

GOLDEN HOUR

Preterm babies <28 weeks' gestation

INTRODUCTION

The care preterm babies receive within the first few hours and days has a significant impact on their long-term outcomes. The CESDI Project 27–28 study highlighted the importance of good early care for preterm babies with particular reference to effective resuscitation (see **Resuscitation** guideline)

AIM

To stabilise baby and perform all procedures required within the first hour **after** birth

BEFORE DELIVERY

Nurses	Doctors/ANNPs
<ul style="list-style-type: none"> • Identify nurse responsible for admission and redistribute existing babies • Ensure incubator set up and pre-warmed with humidity set at maximum • Check monitor and appropriate connections • Set oxygen saturation targets to 90–94% by setting alarm limits to 90% and 96% • Ensure ventilator and Neopuff™ plugged in and checked • Ensure appropriate size face masks available • Prepare suction and catheters • Ensure transport incubator pre-warmed and cylinders full • Ensure endotracheal tube (ETT) sizes 2.5 and 3.0 are available • Set up trolley for umbilical arterial catheter (UAC) and umbilical venous catheter (UVC) beside incubator • Prepare infusion fluids for UAC and UVC • Take resuscitation bag and saturation monitor to delivery 	<ul style="list-style-type: none"> • Registrar/experienced ANNP is responsible for early care of babies <28 weeks' gestation • counsel parents appropriate to gestation • <27 weeks, discuss delivery with consultant • Prescribe infusions for UAC and UVC • Check resuscitaire in delivery suite • ensure overhead heater switched on and set to maximum • set peak inspiratory pressure (PIP) at 25 cm H₂O and FiO₂ at 0.30 • check saturation monitor and probe available • ECG monitor and leads (if available) • Prepare plastic bag

AFTER DELIVERY

Nurses	Doctors/ANNPs
<ul style="list-style-type: none"> • Keep baby warm with plastic bag and hat • Assist with resuscitation • Accurate time-keeping including resuscitation and procedures • Attach oxygen saturation probe to right hand • Do not attach ECG leads <26 weeks' gestation. Only use if 26–27 weeks or if concern with critical cardiac arrhythmia • Assist with ETT fixation • Pre-warm surfactant and prepare surfactant administration equipment • Set up transport incubator (if used locally) and transfer baby to it • Ensure baby labels in place before transport • Ensure midwives have taken cord gases • Transfer baby to NNU 	<ul style="list-style-type: none"> • Competent practitioner or tier 2 staff to attend • Perform optimal cord clamping, delaying clamping by 1 min, ensuring baby kept warm • Only cut cord before 1 min if baby requires immediate resuscitation, which cannot be provided with cord intact • Place baby in plastic bag • Use warmed humidified gases and thermal mattress as required • Cover baby's head with appropriate size warmed hat • Assess colour, tone, heart rate and breathing • If baby breathing regularly, commence CPAP at 5–6 cm H₂O • If baby not breathing regularly, follow resuscitation algorithm as per NLS guidance • See Resuscitation guideline • If continued IPPV necessary, intubate • Consider early surfactant on labour ward, ensure appropriate ETT position and fix securely before administering. See Surfactant replacement therapy – including less invasive surfactant administration (LISA) technique guideline • Review baby before transfer to NNU (some units use transport incubator): <ul style="list-style-type: none"> • air entry • colour • heart rate • saturation • Complete joint resuscitation record • Show baby to parents • Senior member of staff to talk briefly to parents • Transfer baby to NNU

FIRST HOUR FROM BIRTH

Nurses	Doctors/ANNPs
<ul style="list-style-type: none"> • Aim for at least 1:1 nursing care for first hour • Transfer to incubator in plastic bag • Weigh baby in plastic bag • Leave baby in plastic bag until incubator reaches adequate humidity • Attach baby to ventilator or non-invasive support equipment and reassess ABC • Monitor heart rate and saturation • Record blood pressure + baseline observations • Do not use ECG leads on babies <26 weeks' gestation • Measure axillary temperature on arrival • Insert nasogastric tube (NGT) • Assist doctor/ANNP with lines • Give vitamin K • Give first dose of antibiotics • Commence prescribed infusions – do not wait for X-ray confirmation of umbilical lines provided they bleed back following insertion • Take photograph for parents • Ensure parents have access to information and support for early expressing of breast milk (aim for ≤ 2 hr of birth) 	<ul style="list-style-type: none"> • Reassess ABC • Split tasks between doctors/ANNPs Doctor/ANNP A • Prescribe weight-dependent drugs and infusions, and vitamin K • Prepare blood test forms and blood bottles • Start admission notes (BadgerNet) Doctor/ANNP B • If not ventilated, check respiratory effort on CPAP • Check ETT position clinically and administer surfactant if not previously given on labour ward • Check ventilation – review tidal volume and chest movement • Commence with tidal volume of 5 mL/kg <ul style="list-style-type: none"> • targeted tidal volume ventilation should be commenced • maximum PIP set appropriately and reviewed • If not oxygenating/ventilating, consider increasing tidal volumes <ul style="list-style-type: none"> • if tidal volume >5 mL/kg or vigorous chest movement, reduce tidal volume target without waiting for first gas • check saturation and adjust FiO₂ to keep saturation 91–95% • Insert UAC and UVC through hole in plastic bag <ul style="list-style-type: none"> • commence infusions as soon as line secured • give IV antibiotics • Take blood for: <ul style="list-style-type: none"> • FBC • group and DCT • blood culture • blood glucose • pre-transfusion bloodspot • arterial gas • Defer peripheral IV cannula insertion unless unable to gain umbilical access • Once lines inserted, request X-rays • Document <ul style="list-style-type: none"> • ETT position • NGT length • UAC and UVC positions at time X-ray taken • Document X-ray review in notes • Update parents and document in notes

Once baby set up – minimise handling
Hands off – Eyes on