IN THE CORONERS COURT
OF VICTORIA
AT MELBOURNE

Court Reference: COR 2015 4992

FINDING INTO DEATH WITHOUT INQUEST

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

Findings of:	Paresa Antoniadis Spanos, Coroner
Deceased:	LFM
Date of birth:	19 November 1962
Date of death:	1 October 2015
Cause of death:	Multiple injuries sustained in a motor vehicle incident (driver) in a man with a history of seizures
Place of death:	Hawthorn East

I, PARESA ANTONIADIS SPANOS, Coroner,

having investigated the death of LFM without holding an inquest:

find that the identity of the deceased was LFM

and that the death occurred on 1 October 2015

at Rathmines Road, Hawthorn East, Victoria 3123

from:

I (a) MULTIPLE INJURIES SUSTAINED IN A MOTOR VEHICLE INCIDENT (DRIVER) IN A MAN WITH A HISTORY OF SEIZURES

Pursuant to section 67(1) of the **Coroners Act 2008**, I make findings with respect to **the following circumstances**:

BACKGROUND AND PERSONAL CIRCUMSTANCES

1. LFM was a man from Ashburton who was self-employed in the construction industry and owned an excavation and construction business. He is survived by his wife, AWM, and his children, ZLM and NSM.
2. In August 2010, LFM suffered a seizure and was subsequently diagnosed with epilepsy. He experienced numerous seizures between 2010 and his death in 2015.

CIRCUMSTANCES IMMEDIATELY PROXIMATE TO DEATH

3. On 1 October 2015, at about 3.35pm, LFM was driving East on Rathmines Road in Hawthorn East, when his car[1] collided with the rear of an Isuzu tray truck that was legally parked on the left-hand side of the road. The Isuzu truck belonged to Mr Khodr Kanjo, who was nearby at the time of the collision and suffered injuries as a result.
4. Other drivers who were nearby at the time of the collision called emergency services and checked on both LFM and Mr Kanjo. They found that LFM had already passed away.
5. According to witnesses, immediately prior to the collision, LFM's car had been travelling at a speed above the speed limit when it swerved onto the wrong side of the road before veering back into the left lane, where it collided with the parked truck. The witnesses did not see any emergency steering or braking prior to the impact. A Victoria Police reconstructionist[2] calculated the speed at impact to be about 116km per hour and advised that there was no evidence of braking prior to the accident.

[1] A green Toyota Hilux utility registered to LFM's construction company.
[2] Detective Acting Sergeant Jenelle Mehegan of the Major Collision Investigation Unit, Victoria Police.

6. LFM's vehicle was later inspected by a police mechanic[3] and found to have been in a roadworthy condition. At the time of the collision, the road was dry and in good condition.

INVESTIGATION AND SOURCES OF EVIDENCE

7. This finding draws on the totality of the material the product of the coronial investigation of LFM's death. In addition to the material contained in the coronial brief compiled by Leading Senior Constable Oliver Pauli of Nunawading Highway Patrol, this also includes medical records provided by St Vincent's Hospital and LFM's treating general practitioner at the time, Dr Leo Popp, of the Poath Road Clinic.

DIAGNOSIS AND CLINICAL MANAGEMENT OF EPILEPSY

8. LFM experienced his first known seizure on 19 August 2010. He was referred by his general practitioner at the time, Dr Quoc Duong[4], to see Professor Mark Cook, a Neurologist & Epileptologist. At around this time LFM was assessed by Dr Ronnie Freilich, at Malvern Neurology. LFM's neurological examination, MRI[5] and EEG[6] results were all normal and his blood pressure was 125/80.[7] At that stage, the seizure was an isolated incident, and Professor Cook's opinion was that it was probably provoked by weeks of sleep deprivation and stress, so no medication was prescribed.[8]

9. On 24 January 2011, LFM experienced a second seizure, and on 27 January 2011 he attended an appointment with Professor Cook at his private clinic and was prescribed Epilim.[9] Further MRI and EEG scans were completed, with normal results.[10]

10. According to Professor Cook, at that time, LFM and his wife AWM both considered that there may be an alternative explanation for LFM's seizures other than epilepsy, particularly a cardiac abnormality or sleep disturbance. Professor Cook did not believe this to be the case, and explained that it was common for investigations to produce normal results between seizures.[11]

