CORONER'S COURT
OF NEW SOUTH WALES

Inquest:	Inquest into the death of Harvey McGlinn
Hearing dates:	19 & 20 September 2022
Date of Findings:	13 October 2022
Place of Findings:	Coroner's Court of New South Wales, Lidcombe
Findings of:	Magistrate Derek Lee, Deputy State Coroner
Catchwords:	CORONIAL LAW – cause and manner of death, baby sling, fabric infant carrier, risk of suffocation, positional asphyxia, Boba Wrap, T.I.C.K.S., Central Coast Local Health District, community health centre
File number:	2019/00110351
Representation:	Mr J Harris, Counsel Assisting, instructed by Ms E McGee (Crown Solicitor's Office) Ms A Horvath SC for NSW Health & Central Coast Local Health District instructed by Ms K Hinchcliffe (Makinson d'Apice Lawyers)
Findings:	Harvey McGlinn died on 8 April 2019 at Killarney Vale NSW 2261. The cause of Harvey's death was positional asphyxia. Harvey died whilst being carried in a fabric infant carrier, otherwise known as a sling, in a position which was inadvertently inconsistent with both the manufacturer's instructions and publicly available guidance regarding its use. Harvey's position in the carrier in this way did not allow for a patent airway to be maintained.

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1. Introduction

1.1 Harvey McGlinn was a three week old infant at the time of his death. On 8 April 2019, Harvey was taken by his mother to a community health centre for a routine check-up. Harvey was being carried in a fabric baby carrier worn by his mother at the time. Shortly after the check-up commenced, Harvey was taken out of the carrier and found to be pale and unresponsive. Emergency resuscitation efforts were initiated but Harvey could not be revived and was tragically pronounced deceased.

2. Why was an inquest held?

2.1 Under the *Coroners Act 2009* (**the Act**) a Coroner has the responsibility to investigate all reportable deaths. This investigation is conducted primarily so that a Coroner can answer questions that are required to answer pursuant to the Act, namely: the identity of the person who died, when and where they died, and what was the cause and the manner of that person's death.

2.2 A postmortem examination was performed following Harvey's death. This examination was unable to identify specific medical evidence to establish the cause of Harvey's death. For this reason alone, an inquest was required to be held. In addition, the circumstances in which Harvey was found to be unresponsive on 8 April 2019 raised questions about a number of issues. These included the manner in which Harvey was being carried on the day, whether there was any earlier opportunity to identify the possibility that Harvey was in distress or unresponsive, and the nature of information and education provided to parents of newborn infants regarding safe sleeping practices and safe sleeping environments, particularly as they related to infant carriers.

2.3 In this context it should be recognised at the outset that the operation of the Act, and the coronial process in general, represents an intrusion by the State into what is usually one of the most traumatic events in the lives of family members who have lost a loved one. At such times, it is reasonably expected that families will want to grieve and attempt to cope with their enormous loss in private. That grieving and loss does not diminish significantly over time. Therefore, it should be acknowledged that the coronial process and an inquest by their very nature unfortunately compels a family to re-live distressing memories several years after the trauma experienced as a result of a death, and to do so in a public forum. This is an entirely uncommon, and usually foreign, experience for families who have lost a loved one.

2.4 It should also be recognised that for deaths which result in an inquest being held, the coronial process is often a lengthy one. The impact that such a process has on family members who have many unanswered questions regarding the circumstances in which a loved one has died cannot be overstated.

3. Harvey's personal background

3.1 Inquests and the coronial process are as much about life as they are about death. A coronial system exists because we, as a community, recognise the fragility of human life and value enormously the preciousness of it. Understanding the impact that the death of a person has had on those closest to

that person only comes from knowing something of that person's life. Therefore, it is important to recognise and acknowledge the life of that person in a brief, but hopefully meaningful, way.

3.2 Harvey was born on 12 March 2019 at 37 weeks and four days to Tattika Dunn and William (Bill) McGlinn. Harvey was Tattika's third child after she had previously had twin boys from a previous relationship. Due to recurrent haemorrhage, labour was induced and Harvey was born via assisted delivery with ventouse, forceps and an episiotomy. Harvey was noted to be bradycardic during labour and he sustained bruising to his face and swelling to the back of his head during delivery. Harvey's APGAR score was 2 at 1 minute (as he was noted to be pale, flaccid and not breathing), with his score rising to 7 at the 5 minutes and 10 minutes marks.

3.3 Harvey's birth weight was recorded as 2,940 grams. This later increased to 2,900 grams by 15 March 2019. Following his birth, Harvey was placed in the special care nursery and remained at hospital until he was discharged on 16 March 2019.

3.4 Harvey was breastfed and also given supplementary formula. As Harvey experienced reflux during his early life, Tattika gave him gripe water.

3.5 After returning to his home in Killarney Vale, Harvey was visited by midwives and child and family health registered nurses from the Midwife Support Program on the following occasions:

(a) On 18 March 2019, a midwife attended Harvey's home. His weight was recorded as 2,250 grams. This raised a concern as it indicated that Harvey had lost approximately 400 grams since 15 March 2019. Tattika reported that Harvey was feeding every three hours, and a feeding plan was documented.

(b) On 19 March 2019, Harvey was visited by another midwife. Harvey's weight was recorded as 2,680 grams, an increase of 130 grams from the previous day. The midwife observed Harvey breastfeeding and noted that he was feeding appropriately. Accordingly, Harvey was discharged from the Midwife Support Program.

