

**A Decision by the
Deputy Health and Disability Commissioner
(Case 21HDC00052)**

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Introduction

1. The Health and Disability Commissioner (HDC) received a complaint from Mr and Mrs A about the care provided to their son, Baby A, by Bay of Plenty District Health Board (BOPDHB) (now Health New Zealand|Te Whatu Ora (Health NZ) Hauora a Toi Bay of Plenty).¹ The following issue was identified for investigation:
 - *Whether Bay of Plenty District Health Board provided Baby A with an appropriate standard of care in 2020.*
2. This report is the opinion of Rose Wall, Deputy Health and Disability Commissioner, and is made in accordance with the power delegated to her by the Commissioner.

¹ On 1 July 2022, the Pae Ora (Healthy Futures) Act 2022 came into force, which disestablished all district health boards. Their functions and liabilities were merged into Health New Zealand|Te Whatu Ora. All references in this report to BOPDHB now refer to Health NZ Hauora a Toi Bay of Plenty.

3. The parties directly involved in the investigation were:

Mr A	Complainant/father
Mrs A	Complainant/mother
BOPDHB/Health NZ Hauora a Toi Bay of Plenty	Group provider

4. Further information was received from:

Dr B	Consultant paediatrician
RM C	Registered midwife (RM)
RN D	Registered nurse (RN)
RM E	Registered midwife
RM F	Registered midwife
RM G	Registered midwife
RM H	Registered midwife
Dr I	Consultant paediatrician
Waikato District Health Board (WDHB) (now Health NZ Waikato)	Non-subject group provider
Accident Compensation Corporation (ACC)	
Manatū Hauora Ministry of Health	

5. Also mentioned in this report:

RM J	Registered midwife
RN K	Registered nurse
Dr L	Senior house officer (SHO)

6. Independent paediatric advice was obtained from Dr Simon Rowley, a specialist neonatal paediatrician (Appendix A). In-house midwifery advice was obtained from RM Nicholette Emerson (Appendix B).

Background

Introduction

7. Baby A was born at Tauranga Hospital on Day 1² at 4.49pm via semi-elective Caesarean section.³ Baby A was then transferred to the postnatal ward, where he stopped breathing and resuscitation was commenced. Baby A was resuscitated successfully, but he was deprived of oxygen until this took place. Following resuscitation, Baby A was transferred to the Special Care Baby Unit⁴ (SCBU), where his parents and hospital staff observed shaking of his arms and legs. He was then transferred to Waikato Hospital (WDHB) for further assessment for seizure-type behaviour. No clear seizures were identified during monitoring

² Relevant dates are referred to as Days 1–9 to protect privacy.

³ A surgical procedure where the baby is born through a cut in the mother's abdomen. An elective Caesarean section is where the mother opts to undergo the procedure, rather than birthing naturally.

⁴ A specialist department for babies who are born early or become unwell.

at WDHB, and Baby A was transferred back to Tauranga Hospital on Day 7. Baby A was discharged from Tauranga Hospital on Day 9.

Labour and delivery

8. On Day 1, Mrs A presented at Tauranga Hospital for her planned induction of labour (IOL) during week 39 of her pregnancy. An IOL had been planned because Mrs A's glucose tolerance test at 38 weeks' gestation had shown gestational diabetes⁵ and she had been advised that the birth should take place no later than Day 1.
9. Upon arriving at the maternity ward for her IOL, Mrs A was cared for by RM C. RM C oriented Mr and Mrs A to the ward and commenced cardiotocography (CTG) to monitor and record the baby's heartbeat pattern and uterine contractions. CTG monitoring prior to birth showed normal results. In response to the provisional opinion, Mr and Mrs A reiterated that RM C was friendly, calm, and reassuring during this time, and her orientation to the maternity ward included showing them the handheld call button.
10. Mrs A was assessed by an obstetrician, who advised Mr and Mrs A that there were risks with a natural birth, due to the large size of the baby, the baby's head not being engaged,⁶ and the presence of gestational diabetes. As a result, Mrs A agreed to proceed with birth via Caesarean section, which was performed by another obstetrician. RM C and Mrs A's Lead Maternity Carer (LMC), RM J, were present during the Caesarean section. The procedure was reported as 'technically challenging', requiring the widening of the incision and use of forceps.
11. Baby A was born at 4.49pm. Because of the difficult extraction, Dr L, a paediatric Senior House Officer (SHO), attended at 4.53pm and undertook a full neonatal examination. Clinical notes indicate that the examination was normal, with no routine paediatric follow-up needed. Routine monitoring, including a Neonatal Early Warning Score (NEWS)⁷ assessment 'as per protocol' was considered appropriate.⁸ Baby A's Apgars⁹ following birth were normal, with the scores at 1, 5, and 10 minutes being 9, 9, and 10¹⁰ respectively, and no respiratory support was needed.¹¹

Transfer to postnatal ward

12. Clinical notes show that Mrs A and Baby A were taken to the recovery ward by RM C and LMC RM J at 5.10pm, before being transferred to the postnatal ward at approximately

⁵ Diabetes that develops during pregnancy, in a mother who has no previous history of diabetes.

⁶ The baby's head is engaged when it moves low into the pelvis ready for labour.

⁷ Early warning scores are calculated from vital sign observations and used to indicate worsening of a patient's condition.

⁸ A NEWS observation chart was commenced for Baby A, with first observations documented at 5.30pm; however, no further observations were recorded.

⁹ A test used to evaluate the health of newborn babies.

¹⁰ A score of 7 or more is deemed normal, with the maximum score possible being 10.

¹¹ Clinical records showed that Baby A was 'stunned at birth' with breath holding. 'Stunned' refers to a baby being slow to breathe following labour, which is not uncommon.

5.55pm. HDC was provided varying accounts of the handover and orientation that took place during this transfer.

13. RM C told HDC that once in the recovery ward, she and RM J discussed that blood-sugar testing for Baby A would be done in the postnatal ward within the two-hour time frame.¹² While in the recovery ward, RM J helped Mrs A to commence breastfeeding, while RM C completed documentation.
14. RM C stated that when she returned to the maternity ward to register Baby A's birth¹³ and retrieve the placenta, she also 'gave a handover to [RN D]' and informed RN D that a blood-sugar test would need to be performed 'when [they] returned'.
15. RM C said that when she returned to the recovery ward, RM J was educating Mrs A on how to breastfeed Baby A, but RM J left when RM C, Mr and Mrs A, and Baby A went to the postnatal ward. RM C told HDC that during the transfer, Mrs A wished to continue breastfeeding Baby A, and she told Mrs A that Baby A's airways would need to be monitored while moving and feeding.
16. RM C and RN D stated that upon arrival at the postnatal ward, the family was transferred to their room, where a formal handover took place between them. They told HDC that this consisted of introductions being made, the family being shown the handheld call-bell system, and observations being taken for Mrs A. RN D assisted with breastfeeding, and RM C told the family that RN D would be taking over their care. RM C documented that care was handed over at 5.55pm, and she recorded a care plan for Mrs A in the handover sheet. BOPDHB confirmed that care was handed over from RM C to RN D at the bedside on the postnatal ward at 5.55pm.
17. On Day 4, shortly after the events that followed, Mr and Mrs A submitted a complaint to BOPDHB, in which they stated:

'We were then wheeled into my Post-Natal room in the maternity ward and left there. The "handover" was one nurse introducing me to another nurse. That was all. No room orientation. No information on how and where to get assistance if needed. The "on-duty" nurse then also left the room, leaving us alone. We were left alone in the room until the unexpected outcome event when my baby stopped breathing. I was later told that the nurse "had gone on a break".'
18. In their complaint to HDC, Mr and Mrs A again stated that they 'were not orientated to the room [they] were put into ... [and] were unaware of any emergency button or where it was placed'.

¹² When a mother has gestational diabetes, it can cause her baby's blood sugar level to drop too low after birth.

¹³ In response to the provisional report, BOPDHB explained that NHI numbers are not issued prior to birth, and RM C was registering the birth so that an individual NHI (and clinical record) could be generated for Baby A.

19. At 5.55pm RM C documented in Baby A's clinical records: '[C]are handed over to PN nurse.' At 9.30pm RN D documented in Mrs A's clinical records: '[R]eceived handover from recovery and midwife in charge @ 1800.'
20. In response to the provisional opinion, BOPDHB clarified that records indicate that an initial handover between RM C and RN D took place on the postnatal ward at 5.55pm, the family remained on the recovery ward until 6.05pm (as evidenced by the last documented vital signs for Mrs A in the recovery ward at 6.05pm) and then transfer to the postnatal room took place after this, with a handover completed in the room.
21. The clinical record contains a 'Postnatal Handover and Care Plan' completed for Mrs A by RM J, with the time of completion noted at 5.55pm. The plan contained vital observations for Baby A and Mrs A, and instructions for Baby A, including the need for blood-sugar testing. A separate care plan for Baby A is not recorded. In response to the provisional opinion, BOPDHB clarified that the 'Postnatal Handover and Care Plan' forms the care plan for both mother and baby.
22. BOPDHB told HDC that a lack of clarity regarding the primary individual responsible for the care of Baby A resulted in his care plan not being completed. BOPDHB stated that although Mrs A was under the secondary care of her LMC, there are no clear directives setting out who is responsible for the care plan of a well baby born to a mother in secondary care. BOPDHB said that historically, the responsibility would lie with the obstetrician; however, over the years the clear distinction of the person responsible has become blurred.

Monitoring on postnatal ward

23. RN D stated that following handover and orientation, she left Mr and Mrs A and their baby alone in their room to go on a break, as the next observations were not due for 30 minutes and 'both mum and baby were okay'. RM E told HDC that as it was a 'Friday evening shift [with] high acuity', she offered to help RN D with half-hourly patient observations and provide cover for RN D while she took her break.
24. The observation chart for Mrs A shows that her vital signs were measured every half hour on the postnatal ward.

Emergency response

25. Mr and Mrs A stated that 45 minutes¹⁴ after transfer to the postnatal ward, Baby A 'became lifeless'. Mr and Mrs A said that as they were not orientated to the room, they were unaware of where the emergency button was or when to use it, so they pressed the handheld call button on the bed multiple times. The family later became aware that the emergency button was on the wall behind the bed.

¹⁴ In response to the provisional opinion, BOPDHB sought to clarify that the timing of the transfer to the postnatal unit and the recorded timing for the call bell/resuscitation do not support that the event occurred 45 minutes after transfer and that the family were alone for this period.

