CORONERS COURT
OF NEW SOUTH WALES

Inquest:	Inquest into the death of DH
Hearing dates:	2 & 3 October 2018 at Dubbo
Date of findings:	4 October 2018
Place of findings:	Dubbo
Findings of:	**State Coroner Les Mabbutt**
File number:	2014/39614
Catchwords	CORONIAL – Cause and manner of death. Hospital care and treatment.
Representation:	Counsel Assisting the Coroner Ms D Ward instructed by Ms de Castro Lopo of the Office of General Counsel Mr T Hackett instructed by O'Brien Solicitors for Ms H B and the family of DH Ms E Winborne Aboriginal Legal Service for Mr DH, the brother of DH. Mr B Bradley of Counsel instructed by Hickson lawyers for Western NSW Local Health District Mr Barnes of Counsel instructed by Avant Law for Dr Ismail (by telephone only for a short period on 2 October)

Non publication order s 74 of the *Coroners Act* 2009

1. *That, pursuant to s.74(1)(b) of the Coroners Act 2009 (NSW), there be no publication of:*
    a. *The name of 'DH'; or*
    b. *The names of DH's family members.*
2. *That DH and his family members shall be identified by their initials in the coronial findings.*

Notation
This order is made to comply with a Non Publication Order made by the Professional Standards Committee Inquiry on 3 February 2016.

Introduction

1. DH was the oldest of 10 children and at the time of his death at 56 years of age he was the head of a large extended family. DH's family included his wife KH, siblings, his children, grandchildren, nephews and nieces.

2. In the 1990's DH was diagnosed with Type 2 diabetes and had undergone heart surgery in 2007. In 2008 DH had a defibrillator inserted. In 2009 DH retired from his position as an Aboriginal Liaison Officer with the NSW Police with the Orana Local Area Command (Dubbo). DH lived at Mendooran north east of Dubbo with his wife KH.

Events leading up to the death of DH

3. In early January 2014 DH travelled to Kempsey and Coffs Harbour with his wife and grandson. During that trip he cut his left big toe on an oyster shell walking on the beach. Several days later after swimming his toe became infected and he subsequently returned home to Mendooran

4. On 19 January DH's daughter HB noticed the cut was swollen and looked inflamed. DH was unable to put shoes on. On 21 January DH saw Dr Hussein at the Bawrunga Medical Centre in Dubbo and he was referred to the Emergency Department at Dubbo Base Hospital.

5. DH attended the Emergency Department and was seen by the Registrar. The wound was cleaned, checked and bandaged. DH was given a short course of IV antibiotics and discharged with oral antibiotics after approximately 2 hours. He was referred back to his GP. DH attended the wedding of his son on 25 January but it was noticed he remained seated most of the time, which was unusual.

6. On 28 January, DH again attended his GP in Dubbo as the infection had increased. He was sent immediately to Dubbo Base Hospital again and was admitted. On 30 January DH was reviewed by Dr Rice, a general surgeon, who decided the toe required debriding to remove the dead and infected tissue to assist the wound to heal. Whilst the surgery was not classified as emergency surgery, it was not elective. Due to DH's diabetes he was placed into the surgery list on 31 January.

7. Dr Rice conducted the operation and Dr Ismail was the allocated anaesthetist. Dr Sanaa Ismail met DH shortly before the procedure in the anaesthetic bay near the

operating theatre and conducted a pre-operative anaesthetic review. Dr Ismail determined a full general anaesthetic was required. The operation took approximately 30 minutes. Dr Rice considered the procedure had gone well and the infected tissue was removed from the toe. Dr Rice left whilst Dr Ismail and the nurse were waiting for DH to regain consciousness. Tragically that never happened. It became apparent something was wrong and DH's oxygen levels had dropped. Dr Ismail removed the laryngeal mask used during the operation to maintain DH's airway and tried to use a bag and mask on DH to assist with his breathing.

8. An alarm was sounded on the anaesthetic machine. Another doctor, Dr Rigg-Smith, an anaesthetist, was called to assist. Dr Rigg-Smith noticed that the heart was not pumping any blood. An arrest was called and other staff summoned to assist. Cardio Pulmonary Resuscitation (CPR) was commenced, adrenaline was administered and DH was intubated. A defibrillator was used as DH was in ventricular tachycardia (abnormal heart rhythm) to try and reset the heart rhythm.

