IN THE CORONERS COURT
OF VICTORIA
AT MELBOURNE

Court Reference: COR 2010 1835

FINDING INTO DEATH WITHOUT INQUEST

Form 38 Rule 60(2)
Section 67 of the ***Coroners Act 2008***

I, PARESA ANTONIADIS SPANOS, Coroner
having investigated the death of SHANE ANTHONY JARRETT
without holding an inquest:
find that the identity of the deceased was SHANE ANTHONY JARRETT
born on 3 April, 1981
and that the death occurred on 14-15 May 2010
at 2/39 Turnberry Drive, Sunbury, Victoria 3429

from:

1 (a) MIXED DRUG TOXICITY (HEROIN, CLOZAPINE, ZUCLOPENTHIXOL, DIAZEPAM) IN A MORBIDLY OBESE MAN WITH SCHIZOPHRENIA

Pursuant to section 67(2) of the **Coroners Act 2008**, I make findings with respect to **the following circumstances**:

1. Shane Jarrett was a 29 year old single man who resided alone at the above unit, a public housing property. Mr Jarrett had a long history of mental illness and engagement with psychiatric services, a poly-substance abuse history and associated significant criminal history, and a number of medical problems including asthma, chronic obstructive airways disease, sinus tachycardia secondary to clozapine treatment and hepatitis C. From 1999, State Trustees were appointed to look after Mr Jarrett's financial affairs.

2. On 16 May 2010, Mr Jarrett's mother, Rhonda Crew contacted his close friend James Manktelow as she had been unable to contact her son for some days. Mr Manktelow arrived at his home at about 2:30 p.m., rang the doorbell and when there was no answer spoke to one of Mr Jarrett's neighbours who said she had spoken to him a few days earlier. Mr Manktelow left and returned at about 6:30 p.m. with Ms Crew. They used a spare set of keys to enter the

locked unit and found Mr Jarrett lying on his back in the hallway, obviously deceased. They called '000' and ambulance officers arrived shortly thereafter. They confirmed that Mr Jarrett had been deceased for some time.

3. Police also attended and commenced their investigations into Mr Jarrett's death. They found no signs of forced entry or a struggle. In the bathroom, they found an uncapped syringe which was full of liquid, together with a metal spoon, a small piece of scrunched up foil and a used medi-wipe swab. They observed what appeared to be a puncture mark on Mr Jarrett's upper left arm. They photographed the scene and seized a number of items. This finding is largely based on the investigation and brief of evidence compiled by one of the attending police officers, Detective Senior Constable Isaac Papadopoulos from the Hume Crime Investigation Unit. He concluded that there were no suspicious circumstances and, relying on the autopsy findings, that Mr Jarrett died as a result of natural disease and the toxic effects of drugs.

4. An autopsy was performed by Forensic Pathologist Dr Melissa Baker from the Victorian Institute of Forensic Medicine (VIFM), who reviewed the medical records and circumstances as reported by the police and post-mortem CT scanning of the whole body and advised that Mr Jarrett's cause of death is most appropriately attributed to the combined effects of natural disease and the toxic effects of drugs, as verified by the toxicologist's report. Dr Baker found no evidence of any injuries which may have caused or contributed to death and summarised her anatomical findings as *morbid obesity (BMI 49.87), marked hepatolmegaly with severe steatosis, generalized organomegaly, pulmonary oedema and congestion and needle puncture mark with underlying subcutaneous haemorrhage left cubital fossa.*

5. Dr Baker made the following comments of particular relevance to the coronial investigation of Mr Jarrett's death –

"Morbid obesity increased the risk of sudden death and many mechanisms have been proposed for this with the most likely final mechanism being a cardiac arrhythmia occurring in the context of an enlarged heart which is potentially electrically unstable. People with morbid obesity are also more likely to have sleep apnoea which can lead to right heart failure and an increased risk of cardiac arrhythmia...

Sudden death has been reported in schizophrenics due to schizophrenia alone and is thought to be a result of instability of the autonomic nervous system. In addition, atypical antipsychotics can lead to prolongation of the QT interval and predispose to fatal cardiac

arrhythmias. The deceased was being treated with clozapine which is an atypical antipsychotic. Zuclopenthixol, whilst not an atypical antipsychotic, can also lead to prolongation of the QT interval and the deceased was also being treated with this drug."[1]

6. Analysis of a post-mortem blood sample revealed morphine, codeine and 6-monoacetylmorpine (6MAM) at concentrations consistent with the recent use of heroin, clozapine at ~1.5mg/L, zuclopenthixol at ~44ng/mL, and traces of diazepam and its metabolite nordiazepam. Clozapine and zuclopenthixol are both drugs that exhibit post-mortem re-distribution so that these results may be significantly higher than concentrations during life. However, both drugs were prescribed to Mr Jarrett for treatment of schizophrenia.

