Coroners Act 1996
[Section 26(1)]

Western *Australia*

RECORD OF INVESTIGATION INTO DEATH

Ref: 1/14

I, Barry Paul King, Coroner, having investigated the death of ***Amy Tinker*** *with an inquest held at the* ***Perth Coroner's Court, Court 51, CLC Building, 501 Hay Street, Perth,*** *on* ***15 and 16 January 2014****, find that the identity of the deceased person was* ***Amy Tinker*** *and that death occurred on* ***15 September 2010*** *at* ***Royal Perth Hospital*** *from* ***multiple organ failure complicating sepsis in a woman with cirrhosis of the liver*** *in the following circumstances:*

Counsel Appearing:

Ms K Ellson assisting the Coroner
Ms R Hartley, State Solicitors Office, appearing on behalf of the Health Department of Corrective Services and Treena Martin RN
Ms B Burke appearing for Muir McPherson CN

INTRODUCTION

1. Amy Tinker (**the deceased**) died on 15 September 2010 at Royal Perth Hospital after she became seriously ill from sepsis while a sentenced prisoner at Greenough Regional Prison.

2. As the deceased was a prisoner under the *Prisons Act 1981* at the time of her death, she was a 'person held in care' under section 3 of the *Coroners Act 1996*.

3. Section 22 (1)(a) of the *Coroners Act 1996* requires a coroner who has jurisdiction to investigate a death to hold an inquest if the death appears to be a Western Australian death and the deceased was immediately before death a person held in care.

4. I held an inquest at the Perth Coroner's Court on 15 and 16 January 2014.

5. Under s25(3) of the *Coroners Act 1996*, 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.

6. The inquest focused primarily on the care provided to the deceased while a prisoner and on possible improvements that could be made to the standard of primary medical care provided to prisoners in the custody of the Department of Corrective Services (**the Department**), particularly in relation to liver disease.

7. The documentary evidence included two comprehensive reports of the death prepared independently by the Western Australian Police and by the Department, together comprising eight volumes.

8. Statements and oral evidence were provided by Professor J K Olynyk, Ms Treena Martin RN, Mr Muir McPherson CN and Dr R Carbon, Director of Health Services with the Department. The author of the

Department's report, Mr Richard Mudford, attended the inquest as an observer. He was called as an impromptu witness to address the issue of the Department's policy to require prisoners to stand at musters.

THE DECEASED

9. The deceased was born on 24 September 1976 in Port Hedland and raised by her parents in the Jigalong Community in a semi-traditional environment in which Martu was the first language she learned. She had four brothers. She was generally of good health and did not suffer any major childhood illnesses.[1]

10. The deceased attended school until she was 15 years old. She then left Jigalong Community and went to Newman where she lived off and on until 2010.[2] She did not work much since leaving school though she was engaged in Community Development Employment Projects in remote communities.[3]

11. The deceased began to drink alcohol when she was 16 or so. It appears that from that time she spent most of her life entrenched in a cycle of alcohol abuse, poverty, malnutrition, pension payments and further alcohol abuse.[4]

12. The deceased had been in various relationships, one of which resulted in a son who was raised by her parents and by one of her brothers and his family.[5] Many of the relationships were affected by alcohol abuse and violence.

13. Closely associated with the deceased's history of alcohol abuse was a history of regularly committing minor offences. She first came into contact with the criminal justice system when she was 17. She was sentenced to 13 days imprisonment in 2001 and nine months in

[1] Exhibit 1, Vol 3, Tab 87
[2] Exhibit 1, Vol 3, Tab 87
[3] Exhibit 1, Vol 4, Tab 109
[4] Exhibit 1, Vol 4, Tab 109
[5] Exhibit 1, Vol 4, Tab 109

2002.[6] She also spent short periods of time in prison in July 2003 and for about three weeks in late 2006 to early 2007.

14. The deceased's last period of incarceration commenced on 30 March 2010 following an aggravated assault of her partner while she was serving a suspended sentence of imprisonment.

