IN THE CORONERS COURT
OF VICTORIA
AT MELBOURNE

Court Reference: COR 2007 / 1741

FINDING INTO DEATH WITH INQUEST

Form 37 Rule 60(1)
Section 67 of the ***Coroners Act 2008***

Inquest into the Death of: Kylie Anne Lightfoot

Delivered On:	20 December 2013
Delivered At:	Level 11, 222 Exhibition Street Melbourne 3000
Hearing Dates:	28 - 29 October 2010
Findings of:	PETER WHITE, CORONER
Representation:	Ms E McKinnon on behalf of relatives of the deceased Mr S Cash on behalf of Dr Selvan Mr J Snowden on behalf of Southern Health
Police Coronial Support Unit	Sergeant Greig McFarlane

I, PETER WHITE, Coroner having investigated the death of Kylie Anne Lightfoot

AND having held an inquest in relation to this death on 28 and 29 October 2010
at Melbourne
find that the identity of the deceased was Kylie Anne Lightfoot
born on 10 September 1982
and the death occurred between 4 May 2007 and 8 May 2007
at 5/28 French Street Noble Park, Victoria
from:

1 (a) DIABETIC KETOACIDOSIS
1 (b) DIABETIC MELLITUS

in the following circumstances:

8. Kylie Anne Lightfoot (here on referred to as Kylie) was a 24 year old woman who lived alone in Noble Park and worked for the RACV in customer service. She had two older sisters, Wendy and Carolyn and had a close relationship with her mother, Judy. At the age of 12 she was diagnosed with type one diabetes.[1]

9. Judy Lightfoot outlined that throughout her teenage years Kylie had reasonable control of her diabetes.[2] She would sometimes have low blood sugar and her mother would give her a sugary drink to get her blood sugar levels back up again.[3] Her mother also reported that there were times when Kylie's blood sugar level would be too high and she would usually get very tired, thirsty and then fall asleep.[4] This was happening more when Kylie was in her late teens.[5]

10. According to Judy, Kylie was seeing endocrinologist Dr Howard Zeimer at the Monash Medical Centre for the management of her diabetes when she was diagnosed.[6] Kylie was seeing Dr Zeimer approximately every three months.[7] Every time she saw this doctor,

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[1] Statement of Judy Lightfoot, Exhibit 2, p1

[2] Ibid

[3] Ibid

[4] Ibid

[5] Ibid

[6] Ibid

[7] Ibid

Kylie would have a blood test that indicated her average blood sugar level for the preceding months.[8] Kylie's mother reported that she had to take Kylie to emergency twice for high blood sugar.[9]

11. In November 2005, Kylie moved out of her mother's home and into a boarding house in Clayton.[10] Kylie was in a relationship with a man and had less contact with her mother. In early 2007 she moved into her house in Noble Park where she lived alone and in the few weeks before Kylie's death became closer to her mother again.[11]

February 2007 admission to hospital

12. On 5 February 2007, Kylie was admitted to Dandenong Hospital for hyperglycaemia.[12] Kylie had attended at Dr Parijha Selvan's practice and she was sent by Dr Selvan to Dandenong Hospital Emergency Department.[13] She was discharged on 7 February 2007.

13. Diabetes Educator Amy Louise Cowan provided a statement to the Court detailing her involvement with Kylie after her hospital admission.[14] According to her statement in the inquest brief, which I accept, Ms Cowan saw Kylie on 9 February 2007. During the education session they discussed blood glucose monitoring and how to manage her diabetes when she was sick. She was also given a new blood glucose meter and was shown how to use it. The meter provided was an Abbott Diabetes Care Xceed meter and it had the technology to measure ketones. This enabled Kylie to manage her diabetes at home on days when she was sick and more prone to high blood sugar levels and adjust her insulin dose as required for the prevention of diabetic ketoacidosis. Ms Cowan's statement reports that she discussed with Kylie how to prevent diabetic ketoacidosis. Kylie had also started on a new insulin regime which was reviewed by the diabetes educator.[15]

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[8] Ibid

[9] T:34:7

[10] Statement of Judy Lightfoot, Exhibit 2, p3.