26. The handheld call button was activated at 6.23pm, which turned on the call bell light for the room and sent a pager alert to staff; however, no response was received, so Mr A 'r[a]n out of the room' to locate a staff member to assist. Mr and Mrs A stated that Mr A was unable to get the attention of staff in the reception area.
27. RM F documented in the clinical notes that at 6.25pm she noted the call bell for Mrs A's room and saw Mr A at the nurses station. RM F told HDC that after approaching Mr A, he 'calmly' asked if someone could check his baby, 'as he was worried, he was not distressed'. RM E, who was also present in the ward at this time, provided a statement to HDC corroborating RM F's recollection of events. In response to the provisional opinion, Mr A disagreed that he was calm and not 'distressed' at this point.
28. Both RM F and RM E entered Mrs A's room at 6.26pm. RM E left shortly afterwards to retrieve an observation machine,¹⁵ and RM F proceeded to check Baby A. RM F stated that after moving the blankets, she saw that Baby A 'appeared pale and lifeless' and immediately uplifted him to the nearest resuscitation table situated in delivery room 1. RM F told HDC that while passing the nurses station, she requested that staff call a paediatric emergency. BOPDHB stated that the emergency bell¹⁶ at the nurses station was pressed at 6.30pm, 6 minutes and 25 seconds after the handheld call bell was first pressed.
29. RM G stated that she telephoned the on-call paediatrician requesting his attendance for an unknown paediatric emergency. Dr B, a paediatric consultant, told HDC that he was called for assistance at 6.33pm after having already left the hospital and 'was around six blocks' away. Dr B also noted that 777 was called after the resuscitation had already commenced.
30. RM C, RN D, and RM H heard the emergency bell and went to delivery room 1 to assist with the resuscitation. RM C documented the resuscitation as it took place. RN D told HDC that RM F asked her to return to the postnatal room and continue to provide comfort and care to Mr and Mrs A, which she did.

Resuscitation attempts

31. The contemporaneous clinical record of the resuscitation begins at 6.28pm; however, the notes do not identify the author. Dr L, Dr B, RM F, and RN K also made entries in the clinical notes after the resuscitation had been completed.
32. At 6.28pm, RM F began to provide breathing support (IPPV),¹⁷ as Baby A was not breathing. RM E checked Baby A's heartbeat using a stethoscope, and, after confirming that a heartbeat could not be heard, she informed the other staff present of this. RM H began

¹⁵ A machine used to take regular vital signs and not part of emergency response equipment. Observation machines are used according to the level of monitoring required for patients. The frequency of monitoring for Baby A and Mrs A is discussed at paragraph 81.

¹⁶ The emergency button at the nurses station puts out an automatic call for an adult resuscitation team. A further phone call to 777 is needed to specify whether the emergency is obstetric or paediatric.

¹⁷ Intermittent positive pressure ventilation (IPPV) is assisted breathing through a bag and mask.

chest compressions in time with the breathing support RM F was providing. Clinical notes written by RN K indicate that she arrived after IPPV and chest compressions had begun.

33. Dr L and a paediatric locum arrived around 6.30pm. Dr L's clinical notes indicate that IPPV and chest compressions were ongoing and had been going for approximately two minutes. Baby A's heart rate (HR) was less than 60 beats per minute (bpm), and his oxygen saturation¹⁸ was approximately 70%.¹⁹ Upon arrival, the paediatric team took over the resuscitation and airway management.
34. At 6.32pm Dr L commenced suction as there had been copious secretions above the umbilical cord upon delivery.²⁰ However, he was unable to pass the suction through either nostril. Dr L noted that Baby A's HR improved to more than 100bpm with the airway and breathing assistance, and chest compressions were discontinued at 6.34pm.
35. Staff from the SCBU team arrived around 6.35pm and, shortly afterwards, RM H took a sample to test Baby A's blood-sugar levels. The blood-sugar level was recorded as 4.8mmol/L (normal).²¹
36. Clinical notes indicate that at 6.39pm the use of continuous positive airway pressure (CPAP)²² and IPPV continued, and Baby A began to make some effort to breathe on his own and began to react to stimuli. His HR at 6.41pm is recorded as 173bpm, and his oxygen saturation as 100%.
37. Dr B arrived at the resuscitation at 6.42pm. He stated that there was 'an early gasp from [Baby A]' not long after he arrived, with more 'spontaneous gasping and respiration over the next few minutes'. IPPV continued until Baby A began to breathe spontaneously. Over the next 10 to 15 minutes, regular breathing became established. Baby A remained on the CPAP machine, and supplementary oxygen was reduced slowly.
38. As Baby A's breathing had stabilised, and his oxygen saturations and HR remained stable, at 6.51pm staff decided to transfer Baby A to the SCBU, while continuing to use the CPAP machine. RM F told HDC that Mr and Mrs A were 'reassured at regular intervals'. In response to the provisional opinion, the family stated that at this point they told RM F that they had not been told where the emergency button was.

Monitoring and escalation of care in SCBU

39. Dr B stated that 'it was unclear what had happened', but 'the working diagnosis was of an asphyxia event,²³ that is, that the baby had had their breathing stopped or obstructed'.

¹⁸ The amount of oxygen circulating in the blood.

¹⁹ Normal levels for an infant are a heart rate above 100bpm and an oxygen saturation above 95%.

²⁰ Secretions are normal. However, copious amounts could potentially block airways.

²¹ Blood sugar levels below 2.6mmol/L would be considered low for a newborn baby.

²² A device that holds the airway open by blowing in constant air at a set pressure.

²³ An asphyxia event is a period where the body is without oxygen.

40. After arriving in the SCBU, Dr B and Dr L undertook the first Sarnat score²⁴ at 7.15pm to assess Baby A's condition. The scoring considered six different measures²⁵ for assessing Baby A's functions following oxygen deprivation — five measures returned mild to moderate scores, with only one measure returning a severe score. The moro reflex, an involuntary startle reflex, was absent and therefore had a severe score. Dr B told HDC that the absence of this reflex 'is a severe sign of encephalopathy²⁶'.
41. At this time, a blood sample was taken and sent for screening for infection and to assess Baby A's acid-base levels.²⁷ The results showed that he had high levels of acid in his blood, with a pH of 6.96²⁸ and a lactate level of 12.49.²⁹ Dr B told HDC: 'This seemed consistent with a period of not breathing.' Dr B and Dr L commenced intravenous (IV) fluids³⁰ (to reduce possible cerebral swelling), and antibiotics (in case of infection).
42. Dr B told HDC that 'cooling a baby³¹ ... after a perinatal event resulting in a period of low oxygen is done to improve neurological outcomes', although it is not suitable for all babies. Sarnat scores and acid-base levels are both diagnostic criteria used to determine the suitability of cooling as a treatment option and were used to assess whether Baby A qualified for cooling.
43. Dr B referred to WDHB's 'Neonatal Encephalopathy Management' guideline³² (outlined in paragraph 83) and stated:

'The criteria for [cooling] include[s] five conditions, of which one must be met ... Although not meeting these four conditions,³³ I felt that Baby A qualified, as the 5th criteria is any acute perinatal event that may result in [hypoxic ischaemic encephalopathy (HIE)³⁴].'

²⁴ Sarnat scoring is a tool used to assess a baby's condition after a lack of oxygen following birth. The scoring is repeated hourly for the first six hours following the oxygen deprivation.

²⁵ These are level of consciousness, spontaneous activity, tone, suck reflex, moro reflex, and respiratory abnormality. Each measure is recorded as mild, moderate, or severe.

²⁶ A group of conditions that affect brain function.

²⁷ A lack of oxygen can change the balance of acid and base in blood.

²⁸ pH is the measure of acidity, with normal levels for blood being just over 7.

²⁹ Increased lactate levels indicate that the body has been deprived of oxygen.

³⁰ Fluids delivered directly into a vein.

³¹ Cooling (or therapeutic hypothermia) involves lowering the body temperature from 37°C to about 34°C.

³² WDHB is a tertiary neonatal unit, whereas Tauranga Hospital provides secondary-level care. WDHB has specialist services not available at Tauranga Hospital, including specialist monitoring after cooling is commenced. As such, all hospitals in the Midland region, including Tauranga Hospital, use this guideline.

³³ Dr B stated that the four criteria that were not met were 'an Apgar score of under 5 10 minutes after birth (his was normal), continued need for resuscitation at 10 minutes of life (he did not require initial resuscitation) and acidosis with a Ph of <7 within 60 minutes of birth and a base deficit of more than 12. He had these numbers, but only after his deterioration over 90 minutes after birth.'

³⁴ Reduced brain function in infants caused by lack of oxygen to the brain around the time of birth.

44. As such, Dr B discussed Baby A's condition with a senior paediatrician from the Neonatal Intensive Care Unit (NICU) at WDHB and, in particular, whether to commence cooling and arrange transfer to WDHB.³⁵
45. Dr B told HDC that as Baby A was now stable in the SCBU, the WDHB paediatrician felt that staff could continue to monitor Baby A clinically over the next five hours and 'not to commence cooling but continue to review this'. Baby A's blood was tested again during the conversation. The results showed that his pH level had risen to 7.16 and his lactate to 9.72 — these results were still abnormal but were moving towards the normal range.
46. Clinical records show that the subsequent Sarnat scoring was completed at 8.00pm, 9.00pm, 10.00pm, 11.00pm, and 12.00am, with Dr B completing the first four scores to ensure consistency. The scores again recorded five measures as mild or moderate, except for the absent moro reflex, which continued to be scored as severe for the first two hours, decreased to moderate on the third to fifth hours, and then was recorded as mild for the final score.
47. The clinical notes show that by 8.00pm Dr B had spoken to Mr and Mrs A to get an understanding of the events leading to the resuscitation. Dr B documented in the clinical record that the parents described '[around] 5 jerks suspicious for a seizure, rhythmic jerks of trunk and upper limbs' prior to the resuscitation.
48. At 9.30pm, Dr B documented that Baby A's condition had improved, and he had gone from 'flaccid and inactive to hyper-alert'. RN K had noted an episode of foot twitching, which Dr B was alerted to immediately and assessed straightaway. Dr B recorded that the twitching settled when Baby A's foot was held and stated that his impression was that it was 'exaggerated myoclonus', a twitching movement commonly seen in babies, rather than representing a neonatal seizure. Dr B said that he stayed in the unit monitoring Baby A and did not observe any 'definite' seizure activity at any point.
49. Clinical records show that further discussion was held with WDHB at 9.40pm. By this point, Baby A's blood results for acid-base and gases were normal. Dr B discussed the blood results, his clinical observations, and the Sarnat scoring with a NICU fellow from WDHB. Dr B told HDC that this included discussions around seizure-type movement observed by the parents, and the foot twitching he had observed. As there continued to be only one severe Sarnat score, both doctors decided that cooling was not required at this stage, and, therefore, that WDHB did not need to retrieve Baby A from Tauranga Hospital.
50. At 10.15pm, Dr B recorded that he discussed Baby A's care with the parents. Baby A continued to breathe normally, and, on Dr B's instruction, staff trialled taking Baby A off CPAP at 10.30pm.