(c) On 21 March 2019 Harvey was visited by Christine Percy, a Child and Family Health Registered Nurse (**RN**) as part of a Universal Health Home Visit (**UHHV**), which is offered to parents of newborns during the first four weeks following birth. Harvey's weight was noted to be 2,300 grams, which represented a loss of 380 grams over two days. Whilst it was noted that Harvey had passed a dark sticky stool, he otherwise appeared vigorous. In addition, Tattika reported that Harvey was feeding every three to four hours, that he had plenty of wet nappies and yellow runny stools, all of which were considered to be good signs. RN Percy noted no safety concerns for either Tattika or Harvey. She discussed feeding techniques with Tattika and made arrangements for another visit in five days' time.

(d) On 26 March 2019, RN Percy return to visit Harvey. His weight was recorded as 2,730 grams, a gain of 430 grams over five days. RN Percy considered that Harvey may have been receiving more feeds than he needed. Accordingly, she recommended that Tattika attended the Breast Feeding Service Drop In at Long Jetty Community Health Centre (**the Centre**).

3.6 On 2 April 2019, Tattika took Harvey to the Centre where he was seen by Sarah Betteridge, a Child and Family Health RN. Harvey's weight was noted to be 2,850 grams, which was an increase of 120 grams from seven days earlier. RN Betteridge made plans for a follow-up visit for Harvey on 8 April 2019.

3.7 On the evening of 7 April 2019, Harvey was noted to be unsettled. At around 3:30am on 8 April 2019, Bill went into the lounge room and saw that Tattika was with Harvey. Bill prepared some formula and then fed and burped Harvey. Following this, he placed Harvey in a Moses basket near to where Tattika was sleeping.

4. What happened on 8 April 2019?

4.1 At around 5:15am on 8 April 2019, Bill left home to go to work. Harvey appeared to be well at the time.

4.2 At around 8:20am, Tattika's friend, Jillian, arrived. Tattika had made arrangements the previous day for Jillian to look after her twin boys whilst she took Harvey to the Centre. Jillian noted that Harvey was awake and in a baby rocker, and appeared well. After hearing Harvey crying, Jillian suggested that he might be hungry but Tattika explained that he had just been fed.

4.3 As Tattika prepared to leave home, she placed Harvey in a fabric baby carrier known as a Boba Wrap. The carrier consists of a single long piece of fabric, made from cotton and spandex, which is tied around the body in a particular way to support a baby. It is manufactured by Boba Inc., a company incorporated in Wyoming in the United States.

4.4 Jillian noted that Harvey's whole body was inside the carrier, with his head towards Tattika's breast. Jillian was able to see Harvey's head when she looked into the carrier.

4.5 After leaving home, Tattika and Harvey went to the Killarney Vale Bakery which was located nearby on Wyong Road. Tattika later reported that Harvey was kicking and making noises whilst they were at the bakery. CCTV footage from the bakery shows Tattika appearing to settle Harvey by patting his bottom. Tattika bought a coffee and left the bakery at 8:52am. She walked past a liquor store and service station on her way to the Centre which was a short distance away.

4.6 At 8:55am, RN Kathryn Mitchell called Tattika to confirm the appointment. Although RN Mitchell had spoken to RN Betteridge the previous day about the appointment, she was unsure whether it was a home visit. Tattika explained that she was on her way and RN Mitchell reviewed Harvey's case notes to prepare for the appointment.

4.7 A few minutes later, Tattika approached the Centre and walked past a number of staff members who were queueing up at a coffee cart outside. Rebekka Kovacs, a Child and Family Health RN, was in the queue and saw some blue fabric hanging down from Tattika's waist level, and wondered whether this was a baby carrier.

4.8 At 9:01am, Tattika arrived at the Centre's reception area. She saw RN Percy who recognised her and said hello. RN Percy did not recognise that Tattika was wearing a baby carrier and instead thought that she was carrying a bag of some kind around her neck.

4.9 Tattika approached the receptionist, Sandra Styles, and indicated that she had an appointment. Ms Styles asked Tattika to take a seat, and noted that Harvey appeared to be carried in a horizontal position, across Tattika's stomach. Ms Styles did not see Harvey move or hear him making any noises.

4.10 At 9:05am, RN Mitchell went to the waiting room and called out Harvey's name. Tattika initially did not respond, believing that her name was going to be called. RN Mitchell called Harvey's name again and Tattika responded. RN Mitchell commented that she was expecting to see a pram. Tattika responded by pointing to her baby wrap and said, "*I've got him in here*". RN Mitchell noted that Harvey appeared to be positioned around Tattika's lower abdomen, possibly a bit a lower than the level of her belly button.

4.11 Tattika and RN Mitchell went into a clinic room and the appointment commenced. Tattika asked a number of questions and expressed concern about Harvey being unsettled at night, and experiencing reflux and vomiting over the previous few days. Tattika also spoke about her past domestic history from a former relationship. This initial conversation took up to 15 or 20 minutes. At some stage, RN Percy entered the room for a few minutes. She informed RN Mitchell about Harvey's weight and that he had reportedly been feeding well.

4.12 During this time, Harvey remained inside the carrier, on Tattika's lap positioned around her lower abdomen. RN Mitchell noted that she did not see any movement or hear any noises, and assumed that Harvey was asleep.

4.13 After RN Percy left the room, RN Mitchell asked Tattika if she could have a look at Harvey. Tattika began to unwrap the carrier, exposing one of Harvey's legs. RN Mitchell noted that Harvey's skin was white, blue or grey in appearance. She also noted that Harvey's chin was flexed downwards, against his chest, that there was blood around his nostrils, and that the skin around his lips and nose was blue.

4.14 RN Mitchell immediately recognised that Harvey was unconscious or deceased. She initially went to contact Triple Zero but, upon realising that this would take too long, yelled out, "*Emergency*", to RN Percy instead. A call was also made to Triple Zero at 9:29am.

