IN THE CORONERS COURT
OF VICTORIA
AT MELBOURNE

Court Reference: COR 2014 004143

FINDING INTO DEATH WITHOUT INQUEST

Form 38 Rule 60(2)

Section 67 of the Coroners Act 2008

Findings of:	**ROSEMARY CARLIN, CORONER**
Deceased:	**ED**[1]
Date of birth:	29 September 1971
Date of death:	14 August 2014
Cause of death:	1(a) HYPOXIC/ISCHAEMIC ENCEPHALOPATHY 1(b) CARDIAC ARREST 1(c) CARDIOMEGALY
Place of death:	Bendigo, Victoria

[1] The names of the deceased and the deceased's mother have been redacted to protect their identities.

HER HONOUR:

Background

1. ED was born on 29 September 1971. He was 42 years old when he died after an unwitnessed cardiac arrest outside Vahland House Community Care Unit (**Vahland House**) in Bendigo.

2. At the time of his death ED was residing at Vahland House while participating in a rehabilitation program.

3. ED suffered from schizophrenia and Hepatitis C and had a history of obesity, hypertension and alcohol abuse.

The coronial investigation

4. ED's death was reported to the Coroner as it fell within the definition of a reportable death in the *Coroners Act 2008* (**the Act**).

5. The role of a coroner is to independently investigate reportable deaths to find, if possible, identity, medical cause of death and with some exceptions, surrounding circumstances. Surrounding circumstances are limited to events which are sufficiently proximate and causally related to the death. Coroners make findings on the balance of probabilities, not proof beyond reasonable doubt.[2]

6. The law is clear that coroners establish facts; they do not cast blame, or determine criminal or civil liability.

7. Under the Act, coroners also have the important functions of helping to prevent deaths and promoting public health and safety and the administration of justice through the making of comments or recommendations in appropriate cases about any matter connected to the death under investigation.

[2] In the coronial jurisdiction facts must be established on the balance of probabilities subject to the principles enunciated in *Briginshaw* v *Briginshaw* (1938) 60 CLR 336. The effect of this and similar authorities is that coroners should not make adverse findings against, or comments about, individuals unless the evidence provides a comfortable level of satisfaction as to those matters taking into account the consequences of such findings or comments.

8. During my investigation I reviewed the clinical management of ED with the assistance of the Coroners Prevention Unit ("CPU"). The CPU is staffed by independent medical professionals whose role is to assist coroners investigating deaths, particularly deaths that occur in a healthcare setting or where there has been prior medical attendance.

9. After considering all the material obtained during the coronial investigation I determined that I had sufficient information to complete my task as coroner and that further investigation was not required.

10. Whilst I have reviewed all the material, I will only refer to that which is directly relevant to my findings or necessary for narrative clarity.

Circumstances in which the death occurred

11. On 1 August 2014, ED was admitted as a voluntary inpatient in the rehabilitation program at Vahland House. He wanted to decrease his alcohol intake and improve medication management.

12. ED settled into Vahland House well, with no noted alcohol intake, improved self-care and insight into the effects of his drinking and sedentary lifestyle prior to his admission. He participated in the rehabilitation assessments and program with allied health, nursing and medical staff, and his drug and alcohol worker.

13. ED was reviewed by the multidisciplinary team and consultant psychiatrist Dr Mathews on three occasions after admission, including on 13 August 2014. ED had regular risk assessments, mental state examinations and physical observations during his admission to Vahland House, all of which were stable.

14. On 13 August 2014 at 6.55pm Associate Charge Nurse Tracy Lees transferred a telephone call from DER [ED's mother] to ED who was in Unit 9, his allocated unit. During the telephone call, ED told his mother he was very tired and felt unwell. It is not known precisely how long this call lasted, nor what ED did after the call ended.

15. At 7.25pm that night, a Vahland House patient told Nurse Lees that there was a man in a flak jacket lying outside. Nurse Lees and another staff nurse went outside and found ED lying face down on the ground with his arms by his side. He was unresponsive. There was a small amount of blood on the bitumen.

16. The nursing staff called triple-0 at 7.31pm. Nurse Lees checked ED's pupils, which were fixed and dilated. He was not breathing. A defibrillator was applied, but its read-out said 'no shock required', so the staff removed the defibrillator and commenced cardio-pulmonary resuscitation.

17. An Ambulance Victoria MICA unit attended the scene nine minutes after staff called triple-0. The MICA paramedics continued to perform cardio-pulmonary resuscitation on ED. He was intubated and administered intravenous adrenaline and fluids. At 8.08pm a pulse was detected, and ED was transported from the scene at 8.43pm, arriving at Bendigo Hospital Emergency Department at 8.44pm.

