

Neurovascular Devices

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Overview

Neurovascular devices may be used to treat stroke and intracranial aneurysms. This category consists of access catheters, stents, coils, clot retrievers, flow diverters, and aspiration pumps.^{1,2} Tissue plasminogen activator (tPA) has been approved for many decades as a treatment for acute ischemic stroke (AIS).³ However, Endovascular Therapy (EVT) is the current standard of care for AIS with large vessel occlusions.⁴ Endovascular therapies, including devices and imaging, offer good outcomes for patients and may be used in combination with tPA.³

Actions for Consideration

Partner: Identify potential stakeholders, including interventional radiologists, radiology nurses, technologists, and the appropriate clinical and non-clinical value analysis team members. Radiology technologists are especially important to include, given their expertise and depth of knowledge within the radiology field. This category has a high degree of physician preference related to specific devices needed for patient care. Physician leadership will be necessary when navigating conversations related to potential supplier standardization.

Connect: Identify the portfolio of products and suppliers utilized in the facility or Health System. Access physician specific data by device and procedure to understand and help facilitate discussions. Be sure to identify high and low volume users, and associated accessories. Physician preference cards may help inform potential products to have available. Leveraging a physician champion may be helpful to introduce potential changes. Sharing this information with physician leaders will help inform direction for decision-making related to these products. Identify any evidence related to specific products to help inform conversations.

Communicate: Facilitate physician discussions related to conversion or standardization opportunities and develop a common goal. Discuss potential to streamline products, financial impact, and develop strategies to manage use with physicians, leveraging a champion. This categories may be addressed in phases, looking at one type of product to begin. Physician leadership and peer to peer discussions will be important when making decisions. Robust data sharing will not only enhance discussions, but may lead to actionable conversations between peers.

HealthTrust Resources: Access the [Clinical Knowledge Insights Library](#) to find other relevant documents and toolkits with actionable information. Examples for these products include resources around value analysis.⁵ Network on [HealthTrust Huddle](#), our member community that shares ideas and seeks guidance from colleagues.⁶

Professional Society Statements and Clinical Practice Guidelines

- The American Heart Association and the American Stroke Association published *Guidelines for the Early Management of Patients with Acute Ischemic Stroke: 2019*. These guidelines represent an update from the 2018 published guidelines and outline recommendations for prehospital management, emergency evaluation and treatment, general and emergency care, and general supportive in hospital care for adult patients (Found [here](#)).⁴
- A multi-society quality improvement revised consensus statement for endovascular therapy of acute ischemic stroke can be found [here](#).³

- National Institute of Neurological Disorders and Stroke (NINDS) supports research about the brain and nervous system to help those with neurological disease. They provide detailed information about the optimization of endovascular therapy for ischemic stroke. This includes a timeline describing the development of various treatments, review of the NINDS contribution to approved therapies, and research success stories (Full details linked [here](#)).⁷

Clinical Evidence

There are a number of studies that illustrate safety and effectiveness of supplier neurovascular devices, however data comparing supplier products is lacking.

- The following suppliers, Johnson & Johnson, Medtronic, Penumbra, and Stryker all have studies listed on [clinical trials.gov](https://clinicaltrials.gov).

Summary

Neurovascular devices are used to treat stroke and intracranial aneurysms. This category has a high degree of physician preference due to the need for specific devices based on individual patient presentation. Collecting and sharing data on product use and engaging physicians will be essential to support any changes in product standardization.

References

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