IN THE CORONERS' COURT OF THE NORTHERN TERRITORY

Rel No: D0180/2025

Police No: 25 77262

CORONERS FINDINGS

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

I, Elisabeth Armitage, Coroner, having investigated the death of **a 45-day-old, female, Caucasian infant** and without holding an inquest, find that she was born on **17 June 2025** and that her **death occurred on 1 August 2025, at Darwin in the Northern Territory.**

Cause of death:

1(a)	Disease or condition leading directly to death:	**Sudden unexpected death of an infant (SUDI) in an unsafe sleeping environment**

Following an autopsy on 7 August 2025, Forensic Pathologist, Dr Marianne Tiemensma commented:

Comments:

This was the unexpected death of a young full term female infant who was found unresponsive in bed while co-sleeping on a soft shared sleeping surface between her mother and 2-year-old sibling. Some bloody fluid was noted on the bed sheet and dried bloody fluid was noted on the infant's forehead, nose and mouth.

A full post mortem examination was performed with a range of ancillary investigations that included post mortem CT scan, formal neuropathological examination, histology, microbiology, virology, thyroid function tests, biochemical genetics, metabolic studies, and toxicology.

The main post mortem examination findings were:

- Hypostasis present on the cheeks, chin, anterior aspect of the chest, shoulders and arms, supporting a face down position of the infant after death.
- No congenital dysmorphisms.
- No evidence of injury or neglect.
- Subpleural haemorrhages and petechiae with pulmonary congestion and oedema.
- Small reactive cervical and mesenterial lymph nodes

- Rhinovirus detected on a nasopharyngeal swab, Enterovirus in the heart tissue on RT-PCR assay, and Moraxella catarrhalis identified on a right lung swab, however no macro- or microscopic evidence of clinically significant infectious disease.
- Normal thyroid functions.
- No evidence for an inborn error of metabolism or very long chain (vLCAD) or long chain hydroxy-acyl-CoA (LCHAD) dehydrogenase deficiencies.
- No substances were detected on toxicological analysis of post mortem sample of cardiac blood.
- Prescription and over the counter medications detected on segmental hair analysis. Given the history that the infant was bottle fed since birth, this likely represents transplacental transmission due to intra-uterine exposure, with foetal hair present up to several months after birth.
- No cause of death was identified at autopsy. **Considering the available history, scene description, and exclusion of other causes of death, I am of the opinion that the unsafe sleeping environment likely contributed to the death of the infant. The risk factors for infant death in a shared sleeping arrangement in this case include young, small infant, maternal medication use, multiple co-sleepers, soft sleeping surface with soft covers.**

Background:

Infant was born in her home residence "accidentally" but without any complications at 37weeks + 6 days and weighed 3kgs. After the birth, mother and infant were admitted into Royal Darwin Hospital (**RDH**) overnight. There is no evidence in the RDH records that infant's mother was given any safe sleeping education during that admission. The SIDS topic on her vaginal birth pathway was not initialled by nursing staff.

Infant was being raised by a single mother, and infant's grandparents were visiting and providing support. Infants had an overactive thyroid, which resolved when she was four weeks old. Due to mother's medications, infant was bottle fed on formula since birth and usually ate every three hours.

Mother and infant were seen by the Midwifery Group Practice (**MGP**) with home visits documented on 20, 22, 24, 25 and 27 June 2025. Mother is recorded as not smoking. There is no evidence in the MGP records that safe sleeping was discussed during any of these visits.

On 22 June there were some concerns raised by the MGP practitioner about "lethargy" and "grunting" and infant had an overnight stay in RDH. On examination at the hospital infant was alert, reactive and "systemically well." Infant was discharged the next day.

On 14 July 2025 there was a follow-up phone call to infant's mother recorded in the RDH medical records. Mother reported that infant was gaining weight, has more wake windows, is no longer lethargic and was feeding well.

