Global Intracranial Pressure (ICP) Monitoring Market Research Report: Information by Route of Intervention (Intraventricular and Epidural Sensor), Technique (Invasive and Non-Invasive), Application (Traumatic Brain Injury and Subarachnoid Hemorrhage), Device (Intraventricular Catheter and Epidural Sensors), End-User (Hospitals and Clinics, Trauma Centers and others) and Region (Americas, Europe, Asia-Pacific and Middle East & Africa) - Forecast Till 2024

Overview

The Global Intracranial Pressure (ICP) Monitoring Market is expected to register 7.1% CAGR and is projected to reach USD 2,013.9 Million by 2024. Intracranial pressure monitoring devices are designed to measure the pressure within the cranium caused by trauma and accident. It is majorly used in treating traumatic brain injury.

Neurovascular diseases affect the cerebral vascular system and the spinal cord. Neurovascular diseases are inclusive of aneurysms, Dural arteriovenous fistula, Arteriovenous Malformation (AVM angioma), cavernoma, and cerebral hemorrhage. These diseases can be effectively treated by the application of ICP monitoring devices.

Market Dynamics

Increasing prevalence of neurovascular diseases, such as brain aneurysms and Arteriovenous Malformations (AVMs), is likely to propel the global ICP monitoring market. The global burden of neurovascular diseases is increasing. This marks the increase in healthcare expenditures, boosting the demand for therapeutics. Developing countries in Asia-Pacific represent untapped markets in the presence of increasing patient population and the growing healthcare sector. These prevailing conditions are likely to boost the market growth. However, the high cost of ICP monitoring devices along with treatment procedures, is expected to retrain the market growth during the forecast period.

Global Intracranial Pressure (ICP) Monitoring Market Size, by Route of Intervention, 2017 (USD Million)
Segmentation

The global intracranial pressure (ICP) monitoring market has been segmented into route of intervention, technique, application, device, and end user.

By route of intervention, the global market is segmented into intraventricular, epidural sensor, and others. The standard technique of ICP monitoring is to insert the catheter into the ventricle of the brain. The catheter drains the Cerebrospinal Fluid (CSF) as well as monitors the intracranial pressure. Epidural ICP monitoring does not offer accurate results but is less invasive techniques than others.

Based on technique, the global market has been divided into invasive and non-invasive. The invasive segment is further categorized into transcranial doppler ultrasonography, tympanic membrane displacement (TMD) analyzer, optic nerve sheath diameter sonography, fundoscopy (papilledema), and MRI/CT. Invasive techniques require a high level of expertise and have clinically significant risks, including hemorrhage, infection, and probe displacement. Non-invasive tools could circumvent these limitations, allowing detailed investigations and management of elevated intracranial pressure.

Based on application, the global market is further segmented into traumatic brain injury, intracerebral hemorrhage, meningitis, subarachnoid hemorrhage, and others. Traumatic brain injury is the most common cause of death and disability in the Americas. According to the Centers for Disease Control and Prevention, in 2017, 30% of all injury deaths are due to traumatic brain injury in the US.

Based on device, the global market is segmented into intraventricular catheters, subarachnoid screws, fiber-optic monitors, epidural sensors, and non-invasive ICP monitors. The intraventricular catheter segment held the largest market share in 2017 and is estimated to reach USD 922.7 Million by 2024 from USD 559.1 million in 2017.

Based on end user, the global market is segmented into hospitals and clinics, trauma centers, and others. The hospitals and clinics segment dominates the global market for Intracranial Pressure (ICP) monitoring and is projected to reach USD 1299.5 million by the end of 2024.

Key Players

The major players in the global intracranial pressure (ICP) monitoring market are Integra LifeSciences Corporation (US), DePuy Synthes (US), Spiegelberg GmbH & Co. KG (Germany), RAUMEDIC Inc. (Germany), Sophysa SA (France), Boston Neurosciences (US), Medtronic Plc (Ireland), Terumo Corporation (US) and Natus Medical Incorporated (US).

These players are adopting various strategies to expand their global ICP business and enhance their market share.

Global Intracranial Pressure (ICP) Monitoring Market Share, by Region, 2017 (%)
Regional Analysis

The global intracranial pressure (ICP) monitoring market, based on region, is segmented into the Americas, Europe, Asia-Pacific, and the Middle East & Africa.

The Americas accounted for the largest market share and is estimated to dominate the global intracranial pressure (ICP) monitoring market. The region holds the largest market share and is expected to reach **USD 844.8 million by 2024**. The Americas accounts for the largest regional market owing to technological advancements in medical devices and a well-developed healthcare system, along with the increasing number of traumatic brain injuries.

