STATE CORONER'S COURT

OF NEW SOUTH WALES

Inquest:	Inquest into the death of Esteban FRANCO-GARCES
Hearing date:	19 February 2020
Date of findings:	17 March 2020
Place of findings:	NSW State Coroner's Court - Lidcombe
Findings of:	Magistrate Carmel Forbes, Deputy State Coroner
Catchwords:	CORONIAL LAW – hospital death of a two month old boy – delayed recognition of sepsis – inadequacy of senior doctor overview – inadequate handover-prolonged attempts at intravenous access-delayed administration of antibiotic – inadequate co-ordination of care
File number:	2015/309019

Representation: Mr Aitken, Counsel Assisting, instructed by Ms C Potocki, Crown Solicitor's Office.

Mr Rooney, Counsel for Sydney Children's Hospital Network

Mr Hackett, Counsel for Dr Clipsham

Findings: Identity of deceased:

The deceased person was Esteban Franco Garces

Date of death:

Esteban died on 21 October 2015

Place of death:

Esteban died at Westmead Children's Hospital

Cause of death:

The cause of Esteban's death was Sepsis

Manner of death:

The manner of Esteban's death was as a result of natural disease process in circumstances where there was some delay in aspects of treatment. Esteban died in hospital following withdrawal of life support

Introduction

1. Esteban Franco-Garces was an eleven week old baby boy who died at Westmead Children's Hospital (WCH) at about 2am on 21 October 2015 due to sepsis. His mother took him straight to the hospital in the early afternoon on 20 October 2015 when she noticed that he was lethargic, pale and not feeding well.

2. His death was a terrible and unexpected blow to his parents and family. They continue to suffer with grief for their loss. His family have requested that I refer to him as Esteban in this Inquest.

3. A coroner's primary role is to investigate and make findings as to the identity of the deceased person, the date and place of the death, and the manner and cause of death. He or she may also make recommendations considered necessary or desirable in relation to any matter connected with the death.

4. This inquest is concerned primarily with the manner or circumstances of Esteban's death. The following issues of serious concern were raised during the coronial investigation:

    a) delay in triaging Esteban;

    b) delay in the involvement of the most senior staff in the direct management of Esteban;

    c) delay in the administration of antibiotics to Esteban and initiation of more intensive; sepsis management; and

    d) communication issues between staff caring for Esteban.

Esteban Franco Garces

5. Esteban was born prematurely, at 28 weeks gestation, on 1 August 2015. He spent the first 9 weeks of his life in hospital, with six weeks in the Royal Women's Hospital Melbourne and then 3 weeks at Westmead Private Hospital. He went home on 4 October 2015. He had a further brief admission on the 6 October 2015.

6. On 20 October 2015 at some time after 11.30am Esteban's mother noticed that he appeared unwell, he was pale, lethargic and was refusing to take food. She decided to take him straight to hospital. The family arrived in the Emergency Department, Esteban was registered and then they waited for about 20 minutes before Esteban was seen by a triage nurse.

7. Esteban's mother described waiting with Esteban's grandmother and Esteban in the Emergency Department waiting room. She watched the nurses talking, laughing and having coffee showing no concern for her sick baby.

8. At 1:10pm Esteban was assessed at triage as pale, floppy and irritable and was assigned Triage Category 2. The provisional diagnosis was fever. He was taken to a resuscitation bed where his clothes were removed to facilitate monitoring, diagnosis and treatment. He had presented with a heart rate of 200 beats per minute and a temperature of 38.6. These observations are noted in the medical records at 1.19pm.

9. Dr Scott Schofield, Staff Specialist, saw Esteban at 1.15pm. Esteban had a fever and due to his premature status and age Dr Schofield was concerned about the possibility of sepsis. He formed the view that Esteban needed intravenous access to obtain blood samples and administer antibiotics. He handed over care to Dr Ruella Clipsham (formerly D'Cruz), Junior Registrar.

10. Dr Clipsham had a recollection of attending to Esteban around 1.30pm. Dr Clipsham recalled that Esteban was unwell with presumed sepsis and that he required urgent intravenous (IV) access for a full septic work up and to allow for the administration of antibiotics and fluids.

11. Dr Clipsham experienced difficulty in getting IV access. Her recollection was that she asked a nurse to tell Dr Schofield that she needed assistance. She does not recall to which nurse she made this request and there is no evidence Dr Schofield was ever told.

12. Nurse Toole's recollection is that after Dr Clipsham had tried twice to get IV access, he also tried twice and managed to obtain a small blood sample, but the vein was not patent and a catheter could not be maintained. The small blood sample was run for blood gas.

13. Dr Clipsham did not have bedside access to electronic notes and was not aware of the blood result that came back at 1:47pm. It showed that Esteban was acidotic and had raised levels of lactate and carbon dioxide. Dr Clipsham believes that if she had been aware of that result it would have prompted her to seek Dr Schofield' assistance personally. Dr Clipsham regarded Esteban's vital signs as stable during her time at his bedside, she felt that his capillary return and level of responsiveness did not deteriorate.