4.15 Harvey was placed on an examination trolley and cardiopulmonary resuscitation was initiated. Registered Nurses Percy, Kovacs and Mitchell all took part in the resuscitation efforts, together with a doctor from the health centre located next door. Paramedics arrived at the Centre at 9:36am and continued the resuscitation efforts. A CareFlight helicopter was dispatched from Westmead and an emergency physician arrived at the scene at 9:59am.

4.16 Despite these various efforts, Harvey could not be revived and he was pronounced life extinct at 10:12am.

5. The postmortem examination

5.1 Harvey was later taken to the Department of Forensic Medicine where a postmortem examination was performed by Dr Lorraine Du Toit-Prinsloo, forensic pathologist, on 11 April 2019. In addition, Harvey's case was reviewed by a multidisciplinary paediatric review Sudden Unexpected Death in Infancy panel in June 2019.

5.2 The postmortem examination identified the following relevant findings:

(a) Features of acute and chronic aspiration, consistent with the history of reflux;

(b) No features of acute pneumonia in the lungs;

(c) No features of any underlying disease process from microbiology and virology testing, with no evidence supporting an underlying infective cause of death;

(d) No cause of death identified from biochemistry testing;

(e) Routine toxicology testing identified concentrations of nordiazepam (a metabolite of diazepam, a benzodiazepine commonly used in the treatment of anxiety), naproxen (anti-inflammatory medication) and paracetamol. Dr Du Tout-Prinsloo noted that the available literature indicates that levels of naproxen detected in breast milk are low and adverse reactions in infants are uncommon, and that nordiazepam has a long half-life and can accumulate in blood samples of infants who are being breastfed.

5.3 Dr Du Toit-Prinsloo ultimately opined that the cause of Harvey's death could not be ascertained with medical certainty. However, she noted that Harvey had been found unresponsive in a baby sling and that various journal articles have discussed the deaths of infants in such slings. These articles also noted that the position of a baby in a sling is regarded as a potential risk factor for airway obstruction, with subsequent positional asphyxia.

6. What issues did the inquest examine?

6.1 Prior to the commencement of the inquest a list of issues was circulated amongst the sufficiently interested parties, identifying the scope of the inquest and the issues to be considered. That list identified the following issues:

(1) The cause of Harvey's death;

(2) The circumstances of Harvey's death, including observations made and action taken by staff at the Long Jetty Community Health Centre;

(3) Matters which appear to have contributed to Harvey's death, including:

(a) Harvey's age and weight;

(b) his health and development;

(c) the presence of traces of benzodiazepine in his blood;

(d) his position in a baby carrier at the time of his death.

(4) The adequacy of advice and guidance provided to parents regarding the risks associated with, and the safe use of, baby carriers.

6.2 Each of the above issues is discussed in detail below, and it will be convenient to consider some of the issues together and in chronological order.

6.3 In order to assist with consideration of some of the above issues, an independent expert opinion was sought from Associate Professor Nick Evans, senior staff specialist neonatologist.

7. Observations made of Harvey on 8 April 2019

7.1 RN Kovacs gave evidence that whilst waiting in the queue for the coffee cart on the morning of 8 April 2019, her attention was drawn to Tattika as she was walking briskly towards the Centre. RN Kovacs said that she saw that Tattika was wearing a blue, sling-like carrier around her. However, RN Kovacs expressed some uncertainty about when she first realised that Tattika was wearing a sling as it was difficult to distinguish between what she observed at the time, and what she learned in retrospect when documenting her observations in Harvey's progress notes.

7.2 In any event, RN Kovacs described having seen baby sling carriers prior to 8 April 2019 and that the item that she saw Tattika wearing did not appear to be a traditional baby carrier. Nurse Kovacs described seeing a "*bulge-like presence*" at the bottom of the sling, which was "*low down*", below the level of Tattika's belly button.

7.3 RN Kovacs gave evidence that she could not see any part of the baby that she believed was inside the sling, and could not see which way the baby was oriented. However, RN Kovacs indicated that the bulge or bump that she observed was positioned horizontally, across Tattika's body.

7.4 RN Kovacs said that she could not recall what, if anything, went through her mind at the time that she made the above observations. She agreed that her thinking at the time may have been affected by her knowledge of subsequent events. Notwithstanding, RN Kovacs gave evidence that *if* at the time she had recognised or believed that there was a baby inside the sling, she would have considered that there was an element of risk involved with the manner in which the baby was being carried. This is because RN Kovacs observed that the sling was being worn "*in a manner contrary to the usual way*" in which she had seen slings worn previously. RN Kovacs explained that from her previous observations, babies in slings were carried in a more upright position with their head usually visible around the region of the clavicle of the person wearing the sling. In evidence, Nurse Kovacs described the position as "*essentially in the feeding position but higher".*

7.5 RN Mitchell gave evidence that when she first went into the waiting room to call Harvey's name, she initially recognised that Tattika did not have a pram with her and thought that she may have been a

client of another allied health service. RN Mitchell then noted that Tattika had something on her lap which appeared to be very small, and which RN Mitchell did not immediately recognise to be a baby.

7.6 However, RN Mitchell gave evidence that when Tattika stood up, she recognised that Tattika was wearing a baby sling and that there was a baby inside the sling, lying across Tattika's body at the level of her belly button. RN Mitchell said that she presumed that the baby was asleep as she saw no movement from the baby and did not hear the baby making any sounds. RN Mitchell gave evidence that she thought that the baby was in more of a horizontal, rather than an upright position and could not see whether the baby was sitting. RN Mitchell stated that she held no concerns at the time of making these observations.

