Home monitoring programme - EMERGENCY DEPARTMENT ASSESSMENT

This baby is part of the "Home Monitoring" programme for babies with complex cardiac anatomy with a systemic - pulmonary shunt. Please see discharge letter for cardiac condition and expected physiologic measurements (HR, saturation, weight etc)

Infants with systemic - pulmonary shunts can be very brittle. They may deteriorate rapidly and are prone to sudden collapse. Cardiac function can be severely impaired and inotropes should be started early if they are unwell. Their physiology is dependant on balancing systemic and pulmonary blood flow. Too much blood flow to the lungs will divert blood from the body causing poor perfusion, acidosis and shock. Lack of blood flow to the lungs can occur if there is shunt stenosis (or a respiratory illness develops) causing severe cyanosis.

Red flags for this infant include:

- Resting oxygen saturations > 5% lower than expected range.
  Expected saturations for this infant ……% to……%
- Increased work of breathing
- Weight loss
- Acidosis
- Dehydration

These children will usually need to be admitted to hospital unless they rapidly recover to normal

Especially if:

- The infant is irritable or listless or there is ongoing caregiver concern.
- The infant has a significant viral illness: respiratory or diarrhoea and vomiting (maintaining adequate fluid intake and circulating blood volume is paramount: if an infant has diarrhoea and vomiting - consider withholding diuretics).

Please have a low threshold for:

1. Blood tests: Blood gas (arterial or capillary), FBC, U&E, creatinine and lactate. If there is any metabolic acidosis and/or raised lactate, review the need for further volume resuscitation and inotropes.
2. Discussion early with the local paediatric consultant on call AND paediatric cardiologist on call (Ph: 09 367 0000 Operator - Auckland City Hospital).
3. Obtaining IV Access: IV access can be difficult in these infants particularly if the infant is unwell. Prolonged attempts at IV access may stress the infant and precipitate deterioration. Inexperienced clinicians should not try access if others with greater technical ability are available.

Also Note:

- If intubation is required, get assistance from an intensivist/anaesthetist. In shocked infants, avoid hyperventilation and hyperoxia as this may increase pulmonary blood flow and further reduce systemic blood flow.
- All children admitted via Starship Children's Emergency Department should be reviewed by Paediatric Intensive Care Unit (PICU) within one hour of arrival. Transfer to PICU or the ward should be completed as soon as possible.