Active management of the extremely preterm newborn (22+0 to 24+6 weeks’ gestation)

**TERTIARY UNIT**

**Before Birth**
- Mobilise team:
  - Consultant Neonatologist
  - Team of 3–4 experienced medical and nursing staff

**Non-Tertiary Unit**

**Urgent PIPER referral 1300 137 650**

**Equipment List**

**Mobilise local team**
- Consultant Paediatrician/GP/Senior Clinician
- Team of 3–4 experienced medical and nursing staff
- +/- Other specialties (anaesthetics)

**CHECK PREPARED EQUIPMENT**

**Birth**

- Defer cord clamping
- Provide stimulation if not breathing
- Reassess at 30 seconds

**At 30 seconds:**
- HR >100?
- Established breathing or crying?

**At 1 minute:**
- HR >100?
- Established breathing or crying?

**At 1 minute 30 seconds:**
- HR >100?
- Established breathing or crying?

**At 2 minutes:**
- HR >100?
- Established breathing or crying?

**At birth:**
- HR >100?

**If HR <60 after 30 seconds of effective IPPV:**
- Repeat steps to optimise IPPV, increase inspiratory pressure if needed
- Commence chest compressions
- Increase O₂ to 100%
- Continue to reassess HR at 60 second intervals but minimise interruptions to IPPV during HR assessment
- Cease chest compressions if HR >60 on reassessment and wean O₂ according to target SpO₂

**If HR >100:**
- Immediate cord clamping then transfer to radiant warmer
- Provide stimulation

**Cord clamping at ≥60 seconds then transfer to radiant warmer**

**Provide CPAP, O₂ 30%**
- Apply pulse oximetry
- Apply ECG leads if available
- Adjust FiO₂ to target saturations
- Reassess every 30 seconds until stable

**Provide IPPV PIP 25, PEEP 5, O₂ 30%**
- Ensure neutral head position
- Suctioning not routinely necessary
- Apply pulse oximetry
- Apply ECG leads if available
- Reassess after 30 seconds

**Provide Adrenaline 1:10,000 solution**

**If no UV/IV access:**
- ET 0.5–1.0mL/kg (50–100 microgram/kg) = 0.5mL

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# Ongoing care*

- Temperature maintenance (incubator or radiant warmer)
- Continue CPAP or PPV
- Consider intubation if:
  - High FiO2 requirement
  - Persistent apnoea
  - Circulatory compromise
- Surfactant for all intubated infants <26 weeks
- IV access
- Check blood glucose & administer IV dextrose
- Caffeine loading dose IV
- Blood culture, IV antibiotics

*Non-tertiary Unit:
- Consult with PIPER at the earliest opportunity.
- PIPER will guide ongoing care if local equipment/expertise to provide the above measures is not available.

## Equipment list

### Temperature maintenance
- Resuscitator with inbuilt heater
- Polyethylene bag or wrap (food grade, heat resistant)
- Warm towels/wraps
- Woollen hat

### Equipment to support breathing
- T-piece device
- Self-inflating bag 250mL
- Face mask: 35mm ideal
- Laerdal round mask size 50mm

### Equipment for gastric decompression
- Size Fg 8 feeding tube & 10mL syringe for aspirating gastric contents

### Equipment for securing lines and tubes
- Duo-Derm™ to protect the skin
- Non-latex adhesive tape – Leukoplast™ and Elastoplast™
- Cotton or silk ties (for ET) and scissors

### Medical gases
- A source of medical air (cylinder or reticulated)
- A source of medical oxygen (cylinder or reticulated)
- Air/oxygen blender (ideal)
- Oxygen flow meter allowing flow up to 10L/min
- Air flow meter allowing a flow up to 10L/min
- Oxygen and air tubing (green argyle)
- Y-connector if no air/oxygen blender is available

### Drugs
- Adrenaline 110,000
- 0.9% sodium chloride
- Access to O-Rh negative blood readily available
- Sterile water for injection

### Equipment to clear the airway
- Suction Catheters Fg 6, 8 & 10
- Suction tubing
- Suction unit set to -100mmHg

### Equipment for intubation
- Laryngoscope with a straight blade size 00
- Endotracheal tubes (ET): Uncuffed, sizes 2.0mm, 2.5mm & 3.0mm
- Endotracheal stylet/introducer (for oral intubation only)
- Colorimetric end-tidal CO2 detector (PediCap™ or similar)

### Equipment for umbilical and peripheral intravenous access
- Umbilical venous catheter (UVC) size 3.5mm
  - (or Fg5 feeding tube if not available)
- Fg 24 intravenous catheter for peripheral access
- Paediatric instrument set (for UVC insertion)
- Three-way tap and extension tubing primed with 0.9% sodium chloride

### Monitoring equipment
- Stethoscope – neonatal size
- Pulse oximeter with neonatal sensor
- Posy to secure sensor
- EGG with small ECG gel electrodes (desirable)
- Clock with a second hand

### Equipment for fluid and drug administration
- Syringes 2mL, 5mL, 10mL, 20mL
- Needles 19g, 23g, 25g and blunt drawing up needles
- 0.9% sodium chloride 10mL ampoules
- 5% and 10% glucose solution

### Resuscitation record sheet