Intraoperative Neurophysiological Monitoring Market Research Report - Global Forecast to 2027

Global Intraoperative Neurophysiological Monitoring Market Trends, Size and Application, By Type (EEG, EMG and Evoked Potential (EP)), Method (Invasive, Non-Invasive and Minimally Invasive), Source (In-house, Outsource and Tele-Health), Procedure (Spinal, Neurovascular, Orthopedic, Otolaryngology Surgery, Urology and others) and Region (North America, Europe, Asia-Pacific and the Middle East & Africa) - Forecast to 2027

Overview

The Global Intraoperative Neurophysiological Monitoring Market is expected to register 8.9% CAGR and is projected to reach USD 3,125.7 Million by 2027. Intraoperative neurophysiologic monitoring (IONM) as the name suggests is a monitoring technique, which refers to a group of procedures used during surgery to monitor neural pathways during high-risk neurosurgical, orthopedic, peripheral nerve, and vascular surgeries. IONM is used in most of the surgical procedures and is directly aimed at reducing the risk of neurological deficits after operations that involve the nervous system. IONM has evolved during the last two decades. The use of IONM offers a possibility to detect injuries before they become so severe that they cause complications after the operation.

Market Dynamics

The factor driving the global intraoperative neurophysiological monitoring market is the increase in the number of surgeries. The intraoperative neurophysiological monitoring industry is experiencing a period of rapid change. The number of patients suffering from cerebrovascular disorders has increased rapidly and has reached an all-time high in the past few years. As IONM is used in most of the surgical procedures such as spinal, orthopedic, cardiovascular, ENT, and genitourinary surgeries, the demand for the IONM services is on the rise. The increase in the number of surgeries is playing an important role in the growth of the global intraoperative neurophysiological monitoring market.

Global Intraoperative Neurophysiological Monitoring Market Size, by Procedure, 2015 (USD Million)
The global intraoperative neurophysiological monitoring market has been segmented into type, procedure, methods, and source.

Based on type, the global market is segmented into electroencephalography, electromyography, and evoked potentials. The electroencephalography segment accounted for the largest market share of the global intraoperative neurophysiological monitoring market. Electroencephalography (EEG) is an electrophysiological monitoring method that involves electroencephalogram (EEG), which is used to evaluate the brain’s spontaneous electrical activity over a period of time. It is typically noninvasive, with the small, flat metal electrodes placed along the scalp; however, invasive electrodes are sometimes used in specific procedures.

Based on procedure, the global market has been segmented into spinal, neurovascular, orthopedic, otolaryngology surgery, urology, and others. The spinal segment accounted for the largest market share of global intraoperative neurophysiological monitoring market, accounting for a market share of 66.6% in 2015. The combined use of somatosensory evoked potentials and motor evoked potentials is of considerable significance in providing an assessment of spinal cord function and offers a most comprehensive way to selectively screen and identify spinal cord injuries.

Based on methods, the global market is segmented into invasive, non-invasive, and minimally invasive. The invasive segment accounted for the largest market share by 61.3% in 2015, and non-invasive is the fastest-growing segment. Minimally invasive method refers to a procedure that limits the size of incisions needed, the use of minimally invasive techniques in IONM is limited.

Based on source, the global market is segmented into in-house, outsourced, and telehealth. The in-house segment accounted for the largest market share of global intraoperative neurophysiological monitoring market share by 59.8% in 2015. Currently, most of the IONM procedures carried out in-house where the hospitals take the responsibility of monitoring the patients throughout their treatment or surgery. However, the trend in the market is now shifting towards outsourced IONM.

Key Players

The major players in the global intraoperative neurophysiological monitoring market are Accurate Monitoring LLC (US), Argos Neuromonitoring LP (US), Cadwell Laboratories Inc. (US), Computational Diagnostics Inc. (Pennsylvania), EMOTIV (California), Inomed Medizintechnik GmbH (Germany), IntraNerve (US), Medtronic (US), Medsurant Holdings (US), Natus Medical Incorporated (US), Neuro Alert (US), NeuroMonitoring Technologies, Inc (US), NeuroSentinel LLC (US), NuVasive(California), Procirca(US), ProPep Surgical(US), SpecialtyCare (US), and Sentient Medical Systems (US).

Some of the key strategies followed by the players operating in the global intraoperative neurophysiological monitoring market are adopting various strategies to expand their business and enhance their market share.

Global Intraoperative Neurophysiological Monitoring Market Share, by Region, 2016 (%)
Regional Analysis

The global intraoperative neurophysiological monitoring market, based on region, is divided into North America, Europe, Asia-Pacific, and the Middle East & Africa.

North America accounted for the largest market share of the global intraoperative neurophysiological monitoring market with a USD 714.5 million revenue in 2015. Intraoperative neurophysiological monitoring techniques have been widely used all over the region. The US has some of the best hospitals in the world with state-of-the-art infrastructure. Most of the hospitals and their neurology departments are well equipped with the equipment that is required for the working of the IONM techniques.

Europe is the second-largest market for intraoperative neurophysiological monitoring services. European countries are now making efforts in promoting the benefits of the intraoperative neurophysiological monitoring services. Patient-friendly healthcare and insurance policies are making a positive impact on people taking medical assistance. The Western Europe region accounted for the largest market share of intraoperative neurophysiological monitoring market in the region.

Asia-Pacific has a limited market for IONM services as compared to North America. Awareness of intraoperative neurophysiological monitoring services is growing worldwide. The region is one of the fastest-growing regions in the intraoperative neurophysiological monitoring market. Japan, China, and India are among the top countries in Asia-Pacific, where the growth of the IONM market is substantial.

The Middle East & Africa is a region where the intraoperative neurophysiological monitoring market is very limited and is expected to continue in the same way. Many African countries still do not have access or have minimal access to essential medical assistance and drugs.

Key Updates

- In July 2015, EMOTIV collaborated with Disney in its initiative of funding into mind control, robotic prosthetics, and virtual pop stars. EMOTIV would be building a headset, which will read brain waves/signals that will ultimately have a possibility of controlling virtual and real objects with our mind.

- In February 2016, Medtronic acquired Bellco, thereby adding life-extending dialysis portfolio to recently formed renal care solutions business.

- In March 2016, Natus Medical Incorporated acquired NeuroQuest. The company believed that the addition of NeuroQuest would further strengthen Global Neurodiagnostic brand as a leading provider in the company’s rapidly growing ambulatory EEG service business.
Global Intraoperative Neurophysiological Monitoring Market, by Type

- Electroencephalography
- Electromyography
- Evoked Potentials

Global Intraoperative Neurophysiological Monitoring Market, by Procedure

- Spinal
- Neurovascular
- Orthopedic
- Otolaryngology Surgery
- Urology

Global Intraoperative Neurophysiological Monitoring Market, by Methods

- In-House
- Outsourced
- Tele-Health

Global Intraoperative Neurophysiological Monitoring Market, by Region

- North America
  - US
  - Canada
- Europe
  - Western Europe
    - Germany
    - UK
    - France
    - Italy
    - Spain
    - Rest of Western Europe
  - Eastern Europe
- Asia-Pacific
  - China
  - Japan
  - India
  - Australia
  - South Korea
  - Rest of Asia
- Middle East & Africa
  - Middle East
  - Africa

Available Additional Customizations

- Regulatory Scenario
- Market Trends
- Pricing Analysis

Intended Audience

- Medical device companies
- Trauma center
- Research and academic institutes
- Government research organizations
- Hospitals and clinics
- Regulatory agencies
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