Assessment and Management of Neonatal Babies who are accidentally dropped or fall when in-hospital Guideline

Guideline information

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Summary of document:
This guideline is to support staff in how to respond after a baby is accidentally dropped by a parent, relative, visitor or healthcare professional, or slips from a person' s hold or lap and falls to a different surface within the maternity departments. It includes precipitate births outside the hospital where babies are born onto a surface and there is potential for a head injury.

Scope:
This guideline is to support all Health Care Professionals involved in the care of babies in how to respond after a baby is accidentally dropped or falls.
The guidance below uses the term 'woman' (pronouns she or her) to describe individuals whose sex assigned at birth was female, whether they identify as female, male or non-binary. It is important to acknowledge it is not only people who identify as women for whom it is necessary to access women's health and reproductive services. Therefore, this should include people who do not identify themselves as women but who are pregnant or have recently given birth. Obstetric and Midwifery services and delivery of care must therefore be appropriate, inclusive and sensitive to the needs of those individuals whose gender identity does not align with the sex that they were assigned at birth

To be read in conjunction with:
628 Babies Sharing Their Mothers' Bed While in Hospital Guideline –opens in a new tab.

Patient information:
Include links to Patient Information Library

Owning group:
Maternity Guideline, Audit and Research Group

Executive Director Job title:
Chief Operating Officer

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Keywords
Accidentally dropped babies

Glossary of terms
NEAD - Non Epilepsy Affective Disorder
BMI – Body Mass Index
SCBU - Special care Baby Unit
GCS - Glasgow Coma Score

Contents

Scope

This guideline is to support all Health Care Professionals involved in the care of babies in how to respond after a baby is accidentally dropped by a parent, relative, visitor or healthcare professional, or slips from a person' s hold or lap and falls to a different surface within the maternity departments. It includes precipitate births outside the hospital where babies are born onto a surface and there is potential for a head injury

Aim

The aim of this guideline is to guide and support staff to reduce clinical risk of fallen or dropped newborns and who's immediate response is vital to ensuring any injuries to a baby who has fallen are detected and treated as quickly as possible.

Objectives

The aim of this document will be achieved by:

- Providing advice to all parents on prevention of accidently falls or dropping the baby
- Risk assessing postnatal mothers and baby identified at high risk of falls /drops
- Able to respond immediately when baby has fallen or been dropped
- Clinically monitor and appropriately manage and care for any baby that has fallen or been dropped.

Key Points

- Infant falls can result in significant head injury with subtle or even absent clinical signs.
- All babies who fall on the postnatal ward should be discussed with the Consultant on call.
- Clinicians should have a low threshold for any size of swelling, haematoma or laceration following a head injury.
- If CT imaging is indicated, this should be performed within an hour

Introduction

A newborn fall is defined as "a fall in which a baby being held or carried by a health care professional, parent, family member, or visitor falls or slips from that person's hands, arms, lap, etc. This can occur when a child is being transferred from one person to another. The fall is counted regardless of the surface on which the child lands and regardless of whether or not the fall resulted in injury". For practical purposes 'fall' and 'drop' are used interchangeably in this guideline.

The risks of accidentally dropping a baby are well known, particularly when a parent falls asleep while holding a baby; or when a parent or healthcare worker holding the baby slips, trips or falls. However, despite healthcare staff routinely using a range of approaches to make handling of babies as safe as possible, and advising new parents on how to safely feed, carry and change their babies, on rare occasions babies are accidentally dropped or fall.

The immediate response is vital to ensuring any injuries to an accidentally dropped baby are detected and treated as quickly as possible, but as automatic transfer of the baby to the emergency department

is not always appropriate, clinical staff in these clinical areas need easily accessible practical advice in managing this situation.

Advice Preventative Actions

Advice should be given to parents on prevention of accidently falls or dropping the baby on admission to the postnatal ward

Advice should be given verbally as soon as possible after delivery

- Women should be directed to the information within the ward area (Patient information leaflet)
- The height of the bed should be lowered to the lowest possible level before bringing a baby into bed with mother
- Mothers and babies should be advised that the safest place for a baby to sleep is in a clear flat, firm separate sleep space.
- Babies should be placed back into the cot if the baby is asleep and the mother is feeling tired
- Women with limited mobility should be advised to ask for help when wishing to transfer the baby to and from the cot
- Women with limited mobility or a low Haemoglobin should be advised to leave the curtains around the bed open so that they can be observed more easily. The exception is when privacy and dignity is required.
- The safest position to feed the baby in bed is on mother's side facing baby
- Parents and visitors should not carry baby around postnatal /corridors areas without using a cot.