15. The deceased was considered to be shy and withdrawn, particularly with male figures of authority but even with other Aboriginal female prisoners with whom she was unfamiliar.[7]

16. In June 2010 the deceased was interviewed by a psychiatrist, Dr S Bala, for a psychiatric report to the court for sentencing purposes. Dr Bala noted that the deceased appeared embarrassed and inhibited, made poor eye contact and made little spontaneous speech. He found no depression or anxiety but considered that the deceased suffered from mental and behavioural disturbance from alcohol abuse. He diagnosed her with alcohol abuse syndrome.[8]

17. Dr Bala was concerned to determine whether the deceased suffered from a neurological or metabolic abnormality which caused her communication difficulties.[9] He noted in his psychiatric report that the deceased would benefit from a thorough medical examination in order to exclude organic causes such as nutritional deficiencies and thyroid problems.[10]

THE DECEASED'S MEDICAL HISTORY

18. In October 2004 the deceased was transferred from Newman Hospital to Royal Perth Hospital suffering from abdominal pain and fever. She was admitted for about three weeks and was treated for acute alcoholic

[6] Exhibit 1, Vol 3, Tab 88
[7] Exhibit 1, Vol 3, Tab 59-73
[8] Exhibit 1, Vol 4, Tab 108
[9] Exhibit 1, Vol 4, Tab 111
[10] Exhibit 1, Vol 4, Tab 108

hepatitis. She was found to have decompensated liver failure.[11]

19. The discharge letter provided by Royal Perth Hospital for the deceased stated that the deceased's liver function was stable but that it could worsen at any time, especially if she continued to drink alcohol. It stated that the prognosis was poor and the deceased would need to be palliated if she deteriorated.[12]

20. Over the next two years the deceased presented regularly at Newman Hospital emergency department with alcohol related symptoms including wounds, burns and complaints of seizures. The Newman Hospital notes in 2005 and 2006 referred to the previous history of liver failure.[13] She continued to present to Newman Hospital until early 2010 with alcohol and violence related injuries, but liver failure was not mentioned again in the notes.

21. It is notable that, when the deceased underwent an initial health screen when she was admitted to Roebourne Regional Prison on 18 December 2006, she apparently denied that she had been admitted to hospital for a serious illness.[14]

ROEBOURNE REGIONAL PRISON

22. As mentioned, on 27 March 2010 the deceased was taken into custody following an assault on her partner. The assault occurred only four days after the deceased had been released on a suspended sentence for a previous assault on the same partner.[15] On 25 June 2010 she was sentenced to an aggregate of 8 months imprisonment backdated to commence on 27 March 2010.[16] On 20 July 2010 the Prisoner Review Board denied her parole.[17]

[11] Exhibit 1, Vol 7
[12] Exhibit 1, Vol 7
[13] Exhibit 1, Vol 7
[14] Exhibit 1, Vol 3, Tab 88
[15] Exhibit 1, Vol 4, Tab 106
[16] Exhibit 1, Vol 6, Tab 189
[17] Exhibit 1, Vol 4, Tab 106

23. The Department's medical and nursing directorate, Health Services, has its own electronic medical record system, which is known as EcHO.

24. The EcHO notes for the deceased on 31 March 2010 indicate that the deceased underwent the Department's Adult Initial Health Screen at Roebourne Regional Prison. She had undergone the same health screen about a month earlier on 22 February 2010 when she had been held on remand in relation to the first assault on her partner. The only health issues raised by the deceased at the time of the health screen on 22 February 2010 were skin ulcers on her legs and stitches on her head.[18]

25. It appears that at the health screens the deceased made no mention of her liver failure in 2004. The nurse administering the health screen on 22 February 2010 sent a request to Newman Hospital for the deceased's medical history, but it is not clear when or if the history was provided.

26. On 1 April 2010, Dr A. H Adermanabadi saw the deceased as a newly admitted prisoner. She gave no previous medical history. Dr Adermanabadi arranged for her to be tested for hepatitis immunity and HIV and, when the tests results were obtained on 19 April 2010, also requested that liver function tests be done.[19]

27. While there is no mention of the liver function test results, an EcHO note for 29 April 2010 indicates that the deceased was at high risk from alcohol use. This may have related to the deceased's mental health.[20]

28. On 17 June and 28 July 2010 the deceased received dental treatment which resulted in the extraction of five molars.[21]

[18] Exhibit 1, Vol 1, Tab 20
[19] Exhibit 1, Vol 1, Tab 20
[20] Exhibit 1, Vol 1, Tab 20
[21] Exhibit 1, Vol 1, Tab 20

29. As noted earlier, in June 2010 Dr Bala assessed the mental state of the deceased and mentioned that she would benefit from a thorough medical examination. On 5 July 2010 Dr Bala wrote to a Community Corrections Officer in South Hedland to notify the Department that he had just reviewed the Newman Hospital notes for the deceased, which notes included information about the seizures suffered by the deceased and the admission to Royal Perth Hospital in 2004 for decompensated liver failure. Dr Bala requested that the deceased's current medical practitioner be informed of the contents of the notes so that he or she could decide, among other things, whether liver function tests should be undertaken.[22]

30. It is not clear when Roebourne Regional Prison received the letter from Dr Bala, but a hand-written annotation at the top of the copy provided to the court indicates that it was 'Received via email on 14/7/10.' The annotation does not indicate who received the copy.

