

Identification and Management of Infants at Risk of Neonatal Hypoglycaemia in the First 48 Hours of Life: An Adaptation of the BAPM Framework for Practice

The aims of this guideline are to safely manage term and preterm babies at risk of hypoglycaemia in the first 48 hours after birth, where possible to keep mothers and babies together, and to reduce the risk of brain injury.

PLEASE NOTE: The **ONLY** circumstance where a blood glucose level of 2 and above is deemed acceptable is in a **TERM** infant, on the **POSTNATAL/LABOUR** ward **AND** in the **FIRST 48** hours of life. At all other times a threshold of **<2.6mmol/L** should be used

The guidance focuses on these key areas:

- a) Partnership with parents
- b) Early identification of infants at risk
- c) Early and regular feeding starting within the **first hour** after birth
- d) Clinical assessment for symptoms of hypoglycaemia
- e) Accurate measurement of blood glucose using a blood gas machine.

Clinical assessments including the absence or presence of signs of symptomatic hypoglycaemia, must be regularly documented.

At Risk babies who should be placed on the Hypoglycaemia Pathway

The following groups of infants are at risk of neurological sequelae of neonatal hypoglycaemia. Measures should be in place to identify them at birth for early milk/energy provision and monitoring of blood glucose concentration. Commence the following babies on the Hypoglycaemia Pathway Part One

1. Intrauterine growth restriction (birth weight <2nd centile) or clinically wasted appearance

Plot the birth weight on the gestation specific growth chart and assess the centile. (See table).

Midwives are at liberty to identify babies from the customized gap grow charts if the baby's birth weight is less than 2nd percentile predicted for that baby.

Birth weight(kg) < 2 nd centile by gestation		
Gestation in weeks	Boys	Girls
37	2.10	2.00
38	2.30	2.20
39	2.50	2.45
40	2.65	2.60
41	2.80	2.75
42	2.90	2.85

2. Infants of diabetic mothers

Place all infants of diabetic mothers on the pathway.

Please note infants weight and if >98th centile (see table) document this as an additional risk factor in the Hypoglycaemia Care Plan. This does not apply to babies of non-diabetic mums above the 98th centile.

Birth weight (kg) > 98% centile AND infant of diabetic mother		
Gestation in weeks	Boys	Girls
37	3.8	3.7
38	4.1	3.9
39	4.3	4.1
40	4.5	4.3
41	4.6	4.4
42	4.7	4.5

3. Babies born less than 37 weeks gestation

4. Temperature < 36 degrees C at any time.

5. Infants of mothers taking beta-blockers in the third trimester and/or at time of delivery

6. Sepsis (Known infection or clinical symptoms of infection in infant)

7. Perinatal acidosis (cord arterial or infant pH <7.1 AND base deficit ≥ -12mmol/L)

8. Rare conditions/Family History where the baby is at risk of hypoglycaemia flagged up antenatally or by Neonatologist

IMPORTANT - Signs which can be indicative of Symptomatic Hypoglycaemia

- Cyanosis
- Apnoea
- Altered level of consciousness
- Seizures
- Hypotonia
- Lethargy
- High pitched cry

Measurement of blood glucose should be performed for any infant who has one or more of the above signs. Symptomatic hypoglycaemia (BG<2.6mmol/L with clinical signs as above) is an emergency and requires admission immediately to the NICU. Please note that babies displaying the above symptoms should be reviewed by the neonatal team even in the event of a normal blood glucose.

Abnormal feeding behaviour in babies on the pathway especially after a period of feeding well, may be indicative of hypoglycaemia (see signs below)

- Not waking for feeds
- Not sucking effectively
- Drowsiness or lethargy
- Constantly unsettled at the breast eg pulling off and getting distressed when offered the breast

It should prompt a full clinical assessment and blood glucose measurement.

Refer also to the generic reluctant feeder guideline.

Jitteriness - defined as excessive repetitive movements of one or more limbs, which are unprovoked and not in response to a stimulus is common and is not by itself an indication to measure blood glucose. In an at risk baby it may be a sign of hypoglycaemia.

Measurement of Blood Glucose

Samples should be taken from a warm well-perfused heel by heel prick, or from a free flowing sample, using skin asepsis and patient comfort. Air bubbles in capillary tubes should be avoided. Analyse the sample using blood gas analyser on the postnatal ward. Record the result clearly on the chart. Use the result to manage the next stage.

