



## FINDING OF INQUEST

*An Inquest taken on behalf of our Sovereign Lady the Queen at Adelaide in the State of South Australia, on the 20<sup>th</sup>, 21<sup>st</sup>, 22<sup>nd</sup> and 23<sup>rd</sup> days of April 2010, the 16<sup>th</sup> day of September 2010 and the 12<sup>th</sup> day of May 2011, by the Coroner's Court of the said State, constituted of Mark Frederick Johns, State Coroner, into the death of Andrew Kiltie.*

*The said Court finds that Andrew Kiltie aged 52 years, late of 27 Doradus Avenue, Hope Valley, South Australia died at Hope Valley, South Australia on the 26<sup>th</sup> day of December 2007 as a result of attributed to clozapine toxicity. The said Court finds that the circumstances of his death were as follows:*

### **1. Introduction**

- 1.1. In traditional Aboriginal culture it is customary to avoid using the first name of the deceased during the period of mourning. Instead of the first name, the word 'Kunmanara' is used. I will therefore refer to the deceased as Kunmanara Kiltie.

### **2. Cause of death and reason for Inquest**

- 2.1. Kunmanara Kiltie was aged 52 years when he died on 26 December 2007. An autopsy carried out by Dr John Gilbert five days later. In the post-mortem report resulting from that autopsy Dr Gilbert attributed the cause of death to clozapine toxicity<sup>1</sup> and I so find.
- 2.2. Kunmanara Kiltie had a number of medical conditions including anaemia, asthma, brain injury, chronic obstructive pulmonary disease, Type 2 diabetes, hypertension

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<sup>1</sup> Exhibit C21

and ischaemic heart disease. He was also being treated for psychosis and aggressive behaviour. At the time of his death he had been living in supported residential accommodation in Hope Valley, supervised by the Strathmont Centre, with assistance of 24 hour care from Disability SA. This arrangement had been in place since 2002.

- 2.3. On 1 November 2004 the Guardianship Board of South Australia made orders pursuant to section 32 of the Guardianship and Administration Act 1993 in relation to Kunmanara Kiltie. Amongst other things, the Board ordered that Kunmanara Kiltie reside in such place as his guardian - the Public Advocate - thinks fit and, secondly, the Board authorised the detention of Kunmanara Kiltie in such places as the Public Advocate might determine<sup>2</sup>. That order remained in force until Kunmanara Kiltie's death and, accordingly, he was detained under a law of the State at the time of his death. His death was therefore a death in custody within the meaning of the Coroners Act 2003 and this Inquest was held as required by section 21(1)(a) of that Act. I find that Kunmanara Kiltie was lawfully detained at the time of his death.

### **3. Background**

- 3.1. Kunmanara Kiltie was born in 1955 at Mabel Creek Station, Indulkna. He had a deprived childhood and was raised by abusive, alcoholic parents. He suffered gross neglect and maltreatment and from a very early age became addicted to petrol sniffing.
- 3.2. Kunmanara Kiltie showed evidence of disturbed behaviour from approximately the age of 11. This resulted in him being institutionalised for most of his life in boys' homes, psychiatric hospitals, security hospitals and prisons with brief intervals between detention in the community.
- 3.3. The Court received a large volume of case notes from Glenside Hospital, James Nash House, the Strathmont Centre and Modbury Hospital. These record a sad picture of Kunmanara Kiltie's life within these institutions and hospitals. In 1965 he was brought from Coober Pedy to Adelaide for outpatient treatment at the Children's Hospital. At the age of 11 he was admitted to Hillcrest Hospital but no psychiatric diagnosis was reached. He was thought to be mentally retarded with organic brain damage. He was prescribed large doses of neuroleptic medication which did not

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<sup>2</sup> Exhibit C12q, paragraph 2

appear to alter his aggressive and excessively irritable behaviours. He was discharged from Hillcrest Hospital at the age of 16 in 1971 to the Mount Barker Boys' Home, but returned to Hillcrest in the same year following disturbed behaviours such as bashing his head against walls and self mutilation.