7.7 After proceeding into the clinic room, RN Mitchell gave evidence that she had a conversation with Tattika regarding a number of topics which took up to 15 or 20 minutes. Tattika remained seated the entire time and RN Mitchell noted that the tension in the sling was more relaxed than when Tattika was standing up in the waiting room. RN Mitchell also noted that Harvey was positioned horizontally in the sling, lying across Tattika's lap. Whilst RN Mitchell was unable to see any part of Harvey's body, she gave evidence that from his general outline she saw that his legs were stretched out.

7.8 After RN Percy entered the clinic room briefly and then left, RN Mitchell asked Tattika whether she could have a look at Harvey in order to see if there were any concerns with him physically. As Tattika started folding down part of the sling, Nurse Mitchell observed that Harvey's leg was "*very pale and blotchy*" which immediately raised a concern. As the sling was unfolded, RN Mitchell saw that Harvey's legs were stretched out, his arms were pale and purple and grey in colour, his scalp was very pale and purple, and there was vomit on his chest. In addition, Nurse Mitchell described Harvey's position as being "*curled up*", with his shoulders curled up as well and his chin "*right up against his chest*", with his legs at the same level as his body, and his head positioned a little higher.

7.9 **Conclusions:** The observations made by staff at the Centre leading up to Tattika's appointment did not immediately identify that Harvey was being carried in a sling. These observations also did not identify that Harvey may have been in distress or had become unresponsive prior to the sling being unfolded during the course of the appointment. Neither of these matters was due to any inattention on the part of staff at the Centre or a failure to recognise the manner in which Harvey was being carried, and any risk associated with this.

7.10 Rather, it appears that the following factors contributed to the lack of any immediate recognition of the manner in which Harvey was being carried: Tattika walking briskly to the Centre, Harvey being carried in a relatively low position, Harvey being positioned horizontally across Tattika's body, Tattika being seated in the Centre's waiting area prior to her appointment, staff at the Centre being less familiar with slings compared to other type of infant carriers and the absence of any sign that Harvey was in distress during the course of the appointment prior to RN Mitchell asking if she could have a look at Harvey.

7.11 There is no evidence to suggest that any staff at the Centre had any reasonable opportunity to identify the manner in which Harvey was being carried and any risks associated with this. There is also no evidence to suggest that if earlier identification had occurred that this would have altered the eventual outcome.

8. What was the cause and manner of Harvey's death?

8.1 In evidence, Associate Professor Evans was asked to opine as to whether any of the following features was most significant as to the cause of Harvey's death:

(a) possible immersion in the fabric of the sling;

(b) the positioning of Harvey's neck; or

(c) aspiration of vomit.

8.2 Associate Professor Evans described some difficulty in determining the proximity of the fabric of the sling to Harvey's airway, and therefore its relevance. Associate Professor Evans explained that the general wisdom of sudden infant death prevention guidelines is to not include soft toys and soft bedding material (such as cot bumpers) in infant sleeping environments to avoid the risk of such items coming into contact with a baby's face.

8.3 As to the evidence of a vomit and possible chronic aspiration, Associate Professor Evans expressed some uncertainty as to the mention of chronic aspiration from possible reflux in the autopsy report. He explained that this finding is difficult to reconcile with Harvey's history as reflux will usually manifest clinically as vomiting. However, in Harvey's case there was no history of recurrent vomiting. In addition, Associate Professor Evans explained that whilst the role of reflux in sudden infant death is uncertain, in the context of this case he would have expected there to be a stronger history of clinical reflux if it played a causative role in Harvey's death. Overall, Associate Professor Evans considered that chronic reflux aspiration would have likely produced respiratory signs and symptoms prior to the day of Harvey's death, which were not evident.

8.4 Two other matters were explored with Associate Professor Evans in evidence:

(a) First, the toxicology results from the autopsy. In this regard, as part of the coronial investigation, an opinion was sought from Dr Shuang Fu, a forensic pharmacologist and toxicologist. Dr Fu opined that the detected levels of nordiazepam, naproxen and paracetamol in Harvey's postmortem blood samples are much lower than the reported therapeutic levels and therefore would have had no effect on him at the time of his death. In evidence, Associate Professor Evans agreed with the opinion expressed by Dr Fu.

(b) Second, concerns regarding Harvey's weight gain following birth. Associate Professor Evans explained that in breast fed babies the most common cause of poor weight gain in the early postnatal period is inadequate milk supply or acquisition. Associate Professor Evans considered this to be the likely cause in Harvey's case, but noted that the response from the midwives and nurses involved in Harvey's care was appropriate. Harvey's feeds were observed and recommendations were made for Harvey to receive complementary feeds with expressed breast milk or formula milk. In addition, Associate Professor Evans expressed the belief that some of the inconsistencies in Harvey's weight following birth may have been due to measurement error. For example, Associate Professor Evans described that an increase of 450 grams over five days from 21 March 2019 would have been "*an extraordinary weight gain*".

Associate Professor Evans explained that whilst Harvey's weight gain was slow, the trajectory of his weight was the more important consideration. In this regard, Associate Professor Evans noted that Harvey was actually gaining weight and that prospectively there would not have been a concern about this. However, Associate Professor Evans explained that in hindsight Harvey's weight would be considered to be a risk factor. This is because Harvey's low weight may have contributed to less muscle and head control. This is of particular relevance to the last issue considered by Associate Professor Evans, that being the positioning of Harvey's neck.

8.5 In this regard, Associate Professor Evans considered the position of Harvey's neck to be the most significant factor as to the cause of his death. Associate Professor Evans noted that Harvey was found with his neck in a flexed position against his chest and explained that this is not a good position in terms of maintaining a patent airway. Associate Professor Evans referred to a published study from France which described 19 cases of sudden infant deaths in adult worn baby carriers, with 10 of the cases involving a wrap or sling similar to the one which was used to carry Harvey.

