Coroners Act 1996
[Section 26(1)]

Western *Australia*

RECORD OF INVESTIGATION INTO DEATH

Ref: 24/15

I, Sarah Helen Linton, Coroner, having investigated the death of ***Tien Chung NGUYEN*** *with an inquest held at the* ***Perth Coroner's Court, Court 51, CLC Building, 501 Hay Street, Perth****, on* ***17 July 2015*** *find that the identity of the deceased person was* ***Tien Chung Nguyen*** *and that death occurred on* ***27 November 2010*** *at* ***Royal Perth Hospital*** *as a result of* ***ruptured dissection of the thoracic aorta*** *in the following circumstances:*

Counsel Appearing:

Sergeant L Housiaux assisting the Coroner.
Ms C Chapman (State Solicitor's Office) appearing on behalf of the Department of Corrective Services.

TABLE OF CONTENTS

INTRODUCTION

1. Tien Chung Nguyen (the deceased) died while undergoing surgery at Royal Perth Hospital (RPH) on 27 November 2010.

2. At the time of his death, the deceased was serving a term of imprisonment imposed on 17 September 2008. As the deceased was a sentenced prisoner under the *Prisons Act 1981* (WA) at the time of his death, he came within the definition of a 'person held in care' under section 3 of the *Coroners Act 1996* (WA).

3. Pursuant to section 22(1)(a) of the *Coroners Act*, where a person was held in care immediately before his or her death in Western Australia, an inquest is required to be held. Accordingly, I held an inquest at the Perth Coroner's Court on 17 July 2015.

4. Section 25(3) of the *Coroner's Act* specifies that where a death investigated by a coroner is of a person held in care, the coroner must comment on the quality of the supervision, treatment and care of the person while in that care. Accordingly, the focus of the inquest was on the medical treatment provided in hospital and in prison, as well as the general care and supervision provided, to the deceased prior to his death.

5. Two witnesses were called to give oral evidence at the inquest: Sergeant Sanjeev Albuquerque from the Coronial Investigations Unit, and Mr Richard Mudford from the Department of Corrective Services. In addition, a significant quantity of documentary evidence was tendered, including a number of medical reports as well as the deceased's original medical records.[1]

[1] Exhibits 1 - 4.

BACKGROUND OF THE DECEASED

6. The deceased was born on 6 May 1955 in Vietnam. He married in approximately 1984. The deceased and his wife then came to Australia (via Hong Kong) as refugees in 1985. They later had two daughters and a son in Australia. They lived as a family in Sydney, New South Wales, where the deceased and his wife ran a bakery for many years.[2] The deceased was a hard worker and dedicated to his family.[3]

7. However, sometime in 2000 the deceased injured his back in a car accident. This led him to suffer chronic back pain and he was no longer able to perform his duties as a baker. The family then experienced financial difficulties and the deceased began to use illicit drugs. The deceased and his wife divorced in 2004.

8. They eventually sold the bakery in 2006. The deceased purchased another business, but the deceased did not work in that business.[4]

9. Around this time the deceased became involved in the distribution of illicit drugs.[5] This required him to fly to and from Sydney to Perth, Western Australia.[6]

10. On 28 November 2006 the deceased and another person were found by police officers at a home in the suburb of Girrawheen in Perth in possession of illicit drugs. This led to a number of criminal charges being laid against the deceased, some of which he admitted and some of which he contested.

11. The deceased was eventually convicted of three offences relating to the sale or supply of illicit drugs.[7] On 17 September 2008 he was sentenced in the District

[2] Exhibit 1, Tab 2, 7 – 8.
[3] Exhibit 1, Tab 7 [7] – [9].
[4] Exhibit 1, Tab 7 [9] – [13]; Exhibit 2, Tab 2.
[5] Exhibit 2, Tab 2.
[6] Exhibit 1, Tab 2, 8.
[7] Exhibit 1, Tab 21.