11. In a letter dated 27 January 2011, Professor Cook wrote to Dr Duong stating that he had referred LFM to a cardiologist in order to reassure LFM and AWM and to address their concerns that there may be a diagnosis other than epilepsy that was causing the seizures. The

[3] Dale Woodland, a police mechanic from the Transport Investigation Section, Mechanical Investigation Unit.
[4] A general practitioner at the Ashwood Medical Group.
[5] Magnetic Resonance Imaging.
[6] Electroencephalogram.
[7] Letter from Dr Freilich to Dr Jonothan Stevenson, Ashwood Medical Group.
[8] Statement by Professor Mark Cook dated 13 February 2016, coronial brief.
[9] Ibid.
[10] Ibid.
[11] Ibid.

letter was copied to Dr Wes Mohammed, cardiologist at St Vincent's Hospital. I have investigated whether LFM attended an appointment with any cardiologist at St Vincent's Hospital, and have been informed by the hospital that there are no records of any referrals, notes, booking details or attendances to suggest that LFM attended an appointment with a cardiologist at either the St Vincent's Cardiology Unit or the St Vincent's Heart Centre.

12. LFM experienced a further seizure in late-April 2011. According to a letter from Professor Cook to Dr Duong dated 3 May 2011, LFM had missed some doses of medication in the days prior to the seizure.[12] At around this time, LFM's medication was changed from Epilim to Topamax.[13] His condition continued to be monitored by Professor Cook throughout 2011 and, in late-December 2011, Professor Cook noted that LFM was seizure free and was tolerating Topamax well.[14]

13. In April 2011, Professor Cook referred LFM to see Dr John D. Santamaria, a specialist in Respiratory & Sleep Medicine, to determine whether sleep apnoea with nocturnal hypoxia could have been a trigger for his seizures. Dr Santamaria's investigations indicated that LFM had moderate obstructive sleep apnoea, but that this was unlikely to have been a trigger.[15] In late-July 2011, Professor Cook noted that LFM had moderate sleep apnoea, but in his opinion, this was not severe enough to account for the seizures.[16]

14. In early March 2012, Professor Cook noted that LFM remained well,[17] however, by June 2012, he had experienced some complex partial seizures.[18] As a result, his medication was increased[19] and he was referred by Professor Cook for PET[20] and CT[21] scanning of the brain. The results of the PET scan showed some minor abnormalities in the left temporal lobe, which Professor Cook believed may have been relevant to the seizures.[22]

[12] The letter dated 3 May 2011 was copied to the St Vincent's Hospital Driving Clinic and Dr Wes Mohammed, Cardiologist, St Vincent's.
[13] The letter dated 26 July 2011 was copied to the St Vincent's Hospital Driving Clinic and Dr Wes Mohammed, Cardiologist, St Vincent's Private.
[14] The letter dated 22 December 2011 was copied to Dr Wes Mohammed, Cardiologist, St Vincent's Hospital (in addition to Dr Morris Odell and Dr John Santamaria, ICU, St Vincent's Hospital).
[15] Statement by Dr John D Santamaria dated 12 May 2016.
[16] Statement by Professor Mark Cook dated 13 February 2016, coronial brief.
[17] Letter to Dr Morris Odell, VIFM, dated 6 March 2012.
[18] Statement by Professor Mark Cook dated 13 February 2016, coronial brief; Letter from Professor Cook to Dr Quoc Duong dated 21 June 2012.
[19] Statement by Professor Mark Cook dated 13 February 2016, coronial brief.
[20] A PET Scan (or Positron Emission Tomography) is a non-invasive, diagnostic examination that finds information about the activity of different parts of the body.
[21] The CT (Computer Tomography) scan is a medical imaging procedure that uses x-rays and digital computer technology to create detailed images of the body.
[22] Statement by Professor Mark Cook dated 13 February 2016, coronial brief.

15. LFM was reviewed by Professor Cook in early February 2013, by which time he had experienced a further seizure.[23] In a letter to Dr Duong, Professor Cook noted that LFM had reported one recent complex partial seizure. His dose of Topamax was increased.[24] By August 2013, LFM reported that he was well and had been seizure-free for the past six months,[25] however, medical records from LFM's general practitioner, Dr Popp, show that LFM experienced complex partial seizures in September 2013.

