IN THE CORONERS' COURT OF THE NORTHERN TERRITORY

Rel No: D0185/2023

Promis No: 10456607

CORONERS' FINDINGS

Section 34 of the ***Coroners Act 1993***

I, Chrissy McConnel, Deputy Coroner, having investigated the death of **a child** and without holding an inquest, find that the deceased was born on **25 October 2018** and that his **death occurred on 14 September 2023 in the Northern Territory.**

Cause of death:

1(a)	Disease or condition leading directly to death:	**Haemophilus influenzae septicaemia**
1(b)	Morbid conditions giving rise to the above cause:	**Superimposed respiratory tract infection**

Following an autopsy on 15 September 2023, Forensic Pathologist, Dr Marianne Tiemensma commented:

Circumstances surrounding death

This was the reported death of a 4 year old male child who was reportedly seen at Katherine Regional Hospital in the early morning hours of 10/09/2023 for fever and "pain in his eyes". The decedent was assessed (pulse rate 156/min; respiratory rate 28 breaths/min; temperature 39.2 degrees Celsius; oxygen saturation 99%), and the attending clinician was of the impression that the child presented with a viral upper respiratory tract infection/flu-like illness, in addition to an incidental finding of a small plastic foreign object in the right ear canal. Paracetamol was administered orally in the department "to good effect" and the child was discharged with advice for symptomatic treatment and monitoring of symptoms, with a request to return to hospital if any deterioration occurs, new symptoms develop, or parental concerns.

The decedent reportedly struggled to sleep over the next five nights and lost his appetite; he was treated symptomatically with paracetamol, Nurofen, and cough syrup. The decedent reportedly complained about body aches (leg, shoulder, stomach). The decedent was in the care of his father on the morning of 14/09/2023 while his mother was at work, and the father noted around 1:15 pm that the child was not breathing. Cardiopulmonary resuscitation was attempted.

Summary of main pathological findings

- External examination showed:
  - The body of an overweight male child, clad in black shorts only.
  - Evidence of medical intervention.
  - No external evidence of injury with careful examination.
  - No skin rash or pathology.
- A post-mortem CT scan was performed which showed:
  - Significant bilateral pleural effusions.
  - Extensive consolidation of the upper lobe of the right lung, in keeping with respiratory sepsis.
  - Small pericardialeffusion.
  - No abdominal pathology.
  - No evidence of skeletal injury.
- No internal examination was performed.
- Biochemical analysis of the vitreous fluid showed some dehydration.
- Microbiology results:
  - Haemophilus influenzae and Human herpes virus 6 were detected on post-mortem cerebrospinal fluid.
  - Haemophilus influenzae was cultured on post-mortem pericardial fluid and blood culture.
- Post-mortem toxicological analysis showed:
  - Paracetamol at a low concentration.

Radiological examination

A post-mortem CT scan was performed prior to autopsy, that was reviewed by Dr Sarah Constantine, specialist radiologist. The main findings were:

- Significant bilateral pleural effusions.
- Extensive consolidation of the upper lobe of the right lung, in keeping with respiratory sepsis.
- Small pericardial effusion.
- No abdominal pathology.
- No evidence of skeletal injury.

Comments

- This was the death of a previously healthy 4 year old male child who presented to Katherine Regional Hospital on 10/09/2023 with symptoms of a viral upper respiratory tract infection/flu- like illness, which was treated symptomatically. The child's condition reportedly did not improve over the following days, and he had loss of appetite, bodily aches, and struggled to sleep; and he was treated symptomatically, until he was found deceased on the afternoon of 14/09/2023.
- I have no reason to believe with the information available and findings made during external examination of the body, post-mortem CT scan, and results of infectious screening that the death of this 4 year old child was due to any other cause than Haemophilus influenzae

septicaemia, likely following respiratory tract infection. However, without internal examination, I am not able to fully define the pathology.

- The immunisation chart was not sighted, however according to police information his vaccinations were "up to date".

