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Enhancing Neuroscience Care: Achieve Exceptional Patient Outcomes With Optimal Operational Efficiency & Financial Success

By Michelle Luffey

In the rapidly evolving healthcare landscape, numerous services are shifting away from the hospital setting, resulting in the growth of high-acuity inpatient services, like neurosciences, increasingly essential. This article delves into the critical aspects of service line structure and leadership for a neuroscience service line, with a particular focus on the integration of neurology and neurosurgery. Unique challenges and opportunities that emerge within this intricate and crucial field of healthcare will be addressed, aiming to offer insights into the development of a cohesive, high-performing service line that delivers exceptional patient care and bolsters the organization's strategic growth.

A critical starting point is deciding on the neuroscience service line leadership model, which closely resembles the concept of service line leadership for cardiovascular services. When involving medical and surgical components—in this case, neurology and neurosurgery—either a dyad or triad model is suitable. In either model, the neuroscience administrative leader partners with the neuroscience physician leader(s). In some organizations, a single physician leader represents the entire neuroscience service line for both neurology and neurosurgery, while others opt for a medical neurologist and neurosurgeon-led triad model. The choice between models depends on the organization's specific needs and culture. In an organization with strong collaboration between neurology and neurosurgery, a single physician leader should be able to garner support from either group. However, in organizations with limited collaboration between these groups, the triad model might be necessary to ensure each physician specialty feels represented. Regardless, each leader has defined responsibilities, as well as shared responsibilities, as illustrated in Image 1.

Image 1 – Adapted from: Biga C et al., "Developing and Managing a Successful CV Service Line," American College of Cardiology, 2012; Cardiovascular Roundtable research and analysis.

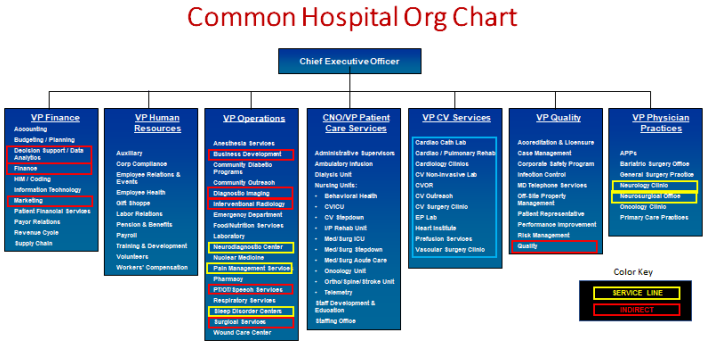

Image 2.

Another crucial aspect is determining the scope of the neuroscience service line. As shown in Image 2, the overall hospital organizational chart clearly delineates the specialized cardiovascular service line and its typical inclusions. If starting a de novo neuroscience service line, the areas highlighted in yellow are departments typically identified as potential candidates for inclusion.

To determine whether a service or department is part of the service line, Corazon recommends applying the 80/20 rule. If a service is 80% neuroscience-focused, it should be included in the neuroscience service line. If there is a significant neuroscience focus but less than 80%, then the department may need a matrixed relationship to the service line, which entails representation in councils and meetings to ensure consistency in services provided to neuroscience patients. In Corazon's experience with developing neuroscience service lines, the following departments require a thorough review:

- Neurodiagnostics
- Neurointervention: if a separate department exists, then it should be part of the service line. However, in most facilities, neurointervention is often performed in either the interventional radiology lab or the cardiac cath lab, so the 80/20 rule would apply.
- Physical Medicine & Rehabilitation (PM&R): PM&R is not shown on this org chart example but is another department that may be as high as 80% neuro in nature.
- Neurology and neurosurgery clinics/offices: some organizations choose to keep the physician

practices separate under a designated VP of the Medical Group. If the clinics remain in the practice division, they must still be matrixed to the service line. The service line model aims to create cohesion across the continuum of care.

- Pain Management: could be neurointervention-focused or anesthesia service-focused.
- Sleep Disorders Center: might be neurology-focused or respiratory therapy-focused.
- Nursing units: Neuro ICU, Neuro Step-down, or Neuro Acute Care can be included with a matrixed relationship to the nursing services division or, at minimum, need to be matrixed to the service line. If neurology and neurosurgery patients constitute only a portion of the patient population in Med/Surg ICU, Med/Surg Step-down, or Med/Surg Acute Care units, these units should still have representation at councils and meetings to ensure consistency in neuroscience care.

The simple org chart in Image 2 does not provide all possible examples of departments or services which might exist in your organization but applying the 80/20 rule to any department that provides neuroscience care will simplify the decision of whether that department should be counted as part of the neuroscience service line.

When determining the structure and departments included in the neuroscience service line, other indirect support services (highlighted in red within Image 2) such as business development, decision support, finance, quality, and marketing play a vital role in operations.

Other departments, including surgical services, diagnostic imaging, Interventional radiology or the cath lab (depending on the procedure location), laboratory, PT/OT, and Speech are all heavily relied upon by neurosciences but likely do not have neurosciences accounting for 80% of their work. These departments may need a matrixed relationship to the service line, which entails representation in councils and meetings to ensure consistency in services provided to neuroscience patients.