In all of the above situations ensure that 40% dextrose gel is written up prophylactically on the 'as required medicines' part of the prescription record. The dose is 0.5mls/kg. In the event it has not been written up and a dose is required use the SOP Dextrose Gel Administration Guidance found in the Care Bundles to give the required dose so that treatment is not delayed and inform neonatal team.

Start all 'at risk' babies on the Hypoglycaemia Pathway Part One for immediate management at birth (Page 3) with written explanatory notes on Page 4.

IMPORTANT: There are separate pathways for term and preterm infants with **different intervention thresholds**. Depending on whether the baby is preterm or term print off and refer to the appropriate hypoglycaemia care bundle following the first blood test.

Each care bundle consists of :

- Hypoglycaemia Pathway Flow Charts (Preterm or Term)
- Hypoglycaemia Care Plan (document feeding, blood glucose and risk score)
- NEWTT Chart (including responsiveness, tone, HR, RR, Temp, colour)
- Dextrose Gel Administration and SOP

Hypoglycaemia Pathway Part one



Dry baby, put on red hat, place skin to skin and initiate feeding. Keep warm.
If not receiving skin to skin ensure appropriate clothing or incubator if preterm/IUGR

Identify at risk infants (see Box A) Notify neonatal team if multiple risk factors
Give and explain Parent information leaflet

Start NEWTTS chart and Hypoglycaemia Care plan and record symptoms/ lack of symptoms at every feed. Get Dextrose gel written up as PRN

First feed, **MUST** be given as early as possible within the first hour.
A breastfeeding baby may feed multiple times before first BG measurement taken
Record first temperature at 1 hour and instigate warming measures as required

If NO EBM
Give dextrose gel and consider supplement of 5ml/kg formula if mother consents

Breast feeding
Put to breast but if ineffective feeding hand express and give colostrum

Bottle feeding
Offer 10mls/kg, via bottle, syringe/cup

Is baby <37/40 weeks gestation at birth?

NO

Promote ongoing skin contact and check glucose level pre second feed which should be within **3 hours** of 1st feed and follow **Term Infant Hypoglycaemia Pathway and Care Bundle**

YES

Promote ongoing skin contact and give second feed **2 hours** after 1st feed
First glucose level should be checked pre **third** feed which should be **2 hours** after 2nd feed at 4-5 hours of age and follow **Preterm Infant Hypoglycaemia Pathway and Care Bundle**

Box A – Infants at risk

- IUGR (<2nd centile) or clinically wasted
- * Infants of diabetic mothers
- * Maternal beta blocker use
- * <37 weeks gestation
- Temp <36 C at any time
- Perinatal Asphyxia cord pH <7.1 AND BE > -12
- Rare Conditions/FH as directed
- Sepsis-known/clinical signs

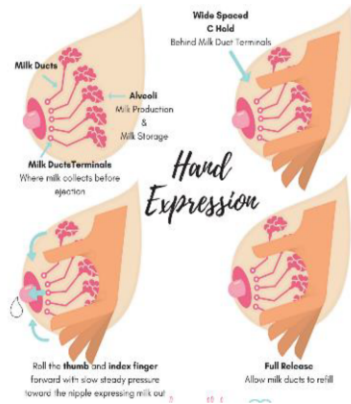
NEWBORN EARLY WARNING

Observation chart for newborn infants

Time	Temp	HR	RR	SpO2	Weight	Length	Head Circ	Glucose	Bilirubin	Urine	Stool	Feeding	Activity	Respiratory	Neurological	Other
01:00																
02:00																
03:00																
04:00																
05:00																
06:00																
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NOTE:

If a blood gas is being done before the first glucose level for anything other than hypoglycaemia then disable the glucose from the analysis to avoid capturing the normal physiological drop following birth.



ALL Babies 'At Risk' of Hypoglycaemia - Hypoglycaemia Pathway Part One

Prior to/at delivery

At risk babies should be identified and parent information leaflet given and explained as early as possible. This should include why their baby is receiving extra support and blood glucose monitoring, how the likelihood of hypoglycaemia can be minimised and the signs that could indicate that baby is becoming unwell. Focus on signs indicative of hypoglycaemia and measures to minimise occurrence.

Some infants will have multiple risk factors for hypoglycaemia – these should be flagged up to the neonatal team to consider if this pathway is appropriate or whether earlier admission needs to be considered. For preterm infants and those anticipated to be <2nd centile an incubator should be pre-warmed during labour and made available for baby when not skin to skin with mother following delivery.