7. In her statement included in the brief of evidence, Ms Crew raised concerns about her son's weight management, and in particular alleged that he had gained over 100 kg while serving his last sentence of imprisonment. She was also concerned about his smoking and food choices, and understood that some of her son's prescribed medications contributed to his weight gain.

8. While subsequent investigation of these concerns suggests that Ms Crew's recollection of her son's weight gain is inaccurate, the broader public health issues of weight gain and the appropriate medical management of psychiatric clinically ill patients are legitimate, and are sufficiently connected with Mr Jarrett's death to warrant coronial investigation.

9. Based on the available evidence, which includes medical records from Justice Health, North Western Mental Health/Mid West Area Mental Health Service (MWAMHS) and Mr Jarrett's treating general practitioners, the following facts are substantiated –

- when last incarcerated on 15 November 2006, Mr Jarrett's weight was 110 kg
- about 18 months later in April 2008, two months before parole, his weight was 118.6 kg[2]
- when paroled on 15 July 2008, he was admitted to the Acute Mental Health Residential Unit (AMRU) at Sunshine Hospital

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[1] Pages 10-11 of Dr Baker's autopsy report, page 52 of the coronial brief.

[2] Justice Health "Report on health care pre-release from custody" dated 29 August 2011, page 3 findings.

- about three months after his release from prison, on 8 October 2008, Mr Jarrett's weight was documented in the medical records at 126 kg, prior to the recommencement of clozapine

- Mr Jarrett's weight was documented as 129 kg and 130 kg respectively on 27 November and for December 2008, when "clozapine induced weight gain was documented as an issue of concern" [3]

- on 29 January 2009 a weight of 130 kg was again documented

- Mr Jarrett remained an inpatient for 10 months until his discharge on a Community Treatment Order in May 2009

- at an outpatient review on 15 May 2009, Mr Jarrett's weight was documented at 165 kg indicating a significant weight gain of 35 kg in the four-month period immediately preceding his discharge[4]

- at subsequent outpatient reviews, Mr Jarrett's weight fluctuated between 160 kg and 172 kg in the twelve month period preceding his death[5]

- at autopsy on 19 May 2010, Mr Jarrett weighed 167 kg, and at a height of 183 cm, had a body mass index (BMI) 49.87 placing him in the "morbidly obese" category.[6]

10. According to Dr Fenn's statement, the propensity for weight gain and the development of a "metabolic syndrome" on psychotropic medication is well recognized in the psychiatric literature and in the psychiatric community more generally. The threshold decision to recommence Mr Jarrett on clozapine was only made after careful consideration of his overall treatment history, as a "last resort" measure for treatment-resistant symptoms in full

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[3] Statement dated 3 November 2011, provided by Dr David Ian Fenn, Consultant Psychiatrist, Mid West Area Mental Health Service, at page 2.

[4] In a statement dated 21 November 2011, GP Dr Anthony King, noted that Mr Jarrett's weight was 134kg and 135kg respectively on 10 June and 18 June 2009 respectively, according to practice medical records. These weights appear to be aberrant and have been disregarded for present purposes.

[5] See Dr Fenn's statement – 160kg 23 June 2009; 160kg 7 July 2009; 165kg 2 September 2009; 172kg 27 October 2009; 172kg 21 January 2010; 170kg 15 April 2010.

[6] See Dr Baker's autopsy report at page 43 of the coronial brief.

knowledge of the history of sinus tachycardia (believed secondary to clozapine treatment in the past).[7]

11. The recognition and management of Mr Jarrett's obesity was clearly identified in the AMHRU Recovery Action Plan dated 15 December 2008 when he was still an inpatient, and the Individual Service Plan dated 20 October 2009 when he was an outpatient of the MWAMHS. Both plans identified encouragement of exercise and improved food choices as appropriate strategies. Apart from monitoring his weight, as noted above, staff at both AMHRU and MWAMHS offered dietary advice and education around healthy nutrition both formally and informally. To some extent, Mr Jarrett appears to have actively obstructed collaborative engagement between the MWAMHS and his treating general practitioners. While generally compliant with a regime of metabolic and cardiac monitoring appropriate for a patient on clozapine, Mr Jarrett was only minimally compliant with suggested obesity management strategies, refusing to undertake lipid testing for example because of the need to fast beforehand.

12. Having recommenced Mr Jarrett on clozapine, mindful of Mr Jarrett's obesity and limited exercise tolerance, from May 2009, Dr Fenn commenced a graduated programme of rationalising the prescribed regime of psychotropic medication. To this end, the antipsychotic amisulpride and the mood stabiliser sodium valproate were reduced in dosage and ceased between May 2009 and April 2010. Similarly, Dr Fenn reduced the clozapine dose from 425 mg in December 2009 to 375 mg in March 2010, with a plan to gradually withdraw the clozapine and continue treatment with zuclopenthixol decoanate as a fortnightly depot medication, if Mr Jarrett's mental state remained comparatively stable.