16. In November 2013, LFM was involved in a minor car accident, which despite causing damage to his car, he was unable to recall. According to Professor Cook, LFM had not taken his full dose of medication on the morning of the accident, and he had likely experienced a complex partial seizure.[26]

17. LFM was reviewed by Professor Cook in January 2015 and reported some minor seizures. His dose of Topamax was increased and he was also prescribed Lamotrigine. A repeat MRI and EEG were arranged, both producing normal results.

18. Following this January 2015 review, Professor Cook wrote to Dr Popp and reported that LFM had been experiencing 1-3 seizures per month between October 2014 and January 2015.[27] Professor Cook next reviewed LFM in April 2015, following which, he wrote to Dr Popp and reported that LFM had been seizure-free since the end of January.[28]

19. When reviewed by Professor Cook on 21 April 2015, LFM reported being seizure-free, and appeared to be tolerating both medications well. This was the last time LFM attended an appointment with Professor Cook.[29]

MEDICAL CAUSE OF DEATH

[23] Ibid.
[24] Statement by Professor Mark Cook dated 13 February 2016, coronial brief; Letter from Professor Cook to Dr Quoc Duong dated 5 February 2013.
[25] Statement by Professor Mark Cook dated 13 February 2016, coronial brief; Letter from Professor Cook to Dr Quoc Duong dated 6 August 2013.
[26] Statement by Professor Mark Cook dated 13 February 2016, coronial brief.
[27] Letter from Professor Cook to Dr Popp dated 20 January 2015.
[28] Letter from Professor Cook to Dr Popp dated 21 April 2015.
[29] Ibid.

20. On 8 October 2015, forensic pathologist, Dr Sarah Parsons of the Victorian Institute of Forensic Medicine [VIFM], reviewed the circumstances of the death as reported by police to the coroner, post-mortem computer assisted tomography [PMCT] scans of the whole body, and performed an autopsy. Dr Parsons' anatomical findings included multiple lacerations, bruises and abrasions, cardiac laceration, 1.5 litres of blood within the left pleural cavity, multiple rib fractures and pulmonary contusions.

21. Dr Parsons also commented that LFM had significant coronary artery disease and myocardial fibrosis, which would be in keeping with a diagnosis of ischemic heart disease. Further, that her anatomical findings suggested that LFM's seizures *may* have been due to problems with his heart, rather than epilepsy. She stated that it was impossible at autopsy to determine whether LFM had experienced an epileptic fit which lead to the accident.

22. Routine toxicological analysis of post-mortem samples revealed the anti-seizure medications lamotrigine[30] and topiramate[31], both of which were within the normal therapeutic range.[32]

23. Dr Parsons concluded that the cause of LFM's death was *multiple injuries sustained in a motor vehicle incident (driver) in a man with a history of seizures.*

24. On 12 October 2015, forensic pathologist and neuropathologist, Dr Linda Iles, also of the VIFM, performed a post-mortem brain examination. Dr Iles' neuropathological findings included foci of microscopic infarction and gliosis of varying ages within the left and right parietal watershed cortices, as well as microscopic foci of gliosis within the anterior hippocampi bilaterally. There was no evidence of traumatic brain injury. Dr Iles commented that, given the location of the microscopic cortical infarction gliosis,[33] a cardiac origin for LFM's seizure disorder *should be considered*.

FAMILY CONCERNS

25. Given the findings of Dr Parsons and Dr Iles, LFM's family raised concerns that Professor Cook did not order testing of LFM's heart to explore whether his seizures had a cardiac origin. I have met with both Dr Parsons and Dr Iles to discuss the findings in their written reports and have confirmed that they had each identified cardiac disease as a *possible*, rather than a probable, cause of LFM's seizures. I also note that, after discussions with LFM and

[30] Lamotrigine is a substituted asymmetric triazine compound used as an anticonvulsant.
[31] Topiramate is an effective anticonvulsant.
[32] Report by forensic physician, Dr Angela Sungaila, of the Victorian Institute of Forensic Medicine [VIFM], dated 10 June 2016.
[33] This refers to the reaction of brain cells to some sort of insult such as deprivation of oxygen.