Management immediately after birth

- Baby should be dried, covered and a hat put on.
- He/she should be placed skin to skin with the mother to provide warmth and facilitate the initiation of feeding.
- Feeding should commence as soon as skin to skin is achieved and must be **within the first hour**
- Ensure the ambient temperature is warm, the room is free from draughts, show safe positioning of the baby and commence observations.
- If mother is unavailable for skin to skin, baby can be placed skin to skin with the father.
- If neither parent available for skin to skin, consider if an incubator is needed to maintain temperature depending on the circumstances (eg IUGR/preterm). Otherwise, ensure appropriate clothing for ambient temperature before placing in a cot after first feed
- Regular observations include colour, tone, respiratory rate, heart rate, temperature, level of consciousness and signs associated with hypoglycaemia, recorded using the NEWTTTS chart.
- Feeds including, type, volume and duration should be documented on the Hypoglycaemia Care Plan. Blood glucose results should also be recorded here with the time of the sample and the signature of the person testing. In addition the risk factors for hypoglycaemia for each baby should be recorded here on the Hypoglycaemia Care Plan along with date and time of birth.

Breastfeeding

Ensure that baby is offered the breast as soon as possible **within the first hour** and offer:

- a) Breastfeeding support
- b) Advice on recognition of early feeding cues (rapid eye movements under the eye lids, mouth and tongue movements, body movements and sounds, sucking on a fist)
- c) Advice on signs of effective attachment.

Document feeding cues and feeding effectiveness at each feed. If feeding is ineffective, encourage continuous skin to skin and teach hand expression. Any colostrum expressed should be fed immediately to the baby. Continue to offer the breast in response to feeding cues as often as possible

Continue to express at least 8 – 10 times per 24 hour period until baby is feeding effectively and provide active feeding support until breastfeeding is established. **If no colostrum is available and after discussion with the mother, try expressing hourly, ensuring adequate amounts of colostrum in 3 hours. Consider use of dextrose gel or consider supplementing with term formula milk 10mls/kg per feed) until colostrum is available.** Support to resume breast milk feeds as soon as possible.

Formula feeding

For women who choose to formula feed, offer 10mls/kg as soon as possible **within the first hour**. Aim to give at least 80 - 100mls/kg/day in this group because formula milk has lower availability of cerebral alternative fuels.

Hypothermia

Thermal control is incredibly important in all babies but even more so in the high risk population as it puts them at increased risk of hypoglycaemia and neonatal admission. Please keep all babies skin to skin with just a hat and warmed towels wherever possible and when not skin to skin ensure baby is appropriately dressed in the cot. Consider if baby may need to be in an incubator ie. Preterm infant or <2nd centile.

IMPORTANT: From this stage forward, the management of term and preterm infants is NOT the same and a different care pathway will be used for each group from now on.

The following explanatory notes are separated into term and preterm sections accordingly and should be used with the appropriate term/preterm care bundle which should be printed and placed in baby's notes.

Management of TERM Infants following first blood glucose measurement

1. Following the first feed which should be offered within the first hour, the first blood glucose measurement should be just before the second feed. In practice for the term infant who is well this should be no more than 3 hours from the first feed. An infant who does not show any feeding cues within four hours of birth, should prompt BG measurement by 4 hours and administration of a feed by tube, cup or syringe.
2. Measure blood glucose immediately if there are signs in keeping with **symptomatic hypoglycaemia** (see Page 2) at any time on this pathway. Symptomatic hypoglycaemia is a medical emergency and should be followed immediately by measures to correct it (Buccal dextrose gel or IM glucagon 200 micrograms / kg up to a maximum of 1 mg as a single dose) along with the siting of an IV line and consideration of a full hypoglycaemia workup.