Risk Assessment Identifying infants at high risk of falls

- Maternal GA/Epidural/Spinal anaesthesia for delivery
- Primigravida mother
- Breast feeding in bed
- Night-time (between the hours of midnight and 8am)
- Impaired awareness of mother e.g. fatigue, sedation. Phone use and dim lighting
- Underlying maternal condition e.g. epilepsy, NEAD. Diabetes, disability, raised BMI.
- Social issues: Young mothers, single mother, language barriers.

Initial assessment when baby has fallen

In all areas on report of a baby falling, professionals should respond immediately.

Use emergency call bell to summon support if required.

Assessment

Undertake immediate assessment to determine immediate response

Physical examination and ongoing assessment of a child with possible traumatic brain injury

must be quick and safe, and consists of key steps:

- Assessment of airway breathing and circulation.
- Evaluation of level of consciousness, and pupillary size and reaction to light
- Assessment of local traumatic injuries
- Full neurological examination and enhanced observations

Immediate assessment and actions

All infants who are found following a drop or fall should be moved carefully to a warm well light surface e.g. resuscitaire for a full assessment.

1. "**Urgent" call 2222 call for an urgent paediatric review if on assessment baby:**

- Is unresponsive, cyanosed, altered consciousness or not breathing.
- Having abnormal movements or posturing
- Having Seizures
- If floppy/no movements
- Only opens one eye with or without new bruise/swelling.
- Pupils asymmetrical
- New external injury -The baby has any obvious signs of external injury (any swelling over scalp /new bruise/suspected limb fracture/ clear fluid draining from nose or ear).

Immediate Action Plan

- **"URGENT"** call 2222 for neonatal team to review **Urgently.**
- Start assessment and stabilisation as per UK Newborn Life Support algorithm (NLS).
- Admit/ transfer to special care unit (SCBU) for further investigation and assessment.

2. **If the baby is responsive**, active or crying with no obvious signs of external Injury

If baby is:

- Alert and normal movements
- Sleepy, but wakes on handling
- Irritable/but consolable,
- Poor feeding/not interested
- Both eyelids open equally
- Pupils equal and reactive

Immediate Action Plan

- Inform neonatal team to request review within 15 mins
- A midwife should perform immediate assessment including NEWTT2 observations, with additional comments on the level of alertness and responsiveness.

- If assessor is trained and competent, complete neurological examination with modified paediatric Glasgow Coma Scale (Appendix 1) can be used for assessment and further management plan.
- Babies will be transferred to SCBU for a period of enhanced observations
- Start enhanced observations* and continue for 12 hours.
- If changes in enhanced observations, call for immediate neonatal review.

*Enhanced observations = NEWTT2+ modified paediatric Glasgow Coma Scale

- If newborn baby is in a setting with no paediatric support i.e. Community the baby will need transfer to the nearest A&E department.
- ➢ Babies who are accidently fall /are dropped, at Withybush Birth Centre should be transferred in by ambulance to GGH.
- ➢ Babies who are accidently dropped in Bronglais should be transferred to Angharad children's ward for assessment and enhanced observations.

Management of all babies following a fall and management should be discussed with the consultant after assessment by the paediatric team

Role of Attending Doctor

- Detailed Assessment by the neonatal team (Tier 2 (Reg) or above)
- Take a full history of the event (see section)
- Complete a thorough medical and neurological examination checking for signs of injury Perform neurological assessment and enhanced observations (NEWTT2) Glasgow score. Check anterior fontanelle and sutures, pupil size, symmetry and response to light, tone, power, primitive reflexes,
- Measure head circumference and compare to initial head circumference (if performed)
- Use body maps in postnatal pathway to document any bruises, erythema, swelling, obvious injuries or skin marks.
- Review Birth, mode of delivery and determine whether there any injuries already attributed to birth to differentiate these from any other bruising or markings.
- If there is a step-like deformity or evidence of a skull fracture, consider performing a CT scan. Discuss with neonatal consultant on service/call.
- Review the history of Vitamin K administration. If not given or administered orally, offer IM Vitamin K if no medical contraindications and document administration.
- After reviewing the history and risk of potential intracranial bleeding, consider whether administering IM that Vitamin K may be in the baby's best interest (even where parents decline)

Detailed History Taking

The majority of drops are unwitnessed with limited history available to explain mechanism of injury. The vast majority are accidental. However clinical staff need to be alert to the possibility of non-accidental injury or an element of neglect in accidental drops.

