NEONATAL HYPOTENSION

Re-check Blood pressure
Infant not hypotensive
No further action

- **Re-check Blood pressure**
- **Infant still hypotensive**
- **Consider underlying condition**

- **Consider – 10mls/kg 0.9% sodium chloride bolus**

- **Patent DuctusArteriosus? – consider treatment**

- **Pneumothorax? – treat by draining**

- **Sepsis? - culture and treat with antibiotics**

- **Clotting abnormalities? – treat with FFP**

- **Re-check Blood pressure**
- **Infant still hypotensive**

- **Consider starting dopamine at 5 mcg/kg/min and titrate up***

- **Consider adding Start dobutamine at 5 mcg/kg/min and titrate up***

- **If infant still hypotensive despite 20 mcg/kg/min dopamine and 20 mcg/kg/min dobutamine call NICU consultant to discuss further management e.g. hydrocortisone, adrenaline and noradrenaline**

Blood Pressure Levels

- There is no consensus on normal blood pressure levels for preterm infants.

- Many advocate a lower limit of mean arterial blood pressure as being equivalent to Corrected gestational age. Blood pressure charts are also available according to gestational age and birth weight.

- Maintaining a blood pressure of > 60 mmHg in term babies with PPHN is required to prevent right to left shunting.

- Blood pressure should not be considered in isolation but should occur as part of a thorough assessment of cardiovascular status including: (Heart rate, Peripheral perfusion, Capillary refill time, Toe-core temperature difference, Urine output, Acidosis, Lactate).

A variety of drugs can be used to treat hypotension. Dopamine is better than dobutamine at increasing blood pressure although this does not translate into long term outcomes.

- Left ventricular output decreases with dopamine and increases with dobutamine and adrenaline.

- Adrenaline infusions are associated with more short term adverse effects e.g tachycardia, lactic acidosis and hyperglycaemia.

- Hydrocortisone has been shown to be effective in treating refractory hypotension in preterm infants without compromising cardiac function, systemic perfusion, or cerebral and renal blood flow.

- Tissue oxygen delivery depends on haemoglobin and oxygen saturation as well as on cardiac output. Keep the haematocrit over 0.4 (PCV >40) in critically ill infants an umbilical venous catheter (UVC) or percutaneous intravenous long line (LL) should be inserted for inotropic infusions once dopamine or dobutamine infusion > 5 mcg/kg/min

- If infant remains hypotensive despite 20 mcg/kg/min of dopamine and 20 mcg/kg/min dobutamine**speak to neonatal consultant.**

- Consider hydrocortisone or adrenaline infusion only after discussion with consultant.

Check cortisol levels or carry out a short synacthen test prior to starting hydrocortisone