14. Dr Clipsham estimated she attempted cannulation for about 30 minutes, but given the vital signs she did not consider that intraosseous cannulation was required and she thought that another staff member would shortly assist with cannulation.

15. At about 2pm Dr Clipsham spoke to Dr Schofield and Dr Adrian Bonsall, Career Medical Officer, at a handover and advised of her difficulty with getting IV access to Esteban. Dr Anya Wilson, Registrar was assigned to assist. Dr Wilson effectively took over care, it seems, making two attempts at IV access without success. Dr Bonsall was consulted and he recommended scalp vein access, which Nurse Bradley Toole began to prepare for.

16. Dr Bonsall reviewed Esteban after handover, which appears to have been at about 2.45pm. He noticed he had a heart rate of 165, a capillary refill of 203 seconds, a respiratory rate of 36 breaths per minute and a temperature of just over 36. Venous blood gas showed a mild acidosis. Just as Dr Bonsall was preparing to perform IV access, Dr Raymond Chin, Staff Specialist Paediatrician, arrived. Dr Chin estimates IV access being obtained between 2.30pm and 2.45pm, with fluid bolus being given at 3pm and antibiotics were given at 4pm, following an elevated lactate blood gas result at 3.49pm.

17. Support from the Paediatric Intensive Care Unit (PICU) was requested at about 4pm and Dr Joanne Ging, Paediatric Staff Specialist, became involved at 4.20pm after noticing Esteban's blood gas result on the system.

18. Dr Ging took it upon herself to find Esteban's parents and advise them of the seriousness of the situation.

19. After PICU transfer Esteban was on near maximal support (including intubation and adrenaline) and continued to deteriorate. Esteban continued to develop multi organ failure and coagulopathy and a decision was made when he became unresponsive to withdraw life sustaining therapy.

What should have happened?

20. Esteban presented at WCH shortly before 1pm and did not receive antibiotics until 4pm despite there being an initial suspicion of Sepsis.

21. Dr Mark Lee, Director of Emergency Medicine Training, John Hunter Hospital who has expertise in Paediatric Emergency Medicine and was the inaugural chair of the NSW Paediatric Sepsis Committee has provided an independent expert review of Esteban's care and treatment. He suggested possible improvements at the WCH that may assist in preventing another family enduring the same experience that the Franco-Garces' did.

22. Dr Mary McCaskill, Paediatric Emergency Specialist, Chair of the Paediatric Sepsis Pathway Reference Group and Acting Director of Clinical Governance for the Sydney Children's Hospital Network (SCHN) provided in depth evidence of the significant changes that have been made at WCH in response to Esteban's death.

23. Dr McCaskill conceded on behalf of the WCH that Esteban should have been seen earlier, that senior staff should have been involved earlier in his direct management, that there should not have been the prolonged attempts establishing IV access and antibiotics should have been administered earlier.

24. We will never know definitively whether Esteban would have survived if he had been administered antibiotics earlier. It is however agreed by all parties that it was not appropriate that Esteban was not given that very best chance of survival.

25. I will now consider the issues the experts note as significant to ensure that the best practices are adopted in similar cases in the future.

What changes have been made since Esteban's death?

26. In response to Esteban's death there have been significant changes at the WCH.

Sepsis Pathway

27. At the time of Esteban's admission the approach to unwell neonates was to perform a full septic workup before commencing antibiotics. This involved taking blood, urine sample and often cerebral spinal fluid. A revised Emergency Department Paediatric Sepsis Pathway was developed by the Clinical Excellence Commission Reference Group and released in September 2016.

28. The pathway guides clinicians to consider sepsis when a patient shows signs of deterioration. It emphasises that clinicians must prioritise treatment of patients who may have sepsis.

29. This pathway also emphasises the importance of early senior clinical involvement in patients with sepsis and the importance of commencing antibiotics within 1 hour of presentation.

30. The pathway also stipulates for the delivery of antibiotics *before* the delivery of fluid bolus.

31. Laminated copies of the new Paediatric Sepsis Pathway Chart are now available at every bed in the resuscitation bay. Dr McCaskill gave evidence that copies will also now be placed in the registration and triage sections of the Emergency Department to aid those clinicians in their decisions.

Training

32. Significant work was also done at the hospital to review performance in the treatment of children who were potentially septic: In 2016 a project was completed as part of a quality improvement program with Dr Adrian Bonsall as the lead, which resulted in a flow chart called Access for Antibiotics to guide steps and timing to deliver antibiotics intravenously or intramuscularly.

33. In August 2017 a Rapid Response System for all patients was implemented at the hospital. A flowchart was introduced which identifies that staff are to immediately attend when a rapid response is raised.