Following First Blood Glucose Measurement – Term Hypoglycaemia Pathway Part 2

3. Based on the result of the first blood glucose (BG) measurement, place the baby on one of the following sections of the Term Hypoglycaemia Care Pathway Part 2 and follow guidance:
 - A) **Blood glucose $\geq 2.0\text{mmol/L}$ and no abnormal signs.** Start green section (left hand side of chart). Support ongoing breast feeding and feed 3 hourly (breastfed babies may feed more frequently). If baby not breast feeding try expressing ensuring adequate colostrum/3 hours, give dextrose gel and consider supplement with formula milk 7.5mls/kg per feed.
 - B) **Blood Glucose 1.0 to 1.9mmol/L, and no abnormal signs.**
Start amber section (middle section of chart) Support ongoing breast feeding and feed 2 hourly (breastfed babies may feed more frequently). If baby not breast feeding try expressing ensuring adequate colostrum/3 hours, give dextrose gel and consider supplement with formula milk 7.5mls/kg per feed. Please note in the amber section, babies with multiple risk factors and a BG $< 2.0\text{mmol/L}$ should be highlighted to the Neonatal team at the first low result for review. Also, babies who have achieved 3 BG $> 2.0\text{mmol/L}$ on 2 hourly feeds should be maintained on 2 hourly feeds for a further 12 hours with no further BG monitoring if feeding well and asymptomatic before moving to the green pathway for BG monitoring on 3 hourly feeds
 - C) **Blood Glucose $< 1.0\text{mmol/L}$, OR clinical signs consistent with hypoglycaemia with Blood Glucose $< 2.6\text{mmol/L}$ OR 3 values $< 2.0\text{mmol/L}$ in the first 48 hours.**
Admit to neonatal unit promptly for consideration of hypoglycaemia workup and urgent IV dextrose as per red section of pathway part two (right hand side)

If at any time the healthcare professional caring for the baby still has concerns following medical review, they must escalate appropriately first to the registrar and then to the responsible consultant and document this in the medical records.

Further care before discharge

Do not transfer babies with risk factors for impaired metabolic adaptation and hypoglycaemia to community care until you are satisfied that the baby is maintaining blood glucose levels $\geq 2.0\text{ mmol/L}$ on at least three consecutive occasions on 3 hourly feeds and is feeding well.

All Infants at risk of hypoglycaemia should not be transferred to the community until they are at least 24 hours old from completion of their first of three blood glucose levels above 2.0mmol/L on 3 hourly feeds and where mother and midwife are satisfied that effective feeding is established.

In addition, in babies where there has been requirement for 2 hourly feeds due to blood glucose levels being

below 2.0mmol/L you should ensure the baby has been reviewed by the neonatal 'baby check' doctor on day of discharge in addition to the usual reviews during their stay.

Management of PRETERM Infants (<37 weeks) following first blood glucose measurement

Preterm infants are at risk of hypoglycaemia and generally may have lower reserves than term infants. In addition they are at risk of difficulties in establishing feeds and maintaining good thermoregulation. These babies often need longer stays in hospital to ensure establishment of feeding, show ability to gain weight and therefore require closer monitoring.

We should ensure these babies are able to maintain blood glucose levels on 2 hourly feeds before progressing to 3 hourly amounts.

In addition, the intervention threshold will not be changed to 2.0mmol/L from 2.6mmol/L until further evidence is available of its' safety in this group of babies.

1. Following the first feed which should be offered within the first hour, a second feed should be given 2 hours from the first feed. A blood glucose measurement should NOT be taken at this time. The first blood glucose measurement should be just before the second third feed. In practice for the preterm infant who is well this should be around 4-5 hours of age. **The reason for not taking a blood glucose before the second feed is that babies naturally experience a blood sugar drop following birth which should return to normal by 4hours of age. By taking the sample at 2-3 hours of age the baby is still within the period for the natural low levels which may falsely be interpreted as hypoglycaemia requiring intervention.** An infant who does not show any feeding cues within the first 3 hours following birth, should prompt BG measurement by 3 hours and administration of a feed by tube, cup or syringe.
2. Measure blood glucose immediately if there are signs in keeping with **symptomatic hypoglycaemia** (see Page 2) at any time on this pathway. Symptomatic hypoglycaemia is a medical emergency and should be followed immediately by measures to correct it (Buccal dextrose gel or IM glucagon 200 micrograms / kg up to a maximum of 1 mg as a single dose) along with the siting of an IV line and consideration of a full hypoglycaemia work up.

Following First Blood Glucose Measurement – Preterm Hypoglycaemia Pathway Part 2

3. Based on the result of the first blood glucose (BG) measurement, place the baby on one of the following sections of the Preterm Hypoglycaemia Care Pathway Part 2 and follow guidance:

A) Blood glucose $\geq 2.6\text{mmol/L}$ and no abnormal signs. Start green section (left hand side of chart).

