



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 S.57(1)(c) of the *Coroners Act 1995*)

I, Simon Cooper, Coroner, having investigated the death of HE

Find, pursuant to section 28(1) of the *Coroners Act 1995*, that

- a) The identity of the deceased is HE;
- b) HE died in the circumstances set out further in this finding;
- c) The cause of HE's death was echovirus type 9 (myocarditis and pneumonitis) infection;
- d) HE died on 9 October 2015 on the Esk Highway, near Fingal in Tasmania; and
- e) HE was born in Southern Tasmania in 2014 and was aged 19 months at the time of her death.

Introduction

In making the findings set out above I have had regard to the evidence gained in the comprehensive investigation into HE's death. The evidence comprises an opinion of the forensic pathologist who conducted the autopsy on HE's body; the results of toxicological analysis of samples taken at autopsy; relevant police and witness affidavits; medical records and reports; and forensic evidence.

In addition, the circumstances surrounding HE's death, and in particular the management of her at both the St Mary's Community Hospital and by Ambulance Tasmania, were reviewed as part of the investigation by Dr AJ Bell MD FRACP, former associate professor of emergency medicine and current medical advisor to the Coronial Division of the Magistrates Court of Tasmania.

Background

HE was born in Southern Tasmania in 2014. She was the younger of two children, having an older sister. Her treating general practitioner was Dr Sarah Burbury who HE last saw a month or so before her death. Although her health was generally good, she was taken to the Royal Hobart Hospital in August 2015 having apparently suffered a febrile convulsion.

Circumstances Surrounding the Death

On 9 October 2015 the family travelled from their home to the White Sands Resort at Bicheno on the East Coast of Tasmania. They arrived there at 2.20pm. HE's father parked the vehicle outside reception and remained with the children whilst her mother entered and completed the check-in procedures.

Sometime around 4.40pm, HE's older sister called out to her father that HE had fallen down. HE's father went to the lounge room area of the unit in which the family were staying. He found HE lying on the floor, partially under a coffee table. He picked her up. She was limp and extremely hot, but still breathing. In an attempt to cool HE down, both parents removed her clothing and wiped her with a damp face washer. HE began to convulse at this time.

At 4.55pm HE's father contacted the St Marys Hospital where he spoke with Registered Nurse (RN) Colin Stone, via the triage telephone. The information passed on by HE's father to RN Stone was that:

- HE had been unwell since the morning and appeared to be getting worse;
- She appeared dazed and was staring into space;
- She was quite hot and had been sponged down;
- There appeared to be a rhythmic twitching of her right hand; and
- HE had previous history of febrile convulsion.

RN Stone was concerned and asked that HE be brought immediately to the hospital. RN Stone was unfamiliar with the location of the White Sands Resort so conferred with his colleague, Enrolled Nurse (EN) Noelene Mitchell, who confirmed that St Marys Hospital was the closest facility. RN Stone immediately contacted Doctor Cyril Latt, the only General Medical Practitioner at St Marys, to advise that a young patient was coming in with suspected febrile convulsion.

The family then packed up all personal effects and left the White Sands Resort, arriving at the St Marys Community Hospital at approximately 5.30pm. HE was carried into the hospital by her mother. Nursing staff observed that HE looked floppy, had bright red cheeks, and was flushed and breathing rapidly. HE was taken to the Emergency Room and placed on the bed. EN Mitchell observed that HE appeared to be a healthy baby girl, pink in colour, with damp hair. She was breathing, but floppy and unresponsive. HE was not making any noise; neither moaning nor crying.

Dr Latt immediately attended the Emergency Room. He observed that HE had mottled skin, and had rhythmic jerking, predominantly in her right arm. Her eyes were open. She was not crying and she seemed to recognise her mother's voice.

HE's condition was immediately observed as serious. An oxygen mask was placed over her face. Initial observations were recorded as: temperature (*per axilla*) 37.1 degrees, oxygen saturations 100%, respiration 36 and her pulse ++170/mins (sinus rhythms). Her pupils were ~3mm, still reactive, but rather weak. In summary her pulse was fast and her temperature higher than normal.