13. Mr Jarrett was already overweight when he commenced his last period of incarceration. He gained over 8 kg during his 18 month incarceration, another 8 kg in the first three months of his admission to the AMHRU at Sunshine Hospital, prior to the recommencement of clozapine, 4 kg within the first three months after recommencement of clozapine, and notably, some 35 kg in the following four months, immediately preceding his discharge on a Community Treatment Order in May 2009.

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[7] Dr Fenn's statement, page 3.

14. I accept that the need to manage Mr Jarrett's morbid obesity was recognized by his treating clinician's, that his own efforts in this regard were minimal, and that pushing him more might have jeopardised the therapeutic relationship and the co-operation required for clozapine treatment and its associated monitoring regime. However, it has to be said that the weight management strategies employed failed, Mr Jarrett's morbid obesity posed serious health risks and ultimately contributed to his death.

15. I find that the cause of Mr Jarrett's death is mixed drug toxicity involving heroin, clozapine, zuclopenthixol and diazepam, in a morbidly obese man with schizophrenia.

COMMENTS

Pursuant to section 67(3) of the **Coroners Act 2008**, I make the following comment(s) connected with the death:

1. In light of the circumstances in which Mr Jarrett died, I asked the Coroners Prevention Unit (CPU) to review any relevant guidelines and the literature regarding any association between clozapine treatment and significant weight gain.

2. The CPU advised that Victoria does not have statewide guidelines for the prevention, detection, treatment and monitoring of weight gain associated with the prescribing of psychotropic medications. However, public mental health services have specific screening tools from metabolic issues associated with the use of antipsychotic medication. Clozapine prescribing protocols require physical screening to detect cardiac disease and blood dyscrasia, but do not require screening for other medical conditions associated with clozapine-related weight gain.[8]

3. It is appropriate to note here that the 2011 Ministerial Advisory Committee on Mental Health document *Improving the Physical Health of People with Severe Mental Illness Report* is part of the Victorian Government's *Victorian Mental Health Reform Strategy 2009-2019.* The

[8] Examples of currently available clinical practice guidelines or consensus statements are – Orygen Youth Health and Headspace Australian Clinical Guidelines for Early Psychosis which include guidelines on when to use behavioural weight management (see http://epicc.org.au/eppic-clinical-guidelines); 2004 Members of the Consensus Panel for Diabetes, Psychotic Disorders and Antipsychotic Treatment: A Consensus Statement (see http://ccchip.com.au/category/guidelines/concensus); Department of Health, NSW 2009. Physical Health Care of Mental Health Consumers (see http//ccchip.com.au/category/guidelines/nsw_health_guidelines); National Guideline Clearinghouse 2009 Clinical practice guideline for schizophrenia and incipient psychotic disorder. (see http://www.guideline.gov/content.aspx?id+3415).

document contains recommendations aimed at both the Victorian and Australian governments to establish a systems approach to the prevention, detection, treatment and monitoring of the physical health of people with a mental illness across the public and private sectors.

4. The CPU noted that since the introduction and widespread use of antipsychotic medication, weight gain has been a recognized side-effect. The introduction of a typical antipsychotic medication has increased physical health problems for mental health patients. Studies show that clozapine and olanzapine have the highest rate and amount of weight gain associated with their therapeutic use, and have adverse effects on lipid and glucose metabolism. These in turn lead to an increased incidence of type 2 diabetes, hypertension and hyperlipidaemia. This is of particular concern in a population already vulnerable as regards their physical health, with cardiovascular disease being a frequent cause of death and with a life expectancy of 25 years less than the general population. Research suggests that the weight gain associated with antipsychotics commences in the first three months of treatment and continues for at least a year.

5. Regardless of the benefits of antipsychotic medications, including clozapine in particular, there are metabolic and other health consequences associated with their use and an increase in the burden of disease to the community.

RECOMMENDATIONS

Pursuant to section 72(2) of the **Coroners Act 2008**, I make the following recommendation(s) connected with the death:

1. In light of the above I recommend that the Minister for Health ensures that the prescribing of antipsychotic medications should attract adjunct processes for the prevention, detection, treatment and monitoring of the metabolic, cardiac or other disturbances associated with their use, with the aim of improving the morbidity and mortality of patients who require them for the treatment of serious mental illness.

I direct that a copy of this finding be provided to the following:

The family of Shane Anthony Jarrett

Investigator Detective Senior Constable Isaac Papadopoulos (#32906) c/o OIC Hume CIU

North Western Mental Health c/o Melbourne Health

Chief Psychiatrist

Justice Health

Office of Correctional Services Review

Concord Centre for Metabolic Health and Psychiatry

Dieticians Association of Australia

Mental Health Interest Group

Minister for Health and Minister for Ageing

The Royal Australian and New Zealand College of Psychiatrists

The Royal Australian College of General Practitioners

Signature:

PARESA ANTONIADIS SPANOS
CORONER
Date: 23 August 2012