CARE OF THE NEWBORN AT DELIVERY

INTRODUCTION
During the first 24 hr of life, newborn infants are at risk of developing hypothermia or hypoglycaemia.

DEFINITIONS
Hypothermia
- Temperature <36.4°C

Hypoglycaemia
- Lower than normal blood glucose <2.6 mmol/L

INTRAPARTUM PREPARATION
- Identify risk factors that may affect immediate care and devise management plan
- Ensure delivery room warm
- Check resuscitation equipment
- Pre-warm towels
- Summon multidisciplinary team members necessary for delivery and inform of risk factors

IMMEDIATE CARE
At delivery
- Dry with warm towel and cover to prevent heat loss
- Assess wellbeing and, if necessary, resuscitate – see Neonatal resuscitation guideline
- Assess Apgar scores at 1, 5 and 10 min. Document in intrapartum records
- If baby delivered in poor condition or risk factors identified during intrapartum period:
  - double clamp cord and take cord blood for paired cord samples – see Umbilical cord sampling guideline
  - inform neonatal team of pH level <7
- Encourage skin-to-skin contact with baby for at least 1 hour
- Avoid performing routine postnatal procedures during first hour after birth unless requested by mother or treatment necessary for wellbeing of baby
- Identify babies at increased risk of hypothermia (<37 weeks or small for dates) and hypoglycaemia (<37 weeks or <2.5 kg, infants of diabetic mothers)

Registration and identification
- Register and identify baby and mother as soon as possible. See Registration and identification section

THERMOREGULATION AND MANAGEMENT

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<th>Baby’s temperature in normal room environment should be 37°C</th>
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- Encourage uninterrupted skin-to-skin contact with mother (or partner if appropriate)
- document offer and whether accepted by mother in intrapartum record. If declined or not done, note reasons
- Check baby’s initial axillary temperature using digital thermometer while cradled by mother/partner (ideally 1–2 hr following birth). Record in intrapartum record
- If temperature ≥36.4°C, do not recheck axilla temperature unless:
  - specific risk factors e.g. small for dates, preterm, maternal pyrexia during labour, group B streptococcus (GBS), pre-labour spontaneous rupture of membranes (PROM) – see Group B streptococcus guideline and Pre-labour rupture of membranes (PROM) guideline

  - baby unwell
- Use digital thermometer and record subsequent temperature checks in postnatal record

Hypothermia
- Although babies are able to maintain stable body temperature, their ability to stay warm may be overwhelmed by extremes of environmental temperatures and influenced by gestational age
- A newborn is more likely to develop hypothermia because of large surface area per unit of body weight
Close observation by healthcare providers can often prevent neonatal hypothermia

Temperature <36.4°C in an otherwise well baby
- Apply hat to prevent further heat loss
- Encourage continued skin-to-skin contact with covering blanket
- Initiate early feeding
- Observe for general wellbeing
- Recheck temperature within 1 hour
- If temperature remains <36.4°C, consider heated cot and further investigations – follow local protocol

Temperature >38°C

Temperature >38°C is abnormal and requires urgent attention.
Notify neonatology team who will undertake full assessment, including physical examination

- If baby appears unwell, or not maintaining own temperature, refer to neonatologist
- If problems identified, continue to observe baby until resolved. Document all management in postnatal records including discussions with parents

HYPOGLYCAEMIA
- Unless unwell, babies do not become hypoglycaemic even if feeding is delayed
- Keep warm and encourage to feed as soon as possible. They will suck well, settle between feeds and will not require monitoring – see Staffordshire, Shropshire & Black Country Newborn Network Hypoglycaemia guideline (if used locally)

Symptoms and signs
- Signs of hypoglycaemia may require further investigation including possible admission to neonatal unit
- Blood glucose <2.6 mmol/L and any of the following symptoms:
  - apnoeic/cyanotic episodes
  - irritability
  - hypotonia
  - poor responsiveness
  - seizures

Management
- See Staffordshire, Shropshire & Black Country Newborn Network Hypoglycaemia guideline (if used locally)

INITIAL CARE AND FIRST EXAMINATION BY MIDWIFE

First hour of birth
- If baby appears unwell or has symptoms of hypoglycaemia, attempt to feed and refer to neonatology team
- If problems identified, continue to observe until resolved and document management in postnatal record – including discussions with parents
- Once skin-to-skin contact ceased, further assess newborn. Include:
  - birth weight
  - head circumference
  - initial examination
- Document all findings and discussions in intrapartum record

EXAMINATION
- To identify major physical abnormalities/problems

Consent and preparation
- Inform parents and obtain consent
- Keep baby warm and examine in quiet environment – ideally with parents present

Procedure

Skin
Care of the newborn at delivery 2013–15

- Hydration
- Rashes: including erythema toxicum, milia, miliaria, staphylococcal skin infection, candida
- Colour: pink/cyanosis/jaundice/pallor/plethora
- Acrocyanosis
- Cutis marmorata
- Bruises: traumatic lesions, petechiae

