



Appendix- I

Basic Instruction for starting a Cerebral NIRS Study Using INVOS™ 5100C Cerebral/Somatic Oximeter



Sensor placement

Pre-use Check: Remove the sensor from the package and examine for visual signs of damage. If any signs of damage are observed, select another sensor.

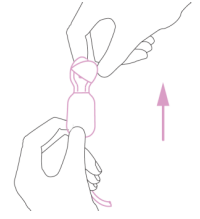
Cerebral Site Selection: Select sensor site on the right or left side of forehead

Patient Prep:

- To achieve optimum adhesion, the patient's skin must be clean and dry. Dry the skin with a gauze pad.
- Can use Cavilon to prep skin

Sensor Placement (Term Infants and Premature Infants 29 weeks or more GA):

- Warm the sensor in your hands or an incubator to ease placement.
- Cut a baby hat to be used as head band as shown in figure
- Holding the cable, peel back the two halves of the white liner from the clear adhesive layer beginning at the center of the sensor pad. Apply to the skin.
- Continue applying the sensor by smoothing it to the skin from the center outward. Ensure edges of the sensor are sealed
- Monitor for surrounding erythema with every care.



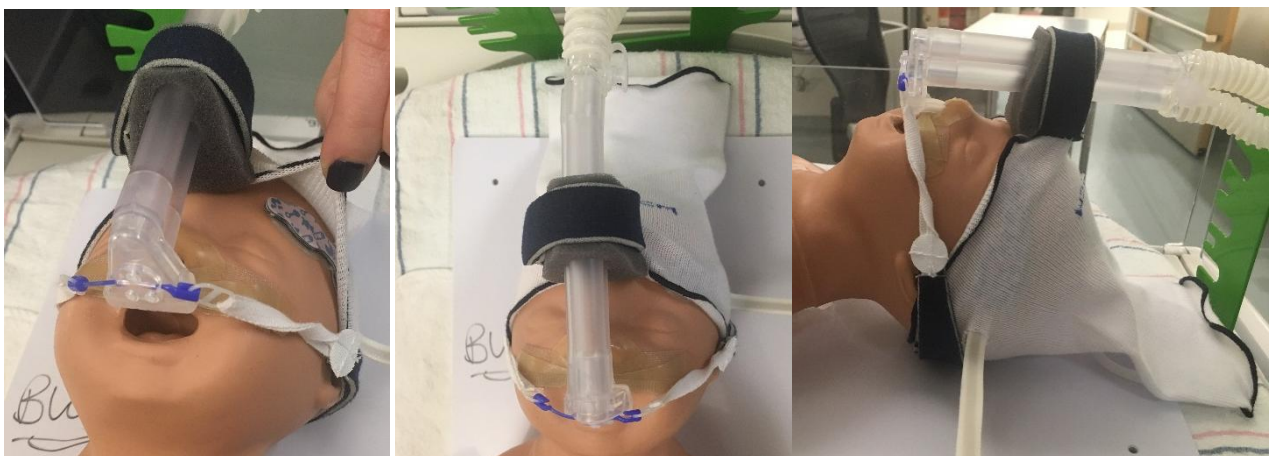
Figures demonstrating

A- Baby in Room air or Intubated



A- Baby on CPAP Should avoid Central CPAP piece. Start almost 2 cm away from midline.

Make a "very tiny" opening in CPAP hat without affecting the hat integrity about 3 cm from blue band



Sensor Placement (Premature Infants < 29 weeks GA):

- Apply the sticky side of Mepitel to the NIRS sticky side. Trim the excess Mepitel.
- The NIRS probe is not sticky at that point and only kept in place by the supporting hat.
- Check skin integrity every care

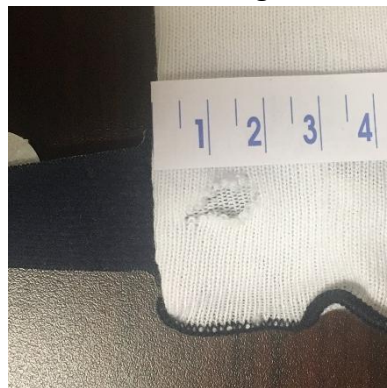


B- Baby in Room air or Intubated

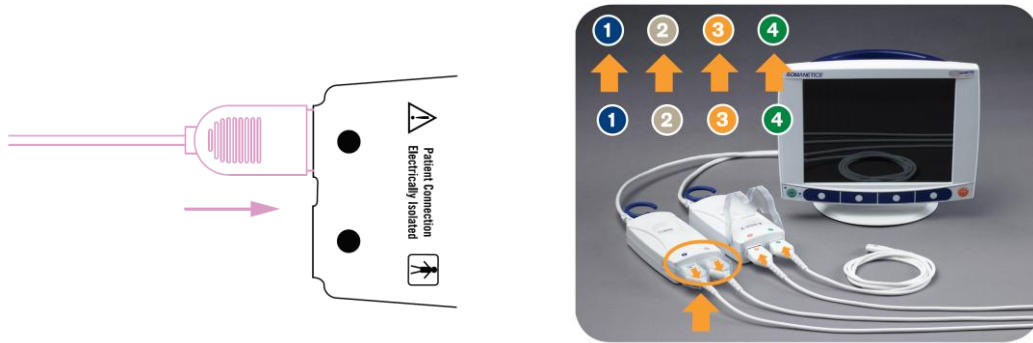


C- Baby on CPAP- Should avoid Central CPAP piece. Start almost 2 cm away from midline.

D- Make a “very tiny” opening in CPAP hat without affecting the hat integrity about 1 cm from blue band



Attach Sensor cable to the cables box: Make sure that the cable goes to socket #1. If doing bilateral monitoring (in very rare occasions), make sure that cable #1 always goes to socket # 1 and cable # 2 goes to socket # 2. Sensor cables can be connected to the box before or after placement. Secure the cables box to a fixed object to avoid strain on the sensor-to-skin interface using strain-relief clips.



Monitoring:

- Turn power ON by selecting the green ON/OFF key. The INVOS™ System performs a 10-second self-test, stopping at the Start Screen.
- Press NEW PATIENT and add patient MRN as ID.
- Monitoring begins displaying the patient's rSO2 values in white.
- When the patient's rSO2 values have been displayed for approximately 1 minute, set a baseline. For all channels, press the BASELINE MENU button followed by pressing SET BASELINE.
- If sensors are removed or peeled back to do so, be sure sensor is properly re-sealed to skin to avoid light entering.

Skin Care

- Skin integrity should be assessed with each care and documented in medical record.
- If single NIRS probe is used, alternate between right to left every 4-6 hours
- The NIRS probe cannot be put directly under the CPAP central head piece to avoid excessive pressure on the skin. Medial end of probe needs to be about 2 cm away from midline



Sensor Removal

- Use care when removing the sensor from the patient. If difficult to remove, use saline or Cavilon swab.