MAGISTRATES COURT *of* TASMANIA

CORONIAL DIVISION

Record of Investigation into Death (Without Inquest)

Coroners Act 1995
Coroners Rules 2006
Rule 11

(These findings have been de-identified in relation to the name of the deceased, family, friends and others by direction of the Coroner pursuant to s57(1)(c) of the *Coroners Act* 1995)

I, Simon Cooper, Coroner, having investigated the death of HB, make the following findings.

Introduction

1. HB, aged just 8, died of asthma in the North West Regional Hospital, Burnie, Tasmania.

2. He told those treating him at the Hospital that he had asthma but they thought it was a panic attack. It was not. He should have been transferred to a hospital either in Hobart or Melbourne where he could be ventilated. Instead, he was kept at the North West Regional Hospital where he was inadequately treated, wrongly diagnosed, and died.

3. This finding examines HB's treatment and circumstances of his death. In making the findings, I have had regard to the evidence gained in the comprehensive investigation into HB's death. The evidence includes:

   - The Tasmania Police Report of Death for the Coroner;
   - An opinion of Dr Donald Ritchey, the Forensic Pathologist who conducted the autopsy;
   - Affidavits confirming identification and life extinct;
   - Information including photographs of HB and his sister and details of his life from his grandmothers;
   - Ambulance Tasmania records;
   - Medical reports and records from St Anthony Family Medical Practice, Strathfieldsaye, Victoria;
   - Medical reports and records from the Tasmanian Health Service;
   - Final Root Cause Analysis (RCA) Report from the Tasmanian Health Service, endorsed 29 October 2019;

- Department of Health and Human Services, Child Protection file, Victoria (file incomplete);
- A précis of medical records prepared by forensic nurse, Ms L Newman; and
- Reports from Dr A J Bell, Medical Advisor to the Coronial Division, dated 28 January 2020 and 29 September 2020.

What a Coroner Does

4. A Coroner in Tasmania has jurisdiction to investigate any death which appears to have been, accidental, unexpected or unnatural.[1] HB's death meets this statutory definition.

5. When investigating any death a Coroner performs a role very different to other judicial officers. The Coroner's role is inquisitorial. She or he is required to thoroughly investigate a death and answer the questions (if possible) that section 28(1) of the *Coroners Act* 1995 (the "Act") asks. These questions include who the deceased was, the circumstances in which he or she died, the cause of the person's death and where and when the person died. This requires the making of various findings, but without apportioning legal or moral blame for the death.[2] The Coroner's role is to help, where possible, explain a death or deaths and, if possible, provide guidance to avoid similar deaths occurring in the future.

6. A Coroner is also able, if she or he thinks fit, to make comments about the death or, in appropriate circumstances, recommendations to prevent similar deaths in the future. A Coroner does not punish anyone or award compensation – that is for other proceedings in other courts, if appropriate. Nor does a Coroner charge people with crimes or offences arising out of a death that is the subject of investigation. In fact, a Coroner in Tasmania may not even say that he or she thinks someone is guilty of an offence.[3] I should make it very clear indeed that I do not consider anyone has committed any crime or offence in relation to HB's death.

7. As was noted above, one matter that the Act requires is finding how the death occurred.[4] It is well-settled that this phrase involves the application of the ordinary concepts of legal causation.[5] Any Coronial inquest necessarily involves a consideration of the particular circumstances surrounding the particular death so as to discharge the obligation imposed by section 28(1)(b) upon the Coroner.

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[1] Section 3.
[2] *R v Tennent; ex parte Jager* [200] TASSC 64, at par 7.
[3] Section 28(4).
[4] See section 28(1)(b).
[5] *March v Stramare* (E&MH) Pty Ltd [1990-1991] CLR 506.

8. The standard of proof that a Coroner applies is the civil standard. This means that where findings of fact are made a Coroner needs to be satisfied on the balance of probabilities as to the existence of those facts. However, if a Coroner reaches the stage where she or he is contemplating making findings which might reflect adversely upon an individual, it is well-settled that the standard applicable is that articulated in *Briginshaw v Briginshaw*[6], that is, that the task of deciding whether a serious allegation is proved should be approached with great caution.