Court in Perth to an aggregate sentence of 6 years' imprisonment, backdated to commence on 10 September 2007.[8] An appeal against his sentence was later dismissed but the matter was returned to the District Court on 8 June 2009 for correction of sentence. Ultimately, the deceased's earliest date of release was 9 March 2013.[9]

PAST MEDICAL HISTORY

12. At the time the deceased was sentenced he was a 53 year old man with a significant medical history, including:

- Brain aneurysm surgery in Hong Kong in 1982 and in Sydney in 1991 with subsequent memory loss, stuttering and paraesthesia down his right side;
- Persistent headaches related to his past neurosurgery that required regular medication;
- A permanent back injury from a motor vehicle accident in 2000, resulting in chronic back pain;
- Lower urinary tract symptoms;
- Carrier of Hepatitis B; *and*
- Inactive Hepatitis C.[10]

MANAGEMENT IN PRISON

13. Other than a brief period on remand before being released on bail, the deceased's first time in custody was when he became a sentenced prisoner in September 2008. He served the initial part of his sentence at Hakea Prison, before being later transferred first to Acacia Prison and then ultimately to Wooroloo Prison Farm.[11]

14. Due to the deceased's limited ability to speak or understand English, Vietnamese speaking prisoners were informally utilised to assist with the admission

[8] Exhibit 1, Tab 21.
[9] Exhibit 2, DIC Review Report, 3.
[10] Exhibit 2, Tab 5.
[11] Exhibit 2, DIC Review Report, 7.

assessment processes and interviews. The deceased was reportedly happy with this arrangement. No welfare concerns, history of self-harm or evidence of suicidal ideation were identified during the reception process. However, he disclosed significant health issues consistent with his past medical history.[12] Some of the deceased's medical records were obtained from the Eastern States to assist the prison doctors to assess the deceased's medical needs.[13]

15. While at Hakea the deceased was reviewed regarding his chronic pain issues and prostate issues. He was referred to the Pain Clinic at RPH and the Urology Clinic at RPH for those medical issues.

16. His lower urinary tract symptoms were investigated and the urologists at RPH ultimately diagnosed benign prostate hypertrophy. The deceased's symptoms were successfully controlled with an alpha-blocker.[14]

17. Investigations were undertaken to try to establish a cause for his headaches, which had increased in regularity over time.[15] This included an urgent CT scan of his head at RPH in July 2008.[16] No definitive cause for the increase in headache frequency and severity was able to be identified. He was diagnosed with central neuropathic pain, which was treated with some measure of success by tricyclic antidepressant and anticonvulsant medication. His back and neck pain was treated with simple analgesia and physiotherapy.[17]

18. The deceased also underwent regular liver review, due to his previous hepatitis C infection.[18]

19. Apart from his ongoing medical conditions, the deceased was also admitted to RPH on 13 March 2008 for treatment for a partially amputated and fractured

[12] Exhibit 2, DIC Review Report, 7.
[13] Exhibit 3. Vol 2, Copy 3.
[14] Exhibit 1, Tab 25.
[15] Exhibit 3, Vol 2, Copy 3.
[16] Exhibit 2, DIC Review Report, 6.
[17] Exhibit 1, Tab 25.
[18] Exhibit 1, Tab 25.

right thumb, which he injured after catching it in a heavy steel door.[19] It was successfully treated with K-wiring.[20]

20. In June 2008 the deceased was issued with an extra mattress by the prison to assist in managing his chronic back pain issues.[21]

21. Throughout his sentence the deceased exhibited no behavioural issues and there were no reported management problems. He did not participate in any education or vocational training predominantly due to the difficulties attributable to his limited ability to speak English.[22] However, he was reported to be a reliable and punctual worker who interacted well with staff and other prisoners.[23]

22. He received few visits as his family continued to reside in New South Wales. He kept in contact with his family and friends by telephone and through written correspondence.[24]

23. The deceased's isolation from his family prompted him to request an interstate prison transfer to New South Wales in November 2009.[25]

24. Towards the end of October 2010 it is apparent from the medical records that the deceased was experiencing further spinal degeneration, which was causing him additional pain. He was referred to a physiotherapist who measured him for a back brace.[26] However, the purchase of the brace was then postponed as arrangements were put in place to transfer the deceased to New South Wales, as requested.[27]

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[19] Exhibit 3, Vol 2, Copy 3.
[20] Exhibit 1, Tab 25.
[21] Exhibit 2, DIC Review Report, 6.
[22] Exhibit 1, DIC Review Report, 7.
[23] Exhibit 2, Tab 13.
[24] Exhibit 2, Tab 13.
[25] Exhibit 2, Tab 14.
[26] Exhibit 3, Vol 3, Copy 5.
[27] Exhibit 2, Tab 16; Exhibit 3, Vol 3, Copy 5.

25. The deceased was reportedly very happy at the prospect of returning to Sydney.[28] Sadly, the transfer was unable to be completed before the deceased's sudden death.