³⁵ Dr B told HDC that transfer to WDHB would have been necessary, as although Tauranga Hospital 'can commence cooling in our unit, we do not have the full suite of intensive care cooling and monitoring equipment required to do more than commence cooling.'

51. At 3.00am on Day 2, Dr B reviewed Baby A and observed little change. Six hours had now passed (the window within which ideally cooling is started), so further discussions did not take place with WDHB regarding cooling or hospital transfer. WDHB told HDC that while there were early signs of moderate neonatal encephalopathy, these had improved over time, and therefore it was the correct decision not to transfer for cooling at this stage.
52. Baby A's care was taken over by Dr I, a consultant paediatrician, who examined Baby A at 9.00am. Dr I told HDC that at this point, Baby A was outside the six-hour window for cooling. During this assessment, Baby A was breathing normally, without any support. All observations were noted to be normal, and Dr I successfully observed the moro reflex. Dr I did note that Baby A was very unsettled, with jerky movement in his arms and legs and stated that she considered that the increased noise and light may have been the cause of his irritability. She also noted that there was potential seizure activity but considered that the movement was consistent with myoclonic jerks. Dr I told HDC that she agreed with the diagnosis of a moderate hypoxic injury to Baby A's brain but stated that his condition was improving.
53. Clinical notes show that Baby A was unsettled most of the day. RN K documented at 9.00pm that Baby A had constant shaking movements of his arms and feet, which was reported by his parents.
54. At 11.30pm, Baby A was reviewed by a paediatric SHO. Dr I told HDC that the paediatric SHO noted that there were ongoing concerns about jittery movement of Baby A's arms and legs and spoke with the on-call consultant, who agreed to continue observing Baby A.
55. BOPDHB told HDC that in its 'Neonatal Clinical Review', concerns were raised that clinical seizures 'may have occurred but not have been recognised and were incorrectly diagnosed as further shaking/jittery behaviour' and therefore were not escalated to a senior medical officer for review; however, BOPDHB stated that '[i]t is not possible to be certain of this' and 'the degree of definite seizure activity seen clinically was still uncertain'.
56. Dr I next reviewed Baby A at 9.00am on Day 3. By this time, a senior nurse in the SCBU, not involved in Baby A's care, had noticed the shaking and brought her concerns about possible seizures to the attention of Dr I. Dr I told HDC that she then spent a long time observing Baby A and discussing the shaking with Mr and Mrs A. On examination, Baby A was generally settled but would cry intermittently, which was associated with jerking of his head and feet, lasting for seconds. Dr I stated that she was unable to stop these movements.
57. Due to concern that the jerks were clinically seizures, Dr I discussed Baby A with the NICU fellow from WDHB. Clinical notes record that the NICU fellow agreed that the movement was likely seizures, and a treatment plan was made. At 10.35am, Baby A was administered an initial dose of phenobarbitone.³⁶ Thirty minutes after this dose, Mr and Mrs A reported that the frequency and intensity of shaking had decreased.

³⁶ Drug used to prevent seizures.

Transfer of care to WDHB

58. Dr I re-examined Baby A at 1.30pm. Baby A 'had a normal respiratory examination, with saturations of 92%. Oxygen was commenced'.³⁷ His legs continued to jerk, which on some occasions could not be controlled with handling. Dr I told HDC that she remained concerned that this behaviour was seizures, and, after discussing the further observations with the WDHB NICU fellow, it was agreed to transfer Baby A to WDHB for monitoring.³⁸
59. Ongoing shaking episodes were seen by Dr I when she examined Baby A at 3.30pm. His left foot was jerking intermittently in a manner not controlled by handling.
60. Dr I told HDC that the neonatal transport team from WDHB arrived at 4.00pm and 'also noted the intermittent seizures of the left foot'. Further discussions occurred between Dr I and the WDHB NICU fellow, and Baby A was administered a further dose of phenobarbitone prior to transfer to WDHB.
61. Monitoring continued at Waikato Hospital, where Baby A continued to experience shaking episodes, but monitoring machines did not pick up clear seizures. Baby A's condition improved while at WDHB, and he was transferred back to BOPDHB on Day 7, after the shaking episodes had ceased. Baby A's condition remained stable, and he was discharged from BOPDHB on Day 9.
62. Dr I told HDC that she reviewed Baby A multiple times following his discharge. She stated: '[Baby A] has thrived since discharge.'

Adverse Event Investigation

63. As a result of the events, BOPDHB undertook an Adverse Event Investigation (AEI), which was completed in October 2020.³⁹ The AEI report considered staff statements and clinical records and found the following:

Orientation to postnatal room did not include how to call for emergency assistance

64. The AEI found that neither RM C nor RN D orientated the parents to the emergency call-bell system, or when to call using the emergency button, which 'delayed the treatment of [Baby A's] collapse'.

Call bell system does not include an emergency bell accessible to the client in bed

65. The AEI found that the call-bell system used by patients does not include an emergency button. The AEI identified that a mother who has undergone a recent Caesarean section would not be able to reach the emergency button, which is placed behind the bed; however, the placement of the bell did not affect the outcome in this case, as Mr A was present in the room.

³⁷ Phenobarbitone can cause patients to breathe abnormally.

³⁸ Including monitoring for neonatal seizures, which is available only at tertiary units.

³⁹ The family received a copy of the AEI report on 16 October 2020.

Patient call-bell system had been turned to silent mode for several years with a pager system

66. At the time of events, BOPDHB had set the call-bell system to silent mode, meaning that there was no audible ring.⁴⁰ The AEI found that pagers were not being carried by staff reliably at all times.

Appropriate information for parent care of infant not provided, including safe airway positioning

67. The AEI found that neither RM C nor RN D provided information on safe airway management, including 'face clear, neck positioning, safe sleep, normal infant colour and breathing and safe airway during breastfeeding', and, although the cause of Baby A's collapse is unknown, providing this information in future would minimise the risk of collapse occurring due to a lack of airway protection.

A care plan was not documented for the infant, including a plan to monitor blood sugar (baby of gestational diabetes) and NEWS assessment

68. The AEI found that a care plan for Baby A was verbalised during handover; however, the NEWS assessment was not completed fully with details of the risk of low blood-sugar levels.

Resus equipment was not readily available in the postnatal ward

69. The AEI found that historically resuscitation equipment was available only in the delivery area as shared equipment, meaning that staff had to run down the corridor to access the equipment. Although quality improvements were underway, they had not been completed at the time of the events.

Attempt at calling 777 to stipulate paediatric emergency delayed

70. The AEI found that the emergency button activated at the nurses station activates the pager of the general resuscitation team but does not automatically alert specialist teams such as the paediatric team. The AEI found that in this instance, even though a paediatric house officer was present, a paediatric consultant was needed. However, the AEI acknowledged that resuscitation was undertaken successfully by the responding resuscitation team.

Delay in SCBU staff attendance

71. The AEI found that the emergency bell in the patient's room is not heard in the SCBU, and the resuscitation pager is not held by anyone in the SCBU, meaning that a separate call is needed to alert SCBU staff members of an emergency.

Review of protocols due to incident

72. The AEI found the following:

'With clear policies and protocols regarding transfer process, staff handover information, orientation and education given to parents, emergency call processes, and management of infant collapse on the postnatal ward, this situation might not have occurred.'

⁴⁰ As BOPDHB considered that the alerts were too noisy for patients at all hours of the day.

Recognition of seizures

73. The AEI suggested that there was a 'possibility' of delay in recognising Baby A's seizures by either nursing and/or junior staff, and therefore this was not able to be escalated to a senior medical officer for consideration of early treatment. However, the AEI also states that it is not known whether Baby A had seizures prior to Sunday and 'diagnosing seizures is however difficult in babies [and] seizures can also look different in babies compared to children and adults'.

Baby not accepted for early transfer to Waikato when there was diagnostic uncertainty regarding whether cooling was required

74. The AEI identified the following:

'Therapeutic hypothermia is the standard treatment for [HIE]. It can slow down the injury process allowing the baby's brain to heal and minimizing the spread of damage. The current evidence does not support cooling of infants with mild HIE. Cooling should only be commenced during the first 6 hours after an asphyxia event.'

75. The AEI found that Baby A's condition and description of seizures was discussed with WDHB, and an active decision was made not to commence cooling. The impression changed to moderate HIE after the six-hour window had passed, and further discussion with WDHB was not held at this time. Ongoing concerns about respiratory depression and ongoing seizures led to the decision to transfer Baby A to WDHB.
76. The AEI states that as BOPDHB is a secondary hospital, it does not utilise an aEEG, a technique for monitoring the electrocortical activity in preterm and term infants in neonatal intensive care units. It determines whether seizures are occurring.

Signatures missing on some documentation

77. On review of the medical records, the AEI found that not all documents were signed as required.

Recommendations

78. BOPDHB's AEI report recommended the following:

- 1) Review of the orientation process to the postnatal ward, including the call-bell system.
- 2) Institution of an emergency bell accessible to the client in bed.
- 3) Re-institution of an audible patient call-bell system, and for staff to carry pagers.
- 4) Appropriate information for parent care of an infant to be provided, including safe airway position, and for this information to be documented.
- 5) Care plans to be documented for all patients prior to handover to the postnatal ward, and for care plans to be verified as appropriate by a registered midwife.
- 6) A new neonatal resuscitation trolley and resuscitation station to be provided.

- 7) A review of the 777 response process with the resuscitation coordinator and teams involved.
- 8) A designated SCBU staff member to wear an emergency pager for 777 neonatal resuscitation situations.
- 9) Review and development of protocols for transfer to the postnatal ward, care planning and orientation to the postnatal ward, management of infant collapse on the postnatal ward, and emergency systems on maternity wards.
- 10) Education on neonatal seizures for doctors, and on seizures and Sarnat scoring for nurses.
- 11) Review of systems for referral to a tertiary hospital, including use of a video link to determine clinical need for transfer, use of aEEG, and standardised criteria for transfer in cases of HIE.
- 12) A reminder to be sent to staff on the importance of clear, timely, and legible documentation.

Relevant policies and standards

79. BOPDHB's 'Care Delivery — Nursing and Midwifery Shift Handover' policy (2019) provides the following:
 - 'A clinical handover of nursing and midwifery care from 1 shift to another will occur to ensure co-ordinated and safe care delivery to the patient/client.'
 - Standard 1.1.1: 'It is the responsibility of all nursing and midwifery staff to review their patients' health record, including the plan of care, each duty.'
 - Standard 1.1.2(b): 'A team bedside handover, including review of documentation, will take place after the brief overall [verbal] handover.'
 - Standard 1.1.6: 'A verbal handover does not replace any requirement for accurate and complete written documentation in the client health record e.g. care plan and A to D Planner.'
80. BOPDHB's 'Care Delivery — Inter-Department/Ward Communication Standards' policy (2019) provides the following:
 - Standard 2.2.1: 'All nurses/midwives on each ward/department will hold a pager for patient call bells and communication from other departments.'
81. BOPDHB's 'Care Delivery — Physiological Observation Standards for Inpatients' policy (2018) provides the following:
 - 'All inpatients in acute hospital settings will have regular physiological observations completed and documented to monitor their health status. For inpatients, these observations are used to calculate ... the Maternity Early Warning Score (MEWS), [and] the Newborn Early Warning Score (NEWS).'