18. On arrival at the Emergency Department, ED had a further cardiac arrest which required resuscitation before his circulation returned. An electro-cardiogram ("ECG") was performed which indicated global ST depression and tenecteplase was administered to ED.[3]

19. ED underwent a computed tomography brain scan which showed cerebral oedema and loss of grey-white differentiation. He was admitted to the Intensive Care Unit and his family were informed.

20. On 14 August 2014 ED had two sets of clinical testing performed with brain death confirmed. He was declared deceased at 9.40pm.

21. I am satisfied that ED's medical care was reasonable in all the circumstances. There are no public health and safety issues arising from the circumstances of this death.

Identity of the deceased

22. ED was visually identified by his mother DER on 14 August 2014. Identity was not in issue and required no further investigation.

Medical cause of death

23. On 21 August 2014, Dr Malcolm Dodd, Forensic Pathologist at the Victorian Institute of Forensic Medicine, conducted an autopsy on the body of ED after reviewing a post mortem

[3] ED's ECG should global ST depression with STE ~3mm aVR and QRS prolongation. This was thought to represent a LMCA occlusion (blockage of the left main coronial artery). Tenecteplase is a thrombolytic administered intravenously after the onset of an acute myocardial infarction.

CT scan. The autopsy revealed an enlarged heart and thickened right ventricular wall, evolving cirrhosis, congested enlarged spleen and hypoxic changes to the brain.

24. Toxicological analysis of post mortem specimens taken from ED identified a metabolite of risperidone, a drug used to treat schizophrenia and psychotic disorders.

25. After reviewing toxicology results, Dr Dodd completed a report, dated 18 November 2014, in which he formulated the cause of death as '1(a) hypoxic/ischaemic encephalopathy; 1(b) out of hospital[4] cardiac arrest; and 1(c) cardiomegaly'. Dr Dodd was satisfied that ED died of natural causes. I accept Dr Dodd's opinion.

Findings

Pursuant to section 67(1) of the *Coroners Act 2008* I find as follows:

(a) the identity of the deceased was ED, born 29 September 1971;

(b) ED died on 14 August 2014 at Bendigo, Victoria, from natural causes being 1(a) hypoxic/ischaemic encephalopathy; 1(b) cardiac arrest; and 1(c) cardiomegaly; and

(c) the death occurred in the circumstances described above.

Comments

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

1. From an epidemiology and population health perspective it is recognised that the occurrence of sudden death of unknown cause in people with schizophrenia is higher than the general population.

2. According to the Schizophrenia Research Institute people with schizophrenia have 2.5 times the death rate of the general population, and life expectancy is reduced by up to 18 years. The combination of contributing factors to the mortality rate for people with schizophrenia are complex. According to a recent article:

[4] 'Out of hospital' simply refers to the fact ED was located outside of a hospital facility. Although the words do not reflect on ED's lifestyle, I have removed them from my determination of the cause of death due to family concerns.

Despite extremely high rates of suicide in schizophrenia relative to the general population, most of the excess mortality is due to death from natural causes. Circulatory and respiratory diseases contribute most to the excess mortality.

The underlying reasons for premature death from natural causes in this population are not known with certainty. Persons with schizophrenia have elevations in six leading modifiable risk factors for mortality: smoking, hypertension, raised blood levels of glucose, physical inactivity, obesity and dyslipidaemia. In addition, mortality in schizophrenia may be increased by drug and alcohol abuse, found to be disproportionately high in this population, as well as by suboptimal medical treatment and the overall social disadvantages experienced by many persons with the disorder. Adverse effects of antipsychotic medications have also been identified as a cause of excess mortality in some but not other studies.[5]

Recommendation

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

1. The Victorian Government Department of Health and Human Services promote research into the underlying reasons for and the prevention of sudden death in people with schizophrenia through means such as the multidisciplinary and cross-sectional Mental Illness Research Fund.

Publication

Given that I have made a recommendation I direct that this finding be published on the internet pursuant to section 73(1A) of the *Coroners Act 2008*.

I direct the Registrar of Births Deaths and Marriages to register the cause of death as above.

I convey my sincere condolences to ED's family, particularly his mother and long-time carer, DER.

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

DER, Senior Next of Kin

[5] Dickerson, F., Stallings, C., Origoni, A., Schroeder, J., Khushalani, S. & Yolken, R., 'Mortality in Schizophrenia: Clinical and Serological Predictors'; *Schizophrenia Bulletin* (2014) 40(4), 796-803.

The Secretary of the Department of Health and Human Services

The Office of the Chief Psychiatrist

Bendigo Health

Senior Constable Ricki Lee Turton, Form 83 officer, Victoria Police

The Registrar of Births Deaths and Marriages

Signature:

ROSEMARY CARLIN
CORONER
Date: 25 May 2017