EVENTS ON 26 NOVEMBER 2010

26. At approximately 11.00 am on 26 November 2010 the deceased was seen by a fellow prisoner sitting on a chair outside the shower block at Wooroloo Prison Farm. He was clutching his chest with his left hand.[29]

27. The other prisoner ran to the deceased and asked if he was okay. The deceased waved his hand as if to indicate that he was okay. However, the other prisoner was still concerned so he ran over to the Unit A office and spoke to the two prison officers, Officers Allen Limbrick and Icarus Wilkinson, who were inside.[30]

28. The two officers left the office and followed the prisoner 7 metres back to where the deceased was sitting nearby.[31] The two officers noticed the deceased was sitting with his left arm up across his chest and resting on his right shoulder. He appeared in some discomfort. Officer Limbrick spoke to the deceased and the deceased told him that he had pain in his back.[32] At 11.15 am Officer Limbrick returned to the office and telephoned the hospital officer, requesting the medical buggy and a medic to attend the deceased.[33]

29. Another prisoner, who spoke Vietnamese and was a friend of the deceased, came over and assisted with interpreting. When the prisoner arrived he interpreted for the deceased and indicated that the deceased was suffering pain in his chest and shortness of breath.[34] Officer Limbrick then brought the Oxy Boot machine

[28] Exhibit 2, Tab 7 [23].
[29] Exhibit 1, Tab 18].
[30] Exhibit 1, Tabs 2, 3, 8 and Tab 18.
[31] Exhibit 1, Tab 8 [9].
[32] Exhibit 2, Tab 8 [10]
[33] Exhibit 1, Tab 2, 3 and Tab 8 [11] – [12].
[34] Exhibit 1, Tab 10 [9].

from the office and Officer Wilkinson administered oxygen to the deceased.

30. At 11.18 am two nurses arrived and took over the deceased's care.[35] They noted the deceased presented with high blood pressure and was clutching his chest and sweating profusely. He was reporting chest pain. The medical staff administered aspirin and glyceryl trinitrate, in accordance with chest pain treatment guidelines, and requested an ambulance attend.[36] The deceased reported further symptoms including paraesthesia in his legs while they waited for the ambulance to arrive.[37]

31. The ambulance arrived at the prison at 11.53 am and the ambulance officers attended the deceased shortly afterwards.[38] The deceased rated his chest pain at 7 out of 10 at 12.05 pm.[39]

32. The ambulance left the prison grounds at 12.13 pm bound for Swan District Hospital. The prisoner who was interpreting for the deceased was allowed to accompany him in the ambulance to the hospital.[40]

ADMISSION TO SWAN DISTRICTS HOSPITAL (SDH)

33. The deceased presented to the Emergency Department at SDH at 12.55 pm. He was assessed minutes later by a medical officer, Dr Olakengal, at which time he was still complaining of chest pain. On examination the deceased's observations were all normal and he scored 15/15 on the Glasgow Coma Scale. Given the reports of chest pain Dr Olakengal ordered blood tests, an electrocardiogram (ECG) and chest x-ray examination.[41]

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[35] Exhibit 1, Tab 2, 3.
[36] Exhibit 1, Tab 9 [4] – [5] and Tab 14; Exhibit 2, DIC Review Report, 3.
[37] Exhibit 1, Tab 14.
[38] Exhibit 1, Tab 20.
[39] Exhibit 1, Tab 20.
[40] Exhibit 1, Tab 19.
[41] Exhibit 1, Tab 28; Exhibit 3, SDH File.

34. He was treated with Mylanta, pantoprazole, aspirin, panadeine forte and nitroglycerin. Before the other prisoner (who had been interpreting) was returned to Wooroloo the deceased told him that his pain was diminishing and he was starting to feel better.[42]

35. The deceased's initial ECG did not show any dynamic changes and the initial blood tests showed only a rise in the white cell count. The first chest x-ray was also satisfactory. The 12 hour troponin and a further ECG showed no evidence of an acute myocardial infarction (heart attack).[43]

36. The deceased complained of persistent nausea and epigastric discomfort. He did two large vomits, which eased his epigastric pain but he refused to eat. Urinalysis showed the presence of large amounts of blood and protein in the urine.[44] Repeat blood tests were undertaken and he was given intravenous fluids.[45]

37. In the morning the deceased became tachycardic and hypotensive and was given intravenous fluids. He continued to experience persistent epigastric tenderness but was not in obvious distress and no longer complained of chest pain. The deceased also showed signs of deteriorating renal function.[46]

38. The diagnostic possibilities were considered and there was a wide differential as to the possible causes of his symptoms.[47]

39. An ultrasound Focussed Assessment by Sonography for Trauma (FAST scanning) had been performed earlier, which showed no free fluid and the aorta to have a maximum diameter of 2.6 cm, but there was a suggestion of pericardial free fluid.