9. None of the doctors at this stage were aware DH had a defibrillator inserted in his chest. At this point Dr Ismail noticed the presence of the defibrillator on the medical notes. CPR continued and Dr Bikshandi from the ICU attended. There was a return of spontaneous circulation. DH was transferred to the ICU. After 24 hours despite the return of cardiac and respiratory function, clinical signs indicated DH had suffered a non reversible hypoxic brain injury. Family members in the intensive care unit requested information and answers from doctors and medical staff about what had gone wrong. On 2 February DH's care was taken over by Dr Greenberg, the Director of Medical Services.

10. After further discussion with the family on 4 February DH was transferred to Nepean Hospital at Penrith for a second opinion regarding his condition. Following a further assessment on 6 February at Nepean Hospital, life support was turned off while family members were by DH's bedside. The defibrillator had not been deactivated. Tragically, after the family had made the difficult decision to turn off life support, the defibrillator attempted to restart DH's heart, which resulted in DH's body being lifted off the bed, in the presence of his family. DH was declared deceased at 4.30pm on 6 February 2014.

11. DH's death was reported to the Coroner and Detective Senior Constable Sue-Ellen Scott from Orana Mid Western Police District was the officer in charge of the investigation.

12. Following a review at the hospital of the events of 31 January 2014, on 20 February Dr Ismail was suspended from duty and on 26 February DH's case was referred to the Medical Council of NSW. A hearing under s 150 of Part 8 of the *Health Practitioner Regulation National Law* (NSW) was conducted on 1 April 2014 with reasons handed down on 16 May 2014. Practice conditions were imposed on Dr Ismail's registration.

13. The Health Care Complaints Commission conducted an investigation and subsequently the matter proceeded to a Professional Standards Committee Inquiry. The PSC Inquiry handed down its decision on 13 April 2016. Dr Ismail was found to have engaged in unsatisfactory professional conduct. She was reprimanded in the strongest possible terms and a series of conditions were imposed upon her registration.

The pre-operative/anaesthetic assessment by Dr Ismail

14. The preoperative assessment conducted by Dr Ismail was found by the Profession Standards Committee to be inadequate.

15. The full medical history of DH including prior heart surgery and other medical issues was not obtained from DH by Dr Ismail. The medical file was not fully reviewed. The notes from DH's General Practitioner provided to the hospital indicated the presence of the defibrillator as did the notes from nursing staff but Dr Ismail did not see them. Dr Ismail failed to ask adequate questions and failed to identify DH was fitted with a cardiac defibrillator.

The disappearance of medical records

16. The anaesthetic machine used in DH's procedure produces a print out that should be collated and entered into the medical records. The contemporaneous records produced by the anaesthetic monitoring machine were unable to be located when ICU doctors needed to review the material upon DH being transferred to that unit. Two copies were printed. One was sent to the ICU where Dr Ismail was working and the printout was placed into the back of DH's medical file. A second copy was

placed on Dr Ismail's handbag. Neither copy could be subsequently located. Dr Ismail denied seeing either copy.

17. The anaesthetic machines are reset prior to another patient undergoing surgery and the data is not retained so the data could not be retrieved in original form. The s 150 hearing was unable to resolve what happened to the print outs but stated at page 14 of the decision "*Her (Dr Ismail's) lack of concern that the anaesthetic print out was lost and her lack of real explanation for how it went missing also raise concern."*

18. An expert technician was called by the Hospital who recovered some data from the anaesthetic unit and was able to provide material from which an anaesthetic unit report was prepared.

19. This report was carefully reviewed by the Doctors involved in the s.150 proceedings, Dr Ismail was asked questions about it and it was ultimately interpreted in the s.150 determination in the following manner:

- Anaesthetic started about 9.52am and alarm went off 1 minute later when D H's oxygen levels fell from 90% to 78%.
- Dr Ismail said this concerned her as he was a morbidly obese patient so she changed oxygenation and he did respond.
- 10.03, ten minutes later, another alarm at 77% oxygen
- 10.19 oxygen at 63%
- One minute later at 10.20 it was 53%
- Dr Ismail cannot recall that reading and said she thinks that the saturation levels of 53-63% were still within the operating period, the operation was approximately 30 minutes long and at around this point the patient was transferred to his bed.
- 10.26 DH had a heart rate of only 36/minute
- Heart rate never exceeded 40/minute (resting heart rate typically around 60-100 most adults).
- 10.28 low oxygen alarm sounds at 64%
- Half a minute later at 42%
- Low oxygen alarm again sounded at 10.31 at 74%
- 10.36 blood pressure alarm sounded with blood pressure at 62 consistent with calling the cardiac arrest.