[11] Ibid

[12] Statement from Amy Louise Cowan, p15 of Inquest brief. Hyperglycaemia occurs when blood sugar levels become too high.

[13] T:59.10. Dr Selvan was cross examined about whether she did send Kylie to the emergency department as there was no note of this in her medical records for 5 February 2007 however given that Kylie did go to the Emergency Department I accept that it is most likely Dr Selvan sent her there.

[14] Statement from Amy Louise Cowan, p15 of Inquest brief.

[15] Judy Lightfoot also reported that Kylie was on a new insulin regime T:38:27

b. On examination, Dr Selvan found signs of a mild virus infection in her throat, but her chest was clear, her abdomen was soft with no acute localised tenderness.[27] She was not dehydrated and her vital signs were normal. Dr Selvan advised Kylie that she may have abdominal colic and prescribed Amoxil, Buscopan and Maxolon.[28]

c. Dr Selvan performed a urine dip test but did not record the results in Kylie's patient record.[29] Her written and oral evidence is that the results of the dip test showed that there was sugar in her urine but no nitrate or ketone.[30] Dr Selvan's evidence was that she could not test Kylie's blood sugar level as her glucometer was broken so she told her to go straight home and perform her blood test and take her insulin.[31] She also advised that if she was not feeling well or that the test revealed high sugar levels she should call an ambulance and go to hospital without delay.[32] Dr Selvan gave evidence that Kylie was a fairly well patient that could communicate easily with her and therefore she did not doubt that Kylie would take her advice.[33]

d. Dr Selvan's evidence is that she asked Kylie about her diabetes in general terms, that is whether she was taking care of her diabetes and taking her insulin properly, to which Kylie answered yes.[34] Dr Selvan did not have any concerns after asking those questions.[35] When questioned whether Kylie was displaying any symptoms which may have indicated a problem with her diabetes, Dr Selvan replied that there was nothing at all.[36] She stated that if the urine dip test was positive for ketone, she would have sent Kylie to hospital, as she did in February 2007.[37]

e. At no time during Dr Selvan's consultations with Kylie did she contact Kylie's diabetes specialist but she did assume someone was taking care of her diabetes. Dr

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[27] Patient record, Exhibit 3A for Friday May 4 2007

[28] Statement of Dr Parijha Selvan, Exhibit 3

[29] I accept that the patient care notion 'urine dip' refers to the urine strip dip test.

[30] T57:28

[31] Statement of Dr Parijha Selvan, Exhibit 3

[32] Ibid

[33] T68: 1-5

[34] T60:18-26

[35] Ibid

[36] T63:26-28

[37] T155:10

14. According to Ms Cowan, Kylie was encouraged to maintain phone contact with the Diabetes Nurse Educators at Dandenong Hospital and was given a 24 hour contact number for the endocrinology registrar at the hospital.[16]

15. Kylie was given an appointment at the Dandenong Diabetes Support Service however she failed to attend clinic appointments on 8 November 2006, 4 December 2006, 21 March 2007 and 18 April 2007. [17]

4 May 2007 consultation with Dr Selvan

16. On 4 May 2007, at approximately 4.45pm, Kylie went to the Diane Dandenong Plaza medical centre and saw Doctor Parijha Selvan.[18] Doctor Selvan provided a statement to the Court[19] and appeared at the inquest to give evidence of her contact with Kylie on this day.

17. Dr Selvan's written and oral evidence about the consultation with Kylie is summarised as follows:

    a. Kylie presented to the clinic to obtain a medical certificate.[20] Dr Selvan had seen Kylie on four occasions prior to 4 May 2007.[21] Kylie told Dr Selvan that she had been to the hospital the day before with stomach pain but she did not get to see anyone after waiting for a few hours and went home.[22] She had also vomited the day before but was not vomiting on 4 May 2007.[23] She had slept until 11am that morning.[24] Kylie described pain in the lower stomach on the left side and lower back and leg.[25] She had not checked her blood sugar levels for the day or taken her insulin for the day.[26]

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[16] Statement from Amy Louise Cowan, p15 of Inquest brief

[17] Ibid

[18] Patient record of Kylie Lightfoot as at 14 March 2008, Exhibit 3A

[19] Dr Selvan's statement was dated 14 March 2008, not 14 August 2008 as submitted by Counsel for the family.