- For the mother's monitoring: 'All patients who have had a surgical procedure should be monitored every 30 minutes using the EWS/MEWS charts, initially for 4 hours, or according to their clinical response on the EWS/MEWS chart.'
- For the baby's monitoring, 'All babies will have observations recorded of heart rate, respiratory rate, temperature, work of breathing, respiratory support, colour, tone and behaviour within 2 hours of birth, at the 24 hour full neonatal examination, before transfer home/primary unit if > 1 hour since last observations, at any time if concerns about the baby, as well as oxygen saturations monitoring, and blood glucose monitoring if signs of hypoglycaemia ... The trigger for increasing frequency of observations are clinical concerns and/or the Clinical Response to NEWS Trigger process.'

82. BOPDHB's 'Care Delivery — Observing Patients' policy (2020) provides the following:

- 'Observation frequency is based on the needs of the individual patient and is documented within the care plan.'

83. BOPDHB's 'Care Delivery — Patient Call System — Principles and Standards' policy (2019) provides the following:

- Standard 1: 'Where a paging system is used to communicate patient calls to staff, it is compulsory for all ward/department staff to wear a pager.'

84. WDHB's 'Neonatal Encephalopathy Management' guideline (2020) 'provide[s] guidance around the identification and management of neonates with neonatal encephalopathy'. The guideline contains a 'Neuroprotection Care Pathway', which assists with the assessment and management of newborn babies who may benefit from cooling for presumed HIE:⁴¹

- For an infant less than 6 hours old, and birthed after 36 weeks of gestation, the pathway guides the clinician to check whether the infant has *at least one* of the following: an Apgar score of 5 or less at 10 minutes after birth, a continued need for resuscitation at 10 minutes, any acute perinatal event that may result in HIE, pH level greater than 7 within 60 minutes of birth, or a base deficit of 12 or more within 60 minutes of birth.
- If one of these criteria is met, the pathway next asks whether the infant has had seizures. If the answer is yes, cooling should be commenced; if the answer is no, the pathway asks the clinician to consider whether the infant *has 3 moderate to severe signs of encephalopathy*, ie, three moderate to severe Sarnat measures (outlined in paragraph 40). If the answer is yes, cooling should be commenced; if not, the case should be discussed with the on-call neonatologist.

⁴¹ The Neuroprotection Care Pathway is included as Appendix C.

Responses to provisional opinion

Mr and Mrs A

85. Mr and Mrs A were provided with the opportunity to comment on the 'background' section of the provisional report. Where appropriate, their comments have been incorporated into the report.
86. The family reiterated that they are 'very grateful for what staff did in reviving and caring for [Baby A] ... and appreciate and acknowledge the effort of those that helped in [Baby A's] hospital recovery and follow ups in the paediatric unit.'

BOPDHB

87. BOPDHB was provided with the opportunity to comment on the provisional report. BOPDHB accepted the proposed recommendations and, where appropriate, BOPDHB's comments have been incorporated into this report.

Opinion: BOPDHB — breach

88. As a healthcare provider, BOPDHB had a duty to provide services to Baby A with reasonable care and skill. This included responsibility for the actions of its staff, and an organisational duty to facilitate the provision of reasonable care.
89. To help determine whether the care provided to Baby A by BOPDHB from Day 1 to Day 9 was of an appropriate standard, I sought independent advice from specialist neonatal paediatrician Dr Simon Rowley, with in-house midwifery advice provided by RM Nicholette Emerson. In addition, I have considered the findings from BOPDHB's AEI.
90. In my view, there were deficiencies in the care provided to Baby A, and these were systemic issues for which BOPDHB bears responsibility. These are outlined below.

Midwifery care

Orientation of call bell and emergency button

91. Mrs A and Baby A were transferred to the postnatal ward by RM C and RM J. Clinical notes document that Mrs A's and Baby A's care was handed over from RM C to RN D, but the notes do not show whether the handover included orientation to the call bell and/or emergency button. In their response to the 'information gathered' section of the provisional opinion, Mr and Mrs A said that their orientation to the maternity ward at the time of admission included being shown the handheld call button.
92. Staff at Tauranga Hospital stated that Mr and Mrs A were orientated to the call bell system, but orientation to the emergency button is not mentioned. Mr and Mrs A said that they were not provided with any information 'on how and where to get assistance if needed' and were unaware of any emergency button. When Baby A stopped breathing, Mr and Mrs A could not find the emergency button, and instead pressed the call bell multiple times.

93. The AEI found that neither staff member orientated Mr and Mrs A to the emergency call-bell system or when the button should be used, which ‘delayed the treatment of [Baby A’s] collapse’.
94. RM Emerson advised that if a handover at the bedside took place and included orientation to the call bell, but this was not documented and the emergency bell was not identified or explained, it would be a moderate departure from the expected standard of care. She advised that if no orientation of either the call bell or the emergency button were provided, this would be a severe departure.
95. At the outset, it is necessary to acknowledge that there are some differences between the evidence provided by the health practitioners involved and that provided by Mr and Mrs A.
96. I accept the findings made in the AEI and the advice provided by RM Emerson. Given the conflicting accounts and absence of documentation, I am unable to determine whether the family was orientated to the call-bell system in the postnatal ward. I acknowledge that their orientation to the maternity ward at the time of admission included being shown the handheld call button, and I note that they were able to locate and use the call bell successfully when required. The family were unable to locate the emergency bell when Baby A stopped breathing, and state that they were not advised of the emergency bell. Given these two factors, and the omission from staff statements of any orientation to the emergency bell, I consider it more likely than not that Mr and Mrs A were not orientated to the emergency bell. As such, I accept RM Emerson’s advice that even if the call bell was located, it was a moderate departure from the accepted standard of care for the emergency button not to have been identified or explained. I am critical that this did not occur and will address the issue of documentation below.

Care plan for Baby A

97. A care plan was recorded for Mrs A at handover, and this contained information for Baby A, including the need for blood-sugar testing. The clinical records did not contain a separate care plan for Baby A. RM C stated that she informed RN D during handover that a blood-sugar test would need to be performed. A NEWS assessment chart for Baby A was initiated but this was not completed.
98. The AEI found that a care plan for Baby A was verbalised during handover from RM C to RN D, but an individual care plan for Baby A was not documented. In addition, the AEI found that the NEWS assessment was not completed fully with details of the risk of low blood-sugar levels. BOPDHB told HDC that a lack of clarity regarding the primary individual responsible for the care of Baby A resulted in his care plan not being completed.
99. I accept the findings in the AEI and note that BOPDHB’s ‘Care Delivery — Nursing and Midwifery Shift Handover’ policy states that a verbal handover does not replace any requirement for accurate and complete clinical records, including care plans. I am therefore concerned that a separate care plan for Baby A was not documented and that his NEWS assessment was not completed fully with details relating to his risk of low blood sugar.

100. I acknowledge BOPDHB's comments that there were no clear directives on who was responsible for the care plan for Baby A, and I hold BOPDHB accountable for this shortcoming. I am therefore not critical of the midwives responsible for Baby A and consider that this forms part of a wider set of issues relating to the demarcation of responsibility between the LMC and secondary care (as highlighted by BOPDHB in paragraph 22), and the non-adherence to documentation standards, which is addressed below.

Information provided to Mrs A

101. RM C told HDC that RM J provided Mrs A with information on breastfeeding while in recovery, and she provided Mrs A with information on monitoring Baby A's airway while breastfeeding and moving to the postnatal ward. No further information was given to Mrs A during the handover from RM C to RN D.
102. The AEI found that although positioning during breastfeeding was discussed, neither RM C nor RN D provided appropriate information to Mrs A during the bedside handover, including information on safe airway management.
103. I am unable to find any evidence that information on safe airway management was provided to Mrs A, and I consider it more likely than not that this was not provided. I note that this was also a finding of the AEI. While I acknowledge that the reason for Baby A's collapse is unclear, I am concerned that information regarding safe airway management was not provided to Mrs A, given that this would help to minimise the risk.

Monitoring on postnatal ward

104. Transfer to the postnatal ward took place after 6.05pm, just over one hour after Baby A's delivery. The care plan for Mrs A was for observations to be taken half hourly, as per BOPDHB's 'Care Delivery — Physiological Observations Standards for Inpatients' policy, and clinical records support that these observations took place. Baby A had observations taken at 5.30pm, with no further observations recorded on the ward. After orientation to the ward, the family was left alone while RN D went on her 30-minute break.
105. RM Emerson referred to the 2012 Ministry of Health Publication 'Observation of Mother and Baby in the Immediate Postnatal Period: Consensus statements guiding practice',⁴² which states that mothers and babies must receive *active and ongoing assessment* in the immediate postnatal period, which is defined as the first *one to two hours* following birth. However, RM Emerson also highlighted that the guidance recognises the need for the mother and family's privacy following birth.
106. In light of the acuity of the ward (as stated by RM E), the staffing shortage, and the 'apparent wellness' of both Mrs A and Baby A, alongside RN D's intention to return in the next half hour for scheduled observations, RM Emerson considered that there was no departure from accepted practice in leaving Mrs A and Baby A alone in the room after one hour of

⁴² www.health.govt.nz/publication/observation-mother-and-baby-immediate-postnatal-period-consensus-statements-guiding-practice.

observation had already taken place. I accept RM Emerson's advice and am not critical that ongoing staff presence ceased after one hour.

