Surgery: Congenital and Pediatric Heart Surgery

“NIRS cerebral/tissue oximetry provides continuous, non-invasive measures that are suitable targets for goal-directed therapy to treat deficiencies in global and regional perfusion and should be standard of care.”

Nancy Ghanayem, Clinical Director, Cardiac Critical Care, and James Tweddell M.D., Department of Cardiothoracic Surgery, Children’s Hospital of Wisconsin

EQUANOX™ Model 7600
Regional Oximeter System
Neonatal/Pediatric Sensor
Model 8004CB Series†

You make key decisions that strive to preserve major organ function … EQUANOX provides you the accurate, reliable and consistent measures of tissue oxygen saturation to assist that decision making.

† 510(k) pending
See the Difference in Your Neonatal and Pediatric Patients

Regional oximetry enables you to alert the surgical team to profound cerebral or other major organ desaturation due to:

- Circulatory insufficiency or lack of oxygen reserves during major cardiac structural corrections or deep hypothermic conditions
- Imbalances in the delivery of oxygen to meet metabolic need in major organ systems during cardiopulmonary bypass
- Decreased cardiac output in post-operative recovery and treatment

The EQUANOX System:

- **Industry-Leading Accuracy**
  Absolute accuracy that aligns to true patient physiology, indicating adequacy of perfusion
- **Consistent and Reliable**
  Rapid, reliable, response to physiological change without signal instability and interruptions from ambient electrical and optical interferences
- **Portable and Versatile**
  Lightweight and durable, with long battery life, allowing ease of continuous monitoring during patient transport within the hospital
- **Optimized for the Patient**
  Unique optical spacing to isolate and target key tissues for the intended population

- As advances in neonatal care increase the survivability of low birth weight patients, organ failure due to hypoxia and hyperoxemia challenges the ability of neonatal teams to ensure long-term quality of life.¹
- Conventional monitoring modalities may not provide comprehensive information on true patient physiology.²
- Regional oximetry is rapidly becoming standard of care in providing real-time, non-invasive measurement of tissue perfusion to alert the clinical team of insufficient oxygen to meet metabolic demand.³ ⁴
- Traditional trending systems often lack the precision needed to make effective clinical decisions.⁵

Additional Reading

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<th>Author</th>
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<td>Tweddell J, et al.</td>
<td><em>Semin Thorac Cardiovasc Surg Pediatr Card Surg Ann</em>, 2010; 13:44-50</td>
<td>NIRS use is increasing in critically ill neonates, and its usefulness goes beyond the ICU to other care departments, and will probably become the future for neonatal neuromonitoring. NIRS detects changes in oxygenation earlier than standard pulse oximetry. NIRS is effective to obtain easy, immediate, and noninvasive measurements of splanchnic rSO2 in infants following congenital heart surgery.</td>
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References:

5. van Bel F, et al; *Neonatology* 2008; 94:237

* Based on 8004CA clinical results