- Entries consistent with the start of CPR at 10.37

20. The decision in the s.150 proceedings included a finding that by the time the cardiac arrest was called, DH had already experienced multiple episodes of severe hypoxia and ongoing severely reduced heart beat during the course of the operation.

21. The PSC Inquiry that followed resulted in findings critical of (in summary):
    - The use of a laryngeal mask (LAM) airway Supreme instead of intubation.
    - The use of Total Intravenous Anaesthesia with propofol, which was not appropriate anaesthesia given DH's other co-morbidities.
    - Failure to adequately monitor blood pressure.
    - Failure to recognise low oxygen readings, low heart rate and that DH was in pre cardiac arrest.
    - That Dr Ismail was slow to respond to DH's deteriorating condition.

22. Dr Ismail had, by this time, admitted the particulars referred to above and that these amounted to unsatisfactory professional conduct.

23. During the course of the PSC Inquiry into DH's death Dr Ismail provided the following evidence:
    - She only became aware of DH having a defibrillator fitted after the operation had been conducted.
    - Had she been aware of the presence of the defibrillator and DH's other medical conditions she would have cancelled the surgery.
    - Some of the handwritten pre-anaesthetic assessment entries were completed after DH suffered the cardiac arrest. This included a retrospective entry by her about the presence of a defibrillator on the assessment form.

Why was an inquest held?

24. The role of the Coroner pursuant to s 81 of the *Coroners Act 2009* is to make findings regarding:
    - The identity of the deceased
    - The date and place of that person's death
    - The cause and manner of that person's death

25. An inquest was held to investigate DH's death following his care and treatment at Dubbo Base Hospital. The professional conduct of Dr Ismail regarding DH's death has already been examined and determined during the course of the PSC inquiry. It is not the role of the Coroner to determine criminal responsibility, civil liability, disciplinary action or negligence.

26. The findings of the PSC inquiry are in evidence. This inquest will examine several issues that bear on what went wrong at the hospital to prevent similar circumstances in the future.

27. Pursuant to s 82 of the Act, a Coroner has the power to make recommendations, including concerning any public health or safety issue arising out of the death in question.

Cause of death

28. The post mortem report by Pathologist Dr Lillian Schwartz recorded the cause of death as '*complications from the surgical treatment of an acute ulceration of the left big toe.'* Ischaemic heart disease, diabetes and morbid obesity were listed as contributing factors.

29. Dr Schwartz gave evidence via AVL following a review of her notes and other material including the findings of the s 150 hearing, specifically the findings of an extended period of hypoxia suffered by DH prior to the cardiac arrest.

30. Dr Schwartz found on examination evidence of hypoxic brain injury. Dr Schwartz was unable to confirm what event occurred first in the context of the surgical procedure.

31. On all the evidence presented at inquest, the decisions of the s 150 and PSC inquiries and observations made by Doctors Rigg-Smith and Bikshandi regarding DH's condition when they attended the emergency, I find that DH suffered an extended period of hypoxia during the operation prior to suffering a cardiac arrest. In addition the use of general anaesthetic and the laryngeal mask was not appropriate given DH's co morbidities.

32. I find on the evidence the cause of death was Hypoxia and cardiac arrest with contributing conditions of Ischaemic Heart Disease, Diabetes Mellitus and Morbid Obesity.

Manner of Death

33. In addition to the failure to conduct a proper pre-operative anaesthetic review, DH was a high risk patient given his other medical conditions. DH was not undergoing major surgery. The failure to properly assess his condition prior to surgery and a failure to use the appropriate anaesthetic and intubation contributed to his death. A further failure by Dr Ismail to properly monitor and respond to DH's deteriorating condition during the procedure impacted on DH's chances of recovery.

34. I find that DH's death was preventable. I find the manner of death was failure to properly assess and monitor a high risk patient under general anaesthetic on a background of existing co morbidities.