[20] Statement of Dr Parijha Selvan, Exhibit 3

[21] Dr Selvan's statement indicated that she had seen Kylie on three occasions, however in cross examination and relying on the patient record it is clear that she saw Kylie on four occasions prior to 4 May 2007.

[22] Statement of Dr Parijha Selvan, Exhibit 3

[23] T62:3

[24] Statement of Dr Parijha Selvan, Exhibit 3

[25] Patient record, Exhibit 3A for Friday May 4 2007

[26] Statement of Dr Parijha Selvan, Exhibit 3

Selvan's evidence was that she did not have any concerns about her diabetes control.[38]

4 May to 8 May 2007

18. Police investigation revealed that on 4 May 2007 Kylie called Dale Collins, a nurse who had met Kylie back in February 2007.[39] The police member who spoke to Mr Collins made a note of his conversation him. This note recorded that Kylie called Mr Collins to complain of severe stomach cramps and had been to hospital but had to wait so left and that she had been taking Panadol. The note also indicated Mr Collins advised her to go back to hospital or to a doctor and not take so much Panadol.

19. On 7 May 2007, Judy Lightfoot tried to call Kylie's mobile phone but she did not answer.[40] She also tried calling Kylie's home phone but it was engaged. Judy's statement also maintained that a neighbour had seen the Kylie's front door open on Sunday 6 May 2007.[41] On 8 May 2007, Kylie's employer called Judy and asked where Kylie was as she had not gone to work. Judy was told that on the Friday morning (4 May 2007) she had come to work but they had sent her to the hospital as she had cramps in her legs.[42] Judy went to Kylie's flat and found Kylie unresponsive on the lounge room floor. She called emergency services however Kylie had passed away.

20. Doctor Michael Burke of the Victorian Institute of Forensic Medicine performed a medical investigation on 14 May 2007. Dr Burke ascertained the cause of Kylie's death to be diabetic ketoacidosis in the setting of diabetes mellitus.[43] Dr Burke provided a supplementary report to his initial investigation report on 12 May 2010 as I requested his opinion on the time of Kylie's death.[44] Dr Burke noted that establishing a time of death is particularly difficult. He concluded that the presence of rigidity and absence of any

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[38] T60:27

[39] At conclusion of the inquest hearing, I requested that further investigation into the identity of Dale Collins. I received a copy of the investigating member's note of his discussion with Dale Collins. I determined that there was no need to hear evidence from Mr Collins.

[40] Statement of Judy Lightfoot, Exhibit 2

[41] Ibid

[42] This is inconsistent with the evidence of Dr Selvan that Kylie had told her she had slept until 11am that day.

[43] Statement of Doctor Michael Burke dated 15 May 2007, Exhibit 1.

[44] Supplementary Statement of Dr Michael Burke dated 12 May 2010, Exhibit 1A.

changes of decomposition would suggest Kylie passed away closer to 8 May 2007 rather than 4 May 2007.[45]

Dr Nicholas Demediuk

21. As part of my investigation I sought an expert opinion from Dr Nicholas Demediuk about whether Dr Selvan's management of Kylie on 4 May 2007 was reasonable and appropriate. Dr Demediuk provided a statement to the Court dated 16 June 2008[46] and attended at the inquest to give evidence.

22. Dr Demediuk in his statement is critical of Dr Selvan in the following areas:

    a. Dr Selvan did not obtain a definitive check of Kylie's blood sugar level by some other means. He states that this could be achieved by sending the patient home to check their blood sugar level with clear and explicit instructions of follow up action, urgent pathology testing or by immediate direct referral to the emergency department.[47]

    b. He does not give much weight to Dr Selvan's comment in her statement that Kylie go home and perform her blood sugar test and take her insulin as this is not noted in her medical record.[48]

    c. Dr Selvan's failure to record the results of the urine dip test in the medical record.[49]

    d. Dr Selvan's failure to inquire about her HbA1c, level of diabetic control, frequency of hypoglycaemia, high sugars and hospital admissions.[50]

23. Dr Demediuk gave the Court an explanation of ketoacidosis. In summary, diabetic ketoacidosis occurs when blood sugar levels are too high and the body starts to break down fat instead of sugar.[51] It is a combination of high sugar and acidosis in the blood.[52] Ketones in the blood is a marker that ketoacidosis is occurring.[53]

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[45] Ibid.