8.6 Associate Professor Evans also noted that Harvey was being carried in the sling "*in a way that was contrary to the manufacturer's instructions and also public health advice*". These matters are discussed further below. Ultimately, Associate Professor Evans opined that it "*seems very likely that Harvey's tragic death was the result of accidental suffocation within the wrap baby carrier*".

8.7 **Conclusions:** Having regard to the opinion expressed by Associate Professor Evans the finding of aspiration of vomit as part of the postmortem examination can be excluded as contributing to Harvey's death. Similarly, there is no evidence that there was any toxicological contribution to Harvey's death. The evidence that remains relates entirely to the manner in which Harvey was being carried on 8 April 2019.

8.8 The possibility of the fabric of the sling being too close to Harvey's face and being causative of death cannot be entirely excluded. However, the opinions expressed by Associate Professor Evans establishes that the position that Harvey's neck was in once the sling was unfolded is the most important consideration as to the cause of Harvey's death. The evidence establishes that the position of Harvey's neck, with his chin on his chest, compromised his airway. Harvey's relatively low weight may have resulted in less muscle and head control resulting in a difficulty in maintaining a patent airway from the way that Harvey was positioned in the sling.

8.9 Overall, having regard to all of the above matters, it is more probable than not that the cause of Harvey's death was positional asphyxia. This most likely occurred as a result of the way in which Harvey was being carried inside the sling which did not allow for a patent airway to be maintained.

9. Adequacy of guidance provided to parents regarding the risks associated with, and the safe use of, baby carriers

9.1 This issue will be considered in two respects in relation to information and advice provided to parents by:

(a) the manufacturers of the Boba Wrap; and

(b) NSW Health generally, and the Central Coast Local Health District (**CCLHD**) more specifically, as the Local Health District (**LHD**) within which the Centre is located.

Guidance provided by the manufacturer

9.2 As noted above, Harvey was being carried in a Boba Wrap manufactured by Boba Inc (**Boba**). Boba sells two main categories of products – wraps and soft structured carriers – which are designed in the United States and manufactured in China. Boba's products have been sold in Australia since at least 2014, with its wrap products made of one long strip of fabric, comprised of a blend of cotton and spandex. According to the president of Boba, the Boba Wrap can be distinguished from other baby wearing products in the market, such as slings. This is because whilst slings are generally designed to be worn diagonally across the body and secured over the wearer's shoulder, the Boba Wrap is "*tied tightly around the wearer's stomach, back and shoulders in a specific manner and requires the infant to be positioned vertically at the front of the wearer's chest*".

9.3 Up until December 2019, the instruction booklet for use of the Boba Wrap provided guidance for infants to be held in two ways: the "Newborn Hold" and the "Love Your Baby Hold". Both holds "*require the infant to be placed in the wrap and positioned on the wearer's chest, vertically, with the infant's head close enough for the wearer to kiss*". The only difference between the two holds is that the former requires the legs to be kept inside the wrap and tucked beneath the infant in a position known as the "*fetal tuck*", with the latter involving the infant's legs positioned outside of the wrap on either side of the wearer's body.

9.4 A warning label was attached to the Boba Wrap that Harvey was carried in. Relevantly, it stated the following:

> SUFFOCATION HAZARD. When using this wrap, constantly monitor your child. Babies younger than four months can suffocate in a wrap if face is pressed tightly against your body. Babies at greatest risk of suffocation include those born prematurely and those with respiratory problems. Check often to make sure baby's face is uncovered, clearly visible, and away from the wearer's body at all times. Make sure baby does not curl into a position with the chin resting on or near baby's chest. This position can interfere with breathing, even when nothing is covering the nose or mouth. [original emphasis]

9.5 In addition, the warning label contained four images showing that babies should be carried with their chin up, face visible and nose and mouth free, and that they should not be carried too low or in a hunched position with their chin touching their chest.

9.6 The instruction booklet sold with the Boba Wrap that Harvey was carried in relevantly noted the following after listing the instructions for the Newborn Hold:

> **IMPORTANT:** All babies MUST be carried in an upright, completely vertical position, facing the wearer (ABSOLUTELY NO CRADLE OR OTHER HORIZONTAL POSITIONS. NEVER FACE YOUR BABY FORWARD). [original emphasis]

9.7 Finally, a Babywearing Safety Manual included with the Boba Wrap noted the following:

> 1. Make sure your baby can breathe at all times. Baby carriers allow parents to be hands-free to do other things, but you must always be active in carrying for your child. No baby carrier can ensure that your baby has an open airway
>
> 2. Never allow your baby to be carried, held or placed in a position that curls the head against the chest. This position can restrict your baby's ability to breathe… Newborns do not have the muscle control to open their airways if they are placed in this kind of position.
>
> 3. Never allow your baby's head and face to be covered with fabric. This prevents you from being able to easily and frequently check on your baby.
>
> …
> IMPORTANT: Preemies, low birth weight newborns, babies with an upper respiratory infection, low muscle tone or GERD Should be carried in an upright position and should NOT be held in a horizontal (cradle, hammock) position across the wearer's chest

9.8 As to the adequacy of guidance provided by the manufacturer of the Boba Wrap, associate Professor Evans noted the following in his report:

> The premises of the effectiveness of manufacturer's safety instructions are, firstly the people read them (which I suspect they often don't) and secondly, that everyone who acquires the product will have access to these instructions.
>
> The latter may not be the case with baby products which will be used for a short period of time and then often handed on to friends and family who are starting families. I suspect such hand on would rarely include instruction paperwork.

9.9 Associate Professor Evans acknowledged in evidence that the Boba Wrap that Harvey was being carried bore a warning label as described above. However, the issues regarding access to, and the reading of, the instruction booklet and Babywearing Safety Manual that are included with the Boba Wrap raised by Associate Professor Evans cannot be accurately determined on the available evidence.