Support ongoing breast feeding and feed 2 hourly (breastfed babies may feed more frequently). If baby not breast feeding effectively try expressing **ensuring adequate colostrum**/3 hours. Consider supplementing with formula milk 7.5mls/kg per feed. Once baby has achieved 3 BG $>2.6\text{mmol/L}$ on 2 hourly feeds they should be maintained on 2 hourly feeds for a further 12 hours with no further BG monitoring if feeding well and asymptomatic. Babies should then move to 3 hourly feeds until a further 3 consecutive BG levels are above 2.6mmol/L

B) Blood Glucose 1.4 to 2.5mmol/L, and no abnormal signs.

Start amber section (middle section of chart) Give buccal dextrose gel. Support ongoing breast feeding and feed 2 hourly (breastfed babies may feed more frequently). If baby not breast feeding try expressing **ensuring adequate colostrum**/3 hours, and consider a) supplement with formula 7.5mls/kg per feed milk and b) placement of NGT. Babies should be highlighted to the Neonatal team at the first low result for review. If a repeat BG level is 2.6mmol/L or above babies can move to the top of the green pathway (left side of chart)

If a second BG $<2.6\text{mmol/L}$ and $>1.4\text{mmol/L}$ and asymptomatic, insert an NGT if not already done so, continue to support breastfeeding and inform the neonatal team for review. Following a review by the neonatal team the baby may be:

- a) Started on an individualised plan which may include placement of NGT if not already done, increasing feed volume if tolerated by baby and ensuring all other parameters are normal by careful examination of the baby and review of the observation chart
- b) Admitted to NICU

If a baby is started on an individualised plan and not admitted a further blood glucose level should be taken prior to the next feed. If this BG level is 2.6mmol/L or above, the baby can continue on the individualised plan that achieved the normal BG level as long as the next 3 BG levels are normal. The baby should then have a further review by the neonatal team with a plan to move to the green pathway. A 3rd BG < 2.0mmol/L at any time means the baby should be urgently reviewed and admitted to NICU as per the red pathway on the right side of the chart.

C) Blood Glucose <1.4mmol/L, OR clinical signs consistent with hypoglycaemia with Blood Glucose <2.6mmol/L OR 3 values <2.6mmol/L in the first 48 hours.

Treat as a medical emergency

Give buccal dextrose 200mg/kg

Inform neonatal team immediately and admit to neonatal unit promptly for consideration of hypoglycaemia workup and urgent IV dextrose as per red section of pathway part two (right hand side)

If at any time the healthcare professional caring for the baby still has concerns following medical review, they must escalate appropriately first to the registrar and then to the responsible consultant and document this in the medical records.

Further care before discharge

All Infants at risk of hypoglycaemia should not be transferred to the community until they are at least 24 hours old from completion of their first of three blood glucose levels above 2.6mmol/L on 3 hourly feeds and where mother and midwife are satisfied that effective feeding is established.

Importantly, preterm babies often require longer to fully establish feeding, maintain their temperature and are at higher risk of significant weight loss. We must ensure these babies are able to consistently maintain their blood glucose levels prior to discharge.

All preterm babies should be monitored on the postnatal ward/transitional care routinely by the neonatal team but in addition you should ensure the baby has been reviewed by the neonatal team on the day of discharge so that all aspects of their care can be reviewed before discharge.

All babies born in MLU or in the community

Screen all babies at birth as described previously (p1-2). Take measures to keep baby warm in particular by promoting continuous skin to skin and initiate an early feed. Babies identified as requiring initiation on the pathway must be transferred out promptly to a hospital postnatal ward where regular blood glucose measurements can be undertaken. Use a transwarmer if available. If unavailable ensure sufficient warming measures to maintain temperature. Low temperature will increase chance of hypoglycaemia. Ensure a single feed and a single bolus of 40 % buccal dextrose (0.5mls/kg) prior to transfer.

All babies regardless of risk factors should be monitored for:

1. Signs of symptomatic hypoglycaemia (see above)
2. Abnormal feeding behaviour
3. Hypothermia (see below)

One temperature of 36-36.5°C can be treated by warming measures and a feed. A repeat temperature must be checked in 1 hour. A second temperature <36.5°C warrants admission. Any babies falling into this category above should be given a bolus of dextrose gel and a feed prior to prompt transfer.