Europe accounted for the second-largest market share in **2017**. High blood pressure increases the risk of a brain hemorrhage. According to Public Health England, around 12.5 million people in 2015 suffered from high blood pressures in the UK. This provides favorable backgrounds for the market to grow in the region.

Asia-Pacific is expected to witness a lucrative **CAGR of about 7.4%** during the forecast period owing to the presence of rapidly growing economies such as China, Japan, and India. However, the Middle East and Africa is expected to observe slow growth due to less exposure to healthcare services and stringent government rules and regulations.

Key Updates

- **In July 2016**, Terumo Corporation agreed to purchase Sequent Medical, Inc., a privately-held firm developing a new medical device for aneurysm embolization, thus, expanding its portfolio of neurovascular products.

- **In September 2017**, Natus Medical Incorporated acquired neurosurgery business assets from Integra LifeSciences, entering into the neurosurgery business segment.

- **In April 2018**, Medtronic plc announced two-year outcomes for the Harmony (TM) Transcatheter Pulmonary Valve (TPV) from its early feasibility study. The study was presented at the Society for Cardiovascular Angiography and Interventions (SCAI) 41st Annual Scientific Sessions.

Market Segmentation

**Global Intracranial Pressure (ICP) Monitoring Market, by Route of Intervention**

- Intraventricular
- Epidural Sensor

**Global Intracranial Pressure (ICP) Monitoring Market, by Technique**

- Invasive
- Non-invasive
  - Transcranial Doppler
  - Ultrasonography
Global Intracranial Pressure (ICP) Monitoring Market, by Application
- Traumatic Brain Injury
- Intracerebral Hemorrhage
- Subarachnoid Hemorrhage
- Meningitis

Global Intracranial Pressure (ICP) Monitoring Market, by Device
- Intraventricular catheter
- Subarachnoid screw
- Non-invasive ICP monitors
- Epidural sensors

Global Intracranial Pressure (ICP) Monitoring Market, by End User
- Hospitals & Clinic
- Trauma Centers

Global Intracranial Pressure (ICP) Monitoring Market, by Region
- Americas
  - North America
    - US
    - Canada
  - South America
- Europe
  - Western Europe
    - Germany
    - UK
    - France
    - Italy
    - Spain
    - Rest of Europe
  - Eastern Europe
- Asia-Pacific
  - China
  - Japan
  - India
  - Australia
  - Rest of Asia-Pacific
  - Middle East & Africa
- Middle East
  - Africa
  - Rest of Middle East & Africa

Available Additional Customizations
- Additional Companies
  - Siemens Healthcare Private Limited
  - Advanced Brain Monitoring
  - Compumedics Limited
  - Orsan Medical Technologies Ltd.
  - NIHON KOHDEN CORPORATION

Intended Audience
- Trauma centers
- Research and academic institutes
- Government research organizations
Hospitals and clinics
Regulatory agencies

Infographic Summary:

The intracranial pressure (ICP) monitoring market is expected to reach USD 2,013.9 million by 2024.

Intracranial pressure (ICP) monitoring Market Share, by Region, 2017

- **DRIVERS:**
  - Increasing prevalence of neurovascular diseases such as brain aneurysm, Arteriovenous Malformations (AVMs), and others, are likely to propel the ICP monitoring market
  - Favourable reimbursement policies provide favourable background for the market growth
  - Growing prevalence of traumatic brain injuries
  - Ongoing product development & commercialization will boost the ICP monitoring market

- **RERAINTS:**
  - The shortage of trained professionals
  - High procedural cost of ICP monitoring devices

- **KEY PLAYERS:**
  - Integra LifeSciences
  - Codman & Shurtleff
  - Natus Medical Incorporated
  - Medtronic Plc.
  - RAUMEDIC
TABLE OF CONTENTS

1 REPORT PROLOGUE

2 MARKET INTRODUCTION

2.1 Scope of Study 17
2.2 Research Objective 17
2.3 List of Assumptions 18
2.4 Market Structure 18

3 RESEARCH METHODOLOGY

4 MARKET DYNAMICS

5 MARKET FACTOR ANALYSIS

6 GLOBAL INTRACRANIAL PRESSURE (ICP) MONITORING MARKET, BY ROUTE OF INTERVENTION

7 GLOBAL INTRACRANIAL PRESSURE (ICP) MONITORING MARKET, BY TECHNIQUE

8 GLOBAL INTRACRANIAL PRESSURE (ICP) MONITORING MARKET, BY APPLICATION

9 GLOBAL INTRACRANIAL PRESSURE (ICP) MONITORING MARKET, BY DEVICE

10 GLOBAL INTRACRANIAL PRESSURE (ICP) MONITORING MARKET, BY END USER

11 GLOBAL INTRACRANIAL PRESSURE (ICP) MONITORING MARKET, BY REGION

12 COMPETITIVE LANDSCAPE

13 COMPANY PROFILES