Documentation

107. As identified above, there were several concerns with the standard of clinical documentation, in particular the lack of documentation relating to orientation to the call-bell system and a separate care plan for Baby A, and the incomplete documentation of Baby A's NEWS assessment.
108. RM Emerson advised that there is a lack of legible names and designations accompanying signatures in the clinical midwifery and nursing notes. The AEI also found that not all documents were signed as required. RM Emerson stated that this 'created complexity in ascertaining roles and who was present during the resuscitation'. In addition, RM Emerson noted that although Mrs A and Baby A were transferred to the postnatal ward at 5.55pm,⁴³ the first entry, which is not annotated as retrospective, was written at 9.30pm. RM Emerson advised that midwives are expected to maintain a professional standard of documentation, as outlined in the Midwifery Council's 'Be Safe 4 Documentation and record keeping'.⁴⁴
109. I accept RM Emerson's advice and the findings in the AEI and am critical of the standard of documentation. In addition to the deficiencies in documentation outlined by RM Emerson and in the AEI, I note that there was a lack of supporting documentation regarding handover, retrospective notes made many hours after the care provided, missing times and dates, legibility of notes and, in general, the quality of information contained within the notes. Furthermore, alongside RM Emerson's difficulties in deciphering the information, I note that the substandard documentation contributed to difficulties experienced by HDC when investigating the quality of care provided to Baby A.
110. While I acknowledge that RM Emerson's criticisms were in relation to midwifery documentation, I consider that it is applicable to all healthcare staff, given the recurring substandard documentation from multiple clinicians contained in Baby A and Mrs A's clinical records.
111. The Medical Council of New Zealand (MCNZ), the Nursing Council of New Zealand (NCNZ), and the Midwifery Council of New Zealand all have professional guidelines for doctors, nurses, and midwives setting out expectations for the standard of documentation.⁴⁵ These guidelines state that records should be clear and accurate, record discussions with patients and whānau, and be completed as soon as possible after the event. The documents from NCNZ and the Midwifery Council further set out that records should be legibly signed, dated,

⁴³ Noting that as mentioned at paragraph 20, initial handover took place at 5.55pm, but the family remained on the recovery ward until 6.05pm.

⁴⁴ [Be Safe 4 Documentation and record keeping.pdf \(midwiferycouncil.health.nz\)](https://www.midwiferycouncil.health.nz/Be-Safe-4-Documentation-and-record-keeping.pdf)

⁴⁵ See MCNZ, 'Managing Patient Records', December 2019, NCNZ, *Code of Conduct for Nurses* 2012, and the Midwifery Council of New Zealand, 'Be Safe Documentation and Record Keeping', March 2018.

and timed, and make clear the identity of the author. The Midwifery Council also sets out that notes written in retrospect should be identified as such.

112. While I appreciate that each individual is responsible for the content of their entries into the clinical record, I consider that given the range of issues identified, and the number of staff involved in producing substandard documentation, this is indicative of a systemic issue with documentation standards at BOPDHB.

Emergency response and resuscitation

113. Mr and Mrs A stated that 45 minutes after transfer to the postnatal ward, Baby A ‘became lifeless’. Mr and Mrs A pressed the call bell at 6.23pm.⁴⁶ As the system had been set to silent, the call bell did not ring audibly but sent alerts to staff pagers. Staff noticed Mr A in the hallway and entered the postnatal room at 6.26pm and arrived at the resuscitation room at 6.27pm.
114. The AEI found that the handheld call bell did not include an emergency bell, and the emergency bell was not accessible to patients from the bed. In addition, it found that the call bell system was on silent, and staff were not carrying pagers reliably.
115. Statements in the AEI indicate that between 6.26pm and 6.27pm RM F and RM E passed the nurses station and asked for an emergency to be alerted. The emergency button was pressed at 6.30pm, and a call to the on-call paediatrician was made at 6.33pm.
116. The resuscitation was commenced by the midwifery and nursing staff on the postnatal ward, and included chest compressions and breathing support, until the paediatric and specialist resuscitation team arrived to take over.
117. The AEI found that resuscitation equipment was not readily accessible on the postnatal ward, and that a separate call had to be made to both the paediatric team and SCBU staff as the emergency button does not alert the specific team needed, and the resuscitation pager was not held by anyone in the SCBU.
118. I accept the findings of the AEI and am satisfied that the staff who first responded to the emergency were equipped to initiate the resuscitation, and that once members from the paediatric team arrived, the resuscitation was taken over by them appropriately. However, I remain concerned about the systems in place at BOPDHB to ensure that paediatric expertise was to hand at the earliest opportunity in emergencies of this nature.
119. I acknowledge that BOPDHB attempted to mitigate impacts of the call-bell system being on silent by having a policy that required all staff to carry their call-bell pagers. However, these events made it evident that BOPDHB’s ‘Care Delivery — Patient Call System — Principles and Standards’ policy was not followed by staff or enforced by management. By failing to carry pagers, and having the system on silent, staff at BOPDHB severely limited their ability

⁴⁶ Noting that as mentioned at paragraph 20, the family arrived on the postnatal ward around 6.05pm — just under 20 minutes prior to the call bell being activated.

to note and respond to patient calls. This is particularly concerning if staff do not orientate patients to the emergency button, and patients are left to rely on the call button, as was the case here.

120. The information provided to HDC does not make clear the cause of delays between asking for an emergency to be called, the button being pressed, and a call being made to the paediatrician. The AEI indicated that there may have been staff confusion regarding emergency processes, which I consider is a result of having poor systems in place for managing emergencies on the wards.

Conclusion

121. I consider that systems issues at BOPDHB meant that the care provided to Mrs A and Baby A after transfer to the postnatal ward constituted a breach of the Code of Health and Disability Services Consumers' Rights (the Code).
122. As outlined above, there were deficiencies in the midwifery care provided to Mrs A and Baby A during handover. This was exacerbated by a lack of clarity on who was primarily responsible for the care plan for Baby A, as highlighted in paragraph 22. In particular I note that the emergency button was not identified or explained to Mr and Mrs A, a care plan for Baby A was not documented (only verbalised during handover), blood-sugar testing was delayed, and appropriate information regarding safe airway management was not provided to Mrs A.
123. However, I note the AEI's finding that if clear policies and protocols had been in place regarding the transfer process, orientation and handover, and education to parents, this situation may have been avoided. As such, I consider this to be a systems issue rather than a deficiency in care by any one individual and am critical of BOPDHB for failing to have appropriate policies and processes in place.
124. Further deficiencies were also present in the processes and procedures in place to manage emergency situations. This included the location of emergency bells, staff compliance with the internal policy on pager use, and staff confusion on emergency processes.
125. In addition, I am critical of the substandard documentation recurrent throughout Baby A's and Mrs A's clinical records and consider this to be indicative of a systemic issue at BOPDHB.
126. Although I acknowledge the changes made by BOPDHB following the events, I find that BOPDHB breached Right 4(1) of the Code.⁴⁷

Paediatric care — no breach

Care provided immediately after delivery

127. Although a technically difficult birth, there were no signs that Baby A's health was at risk, or that additional care and monitoring would be required at this stage. In his advice to HDC, Dr

⁴⁷ Right 4(1) of the Code states: 'Every consumer has the right to have services provided with reasonable care and skill.'

Rowley did not identify any concerns about Baby A's condition immediately following his birth.

Care provided during resuscitation

128. Dr L and a paediatric locum arrived at 6.30pm and took over management of Baby A's resuscitation. The team continued to provide chest compressions and IPPV until Baby A's HR had improved, at which point chest compressions were discontinued. Dr L also attempted to commence suction. Dr B arrived at 6.34pm, IPPV continued, and shortly after this Baby A began to breathe spontaneously.
129. Dr Rowley said that Baby A experienced sudden unexpected postnatal collapse (SUPC). Dr Rowley advised that he has no concerns with the paediatric care provided during the resuscitation. He stated:

'[B]y the time the consultant paediatrician arrived ... there were spontaneous breathing movements a good heart rate and a rapid return to spontaneous respirations.'

Decision not to undertake therapeutic hypothermia (cooling)

130. I acknowledge Dr B's conscientious oversight of Baby A in the period following the SUPC. Dr B commenced Sarnat scoring upon transfer to SCBU and continued to undertake these scores for the first six hours after the resuscitation. Dr B discussed the situation with WDHB NICU twice during the six-hour period, and the active decision not to commence cooling was made jointly with the specialists at WDHB. WDHB told HDC that it was the correct decision not to transfer to WDHB for cooling.
131. The AEI found that Baby A was not accepted for early transfer to WDHB as there was diagnostic uncertainty regarding whether cooling was required. The AEI outlined that the current evidence does not support cooling of infants with mild HIE, and cooling should be commenced only during the first six hours after an asphyxia event.
132. Dr Rowley advised that Dr B adhered to Sarnat scoring in an appropriate manner. Dr Rowley said that it is not clear that therapeutic hypothermia is appropriate in cases of SUPC, and adequate discussion took place with WDHB about the use of cooling. He advised that by the time it became apparent that Baby A could benefit from cooling, the six-hour window for cooling had passed.

Appropriate response to seizures

133. Dr I and the SCBU nurses provided Baby A with further care and monitoring. Dr I observed jerky movement in Baby A's arms and legs, and, although she noted that potentially this could be seizure activity, she considered that the movement was consistent with myoclonic jerks. SCBU nurses and a paediatric SHO also noted that Baby A was unsettled and had shaking movement of his limbs.
134. The potential seriousness of the jerking movement was escalated to Dr I on Day 3, after a senior nurse not responsible for Baby A's care noted concern about the movement. The

situation was discussed with WDHB, and an initial dose of phenobarbitone was trialled. When this did not improve the movements, transfer to WDHB was arranged.

135. The AEI suggested a possibility that seizures were not recognised by nursing or junior medical staff, and therefore not escalated to senior staff members earlier. However, the AEI acknowledged the difficulty in diagnosing seizures in babies.
136. Dr Rowley advised that some focal seizures were witnessed at BOPDHB, but most of the movement witnessed appears to have been neurological reflex hyperirritability,⁴⁸ and therefore he did not identify any concerns.

Conclusion

137. Although Baby A was transferred to WDHB for potential seizure-type behaviour sometime after the asphyxia event, I accept Dr Rowley's advice that Baby A received appropriate monitoring and care from paediatric staff from birth until the time of transfer, and that WDHB's 'Neonatal Encephalopathy Management' guideline was followed appropriately when deciding whether it was appropriate to commence cooling.

Changes made since events

138. As outlined in paragraph 78, BOPDHB's AEI report made several recommendations, which have been actioned as followed:
- Recommendation 1: Three handover meetings have been held, including reminders to staff about expectations that women/whānau are to be orientated to postnatal rooms and that patient call bells (including emergency bells) are to be explained, including situations that would require the emergency bell to be used.
 - Recommendation 1: Staff were reminded to note call bell orientation in the progress notes on admission of a patient.
 - Recommendation 1: Managers have agreed on a standard phrase to be used when documenting call and emergency bell orientation, and staff have been advised of this.
 - Recommendation 2: BOPDHB met with the call-bell system provider and ordered new call-bell handsets with emergency buttons accessible in bed. These handsets were installed in April 2021.
 - Recommendation 3: The call-bell system has been turned to audible.
 - Recommendation 3: An audit of call-bell wait-times was completed with the average wait-time improved to 1 minute and 8 seconds.
 - Recommendation 4: Three handover meetings have been held, including reminders to staff about providing information on maintaining a safe airway at all times.

⁴⁸ Increased muscle reflexes caused by neurological changes.

