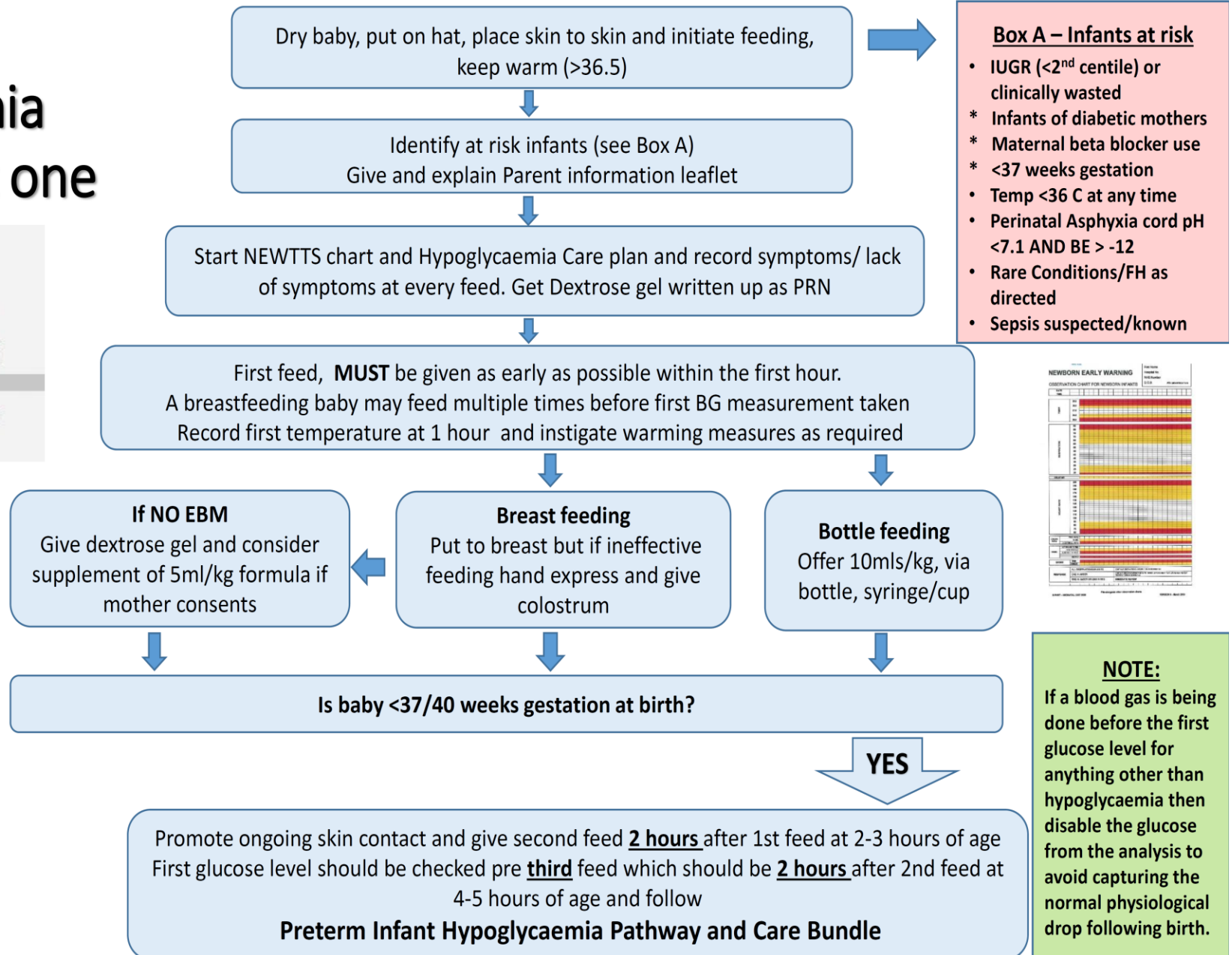
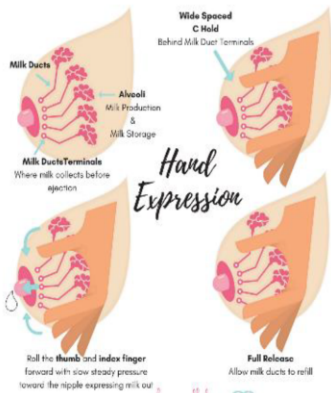


PRETERM

Hypoglycaemia

Pathway Part one



PRETERM Infants Hypoglycaemia Pathway Part Two

Preterm infants have lower reserves than term infants and are more prone to slower establishment of feeds and difficulties with thermoregulation

IF BG ≥ 2.6 mmol/L

Give 2 hourly feeds, support breast feeding. If volume of expressed milk is insufficient, consider topping up. Aim for a minimum of 90mls/kg/24 hours (7.5mls/kg/feed 2 hrly).

