (Non urgent Issues Only)* Policy 1.362 on 18 March 2014 (**2014 PSRF Policy**). It was in force as

at September 2016 and it outlined the arrangements for patients to access a health centre/clinic in a correctional centre for non-urgent health matters. Relevantly, the 2014 PSRF Policy provided that:

(a) completed PSRFs were to be triaged by a RN with patients placed on an appropriate waitlist on PAS and given a clinical priority;

(b) any patient indicating any condition via a PSRF "*that could clinically be a medical emergency (for example (but not limited to) chest pain or short of breath) must be seen immediately (however, this may be the next day if the form was deposited during hours when there are no clinical staff on duty)*"; and

(c) an entry is to be recorded in the progress notes section of the patient's Health Record acknowledging receipt of the PSRF.

10.6 In her statement, RN Fernandez indicated that PAS was "*fairly new*" as at September 2016 and "*it was not the practice at that time to create a PAS entry on receipt of the [PSRF] or record receipt of the [PSRF] in [a patient's] progress note*". It was only usual practice to documents on a PSRF form itself how many times a patient had been called, and whether they did in fact attend before filing the PSRF in the patient's medical record. Further, RN Fernandez gave evidence that as at September 2016 she had not received any training regarding the 2014 PSRF Policy.

10.7 Shaun Connolly, the Justice Health Nurse Manager Operations, agreed in evidence that it was not appropriate for Malu to have been taken off the waitlist in September 2016. Further, Mr Connolly gave evidence that follow-up with Malu should have occurred until he was seen by a clinician. In circumstances where Malu may have refused to be seen, Mr Connolly gave evidence that a pathway could have been followed involving escalation to senior clinicians so that Malu could be reviewed regarding the complaints expressed in the 2016 PSRF.

10.8 **Conclusions:** The Justice Health response to the 2016 PSRF completed by Malu was inadequate as it did not comply with relevant provisions of the 2014 PSRF Policy. Malu should not have been removed from the waitlist to be seen by a clinician. Indeed, as Malu wrote on the 2016 PSRF that he was experiencing sharp chest pain on a daily basis, the 2014 PSRF Policy regarded this as a condition that clinically could be an emergency and required that Malu be seen immediately. In addition, the 2016 PSRF and Malu's non-attendance were not documented in the relevant progress notes, again in breach of the 2014 PSRF Policy.

10.9 The conclusions reached above raise a number of matters for further consideration:

(a) whether the response to the 2016 PSRF represented a missed opportunity for further investigation regarding Malu's presenting complaint which might have led to a potential diagnosis ;

(b) any system or practices regarding the provision of PSRFs by inmates; and

(c) whether any changes have been made since 2016 to the procedures for assessing and responding to inmates with underlying health conditions and/or PSRFs.

Missed opportunity in relation to the 2016 PSRF?

10.10 The 2016 PSRF may have represented a missed opportunity to investigate and diagnose Malu's rheumatic heart disease before the onset of endocarditis. Such a diagnosis may have either led to earlier elective mitral valve surgery before endocarditis, or earlier recognition and treatment for endocarditis later. However, either of these two potential steps in Malu's management would have depended on a clinic review resulting in Malu being referred for further investigation in relation to his murmur and the chest pains.

10.11 It is important to note that Associate Professor Adams explained that sharp chest pain is not a typical symptom of rheumatic heart disease or endocarditis. Further, Associate Professor Adams indicated that the only investigation that would have been indicated in September 2016 would have been regular follow-up in relation to Malu's heart murmur, with echocardiography every 1 to 2 years being ideal, together with potentially prophylactic treatment to prevent further episodes of acute rheumatic fever. Therefore, any discovery of rheumatic heart disease from investigations of Malu's chest pain would have been incidental.

10.12 It should also be noted that Malu was seen at the Goulburn CC clinic on a number of occasions after he completed the 2016 PSRF. He did not complain of heart murmur or chest pain on any of these occasions. Relevantly, on 12 October 2016 Malu received his second hepatitis B vaccination. During this appointment, Malu would have been asked a number of questions regarding his health status. The absence of any complaint by Malu regarding heart murmur or chest pain may possibly be explained by the fact that these symptoms subsided, or that Malu became less concerned about them.