- Recommendation 4: Managers have agreed on a standard phrase to be used when documenting safe airway positioning information provided, and staff have been advised of this.
- Recommendation 5: Coordinators, postnatal midwives, and registered nurses were reminded that care plans must be written for mother and infant prior to handover to the postnatal ward.
- Recommendation 5: All staff were reminded to complete NEWS assessment and document baseline observations prior to admission to the postnatal ward.
- Recommendation 6: A neonatal resuscitation adjunct trolley for advanced resuscitation care was placed in the delivery suite access alcove.
- Recommendation 6: A resuscitation station was placed in the postnatal alcove to minimise delays in resuscitation.
- Recommendation 7: Staff were educated on who should attend when emergency buttons are activated, and signs were added next to the buttons outlining who should attend. Staff were also encouraged to call 777 to ensure that the correct teams attend.
- Recommendation 7: Emergency bell displays were set so that the room number and 777 call are both visible to staff to respond.
- Recommendation 8: Emergency bells for antenatal, postnatal, and delivery suite are now audible in SCBU.
- Recommendation 12: A staff meeting was held to remind staff always to date, time and sign all entries in the clinical notes.

139. This complaint was brought to the attention of the Director-General of Health pursuant to section 39(2) of the Health and Disability Commissioner Act. The Ministry told HDC that it was liaising with BOPDHB to oversee the implementation of the recommendations made in the AEI report. The Ministry stated that it is confident that the identified risks to public safety would be mitigated by the proposed changes. HDC will confirm with the Ministry of Health that it is satisfied with the changes implemented by BOPDHB.

140. In response to the provisional report, BOPDHB advised of the following further changes:

- All Obstetric, Maternity, and Neonatal care is now documented in the electronic 'Badger Net' system (a shared platform for maternity-related care data).
- Handover from the delivery unit to the postnatal ward is supported by a checklist, a copy of which was provided to HDC. The checklist includes the initial care plan for the mother and neonate, and a section on informing the postnatal team if a baby is under the care of the paediatric team.
- Resources are provided to every woman as part of their welcome information pack (sent out prior to the birth). The resources cover information on breastfeeding, newborn airway protection, and safe sleeping.

- A breastfeeding information poster is in every room on the maternity unit.

Recommendations

141. I recommend that Health NZ Hauora a Toi Bay of Plenty, in light of the changes made:
- a) Provide a written apology to the family for the deficiencies in care outlined in this report. The apology is to be sent to HDC within three weeks of the date of this report, for forwarding to the family.
 - b) Outline any further measures planned or implemented in response to the recommendations made in the AEI report, including evidence of the impact of these changes.
 - c) Evaluate the effectiveness of the new procedures for handover and orientation to the postnatal ward by conducting an audit of handover and orientation documentation and provide HDC with the outcome report with any corrective actions implemented.
 - d) Undertake an audit of a random selection of 20 patients' documentation on the maternity unit in order to identify compliance with professional documentation standards and provide HDC with the summary of the findings with any corrective actions to be implemented.
 - e) Further to recommendation 5 (under paragraph 138) and with reference to the statement made in paragraph 22, develop clear directives on the responsibility of the LMC for the care plan of a well baby born to a mother in secondary care.
142. Recommendations b) to e) are to be provided to HDC within three months of the date of this report.

Follow-up actions

143. A copy of this report with details identifying the parties removed, except Tauranga Hospital, Waikato Hospital, Health New Zealand | Te Whatu Ora, Health NZ Hauora a Toi Bay of Plenty, Health NZ Waikato, and the advisors on this case, will be sent to Health New Zealand | Te Whatu Ora, Manatū Hauora | Ministry of Health, the Midwifery Council of New Zealand, the New Zealand College of Midwives, Te Tāhū Hauora | Health Quality & Safety Commission, and the National Maternity Monitoring Group and placed on the Health and Disability Commissioner website, www.hdc.org.nz, for educational purposes.

Appendix A: Independent clinical advice to Commissioner

The following independent advice was obtained from neonatal paediatrician Dr Simon Rowley:

'Re Complaint Tauranga Hospital (Te Whatu Ora Bay of Plenty)

Ref 21HDC00052 [Baby A]

My full name is Robert Simon Hearn Rowley. I am a Registered Medical Practitioner and Specialist Neonatal Paediatrician. My qualifications are MB ChB. FRACP. I have also been awarded a CNZM for services to neonatal paediatrics. I am a Neonatal Paediatrician working at Children's Health, Auckland City Hospital which includes clinical management of level 3 and level 2 infants in NICU. I have also practised as a General Paediatrician in private practice here in Auckland for over 30 years. I am also the former Chair of the Northern Region Paediatric Vocational Training Committee, a position I held for 12 years until recently.

I have had access to the following documents:

Letter of complaint dated 8 January 2021

Te Whatu Ora Bay of Plenty's response dated 23 April 2021

Staff statements received with above response.

Clinical records from Te Whatu Ora Bay of Plenty covering the relevant period.

Relevant policies received from Te Whatu Ora Bay of Plenty

The pregnancy with [Baby A] was complicated by the development of gestational diabetes at 38 weeks. Induction had been planned for [Day 1] (39.6 weeks gestation) but was then changed to an elective Caesarean delivery due to unsuitable position (high head unengaged) and a large baby in a pregnancy also complicated by gestational diabetes. Delivery was at 1649 hours on [Day 1]. Forceps were applied to deliver the head through the Caesarean scar. The baby weighed 3690G with Apgar score of 8, 9, and 10 at 1, 5, and 10 minutes. i.e. no significant resuscitation would have been required. He was examined by a paediatrician and no concerns were noted so he was handed to [Mr A], his father, for some skin to skin contact. Initial care was in recovery and then mother — [Mrs A], father — [Mr A] and baby — [Baby A] were transferred to the postnatal ward. Forty-five minutes after this transfer, the father rang the patient call bell to alert maternity staff to his concerns about the baby's breathing or lack of it. There was no midwife in the room with the mother and baby so he walked to the ward office and it took some minutes for staff to arrive. They found a lifeless appearing infant in the mother's arms. Resuscitation was then initiated by the LMC and other midwifery staff with paediatric staff arriving within minutes, a triple7 emergency having been called at 1830 followed by a call to the consultant at 1833 and the consultant paediatrician arriving at 1842. Although there had been no heartbeat detected at the

time the nurse first assessed [Baby A], by the time the consultant had arrived there was a good and variable heart rate, good colour and saturations. There is a discrepancy between the mother's statement of complaint and the nursing/midwifery statements about orientation to the room including where the emergency bell was situated. What is clear is that the post-natal nurse received a handover (1755hours) from the LMC including instructions about the need to do a blood sugar in 30 minutes but as the mother and baby appeared to be stable she went on her dinner break leaving them alone in the room. 20 minutes into her break the alarm bell rang (this was approximately 1 hour 25 minutes following Caesarean section delivery). Subsequently [Baby A] was carefully monitored using Sarnat scoring (a standardized systematic scoring system of the degree of encephalopathy) in order to evaluate a possible need for therapeutic hypothermia as treatment for stage 2 or 3 hypoxic ischaemic encephalopathy (HIE). His first blood gas following resuscitation had shown a PH of 6.96 — very acidaemic, with a lactic acid of 12.49 and base deficit of minus 18. These were consistent with severe HIE and in the setting of sudden unexpected postnatal collapse discussions were held with the tertiary centre paediatricians at Waikato Hospital regarding therapeutic hypothermia — very appropriately. Following continuing improvement in blood gas measurements and a stable condition of baby with Sarnat scoring not achieving a level of seriousness to mandate therapeutic hypothermia (cooling), as well as the baby having had normal Apgar scores at delivery, the decision was made not to transfer to Waikato Hospital for cooling. Over the next 24 hours [Baby A] remained stable but with jittery movements — possible seizures noted and generally unsettled behavior. After discussion with the Waikato team, and a trial dose of the anticonvulsant phenobarbitone which effected a diminution in seizure-like activity, transfer to Waikato Hospital for ongoing surveillance was undertaken. No further seizures were noted on BRAINZ monitoring, his MRI brain was normal and he gradually improved enabling him to return to Tauranga for preparation for discharge home. I understand that to date his development has been normal at follow-up. I believe that [Baby A] experienced what is commonly known as Sudden Unexpected Postnatal Collapse (SUPC). This has been well documented in the medical literature and I refer to an excellent article by Vix Monnelly and Julie Becher in *Early Human Development* (126)2018. 28–31. In this article over 400 cases are cited with a 50% mortality and a high morbidity in the survivors. These infants appear normal at birth but for some reason do not complete sustained transition to the postnatal circulation and are found collapsed not breathing often in a parent's arms within the first 1–2 hours of birth although reports can be up to 24 hours after birth. Where children have died following SUPC autopsies have demonstrated other pathologies in over half of the cases. Various theories on causation have been put forward including asphyxiation due to airway obstruction while in a parents' arms — similar to what is thought to be the final common pathway in SUDI (Sudden Unexpected Death in Infancy). As a result most units should now have a written policy about the care of the infant in the immediate post partum period. Most state that the infant and parents should not be left alone by the midwifery staff in the first 2 hours after delivery — even for a short period of time. Following complicated deliveries such as a Caesarean section this recommendation is even more important. It is not clear to me from the information supplied whether this is included in the policy for management of mother

and infant by a midwife following delivery. In [Baby A's] situation it seems that the parents and [Baby A] were left alone for a period of time within this 2 hours and appeared to be unclear about what to do with a baby that they suspected might not be breathing normally. The postnatal nurse had gone on her dinner break leaving the parents and baby unattended within the 2 hour observation period. This I believe is a departure from accepted standards. Obviously when there are work pressures on staff making it difficult to achieve this, it can be difficult. It appears that once [Baby A] was attended to, the resuscitation by the nursing and midwifery staff and then the medical staff who arrived promptly was efficient and effective. The blood gases showed improvement and the baby appeared to have mild encephalopathy only. Ongoing discussions regarding cooling (therapeutic hypothermia) were held with Waikato Hospital paediatricians. Sarnat scoring to assist in this decision making was adhered to in an appropriate manner and by the time it became apparent that [Baby A] may have benefitted (onset of probable seizures) it was well past the time window of 6 hours post event that therapeutic hypothermia is recommended within.

Specific questions. Regarding the care provided by the paediatric team immediately after delivery I have no concerns. The baby did not require any resuscitation beyond the first minute and was behaving normally on paediatric assessment.

Regarding the care provided during [Baby A's] resuscitation I also have no concerns. As already mentioned once he was brought to the resuscitation table nearest the postnatal ward the midwifery staff acted promptly with cardiac compressions and bag-mask ventilation which was clearly effective. When the paediatric team arrived within minutes [Baby A] was being adequately ventilated and had saturations of 100%. By the time the consultant paediatrician arrived — approximately 10 minutes — there were spontaneous breathing movements a good heart rate and a rapid return to spontaneous respirations with just a mask supplying extra pressure (CPAP). The baby was transferred to the SCBU, lines had been inserted as well as a nasogastric tube to decompress the stomach. Sarnat scoring began and discussions regarding therapeutic hypothermia were happening. These maneuvers were all timely and appropriate.

