IN THE CORONERS COURT
OF VICTORIA
AT MELBOURNE

Court Reference: COR 2012 4544

FINDING INTO DEATH WITHOUT INQUEST

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

I, CAITLIN ENGLISH, Coroner having investigated the death of Michael Justin Nicoll

without holding an inquest:
find that the identity of the deceased was Michael Justin Nicoll
born on 12 August 1976
and the death occurred on 25 October 2012
at Cabrini Hospital, 183 Wattletree Road, Malvern
from:

1 (a) MULTIORGAN FAILURE COMPLICATING STREPTOCOCCUS PYOGENES SEPTICAEMIA

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

1. I have had the carriage of this investigation since the retirement of Coroner Spooner in February 2014.

2. Michael Nicoll was 36 years of age at the time of his death. Mr Nicoll resided with his partner, Colin Tyrus Brighton East. Mr Nicoll worked as a general manager and was described by his mother as a kind and generous person with a great sense of humour.

3. Prior to 18 October 2012, Mr Nicoll was generally in good health.

4. As part of the coronial investigation, I have relied materials including Mr Nicoll's medical records from Cabrini Hospital, letters of concern from Mr Tyrus and family members, the transcript of the meeting between Mr Tyrus and Cabrini Health on 8 November 2012, a statement by Dr Jiun Kae Pui, correspondence and materials from Cabrini Health, correspondence from the Australian Health Practitioner Regulation Agency, the Medical

Examiner's Report from the Victorian Institute of Forensic Medicine and a report obtained by Mr Nicolls' family by Associate Professor John Raftos. I have drawn on all of this material as to the factual matters in this finding.

Events Proximate to Death

5. On 20 October 2012, at approximately 10.15pm, Mr Nicoll attended the Cabrini Hospital Emergency Department (ED) accompanied by Mr Tyrus. Medical records indicate that he presented with a two-day history of diarrhoea, nausea and vomiting.

6. Mr Nicoll was examined by Dr Jiun Kae Pui, the ED registrar. Mr Nicoll was dehydrated and treated with intravenous (IV) hydration and oral hydration once his nausea abated. The IV treatment consisted of four litres of normal saline given over four hours.

7. Dr Pui formed the opinion that Mr Nicoll was suffering gastroenteritis and administered ondansetron, an anti-emetic medication.

8. Due to continued episodes of diarrhoea, Mr Nicoll was placed in an isolation room.

9. At approximately 3am, Mr Nicoll reported experiencing difficulty passing urine. Given Mr Nicoll's age, Dr Pui considered an indwelling catheter to be inappropriate and 5mg of diazepam was administered. Mr Nicoll reportedly passed urine within one hour, however his urine output was not measured.

10. Dr Pui stated that the results of Mr Nicoll's blood test showed elevated creatinine levels confirming Mr Nicoll's dehydration. Dr Pui noted the low platelet count, but did not assess it as a cause for concern.[1]

11. The last set of ED observation records at 3.00am show Mr Nicoll was persistently tachycardic, although his temperature and blood pressure had returned to normal limits.

12. Mr Nicoll was discharged from the ED at approximately 4.30am on 21 October 2012. Mr Tyrus expressed his concern at Mr Nicoll's discharge, given his condition and continuing episodes of diarrhoea.

13. The medical notes show that a stool and urine samples had been ordered, however the samples were not taken prior to Mr Nicoll's discharge.

14. Mr Nicoll's condition did not improve at home and he returned to the Cabrini Hospital ED on 22 October 2012.

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[1] Statement of Dr Pui dated 12 August 2013, 2.

15. Mr Nicoll presented with septic shock, four day history of fever, vomiting and bloody diarrhoea. A CT scan was conducted and Mr Nicoll was transferred to the Intensive Care Unit (ICU).

16. No source of infection was apparent on clinical examination. Mr Nicoll was treated with broad spectrum antibiotics.

17. Mr Nicoll was subsequently diagnosed with streptococcus pyogenes septicaemia.

18. Despite aggressive life support treatment, Mr Nicoll continued to deteriorate and a decision for palliation was made.

19. On 25 October 2012, Mr Nicoll developed asystole. A decision was made not to resuscitate and Mr Nicoll subsequently died.