9. Finally, it is a matter of principle that if a Coroner is contemplating making adverse findings then the person who may be subject of those findings is entitled to procedural fairness.[7] In plain English, they are entitled to tell their side of the story before the Coroner makes his or her mind up.

Background

10. HB was born in Bendigo, Victoria in 2011. His parents did not play a significant role in his life. At the time of his death, he was the subject of a Child Protection Order made by a court in Victoria. The order was made because both his parents were considered incapable of being able to care for him. Fortunately, HB had loving and committed grandparents (on both sides).

11. He lived with his maternal grandparents in Bendigo, Victoria. They had HB in their care from the beginning of September 2018.

12. HB was diagnosed with autism spectrum disorder. His medical records indicate that he was on no long-term medication, but had been prescribed Seretide, a treatment for asthma administered by an inhaler, in September 2015. Seretide was prescribed for him following two presentations to his general practitioner, roughly a week apart. His medical notes indicate that a cough and wheeze were noted. I can find no record of a follow-up in relation to the prescription of the inhaler, which was provided, it seems, on the basis of a "trial". I do not know whether this was because the trial was not followed up by HB's mother, although I suspect this was the case.

13. Although it is apparent a diagnosis of asthma was considered on two occasions by general practitioners and asthma treatment commenced, there was no follow-up assessment of the effect of that treatment and no formal diagnosis of asthma made.

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[6] (1938) 60 CLR 336 in particular Dixon J (as he then was) at 362.
[7] See *Annetts v McCann* (1990) 170 CLR 596.

14. At the time of his death, which occurred during school holidays, HB was visiting his paternal grandparents in Ulverstone, Tasmania and visiting members of his extended family, on his father's side. He was not prescribed or using asthma prevention medication.

15. When she picked him up prior to the trip to Tasmania on 22 June 2019, his paternal grandmother said that HB seemed to have a cold.

16. On Sunday, 23 June 2019, HB went to stay with his aunt in Devonport. His aunt later said he was wheezing. His aunt administered him a Ventolin inhaler.[8] On 25 June 2019 HB went back to stay with his paternal grandparents at Ulverstone.

17. The following days passed relatively speaking, uneventfully. But by Friday, 28 June 2019, HB's cold like symptoms seemed to increase. His paternal grandmother said that his sniffles were more pronounced and he had slight wheezing. Over the night of 28/29 June, HB commenced coughing. In the early hours of 29 June, he woke his grandmother with his severe coughing and vomited up phlegm. She administered a Ventolin inhaler to him, along with an 'over-the-counter' cough medicine.

18. Throughout 29 June 2019, HB's grandmother continued to administer Ventolin to him. It is unclear whether when she did so a spacer was used. Initially, the Ventolin seemed to provide some relief to HB. However, by early evening, around 5.30 pm – 6.00 pm, he started coughing severely again and was struggling to breathe. His grandmother called an ambulance. She cared entirely appropriately for her grandson.

Circumstances of Death

19. After initial assessment by ambulance paramedics, who recorded oxygen saturations at 88% on room air, and administered oxygen therapy, HB was taken to the North West Regional Hospital (NWRH) Emergency Department (ED). Not long after his arrival in the ED, he became markedly short of breath. His medical records indicate that he was administered salbutamol, ipratropium and prednisolone, all of which were seemingly effective in controlling his symptoms, at least for a time. He was then admitted to the hospital and placed in ward. On the ward, he was under the care of a paediatric team and was administered salbutamol hourly. His medical notes indicate that he responded well initially but would deteriorate over the following hour with an increased wheeze, respiratory rate and hard of breathing.[9]

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[8] 'Ventolin' is a brand name for the drug albuterol or salbutamol. It is available without a prescription from pharmacies in Tasmania.

[9] Medical records.

20. The following day, 30 June 2019, HB was noted as looking well but still having chest wheezes. He continued to be treated with one hourly Ventolin and four hourly Salbutamol. He remained stable throughout the day.

21. On 1 July 2019, HB was reviewed by the NWRH paediatric team. His notes indicate that the team concluded his asthma had been "undertreated to date" (something obviously correct), but that if he continued to "do well" he could be discharged later that day. Nonetheless, treatment with salbutamol continued but notwithstanding that therapy, his oxygen saturation levels began to decrease in the evening.