35. I turn now to the list of issues to be considered during the Inquest.

The availability of out-patient services that might have been able to assist DH with wound care (such as a diabetes nurse or wound care clinic) following his attendance at the Emergency Department of Dubbo Base Hospital on 21 January 2014 and what type of out-patient services are currently available for patients with a similar presentation?

36. Following treatment at Dubbo Hospital on 21 January 2014 DH was discharged with oral antibiotics and referred back to his GP in Dubbo. Wound care was available at DH's GP. Any available services, including DH's GP, required travel to Dubbo to access them. Mendooran is approximately 75 kilometres from Dubbo.

37. From 2010 to 2012 DH had been an outpatient at the Diabetes Foot Clinic and was visited at his home on occasion by Aboriginal Health Workers. When DH returned to his GP on 28 January 2014 he was again referred to Dubbo Hospital for review of the wound but his GP also referred him back to the Diabetes Foot Clinic for longer term follow up. Tragically, DH died before this referral could be actioned.

38. In January 2014 the following services were available to assist patients like DH:
    - A weekly Diabetes Foot Clinic at the Dubbo Hospital Diabetes Unit (conducted by a podiatrist)

- Ambulatory care unit at Dubbo Health Service for complex wounds requiring GP or specialist referral
- Community Nurses from Lourdes Hospital (Catholic Health Care) who can attend patient's homes to dress wounds. This service operated on a 30km radius from Dubbo and would not have covered DH at his address at Mendooran
- GP nurses operating from all GP practices in Dubbo who provide wound dressings

39. In 2018 three additional services are now available:

- Outreach Podiatry Clinic to attend patient's homes, this is a partnership between a Podiatrist from Peak Hill Aboriginal Medical Service and the Aboriginal Health Practitioners-Diabetes program.
- In September 2018 a High risk foot clinic was opened by the Dubbo Health Service following specific State Government funding. The new clinic has a full time podiatrist and other health professionals, dietician, social worker and diabetes educator and includes and aboriginal health worker. This service will officially open in November 2018.
- Marathon Health, a funded primary care contractor providing diabetes education and dietician services.

40. In light of what is a clear need for outpatient services for patients with diabetes and wound care I am satisfied there has been an increase in firstly, services available and secondly the structuring of those services. This is to provide patients with wound dressing, education regarding diabetes and the importance of wound care. It must be acknowledged that coverage of all small communities is unable to be achieved.

41. Decisions must be made to provide services to patients in the entire Health Service and the wider Western NSW Local Health District, which covers a substantial area. It is clear available resources do not allow for coverage at every location. I am satisfied the Dubbo Health Service has demonstrated a clear understanding of the need for an increase in outreach services and the various strategies that may be involved in providing health care to aboriginal clients. I do not consider in the circumstances of the additional state funding that has been made available and the

multi skilled purpose of the new team, to make any recommendations regarding specific disposition of those resources.

Documentation of the pre-operative anaesthetic review completed prior to DH's surgery on 31 January 2014 and any changes to the system for anaesthetic review since DH's death.

42. Dr Namrata Singh, the Director of Anaesthetics at Dubbo Hospital, gave evidence regarding practices in place in January 2014 and changes that have been made to procedures for anaesthetic review and assessments since.

43. Electronic Medical Records (EMR) are now in use at Dubbo Hospital. The paper based pre-operative anaesthetic review is still used, however information from that form and other forms used in the anaesthetic record is transferred to the electronic records.

44. A Pre Anaesthetic Assessment Protocol memo of 10 April 2017 was sent to all Anaesthetic staff and outlines requirements for anaesthetic pre-operative reviews at the hospital. This protocol is explained and provided to all new doctors during induction at the hospital

45. Except in the most life threatening emergencies, patients are not accepted on a theatre list for surgery nor brought onto the theatre floor until the patient has been seen and reviewed by an anaesthetist and approved for surgery.

46. Following a review by the anaesthetist, if the patient is in a high risk category the pre-anaesthetic assessment is placed in a 'High Risk' file that is kept separately from and in addition to the patient's medical file. All high risk patients (any patient scoring an American Society of Anaesthetic Scale (ASA) rating of 4 or 5) must be discussed/reviewed with the Anaesthetic Consultant in Charge. Depending on this review planned surgery may be delayed if indicated. The Consultant in Charge will decide the 'level' of anaesthetist who is to conduct the anaesthetic procedure and another anaesthetist available on the day of the procedure will be made aware of patient's assessment in case 'back up' is needed.