A detailed history should be obtained from the health care professional caring for the baby and from the parents or people present at time of fall.

- Who was caring for the baby at the time of the fall?
- If the baby was being held at the time of the fall, who was holding the baby?
- Time of fall?
- Time of reporting?
- An estimate of the height of the fall and type of surface onto which the baby fell.
- The position to which the baby fell
- The circumstances surrounding the fall
- Any witnesses to the fall?
- The last time a professional saw the baby prior to the fall.

All Findings should be clearly documented in the notes of the baby and the proforma complete

Following initial assessment

All babies both unresponsive, external injuries, abnormal neurological examination) **or who are responsive, active or crying with no obvious signs of external injury** must be transferred to SCBU for enhanced observations and regular review by the paediatric team.

Note. The place of care is determined by the staff competency in undertaking enhanced observations i.e. SCBU.

From BAPM
Commence enhanced observations immediately. there should be a minimum of 12 hours observations prior to discharge and observations should be documented at the following frequency :

- ½ hourly for 2 hours
- 1 hourly for 4 hours
- 2 hourly for 6 hours
- Discontinue formal observations at 12 hours if GS is equal to 14. If well the baby can be discharged after 12 hours of **normal observations**

- If there are abnormal enhanced observations or any concerns for the clinical wellbeing of the baby **at any point**, the immediate review by a senior neonatologist/paediatrician is required

Assessment and risk factors for CT scan

Babies who have sustained a head injury and have any of the following risk factors should have a CT head and neck scan within 1 hour of risk identified- (NICE, 2017)

- Suspicion of non-accidental injury
- Post-traumatic seizure but no history of epilepsy.
- GCS (Modified paediatric) less than 14
- • Suspected open or depressed skull fracture or tense fontanelle.
- Any sign of basal skull fracture (haemotympanum, 'panda' eyes, and cerebrospinal fluid leakage from the ear or nose, Battle's sign)

- Focal neurological deficit. •
- Presence of bruise, swelling or laceration of more than 5 cm on the head.
- Loss of consciousness lasting more than 5 minutes (witnessed)
- Abnormal drowsiness.
- Three or more discrete episodes of vomiting.
- Fall from height ≥90cm.

If there is a clinical suspicion of a spinal injury, consider MRI head and spine instead of CT spine after discussion with specialist services

The written radiology report should be made available within 1 hour of the scan being performed. This should be reviewed by the consultant neonatologist or paediatrician on call who will plan on-going care.

For any abnormal CT scan should be referred for specialist advice by the neonatal /paediatric consultant**. *If CT imaging is indicated this should be performed within 1 hour**

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Analgesia

Consider giving appropriate analgesia to the baby i.e. paracetamol.

Communication

- Ensure that the parents/ carer are kept fully informed and supported at all times.
- Discuss the need and plans for monitoring baby and communication with mother should include provision of emotional support and information about immediate management plan

Documentation

- Complete the *Proforma for history and assessment of newborn following in-hospital fall or drop* (see appendix 2)
- Contemporaneous record keeping
- Check if there are any safeguarding issues and please notify safeguarding team if there are.
- Complete DATIX incident report

Discharge and Follow up

- If observations normal for 12 hr and no significant extra -cranial injuries nor concerns about safeguarding, then middle grade/tier 2 /consultant may discharge baby.
- Ensure community midwife/health visitor and GP is a made aware of discharge and that the fall, assessment and investigations are fully documented in the discharge summary.
- All babies who have had abnormalities on CT head imaging should have
    - Head Circumference monitored regularly in community (By SCBU Out Reach Team)
    - Named Neonatal Consultant follow-up will be arranged to monitor progress and neuro-development
    - Neurosurgical follow up should be as per advice of the Neurosurgical team.