Mother and infant were attending the Community Health Palmerston clinic. Clinic records note that infant was developing normally and a warm and responsive bond between mother and infant was documented. On 17 July 2025 at Infant's 4-week check-up, the records indicate that "safe sleeping guidelines and resources" were discussed.

Circumstances:

On 31 July 2025 mother had 4 standard drinks during the evening.

Infant usually slept in a cot situated at the end of her mother's bed. During the early hours of the morning of 1 August 2025, infant woke up for a feed and when infant would not settle mother put her back down to sleep in her queen size bed, between herself and infant's two-year-old brother.

At about 8:00am, mother woke up and noticed infant was laying on her back, apparently asleep. Mother soon realised infant was cold to touch, blueish in colour, and she had fixed, dilated pupils. Mother also noted blood around infant's nose and mouth. Mother called emergency services at 8:02am.

Intensive care paramedics arrived at 8:09:50am. Mother met them downstairs with infant in her arms. She told the paramedics that she had fed infant at 3am. The paramedics conducted CPR. They noticed that infant's skin was mottled. Tragically infant could not be revived and she was declared deceased at 8:10am on 1 August 2025. She was just 6 weeks old when she passed away.

Police arrived and examined the scene with Forensic Pathologist, Dr Roopan. Mother told attending police and Dr Roopan that she bottle fed infant again at about 5am and placed her back to sleep between mother and brother. The sleep environment was a queen size bed with quilt cover and pillows, with some blood staining present.

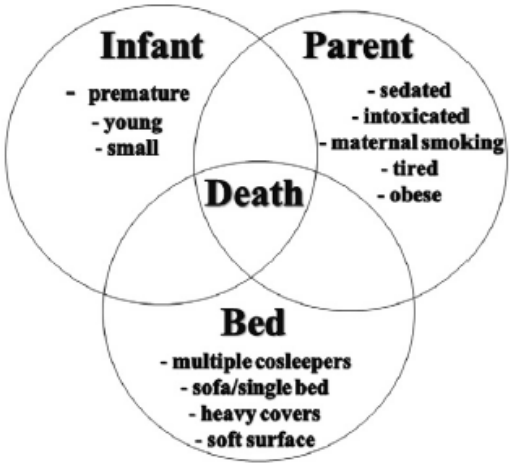
Comment:

According to the Australian Breastfeeding Association around 75% of babies spend at least some time sharing the parent bed in the first three months of life, whether parents meant to bed share, or not.[1] Although infant had her own cot, it tragically appears this was one of those occasions when her mother, just like many other mothers, chose to co-sleep.

The Australian Breastfeeding Association also recognises that, "Adult beds were not designed with infant sleep safety in mind and may contain hazards for babies." The risk created by an unsafe sleep environment, which includes co-sleeping in a parent's bed, was considered in detail in the *Inquest into the deaths of Baby K, Baby B and Baby S* [2026] NTCC 06. In those findings I considered the evidence of Professor Roger Byard at [18]-[19] and noted:

[1] Bed-sharing and your baby the facts.pdf

Professor Roger Byard has been researching and publishing on the risks of co-sleeping since 1994.[2] To assist in identifying SUDI in an unsafe sleeping environment, Professor Byard developed the "triple risk" model; the greater the number of risk factors in a sleeping situation, the greater the risk of an infant death.[3] The model demonstrates the interrelationship of risk factors and provides a conceptual framework for understanding accidental suffocation/smothering and unexpected infant death in a shared sleeping situation:[4]



Professor Byard said that the model demonstrates the potential interaction between three components in a shared sleeping situation: the infant, the bed, and the parents (or other co-sleepers). Infants who are most at risk are young, small for gestational age and premature. Bed/sleep environments that increase the risk of suffocation/smothering include beds with soft surfaces such as compressible mattresses, bean bags, waterbeds, sofas, and pillows. Heavy covers also increase the risk. Features of parents which increase the risk include obesity, sedation, fatigue, intoxication, maternal smoking, and multiple co-sharers. He said that, while it must be recognized that many situations do not result in a lethal outcome, in certain infants the compounding effect of these risk factors may result in death.[5]