- 3.4. He was discharged from Hillcrest Hospital in April 1974 and then spent a large number of years in prison for violent sexual offences. Alcohol was seen to be a major cause or factor in the commission of these offences.
- 3.5. During a period of imprisonment commencing in 1987, which was being served for the offences of breach of parole, burglary, assault with intent to rape and a number of other assault offences, he was referred to a management assessment panel. A number of psychiatric and psychological assessments were performed. He received psychiatric treatment and his behaviour improved. He was released on home detention in 1991 to the Indulkna community. He did not remain in the community for very long as his parole was revoked for further offending and violent behaviour including self-mutilation. He was released on parole on two further occasions but was returned again to prison in 1992 and 1993 for breaches. On 8 November 1994, the Guardianship Board made its first order for guardianship as to custody and medical and psychiatric treatment. At this time it was believed that Kunmanara Kiltie may have had a psychiatric illness, possibly schizophrenia, as well as a severe longstanding behavioural disorder. Another train of thought was that he did not have a mental health illness but an acquired brain injury and there was considerable disagreement and debate about where he should be housed as a mental health approved treatment facility was thought not to be appropriate.
- 3.6. It was clear that he was a danger to himself and others and therefore could not be released into the community. In 1997 special funding was obtained from the Department of Human Services for him to be housed in a closed ward with one-on-one special care provided by Group 4 security at Glenside Hospital. In 2001 the drug clozapine was trialled in an effort to see whether it might control Kunmanara Kiltie's aggressive and violent behaviours. Previous antipsychotics had been unsuccessful and clozapine was a last resort to improve his quality of life.
- 3.7. Fortunately, the clozapine appeared to have a significant positive impact on Kunmanara Kiltie and in August 2002 he was taking clozapine at a dose of 300mg per

day. In November 2002 his dose was increased to 400mg per day and, with the exception of a brief period approximately a year before his death, he remained on that dose until the time of his death.

- 3.8. In December 2002 Kunmanara Kiltie was moved from Glenside Hospital to reside in a specially dedicated house in Hope Valley under the auspices of the Department of Families and Communities. He continued to be cared for by the same workers who had cared for him at the Glenside Hospital. In fact, the employment of these Group 4 security staff was transferred from Group 4 to Disability Services SA to ensure continuity of care for him. Initially two workers were on duty in the house during the day and two workers during the night. That was later altered so that there was only one carer on duty during the night hours.
- 3.9. So Kunmanara Kiltie was in a property devoted entirely to him and set up for that purpose. Great care was taken in setting up the property to ensure consistency of care for him by having the Group 4 staff, with whom he was familiar, transfer their employment to Disability SA. On any view this is commendable.
- 3.10. Dr Gilbert said that clozapine is a drug of last resort for use when other antipsychotic medications are not working<sup>3</sup> and it does have some lethal side effects. However, it is quite clear that in Kunmanara Kiltie's case, clozapine resulted in a drastic improvement in his quality of life by controlling his behaviour to an extent that permitted his carers to afford him a better quality of life. The carers kept logs of events called 'house reports' and when one looks at these it can be seen that Kunmanara Kiltie went on outings, he went to the shops, he visited people he knew and was taken to places and involved in activities that he never would have enjoyed had it not been for the modifications to his behaviour brought about by the clozapine. Furthermore, he participated in daily activities of life around the house and interacted with his carers who had been with him for a long time. There is no doubt that clozapine meant, for him, a good quality of life over the years from 2002 until his death.
- 3.11. It was against that background that the treating medical practitioners made an informed decision that the benefits to Kunmanara Kiltie of taking clozapine outweighed the risks which the taking of the drug posed.

