INTRA-OPERATIVE MONITORING SERIES

Code No.	Class Title	Occ. Area	Work Area	Prob. Period	Effective Date	Last Action
4104	Intra-Operative Monitoring Specialist	02	446	6 mo.	10/01/13	New
4105	Advanced Intra-Operative Monitoring Specialist	02	446	6 mo.	10/01/13	New
4106	Intra-Operative Monitoring Coordinator	01	446	6 mo.	10/01/13	New

Promotional Line: 371

Series Narrative

The function of the individuals in the Intra-Operative Monitoring (IOM) series is to provide surgeons with information about their patient's nervous system during surgical procedures. This is accomplished by stimulating the nervous system with appropriate stimuli and recording the responses to these stimuli. They passively record signals from the patient's nervous system when a stimulus is not necessary or is iatrogenic. Changes in the patient's responses and/or the presence or absence of responses are promptly conveyed to the surgical team and are interpreted in light of the ongoing surgical procedure.

DESCRIPTION OF LEVELS OF WORK

Level I: Intra-Operative Monitoring Specialist 4104

An employee at this level provides clinical and research support to the Intra-Operative Monitoring service. The employee assists, learns, performs, investigates, develops, researches and implements technologies and procedures to meet the monitoring requirements of surgical patients and maintains an ongoing state of readiness for all accrediting and regulatory bodies.

1. Stimulates, collects, analyzes and records multiple types of electrophysiological activity from the central and/or peripheral nervous system.

2. Performs research directed at developing, reviewing and optimizing procedures for the performance of IOM.

3. Researches and implements the latest procedures and practices in IOM. Performs literature searches of scientific journals for updates concerning development, equipment and techniques used in Intra-Operative physiological monitoring.

4. Schedules IOM cases by maintaining the scheduling log and receiving phone, text, and/or verbal messages from attending and resident surgeons, their departmental schedulers, O.R. personnel, and the EEG/IOM departmental secretary. Assists in the scheduling of vendors when IOM personnel are not available.

5. Assists in the collection, recording, and reporting of IOM cases for monthly statistics.

6. Acquires patient's history and other pertinent data from the patient's chart, EMR, and by directly communicating with the patient and/or the patient's attending and resident physicians and records such data in the IOM record.

7. Establishes a rapport with patients when explaining what the role of IOM is in their surgery and where they will be placing electrodes.

8. Communicates with anesthesia personnel so that appropriate anesthetics and medical devices (i.e. bite-blocks) are administered and are in place.

9. Practices electrical safety relevant to equipment and type of monitoring performed.

10. Practices sterile procedures such as placing a needle and/or corkscrew electrodes on patients' skin, in patients' scalp and in patients' muscles using standard measurement and marking techniques; applies knowledge of anatomy and neurophysiology to the monitoring performed.

11. Identifies the appropriate IOM protocols, techniques, and supplies for surgical cases; discusses the protocols with surgeons and helps to finalize an appropriate IOM plan under the surgeon's direction.

12. Sets-up equipment for the monitoring and assessment of spinal cord and/or peripheral nerves and/or cranial nerves and/or brainstem responses and/or brain cortical responses during surgical procedures.

13. Checks electrode impedance and obtains and reports pre-positioning and/or pre-incision baseline values for risk assessment and the determination of monitoring acuity.

14. Documents the monitoring process (i.e. physiological status, anesthetic adjustments and changes, and communicates significant results and documents the verbal responses of operating room personnel to these communications); documents the patient's waveform description and records and analyzes these results to be reviewed by a physician; generates reports for each case; manages an IOM data archive.

15. Removes and appropriately disposes of electrodes and is responsible for patient clean-up.

16. Maintains, evaluates and procures equipment and supplies.

17. Performs other related duties as assigned.

Level II: Advanced Intra-Operative Monitoring Specialist 4105

An employee at this level collects and analyzes, or oversees the collection and analysis of multiple types of recordings and measurements of the electrical activity of the central and/or peripheral nervous system. The employee provides clinical and research support to the IOM service. The employee assists, learns, performs, investigates, develops, researches, and implements technologies and procedures to meet the monitoring requirements of surgical patients and to maintain an ongoing state of readiness for all accrediting and regulatory bodies.

1. Stimulates, acquires, analyzes and records multiple types of electrophysiological activity from the central and/or peripheral nervous system.

2. Trains support staff.

3. Collects, records, and reports IOM cases for monthly statistics.

4. Establishes the correct location/site, type of surgery and placement of equipment in the operating room based on surgical staff and physical room requirements.

5. Monitors neurophysiologic central/peripheral nervous system function throughout the operative procedure, as well as communicating with the surgeon(s), overseeing neurophysiologist(s), training specialist(s), the anesthesia team, and nursing staff, as necessary.

6. Creates and/or modifies monitoring protocols pre-surgery and/or intra-operatively using their own discretion and judgment based upon the needs of the surgeon(s) and/or the needs of the intra-operative specialist and/or the overseeing neurophysiologist to maximize patient safety.

7. Assists higher-level personnel with data archiving.

8. Assists in the evaluation of vendor performance.

9. Performs other related duties as assigned.

10. Performs duties at lower-level of this series, as required.

Level III: Intra-Operative Monitoring Coordinator 4106

An employee at this level supervises the collection and analysis of multiple types of recordings and measurements of the electrical activity of the central and/or peripheral nervous system. This employee provides clinical and research support to the IOM service. The employee assists, learns, performs, investigates, develops, and implements technologies and procedures to meet the monitoring requirements of surgical patients. These employees must also maintain an ongoing state of readiness for all accrediting and regulatory bodies. Manages the data archival and retrieval of physician, patient and legal requests; manages the acquisition, use, and evaluation of outside vendors.