Systems or practices regarding provision of PSRFs from inmates

10.13 RN Fernandez gave evidence as to the mechanism at Goulburn CC by which inmates came to obtain a PSRF to complete. Typically, this would involve an inmate known as a "sweeper" assisting other inmates. The sweeper typically hands out forms (such as the PSRF) to other inmates and ensures that the inmates understand how to submit them. In the case of a PSRF, these can be left in the locked box located in each wing, given to a sweeper or brought by the inmate when attending an appointment at the clinic or to collect their medication.

10.14 Mr Connolly gave evidence that the use of sweepers at Goulburn CC is not a "*mechanism*" that Justice Health would "*use moving forward*". Mr Connolly gave evidence that from a culturally and linguistically diverse perspective it would be preferable to have resources used by inmates available in multiple languages, or to use interpreters to assist inmates in this regard. Mr Connolly also referred to the use of technology to allow for a more direct patient-to-clinician interface, and so that a patient can see where they are in a queue to be seen.

Clinician access to adolescent health records

10.15 One matter which arose somewhat peripherally during the inquest concerned the awareness of Justice Health clinicians to the existence of an inmate's adolescent health records, and the ability of clinicians to access such records. Malu's health records from his time in juvenile detention contained clear information as to the incidental finding of a heart murmur, Malu's referral for a TOE, and no evidence that Malu attended his appointment for the TOE. These matters are significant because, according to Associate Professor Adams, if a TOE had been conducted in November 2013 it is likely that Malu's rheumatic heart disease would have been discovered. If this had occurred, it is possible that it may have led to earlier planning for mitral valve surgery and/or increased awareness as to the risk of Malu developing infective endocarditis.

10.16 RN Fernandez gave evidence that she did not have access to Malu's medical records from his previous time in juvenile detention. Instead, these records were stored in a separate file. There is no suggestion that if RN Fernandez had access to Malu's file this would have made any difference. This is because Malu's adolescent health records disclosed the finding of a heart murmur which was already apparent from the 2016 PSRF.

10.17 When asked about this issue in evidence, Mr Connolly agreed that there may be a benefit for clinicians in having ready access to adolescent health records, particularly for younger adult inmates. Mr Connolly gave evidence that if such records are already located on Justice Health's electronic medical records system, then they can be accessed by a clinician with a particular item of occasions number for an inmate. However, the ability to access records in this way is not widely known amongst clinicians. Mr Connolly gave evidence that he only discovered this method of access from looking at Malu's matter.

10.18 To address this issue of both awareness and access, Mr Connolly caused a notice to issue on 5 September 2022 (**2022 Notice**), which informed all Justice Health clinical staff of the following matters:

(a) if an adult patient in custody has a previous adolescent health admission it may contain relevant clinical history;

(b) how to identify the existence of such records and that such records may contain important medical information such as a general medical history, pre-existing medical conditions and results of previous investigations; and

(c) reviewing an adolescent health record may further support multidisciplinary care planning and delivery of health services in an adult correctional setting.

10.19 **Conclusions:** Due to the way in which the issue regarding clinician access to adolescent health records arose, it could only be explored in a limited way during the inquest. Whilst it would not have made a difference in Malu's case, the ability of clinicians to have access to existing adolescent health records can be beneficial, particularly for younger adult inmates.

10.20 Whilst the 2022 Notice highlights the ability of clinicians to access existing adolescent health records in one particular way, it seems that further consideration should be given as to whether such records should be made more readily available generally and, if so, how this can occur. Therefore, it is desirable to make the following recommendation.

10.21 **Recommendation:** I recommend that the Chief Executive, Justice Health & Forensic Mental Health Network consider whether adolescent health records of adult patients in custody should be made more readily accessible to treating clinicians and, if so, how such access can be facilitated.

11. Justice Health Response to the Patient Self-Referral Form in February 2017

11.1 Following Malu's transfer from Goulburn CC to Parklea CC on 30 January 2017, he was seen at the clinic at Parklea CC on 3 and 4 February 2017. Both appointments were on a "walk-in" basis, and on each occasion Malu complained of body aches. He was found to have a low fever and given paracetamol. However, neither attendance was documented in his progress notes.