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<sup>3</sup> Transcript, page 34

- 3.12. Kunmanara Kiltie stayed in this environment until his death in December 2007. On Christmas day 2007 he was taken to his adopted mother's address<sup>4</sup> for an early Christmas lunch. The daily house report shows that Mr Deacy and Mr Baxter, two of his regular carers, were on duty and they left for Ms Karpany's house at approximately 10am. They returned to Kunmanara Kiltie's house at 12:15pm. The carers reported that although Kunmanara Kiltie was a little quiet during the visit, he was otherwise normal and they had no concerns for his welfare. On the other hand, Ms Karpany thought Kunmanara Kiltie was not very happy. She thought that he had a swollen tongue and that his mouth and head may have been sore. She believed that he did not have his normally hearty appetite.
- 3.13. The evidence of Professor Bochner was that a swollen tongue was not amongst the known side effects of clozapine. At autopsy, Dr Gilbert noted the tongue to be of normal size and no other abnormalities about Kunmanara Kiltie's mouth were noticed. On balance, I believe that Ms Karpany may have been mistaken in her recollection about Kunmanara Kiltie's tongue and possible soreness of his head.
- 3.14. After arriving back at his house, Kunmanara Kiltie had Christmas lunch and his medications. At 6pm he was given another dose of medication and ate a small dinner. There was a change in the carer staff with Mr Stephens beginning the evening shift. At 8:30pm Mr Stephens gave Kunmanara Kiltie four clozapine tablets, each of 100mg, to make up his daily dose. This was the usual time for the administration of that medicine and the medicine was dispensed from the Webster pack prepared by the Modbury Hospital pharmacy for that purpose. Kunmanara Kiltie went to bed at approximately 9:30pm. His room was monitored by CCTV and Mr Stephens recorded in the daily house report that Kunmanara Kiltie got out of bed twice to go to the toilet, once at 11:10pm and once at 11:50pm. At 3:50am, according to the daily house report, Mr Stephens noted via CCTV monitor that Kunmanara Kiltie appeared to be lying in the same position. Mr Stephens made a physical check on Kunmanara Kiltie and noted that there were no signs of breathing, no pulse and that his hands were cold to touch. He was lying on his back on top of the bed with his left leg lying over the side of the bed. Mr Stephens called the Strathmont Centre and then the ambulance. The South Australia Ambulance Service arrived at 4:13am and an

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<sup>4</sup> Jan Karpany

intensive care paramedic declared Kunmanara Kiltie to be deceased at 4:25am on 26 December 2007.

#### **4. Findings at post-mortem**

- 4.1. At post-mortem Dr Gilbert noted that there was pulmonary oedema and congestion in keeping with failure of the left ventricle of the heart. He also noted that there was mild dilation of the cardiac chambers and that the heart was enlarged. He noted that all three coronary arteries showed narrowing due to deposits of atheroma. The left-hand descending artery was 70% occluded and the other two were 50% occluded<sup>5</sup>. Dr Gilbert gave evidence that if it were not for the toxicological result, which showed an abnormally high level of clozapine, he would have ascribed death to congestive cardiac failure due to ischaemic and hypertensive heart disease, having regard to Kunmanara Kiltie's history of hypertension<sup>6</sup>. This was because the oedematous lungs were indicative of possible heart failure in the days leading up to Kunmanara Kiltie's death and the congestion of the liver was evidence of the same thing<sup>7</sup>. Dr Gilbert was asked about the level of clozapine found at autopsy. He discounted the results from blood taken at autopsy due to the phenomenon of post-mortem redistribution. However, he said that liver tissue was tested revealing a level of 45mg per kilogram of clozapine which was considered to be within the lethal range<sup>8</sup>. Dr Gilbert said that, unlike blood tests taken at autopsy, liver levels do not change substantially after death<sup>9</sup> and therefore the reported level ought to reflect the concentration that was present in life.
- 4.2. Dr Gilbert said that the toxic effects of clozapine include drowsiness, delirium, coma, tachycardia, hypotension, respiratory depression, seizures, lethargy, areflexia, cardiac arrhythmias, aspiration pneumonia, dyspnoea and respiratory failure<sup>10</sup>. Dr Gilbert considered the possible explanations for this very high level of clozapine in Kunmanara Kiltie's body. One potential explanation was an overdose of medication. However, the careful dispensation of the medication as evidenced in the records and other information available to Dr Gilbert<sup>11</sup>, suggested that it simply was not feasible