Post Mortem Examination

20. A post mortem autopsy was conducted by Forensic Pathologist Dr Heinrich Bouwer at the Victorian Institute of Forensic Medicine on 29 October 2012. Dr Bouwer formulated the cause of death. I accept his opinion. Dr Bouwer noted that:

"*At autopsy there was evidence of multi-organ failure. The lungs were heavy, congested and showed diffuse alveolar damage. There were generalised oedema, pleural effusions, jaundice, peripheral lung infarcts and thromboemboli, erythematous skin rash, in keeping with a diagnosis of multi-organ failure due to severe sepsis. A source of the streptococcus pyogenes infection was not identified.*"[2]

21. Professor Catriona McLean from the Alfred Hospital reviewed the large intestinal slides for a second opinion. Dr McLean noted:

"*Although the features raised the possibility of an inflammatory bowel disease, in particular Crohn's disease, the overlying mucosa appeared normal although autolysed. The Chronic inflammation is therefore of uncertain significance and non-diagnostic.*"[3]

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[2] Autopsy Report, 13 of 14.

[3] Autopsy Supplementary Report, dated 29 May 2013, 1 of 1.

Cabrini Hospital Internal Investigation

22. On 8 November 2012, a meeting was held between Cabrini Health staff and Mr Nicoll's family, namely Mr Tyrus, and his support person, Mr John Fasham.

23. Associate Professor Simon Woods, Executive Director Medical Services – Cabrini Health, Dr Michael Ben–Meir, Director of Emergency Department and Angela Doherty were in attendance. Minutes of the meeting indicate a discussion took place in relation to Mr Tyrus's concerns, particularly concerning Mr Nicoll's first presentation to the Cabrini Hospital ED. The notes also indicate:

'A/Prof Woods acknowledged Michael should have been admitted to the hospital. His clinical picture of dehydration, severe diarrhoea, nausea, fever, high pulse rate and his blood results would have been enough reason to admit him. A presumptive diagnosis of gastroenteritis or colitis would still have been made initially. However; as a result of an error of judgment, Michael was discharged and for that Cabrini is extremely sorry."[4]

24. Cabrini Health also undertook a review. Their advice to Mr Nicoll's family indicated this review had two parts.

25. The first part was the Clinical Practice Review. This review examined Dr Pui's decision making at the time of Mr Nicoll's initial presentation to Cabrini Hospital ED and the decision to discharge Mr Nicoll on 21 October 2012.

26. The review panel comprised three independent senior Emergency Medicine Physicians from the Australasian College of Emergency Medicine. The panel was chaired by Associate Professor Dr Simon Woods.

27. The review panel concluded that it was not reasonable to expect Dr Pui to have made the specific diagnosis of streptococcus pyogenes. It found however, that Dr Pui had erred in his decision to discharge Mr Nicoll rather than admitting him for further monitoring and that '*there were clinical features to support admitting Michael to the hospital.*'[5]

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[4] Transcript of Meeting between Cabrini Hospital and Mr Tyrus held 8 November 2012, 2 of 4

[5] Letter from Cabrini Hospital to Mr Tyrus dated 10 January 2013, 1 of 3.

28. Dr Pui willingly participated in the Clinical Practice Review and fully accepted the review committee's findings.[6] It was found that he '*demonstrated a sound knowledge of all the relevant clinical issues and there was no evidence of a knowledge deficit.*'[7]

29. Dr Pui's performance was monitored and he participated in close supervision to review all patients discharged from emergency department under his care. Dr Pui stated:

'Other than risk management, this was also aimed to provide further teaching and learning opportunities for me. All patients that I have discharged from the Emergency Department for the following 6 months were logged ...after review by an independent emergency physician not involved in the individual patient care.'[8]

30. The second part of the review comprised the Clinical Outcomes Committee Review. This committee is concerned with issues relating to systems and processes of care. As part of the investigation; '*we thoroughly reviewed all related policies and procedures, have spoken in depth to all staff working that night to better understand the hour by hour journey of Michaels' progress and treatment, examined the copy of the medical record...and reviewed our existing patient admission system (PAS) and pathology systems and processes.*'[9]

31. Three domains were reviewed and actions were recommended. The first involved the Emergency Department and the development of the "*Emergency Department Safe Patient Discharge Program*", which has subsequently been implemented.[10] The second involved pathology systems to improve the notification process of phoning abnormal pathology results to the requesting doctor. The protocol has been reviewed and all scientists reminded of the need to contact medical staff if any results meet the criteria for phone notification. Thirdly, the process for copying medical records for the coroner has been reviewed and clarified.

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[6] Statement Dr JK Pui dated 12 August 2013, p 3.

[7] Letter from Cabrini Hospital to Mr Tyrus dated 10 January 2013, 2 of 3.

[8] Statement Dr JK Pui dated 12 August 2013, p 4

[9] Letter from Cabrini Hospital to Mr Tyrus dated 10 January 2013, 2 of 3.