[46] Statement of Dr Nicholas Demediuk, Exhibit 4.

[47] Ibid

[48] Ibid

[49] Ibid

[50] Ibid

[51] T174:7

24. A urine dip test is used to ascertain whether there are ketones in the blood. As noted above, Dr Selvan states that she performed urine dip test on Kylie on 4 May 2007 and gave evidence that the test was negative for ketones. Dr Demediuk agreed that if the urine dip test is performed and there are no ketones present, it is a good indicator that the person is not suffering from ketoacidosis,[54] but he gave evidence that it does not exclude the patient having a critically high sugar level.[55]

25. In oral evidence, he concluded that sending Kylie home to check her blood sugar level was a reasonable course of action but that he would have made notes on the patient record that she was told to go home and check her sugar levels.[56] He also stated that it is relevant to know what the patient's diabetic control is like through asking the patient about their HbA1c result or being copied in to those test results.[57]

Dr Christopher Pearce

26. Dr Christopher Pearce was also asked to provide an opinion about whether Kylie was adequately advised or assessed by Dr Selvan. Dr Pearce provided a statement dated 20 November 2009[58] and attended the inquest to give evidence.

27. Dr Pearce's statement expressed his opinion that sending Kylie home in the absence of a functioning glucometer was a reasonable option.[59] His reason for this was that the other means of obtaining a blood sugar reading, either through an urgent pathology request or going to an emergency department, would have delayed her getting her insulin.[60] The instructions to Kylie needed to be communicated clearly and Dr Selvan needed to be satisfied that she understood them.[61]

28. Dr Pearce differed from Dr Demediuk in his assessment of whether Dr Selvan actually gave the instructions to Kylie and in his opinion, although he was critical of her notes, he

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[52] T175:26-27

[53] T176:1-2

[54] T176:15

[55] T186

[56] T186: 23-24

[57] T186:23-25

[58] Statement of Dr Christopher Pearce, Exhibit 5

[59] Ibid

[60] Ibid

[61] Ibid

considered that there was no indication that these instructions did not occur.[62] He also saw no reason to disbelieve Dr Selvan's evidence that the results of the urine dip test were negative.[63]

29. In relation to Dr Demediuk's criticism of Dr Selvan's failure to inquire about Kylie's usual care, Dr Pearce did not see this as critical in an acute situation and in his opinion, an assessment of blood glucose, the presence of ketones and the level of hydration was key.[64]

30. At the inquest, Dr Peace agreed that at the time of the consultation on 4 May, if Kylie did have ketoacidosis there would have been signs demonstrating this that a competent general practitioner would have detected.[65] If a urine dip test was done and the result was negative for ketones, he agreed that it was fair to conclude that there are no ketones present.[66]

Issues at Inquest

31. A coroner investigating a death must find the identity of the person who has died, the cause of death and the circumstances in which the death occurred.[67] Finding the circumstances in which the death occurred can, in some cases, include finding the identity of any person who caused or contributed to the death.[68]

32. The identity of the deceased and the cause of death is not in issue in this matter. However the circumstances surrounding her death and whether Dr Selvan played a contributory role was in issue. Counsel for Kylie's family submitted that I should make a finding of contribution directed at Dr Selvan. They submitted that a lack of adequate care by Dr Selvan significantly contributed to the cause of death. Counsel for Kylie's family assert that the following actions contributed to Kylie's death:

    a. Her failure to ascertain Kylie's blood sugar reading when she should have;

    b. Her failure to provide clear instructions to Kylie;

    c. Her failure to make proper inquiries about Kylie's situation;

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[62] Ibid

[63] Ibid

[64] Ibid, p 23

[65] T198

[66] T199:5

[67] *Coroners Act 2008* section 67(1)

[68] *Priest v West* [2012] VSCA 327, [94].

d. Her failure to inquire about Kylie's diabetes specialist and HbA1c reading;

e. Her failure to take adequate notes of her consultations with Kylie;

f. Her failure to provide a more thorough medical examination of her diabetic condition.