22. HB was reviewed by a paediatric registrar in the early hours of 2 July 2019. He was put on continuous oxygen and kept having regular salbutamol and ipratropium nebulisers. His nursing notes indicate that he was short of breath and his oxygen saturation levels (prior to use of the nebuliser) had fallen to the mid-80s. A blood test performed later that morning indicated the presence of infection and, as a consequence, antibiotics were commenced and intravenous magnesium administered. HB kept complaining of not being able to breathe. He was noted to be anxious and distressed at times.

23. Nursing notes indicate in the early hours of 3 July 2019, HB was restless and "panicking that he couldn't breathe". He was apparently "reassured" and given salbutamol puffs. His medical records indicate that the consensus of the night staff team seem to be that it "looked more like a panic attack". Later still, the same morning, HB was unsettled, distressed and hyperventilating. Just before 7.00 am, very distressed and anxious, he collapsed with a respiratory arrest.

24. A code blue was called and resuscitation commenced. The notes concerning the course of events after HB went into respiratory arrest were written subsequently and not contemporaneously. This is not surprising. I accept that the notes are an accurate record of what occurred. The notes record that a paediatric registrar was called at 7.03 am, at which time bag mask ventilation (BMV) was being carried out by an anaesthetic nurse with ICU and ED medical registrars in attendance. The notes record that HB was hypoxic but had a palpable pulse. Intravenous ketamine was administered followed by a muscle parallelising agent and propofol. This was a standard response and appropriate preparation for him to be intubated.

25. By now, HB's oxygen saturation was in the 50s and his heart rate had increased to 150 bpm. He was intubated, following which his heart rate dropped to 60 bpm and CPR commenced. Adrenaline was administered.

26. The resuscitation was unsuccessful. HB could not be revived and died at about 8.30 am. I consider the decision to cease resuscitation reasonable in the circumstances. It is evident that nothing more could have been done for HB at that stage. However, there were aspects of the resuscitation attempt that I will comment upon in due course.

Investigation

27. The fact of HBs death was reported in accordance with the requirements of the *Coroners Act* 1995. His body was formally identified by his grandmother and then taken by mortuary ambulance to the Royal Hobart Hospital.

28. Forensic Pathologist, Dr Donald Ritchey, conducted a post-mortem examination on 4 July 2019. In his report to the Coroner, Dr Ritchey said:

> "*The lungs* [showed] *widespread, severe changes diagnostic of asthma. Specifically there* [was] *marked peribronchiolar lymphoid inflammation forming lymphoid follicles. The bronchi contain*[ed] *abundant mucin and epithelial debris including numerous eosinpophils. There* [was] *marked goblet cell hyperplasis of the bronchial mucosa and there* [were] *florid submucosal and numerous intramucosal* eosinophil. *There* [was] *marked thickening of the submucosa by dense eosinophilic sclerosis. Aspiration and pneumonia* [were] *not seen.*
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> …
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> *[HB] was visiting his grandparents in Tasmania where he developed a respiratory infection in the days prior to this death. He was noted by his carers to have wheezy respirations and he was provided nebuliser treatments that were helpful. On Saturday 29th June an ambulance was summonsed when he developed a severe asthmatic attack for which he was transported to the North West Regional Hospital where he was cared for until Wednesday 3rd July. He developed shortness of breath and asked to be helped to the toilet where he collapsed and could not be resuscitated.*
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> *The autopsy revealed a normally developed and nourished prepubescent boy with markedly hyper-expanded lungs and widespread mucus plugs impacting the main stem bronchi and smaller airways within the lungs. Histology of the lungs confirmed severe asthma with features of acute exacerbation.*
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> *Death due to acute asthma is uncommon but not unprecedented. The mechanism of death in acute asthma is complex but likely involves hypoxia due to severe airway spasm/constriction preventing normal breathing.*"

29. Dr Ritchey expressed the opinion that the cause of HB's death was acute exacerbation of chronic asthma. I accept Dr Ritchey's opinion.

30. The Coronial Division Medico-Legal committee examined the circumstances of HB's death. In particular, HB's treatment was examined and reviewed by the Medical Advisor to the Coronial Division, Dr Anthony J Bell (MB BS MD FRACP FCICM).

