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
• 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	• 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 using the neonatal calculator • Check resuscitaire in delivery suite • ensure overhead heater switched on and set to maximum • set peak inspiratory pressure (PIP) at 20 cm H_2O and FiO_2 at 0.21 • check saturation monitor and probe available • ECG monitor and leads (if available) • Prepare plastic bag

AFTER DELIVERY

Nurses	Doctors/ANNPs
• 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	• 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 H_2O • If baby not breathing regularly, give 5 inflation breaths at 20–25 cm H_2O using T-piece and face mask ◦ 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 FiO_2 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): ◦ 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
• 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	• Reassess ABC • Split tasks between doctors/ANNPs **Doctor/ANNP A** • 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**) **Doctor/ANNP B** • 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 FiO_2 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: ◦ 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 ◦ 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