33. Counsel for the family also submitted that Dr Selvan's evidence was unreliable and should be treated with caution.[69]

34. Counsel for Dr Selvan submitted that there is no causal link between any act or omission on Dr Selvan's part and the death[70] and that her medical management of Kylie was appropriate in the circumstances.[71] Counsel submitted that I should be satisfied that on 4 May 2007, Kylie did not have ketosis and that she developed ketoacidosis at some later indeterminate point in time and that the evidence does not afford a reasonable basis for any adverse finding or comment in relation to Dr Selvan's medical management of Kylie.

COMMENTS

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

Reliability of Dr Selvan's evidence

35. Dr Selvan was cross-examined extensively on the reliability of her evidence and her memory of the consultation in the absence of detailed notes of the consultation on 4 May 2007. While I accept that her notes were not detailed and as a matter of practice management it would be desirable for her to keep more detailed notes, I have no reason to disbelieve her evidence. Her lack of notes is reflective of questionable management but does not in itself establish the cause of Kylie's death.

Dr Selvan's conduct

36. Kylie presented to Dr Selvan on 4 May 2007. In the absence of any evidence to the contrary, I am satisfied that Dr Selvan performed the urine dip test and, although she did not record the results of the test, I accept her evidence that it was negative for ketones. I

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[69] Submissions for the Lightfoot family p7

[70] Submissions for Dr Selvan p 3.

[71] Submissions for Dr Selvan p 1.

accept that given the results of the urine dip test, it is unlikely that Kylie had ketones at the time of the 4 May 2007 consultation and it is likely that she developed ketones after her visit to Dr Selvan. However, I also find that although there were no ketones, Kylie may have had a high blood sugar level that needed to be addressed promptly by Kylie taking her insulin.

37. In the absence of evidence to the contrary, I also accept Dr Selvan's evidence that she gave Kylie instructions to return home and perform her blood sugar test herself and to give herself her insulin. As I accept that she gave those instructions, it is in those circumstances I further find that Dr Selvan should have arranged a follow up with Kylie, either by way of Kylie calling the surgery with the result of her blood sugar level test or by Dr Selvan calling Kylie. This may have allowed Dr Selvan a further attempt to appropriately manage Kylie's condition.

38. In relation to the proposition that Dr Selvan should have enquired about Kylie's specialist, I find that it was not unreasonable for her to make the assumption that Kylie was seeing a specialist.

39. This case highlighted Dr Selvan's questionable practice management in that she failed to keep adequate records about communication with Kylie, consultations with Kylie or any note about Kylie's specialist. She also failed to have a working glucometer at the practice. It would have been better practice for Dr Selvan to have a working glucometer in order to test Kylie's blood sugar level at the time. Although I accept her evidence that she was confident that Kylie would follow her instructions, I am not satisfied that Dr Selvan had enough information about Kylie's condition as she presented on 4 May 2007 to be satisfied that Kylie would be able to look after herself.

40. In the circumstances it would have been appropriate for Dr Selvan to arrange a follow up call to the surgery about the result of Kylie's blood sugar test so that she could be satisfied that Kylie was not in immediate danger.

41. I leave the question of a causal connection between Dr Selvan's failure to follow up on the consultation on 4 May 2007 and Kylie's death open. I cannot be satisfied on the evidence presented, that there was a causal connection.

Finding

I find that the deceased was Kylie Anne Lightfoot. I find that she died as a result of diabetic ketoacidosis in the above circumstances.

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

Ms Judy Lightfoot, senior next of kin

Dr Parijha Selvan

Mr J Snowden on behalf of Southern Health

Sergeant G.J. McFarlane, investigating member

Signature:

PETER WHITE
CORONER
Date: **20 December 2013**