Past medical history

The decedent was born in Pakistan, reportedly with a birth weight of 3.7 kg. Review of the Northern Territory electronic clinical case records (HRN: 7000715) and copy of the hospital file showed just a few recorded consultations, including:

- 10/09/2023: Katherine Regional Hospital Emergency Department attendance described above.
- 09/01/2023: Katherine Regional Hospital Emergency Department attendance for "viral upper respiratory tract infection".
- 30/08/2022: Request letter from Dr David Brummitt for a non-urgent echocardiogram, for a "prominent pansystolic cardiac murmur". It is not clear whether this was ever performed, however I could not find record of this on the Northern Territory Health electronic clinical case records.

Medication

The decedent was reportedly given paracetamol, Nurofen (ibuprofen), and cough syrup in the days prior to death for symptomatic relief. He was not taking any regular prescription medication. According to police information the decedent's immunisations were up to date (immunisation chart not sighted).

Specimens were taken for toxicological analysis:

Results: Forensic Science Case Number: 2304444

Preserved femoral blood Alcohol not detected

Preserved femoral blood Paracetamol 2.8 mg/L

No other drugs listed in the Scope of Analysis were detected in the preserved femoral blood.

Paracetamol has analgesic and antipyretic properties. Reported therapeutic concentrations of paracetamol in plasma in adults are 5-25 mg/L.

Police investigation:

A coronial investigation by police found no suspicious circumstances surrounding this death.

Circumstances:

The child was a four year old male, born in Pakistan on 25 October 2018. He had a younger sister. He moved to Australia in 2021 with his mother and sister after his father was already residing in Australia and had obtained a Visa for the family. The family lived in Katherine. The child was known to enjoy being around water and took a liking to toys, with his favourite toy being an electrical car that he was able to sit in and drive around. He was enrolled at Katherine South Preschool, which he enjoyed and each night before school the next day, he would make sure his items were organised and ready to go.

As part of Visa requirements, the family were obliged to have the appropriate vaccinations. They were not eligible for Medicare and were required to have private health insurance to cover any medical care

usually covered by Medicare. The family was insured by NIB health insurance. As the family were Medicare ineligible, they were responsible for the payment of any fees raised which they could then seek reimbursement from their health insurer. At triage the child was given an ATS category 4 and inline with the NT Health Medicare Ineligible Fees and Charges the fee was determined (Semi-urgent – Triage 4 = $620).

His father had completed over six years of study in Australia, is well educated and stated he has very good understanding of English.

The child was a patient at the Bauhina Health and Katherine Family Medical Practice. He attended Katherine Family Medical Practice on 16 February 2023 with his father for an "immunisation enquiry updated". He was given the polio sabin (oral) and his father requested that the immunisations be put into the record. The doctor noted "will need the immunisation database to upload the immunisations. Will email them to have the records put on the database". On 30 August 2022 the child was referred for a non-urgent Echocardiogram with the Katherine District Hospital at Paediatric Cardiology on 6 June 2023. He did not present for this appointment.

On 9 September 2023, the child went with his mother to visit a friend. After returning home he complained to his mother about pain in his eyes. She took his temperature, which was 39º and she gave him a tablespoon of Nurofen. After 15-20 minutes he appeared better and went for a bike ride. When he returned, he complained about pain in his eyes again and started shivering and stated he felt cold. His mother took his temperature again which was 39º.

On 10 September 2023 at approximately 12:43am, the child's parents took him to the Katherine District Hospital with a fever.

On examination at the Katherine District Hospital, it was noted -

> "HR 156, RR 28, SPO2 99%RA, T 39.2, chubby well looking child, no incr WOB/resp distress, HEENT – throat mild erythema, otherwise NAD, o sinus tenderness, ears – FB small plastic object to R ear in font of TM, no infection/erythema, TM difficult to visualize on R, otherwise ear exam NAD, chest – clear throughout, CVS – CRT <2sec, slightly dry MM, abdo SNT throughout, BS present, no rashes, normal neck mvmts pain free.""