[10] Letter from Cabrini Hospital to Mr Tyrus dated 10 January 2013, 2 of 3: The Emergency Department Safe Discharge Program builds on existing protocols, policies and orientation packages for emergency department staff. The program covers expectations for all staff(medical and nursing) in respect to care planning, including admission and discharge criteria and review processes, documentation and escalation of concerns. The program also implemented a review process for discharge decision making.

32. Cabrini Health confirmed in correspondence to Mr Nicoll's father, Mr Jim Nicoll, that the *Emergency Department Safe Discharge Program* will be evaluated by the hospital's Emergency Department Operations Committee.[11]

Corners Prevention Unit (CPU)

33. The Coroners Prevention Unit, Health and Medical Team (HMIT)[12] conducted a review of the care provided by Cabrini Hospital ED. The review concluded that the care and discharge planning provided by Dr Pui was inappropriate given Mr Nicoll's presentation. Dr Pui and Cabrini Hospital have acknowledged the shortcomings and Dr Pui has undergone supervision and training following the incident. The review found it was reasonably likely that a more prolonged admission to hospital and further investigation and therapy may have prevented Mr Nicoll's death.

Other issues raised by Mr Nicoll's family

34. Mr Tyrus stated in a letter dated 16 September 2013, his concern that a senior triage nurse had expressed to him her belief that Michael '*was too sick to go home.*'[13] This was also raised by Mr Tyrus at his meeting with Cabrini Health on 8 November 2012.

35. The notes of that meeting indicate Dr Woods responded ; '*that Cabrini is endeavouring to promote a culture of patient centred care, with a focus on safety and we encourage all staff to raise concerns...However, Cabrini will continue to up-skill the staff, review incidents and reinforce to staff that if in doubt- admit.*'[14]

36. It is noted that the *Emergency Department Safe Discharge Program* also covers documentation and escalation of concerns. I have reviewed this document and note that the program included a number of immediate initiatives to be implemented such as; vital observation checks prior to discharge, arrangement for specialist follow up where applicable, medical notes including a clear outline surrounding discharge and paediatric patients requiring review at ED or with a paediatrician rather than a GP. Further, it included several initiatives to be gradually implemented such as night duty discharge reviews, a

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[11] Letter from Cabrini Hospital to Mr Jim Nicoll dated 24 January 2013.

[12] The HMIT assist in the investigation and development of recommendations surrounding deaths occurring during the provision of healthcare. They assist in identifying factors that may help improve patient safety and risk management in such settings.

[13] Statement of Colin Tyrus, 16 September 2013, 2.

[14] Cabrini Transcript of meeting held on 8 November 2012, 3.

template on patient information sheets for admissions and discharges and follow up phone calls.

37. A report on the program on October 2013 and an updated report in November 2014, demonstrate that the follow up phone call service has successfully continued throughout 2014. The implementation of the discharge template is in its final stages and night duty discharge reforms have been made to provide extra support to the night duty doctor. These have included that from September 2014, the 8am shift commences at 7am.

38. Further inquiries were made with Cabrini Health regarding the implementation of changes in their practices following the death of Mr Nicoll. Cabrini Health's response revealed changes made to both staffing levels in the ED and training regarding completing proper documentation by medical staff.

39. On 20 October 2012, there were 11 presentations to the ED between midnight and 8 am. Dr Pui was the only emergency doctor working overnight. The usual number of presentations was six. The medical staff rostering in the ED was reviewed in light of this case and changes were made are as follows;

- The doctor rostered to work the 1pm to 8pm shift now provides evening on-call services, at the discretion of the doctor in charge, until midnight. The doctor rostered for overnight on-call will provide cover from midnight.
- The 4pm to 12am shift now extends from 4pm to 1am to provide extra support to the night duty doctor.
- The 8am to 4pm, shift now commences at 7am to provide extra support to the night duty doctor.
- These changes provide more overlap to allow more thorough handover and review of patients.
- Overnight on call services have been reviewed and the midnight on call ED Fellow now stays until less than 3 patients are waiting to be seen. Further they can be called back in certain prescribed circumstances.

40. In response to the requirement for proper documentation by medical staff, the following initiatives have been implemented;

- Registrar's case notes of the patients discharged on night duty are reviewed by the ED Consultant Emergency Physician on duty the following morning.
- An audit of medical documentation in the ED was conducted.
- Amendments have been made to the electronic Patient Information System, which is expected to be completed within 6 months. It includes a 'forcing function' to prevent discharge until a template has been completed.
- A comprehensive and updated orientation package was made available for all new medical staff working in the ED in 2013, highlighting expectations around documentation and communication.
- A mandatory video viewing was implemented for Cabrini Health medical staff in early 2014 focussing on requirements for proper clinical documentation.
- Multiple articles in relation to quality and safety issues, including proper documentation, have been written for the Medical Staff Newsletter since the death of Mr Nicoll.
- Presentations have been made regarding proper clinical documentation by the Executive Director of Medical Services & Clinical Governance.