As indicated earlier, the decision about leadership may be affected by the departments or providers included in the service line. Neurointervention is one of those unique areas given the various providers involved. If neurointerventional providers are all neurologists and therefore part of neurology, or are all neurosurgeons and part of neurosurgery, then the triad model should be considered since there are two distinct services and two distinct leaders for each. However, if the neurointerventional providers are a mixture of neurologists and neurosurgeons, or possibly interventional radiologists, this will not fit cleanly into either neurology or neurosurgery. In this case, a dyad leadership model with one physician leader may work best to build unity across all disciplines.

Not only should the neuroscience service line have responsibility and accountability for care across the continuum, but it must also have the authority to affect change. This includes a focus on operations, clinical quality and performance, financial performance, and business development. While there are many ways to set up the overall structure, there are some key components that Corazon highly recommends as depicted in Image 3.

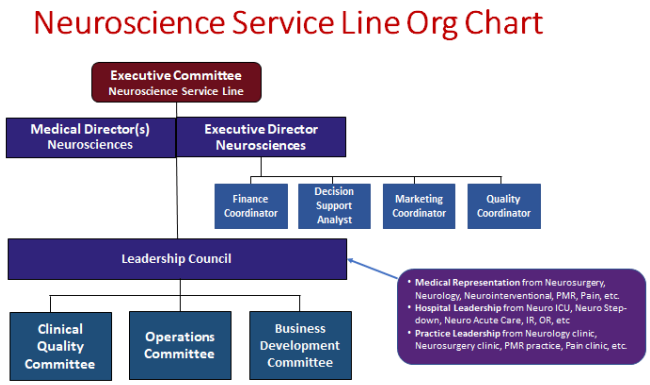

Image 3.

A Neuroscience Executive Committee with representation from the Service Line Medical Director(s), the Service Line Administrative Director, members of the C-Suite (CEO, COO, CMO, CNO, CFO), and the VP of Quality will provide oversight for the execution of the service line goals and objectives. The committee members hold responsibility for the final endorsement of the budget, allocation of capital funding, and the prioritization of the service line's strategic direction. This team must also ensure the service line is achieving progress on strategic initiatives and quality outcomes.

The Neuroscience Leadership Council is chaired by the Medical Director(s) and Administrative Director and provides representation for shared decision-making for all departments and services, including medical representation from Neurosurgery, Neurology, Neurointervention, PM&R, Pain, etc. This council is responsible for the development and support of the service line's vision and strategy, which should be focused on the delivery of high-quality, efficient, and cost-effective care across the entire continuum. This group will also determine what clinical programs are offered and ensure both the quality and financial performance of all neuroscience services.

The Clinical Quality, Operations, and Business Development councils are where the majority of work effort occurs. It is necessary to have dyad leadership at this level and include both a physician and administrative leader. While it is vital to have physicians engaged and championing the work, the execution of the plan ultimately requires the dyad administrative partner to navigate the hospital systems involved in operations, quality, purchasing, and human resources to collect necessary data, process supply orders, requisition new staff, and so on.

- The Clinical Quality Council reviews the quality data and outcomes and addresses any issues through the design, implementation, and review of performance improvement plans.
- The Neuroscience Operations Council addresses patient access, patient flow, scheduling, staffing, supply management, or any other issues affecting the inpatient, outpatient, or ambulatory operations.
- The Finance/Business Development Council reviews the financial dashboard, addresses any financial issues, reviews options for new service offerings including development of the ROI, manages supply value analysis, plans, and executes outreach strategies or marketing needs, and handles any other financial or business development needs for the service line.

To enable the councils to make informed decisions, it is essential to have a significant amount of data in addition to the physicians clinical knowledge of best practices. This data can help to identify where there are successes and where there are opportunities for improvement. The service line needs a robust dashboard that includes operational, quality, and financial metrics to provide a clear picture of the data. The management of this data requires key service line support staff. These individuals can be hired into the service line with a direct reporting relationship to the Administrative Director or they can be individuals from other departments within the facility who have a portion of their duties and responsibilities dedicated to the service line.

- A Decision Support Analyst is necessary to manage the large volume of data needed to populate the service line dashboard. This data is often housed in many different IT systems across the enterprise. It is rarely as simple as pulling a single report from the system, even when the organization uses an integrated software like Epic. It often requires the data to be pulled from various sources and then cross-referenced to provide the necessary information for the councils.
- A Finance Coordinator is tasked with the analysis of the financial metrics, development of financial proformas to aid the finance and business development council in determining ROI for any proposed new service offerings, assisting in the financial analysis of proposed technology purchases, developing cost per case details to understand the profitability of each individual service within the service line, etc.
- A Quality Coordinator is responsible for reviewing and analyzing quality data and outcomes, overseeing any registry or database submissions, aiding in the development and oversight of any performance improvement plans related to quality, and oversight for patient satisfaction and accreditation programs within the neurosciences.
- A Marketing Coordinator is key in assisting the service line with growth strategies, outreach activities, as well as launching service line specific marketing plans, campaigns, and branding.

The elements provided above do not constitute the only way to develop a service line but provide a framework for starting. At Corazon, we understand that developing a robust and effective neuroscience service line is no small feat. It requires a thoughtful approach, a deep understanding of your organization's unique needs, and the willingness to adapt to the ever-changing healthcare landscape. By implementing the strategies and framework that fit your organization, a streamlined, high-performing service line that delivers top-quality patient care while maximizing operational efficiency and financial performance can be successfully implemented. In closing, remember that collaboration, data-driven decision-making, and a clear focus on quality are key ingredients for success in today's complex neuroscience environment.

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