The treating doctor did not take further vital signs, but noted the paracetamol administered at presentation had "good effect" and following examination he was diagnosed with a Viral Upper Respiratory Tract Infection / flu-like illness and the child was discharged to return home with his parents.

At discharge his parents were provided with two doses of paracetamol to take home. They reported that he struggled to sleep over the next five nights, lost his appetite, was treated symptomatically with paracetamol, Nurofen and cough syrup, complained about body aches (leg, shoulder and stomach).

On 14 September 2023, the child's mother said goodbye to her son who was resting in a lounge chair due to his stomach cramps. He was wrapped in a blanket. She went to work, and the child stayed at home with his father who had just finished working night shift. At approximately 1:15pm he was discovered by his father in the lounge chair, unresponsive and not breathing. He rang his wife who was at work and then rang 000. He commenced CPR until the arrival of police and St John Ambulance.

Tragically the child could not be revived, and he was declared deceased by attending Paramedics at 1:53pm.

The father was spoken to by police about why they did not present back to the Katherine Hospital. He stated it was not because of the cost at presentation at Katherine Hospital that prevented him from taking his son back. He stated that he felt the doctor at hospital didn't examine his son properly, did

not pay proper attention and didn't run the appropriate tests. He feared that he would have the same experience if he returned with his son, and didn't have any confidence in the hospital.

He couldn't get an appointment with the GP.

It is unclear as to whether there has been a mandatory open disclosure meeting with the family following the death and the NT Health Structured Judgement Review.

<u>Senior Forensic Pathologist Opinion</u>

Senior Forensic Pathologist, Dr Marianne Tiemensma provided an opinion on discharge at the initial presentation. Dr Tiemensma's opinion from the medical notes, was that the child wasn't acutely ill, and discharge was reasonable at the time. Dr Tiemensma held concerns about what information was provided to the parents in regard to re-presentation.

Dr Tiemensma provided an opinion as to the possible progression of a Viral Upper Respiratory Tract Infection to superimposed bacterial infection. It was the opinion of Dr Tiemensma that the child most probably started with a Viral Upper Respiratory Tract Infection (another family member was sick in the previous week), taking into consideration the period between presentation at Katherine Hospital and death (4 days).

In the following days he deteriorated considerably and developed a secondary bacterial infection.

The child had overwhelming sepsis.

What is Haemophilus influenzae septicaemia:

Haemophilus influenzae septicaemia, also known as bacteremia, is a serious bloodstream infection caused by the bacteria Haemophilus influenzae. It occurs when these bacteria enter the bloodstream and multiply, potentially leading to widespread infection and severe illness. Haemophilus influenzae is a common inhabitant of the upper respiratory tract, but it can also cause invasive infections, particularly in young children and immunocompromised individuals.

What is Septicaemia? (Sepsis)

Septicaemia is when bacteria enter the bloodstream, and cause blood poisoning which triggers sepsis. Septicemia can manifest with a range of symptoms including fever, chills, abdominal pain, nausea, vomiting, diarrhea, fatigue and difficulty breathing. In severe cases, it can lead to sepsis, a life-threatening condition where the body's response to infection is extreme.

Although the child had not presented as critically ill, he died from Haemophilus Influenza Septicaemia. It is known that Septicaemia has a number of serious complications. These complications may be fatal if left untreated or if treatment is delayed for too long.