Regarding the care provided at Tauranga Hospital following resuscitation including the timeliness of transfer to Waikato Hospital I have no concerns. [Baby A] was irritable and unsettled at times over the first 48 hours — an observation consistent with having had an asphyxial insult possibly of greater severity than initially recognized. This was widely discussed, the possibility of seizures was considered and eventually a trial of anticonvulsant medication phenobarbitone was initiated in discussion with a Waikato Hospital paediatrician. There was a transient improvement in the jittery movements but with subsequent recurrence and after further discussions, transfer to Waikato Hospital for further monitoring was undertaken. Some focal seizures were witnessed prior to transfer but no seizures were witnessed after this time and at Waikato clinically or on EEG (BRAINZ) monitoring. Most of what was witnessed appears more likely to have been neurological reflex hyperirritability. The MRI done at Waikato was reassuringly normal which is one of the measures used to predict a good long term developmental

outcome. It is also by no means clear that therapeutic hypothermia (cooling) is appropriate in cases of Sudden Unexpected Postnatal Collapse. The original literature on cooling was regarding infants who had intrapartum HIE where the cooling was initiated within 6 hours of birth. The evidence for its benefit after SUPNC is lacking and although we consider it in these circumstances, there are always other variables possible such as infection where it may not be useful and may increase the risk of adverse outcome. These points are made in the recommendations of the British Paediatric Surveillance Study of SUPC funded by Wellchild in the UK and are included in the guidelines chaired by Julie-Clare Belcher in 2011. They note the theoretical plausibility for benefit from Therapeutic Hypothermia in such context and recommend consideration on an individual case basis such as happened here. In my opinion the management at both hospitals was exemplary with excellent resuscitation and subsequent observation and management, a healthy degree of questioning about the significance of possible signs and symptoms and widespread discussion and consultation. The consideration as to whether cooling was indicated was in depth and constantly re-evaluated.

Any other issues. I have already mentioned the issue of mother and baby being left in the room alone by the LMC within the time frame (at least 2 hours) that it is recommended a midwife/nurse remain present at all times. In recent years hospital policies have acknowledged the risk of SUPC in subsequently making these recommendations. The confusion about the call bell, who is available to respond to it and the fact that the father had to walk to the desk to request timely assistance for his apparently lifeless baby, all happened as a result of not having a midwife/nurse in the room. This I believe is a departure from accepted standard of care of moderate degree. I believe that there should be a clear policy as to post natal care of mother and infant readily available on the delivery unit so that all staff have access to this as well as having an orientation to this.

In summary the issues raised are Sudden Unexpected Post natal Collapse is the likely diagnosis. The baby was in good condition following Caesarean delivery with normal Apgar scores and was appropriately warded with his parents where he was apparently well for over an hour prior to his collapse. The mother and infant should not have been left unattended for the first 2 hours following delivery. This is a moderate departure from accepted standards. Further teaching and orientation on this should be considered. Resuscitation, decisions and discussion with Waikato Hospital, and other paediatric management were all very appropriate. In particular there was adequate discussion about the use of therapeutic hypothermia. The initial studies on therapeutic hypothermia as treatment for hypoxic ischaemic encephalopathy did not include these infants with Sudden Unexpected Postnatal Collapse although it is thought to be of possible benefit in some cases and consideration should be given to cooling on an individual case basis. Appropriate discussion took place. I can understand how traumatic this has been for the family. What is supposed to be a joyous time for them following the birth of their baby has been a shocking experience with the trauma of finding their lifeless infant, seeking help on a busy ward, having the baby admitted to

SCBU then transferred to another hospital and wondering whether their baby has been damaged by the experience. Fortunately it seems that [Baby A] has done well — in part a tribute to excellent resuscitation by midwifery and paediatric nursing and medical staff.

Simon Rowley October 2022

MBChB, FRACP, CNZM

Consultant Neonatal Paediatrician Newborn Services Te Toka Tumai | Auckland'

Appendix B: In-house clinical advice to Commissioner

The following in-house clinical advice was obtained from RM Nicholette Emerson:

'CONSUMER : [Baby A]
PROVIDER : Staff midwives BOPDHB
FILE NUMBER : 21HDC00052
DATE : 7 February 2023

Thank you for the request that I provide clinical advice in relation to the complaint from [Mrs A] about the care provided by BOPDHB midwives. In preparing the advice on this case to the best of my knowledge I have no personal or professional conflict of interest. I agree to follow the Commissioner's Guidelines for Independent Advisors.

I have reviewed the documentation on file:

Documents provided: Consumer complaint 8 January 2021 Bay of Plenty District response and Clinical records, including full set of combined notes and relevant policies.

Background: The complaint comes from [Mrs A] about the care provided to her newborn son [Baby A], by the former Bay of Plenty DHB (BOPDHB). [Mrs A] developed gestational diabetes and an early birth was planned. The complaint concerns the timeliness of resuscitating [Baby A] after he stopped breathing. [Baby A] was born at Tauranga Hospital on [Day 1] by elective caesarean and "the procedure was technically challenging" requiring the use of forceps. The paediatric team was at the delivery and "clinical and biochemical assessments were reassuring". Forty five minutes after transfer to the post-natal ward [Baby A] became lifeless and the parents "were unaware of any emergency button" and there was a time delay (Six minutes and 25 seconds between the call bell and the emergency bell) in [Baby A] receiving resuscitation. He suffered hypoxic ischemic encephalopathy and was transferred to SCBU, and was transferred to Waikato Hospital on [Day 3]. On [Day 7] [Baby A] returned to Tauranga Hospital and was discharged home on [Day 9].

Advice Request: External advice has already been received from a specialist paediatrician. However, there were midwifery components to the care provided at Tauranga Hospital: a) It appears the mother and baby were left in the room alone by midwifery staff in the first 2 hours after delivery. b) Once [Baby A] was brought to the resuscitation table nearest the postnatal ward, Midwifery staff provided cardiac compressions and bag-mask ventilation. Could you please advise whether there were any departures from the expected standard of midwifery care in relation to the above two issues. Please also advise if there are any other matters that in your opinion warrant comment or amount to a departure from the expected standard of midwifery care.

The midwives involved were: [RM C] — Midwife; [RM F] — Midwife; [RM H] — Midwife; [RM G] — Midwife; [RM E] — Midwife; [RN D] — Nurse.

The two hours post birth [Mrs A]. [Baby A] was born at 39 weeks and 6 days (full term) by elective caesarean at 4.49pm on [Day 1]. The decision was made in consultation with [Mr and Mrs A] for an elective caesarean as opposed to the induction of labour (IOL) previously planned. The reason for the change of plan was the conditions were not favourable for a successful IOL as [Mrs A] had developed gestational diabetes (controlled by diet). [Baby A] was reportedly large for gestational age and his descent into [Mrs A's] pelvis had not occurred. Forceps were required at delivery and a paediatrician was in attendance 4 minutes post birth. The delivery is described in clinical notes as a *difficult extraction*. Apgar scores were reassuring at 9,9,10 at 1, 5 and 10 minutes respectively. A full newborn examination was undertaken in theatre by paediatrician [Dr L] and no concerns were identified. Midwives in attendance were staff midwife [RM C] and LMC midwife [RM J]. Following the birth, [Mrs A] and [Baby A] spent time in recovery before being transferred to the postnatal ward.

Whilst in recovery [Mrs A] was supported to breastfeed [Baby A]. [RM C] transferred [Mrs A] and [Baby A] to the ward and care was handed to registered nurse [RN D] at 5.55pm. The first entry into [Mrs A's] clinical notes is written at 9.30pm by [RN D] *received handover from recovery midwife and midwife in charge @ 1800, [Mrs A] was feeding baby on the breast during this time, baby well and pink, suckling, emergency happened afterward at 1825–1900*. This entry is not annotated as retrospective. A maternity early warning signs chart (MEWS) was commenced at 6pm and records normal vital signs for [Mrs A] at 6pm and 6.30pm.

[Baby A]. [Baby A] postnatal handover and care plan records Apgar scores of 9,9,10 at 1,5 and 10 minutes retrospectively. An Apgar score is a standardised assessment for neonates following birth. The highest score of wellbeing is 10. The handover plan was completed by LMC midwife [RM J] and the receiving nurse was [RN D]. Blood sugar protocol is ticked to be undertaken in the care plan. This means that [Baby A] would require blood sugar testing from 2 hours post birth as per protocol for babies born to mothers with gestational diabetes. Observations were normal at handover. Breastfeeding is recorded as initiated at 5.20pm in recovery and care is recorded as being handed to postnatal nurse [RN D] at 5.55pm. Documentation for [Baby A] at 6pm observes [Baby A] suckling well with a good latch, pink and warm with no concerns vocalised or observed. Although the paediatrician documented a plan for staff to initiate a Newborn Early Warning Score (NEWS), I have been unable to locate a copy of this document amongst the notes, therefore I am unable to verify it or comment on its content. According to [Mrs A's] complaint she states that the handover was *one nurse introducing herself to another nurse*. There was no room orientation, No information on how and where to get assistance if needed. When [Baby A] became unresponsive there was an unnecessary time delay in obtaining help as [Mrs A] states neither her or [Mr A] had been orientated to the emergency bell. In considering the complaint, issues have been divided into two components — Midwifery and nursing staff room orientation and attendance, and BOPDHB systems.