Appendix 1

Standard Operating Procedure for the Use of Glucose Gel for Hypoglycaemia in High Risk Infants on the Postnatal Ward

SOP comes into effect	September 1 st 2020
Review Date	September 1 st 2023
Name of Medicine	Glucose Gel 40%
Professionals to whom it applies	Midwives and Neonatal Staff providing care to Infants at High Risk of Hypoglycaemia on the Postnatal Ward
Clinical Director for Neonatology	Dr Geraint Morris
Clinical Director for Maternity	Mr Marsham Moselhi
Medical Director	Mr Dougie Russell
Nursing Director	Eirlys Thomas

It is the responsibility of the nursing staff using this SOP to ensure that treatment with this medication is appropriate.
IF IN DOUBT SEEK FURTHER ADVICE BEFORE ADMINISTERING ANY MEDICATION

Clinical Condition	Neonatal Hypoglycaemia
Criteria for Inclusion	<ul style="list-style-type: none"> Buccal Glucose must be used in conjunction with a feeding plan Infants >34+6 gestation and younger than 48 hours after birth Babies born in the community/MLU requiring transfer to hospital for hypoglycaemia pathway ALL babies symptomatic of hypoglycaemia with BG <2.6mmol/L whilst arranging urgent review and admission as an emergency <p>TERM Infants (from 37 weeks gestation)</p> <ul style="list-style-type: none"> Blood Glucose 1.0-1.9mmol/L in an infant with no abnormal signs Blood glucose <1.0mmol/L in babies whilst arranging urgent review <p>PRETERM Infants (35-36+6 weeks gestation)</p> <ul style="list-style-type: none"> Blood Glucose 1.4-2.5mmol/L in an infant with no abnormal signs Blood glucose <1.4mmol/L in babies whilst arranging urgent review
Criteria for Exclusion	<ul style="list-style-type: none"> Babies <35 weeks gestation Babies >48 hours of age
Seek further advice	<ul style="list-style-type: none"> Urgently if any clinical manifestations of hypoglycaemia Discuss second dose with neonatal team <p>Request review for examination by neonatal team prior to third dose as per hypoglycaemia guideline</p>

Description of treatment															
Name of medicine	Glucose Gel 40%														
Legal status of Medicine	GSL														
Form	Gel														
Strength	40%														
Dosage	<p>0.5ml/kg of 40% Buccal Glucose Gel</p> <table> <tr> <th>Weight of Baby (kg)</th><th>Volume of Gel (ml)</th></tr> <tr> <td>1.5-1.99</td><td>1ml</td></tr> <tr> <td>2.0-2.99</td><td>1.5ml</td></tr> <tr> <td>3.0-3.99</td><td>2ml</td></tr> <tr> <td>4.0-4.99</td><td>2.5ml</td></tr> <tr> <td>5.0-5.99</td><td>3ml</td></tr> <tr> <td>6.0-6.99</td><td>3.5ml</td></tr> </table>	Weight of Baby (kg)	Volume of Gel (ml)	1.5-1.99	1ml	2.0-2.99	1.5ml	3.0-3.99	2ml	4.0-4.99	2.5ml	5.0-5.99	3ml	6.0-6.99	3.5ml
Weight of Baby (kg)	Volume of Gel (ml)														
1.5-1.99	1ml														
2.0-2.99	1.5ml														
3.0-3.99	2ml														
4.0-4.99	2.5ml														
5.0-5.99	3ml														
6.0-6.99	3.5ml														
Route of administration	Buccal														

Method of Administration	<ul style="list-style-type: none"> • Draw up correct volume of 40% glucose gel (Glucogel®) using a 2.5 or 5ml oral / enteral syringe • Dry oral mucosa with gauze, gently squirt gel with syringe (no needle) onto the inner cheek and massage gel into the mucosa using latex-free gloves • Offer a feed preferably breast milk, immediately after administering glucose gel • Repeat blood sugar measurement as per guideline
Frequency of administration	Up to 2 doses given at least 30 minutes apart per episode of hypoglycaemia
Duration of treatment	In babies < 48 hours of age
Total treatment quantity	<p>Maximum of 6 doses in 48 hours</p> <ul style="list-style-type: none"> • Up to 6 doses can be given over a 48-hour period but any more than one dose should be discussed with the neonatal team and it is advisable for the baby to be examined before the 3rd dose is administered.
Adverse reactions	<p>None anticipated</p> <p>Document and report any witnessed side effects</p>
Verbal advice for patient/carers	Discussion documented in patient notes
Follow up	As per medical assessment
Arrangements for referral for medical advice	Follow Hypoglycaemia guideline and refer accordingly
Records of administration for audit	Document in Patient Notes

Staff	
Professional qualifications	Registered midwife or doctor
Training	6 months post registration experience.
Signature of individual accepting responsibility and accountability to perform this SOP	Full training log and signature list