47. These new processes prohibit (except in a limited number of urgent cases) reviews in patient bays by anaesthetists just prior to surgery which occurred with DH on 31 January 2014. Further DH's case would now be reviewed by the Consultant in

Charge prior to any decision regarding surgery occurring or the type of anaesthetic to be used. This is because DH had a score of 4 on the ASA scale, identifying him as a high risk patient.

48. A hospital policy of 'Speaking up for Safety' which is a compulsory training course for all staff has been introduced. This policy allows any staff member to bypass usual protocols and report any patient safety issue to another senior staff member. For instance, a nurse may feel uncomfortable raising issues with a senior surgeon. Where that nurse has patient safety concerns in a clinical situation he or she is encouraged to report directly to, for example, the Nurse Unit Manager, who will raise it as appropriate. This is an attempt at cultural change within the Hospital, encouraging all staff to accept responsibility for patient safety even if a more 'senior' practitioner is involved.

49. I am satisfied changes to procedures regarding documentation and pre-operative anaesthetic reviews have addressed the circumstances that led to DH undergoing surgery without a properly reviewed pre-operative anaesthetic assessment.

Hospital procedures to secure important contemporaneous documents in the event of a 'reportable incident' occurring (as defined in s.20L of the *Health Administration Act* 1982).

50. Dr Singh advised current procedures provide that three designated positions are responsible for ensuring the anaesthetic machine record is properly secured at the conclusion of anaesthesia; the anaesthetist, the anaesthetic nurse and the recovery ward nurse. A copy of the machine record is to be printed and placed on the medical file prior to the patient leaving theatre.

51. It is the responsibility of the anaesthetist in the first instance. To ensure the process is properly enforced each nurse is to verify this has occurred. The recovery nurse is to check that the print out is on the file when receiving the patient into recovery from theatre.

52. Another patient cannot enter theatre and the machine is not to be reset until the record is printed out and secured on the patient's file.

53. The hospital is currently considering the availability, cost and reliability of anaesthetic machines that allow data to be retained on a hard drive. This is an

ongoing process. When a clinical incident occurs the anaesthetic record is immediately secured to ensure all documentation is retained. Importantly, no other incidents of the anaesthetic machine print out being lost have occurred since DH's death.

54. Ms Debra Bickerton, the General Manager of the Dubbo Health Service, stated any clinical incident requires the logging and creating of an Information Management System number. Staff can independently report a clinical incident. All entries on the EMR are date and time stamped.

55. Given the new procedures in place for securing of the anaesthetic machine records and the use of EMR I am satisfied procedures are now in place at the hospital to ensure contemporaneous medical records are secured and retained in accordance with statutory requirements.

Communication between Dubbo Base Hospital and Nepean Hospital about the presence of a defibrillator ATLAS +UR at time of DH's transfer to Nepean Hospital.

56. Given concerns raised by DH's family regarding the failure to disconnect the defibrillator the records provided by Dubbo Hospital to Nepean Hospital have been examined. The discharge summary from Dubbo Hospital specifically referred to an 'ICD2008' most likely signifying 'Implantable Cardioverter Defibrillator'. This was contained in the medical records that were transferred to Nepean Hospital. Further entries on several other Dubbo Hospital records transferred to Nepean indicated the presence of the defibrillator. In addition a chest x-ray was taken at Nepean Hospital on 4 February 2014 which signifies the presence of the defibrillator. I am satisfied the records transferred with DH to Nepean Hospital noted the presence of the defibrillator.

57. On the available evidence, I am unable to make any finding on why the device was not disconnected at Nepean Hospital after a decision was made to withdraw life support.

Communication between Dubbo Base Hospital and DH's family during his admission and after his death, including the role of an Aboriginal Health Worker to assist with family questions.