Dr Latt observed some foamy sputum at HE's mouth. On auscultation, he found that her chest was clear, she was spontaneously breathing, and there were no signs of respiratory distress. On inspection of her body, Dr Latt found no significant rashes and no tonic-clonic reactions. EN Mitchell ran her fingers through HE's hair looking for insect bites or injury and found none. She reported no discernible injury.

RN Stone was recording observations, however, was unable to complete all sections of the Childrens' Assessment Form (CEWT) as he was providing hands-on care to HE. With further questioning of the parents, RN Stone learned that HE had sustained a minor head injury two days prior, with minimal swelling and a faint bruise above the left eyebrow. RN Stone observed a 'barely noticeable' small bump to the central forehead. Further questioning of the parents revealed that at 5.00am that day HE had drank some milk but was otherwise 'off her food' all day, only nibbling small amounts. She had vomited later in the day, mostly mucous.

After the initial observations, although unsure of her exact condition, Dr Latt ruled out febrile convulsion, which he explained to HE's parents and nursing staff. He contacted the on-call paediatrician at Launceston General Hospital (LGH). After some initial delays through the switchboard, Dr Latt demanded and received urgent contact. Dr Chris Bailey (Consultant Paediatrician) answered his call. Dr Bailey agreed that HE's condition was unlikely to be febrile convulsion. Based on the limited information then available, he concluded there was some evidence of cerebral irritation. Dr Bailey's advice was to transport HE as soon as possible to the LGH.

Dr Latt directed RN Stone to order an ambulance immediately and advise that it was urgent, which he did. At 5.45pm Dr Latt observed that HE was still spontaneously breathing, but becoming less responsive, and with increasingly mottled skin. Her condition deteriorated and Dr Latt attempted to cannulate her, but was unable to locate a suitable vein.

Due to this, he decided to attempt *inter osseus* (IO) access in order to administer medications. A first attempt was made to the right tibia. This was not successful due to being unable to penetrate through hard bone. At approximately 6.10pm Ambulance Paramedic, Christopher Paley, arrived and began to assist Dr Latt with insertion of the IO. The attempt by Paramedic Paley too was unsuccessful, resulting in a bent needle. Paramedic Paley observed that HE's arm was twitching. Although her colour was good, she was unresponsive. Around this time Volunteer Ambulance Officer (VAO), Ian Bradbury, arrived and commenced assisting medical staff by ensuring that the necessary monitors and breathing apparatus remained attached to HE.

At 6.15pm Dr Latt was able to successfully gain IO access to HE's left inner knee. At this time RN Stone administered 650mg of the antibiotic Ceftriaxone IMI into HE's right buttock. RN Stone observed that HE's pink tinge to her legs was starting to turn a grey colour. Her breathing was becoming shallow and rapid. Dr Latt observed that the blotching of HE's skin was becoming widespread.

Dr Latt and Paramedic Paley discussed transporting HE as soon as possible. Although HE was not quite ready to be transported at that time, it was clear that efforts in the Emergency Room were not resulting in any improvements to her condition. Dr Latt made a decision for HE to be transported immediately and offered himself and RN Stone to travel in the ambulance with Paramedic Paley and VAO Bradbury. The evidence was that it is rare indeed for Dr Latt to travel with an ambulance as St Marys is a single doctor practice.

HE was placed in the ambulance at approximately 6.30pm.

In anticipation of the ambulance leaving St Marys, HE's father left with her sister to travel to the LGH. It was intended that HE's mother would travel in the ambulance.

Around this time Dr Latt received a call from Dr Andrew Climie, Clinical Coordinator with Ambulance Tasmania. Dr Climie advised Dr Latt not to mobilise until further instruction. Given the urgency of the situation plans were being considered to dispatch a Doctor-Paramedic crew from Launceston by road to St Marys. In addition Ambulance Tasmania was urgently exploring other options such as either Air Ambulance to St Helens aerodrome or helicopter to St Marys.

In my view the decision to hold HE at St Marys Hospital was, in the circumstances, a reasonable one. Although her condition was critical she was at least at a medical facility where treatment options could be continued. Removal into an ambulance and then undertaking a lengthy journey, when she was not able to be stabilised, would not have been the better decision, although it is acknowledged that the choices facing medical and ambulance staff were very limited, given the extreme seriousness of HE's condition.