31. On 12 August 2010 the deceased was examined by Dr J Phang as recommended by Dr Bala. Dr Phang noted in EcHO that the deceased reported 'nil issues' but that he found a 'two centimetre liver edge firm'. Dr Phang stated that he had reviewed previous results which showed abnormal liver function possibly secondary to alcohol. His plan was to follow up the liver function abnormality. An appointment was made for the deceased to have fasting blood tests on 23 August 2010. That appointment was re-scheduled for 25 August.[23]

32. On 25 August 2010 the deceased attended the appointment for blood tests, but she had had tea with sugar for breakfast, so the appointment had to be re-scheduled for 27 August 2010. On that same day, 25 August 2010, the deceased applied for a temporary transfer to Greenough Regional Prison to facilitate visits from her aunt. The application was granted on 26

[22]Exhibit 1, Vol 4, Tab 112
[23]Exhibit 1, Vol 1, Tab 20

August 2010 with the transfer date being 27 August 2010.[24]

33. The EcHO notes for 27 August 2010 were entered by Clinical Nurse Treena Martin who was then engaged by the Department at Roebourne Regional Prison. At 7.49am Nurse Martin made an entry which stated that fasting bloods had been obtained prior to the transfer to Greenough Regional Prison. However, no blood test results were ever provided by a pathology lab for samples taken that day.[25]

34. Whether Nurse Martin inadvertently made the entry in error without having obtained blood samples from the deceased, or whether she took samples from the deceased and the samples or the results were lost at some stage is not entirely clear.

35. At the time, Health Services had no process by which a request made by a doctor for pathology tests would be monitored by the Department to ensure that results were provided.

EVENTS LEADING TO THE DEATH

36. Over the next two weeks or so at Greenough Regional Prison the deceased kept to herself and said very little to either prison staff or other prisoners. She spent a lot of time sleeping in her cell and, according to some fellow prisoners, she did not appear well.[26]

37. On 13 September 2010 Prison Officer Rhondda Ellison Kirby saw the deceased sitting at a table outside her unit and noticed that she had her head down and was breathing with difficulty. Prison Officer Ellison Kirby escorted the deceased to the medical unit to see Clinical Nurse Muir McPherson.[27]

[24] Exhibit 1, Vol 1, Tab 14
[25] ts 11; ts 41
[26] Exhibit 1, Vol 3, Tab 60, 62
[27] Exhibit 1, Vol 1, Tab 18

38. The deceased told Nurse McPherson that she had a headache and had been feeling dizzy. She did not look unwell to Nurse McPherson. He conducted a urine test because he suspected that the deceased was dehydrated. The test confirmed his suspicions, so he provided the deceased with paracetamol and advised her to drink plenty of fluid and to relax.[28]

39. Nurse McPherson told the court that he had no reason to think that the deceased had liver disease. Earlier liver function test results were not available to him. He said in evidence that, even if he had known that the deceased had liver disease, he would not have treated her differently because she presented with dehydration.[29]

40. When a muster check was carried out at 3.30pm that day, Prison Officer Ellison Kirby saw the deceased lying on her bed, apparently asleep. The procedure for formal musters at Greenough Regional Prison at that time did not require prisoners to stand beside their beds or outside their cell doors.[30]

41. At about 5.00pm that day the deceased was found unresponsive in her bed by another prisoner, Maxine Hill. It appeared to Ms Hill that the deceased was having a fit, so she alerted Acting Senior Officer Caroline Pizzy who attended the deceased's cell and administered oxygen to her. Prison Officer Ellison Kirby assisted and arranged for an ambulance to attend. The deceased was moaning and vomiting.[31]

42. Nurse McPherson and Registered Nurse Brian McShane attended and provided medical assistance before moving the deceased to the medical unit where her condition improved sufficiently to communicate with the nurses.[32]

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[28] Exhibit 1, Vol 1, Tab 19
[29] ts 66
[30] Exhibit 1, Vol 4, Tab 106
[31] Exhibit 1, Vol 1, Tab 18, 22
[32] Exhibit 1, Vol 1, Tab 21

43. The deceased was taken to Geraldton Regional Hospital by ambulance. There she was hypotensive and acidotic and did not respond to intravenous therapy. There was right retroperitoneal perinephric collection and pleuro pericardial effusion. She was anaemic but her liver function test results were normal. She was treated with broad spectrum antibiotics and, on the evening of 14 September 2010, was transferred by the Royal Flying Doctor Service to Perth where she was admitted into Royal Perth Hospital's intensive care unit.[33]

44. At Royal Perth Hospital the deceased's condition deteriorated, apparently from disseminated intravascular coagulopathy and multi-organ failure secondary to severe sepsis.[34] The deceased was prepared for theatre for a laparotomy, but her condition was so unstable that the surgery could not proceed.[35] She was transferred back to her bed where at 4.02am on 15 September 2010 she died following an asystolic arrest.