11.2 After Malu completed a PSRF on 6 February 2017 (**2017 PSRF**) it is unclear what occurred next. The clinician who received the 2017 PSRF did not complete any of the details at the bottom of the form. Instead, the 2017 PSRF is annotated with the words "*Unable to locate name on PAS*" in red handwriting with a line drawn to the "Family name" section of the form which was circled. In this section, Malu wrote, "*Malu Tafau*". It is likely that the inability of Malu to be found on the PAS is because both his first name and last name were written in the section of the 2017 PSRF for his surname only. The clinician who annotated the 2017 PSRF has not been identified, despite numerous efforts by Justice Health to do so.

11.3 On 13 February 2017, an entry for Malu was made in the PAS which indicated: "*Self Referred. Update on body aches and temperature*". It is unclear whether this entry relates to an actual consultation that was conducted with Malu as this is not specified by the author of the entry. In addition, it is also unclear whether this entry relates to the 2017 PSRF. However, it seems that this is possibly the case given that the entry is noted with "*Self Referred*". Again, the author of this entry has not been identified. There is also no corresponding documentation in Malu's progress notes regarding the 13 February 2017 PAS entry.

11.4 Counsel Assisting submitted that there are three possibilities regarding the response to the 2017 PSRF:

(a) After initially not being located on PAS, Malu's name may have been located resulting in him being reviewed by a clinician. This may explain why the 2017 PSRF was not filed with Malu's medical records.

(b) The 2017 PSRF may have been put aside and Malu may have been incidentally followed up by a clinician because of his earlier presentations for body aches and fevers on 3 and 4 February 2017 when Malu attended for a walk-in consultation.

(c) The 2017 PSRF may have been put aside and no follow-up conducted despite a note being made on PAS.

11.5 As Counsel Assisting correctly submitted, any conclusion regarding the likelihood of any of these possibilities would be speculative.

11.6 After 13 February 2017, there are no further entries in PAS or Malu's progress notes until 26 April 2017 when he presented to the clinic and was found to be tachycardic and to have pale and dry lips and pitting oedema bilaterally in the lower limbs. It is most likely that Malu had been unwell between February and April 2017 given that he reported taking medication prescribed to other inmates in order to help him sleep in the weeks leading up to 26 April 2017. In addition, following Malu's transfer to hospital, the progress notes from Blacktown Hospital emergency department record that Malu reported experiencing a cough for a few weeks and lower limb oedema "*for a while now but was unable to get medical attention*". However, it is not known what symptoms Malu may have been experiencing in the period between February and April 2017.

11.7 In evidence, Mr Connolly was asked about a number of aspects regarding the response to the 2017 PSRF and agreed with the following:

(a) If the way in which a PSRF was completed by an inmate did not allow a Justice Health staff member to locate the inmate, then he would expect there to have been more attempts made to find the inmate in PAS. Mr Connolly noted that Malu had clearly previously been transferred from Parklea CC and that it would not have been a "*difficult transaction*" to identify him on PAS.

(b) The PAS entries for Malu's presentations to the clinic on 3, 4 and 13 February 2017 should have been documented in his progress notes. Mr Connolly noted that the failure to do so represented a departure from relevant guidelines at the time and from standard health communication practices.

(c) Consistent with the provisions of the 2014 PSRF Policy Malu's description that he had been experiencing a fever for almost a month and was feeling worse, with a rising temperature and drowsiness indicated a condition that could clinically be an emergency, and which required that he be seen immediately.

(d) Malu's presentations in February 2017 ought to have resulted in more investigations being conducted in relation to his symptoms, whilst acknowledging that the precise nature of his symptoms is difficult to discern from the available information. It is not clear whether Malu disclosed his heart murmur or whether he already had a lower limb oedema potentially indicative of reduced heart function.

11.8 Associate Professor Adams expressed the following opinions as to the circumstances surrounding the 2017 PSRF:

(a) Malu's complaint of losing 10 kilograms in weight was particularly concerning.

(b) Malu's complaints of persistent fever, lethargy and body aches are consistent with infective endocarditis.