AWM, Professor Cook made a referral to a cardiologist, despite his opinion that LFM's seizures were unlikely to have a cardiac origin.[34]

26. In the circumstances, I also asked the Health and Medical Investigation Team (HMIT)[35] to appraise Professor Cook's clinical management and care of LFM. The review was completed by an experienced in-house Emergency Physician who concluded that, while no specific cardiac investigations were conducted, the weight of evidence in life was that LFM's condition was neurological, and the management of LFM's condition was reasonable.

ADEQUACY OF THE VICROADS MEDICAL REVIEW

27. VicRoads was first informed of LFM's condition on 6 September 2010, by Dr Ronnie Freilich.[36] This prompted VicRoads to suspend LFM's light vehicle licence. The suspension on LFM's light vehicle licence was lifted on 4 January 2011.[37]

28. Following LFM's second seizure on 24 January 2011, he was referred by Professor Cook to the St Vincent's Driving Clinic for assessment. The outcome of that assessment was that LFM was notified in writing by VicRoads on 24 March 2011 that he was fit to drive a light vehicle but would need to provide another neurological report in 12 months' time.[38]

29. On 11 April 2012, after receiving a satisfactory neurological report from Professor Cook,[39] VicRoads wrote to LFM and informed him that he could retain his light vehicle licence.[40]

30. It appears that VicRoads was not informed of the complex partial seizures experienced by LFM in the period between leading up to June 2012.[41]

31. VicRoads was made aware of the January 2013 seizure episode, and on 19 February 2013, LFM was advised by VicRoads in writing that his licence was to be suspended from 5

[34] See paragraph 11 above.
[35] The HMIT is part of the Coroners Prevention Unity [CPU] established in 2008 to strengthen the prevention role of the Coroner. CPU assists the Coroner to formulate prevention recommendations and comments, and monitors and evaluates their effectiveness once published. HMIT is staffed by practising physicians and nurses who are independent of the health professionals or institutions involved. They assist the Coroner's investigation of deaths occurring in a healthcare setting by evaluating the clinical management and care provided and identifying areas of improvement so that similar deaths may be avoided in the future.
[36] The VicRoads form which was completed by Dr Ronnie Freilich at his second consultation with LFM on 6 September 2010.
[37] This decision was taken by VicRoads on advice of the VIFM and after receiving a report from Professor Cook advising that LFM had been seizure-free since August. The heavy vehicle restriction remained in place.
[38] This decision was taken on advice from the VIFM to VicRoads dated 18 March 2011.
[39] Professor Cook's report was received by VicRoads on 14 Feb 2012.
[40] Letter from VicRoads to LFM dated 11 April 2012. A further letter confirming this was sent on 15 May 2012.
[41] See paragraph 14 above.

March 2013.[42] The suspension was lifted on 28 March 2013[43] and LFM was informed that he needed to provide a further neurological report in 12 months' time.

32. It appears that VicRoads was not informed of the complex partial seizures experienced by LFM in September 2013.[44]

33. On 8 November 2013, Victoria Police requested that VicRoads review LFM's licence following the minor collision that he had apparently been involved in but had no memory of.[45] On 10 December 2013, VicRoads received a medical report by LFM's general practitioner, Dr Popp, and on 2 January 2014, LFM's licence was suspended for 12 months, effective 16 January 2014.[46]

34. On 8 November 2014, after receiving a satisfactory medical report from Professor Cook advising that LFM all was well and had experienced only one seizure in June 2014, VicRoads wrote to LFM and informed him that the suspension was being lifted and that a further neurological report was required in 12 months.[47]

35. It appears that VicRoads was not informed of the seizures reported to have been experienced by LFM between October 2014 and January 2015.[48]

36. On 1 October 2015, the date of the fatal collision, LFM held a current Victorian drivers licence.

37. In the course of this investigation I asked Dr Angela Sungaila, a clinical forensic physician at the VIFM, to review the operation of the system for medical review of drivers as it related to LFM and to provide a report. In her written report dated 10 June 2016, Dr Sungaila advised that the nature of the collision, preceded by uncontrolled driving and acceleration, was in keeping with LFM experiencing a seizure immediately prior to the collision.