1. Trains and oversees support staff.

2. Performs various administrative duties of the IOM department including sick time and vacation reporting, vendor usage, cost tracking, and supply usage, etc.

3. Performs competency assessments on staff and assigns staff to their daily surgical cases.

4. Assists in budget preparation.

5. Assists in the preparation of exhibits for medical-legal cases.

6. Acts as the point person for Information Technology requirements.

7. Oversees all surgical cases and interacts with the neurophysiologist(s) overseeing each case.

8. Completes and submits the IOM case report for monthly statistical analysis.

9. Monitors and reports on quality assurance and quality control measures for the IOM program.

10. Evaluates and reports vendor performance to administrative personnel.

11. Performs research and projects under the guidance of the Director of Neurophysiology.

12. Plans, executes, and implements complex projects that relate to IOM and neurophysiology.

13. Develops lab protocols for pre-operative, intra-operative, and post-operative procedures.

14. Documents a patient's waveform description; records and analyzes results for review by a physician and generates reports for each case.

15. Manages EEG and IOM data archival and retrieval; provides research and responds to data inquiries from physicians, patients, and the legal department.

16. Performs other duties as assigned.

17. Performs duties at the lower-levels of this series, as required.

MINIMUM ACCEPTABLE QUALIFICATIONS FOR ENTRY INTO ALL LEVELS OF SERIES

CREDENTIALS TO BE VERIFIED BY PLACEMENT OFFICER

Level I: Intra-Operative Monitoring Specialist 4104

1. Bachelor's degree in a Biomedical Engineering, Electrical Engineering or a related discipline (i.e. Mathematics, Computer Science, Biology, Physics)

KNOWLEDGE, SKILLS AND ABILITIES (KSAs)

1. Knowledge of Intra-Operative Monitoring studies
2. Knowledge of medical equipment and medical terminology
3. Knowledge of related anatomy and physiology
4. Knowledge of computer software and diagnostic skills
5. Strong verbal and written communication skills
6. Interpersonal skills; a strong team orientation with the ability to develop effective working relationships with faculty, staff and colleagues across disciplines and functional areas
7. Organizational skills
8. Ability to learn and attain a precise and logical decision and judgment framework
9. Ability to interpret policies and procedures and to apply standards consistently
10. Ability to research products and procedures related to the discipline of Intra-Operative Monitoring

Level II: Advanced Intra-Operative Monitoring Technician 4105

1. Bachelor's degree in a Biomedical Engineering, Electrical Engineering or a related discipline (i.e. Mathematics, Computer Science, Biology, Physics)

2. **Three (3) years (36 months)** experience in the performance of Intra-Operative studies such as auditory, visual and somatosensory evoked potentials, spontaneous and evoked electromyography, electroencephalography, and/or motor evoked potentials within a health care facility

*Note: A Master's Degree in a closely related field may be substituted for **one (1) year (12 months)** of experience. A Certification in Neurophysiologic Intra-operative Monitoring (CNIM) may be substituted for **two (2) years (24 months)** of experience.

KNOWLEDGE, SKILLS AND ABILITIES (KSAs)

1. Knowledge of Intra-Operative Monitoring studies
2. Knowledge of medical equipment and medical terminology
3. Knowledge of related anatomy and physiology
4. Knowledge of computer software and diagnostic skills
5. Strong verbal and written communication skills
6. Interpersonal skills; a strong team orientation with the ability to develop effective working relationships with faculty, staff and colleagues across disciplines and functional areas
7. Precise and logical decision and judgment framework
8. Organizational skills
9. Ability to interpret policies and procedures and to apply standards consistently
10. Ability to research products related to the discipline of Intra-Operative Monitoring

Level III: Intra-Operative Monitoring Coordinator 4106

1. Bachelor's degree in a Biomedical Engineering, Electrical Engineering or a related discipline (i.e. Mathematics, Computer Science, Biology, Physics)
2. **Five (5) years (60 months)** of experience in the performance of Intra-Operative studies, advanced Evoked Potentials, or equivalent specialized procedures such as, but not limited to, brainstem evoked potentials, brain function mapping, intracranial grid implantation, transcranial motor evoked potentials, and direct stimulation of neural structures (brain, spinal cord, cranial and peripheral nerves)

Note: A Master's Degree in a closely related field may be substituted for # 1. A PhD. in a closely related field may be substituted for **two (2) years (24 months) of experience.

KNOWLEDGE, SKILLS AND ABILITIES (KSAs)

1. Knowledge of Intra-Operative Monitoring studies
2. Knowledge of medical equipment and medical terminology
3. Knowledge of related anatomy and physiology
4. Knowledge of accepted guidelines and criteria for sterile procedures and infection control
5. Knowledge of alternate montages, protocols, alternate equipment settings and their effects
6. Knowledge of advanced computer software and diagnostic skills
7. Strong verbal and written communication skills

8. Organizational skills

9. Interpersonal, skills; a strong team orientation with the ability to develop effective working relationships with faculty, staff and colleagues across disciplines and functional areas

10. Ability to interpret policies and procedures and to apply standards consistently

11. Ability to research products related to the discipline of Intra-Operative Monitoring