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<sup>5</sup> Transcript, page 29

<sup>6</sup> Transcript, page 30

<sup>7</sup> Transcript, page 31

<sup>8</sup> Fatalities have been reported with liver concentrations ranging from 19 to 85mg per kilogram (average 46mg per kilogram), see Exhibit C22a, Report of Professor Bocher dated 10 October 2009

<sup>9</sup> Transcript, page 33

<sup>10</sup> Transcript, page 36

<sup>11</sup> And subsequently confirmed at this Inquest

that a medication overdose had occurred<sup>12</sup>. Another possibility was that Kunmanara Kiltie had sustained hepatic or renal impairment that may have resulted in reduced metabolic clearance of clozapine<sup>13</sup>. Indeed, Kunmanara Kiltie's liver showed congestion in keeping with cardiac failure. He postulated that it was possible that the clozapine levels were going up because Kunmanara Kiltie had heart failure and the heart failure was in turn causing congestion in the liver, thus impairing the function of the liver with the result that the liver failed to clear or metabolise the clozapine at normal rates<sup>14</sup>. Dr Gilbert was asked about a liver ultrasound that was performed on Kunmanara Kiltie on 30 November 2007, less than a month before his death, which showed no focal hepatic abnormality. Dr Gilbert said that an ultrasound would not have revealed what he found at autopsy<sup>15</sup>.

- 4.3. Dr Gilbert was asked about Kunmanara Kiltie's cardiomyopathy. He was asked if the clozapine might have been a cause of the cardiomyopathy. He said that this was possible. However, Dr Gilbert was more inclined to attribute the cardiac enlargement to Kunmanara Kiltie's underlying hypertensive heart disease<sup>16</sup>. He also noted there were other potential causes in his history for the cardiomyopathy including petrol sniffing with resultant lead toxicity<sup>17</sup> and alcohol abuse<sup>18</sup>.
- 4.4. Dr Gilbert said that it would have been difficult for clinicians treating Kunmanara Kiltie to determine whether there was clozapine related heart damage because of Kunmanara Kiltie's pre-existing heart disease with the result that it would be difficult to distinguish between what might be a result of clozapine and what might be a result of ischaemic and hypertensive heart disease<sup>19</sup>. Dr Gilbert summarised the situation after noting Kunmanara Kiltie's pre-existing conditions of Type 2 diabetes, hypertension, chronic obstructive pulmonary disease, asthma, congestive cardiac failure, myocytic anaemia, alcohol abuse, brain injury, glue sniffing in the past and cognitive personal impairment with aggression and said:

'So clearly he's got a lot of problems then and he's got heart failure and evidence of liver dysfunction which could be due to heart failure although clozapine commonly produces elevations in liver enzymes as well so it can be difficult to interpret which is causing the

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<sup>12</sup> Transcript, page 37

<sup>13</sup> Transcript, page 38

<sup>14</sup> Transcript, page 39

<sup>15</sup> Transcript, pages 40-41

<sup>16</sup> Transcript, page 41

<sup>17</sup> Transcript, page 41

<sup>18</sup> Transcript, page 59

<sup>19</sup> Transcript, page 57

problem. But yes, it clearly is a very, very complex medical history and it can sometimes be difficult to tease out the particular causes for some of his problems such as his cardiac failure because he's got so many potential risk factors for cardiac disease.'<sup>20</sup>

## 5. **Cessation of smoking**

5.1. At one stage it was suggested by Professor Bochner that a cessation of smoking may have had some role to play. This was described by Professor Bochner as a cautious and tentative hypothesis<sup>21</sup>. He was referring to a phenomenon known as induction which causes an increased enzyme activity in the liver brought about by tobacco smoking. When a smoker stops smoking, induction is no longer present and this results in increased clozapine concentrations in the body and blood<sup>22</sup>.