(c) Malu's presenting symptoms warranted medical review, and whilst an immediate diagnosis may not have been made, the constellation of Malu's symptoms, together with the presence of a significant cardiac murmur, would have led to suspicion of an underlying serious issue.

(d) If Malu's symptoms had been investigated (for example with blood tests including inflammatory markers, blood cultures and echocardiography) and infective endocarditis confirmed, then he would have undergone several weeks of intravenous antibiotics and repeated evaluation of valve function.

(e) It is likely that earlier treatment for Malu's endocarditis "*may have significantly improved his clinical outcome*". Whilst there is still a significantly higher mortality rate with the treated infective endocarditis, "*this would have been around 10% had treatment been initiated prior to development of embolic complications*".

(f) Had such investigations been conducted it is likely that Malu's infective endocarditis would have been identified at an earlier stage, allowing more time to institute intravenous antibiotic therapy.

(g) The rate of embolic complications reduces significantly following one to 2 weeks of effective intravenous antibiotic therapy. It is therefore likely that the fatal coronary embolus would not have occurred if treatment had been initiated in February 2017 rather than April 2017.

11.9 **Conclusions:** The Justice Health response to the 2017 PSRF completed by Malu was inadequate in that there was again non-compliance with relevant provisions of the 2014 PSRF Policy. The absence of any investigation in relation to the symptoms disclosed by Malu in the 2017 PSRF resulted in a missed opportunity to investigate, diagnose and treat Malu's endocarditis prior to his admission to Blacktown Hospital on 26 April 2017. If such steps in Malu's management had been taken two months earlier, it likely would have resulted in institution of effective intravenous antibiotic therapy to reduce the rate of embolic complications, such as the fatal coronary embolus that Malu suffered. The earlier institution of such treatment may have averted Malu's death.

12. Changes and improvements made by Justice Health since 2016

12.1 On 6 October 2017, Justice Health published an updated policy (**the 2017 PSRF Policy**) to replace the 2014 PSRF Policy. In essence, the 2017 PSRF Policy replicated the provisions of the former policy with one of the most significant changes being the inclusion of a table to assist clinicians in determining the clinical priority of a patient when being placed on a waitlist. The 2017 PSRF Policy is currently in force.

12.2 Therese Sheehan, the Justice Health Deputy Director of Nursing and Midwifery, provided a statement as part of the coronial investigation which relevantly noted the following:

(a) Prior to September 2016, Justice Health did not provide any formal education to staff regarding the 2014 PSRF Policy.

(b) In August 2017, nursing staff at Parklea CC were sent an email by a Clinical Nurse Educator advising of an upcoming education which attached a copy of the 2014 PSRF Policy with a request for staff to familiarise themselves with it. On 1 September 2017, an education session was held in relation to the 2014 PSRF Policy. Further education in this regard was provided on 15 February 2018.

(c) In July 2019, an audit of patient self-referral processes at all correctional centres (including Parklea CC and Goulburn CC) was undertaken with results showing good compliance with relevant policies overall.

(d) In July 2017, guidance was provided to Justice Health staff at Goulburn CC regarding a situation where a patient who had completed a PSRF could not be identified on PAS. Staff were advised to escalate the issue to either a Nursing Unit manager or a Nurse-in-Charge for assistance, and that failure to do so may lead to an adverse outcome for the patient.

12.3 Notwithstanding the above, Mr Connolly acknowledged the deficiencies in the patient self-referral system that Justice Health had in place in 2016 and 2017. Mr Connolly also indicated that Justice Health considered that the 2017 PSRF Policy was "not fit for purpose" and could lead to gaps in the provision of clinical care. Relevantly, Mr Connolly considered that the 2017 PSRF Policy to not be as prescriptive as it could be, and that it does not address the challenge of how to manage a situation when a patient refuses to attend a clinic following submission of a PSRF.

12.4 In relation to the above matters, in 2018 Justice Health undertook a formal review of patient self-referral processes to identify processes for improvement that may be implemented state-wide and inform policy. This resulted in a project proposal to explore viable options for an improved patient self-referral process that would allow for timely responses to patient's health needs, improved service provision for patients, improved patient engagement and a patient self-referral system that is accessible and ensures a patient feedback loop.