9.10 **Conclusions:** Although the above matters cannot be so determined, it is evident that the manufacturer of the Boba Wrap provided sufficient documentary guidance to purchasers of the wrap as to how it should be worn correctly, and the hazards associated with incorrect use. Relevantly, the guidance provided warned users of particular features relevant to Harvey's case, namely the need to carry babies in an upright position, particularly babies with low birth weights, and the importance of avoiding babies being carried in a position that results in their chin resting on their chest.

Guidance provided by NSW Health and the CCLHD

9.11 RN Kovacs gave evidence that in 2019 that whilst she did not necessarily make direct reference to the use of slings in her conversations with parents during appointments of the kind that Tattika attended on 8 April 2019, she would refer to some general principles in her conversations regarding sudden infant death. These principles related to ensuring that a neutral airway is maintained for infants (keeping infants in what RN Kovacs described as a "*sniffing position*", that is, with an infant's head upright and off their chest) and identifying that there is a greater risk of sudden infant death for certain infants (those with low birth weights or who are unwell). RN Kovacs gave evidence that the focus of these conversations was on maintaining a safe sleeping environment for infants.

9.12 RN Mitchell gave evidence that in 2019 she would always discuss safe sleeping practices with parents during an initial home visit. This discussion would involve reference to information provided by Red Nose Australia regarding such practices. RN Mitchell gave evidence that she would only discuss slings if the topic was raised by a parent. RN Mitchell said that in response she would have advised the parent to make sure that they could see their child when being carried in a sling.

9.13 At the time of Harvey's death, there were two relevant documents published by NSW Health in force:

(a) the Policy Directive *Maternity – Safer Sleeping Practices for Babies in NSW Public Health Organisations PD2012_062*, published on 20 November 2012 (**the 2012 Policy Directive**). The 2012 Policy Directive provided that NSW Health staff "*who care for expectant mothers, parents and caregivers of babies must provide consistent evidence based information and education about safe sleeping practices*". Whilst the 2012 Policy Directive made specific reference to cots, mattresses and bedding it did not make any explicit reference to slings or fabric carriers.

(b) The *Sudden Infant Death Syndrome (SIDS) and safe sleeping for infants* Guideline, published on 24 May 2005 (**the 2005 Guideline**). It also made specific reference to positioning babies when being put to sleep, cots and co-sleeping with adults but again contained no explicit reference to slings or fabric carriers.

9.14 One other piece of documentary material is relevant. It is the *Having a Baby* book (**the Book**) published by NSW Health and provided in hard copy form to all pregnant women attending NSW Health maternity services. An electronic version of the book is also freely available. Within a section of the Book titled, "*Give me strength: pre-and postnatal exercises*" and under a heading titled, "*Other ways to care for your back in pregnancy and after the birth*", is the following advice:

> Carry the baby in a safe baby carrier or put them in a pram rather than carrying them in a capsule. Several different types of wearable baby carriers are available. Fabric wrap, pouch or bag slings and framed carriers are some examples. Parents and carers should take care when using slings and pouches to carry babies. Babies are at risk of suffocation if placed incorrectly in a sling.

9.15 The Book goes on to direct readers to online information concerning safely using baby carriers and provide a link to the Australian Competition & Consumer Commission (**ACCC**) Product Safety Australia website. The relevant section of the website deals with baby slings and carriers (**PSA website**). It relevantly provides the following:

Babies can suffer a range of injuries from incorrectly use or damage slings and carriers. Make sure the product you buy is suitable for both you and your baby, and is made of heavy duty, well wearing materials.

[…]

Risks and Injuries

If used incorrectly, baby slings and framed carriers can lead to:

- rapid suffocation if your baby's face is pressed against fabric or your body
- slow suffocation if your baby is lying in a 'c' shaped position with chin on chest

[…]

Babies who are younger than four months, premature, low birth weight or having breathing difficulties appeared to be at greater risk of injury in baby slings. Consult a paediatrician before using a sling with a premature baby.

Child safety experts do not recommend carrying children younger than four months in framed carriers.

[…]

Safe use

Follow the manufacturer's instructions carefully and have someone assist you the first time you use the product.

[…]

Ensure you can see the baby's face at all times and that it remains uncovered. If using a sling or wrap, ensure the baby has sufficient room to breathe and cannot move to a position where this is compromised.

9.16 Deborah Matha, the Director of Maternity, Child and Family within the Health and Social Policy Branch of NSW Health, and Leanne Roberts, the Acting Director, Women, Children and Families within CCLHD both provided statements as part of the coronial investigation and gave evidence during the inquest.

9.17 Ms Matha and Ms Roberts both gave evidence that in 2019 there was not a great deal of information, from a NSW Health and LHD level, regarding the use of slings in the context of safe sleeping practices for infants. This available information generally related to the wearing of infant carrier products correctly and having visible information, in the form of posters, displayed in hospitals and community health centres. These posters made reference to the following T.I.C.K.S. mnemonic:

> **T**ight: the sling should be tight, with the baby positioned high and upright with head support. Any loose fabric might cause your baby to slump down, which could restrict breathing.
>
> **I**n view at all times: you should always be able to see your baby's face by simply looking down. Ensure your baby's face, nose and mouth remains uncovered by the sling and/or your body.
>
> **C**lose enough to kiss: your baby should be close enough to your chin that by tipping their head forward you can easily kiss their head.
>
> **K**eep chin off the chest: ensure your baby's chin is up and away from their body. Your baby should never be cool to so that the chin is forced onto their chest. This can restrict breathing. Regularly check your baby. Babies can be in distress without making any noise or movement.