31. Dr Bell provided me with two reports. The first addressed HB's treatment at the NWRH. The second dealt with his treatment prior to the immediate lead up to his death.

32. In his report of 28 January 2020, Dr Bell said:

> "*The diagnosis of mild exacerbation of asthma was made* [at the NWRH] *but appears to underestimate the severity of the attack. When coupled with a history of undertreated asthma this is of concern. Over the next 24 hours there was no improvement if anything the patient was worse…. Over night* [HB] *did not improve and the typical early-morning worsening a marker of uncontrolled asthma.*
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> *On the ward round 2 July 2019 the treatment was increased with the use of intravenous magnesium, and blood tests were performed. On 2 July 2019 at midnight* [HB] *was restless and stated he could not breathe. The chest was described as clear.* ***This represented the medical emergency of respiratory failure in severe asthma****. The clear chest (that is no wheeze) indicates there is insufficient air movement to generate a wheeze* [and] *the patient is dying.* **[HB]** ***absolutely at this time required ICU treatment and major interventions****, though this should have happened two days prior, when* [he] *did not respond to therapy. To diagnose a panic attack shows a failure to understand the pathophysiology of the very common illness of asthma*."
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> ***[Emphasis added]**

33. I note that on basic first-aid courses taught by providers such as St John's Ambulance for ordinary members of the public, the fact that "no wheeze" is a sign of a critical respiratory condition is taught as part of the syllabus.

34. I accept Dr Bell's opinion. I observe that it finds support in the Tasmanian Health Services Root Cause Analysis final report.

35. Dr Bell also analysed the resuscitation efforts in respect of HB. I note that Dr Bell is a highly experienced intensive care physician. I consider his comments about resuscitation to be of particular value. He said that resuscitation of a cardio pulmonary arrest patient due to asthma is "difficult and has certain features that are different from usual resuscitation". First, Dr Bell made the point that there is no record of the BVM ventilation rate. This is important because BVM ventilation involves forcing air into lungs. In a patient with asthma it is essential that the ventilation be slow allowing time for air to exit the lungs (a common misunderstanding is that asthma is characterised by an inability to fill the lungs – in fact it is the opposite, being an inability to empty the lungs).

36. Second, Dr Bell said that the evidence suggested that the post-intubation ventilation was too rapid.

37. These findings were sent, in draft, to the Tasmanian Health Service (THS). The THS took no issue with any part of my findings. I acknowledge that appropriate steps, including enhanced staff education, have been put in place by the Service in response to HB's tragic death.

Formal Findings Pursuant to Section 28(1) of the *Coroners Act* 1995:

a) The identity of the deceased is HB;
b) HB died in the circumstances set out above;
c) The cause of HB's death was acute exacerbation of chronic asthma; and
d) HB died on 3 July 2019 at the North West Regional Hospital, Burnie, Tasmania.

Conclusion

38. HB was admitted to hospital with chronic but undertreated asthma. The paediatric team responsible for his care at the North West Regional Hospital underestimated the severity of his asthma. In my respectful opinion, that team do not appear to have appreciated that chronic undertreated asthma may be unresponsive in the usual timescale to standard treatments.

39. The night staff (which included a medical practitioner) on 2-3 July 2019 appear not to have understood the critical significance of the fact that HB was no longer wheezing. Their assessment that he was suffering a panic attack was wrong and not supported by any objective signs or symptoms.

40. The attempts at resuscitation of HB were of a poor standard.

41. HB's death was entirely avoidable. It occurred because of substandard medical treatment. I acknowledge that the Tasmanian Health Service conducted a comprehensive Root Cause Analysis. The recommendations arising from that process, and in particular the implementation of a protocol requiring speedy transfer to the Royal Hobart Hospital Paediatric ICU in cases similar to HB's, is appropriate.

42. Finally, I **comment** that when administering salbutamol to children, it is important to ensure that the drug is administered correctly using a spacer. Guidance in this regard is available from chemists and Asthma Australia's website.

43. I convey my sincere condolences to the family and loved ones of HB on the loss of a lovely little boy.

Dated 2 July 2021 at Hobart in the State of Tasmania.

Simon Cooper
Coroner