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[42] Exhibit 1, Tab 19 [31] – [32].
[43] Exhibit 1, Tab 28; Exhibit 3, SDH File.
[44] Exhibit 3, SDH File.
[45] Exhibit 3, SDH File.
[46] Exhibit 1, Tab 28; Exhibit 3, SDH File.
[47] Exhibit 3, SDH File.

40. The FAST scan was repeated the following morning and it showed a pericardial effusion. This led to a request for an urgent repeat chest x-ray, which showed a widened mediastinum (widening of the tissues in the centre of the chest), which suggested a provisional diagnosis of acute aortic dissection or tamponade.[48]

41. The results suggested a need for urgent imaging, which could not be done at SDH. Accordingly, arrangements were made for immediate transfer of the deceased by ambulance with a medical escort to a tertiary hospital for urgent imaging to be undertaken.[49]

42. The accompanying transfer note indicated a number of differential diagnoses, including dissecting aortic aneurysm as well as pancreatitis and sepsis.[50]

TRANSFER TO RPH

43. The deceased was seen in the Emergency Department at RPH at 9.33 am on 27 November 2010.[51]

44. After being reviewed by a resident medical officer the deceased was sent for an urgent CT scan, which demonstrated a type A dissection of the thoracic aorta. This type of dissection usually requires surgery.

45. The deceased was reviewed by a cardiologist and a consultant cardiothoracic surgeon, Mr Robert Larbalestier. He was then transferred to the operating theatre for urgent surgical management.

46. Given the deceased's critical condition, the Department authorised telephone contact with the deceased's family members prior to the deceased going in to theatre for surgery.[52]

[48] Exhibit 1, Tab 28; Exhibit 3, SDH File.
[49] Exhibit 3, SDH File.
[50] Exhibit 3, RPH File.
[51] Exhibit 1, Tab 29.
[52] Exhibit 2, Tab 3.

47. On the operating table during induction of the anaesthesia the deceased suddenly deteriorated and became hypotensive and bradycardic. Despite full cardiopulmonary resuscitation, adrenaline and an urgent sternotomy with accompanying internal cardiac massage, he failed to respond and died in theatre at 2.10 pm.[53]

CAUSE AND MANNER OF DEATH

Post Mortem Report

48. On 1 December 2010, Dr Daniel Moss, a forensic pathologist, conducted a post mortem examination of the deceased. The examination revealed a tear in the lining of the main blood vessel leaving the heart in the chest with extensive blood clot within the wall of the vessel (dissection of thoracic aorta) There was extensive bleeding within the soft tissues in the chest and within the chest cavities (rupture of aortic dissection). There was evidence of surgical intervention to the chest and evidence of previous neurosurgical intervention was also noted.[54]

49. Toxicological analysis showed medications consistent with the deceased's medical treatment. Alcohol and other common drugs of abuse were not detected.[55]

50. At the conclusion of all investigations, Dr Moss formed the opinion that the cause of death was ruptured dissection of the thoracic aorta.[56]

51. I accept and adopt the opinion of Dr Moss as to the cause of death.

52. It follows from that conclusion that the manner of death was by way of natural causes.

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[53] Exhibit 3, RPH File, Operation Sheet signed by Mr Larbalestier.
[54] Exhibit 1, Tab 5.
[55] Exhibit 1, Tab 5 and Tab 6.
[56] Exhibit 1, Tab 5.

QUALITY OF SUPERVISION, TREATMENT AND CARE

53. At the time he was sentenced to serve a finite term of imprisonment, the deceased already had a long history of multiple medical problems, including chronic back pain and headaches.

54. The deceased's medical records show that throughout his term of incarceration he received regular medical reviews, both by prison medical staff and at RPH. His medical conditions were appropriately managed throughout this time.

55. The deceased's period of incarceration was uneventful in terms of supervision and management issues.

56. Shortly before his death arrangements were being made to transfer the deceased to New South Wales so that he could serve the remainder of his sentence close to his family.

57. When the deceased became critically ill on 26 November 2010 he received prompt attention from prison officers and medical staff before being appropriately transferred to hospital by ambulance.

