The UK Pulse Oximetry Screening for Critical Congenital Heart Defects

Pulse Oximetry Screen: Pre and Post Ductual Measurements

Normally between 4-8 hours of age

Negative Screen
- Both readings more than or equal to 95% and difference less than or equal to 2%

Repeat Screen
- Either reading 90% - 94%
- Or difference greater than 2%

- Clinical assessment by health care professional required
- Symptoms identified?
  - Yes
  - URGENT PAEDIATRIC MEDICAL ASSESSMENT REQUIRED
  - No
  - REPEAT SCREEN
    - Perform in 2 hours

Positive Screen
- Either reading less than 90%
- OR Symptomatic

- Either reading 90% - 94%
- Or difference greater than 2%

- Clinical assessment by health care professional required
- Symptoms identified?
  - Yes
  - URGENT PAEDIATRIC MEDICAL ASSESSMENT REQUIRED
  - No
  - REPEAT SCREEN
    - Perform in 2 hours
TIPS FOR A SUCCESSFUL SCREENING

- When using disposable pulse-oximetry sensors, use a new, clean sensor for every newborn. Likewise, when using reusable sensors, be sure to clean the sensor with the recommended cleaning agents between each infant. In addition to increasing the risk of transmitting infection, dirty sensors can decrease the accuracy of the pulse-oximetry reading.²

- Adult pulse-oximetry clips should not be used when obtaining an SpO₂ reading for an infant as this will yield an inaccurate reading.²

- Do not attempt to obtain a reading on the same extremity as an automatic blood-pressure cuff, which impedes normal blood flow.²

- Bilirubin lamps, surgical lights, and other bright or infrared lights can affect the accuracy of the pulse-oximetry reading.²

- Substances with dark pigmentation, such as dried blood, can alter pulse-oximetry readings. Skin color and jaundice, however, will not affect the SpO₂ reading.²

Medtronic has a full offering of pulse oximetry sensors and monitoring platforms which can be used to measure SpO₂ in CCHD patients. Nellcor™ monitors can be used in newborns and low perfused patients. Used with specific sensors claim accuracy down to 60% of SpO₂, are motion tolerant and include the CCHD labelling³.

3. US Secretary of Health and Human Services Recommendation for CCHD screening – September 2011