12.5 The recommended option arising from the proposal was for a patient self-referral call centre staffed by four registered nurses. This would allow patients to self-refer health problems or concerns in real time using an existing telephone system that is available to inmates rather than relying upon the current paper-based system. Ms Sheehan indicated that the Justice Health Integrated Care Service has reviewed their structure and proposes to implement the self-referral call centre option.

12.6 **Conclusions:** The evidence available to the inquest, and the reviews conducted separately by Justice Health, highlights certain inadequacies with respect to patient self-referral processes in 2016 and 2017, and currently. These inadequacies may potentially lead to gaps in the clinical care provided to inmate patients.

12.7 Justice Health is cognisant of these shortcomings and is already taking steps to implement improvements that will address the inadequacies described above, and improve self-referral processes. One significant improvement involves the use of a system to allow direct interface between inmates and Justice Health staff to communicate health concerns in real time.

12.8 Having regard to the improvements that have been made since 2016, and that are currently in the process of being implemented, it is neither necessary nor desirable to make any recommendations regarding patient self-referral processes.

13. The timing of Malu's planned cardiac surgery

13.1 Associate Professor Adams described the timing of interventional surgery to replace Malu's mitral valve as being a controversial area. He noted that it is an area "*where there is not great data on what is the best practice*". This is because the benefits of delaying surgery until infection is controlled by antibiotic therapy reduces the chance of infection of the prosthetic valve, but allows more opportunity for repeated embolic events. On the one hand, Associate Professor Adams noted that Malu had already had an embolic event prior to initiation of treatment and this favoured early surgery. On the other hand, Malu did not have uncontrolled heart failure and was responding to treatment with a plan for subsequent surgery.

13.2 Overall, Associate Professor Adams noted that Malu was responding well to antibiotic therapy, had a relatively less aggressive infective organism, had not had repeated emboli, had no problems with uncontrolled cardiac failure or uncontrolled infection, had no aortic root abscess and his condition had been discussed with the surgical unit at Westmead Hospital. Having regard to these matters, Associate Professor Adams considered that, on balance, the timing of his surgery was appropriate and what many cardiologists and cardiac surgeons would have considered to be acceptable.

13.3 **Conclusions:** The timing of cardiac surgery with respect to infective endocarditis is fraught with complexities. There are risks associated with delaying surgery due to the risk of embolism and commensurate risks in proceeding to surgery early due to concerns that valve replacement might result in infection. Having regard to the expert evidence, the timing of Malu's planned cardiac surgery was acceptable and appropriate.

14. Findings pursuant to section 81(1) of the Act

14.1 Before turning to the findings that I am required to make, I would like to acknowledge, and express my gratitude to Mr Hilbert Chiu, Counsel Assisting, and his instructing solicitors, Ms Brianna Clark and Ms Caitlin Healey-Nash from the Crown Solicitor's Office. The Assisting Team has provided tremendous assistance during the conduct of the coronial investigation and throughout the course of the inquest. I am extremely grateful for their dedication and meticulousness, and for the sensitivity and empathy that they have shown during all stages of the coronial process.

14.2 The findings I make under section 81(1) of the Act are:

Identity

The person who died was Maluovailoa Tafau.

Date of death

Maluovailoa died on 9 May 2017.

Place of death

Maluovailoa died at Blacktown Hospital, Blacktown NSW 2148.

Cause of death

The cause of Maluovailoa's death was cardiac arrest due to complications of infective endocarditis against a background of rheumatic heart disease.

Manner of death

Maluovailoa died of natural causes whilst on remand in lawful custody. Approximately two months before Maluovailoa was transferred to hospital there was a missed opportunity to investigate symptoms that he had previously reported. Such investigation may have confirmed a diagnosis of infective endocarditis, resulting in the institution of earlier treatment which likely would have altered the eventual clinical course.

14.3 On behalf of the Coroners Court of New South Wales, I offer my sincere and respectful condolences, to Maluovailoa's family and loved ones for their tragic and heartbreaking loss.

14.4 I close this inquest.

Magistrate Derek Lee
Deputy State Coroner
14 October 2022
Coroners Court of New South Wale