CAUSE AND MANNER OF DEATH

45. On 20 December 2010 Chief Forensic Pathologist Dr C T Cooke carried out a post mortem examination of the deceased. He found cirrhosis of the liver and other body organs swollen as may occur with multiple organ failure. There was increased fluid in the body cavities and swelling of the fatty tissues at that back of the abdomen, particularly around the right kidney. Microbiology showed the presence of a bacterium, Stenotrophomonas maltophilia, in the spleen, right kidney and lungs.

46. Dr Cooke concluded that the cause of death was multiple organ failure complicating likely sepsis in a woman with cirrhosis of the liver.

[33] Exhibit 1, Vol 3, Tab 95
[34] Exhibit 1, Vol 2, Tab 35, 37
[35] Exhibit 1, Vol 2, Tab 37, 39

47. I accept and adopt Dr Cooke's conclusion as the cause of death.

48. I find that the manner of death was natural causes.

QUALITY OF SUPERVISION, TREATMENT AND CARE

49. No issues arose in the evidence relevant to the quality of the *supervision* of the deceased from a security management perspective. In other words, it appears to me that no criticism can be made of the way in which the deceased was managed. In fact, that Prison Officer Ellison Kirby took proactive steps to address the deceased's potential illness when she took her to see Nurse McPherson is commendable.

50. As to the quality of *treatment and care* of the deceased, it is apparent that in hindsight a number of things could have been done better. In particular, it seems to me that the delay in obtaining liver function test results for the deceased in late August 2010 and the apparent lack of awareness of nursing and medical staff of the deceased's liver failure deserve comment.

51. The Department's 'Death in Custody Review', which is the formal name for the report authored by Mr Mudford, makes four recommendations for improving the standard of custodial management overall. All of the recommendations relate to identifying and dealing with medical or nursing issues.

52. The first recommendation relates to the Department's standing orders for prison musters and suggests that requirements be amalgamated in one standing order. The context of the recommendation is the fact that the deceased was not required to stand by her bed at the muster check at 3.30pm on 13 September 2010. Had she been required to do so, her condition might have been discovered earlier than it was. Since the

deceased's death, a requirement to that effect has been in place at Greenough Regional Prison.[36]

53. The second recommendation relates to the procedures for pathology tests for prisoners; it suggests that the Department develop a guide or checklist for nursing staff. A management review provided by the Department indicates that the Department has produced a procedure in accordance with this recommendation.[37]

54. The third recommendation suggests that EcHO be improved or replaced to enable the Health Services IT system to flag pending medical examinations and appointments. The management review states that a project to replace EcHO has been withdrawn due to funding limitations.[38]

55. Dr Carbon was asked about this issue in her oral evidence. She stated that improvements have been made to EcHO since the deceased's death, but that it still could not flag when pathology tests had been done. She said that results now go back to the doctor who ordered the tests and that weekly safety meetings are held in which the fact that results have not been received is picked up. There is also an IT administrator who checks test results to ensure that they are all followed up. If tests are ordered, follow up appointments are made for the patient, so the doctor will be made aware at the appointment if the tests were not done. Dr Carbon told the Court that the testing system and follow up has been much improved.[39]

56. The fourth recommendation relates to the disruption of a prisoner's medical care arising from transfer to another prison. The management review indicates that on 26 September 2012 the Department implemented a policy directive requiring a health assessment for any escort of a prisoner from prison to ensure the prisoner's

[36] Exhibit 1, Vol 4, Tab 106
[37] Exhibit 1, Vol 8, Tab 4
[38] Exhibit 1, Vol 8, Tab 4
[39] ts 76-77

fitness to travel. Dr Carbon indicated that the policy directive currently does not apply to internal appointments.[40] That it should seems obvious.