> **S**upported back: your baby's back should be supported in a natural position with their tummy and chest against you. When bending over, support your baby with one hand behind their back. Bend at the knees, not at the waist.

9.18 However, it is not clear whether such posters were displayed at the Centre prior to 8 April 2019, or whether Tattika had access to rooms where such posters may have been displayed during her previous visits to the Centre.

9.19 Ms Matha acknowledged that in 2019 NSW Health did not have any specific policy regarding safe sleeping practices involving the use of slings. Ms Roberts gave evidence that in 2019 the use of slings was not routinely discussed with parents of newborn babies either at hospitals or during attendances at community health centres. Instead, the focus was more on maintaining a safe sleeping environment for infants. Ms Roberts confirmed that the evidence given by Nurses Mitchell and Kovacs regarding informing parents to keep an infant's head uncovered and their airway patent if the topic of slings was raised by a parent was consistent with usual practice in 2019.

9.20 **Conclusions:** At the time of Harvey's death neither NSW Health nor the CCLHD had a policy directive or guideline in place which explicitly referred to and dealt with the use of slings and fabric baby carriers, the risks associated with their incorrect use or use contrary to instructions provided by a manufacturer or the risk supposed to babies with particular vulnerabilities. Instead, guidance and advice provided to parents of newborns, at both a policy and practical level, tended to focus on safe sleeping practices more generally and bedding furniture and equipment more specifically.

9.21 The evidence establishes that discussions between nurses and parents of newborn babies at community health centres like the one at Long Jetty did not specifically canvass the use of slings and other fabric baby carriers. If the topic was raised by a parent during a discussion of the type that Tattika attended on 8 April 2019, then typically the guidance and advice provided to parents would centre around general safe sleeping practices as described above.

9.22 The Book directed parents to helpful information and advice published by the ACCC in relation to the safe use of slings and fabric baby carriers and the risks associated with their incorrect use. However, this such direction was contained within a section in The Book that has nothing to do with safe sleeping, or infant safety in general, making it seemingly difficult for a parent to identify.

9.23 The extent (if any) to which the absence of a policy directive or guideline which made explicit reference to the matters described above had any bearing on the events of 8 April 2019 cannot be determined on the available evidence. This is because it is not known what advice and guidance Tattika may have had access to, or been provided with, prior to 8 April 2019. In addition, as noted above, it is also not clear whether such advice and guidance may have been derived from instructions and warnings published by the manufacturer of the specific wrap that Harvey was carried in.

Relevant changes to the guidance provided by NSW Health and the CCLHD

9.24 Both Ms Matha and Ms Roberts gave evidence that since Harvey's death, the use of slings in a safe sleeping context has become "*more embedded*" in policy at a State and LHD level. In particular, Ms

Matha gave evidence that Harvey's death caused NSW Health to "*pause and reflect*" resulting in a strengthening of the advice provided to parents of newborns.

9.25 Ms Roberts gave similar evidence that since 2019, the general advice provided to parents regarding safe sleeping practices has now been broadened and discussions regarding these practices are not only centred around the use of items such as cots and bassinets, but also about the use of infant carriers, including slings. Ms Roberts also explained that mandatory training regarding the use of slings in a safe sleeping context is now embedded in education provided to registered nurses who are staffed at both hospitals and community health centres.

9.26 RN Kovacs gave evidence that since 2019 she has adopted a new practice when having discussions with parents in the context of a check-up of a kind that Tattika and Harvey attended on 8 April 2019. That is, she now specifically refers to slings in such discussions and refers parents to the T.I.C.K.S. mnemonic. RN Kovacs gave evidence that she is aware that a clinical nurse consultant and clinical nurse educator put together an in-service training session regarding slings for staff at the Centre.

9.27 The changes described above are consistent with other changes made at a policy level. On 20 August 2019, the NSW Health Policy Directive *Babies – Safe Sleeping Practices PD2019_038* (**the 2019 Policy Directive**) was published. This rescinded the 2012 Policy Directive and remains in force to date. Attached to the 2019 Policy Directive is the *Babies – Safe Sleeping Clinical Practice Guideline* (**the 2019 Guideline**) which notes that "*[a] warning has been issued regarding the use of fabric baby carriers or slings following child deaths and associated coronial findings*". The 2019 Guideline goes on to draw attention to the advice provided on the PSA website.

9.28 In addition, the NSW Health My Personal Health Record (known commonly as **the Blue Book**) is provided to all parents of children born in NSW. Following revisions published in August 2021, the Blue Book now identifies and safety issues associated with the use of baby carriers, slings or pouches, and contains a link to a raisingchildren.net.au, a parenting website (**Raising Children website**). The Raising Children website refers to the T.I.C.K.S. mnemonic and provides advice in relation to avoiding suffocation risks for babies. Relevantly, instructions are also provided for babies to be taken out of a sling immediately if a parent notices that the baby's face is covered or the chin is tucked in, the baby is curled into the fetal position, the baby is grunting, wheezing or taking laboured, rapid or whistling breaths, or a baby skin has a grey or blue tinge. The Raising Children website also cross references the PSA website.

9.29 Other advice and guidance that is now available to parents of newborns relevantly include:

(a) A "Safe Sleep Page" on the NSW Health website are which includes the same warnings contained in the Blue Book, and refers parents to the Raising Children website and the PSA website.

(b) Revisions to the Book with a final draft currently pending approval. It is proposed that the information regarding safe use of slings provided to parents in the current version of the Book be logically relocated to sections that deal with antenatal care and what parents should do following the birth of their child. In addition, the proposed revisions introduce highlighted health alert sections which draw a reader's attention to the risks associated with using slings for

babies who are under four months old. These alerts also direct a reader to the Raising Children website and the PSA website.