Once **3 x BG ≥ 2.6 mmol/L on 2 hourly feeds** stay 2 hourly for 12 hours with no further BG monitoring **if feeding well and asymptomatic** before moving to 3 hourly feeds

After 3 consecutive pre feed BG measurements ≥ 2.6 mmol/L and if the infant is feeding well stop BG monitoring unless there are any abnormal clinical signs. Babies should be observed in hospital for a minimum of 24 hrs from the 1st 3 hourly BG > 2.6 mmol/L and reviewed by the neonatal team on the day of discharge

IF the BG is ≥ 1.4 mmol/L and < 2.6 mmol/L

Give Buccal dextrose gel 200mg/kg (0.5ml/kg)
Give 2 hourly feeds, support breast feeding. If expressing insufficient volumes of colostrum, consider topping up via NGT. Aim for a minimum of 90mls/kg/24hrs (7.5mls/kg/feed 2 hrly)
Inform Neonatal team for review

Do a pre feed BG level

If ≥ 2.6 mmol/L move to top of green pathway

If ≥ 1.4 mmol/L and < 2.6 mmol/L

Repeat Buccal dextrose gel 200mg/kg (0.5ml/kg)
Insert an NG tube and give 90mls/kg/24 hours (7.5mls/kg/per feed) Continue to support breast feeding. **Inform Neonatal team for review, individual plan or possible admission to NICU**

Do a pre feed BG

BG ≥ 2.6 mmol/L

Maintain on plan which achieved BG ≥ 2.6 mmol/L for 3x BG ≥ 2.6 mmol/L. Discuss further plan with neonatal team

3rd BG ≥ 1.4 mmol/L and < 2.6 mmol/L

Move to red pathway (right column) for urgent review and admission

IF ANY OF BELOW

- **Symptomatic at any time**
- **3 BG levels < 2.6 mmol/L in 1st 48 hours**
- **BG level < 1.4 mmol/L at any time**

Treat as a medical emergency
Give buccal dextrose 200mg/kg
Inform Neonatal team immediately and admit to NICU

Signs of Symptomatic hypoglycaemia

- * Lethargy
- * Abnormal feeding behaviour especially after a period of feeding well
- * High pitched cry
- * Altered level of consciousness.
- * Hypotonia
- * Seizures
- * Hypothermia ($< 36.0^{\circ}\text{C}$)
- * Cyanosis
- * Apnoea

Hypoglycaemia Care Plan for Babies at risk of Hypoglycaemia following delivery

Ensure NEWTTTS chart is completed for each assessment including TONE, COLOUR, RESPIRATORY RATE, HEART RATE, RESPONSIVENESS, TEMPERATURE

RISK FACTORS FOR HYPOGLYCAEMIA - PLEASE tick all that apply									
IUGR (<2 nd centile)									
Infant of IDDM or GDM									
BW>98 th centile/macrosomic (in baby of IDDM/GDM mother)									
Maternal betablockers in 3 rd trimester or time of delivery									
Preterm (<37 weeks gestation)									
Preterm (<36 weeks gestation)									
Baby with hypothermia (<36 degrees at any time)									
Perinatal asphyxia (Cord pH <7.1 and BE>-12)									
Baby with suspected/known sepsis									
Other Risk Factors – genetic or FH									

Addressograph

Date and Time of Birth

Feeding and BG monitoring										
Date	Route of feeding NGT/Bottle/Breast	Duration of feed	Type of milk	Volume	Vomit?	PU	BO	Blood Glucose	Signed	
Time										
01										
02										
03										
04										
05										
06										
07										
08										
09										
10										
11										
12										
13										
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16										
17										
18										
19										
20										
21										
22										
23										
24										

Neonatal Early Warning Tracking and Trigger Score Chart (NEWTTS)

Addressograph

Score	0	1	2	3
Tone	Normal			Stiff/Floppy
Colour	Pink			Blue/Grey/White
Conscious level	Alert			Unrousable/Unconscious
Grunting	Absent	Present		
Recession	Absent	Present		
Nasal Flaring	Absent	Present		

Note the scores from the box above in the columns below

White = Score 0, Yellow = Score 1, Amber = Score 2, Red = Score 3

Date																			
Time																			
Tone score																			
Colour score																			
Conscious level score																			
Grunting score																			
Recession score																			
Nasal Flare score																			
TEMPERATURE (degrees C)	38.5 or above																		
	38 - 38.4																		
	37.5 - 37.9																		
	37 - 37.4																		
	36.5 - 36.9																		
	36 - 36.4																		
	<36																		
Temperature Score																			
HEART RATE (Beats/minute)	180 or above																		
	170 to 179																		
	160 to 169																		
	140 to 159																		
	120 to 139																		
	100 to 119																		
	90 to 99																		
	80 to 89																		
	<80																		
Heart Rate Score																			
RESPIRATORY RATE (Breaths/minute)	80 or above																		
	70 to 79																		
	60 to 69																		
	50 to 59																		
	40 to 49																		
	30 to 39																		
	<30																		
Respiratory Rate Score																			
Total NEWTTS Score																			
Initials																			

Buccal dextrose gel administration

Inclusion Criteria

- Buccal Glucose must be used in conjunction with a feeding plan
- Infants >34+6 gestation and younger than 48 hours after birth
- ALL babies symptomatic of hypoglycaemia with BG <2.6mmol/L whilst arranging urgent review and admission as an emergency

PRETERM Infants (35-36+6 weeks gestation)

- 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

Exclusion Criteria

- Babies <35 weeks gestation
- Babies >48 hours of age

Dose

200mg/kg (0.5mls/kg) of 40% dextrose gel

In the event that Dextrose Gel has not been prescribed at birth and a dose is required, it may be given by the midwife as per the SOP so that the dose is not delayed in a hypoglycaemia baby. Use the chart below to determine the dose needed and inform neonatal team so that it can be prescribed on the medication chart.

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

Administration

Draw up using a 2.5 or 5ml oral enteral syringe

Dry oral mucosa gently with a gauze swab and gently squirt with syringe into the inner cheek and gently massage using latex free gloves

Offer a feed (preferably breast milk) immediately after. Baby can also feed whilst dextrose gel is being drawn up

More than three doses should be discussed with the neonatal team

Up to six doses can be given on the postnatal ward

Caveat

If given as a temporising measure for symptoms of hypoglycaemia the baby must be admitted to the neonatal unit even if when seen by the paediatrician / neonatologist the symptoms of hypoglycaemia have resolved.