Midwifery and nursing staff orientation and attendance. According to the BOPDHB response 23 April 2021, care was handed from [RM C] to [RN D] at the bedside on the postnatal ward at 5.55pm however [RM C] says in her statement that she handed over details to [RN D] in the nursing station prior to transfer of [Mrs A] and [Baby A] to the ward and then a formal bedside handover took place including orientation to the hand held call system in the ward. [RN D] states that the bell system was orientated and the next set of observations were due in half an hour. There does not appear to be clinical documentation stating that a room and bell system orientation occurred. There does not appear to be documented acknowledgement of a Newborn Early Warning System (NEWS) chart or the need to obtain a blood sugar level (BSL) from [Baby A]. [RN D] says in her statement that she went on a meal break after accepting [Mrs A] to the ward. Both [RN D] and midwife [RM E] acknowledge in their statements that meal break cover for [RN D] was undertaken by [RM E]. In [RM E's] statement she states that the ward at the time was high acuity and that she offered to share half hourly observations with [RN D] at 6pm. Further supporting documentation regarding the high acuity can be found on page 8 of the Datix report. The report states that the ward was a staff member down from shift commencement and this was the 5th Caesarean the ward had accepted that day. On review of BOPDHB it was identified that the emergency button was behind the raised bed head. Because [Mr and Mrs A] had not been orientated to the emergency button they were not aware to press it. In addition had [Mrs A] been on her own, she could not have accessed the emergency button following her caesarean section. The call button was pressed several times resulting in a delay of 6 minutes 23 seconds as there was no emergency identified. Comment has been requested regarding the lack of continued staff attendance in the first two hours following [Baby A's] birth. In 2012 Ministry of Health (MOH) released a document *Observation of mother and baby in the immediate postnatal period: consensus statements guiding practice*:

<https://www.midwife.org.nz/wp-content/uploads/2019/06/observation-mother-baby-immediate-postnatal-period-consensus-statements.pdf>

For the purposes of the document the “immediate postnatal period” is defined as the first one to two hours after the birth, although this time may extend beyond this as required. The guidance suggests ongoing assessment for a minimum of an hour. Assessment will be longer than one hour if the mother or baby has experienced factors that increase the risk of adverse outcomes. *All practitioners providing care in the immediate postnatal period must understand the importance of, and undertake, ongoing assessment of both mother and baby, including situations where non-midwifery personnel are providing care outside of the delivery unit. All staff must be educated and competent in recognising any departure from normal.* The document recognises that the mother/birthing person with her/their family/whānau may need a time of privacy following the birth however they must know when to call for help and how to do so if concerned. I have considered this document along with the policies of BOPDHB and conclude Observations and assessments were performed before the handover to postnatal ward. The handover to the post-natal ward staff included a care plan for both mother and baby. Regular observations of both mother and baby were due in half an

hour. A mother who has had a general anaesthetic should have observations every 30 minutes for the first 4 hours after surgery, or more often if required. These bedside observations and assessments also include checking that you are always able to reach the call bell. (CARE DELIVERY — PHYSIOLOGICAL OBSERVATION STANDARDS FOR INPATIENTS Policy 7.104.1 Protocol 8). Given the acuity of the ward, the staffing shortage and the apparent wellness of both [Mrs A] and [Baby A] along with the intention to return within 30 minutes I do not consider there was a departure from accepted practice in leaving [Mrs A] and [Baby A] 1 hour 10 minutes post birth with the intention of returning in the next half hour for scheduled observations. Of note the MOH policy of remaining for two hours is currently under review. In my opinion, the departure from accepted practice is not in the continued lack of staff attendance but in the apparent lack of orientation to the call bell system. This lack of orientation resulted in delay in accessing urgent help and, had [Mr A] not been present, may have resulted in a more severe outcome. If it is accepted that a handover took place between [RM C] and [RN D] at the bedside including the hand held call system then there is a moderate departure from accepted practice in not documenting the hand over and identifying the emergency bell behind the head of the bed or explaining when this might be activated. If it is accepted that an orientation of the bell system did not take place and Mr and [Mrs A] were not aware of the hidden emergency bell then this is considered a severe departure from accepted Midwifery practice.

2) Once [Baby A] was brought to the resuscitation table nearest the postnatal ward, Midwifery staff provided cardiac compressions and bag-mask ventilation. Could you please advise whether there were any departures from the expected standard of midwifery care in relation to the above? According to the clinical notes, retrospective midwife accounts and the (then) BOPDHB Adverse Event Investigation Record (page 7) the call bell was rung at 6.23pm, 1 hour and 34 minutes after [Baby A's] birth. At 6.25pm following "no response to the call bell" [Baby A's] father left the room to alert staff to concerns regarding [Baby A]. At 6.26pm staff member [RM F], in response to the concerns raised, went to the room, lifted [Baby A], activated the emergency bell in the room and alerted other staff (when passing nursing/midwifery station) to activate a 777 regarding [Baby A's] collapse. [RM F] then transported [Baby A] to delivery suite 1 for resuscitation. The resuscitation required set up at 6.27pm and at this time [RM E] listened for a heartbeat. At 6.28pm, [Baby A's] heart rate was not audible so chest compressions ([RM H]) and IPPV ([RM F]) commenced. At this point staff members in attendance were Midwives [RM H] (chest compressions), [RM C] (documenting) and [RM G] (called 777 requesting paediatric attendance, attached oxygen probe and remained until paediatric team took over). Resuscitation efforts were taken over by the paediatric doctors at 6.30pm. [Baby A's] Heart rate was recorded at 70bpm so chest compressions were continued by [RM H] until 6.34pm when the heart rate had risen and chest compressions were no longer required. The investigation documentation appears to be in keeping with the clinical documentation and the retrospective accounts of those present at the resuscitation. The paediatric doctors continued to lead the resuscitation in keeping with accepted practice. On review of the clinical notes and the Adverse Event Investigation Record the actions taken by the midwives were in

keeping with accepted midwifery practice, with no departures identified. Of note, midwives are trained in neonatal resuscitation and this is an annual mandatory requirement in maintaining a midwifery practising certificate. I note there are some system issues that have been highlighted as follows. Attempt at calling 777. The specific paediatric team were not alerted in the nursing/midwifery station, instead a more generic resuscitation team were alerted. The delay in the attendance of the paediatric team has not been reported as impacting the resuscitation as effective resuscitation had commenced. Improvements planned include review of 777 response. A new resuscitator for the postnatal area will be placed in the central alcove. A new neonatal resuscitation trolley is now in place. Reminder to all staff of the importance of clear timely and legible documentation.

A comment on Midwifery documentation. Documentation: There appears to be a lack of legible name and designation accompanying signatures in the body of clinical midwifery and nursing notes. This has created complexity in ascertaining roles and who was present during the resuscitation. It is noted in the Adverse Event Investigation report there is a reminder to all staff regarding clear timely and legible documentation. From a midwifery perspective, midwives are expected to maintain a professional standard of documentation as outlined in Midwifery council “Be Safe 4 Documentation and record keeping”:

<https://www.midwiferycouncil.health.nz/common/Uploaded%20files/Be%20series/Be%20Safe%204%20Documentation%20and%20record%20keeping%20F.pdf>

This includes (page 2) *all administrative requirements e.g. dates, time, identifying information*. The issue of [RN D] not identifying retrospective notes as such has been raised in question 1. Summary In considering the ward orientation and access to the emergency bell there appears to be a departure from accepted practice. The presence of a midwife for 2 hours following a birth is explored and in the circumstances there does not appear to be a departure from accepted practice in the context. (Noting here the difference between best practice and accepted practice.) There do not appear to be any departures from accepted midwifery practice in the neonatal resuscitation once the emergency was identified. I hope that I have answered some of [Mr and Mrs A’s] remaining questions regarding the midwifery care provided by BOPDHB. I offer my heartfelt condolences for their traumatic experience and wish them the best in the ongoing care of their precious son [Baby A].

Nicholette Emerson, BHSc, PG Dip-Midwifery

Midwifery Advisor

Health and Disability Commissioner’

Appendix C: Neuroprotection Care Pathway

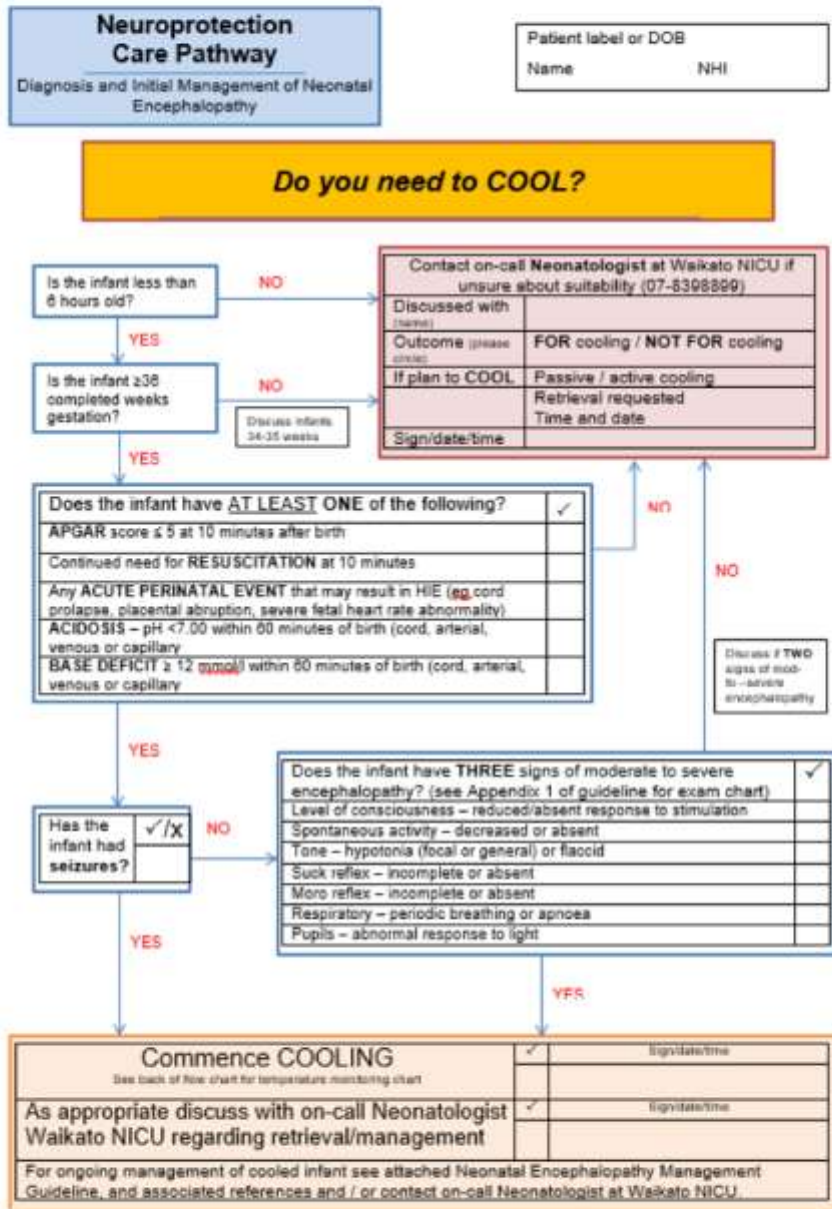


Guideline

Neonatal Encephalopathy Management

Figure 1 - Neuroprotection Care Pathway

Adapted from <https://bebop.nhs.uk/wp-content/uploads/EoE-HEALTH-FOUNDATION-NCP1.pdf>



Doc ID:	1588	Version:	04	Issue Date:	7 AUG 2020	Review Date:	7 AUG 2023
Facilitator Title:	Neonatologist			Department:	NICU		
IF THIS DOCUMENT IS PRINTED, IT IS VALID ONLY FOR THE DAY OF PRINTING							Page 8 of 18



Names have been removed to protect privacy (except Tauranga Hospital, Waikato Hospital, Health NZ Hauora a Toi Bay of Plenty, Health NZ Waikato, and the advisors). Identifying letters are assigned in alphabetical order and bear no relationship to the person's actual name.