Key Points

- Pulse oximetry can detect some critical congenital heart disease that would otherwise be missed on routine examination / antenatal USS.
- The ideal time for oximetry is > 24 hours.
- Babies admitted to SCN should have this performed if >35 weeks GA.
- The probe should be sited on the lower limb.
- 95% and less ≤3 difference between right hand and lower limb is considered normal and a baby can then be discharged as normal.
- Verbal consent should be obtained and the screen documented on the MR410 below discharge check.

Screening Process

- The screening should ideally occur at 24 hours. The oximetry saturation needs to be done on right hand and either lower limb. Take the highest number the trace gets to as the screening number (the probe only needs to only on until a good steady trace is obtained which may take < 1 minute). The baby should not be feeding and should be settled.

Normal ≥95% oxygen saturation
And difference between right hand and lower limb ≤3

- If O₂ saturations 91 – 94% → medical review to consider other causes (mainly sepsis). If well with a normal examination → repeat screening test in 1-2 hours when baby settled.
- If still abnormal after 2 tests → for a senior review (SR or Consultant Neonatologist) and refer to cardiology as necessary.
- If O₂ saturations <90% → for senior review and continuous oximetry monitoring. Other causes need to be excluded (with possible septic work up and IV antibiotics, CXR and assessment for other problems including – upper airway, neurological, polycythaemia, persistent pulmonary hypertension). Studies show up to 50% of babies screening positive have signs of sepsis on further evaluation.²
- If no other cause found echocardiogram to be performed at time dictated by Cardiologist (may be next day but prior to discharge).
Pulse Oximetry Screening to Detect Critical Congenital Heart Disease (CHD)

Documentation

- The outcome of screening should be documented on the neonatal examination form Neonatal History MR410.
- Any abnormal screening should also be documented in the inpatient history with the medical review.
8. Royal North Shore Sydney Hospital guidelines