Expert Opinion

41. The family of Mr Nicoll, together with Mr Tyrus, obtained a report from an independent ED physician, Associate Professor John Raftos. His opinion was;

'*The persistent tachycardia and the presence of band forms an metamyelocytes in Mr Nicoll's blood early on 20 October 2012 indicated that he had a serious bacterial infection that required admission to hospital, further investigation, and treatment with intravenous antibiotics. If this treatment had been provided he would, on the balance of probabilities, have survived.*'[15]

42. Cabrini Health was sent a copy of Associate Professor Raftos' report for comment. An issue was expressed regarding the accuracy of the dates referred to in the report. Further, given the time it takes for the results of blood cultures to become available, it was not conceded that correct antibiotic treatment would have commenced the morning of 21 October 2012, had Mr Nicoll been admitted on 20 October 2012.

[15] Report of Associate Professor John Raftos dated 24 February 2014.

Australian Health Practitioner Regulation Agency

43. The Australian Health Practitioner Regulation Agency advised the coroner[16] that on 11 September 2014, the Medical Board of Australia cautioned Dr Pui under section 178 of the *Health Practitioner Regulation National Law.*

44. The caution required Dr Pui to: '*...in future exercise greater care in the assessment of patients and their presenting symptoms and signs, including ensuring appropriate and timely investigation and follow up of test results and seeking assistance and advice from other health practitioners.*' Further, the caution required Dr Pui to '*...ensure in future he adheres to the Board's code of conduct in relation to adequate record keeping in particular the recording of accurate, contemporaneous patient notes.*'

FINDING

I find that unfortunately Michael Nicoll died of multi-organ failure complicating streptococcus pyogenes septicaemia.

Mr Nicoll's death may have been prevented if he had been admitted to Cabrini Hospital on his presentation on 20 October 2012. I note that Cabrini Health has since thoroughly addressed their acknowledged clinical error.

COMMENT

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

In this case, I had discretion as to whether to hold an inquest or not. The purpose of a coronial investigation into a reportable death is to ascertain, if possible, the identity of the deceased person, the cause of death and circumstances in which the death occurred.

The broader purpose of any coronial investigation is to contribute to the reduction of the number of preventable deaths through the findings of the investigation and the making of recommendations by coroners. This is generally referred to as the prevention role.

The prevention role is expressly referred to in both the Preamble and the purposes of the *Coroners Act* 2008.

[16] Email from Australian Health Practitioner Regulation Agency to the Coroners Court of Victoria dated 11/12/2014

The way in which a coroner can advance the prevention role is through report to the Attorney-General in relation to a death that has been investigated, by comment on any matter connected with the death, or recommendations to any Minister or public statutory authority or entity on any matter concerned with the death, including public health, safety or the administration of justice.

The Act also requires the coroner to avoid the unnecessary duplication of inquiries and investigations, and I have referred to the investigation undertaken by the Medical Board of Australia.

Further, in this case, there has been an internal review conducted by Cabrini Health and the concession made that an incorrect clinical decision was made by Dr Pui in his decision not to admit Mr Nicoll on 20 October 2012.

Cabrini Health review has addressed two issues. Firstly, Mr Nicoll's clinical management by Dr Pui. Dr Pui participated in the review and fully accepted the review's findings. Following the review Dr Pui has been subject to monitoring and six months supervision of his clinical practice.

Secondly, the systems and processes of care in place in the Emergency Department have also been reviewed. This has resulted in a new *Emergency Department Safe Patient Discharge Program*, as well as changes to notification of doctors by pathology staff of abnormal results.

Cabrini Health has also taken steps to implement changes to staffing in the ED and initiatives have been implemented to ensure medical staff properly document patient files.

In light of Cabrini Health's acknowledgement of the clinical error and steps taken to remedy and improve systems and processes, I took the view that the preventative role of the coroner in conducting an investigation had largely been met. I am of the view that the steps implemented by Cabrini Health will help to reduce the number of preventable deaths in the future.

I direct this finding be published on the Internet.

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

Mr Colin Tyrus

Mr James Nicoll

Mrs Samantha McNamara, Investigator, Australian Health Practitioner Regulation Agency

Ms Jennifer Radnell, Clinical Risk Manager, Cabrini Hospital

Dr Jiun Kae Pui

Signature:

CAITLIN ENGLISH
CORONER
Date: 16 December 2014