Further information for staff and links

https://www.lullabytrust.org.uk/wp-content/uploads/2025/01/Professionals-guide.pdf

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Appendix 1 – Paediatric neurological observation chart with modified Glasgow Coma Score GCS for infants less than 4 months

Name:							DOB:								Ward:					
Hospital Number:							Consultant:													
Date																				
Time																				
Frequency of Observations																				
Dot the response of the Glasgow Coma Scale																				
Modified Glasgow Coma Scale	Eyes Open	Alert and awake or gentle stimulus =4																		Eyes closed due to swelling = C
		To rocking /startle response =3																		
		Response to painful stimuli =2																		
		None =1																		
	Best Vocal or Grimace Response	Alert/normal cry =5																		
		Less than usual/irritable but consolable =4																		
		Abnormal high pitch /inconsolable cry =3																		
		Weak cry/moans or grunts to pain =2																		
		None =1																		
	Best motor response	Spontaneous movement, normal primitive reflexes = 5																		Record the best limb's response
		Responds only to touch or stimulus moves limb/ change in face expression, weak primitive reflexes =4																		
		Withdraw to pain =3																		
		Abnormal posturing to pain =2																		
		None =1																		
		Total Score																		
Pupils	Right	Size																		+ reaction - nil reaction S reacts sluggish C eyes closed
		Reaction																		
	Left	Size																		
		Reaction																		
		1 •		2 •		3 ●		4 ●		5 ●		6 ●		7 ●		8 ●				Pupil Scale (mm)
Limb Movement	Arms	Normal power																		Record right (R) and Left (L) separately if there is a difference
		Hypertonic																		
		Hypotonic																		
		No response/ flaccid																		
	Legs	Normal power																		
		Hypertonic																		
		Hypotonic																		
		No response/ flaccid																		
Assessor's Initials																				

Eye Opening	
4	**Spontaneous eye opening.** Alert and spontaneous eye movement or opens eyes on gentle stimulus. If the infant is sleeping they may not open eyes but will have some motor response to touch or gentle stimulus
3	**Eyes open on rocking movement:** If baby's eyes do not open eyes on gentle stimulus, perform gentle rocking motion of the head to see the response. Also observe facial expression and motor response.
2	**Eyes open to painful stimuli.** If the infant does not respond to verbal stimuli, use tactile stimulus by touching the infant's hand/shoulder and gently shaking. If no response, then painful stimulus can be applied by applying pressure to the side of the 3rd or 4th finger to evoke the eye open response.
1	**No eye opening to painful stimuli.** No response to pain stimulus
C	If Infant's eyes are closed – document clearly due to swelling or puffy as normal after birth or swollen and not opening due to injury/trauma score C.
Vocal or grimace response	
5	**Alert/normal cry.** Spontaneous normal facial / oromotor activity.
4	**Less than usual ability and / or spontaneous irritable cry.** Less than usual spontaneous grimace or infant has a spontaneous irritable cry which is consolable.
3	**Abnormal high pitch inconsolable cry.** Infant has an abnormal cry and cannot be consoled.
2	**Weak cry, moans or grunts to pain.** Infant moans or grunts or has weak cry in response to pain.
1	**None.** There is no vocal or grimace response to pain.
Motor Response	
5	**Infant has normal spontaneous movements and normal primitive reflexes.** Includes suck, gag and grasp.
4	**Withdraws to painful stimuli/normal flexion.** The infant flexes arm at elbow without wrist rotation in response to painful stimulus. Best motor response is spontaneous and reflex flexion.
3	**Withdraws to pain.** Only responds to strong painful stimuli – weak withdrawal to pain/ abnormal flexion of arm and wrist with clenched fist and extended legs
2	**Abnormal posturing to pain.** Abnormal flexion (decorticate) or extension (decerebrate) to pain. Response to pain is slow with flexion of the arms with wrist rotation, clenched fists and extended legs **and/or** arms rolled inward on the body with wrist and fingers bent and held on chest **and/or** rigid extension of the arms at the elbow with the inward rotation and extended leg.
1	**No response to pain.**

Triggers for Alerting Immediate Medical Review

Clinical Signs of raised intracranial pressure

- Early signs: Decrease in level of consciousness> 5 minutes (NICE, Sept 2019)
- Late signs: Fall in respiratory rate, decrease in heart rate, rise in blood pressure
- Pupil changes (dilated, unequal or non-reacting)
- Persistent vomiting
- New or evolving neurological signs e.g. pupil inequality, asymmetry of limbs, facial movements
- Abnormal posturing and /or Seizures
- Development of agitation or abnormal behaviour/irritability
- Tense bulging fontanelle

Practical tips:

1. Grading the severity of head injury: Minor head injury (GCS score = 13-14), moderate HI (GCS score = 9-12) and severe HI (GCS score ≤8).
2. For more accurate grading other important factors must be taken into consideration, like mechanism of injury (e.g. the height of fall, surface of fall etc.), loss of consciousness, vomiting, and posttraumatic seizures.
3. Request immediate Paediatric review if any drop of one or more points in the eye/ verbal (Grimace)/motor points.
4. Clinical management decisions should not be based solely on the GCS score in the acute setting.
5. There is limited evidence to validate use of GCS in this age group. However, this scale is adapted for use in this age group through multi-professional group consensus, from the evidence available and local guidelines from the units using GCS to monitor babies following neurosurgery.
6. With limited evidence and validity, use of modified GCS alone cannot be recommended, either as a means of assessing severity or prognosis of brain injury. However, it is a useful tool for monitoring and should supplement detailed neurological examination of newborn but not replace it.
7. Distinction between normal and abnormal flexion may be challenging, especially for the non-specialist. (Reilly 1991)

Appendix 2 Proforma for history and assessment of a neonate following in-hospital fall or drop.

Hywel Dda University Health Board

Patient Addressograph

Proforma for history and assessment of a neonate following in-hospital fall or drop.

Date and Time of event		Gestation (wk)	
Age at time of event (hours)		Birthweight (gms)	
Date and Time Neonatal team informed		Head circumference at birth(cm)	
Maternal history BMI Underlying medical conditions Known substance Misuse Known sedative medications at time of event Any known social Concerns?		**Birth** Parity Type of delivery Medications during labour Maternal Hb post delivery Did PPH occur?	
Circumstances of fall: Who was caring for baby at time of fall? What happened? Who found baby after fall? What was estimated height from where baby fell to floor? What was height of bed from floor? Type of surface baby was found on? Had parents received information about preventing falls on admission to ward? What and when was the last risk assessment of mother undertaken? What and when were the last observations of mother undertaken?			

Initial assessment of Newborn (document injuries on body map in postnatal notes)

Basics Airway Breathing Circulation	
Neurology Head circumference Level of consciousness Tone Primitive reflexes Anterior fontanelle Extracranial trauma Pupillary size, symmetry and reaction	
Feeding Adequacy Vomiting	
Any other injuries	

Management plan:

FLOWCHART PATHWAY FOR THE MANGEMENT ON IN-HOSPITAL NEWBORN DROP OR FALL

Hywel Dda University Health Board

FLOWCHART PATHWAY FOR MANAGEMENT ON IN-HOSPITAL NEWBORN OR FALL OR DROP

Witnessed or unwitnessed fall or drop

Immediate Management – Midwife/ Neonatal Nurse

- Move baby carefully to resuscitaire for full assessment –ensure good light
- Perform baseline observations and assess baby for injuries and responsiveness
- Inform Parents if not aware

▪Baby looks unwell, not responsive, seizure or obvious head injury
▪Urgent Call 2222l and request urgent paediatric review
▪State location of baby

▪Baby looks well with no visible injuries
▪Crying but easily consoled
▪NEWTT2 Observations normal
▪Paediatric team to review baby within 15min

Paediatric Team

Obtain a detailed history from parents/witnesses and midwifery team (Appendix -2)

- Complete a thorough medical and neurological examination – note any birth related injuries
- Document Injuries clearly – bruises, erythema, swelling or skin marks (use Body Map)
- Review history of Vitamin K, if not given or given orally – offer IM if no medical contraindications.
- Perform Enhanced Observations*
- Notify on-call Consultant

* NEWTT2 and Modified Glasgow Score (BAPM)

Baby looks unwell, not responsive, seizure or obvious head injury

- Admit to neonatal unit
- Continue **enhanced** observations
- Complete investigations- FBC, U&Es, Coagulation,
- Blood glucose, Group and save.
- Urgent CT head within hour (see Table)
- Consider Analgesia

Well baby, no injuries

- Transfer to SCBU for continued **enhanced** observations for 12 hours
- If changes in enhanced observations for immediate Paediatric review, consider further investigations

Discharge

- Babies who require admission should be discharged when clinically well
- Babies should be reviewed by Tier 2 doctor/ANNP prior to discharge.
- Discharge details should include all observations, imaging results and neurosurgical consultations
- Head Injury advice and patient information leaflet for parents
- Ensure community Midwife, health visitor and GP is made aware of discharge and fall assessment and investigations documented in discharge summary ./Complete incident form /
- Arrange paediatric /outreach or neurosurgical follow up for baby who has abnormalities on imaging.