

Intraoperative Neurophysiological Monitoring, Surgical 40

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[Implementation](#) 6/1/2025
[Next Review Date](#) 3/2026
[Coverage Policy](#) Surgical 40
[Version](#) 7

Member-specific benefits take precedence over medical policy and benefits may vary across plans. Refer to the individual's benefit plan for details *.

Description & Definitions:

Intraoperative Neurophysiological Monitoring consists of monitoring the nervous system in "real-time" during surgery. Types of monitoring that can be used based with this type of surgery include Electromyogram (EMG), Direct Cortical Stimulation, Brainstem Auditory-evoked Potentials, Electrocorticography (ECoG), Somatosensory-evoked Potentials (SSEP), Motor Evoked Potentials (MEP), Electroencephalogram (EEG), and Nerve Conduction Velocity testing.

Criteria:

Intraoperative neuromonitoring is considered medically necessary for **All** of the following:

- Physician billing for intraoperative neurophysiological monitoring as well as any neurophysiology testing is not the surgeon or in same vendor group as the surgeon performing a surgical procedure at time of the neuro monitoring
- The neuro monitoring is **1 or more** of the following:
 - **One on one intraoperative neuromonitoring** located in the operating room is considered medically necessary for **1 or more** of the following:
 - Surgery with risk of cerebral ischemia including **1 or more** of the following;
 - Aortic arch
 - Aortic arch branch vessels
 - Thoracic aorta
 - Internal carotid artery surgery
 - Resection of epileptogenic brain tissue or tumor
 - Protection of cranial nerves including **1 or more** of the following:
 - Resection of tumors involving the cranial nerves
 - Microvascular decompressive surgeries

- Skull-base surgery in the vicinity of the cranial nerves
- Surgeries of the foramen magnum
- Cavernous sinus tumors
- Oval or round window graft
- Endolymphatic shunt for Meniere's disease
- Vestibular section for vertigo
- Tympanoplasty
- Correction of scoliosis or deformity of spinal cord involving traction on the cord
- Decompressive procedures on the spinal column or cauda equine with **1 or more** of the following:
 - Performed for myelopathy or claudication
 - Where the function of spinal cord or spinal nerves is at risk
- During placement of internal spinal fixation devices where nervous system function is at work
- Spinal cord tumors and spinal fractures with the risk of cord compression
- Neuromas of peripheral nerves or brachial plexus when risk to major sensory or motor nerves exist
- Leg-lengthening procedures when there is traction on the sciatic nerve
- Surgery as a result of traumatic injury to the spinal cord or surgery for arteriovenous malformation of the spinal cord
- Surgery or embolization for intracranial arteriovenous malformations
- Embolization of bronchial artery arteriovenous malformations or tumors
- Arteriography during which there is a test occlusion of the carotid artery
- Circulatory arrest with hypothermia
- Distal aortic procedures where there is risk of ischemia to spinal cord
- **Remote one on one intraoperative neuromonitoring** is considered medically necessary for **1 or more** of the following:
 - Individual has **1 or more** of the following:
 - Surgery with risk of cerebral ischemia including **1 or more** of the following:
 - Aortic arch
 - Aortic arch branch vessels
 - Thoracic aorta
 - Internal carotid artery surgery
 - Resection of epileptogenic brain tissue or tumor
 - Protection of cranial nerves including **1 or more** of the following:
 - Resection of tumors involving the cranial nerves
 - Microvascular decompressive surgeries
 - Skull-base surgery in the vicinity of the cranial nerves
 - Surgeries of the foramen magnum
 - Cavernous sinus tumors
 - Oval or round window graft
 - Endolymphatic shunt for Meniere's disease
 - Vestibular section for vertigo
 - Tympanoplasty
 - Correction of scoliosis or deformity of spinal cord involving traction on the cord
 - Decompressive procedures on the spinal column or cauda equine with **1 or more** of the following:
 - Performed for myelopathy or claudication
 - Where the function of spinal cord or spinal nerves is at risk
 - During placement of internal spinal fixation devices where nervous system function is at work
 - Spinal cord tumors and spinal fractures with the risk of cord compression
 - Neuromas of peripheral nerves or brachial plexus when risk to major sensory or motor nerves exist
 - Leg-lengthening procedures when there is traction on the sciatic nerve
 - Surgery as a result of traumatic injury to the spinal cord or surgery for arteriovenous malformation of the spinal cord
 - Surgery or embolization for intracranial arteriovenous malformations
 - Embolization of bronchial artery arteriovenous malformations or tumors
 - Arteriography during which there is a test occlusion of the carotid artery