Applying this model to infant's sleeping arrangements I identify the following risk factors:

- Infant - young and small (6 weeks of age)
- Bed/sleep environment - multiple co-sleepers as sibling was also present and infant was placed between the co-sleepers, soft sleeping surface, doona, pillows

[2] Byard RW ,Is co-sleeping in infancy a desirable or dangerous practice?, J. Paediatr. Child Health 1994; 30
[3] Inquest evidence of Professor Byard on 17 July 2025 at 278
[4] Byard RW, The Triple Risk Model for Shared Sleeping, J. Paediatr. Child Health 48 [2012] p947-948; although not considered in these inquests it is also known that bottle fed babies are at greater risk when co-sleeping because mothers who bottle feed do not demonstrate the same responsiveness at night as breastfeeding mothers - see Common brief 1.5 SAF,T, SUDI and the practice of Co-Sleeping/Bed Sharing in the NT which references the research of Professor James J. McKenna
[5] Byard RW, The Triple Risk Model for Shared Sleeping, J. Paediatr. Child Health 48 [2012] p947-948

- Parent - mother had consumed alcohol (4 standard drinks), mother was of a larger build/heavy

Dr Tiemensma, the forensic pathologist, identified hypostasis present on infant's cheeks, chin, anterior aspect of the chest, shoulders and arms, which she considered supported a face down position of the infant after death. It is recognised that babies can roll into indentations on a shared sleep surface and back sleeping is recommended for safer respiration and to guard against suffocation/smothering/asphyxiation.

Dr Tiemensma provided this opinion which I accept:

> No cause of death was identified at autopsy. Considering the available history, scene description, and exclusion of other causes of death, I am of the opinion that the unsafe sleeping environment likely contributed to the death of the infant. The risk factors for infant death in a shared sleeping arrangement in this case include young, small infant, maternal medication use, multiple co-sleepers, soft sleeping surface with soft covers.

This is the Red Nose Safe Sleeping / Co-sleeping advice fact sheet.

This Fact Sheet points out that babies should never sleep "in the middle of two adults or next to other children." Infant's mother was a devoted mother who followed advice and provided excellent care. I expect she would have followed this sleeping advice if she had known of it and better understood the risks created by co-sleeping.

In the *Inquest into the deaths of Baby K, Baby B and Baby S* [2026] NTCC 06 I reflected on the potential power of education about safe sleeping, to motivate and empower parents to create and consistently ensure safer sleeping environments for babies, with the aim of reducing deaths from SUDI in an unsafe sleeping environment. In all of mother's medical records there was only one documented occasion when safe sleeping was discussed, at the Palmerston clinic on 27 July 2025. This is too little and too late. It was particularly disturbing that no safe sleeping education was recorded as being given at RDH even though the vaginal birth pathway identifies that education on SIDS is to be given and nor was any recorded in the MGP home visits.

These findings were provided to NT Health for consideration and comment. NT Health agreed in principle with the recommendation included in these findings. NT Health reminded me of the dedicated and tireless work undertaken by NT midwives which I also wish to acknowledge.

Given the complex and sensitive nature of these findings, the Coroner's Grief Counsellor will explain the findings to mother before they are anonymized and published.

Recommendation:

(1) I recommend to **NT Health** that it take all necessary steps, including by amending policy, practice, procedure, guidelines and training, to ensure that baby safe sleep education is provided to pregnant and new mothers at regular intervals during pregnancy and after the birth. The mother's /baby's medical records should document when the education is given and include some detail as to the content and nature of the education. A single 'tick a box' next to SIDS is insufficient to capture what must be recorded.

Decision not to hold an inquest:

Under section 16(1) of the *Coroners Act 1993* I decided not to hold an inquest because the investigations into the death disclosed the time, place and cause of death and 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.