5.2. Professor Bochner had an opportunity during the Inquest to consider the circumstances in which Kunmanara Kiltie gave up smoking. The evidence showed that he had not smoked for at least 5 or 6 weeks prior to his death. Indeed, it may well have been longer than that. This was sufficient for Professor Bochner to rule out the possible involvement of the phenomenon of induction as a contributor to Kunmanara Kiltie's death.

5.3. Professor Bochner said that the chronology of cessation of smoking would mean that the:

'... body burdens of clozapine could have actually worn off by the time of death ...'

And therefore:

'... those high body burdens which were measured or interpreted from the liver concentrations at autopsy, probably would have an alternative reason rather than smoking cessation.'<sup>23</sup>

5.4. Professor Bochner noted that the daily house records recorded that Kunmanara Kiltie was having some respiratory symptoms in the three days before his death, especially at night. He said this led him to consider that the primary pathway to death, if I can use that expression, was most likely heart related. The heart failure resulted in liver congestion with the result that before death Kunmanara Kiltie's liver was not functioning properly and was therefore less efficient in removing clozapine from the

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<sup>20</sup> Transcript, page 69

<sup>21</sup> Transcript, page 91

<sup>22</sup> Exhibit C22a, page 4

<sup>23</sup> Transcript, page 507

body. The high clozapine concentrations were probably a consequence of the failing heart<sup>24</sup>.

- 5.5. In my opinion, the evidence of Dr Gilbert, taken together with the evidence of Professor Bochner, is consistent. I consider that the correct analysis is that Kunmanara Kiltie's heart was failing for several days prior to the date of his death. During that period his liver function was severely impaired as a result of the heart failure, and the high levels of clozapine found at post-mortem were attributable to that fact. As to the actual mechanism of death, the evidence is inconclusive. Kunmanara Kiltie may have died as a result of an effect induced by the high clozapine levels that were present in his body by reason of the impaired liver function. Alternatively, he may have died as a result of the primary effects of cardiac failure. Neither Dr Gilbert nor Professor Bochner could be certain one way or the other.
- 5.6. It was suggested that the clozapine taken over a period of years may have induced cardiomyopathy. However, Professor Bochner was willing to allow that clozapine may have had some role to play in the cardiomyopathy, but he could not say that it was responsible by itself because of the additional factors underlying Kunmanara Kiltie's established heart disease<sup>25</sup>.

## 6. **Conclusion**

- 6.1. I am not critical of any aspect of Kunmanara Kiltie's care and treatment during the 5 years he enjoyed in the house at Hope Valley. Without a doubt, his quality of life was improved by the administration of clozapine. It is impossible to determine whether or not the clozapine may have shortened his life in some way. Certainly, there is no reliable evidence to that effect. There is only a hypothesis. What is certain is that if Kunmanara Kiltie had not been medicated with clozapine for the last 5 years of his life, he would not have been living in the relatively pleasant surroundings and circumstances he enjoyed during those years. More likely, he would have continued to be institutionalised and his self-harming and other disturbed behaviours would have afflicted him for the rest of his life with commensurate restrictions on his activities and enjoyment of life. In my view, the administration of clozapine in his case was justifiable and beneficial.

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<sup>24</sup> Transcript, pages 511-512

<sup>25</sup> Transcript, page 540

- 6.2. One matter of substantial concern that arose in this Inquest was the fact that Mr Stephens admitted that during the early morning of 26 December 2007, prior to his discovery of Kunmanara Kiltie having died, he had slept for some period of time, possibly as much as 90 minutes. He freely admitted this and acknowledged his fault.
- 6.3. I think it most unlikely that this shortcoming in care on the part of Mr Stephens was in any way causative of Kunmanara Kiltie's death. Had Mr Stephens noticed anything - and that is by no means certain given that Kunmanara Kiltie appears to have died in his sleep - it is highly speculative that Mr Stephens would have been able to intervene in any way that would have altered the final outcome.

7. **Recommendations**

- 7.1. I have no recommendations to make in this matter.

*Key Words: Death in Custody; Drug Overdose*

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

*Seal the 12<sup>th</sup> day of May, 2011.*

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*State Coroner*