Appendix 2: Neonatal hypoglycaemia

Management of the 'at risk' or hypoglycaemic infant on enteral feeds

At risk newborns admittable to PNW (with paeds input)

- Well controlled maternal diabetes
- Maternal use of beta-blockers
- Preterm (<37/40)
- LBW (< 2500g)
- Large for gestational age (>90th centile)
- Potential sepsis (GBS)
- Hypothermia

Feed all 'at risk' infants within 1 hour of birth and continue demand feeds with strict 3/24 limits.

- Breastfeed and supplement with available EBM
- If formula fed – 30 – 60mL/kg/d

Check BGL

- at 30 min of age if in SCN
- at 2hrs of age if on PNW
- at any time if clinical signs of hypoglycaemia
- **Perform TBG if BGL <2.6**

Prior to feeds, check and document

- Level of consciousness
- Tone
- Temperature, RR, HR
- Colour

TBG < 1.5 mmol/L or < 2.6 mmol/L and clinically symptomatic

- Discuss with Paediatrician/ Registrar, admit SCN
- Consider glucose gel (0.5 mL/kg of 40% Glucose gek while awaiting IV insertion
- Insert IV
- 2mL/kg 10% dextrose bolus
- 10% dextrose infusion at 60mL/kg/day
- Consider IM glucagon (adequate fat stores, difficult IV access)
- Repeat TBG in 30min

TBG < 1.5 mmol/L OR <2.6mmol/L and clinically symptomatic

- Repeat 2mL/kg 10% dextrose bolus
- Increase 10% dextrose infusion to 90mL/kg/day. May further increase to max 120mL/kg/d, unless fluid restriction indicated
- Alternatively: increase glucose concentration to 12.5% (peripheral IV) or 15% prn (central line only)
- – liaise with PIPER neonatal
- Consider glucagon (0.02mg/kg)
- Next TBG in 30min
- Calculate glucose requirement in mg/kg/min
- Consider hypoglycaemia bloods with severe and persistent hypoglycaemia (usually > 48h)

TBG 1.5mmol – 2.5 mmol/L and clinically asymptomatic

- Massage 0.5mL/kg 40% glucose gel* into buccal mucosa (BF and Formula Fed babies) AND
- Breastfeed and supplement with available EBM if effectively BF
- If **Not Effectively** BF – supplement with 30ml/kg EBM/Formula
- If formula fed baby feed 60mL/kg
- TBG 30 mins after completion of feed (MAX one hour after previous TBG)

TBG 1.5mmol/L - 2.5 mmol/L and clinically asymptomatic

Repeat glucose Gel AND

- Feed EBM/Formula
  - **TBG >/=2.0mmol/L -30mL/kg/d**
  - **TBG <2.0 mmol/L – 60mL/kg/d**
- **TBG MAX** one hour after previous TBG and notify paediatric medical staff if <2.6

- Continue a.c TBG & 2-3/24 feeds
- Supplement BF's with 30 mL/kg/day EBM/formula (if not BF effectively – 60 mL/kg/day until 3 consecutive TBG>/= 2.6
- Formula fed baby – 90mL/kg/day
- Consider continuous NGT feed or IV dextrose.
- After three consecutive TBGs>/= 2.6 mmol/L, gradually wean IV or phase out supplementary feeds over 24 hours, as long as TBGs are stable – continu AC BGL/TBG whilst weaning

BGL/TBG >/= 2.6 mmol/L

- Continue demand feeds with 3/24 limits
- Continue A.C BGL/TBG until three consecutive >/= 2.6 mmol/L then cease**
- Recommence BGL/TBG if change in clinical condition eg: poor feeding

If other significant risk factors for hypoglycaemia **and 3 x consecutive BGL's <3mmol/L paediatric review required prior to ceasing

*2 doses of Glucose Gel can be nurse initiated on drug chart

Medical team can order a further 4 doses (max total of 6 doses) in the first 48 hours of life.

If baby requires NGT/IV Dextrose to maintain TBG following paediatric review, SCN admission is required