57. As to the Department's apparent lack of awareness of the deceased's liver disease, the evidence of Professor Olynyk was illuminating. He described the difficulty with diagnosing liver disease since patients with cirrhosis, an end stage complication of progressive liver injury, can be asymptomatic and can have normal liver function blood test results.[41]

58. Professor Olynyk suggested that benefits can be obtained from the use of a pro forma screening tool specifically for liver disease based on information provided by the patient in relation to demographics, risk factors such as alcohol use, and medication use.[42] He said that such a screening tool could be used within the prison system.[43]

59. Professor Olynyk also told the Court about the use of recently available technology that provides an effective and non-invasive test for cirrhosis of the liver. The test is generically known as tissue elastography. The testing is done with the use of portable machines that cost about $100,000. A test takes ten minutes and can be administered by anyone trained in the process. The machines, marketed as FibroScan by a French company, are being used all over the world.[44]

60. Dr Carbon was asked about the potential use of a pro forma screen and a FibroScan machine within the prison system. She indicated that health screening at prisons now identifies risk factors for liver disease. In the case of the deceased, she had many risk factors which nowadays would result in her being tested and

[40] ts 81
[41] ts 14-15
[42] ts 26-29
[43] ts 31
[44] ts 31-36

assessed for liver disease just on the basis of her alcohol use and poor nutrition.[45]

61. As to the availability of a FibroScan machine to the Department, Dr Carbon said that the Department did not have one but that prisoners were routinely sent to hospitals for FibroScan testing. She said that at some of the bigger prisons an ultrasound specialist attends every six weeks to conduct ultrasound testing. The Department conducts cost-benefit analyses which at the moment have led to the prisons sending prisoners out rather than to the Department acquiring its own machine.[46]

62. I am satisfied on the basis of the foregoing discussion that the Department has taken appropriate steps to address issues relevant to the treatment and care of the deceased in 2010.

63. Of further interest is whether, had those steps been taken prior to the deceased's last period of imprisonment, it would have been likely that the deceased would not have developed sepsis and died in the way she did.

64. Professor Olynyk, who had reviewed the Royal Perth Hospital notes for the deceased from 14 September 2010, provided a report in which he stated that it was unlikely that an intervention while the deceased was incarcerated would have prevented the ultimate outcome since the sepsis was an acute event superimposed on longstanding chronic conditions.[47]

65. As to what could have been done for the deceased had her liver disease been identified in 2010, in oral evidence Professor Olynyk said that, if the deceased could have been compliant with abstinence from alcohol, she could have been a candidate for a liver transplant. He noted, however, that in the deceased's

[45] ts 84
[46] ts 84-85
[47] Exhibit 1, Vol 5, Tab 186

circumstances that possibility may have been easier said than done. He said that what was really needed was prevention of liver disease occurring rather than dealing with end-stage diseases.[48] In the deceased's case, that prevention needed to start in 2004 after she left Royal Perth Hospital.[49]

66. As to whether the Department should have done more to assist the deceased in relation to her liver disease when she was in prison for three weeks in late 2006, it is clear from Dr Olynyk's evidence that the underlying cause of the deceased's condition was her chronic abuse of alcohol.[50] Once released to freedom, the deceased was outside the Department's influence. The deceased had received counselling about alcohol abuse, but even in 2010 she was not interested.[51]

67. In answer to the question whether anything could have been done differently for the deceased in the prison system that may have prevented her death, Professor Olynyk said that septicaemia is unpredictable. The deceased became unwell over a number of hours, so the only issue was whether her illness could have been identified a little earlier. He said that from the way the deceased was described as withdrawn, quiet and relatively non-communicative, it may have been difficult.[52]

68. Professor Olynyk said that a medical assessment had been advised but that there had been a gap until the assessment took place in August 2010. He assumed that the advice was provided in March 2010, but we know that it was July 5 2010 at the earliest and was as likely to have been 14 July 2010. The gap was therefore not substantial.

69. In any event, Professor Olynyk went on to say that a medical assessment may have found nothing, but that

[48] ts 22-23
[49] ts 24
[50] ts 22-23, 37
[51] Ex 1, Vol 1, Tab 20, 29/4/2010
[52] ts 25

we do not know. In addition, he pointed out that the liver function tests done on the deceased's blood on 14 September 2010 were normal.[53]

70. In these circumstances, I am satisfied that, to the extent that the Department's treatment and care of the deceased could have been better, there was nothing that the Department did or failed to do that contributed to the deceased's death.

CONCLUSION

71. The deceased was a young woman when she died from multiple organ failure caused by sepsis which in turn was caused to some degree by chronic liver disease associated with alcohol abuse and lack of proper nutrition.[54]

72. The investigation into the death of the deceased did not explore the reasons for the deceased's chronic alcohol abuse, but the ongoing social catastrophe related to alcohol abuse in the State's northwest, of which the deceased was a victim, is well documented.

73. The deceased was in the custody and care of the Department immediately before she died. In my view the Department could not have prevented her death

B P King
Coroner
31 January 2014

[53] ts 25, 41
[54] ts 18-19