(c) Since April 2022, child and family health registered nurses within the CCLHD have been required to perform a Safe Sleeping Practices Risk Assessment during the UHHV which involves completion of a checklist in a baby's electronic medical record. One of the topics to be discussed with parents during this assessment is the risk of suffocation in baby carriers, slings or pouches, especially for babies with particular bond abilities.

9.30 One additional matter should be noted. Associate Professor Evans gave evidence that new parents are overwhelmed with information and advice relating to how to care for their babies and keep them safe. Whilst acknowledging the need for education and guidance to be provided to new parents, Associate Professor Evans highlighted the need to also recognise the limitations associated with this. That is, due to the volume of information provided to new parents, and the stress which new parents are experiencing in caring for their babies, it may be the case that parents have limited opportunities to actually read and consider the information that is available. In this context, Associate Professor Evans raised for consideration that the only way to possibly reduce the intrinsic risk that may be associated with a product is to eliminate the use of the product.

9.31 In one of her statements, Ms Matha addressed the prospect of banning the use of slings and the fabric carriers, either generally or for babies with particular vulnerabilities. Ms Matha explained that the remit of NSW Health does not extend to the ability to ban products from the consumer market, and that in addition NSW Health is mindful of the following relevant matters:

(a) There may be practicalities associated with implementing a ban based on the particular vulnerabilities of a baby;

(b) a blanket ban over all slings and fabric carriers may exclude products that have been designed with safety precautions;

(c) there may be cultures where the use of slings or fabric carriers is customary;

(d) individuals with a disability may rely on slings and fabric carriers as a necessity; and

(e) a ban is likely to be difficult to enforce given that a sling or fabric carrier is not limited to a commercially made product and may be fashioned from a simple length of fabric.

9.32 **Conclusions:** Since April 2019, both NSW Health and the CCLHD have made appropriate changes to the advice and guidance provided to parents of newborns regarding the use of slings and fabric carriers, risks associated with their incorrect use and risks posed to babies with particular vulnerabilities. The 2019 Policy Directive now explicitly refers to slings and readily available information provided to parents of newborns directs attention to information and warnings that are available online at the Raising Children website, the PSA website and the NSW Health Website.

9.33 These policy improvements are reflected to changes made at a LHD and community level. There is evidence that discussions which occur at community health centres regarding safe sleeping practices are no longer limited to betting furniture such as cots and bassinets, but also now includes infant carriers such as slings. Further, there has been increased education and training provided to registered nurses to ensure that they are appropriately equipped to provide advice to parents regarding the use of slings in a safe sleeping context.

9.34 The issue regarding the potential banning of slings and soft fabric carriers is a fraught one and beyond the scope of an inquest to consider. Whilst removal of a product from use is probably the only way to be certain that any inherent risk associated with the product is eliminated, there are certain nuanced considerations to take into account even if the prospect of removal or banning is capable of practical implementation.

10. Is it necessary or desirable to make any recommendations?

10.1 Having regard to the relevant changes made since 2019 that are described above it is neither necessary nor desirable to make any recommendations.

10.2 However, one final matter should be noted. As part of the coronial investigation, information was sought from the ACCC regarding whether it has given any consideration to any further public information campaign regarding the risks posed by the use of baby slings. The ACCC responded by indicating that it is not specifically considering any such campaign but is instead considering strategies for dealing with unsafe infant sleeping products, with a particular focus on infant inclined the sleeping products.

10.3 Further, the ACCC noted that as part of its published 2021 Product Safety Priorities, it intended to focus on a number of priority areas including implementing strategies for unsafe infant sleeping products, specifically infant inclined sleeping products. Part of the purpose of the Product Safety Priorities is to inform the public about which areas of concern will be addressed in the coming year. Finally, in its response the ACCC indicated that it would have regard to any recommendations arising from the coronial investigation.

10.4 Whilst it is not proposed to make any specific recommendations to the ACCC, it seems clear that the evidence gathered regarding the manner of Harvey's death and the changes that have been made following it are particularly relevant to the consideration given by the ACCC regarding implementing strategies for unsafe inclined sleeping products. Therefore, I will cause to have a copy of these findings provided to the ACCC to hopefully assist in its consideration.

11. Findings

11.1 Before turning to the findings that I am required to make, I would like to acknowledge, and express my gratitude to Mr Jake Harris, Counsel Assisting, and his instructing solicitor, Ms Ellyse McGee of the Crown Solicitor's Office. I am extremely grateful for the excellent assistance provided by the Assisting Team throughout the coronial process, and for all their efforts. Equally importantly, the sensitivity and compassion that the Assisting Team has shown throughout the course of this tragic matter should be acknowledged.

11.2 I also thank the police officer-in-charge, Detective Senior Constable Benton Allan, for his initial role in conducting the coronial investigation and preparing a brief of evidence.

11.3 The findings I make under section 81(1) of the Act are:

Identity

The person who died was Harvey McGlinn.

Date of death

Harvey died on 8 April 2019.

Place of death

Harvey died at Killarney Vale NSW 2261.

Cause of death

The cause of Harvey's death was positional asphyxia.

Manner of death

Harvey died whilst being carried in a fabric infant carrier, otherwise known as a sling, in a position which was inadvertently inconsistent with both the manufacturer's instructions and publicly available guidance regarding its use. Harvey's position in the carrier in this way did not allow for a patent airway to be maintained.

11.4 On behalf of the Coroners Court of New South Wales, I offer my sincere and respectful condolences, to Tattika and Bill, and the other members of Harvey's family and loved ones for their tragic and heartbreaking loss.

11.5 I close this inquest.

Magistrate Derek Lee
Deputy State Coroner
13 October 2022
Coroners Court of New South Wales