34. Since May 2018, new nursing staff were required to attend training upon commencement of their role at WCH, including training for Sepsis Pathways, Handover and Rapid Response.

35. New medical staff and rotating medical staff are required to undergo an intensive orientation course which covers Sepsis Pathways, Handover and Rapid Response. The medical staff are required to undergo a full day simulation training course once every 3 months.

Senior doctors

36. Dr Lee felt that senior doctor oversight should have occurred for Esteban after the initial consultant review at about 1.15pm, given the working diagnosis of sepsis. Dr Lee also felt that the first elevated blood gas result from 1.47pm should also have promoted engagement of a

senior clinician. Esteban was under the treatment of a junior registrar who could not gain IV access to administer the needed antibiotics. Dr Lee explained that IV cannulation can be difficult in newborns due to the immaturity of their veins and the tendency for the veins to collapse when they are septic. This was born out, the junior registrar, the registrar and the nurse all had unsuccessful attempts to gain IV access.

37. The new pathway and rapid response system now directs that senior staff are to be notified when there are two failed attempts at cannulation in a septic patient.

38. Dr McCaskill gave evidence that the current Access for Antibiotics Flow Chart states that when two attempts at cannulation within ten minutes have been unsuccessful that intraosseous access should be attempted and if this access is not achieved that intramuscular antibiotics are to be administered immediately. She explained that the intramuscular administration ensures the timely administration of antibiotics. Then intraosseous cannulation would be carried out to obtain blood for testing and for the administration of fluids.

39. Dr Lee endorsed this flow chart.

40. Dr McCaskill became aware in the witness box that the Paediatric Sepsis Pathway in its current form does not refer to intramuscular administration of antibiotics. I note that she informed this Court that she would address this omission in the pathway document with the Clinical Excellence Commission.

Communication Issues: medical records and handover

41. On 27 June 2016, laptops were introduced into the department to facilitate handovers and to allow clinicians to have bedside access to the patient's entire medical file to provide a comprehensive overview of their clinical practice. There is also now a daily "Team Talk" to assist with handover

42. An Electronic Health Record "FirstNet" was introduced on 27 May 2018, documenting patient's observations, vital sign charts, records time and number of attempts at cannulation.

43. Dr McCaskill explained these innovations were not available in Esteban's case which added to the communication issues on the day. She said that now bedside handover is required, which further promotes effective understanding of the child's condition and awareness of possible deterioration and enables access to the medical records and test results while the handover is taking place at the patient's bedside.

Delayed antibiotics

44. Dr Lee suggested that a time clock specific to sepsis management could be used in resuscitation bays, and that it should be started at the time of initial recognition of sepsis and stopped when antibiotics and IV fluids have been administered.

45. Dr McCaskill gave evidence that a sepsis time bomb clock is now used on the dashboard of the electronic medical records to keep clinicians focused on the time requirement for antibiotics to be administered.

Care and treatment and resources

46. Nursing staff numbers have increased in the Emergency Department since Esteban's death. A second ultrasound machine was purchased to assist with cannulation.

47. Esteban's family were rightly concerned and upset that after triage, Esteban's clothes were removed and he was left with no clothing or covering in the air conditioned emergency department the whole time he was there. His body temperature dropped.
48. The emergency unit has a 'resuscitaire' bed. This is a bed that keeps the baby warm while it has its clothes removed for the purpose of examination and for tests to be undertaken.

49. Dr McCaskill agreed with Dr Lee that a possible drop in core body temperature of a neonate with sepsis could be monitored and controlled through probes connected to heat blankets used in 'resuscitaire' warming beds. The Court notes that Dr MCaskill gave evidence that such an approach would be adopted in future.

Conclusion

50. The introduction of the Sepsis Guidelines and Rapid Response System is intended to provide a clear process of escalation and direction on clinical management for patients who potentially have sepsis. Dr McCaskill gave evidence that further work is also underway. A quality improvement project is underway to address the elements of medical practice in caring for children with potential sepsis. It is proposed that data from FirstNet will be used to identify children with potential sepsis, which will be used to develop an alert system for clinicians through FirstNet.

51. Esteban gave much joy and happiness to his family. I hope that the Franco Garces family understand that their legitimate concerns have been taken seriously by everyone involved in the Inquest and will continue to be taken seriously by the Westmead Children's Hospital and the Sydney Children's Hospital Network.

Findings pursuant to section 81(1) Coroner's Act 2009

The identity of the deceased

The deceased person was Esteban Franco-Garces

Date of death

Esteban died on 21 October 2015

Place of death

Esteban died at Westmead Children's Hospital

Cause of death

The cause of Esteban's death was Sepsis

Manner of death

The manner of Esteban's death was as a result of natural disease process in circumstances where there was some delay in aspects of treatment. Esteban died in hospital following withdrawal of life support

52. I close this inquest.

Carmel Forbes

Deputy State Coroner

NSW State Coroner's Court, Lidcombe

Date 17 March 2020