**Head**
- Palpate skull for:
  - sutures and fontanelle
  - excessive moulding or tension of fontanelle

**Eyes**
- Open gently
- Confirm presence
- Exclude subconjunctival haemorrhage

**Ears**
- Canal patency
- Position in relation to level of eyes
- tags or pits

**Nose**
- Patent nares
- Accessory skin tags

**Mouth**
- Use torch to check:
  - palate intact
  - signs of ‘tongue-tie’ (defined by NICE as an inability to extend the tongue beyond tip of lower incisors)
  - presence of any teeth

**Neck**
- Run fingers down neck towards trunk to check for abnormal swelling or webbing

**Arms and legs**
- Extend and check for:
  - position, including talipes and symmetry of movement
  - swelling and bruising
  - presence/absence of digits and webbing

**Hands**
- Palmar creases – may indicate congenital abnormality
- Fingers – extra or absent digits and webbing

**Legs**
- Extend to check for free movement and muscle tone
- Exclude trauma during delivery e.g. fractures, bruising

**Back**
- Place baby on his/her side or abdomen
- Run fingers downwards along spine to exclude spina bifida or curvature

**Chest**
- With baby supine, check presence of nipples and normal chest movement
- look for abnormal breathing e.g. flaring of nostrils, sub or intercostal recession, grunting, raised respiratory rate. If present, seek neonatal review

**Anus**
- Presence and normality of appearance and position
**External genitalia** (to determine sex)

**Male**
- Gently examine scrotum with thumb and forefinger. Check for descended testes and note any hydrocele
- Penis – check position of urethra and exclude hypospadias

**Female**
- Separate labia to confirm presence of vaginal and urethral orifices
- Examine perineum to detect sinuses

**If evidence of ambiguous genitalia, avoid gender assignment before expert evaluation to avoid confirmation of wrong sex.**

*Ask consultant neonatologist to discuss with parents as soon as possible. Always use the term ‘baby’ and avoid using ‘he’, ‘she’ or, most importantly, ‘it’.*

**If home delivery, midwife will arrange full neonatal examination**

**Abnormalities**
- If baby unwell e.g. respiratory distress or has a major abnormality e.g. spina bifida, inform neonatal team immediately
- Note other minor abnormalities and inform neonatal team next working day for prompt referral to appropriate clinician e.g. medical, surgical, orthopaedic etc
- If abnormalities (or deviations from the norm) detected, inform parents and record findings and discussion in intrapartum record
- If in doubt, discuss with delivery suite co-ordinator immediately
- Record congenital abnormalities

**VITAMIN K**

**Prophylaxis**
- Neonates are relatively deficient in vitamin K (phytomenadione) and those who do not receive supplements are at risk of bleeding (vitamin K deficient bleeding, formerly known as haemorrhagic disease of the newborn) – see Staffordshire, Shropshire & Black Country Newborn Network Vitamin K guideline (if used locally)
- All babies should be given vitamin K with parental consent
- Document consent
- Vitamin K, 1 mg IM as a single dose (for babies weighing >2.5 kg)
- Avoid IV administration for prophylaxis as it does not provide the same sustained protection as vitamin K IM
- Give in accordance with manufacturer’s instructions in order to ensure clinical effectiveness
- If parents decline IM route, offer oral vitamin K as second line option (safety fears of parenteral vitamin K appear to be unfounded)
- If parents refuse prophylaxis, discuss rationale for vitamin K ensuring parents have adequate information. Document discussion in maternal healthcare record
- Babies who are exclusively breast fed will require additional oral doses after discharge from hospital
- See also Staffordshire, Shropshire & Black Country Newborn Network Vitamin K guideline (if used locally)

**REGISTRATION AND IDENTIFICATION**

**Registration**
- Register birth – follow local birth registration procedure

**Identification**
- For the purposes of this guideline, the term ‘wristband’ will cover wristbands and any other form of identity band
- If wristbands produced by a non-regulated person (e.g. maternity care assistant), they must be counter-checked by a registered professional
- To reduce risk of mis-labelling, do not prepare wristbands before delivery
- If used locally, apply security tag to baby as soon as possible

**Before applying wristbands**
- Check information on wristbands with mother and/or her birth partner
Mother
- Mother’s wristband must contain the following information:
  - last name
  - first name
  - date of birth
  - NHS number (if not available, use local hospital number until NHS number available)
  - allergy information – according to local practice

Baby
- As soon as possible after delivery secure two wristbands to baby. These must contain the following information:
  - mother’s last name
  - baby’s date of birth
  - time of birth
  - baby’s NHS number (if not available, use local hospital number until NHS number available)
  - if applicable, twin/triplet I/II/III
- Wristbands may cause damage to premature baby’s skin – ensure an alternative method of identification is used
- Electronic security tag (if used locally)

Transferring baby
- Before transfer to ward, neonatal intensive care unit (NICU) or other specialist unit, ensure baby has correct identification
- When baby being transferred home, mother and midwife check both identification bracelets

Checking wristbands
- Check daily
- ensure bands in situ as per local practice

Detached wristband
- Apply new wristband
- If both wristbands lost:
  - inform midwife in charge of shift
  - check wristbands of all other babies on ward before replacing
  - complete incident report
- If two or more babies do not have wristband, follow local practice for identification