<u>NT Health Structured Judgement Review</u>

A request was made to NT Health to conduct a Root Cause Analysis. In response, NT Health provided a Structured Judgement Review on 27 May 2025. As part of the review the following contributing factors were identified –

Admission and initial care – first 24 hours (Adequate Care)

- *Assessment of any potential red flags. According to ATS, he met criteria for an ATS 3 (urgent, seen within 30 mins), due to mild tachycardia*
- *According to the paediatric sepsis pathway he met sepsis criteria, due to "Signs and symptoms of fever" plus "vital signs in yellow or pink"*
- *Treatment commenced in 15 mins of arrival – received paracetamol.*
- *Dr did review 2 hours after presentation, noting good effect.*

- *Doctor's notes detail history and examination to an expected standard, including a full patient assessment*

Overall assessment of care – (Adequate Care)

- *Met the criteria to be started on the sepsis pathway.*
- *If sepsis not suspected and for discharge, then parents are to be given sepsis recognition education.*
- *Based on presentation, history and examination, the doctor did not suspect sepsis and presentation consistent with a viral illness.*
- *Discharge letter describes red flags and when to return to hospital if there is concern.*
- *Vital signs not entered onto age specific chart, and repeat vitals were not attended prior to discharge.*
- *Using age-appropriate observation chart may have prompted repeat observations which prompts a senor nurse review and 60 minutes vital checks.*
- *Full medical assessment 2 hours after arriving to the ED, noting "good effect" from paracetamol. No red flags noted during assessment.*
- *Diagnosis of viral illness most likely diagnosis based on history and examination. Dr's notes state parents happy to take him home and provided with appropriate advice on when to return.*
- *A repeat set of vitals and vitals entered onto an age-appropriate chart is recommended.*
- *Dr's notes state improvement post paracetamol but not quantified how he was improved.*
- *Repeat vitals attended is practice when the first set is outside normal range, and post treatment.*
- *Doctor attended as physical examination including listening to heart sounds and noted no increase work of breathing.*
- *Immunisations were not up to date, may prompt to increase safety netting on discharge, to offer immunisation information regarding increased risk of sepsis and immunisation "catch up" with primary care providers.*
- *Parents provided appropriate discharge advice on care at home, paracetamol and supportive management, when to return to ED, any deterioration, new evolving symptoms or parents otherwise concerned. Appropriate advice for presentation and diagnosis.*
- *No evidence in the notes that the sepsis pathway was utilised.*

Having conducted a review, NT Health proposed the following:

Recommendations or Local Action Plan

- ***Educate the importance of using age specific vial sign charts or stickers for all patients.***
- ***Educate on the observation guideline – repeated vitals attended on patients with vitals outside normal range.***
- ***Consideration to using fact sheets and handouts to support discharge advice with documentation of their provision.***
- ***Royal Children's Hospital fever fact sheet or viral illness fact sheet may be helpful, depending on the first language of the family.***
- ***NT could review including immunisation status in the risk factors section on the paediatric sepsis form, can be a red flag for being at higher risk of sepsis.***

Having identified some matters that might be improved, the review found that:

> *Overall, while there are some parts of care that could have been improved on, there is no evidence that these would have changed his care, his diagnosis or discharge disposition. The diagnosis was appropriate based on the presentation, as was the plan of discharge with follow up advice.*

Recommendation

I recommend that NT Health implement the 'Recommendations or Local Action Plan' identified in the NT Health Structured judgement review.

Decision not to hold an inquest:

I make no further findings with respect to the circumstances of this death as, under section 16(1) of the *Coroners Act 1993* ("the *Act*") I decided not to hold an inquest because the investigations into the death disclosed:

- The time, place and cause of death;
- The relevant circumstances concerning the death;
- I do not consider that the holding of an inquest would elicit any information additional to that disclosed in the investigation to date; and
- The circumstances do not require a mandatory inquest because:
    - The deceased was not, immediately before death, a person held in care or custody; and
    - The death was not caused or contributed to by injuries sustained while the deceased was held in custody; and
    - The identity of the deceased is known.

NOTE:

Under section 16(2) of the *Act*, within 14 days after receiving notice of a decision not to hold an inquest, a person may apply to the Supreme Court for an order that an inquest be held.

Under section 16(3) of the *Act*, the Supreme Court may if it thinks fit, make an order that an inquest be held.