

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 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 91–95% by setting alarm limits to 89% 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<ul style="list-style-type: none">• counsel parents appropriate to gestation• <27 weeks, discuss delivery with consultant• Prescribe infusions for UAC and UVC using the neonatal calculator• Check resuscitaire in delivery suite<ul style="list-style-type: none">• ensure overhead heater switched on and set to maximum• set peak inspiratory pressure (PIP) at 20 cm H₂O and FiO₂ at 0.21• 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, ANNP or middle grade doctor to attend • Aim for delayed clamping of cord for 1 min, keeping baby warm • If baby compromised, cut cord immediately and take baby to resuscitaire • 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, give 5 inflation breaths at 20–25 cm H₂O using T-piece and face mask <ul style="list-style-type: none"> • monitor response: check heart rate, colour and respiratory effort • if baby does not start to breathe (but chest moving with inflation breaths) give ventilation breaths with pressure of 20/5 and rate of 40–60/min • if heart rate not >100 bpm or falls, observe chest movement and if poor, increase pressures to 25/5 • observe chest movement throughout and consider reducing inspiratory pressure if necessary (e.g. to 16–18) • when heart rate >100 bpm or chest movement seen, check saturation monitor and adjust FiO₂ aiming to bring saturations close to NLS guidance • If continued IPPV necessary, intubate • If unit policy is to give surfactant on labour ward, ensure appropriate ETT position and fix securely before administering surfactant • Review baby before transfer to NNU): <ul style="list-style-type: none"> • air entry • colour • heart rate • saturation • Complete joint resuscitation record and obtain signature from maternity team • 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 • Take photograph for parents 	<ul style="list-style-type: none"> • Reassess ABC • Split tasks between doctors/ANNPs <p>Doctor/ANNP A</p> <ul style="list-style-type: none"> • Prescribe weight-dependent drugs and infusions, and vitamin K using the neonatal calculator for infusions • Prepare blood test forms and blood bottles • Start admission notes (BadgerNet) <p>Doctor/ANNP B</p> <ul style="list-style-type: none"> • 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 • targeted tidal volume ventilation should be commenced • maximum PIP set appropriately and reviewed • If not oxygenating/ventilating, consider increasing tidal volumes and review PIP • if tidal volume >5 mL/kg or vigorous chest movement, reduce PIP or tidal volume target without waiting for first gas • check saturation and adjust FiO₂ to keep saturation 90–94% • Insert UAC and UVC through hole in plastic bag • 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 bloodspots • 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 • Write X-ray report in BadgerNet notes • Update parents and document on BadgerNet

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