58. The Department ensured the deceased's family were informed of his deteriorating health. Given the short timeframe and distances involved, the deceased's relatives were unable to reach Perth in time, but Departmental staff did manage to arrange some telephone contact with one of his daughters before the deceased went into surgery.[57]

Medical Management at SDH

59. Some concerns were raised by a doctor, who reviewed the deceased's medical treatment on behalf of the Department, in relation to the care the deceased

[57] Exhibit 1, Tab 7 [31] – [40].

received at SDH. It was suggested that the deceased should have been more closely monitored and his results acted upon more quickly, prompting an earlier transfer to RPH.[58] As a result, an expert opinion was sought from Associate Professor James Rippey, an Emergency Physician.

60. Professor Rippey observed this was a complex case. Professor Rippey explained that, in terms of Emergency Department presentations for chest pain, aortic dissection is relatively uncommon, but mortality is extremely high. The features of aortic dissection are neither highly sensitive nor specific, and the broad differential makes diagnosis challenging. Once the suspicion is raised, definitive imaging (CT scan or transoesophageal echocardiography) is indicated.[59]

61. Professor Rippey noted that in this case, there were several features that made accurate assessment particularly difficult. One was the language difficulty, due to the deceased's limited ability to speak English. The dynamic nature of dissection means repeated communication is required, which was difficult in this case where interpreters were required.

62. However, the more significant element that steered the clinicians away from considering dissection was the deceased's previous medical history "that obscured the red flags."[60] The deceased's past medical history included much unrelated pathology that had symptoms similar to aortic dissection, and may have lowered the concern about aortic dissection in the evaluating clinician's assessment.[61] In addition, initial examination and investigations did not have any features that raised the likelihood of dissection.

63. On review, Professor Rippey considered the initial assessment at SDH to be reasonable and appropriate

[58] Exhibit 1, Tab 25.
[59] Exhibit 1, Tab 30.
[60] Exhibit 1, Tab 30, 3.
[61] Exhibit 1, Tab 30.

investigations were completed. Aortic dissection was not considered in the initial differential diagnosis. However, after the deceased was admitted for observation and his condition changed, further investigations were undertaken that altered this position. With aortic dissection included in the differential diagnosis a decision was made to urgently transfer the deceased to RPH for definitive imaging.

64. In Professor Rippey's expert opinion, although a higher level of suspicion for aortic dissection could have been gained from the history, "the numerous confounding factors in this case meant the clues to dissection were obscured." If aortic dissection had been considered earlier, and definitive imaging arranged sooner, Professor Rippey indicated it could "possibly" have led to a better outcome.[62]

65. Overall, Professor Rippey concluded that, although it was unfortunate that the diagnosis of dissection was not made earlier, the management of the deceased at SDH was appropriate and he was afforded reasonable care.[63]

66. I accept the expert opinion of Professor Rippey and find the medical care provided to the deceased at SDH was of an appropriate standard.

CONCLUSION

67. At the time of his incarceration the deceased had a number of medical problems. He received appropriate medical treatment for these medical conditions while he was in custody.

68. Unfortunately, on 26 November he experienced a sudden life-threatening medical event, namely aortic dissection. Although not aware of the exact nature of the medical problem, the prison staff and nurses dealt with the deceased promptly and appropriately to provide

[62] Exhibit 1, Tab 30.
[63] Exhibit 1, Tab 30.

as much relief and reassurance to the deceased as they could until he could be taken to hospital by ambulance.

69. To assist in his care during this medical emergency, the Department allowed the deceased's friend, another prisoner, to travel with him by ambulance from the prison to interpret for him.

70. Once in hospital, the doctors at SDH did their best to try and diagnose the problem, but because of the deceased's prior medical history and the difficulty of diagnosing aortic dissection, it took some time to identify the condition. Once investigations showed that aortic dissection was a possibility, the deceased was promptly transferred to RPH for confirmation of the diagnosis.

71. Surgeons at RPH arranged for the deceased to urgently undergo surgery to repair the dissection but the deceased deteriorated on the operating table. Despite their extensive efforts to resuscitate the deceased, he died in theatre.

72. Sadly, the deceased's death occurred shortly before he was due to be transferred to Sydney to be closer to his family. However, the Department did its best to ensure the deceased had some contact with a family member before he went into surgery and died.

73. The deceased was in the custody and care of the Department immediately before he died. I am satisfied that there was nothing that the Department did or failed to do that contributed to the deceased's death.

S H Linton
Coroner
29 July 2015