CEREBRAL OXIMETRY: IS IT REALLY A NO BRAINER?

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OPPORTUNITY STATEMENT
- Current Cerebral Oximetry Technology was giving us incorrect readings on patients presenting for Total Joint Repair. Current process presented a potential risk. Surgery cases were being cancelled weekly due to false low saturation readings thereby causing an inconvenience for the patient, surgeon and operating room staff.

OBJECTIVES
- To establish the rationale for using cerebral oximetry in the patient setting
- To determine evaluation and testing process used to evaluate cerebral oximetry devices in the patient setting
- To compare the accuracy of all existing cerebral oximetry technologies and determine which device will best fit the needs and accuracy of practice
- To evaluate the prevalence of regional cerebral oxygen desaturation in patients undergoing shoulder surgery in supine and sitting positions during routine anesthesia management
- To determine data collection plan to determine which cerebral oximetry device provided the least variation and outliers and provided superior correlations during shoulder repair procedures.

WHAT TRIGGERED EVALUATION?
- 45 y/o Caucasian male returns for testing…..

SURGEON QUOTE
"We perform several hundred shoulder surgeries each year in the beach chair position. We utilize the four-channel Nonin cerebral oxygen saturation monitor for each of these cases. In comparison to other devices, we have observed improved efficacy and safety with the four-channel Nonin. All other devices tested have been more erratic, and their numbers are more difficult to interpret with each patient."

— Dr. George McCluskey

RATIONALITY FOR USING CEREBRAL OXIMETRY
- Cerebral hypoxia is the leading cause of neurologic injuries and occurs in many surgical and clinical situations*
- Current standard of care is to maintain certain parameters (BP, CO, PCO2) with normal ranges and assume adequate cerebral perfusion.
- Continues to be a relatively high risk for adverse neurological outcomes associated with surgery. Existing devices and techniques may be inadequate.
- Legal Justification?

CEREBRAL OXIMETRY TEAM PHOTO

DEVICES EVALUATED - NONIN

EQUANOX™ GREATER ACCURACY

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STAFF EVALUATION SCORES

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