Neurosciences Leading the Way

Neurosciences is a leading hospital service line in terms of care excellence in a community. Within this important service line, neurosurgery drives both growth and differentiation for an institution.

An Integrated Neuroscience center strives to:

- Provide access to world-class care that leads to improved patient outcomes
- Facilitate patient referral & coordinate care across sub-specialties
- Unify the best staff across Neurology, Neurosurgery and all supporting services
- Raise the profile of their differentiated neuroscience program

To enable excellence, your organization must invest in and develop leading competencies across a wide variety of areas. Your hospital managerial dashboard might look like this:

<table>
<thead>
<tr>
<th>Capability</th>
<th>Performance</th>
<th>Sample Decisions</th>
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<tbody>
<tr>
<td>Business Management</td>
<td></td>
<td>- Increase local MD and community awareness of programs</td>
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<td></td>
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<td>- Increase outreach for market expansion</td>
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<td></td>
<td></td>
<td>- Increase patient referrals</td>
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<td></td>
<td></td>
<td>- Streamline processes and cut costs</td>
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<td>Clinical Staff</td>
<td></td>
<td>- Ensure best talent in place</td>
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<td></td>
<td></td>
<td>- Enhance working environment for retention</td>
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<td></td>
<td></td>
<td>- Strive for employee engagement</td>
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<td></td>
<td></td>
<td>- Access to flexible staffing model</td>
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<td>Staff Development</td>
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<td>- Determine future skill need</td>
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<tr>
<td></td>
<td></td>
<td>- Enable all roles to excel</td>
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<td></td>
<td></td>
<td>- Establish core training capabilities</td>
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<td></td>
<td></td>
<td>- Adhere to compliance requirements</td>
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<tr>
<td>Care Coordination</td>
<td></td>
<td>- Streamline care points</td>
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<tr>
<td></td>
<td></td>
<td>- Coordinate across subspecialties</td>
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<td></td>
<td></td>
<td>- Ensure service quality and excellence</td>
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<td></td>
<td></td>
<td>- Ensure high quality patient experiences</td>
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<tr>
<td>Facilities</td>
<td></td>
<td>- Investment in surgical technologies</td>
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<td></td>
<td></td>
<td>- Investment in additional OR/ICU capacity</td>
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<td></td>
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<td>- Investment in general care, floor care</td>
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<td></td>
<td></td>
<td>- Investment in outpatient rehabilitation</td>
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</table>

The Challenge for the Future

As you look forward to the next 5–10 years, Neurosciences as a service line will combine several parallel and intersecting specialties. It will be key for hospital administration and clinical teams to strive for cohesive multi-disciplinary programs in order to ensure patient care excellence.

Challenge: Neuro sub-specialty expertise and integration

Your goals may involve the expansion or streamlining of various sub-specialties such as epilepsy, stroke, or cancer. This will require the need to balance staffing between neurology, nursing, neurosurgery and other specialists. You will be balancing an environment demanding cost reduction while maintaining service delivery excellence.

- Neurodegenerative
- Neuromuscular
- Neurovascular
- Neuroimmunology
- Neuro-oncology
- Neurogenetic disorders
- Epilepsy
- Sleep disorders
- Headache

Medtronic Partner:
We bring knowledge, experience and innovation across the sub-specialties.

Medtronic Partner:
We bring the solutions to support your investment decision-making to enhance your capabilities and performance.

Medtronic Partner:
We have the technologies to support your growth, streamline processes, as well as to handle the increased complexity across staffs and departments.

Challenge: Facility requirements for growth, flexibility and reliability

You may be balancing the following:

- Neuro ICU needs: location, size, technologies
- ORs and staff that can accommodate simple to complex surgeries
- The proximity and flexibility of the facilities for diagnostic imaging, to surgery, to in-patient care...
Enabling for Future Success

In order to deliver excellence in patient care, you need a partner that will help reduce the burden on the hospital, the staff, the patients, and their caregivers by developing integrated technology and service solutions to meet a more complex continuum of care.

Medtronic Partner delivers:
- Competencies: Technologies and education that empower the teams across specialties
- Partnership: Support that builds confidence and the ability to maintain excellence as your program grows
- Care Continuum: Solutions that extend across the neuroscience center’s needs

Medtronic Your Partner of Choice

With over 50 years of delivering market-leading innovation, Medtronic Neurosurgery is uniquely positioned to support you in achieving your goals. Our comprehensive and integrated technologies are setting the standard in Integrated Neuroscience Centers. From sophisticated navigation and imaging solutions to integrated OR planning, to technical and clinical consultants, Medtronic Neurosurgery supports your entire neuroscience team and your diverse program and facility needs.
Industry Firsts Include:

- propel your center forward.
- anticipate the clinical and administrative needs to support your team. We invest significantly each year in new patents across the spectrum of technologies that Medtronic Neurosurgery researches.

- The future of your center may need:
  - Technology Integration Across Care Continuum
  - Augmenting StealthStation planning capabilities with exosurgical navigation
  - Electromagnetic navigation for pediatric and adult neurosurgery
  - Augmenting StealthStation planning capabilities
  - O-arm® 3D imaging for auto-registration of surgical planning
  - Neurostimulation for treating pain

- the OR (e.g. with surgical planning)
- O-arm® Imaging System
- Surgical MRI
- multi-modality intra-operative scans.

- further integration of tools and technologies in the OR (e.g. more navigated instrumentation)
- Further integration of tools and technologies in the OR.

- information that is mobile and available to your staff wherever they are (e.g. outside OR, around the globe)
- Augmenting StealthStation planning capabilities
- O-arm® 3D imaging for auto-registration of surgical planning
- Neurostimulation for treating pain

- communication with your team within your institution.
- provide you more value and consistency across the Neurosciences specialties with both micro-saws and drills. The versatile system standardizes its specialties with both micro-saws and drills. The versatile system standardizes.

- perform “what if” exploration to determine both remotely and in the OR. Surgeons can.
A Heritage of Innovation
You Can Trust

Over 50 years ago, Medtronic Neurosurgery started on a journey to provide innovative technology and service solutions that strive to improve surgery, increase access to therapies, and improve the efficiency of healthcare delivery in order to reduce overall costs.

**Midas Rex®**

- The **Midas Rex® drill family** celebrates 50-plus years of commitment to our customers and longevity in ORs around the world, serving surgeons for spinal, cranial, ENT, orthopedic and other surgeries. Product development and manufacturing of this extensive instrument line is based in Fort Worth, Texas.

**Shunts**

- The **Hydrocephalus therapy line** celebrates 30-plus years of successful longevity serving patients around the world with various cerebro-spinal fluid (CSF) challenges. Product development and research for this sophisticated shunt and critical care product line is based in Goleta, California.

**StealthStation®**

- The **StealthStation® navigation system** celebrates 20 years of successful longevity in cranial, spinal, ENT and orthopedic surgeries. Product development and research for this high technology product line is based in Louisville, Colorado.