58. In January 2014, Dubbo Base Hospital employed two Aboriginal Health Workers (AHW) a Liaison Officer and a Patient Journey Officer, to assist Aboriginal families in interactions with the hospital. Unfortunately, they were only able to play a limited role on 31 January when DH first deteriorated. A weekend fell on 1 and 2 February 2014 and AHW's, then and now, are not available on weekends or after hours (except if ad hoc arrangements are made). Important discussions about DH's prognosis and what went wrong during his procedure were conducted in the absence of the AHWs. On Saturday 1 February, a discussion did take place with ICU staff including an aboriginal nurse but the family felt that greater involvement by an AHW would have been of great assistance.

59. The important role AHW's (now called Aboriginal Health Practitioners) fulfil in the health system was recognised by Dubbo Health Service. Ms Bickerton's evidence is that 25% of patients serviced by the Dubbo Health Service are aboriginal. That percentage varies in certain locations and across certain specialities (such as obstetrics). In Dubbo itself it is approximately 12%.

60. The two AHW positions were reviewed and the team is now comprised of three Aboriginal Health Practitioner. These positions require completion of a 2 year TAFE course and formal registration as an Aboriginal health practitioner with the Australian Health Practitioner Regulation Agency.

61. The role of this position involves:

- Involvement in any family meeting for ICU patients
- Assisting the family to understand medical terms or jargon
- Organising on behalf of the family clarification or questions to hospital staff
- Assisting with accommodation, meals or other issues.

62. There are currently two full time positions (one male and one female) and one trainee position in the Emergency Department funded at the Hospital. Despite several attempts it has not been easy to find applicants. Recruitment is still underway.

63. The situation continues that an AHP may be called in to assist a treating team on the weekend or out of hours if circumstances require, but this is not always possible.

64. It was put by both representatives for the family that a recommendation should be made to the Health Service to fund/create/employ more Aboriginal Health Workers to ensure full coverage.

65. The importance of culturally appropriate assistance to aboriginal patients and their families is of utmost importance. It became apparent during the course of the inquest that members of the aboriginal community hold a level of distrust towards the Hospital as a result of DH's death. Given the geographic restrictions and lack of alternative services, it is imperative trust is restored in what is a major public institution at Dubbo.

66. Ms Bickerton stated the Health Service, rather than specifically recruiting more AHPs, is currently targeting an increase of aboriginal health workers throughout the entire Service to provide more coverage with aboriginal staff overall. It is currently 4% of staff. The target in the first instance is 7%.

67. All staff are required to undergo specific cultural awareness training 'Respecting the Difference' that is face to face and computer based to a total of 8 hours.

68. Two difficulties lie with the making of a recommendation in this regard. The lack of an AHW in ICU specifically or hospital wide over a weekend whilst regrettable, in no way could have impacted on the cause and manner of DH's death. Secondly the Health Service has restructured and increased the positions, obviously with a funding implication. But the Hospital is presently unable to fill all positions.

69. Whilst I fully acknowledge the wish of DH's family that additional AHP positions are created and utilised at the Dubbo Hospital, I consider the current action to recruit more aboriginal staff overall, whilst still attempting to fill the newly created AHP positions is appropriate. From the evidence heard at this inquest I consider the Health Service is committed to ensuring all clients feel culturally safe when attending Dubbo Hospital.

Conclusion

70. DH was the respected head of a large aboriginal family who was greatly loved and is terribly missed. DH's death was preventable. It occurred due to failures in his care and treatment whilst a patient at Dubbo Hospital, a place where members of the community must entrust their care into the hands of medical professionals.

71. DH's family understood he was undergoing a minor surgical procedure on his big toe and had no cause for concern. DH's death in those circumstances increases the grief and loss felt by his family making his death difficult to reconcile. I do not consider I can properly express in words the impact his loss has had on the family. The respect held for DH in his role as head of the family was tangible throughout the course of the inquest.

I offer my sincere condolences to the family for their loss.

I thank Counsel Assisting Ms Ward and Ms De Castro Lopo for their assistance.

Findings pursuant to s 81 of the Coroners Act 2009

Identity

The person who died was DH

Place of death

Nepean Hospital Penrith

Date of death

6 February 2014

Cause of death

Hypoxia and cardiac arrest with contributing conditions of Ischaemic Heart Disease, Diabetes Mellitus and Morbid Obesity.

Manner of Death

Failure to properly assess and monitor a high risk patient under general anaesthetic on a background of existing co morbidities.

Les Mabbutt
State Coroner