Dr Climie asked Dr Latt to insert an endo-tracheal tube, if necessary. Further, he advised Dr Latt should only attempt this procedure if he was 'absolutely confident' as it could cause significant harm if not carried out precisely. Dr Latt decided not to attempt this. I am satisfied, in the circumstances, this was a reasonable decision.

At 6.48pm Dr Latt observed HE's breathing change to very slow and gasping, and she became cyanotic. He attempted to insert a gaudel airway but locked jaw prevented this. Under his direction, a dose of 0.2 ml of Midazolam (a water soluble benzodiazepine designed to attempt to relax HE's locked jaw) was administered by RN Stone to HE's right thigh. The ampoule was 5mg in 1 ml, and the dosage calculation was checked by EN Mitchell. Due to lack of room in the rear of the ambulance, EN Mitchell remained outside during this time. She also had to check on other patients in the hospital and was providing support to HE's mother, who was understandably distraught.

HE arrested at about 6.50pm in the rear of the ambulance. CPR was commenced immediately by Dr Latt and Paramedic Paley. Authority to mobilise had still not been given by Ambulance Communications at this time. At 7.20pm Paramedic Paley re-contacted

Ambulance Communications to try to obtain some transport support. In another telephone conversation, Dr Latt advised Dr Climie that he could wait no longer and requested permission to mobilise.

In the meantime, HE's mother contacted HE's father to advise of the delay. He returned to St Marys.

Just prior to leaving St Marys, Dr Latt successfully inserted an IO to HE's left lower shin. Adrenaline 10mcg/kg was administered, followed by a saline flush and fluid resuscitation (20ml of NS/kg) during CPR.

The ambulance departed St Marys Community Hospital at 7.26pm. HE's family followed the ambulance in the family vehicle. CPR was continued during transit, alternating between Dr Latt, Paramedic Paley and RN Stone. VAO Bradbury was driving. In total, CPR was continued for approximately 60 minutes. The ambulance met the Doctor-Paramedic crew at a location known as Rostrevor (32 kms west of St Marys). There they met Dr Robert Smithers. He directed the medical/ambulance personnel to stop CPR and pronounced that HE was deceased. Dr Smithers advised HE's parents of her death.

The ambulance continued on with the intention of transporting through to Launceston. Tasmania Police were notified of the death. As a consequence the ambulance was directed to stop and wait for the arrival of police. By this time the ambulance had reached Conara.

An investigation was immediately commenced in relation to HE's death. Her body was transported to Hobart where after formal identification an autopsy was carried out by Dr Christopher Hamilton Lawrence, the State Forensic Pathologist. Dr Lawrence expressed the opinion, which I accept, that the cause of HE's death was due to natural causes, namely echovirus type 9 (myocarditis and pneumonitis) infection. Subsequent toxicological analysis of samples taken at autopsy was consistent with this conclusion. Further enquires determined that it was impossible to identify the source of the virus which claimed HE's life.

The coronial investigation into HE's death did not reveal any circumstances whatsoever giving rise to suspicion. I am satisfied that HE's death was the result of natural causes.

All of the material gathered in the course of the investigation, and especially the response to HE's condition, both by medical staff at St Marys Hospital and Ambulance Tasmania, was reviewed by Dr A J Bell. Dr Bell also concluded that HE died of natural causes. He said in relation to the medical care provided to her that the situation faced by Dr Latt and the nursing staff was unbelievably difficult. Dr Bell said that "the management steps were appropriate. In the rural setting (and in fact in major teaching hospitals) [a] patient [with this condition] usually dies".

I accept Dr Bell's opinion as to the medical management of the crisis which claimed HE's life. The responses of all the medical professionals involved have been carefully examined and no cause for concern or criticism is able to be identified. Indeed in the circumstances that the staff of St Marys Hospital, a small, isolated rural medical facility faced, I am satisfied nothing more for HE could have been done.

Comments and Recommendations

In the circumstances there is no need for me to make any further comment or recommendations.

In concluding I convey my sincere condolences to the family of HE.

Dated: 16 March 2017 at Hobart in the State of Tasmania.

Simon Cooper
Coroner