38. Dr Sungaila outlined the role of the VIFM/VicRoads Neuro-Ophthalmology Committee, which advises VicRoads as part of the medical review process. In doing so, the Committee relies on the Austroads and National Transport Commission joint publication *Assessing Fitness to Drive*, in determining reasonable times of licence suspension. Dr Sungaila noted that, in LFM's case, there were multiple seizure episodes of which VicRoads was unaware. This meant that the default standard period of suspension established by the *Assessing*

[42] This decision was taken by VicRoads on advice from the VIFM.
[43] Letter from VicRoads to LFM dated 2 April 2013.
[44] Documented in Poath Road Clinic medical records. See paragraph 15 above.
[45] See paragraph 16 above.
[46] This decision was taken by VicRoads on advice from the VIFM.
[47] This decision was taken by VicRoads on advice from the VIFM.
[48] See paragraphs 17 and 18 above.

Fitness to Drive was often not applied. Dr Sungaila also noted that VicRoads was unaware of LFM's sleep apnoea.

CONCLUSION

39. I find that LFM, late of Ashburton, died at Hawthorn East on 1 October 2015, and that the death was caused by multiple injuries sustained in a motor vehicle incident (driver) in a man with a history of seizures.
40. I further find that the weight of the available evidence supports a finding that LFM's erratic driving described by witnesses immediately prior to the collision indicates that he was experiencing a seizure and that this in turn caused the collision in which he sustained multiple injuries which proved fatal.
41. The evidence does not support a finding that there was any want of clinical management and care on the part of Professor Cook or LFM's general practitioners that may have caused or contributed to his death.

COMMENTS

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

1. The circumstances in which LFM died highlight the inherent limitations in the VicRoads Medical Review system. A Victorian health practitioner has no legal obligation to notify VicRoads regarding a patient who, because of a medical condition, presents a danger to themselves or the public when he or she drives a motor vehicle. For over a decade, Victorian Coroners have investigated fatal motor collisions involving medically unfit drivers and have recommended that such a legal obligation be introduced.[49] Similarly, Victorian Coroners have bemoaned the pragmatic limitations of self-reporting by drivers against their own interests.

2. In LFM's case, while VicRoads was made aware of his epilepsy diagnosis, and required him to submit to their medical review processes, VicRoads was not made aware of all seizure episodes he experienced, including those he reported to have occurred between October 2014 and January 2015, a time period reasonable proximate to the date of death.

3. The stated primary purpose of the *Assessing Fitness to Drive* publication is to increase road safety in Australia by assisting health professionals in making fitness to drive assessments of

[49] Recent findings include the finding by Coroner Jamieson in the investigation into the death of Frederick Hylla 2016/4011; the finding by Coroner Jamieson in the investigation into the death of Pamela Elsdon 2016/5554; and the finding by Coroner Byrne in the investigation into the death of Eric Fiesley 2017/2623.

their patients. Although the publication provides a comprehensive framework for medical practitioners in assessing their patient's fitness to drive, it is a guideline only and its impact is therefore limited.

RECOMMENDATIONS

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

1. With a view to reducing the number of preventable deaths, I recommend that consideration be given by the Secretary of the Department of Economic Development, Jobs, Transport and Resources and VicRoads to adopting a framework requiring mandatory reporting to VicRoads when a medical practitioner forms an opinion that a person's current medical condition renders them unfit to drive, whether for a particular period of time, or for the foreseeable future.
2. That VicRoads considers amending the VicRoads medical details form to require examining doctors to report, not just the most recent seizure as it does currently, but all known seizures which have occurred within the preceding 12 months.

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

AWM

HWL Ebsworth Lawyers on behalf of AVM

Leading Senior Constable Oliver Pauli, Victoria Police, as coronial investigator

VicRoads

Transport Accident Commission

Professor Mark Cook, Neurologist & Epileptologist

Dr Popp, Poath Road Clinic

Dr Sungaila, Victorian Institute of Forensic Medicine

Signature:

PARESA ANTONIADIS SPANOS
CORONER

Coroners Court of Victoria

Date: 18 December 2018