- Circulatory arrest with hypothermia
- Distal aortic procedures where there is risk of ischemia to spinal cord

Intraoperative neurophysiological monitoring is considered **not medically necessary** for any use other than those indicated in clinical criteria, to include but not limited to:

- During intra-thecal pump adjustment
- During radiofrequency ablation/denervation procedures
- During sacroiliac joint injection
- Hip replacement surgery
- Implantation of a spinal cord stimulator
- Off-pump coronary artery bypass
- Submandibular gland excision
- Thyroid and parathyroid surgery

Document History:

Revised Dates:

- 2022: April
- 2020: March
- 2019: September
- 2015: February, March, October
- 2013: March, December
- 2012: June, August

Reviewed Dates:

- 2025: March – Implementation date of 6/1/2025. No changes references updated
- 2024: March
- 2023: March
- 2021: April
- 2020: April
- 2018: August
- 2017: November
- 2016: February
- 2014: February

Effective Date:

- December 2011

Coding:

Medically necessary with criteria:

Coding	Description
95940	Continuous intraoperative neurophysiology monitoring in the operating room, one on one monitoring requiring personal attendance, each 15 minutes (List separately in addition to code for primary procedure)
95941	Continuous intraoperative neurophysiology monitoring, from outside the operating room (remote or nearby) or for monitoring of more than one case while in the operating room, per hour (List separately in addition to code for primary procedure)

G0453	Continuous intraoperative neurophysiology monitoring, from outside the operating room (remote or nearby), per patient, (attention directed exclusively to one patient) each 15 minutes (list in addition to primary procedure)
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Considered Not Medically Necessary:

Coding	Description
	None

U.S. Food and Drug Administration (FDA) - approved only products only.

The preceding codes are included above for informational purposes only and may not be all inclusive. Additionally, inclusion or exclusion of a treatment, procedure, or device code(s) does not constitute or imply member coverage or provider reimbursement. Please refer to the member's contract benefits in effect at the time of service to determine coverage or non-coverage of these services as it applies to an individual member.

Special Notes: *

- Coverage:
 - See the appropriate benefit document for specific coverage determination. Member specific benefits take precedence over medical policy.
- Application to products:
 - Policy is applicable to Sentara Health Plan Commercial products.
- Authorization requirements:
 - Pre-certification by the Plan is required.
- Special Notes:
 - Commercial
 - Medical policies can be highly technical and complex and are provided here for informational purposes. These medical policies are intended for use by health care professionals. The medical policies do not constitute medical advice or medical care. Treating health care professionals are solely responsible for diagnosis, treatment, and medical advice. Sentara Health Plan members should discuss the information in the medical policies with their treating health care professionals. Medical technology is constantly evolving, and these medical policies are subject to change without notice, although Sentara Health Plan will notify providers as required in advance of changes that could have a negative impact on benefits.
 - Services mean both medical and behavioral health (mental health) services and supplies unless We specifically tell You otherwise. We do not cover any services that are not listed in the Covered Services section unless required to be covered under state or federal laws and regulations. We do not cover any services that are not Medically Necessary. We sometimes give examples of specific services that are not covered but that does not mean that other similar services are covered. Some services are covered only if We authorize them. When We say You or Your We mean You and any of Your family members covered under the Plan. Call Member Services if You have questions.

References:

Including but not limited to: Specialty Association Guidelines; Government Regulations; Winifred S. Hayes, Inc; UpToDate; Literature Review; Specialty Advisors; National Coverage Determination (NCD); Local Coverage Determination (LCD).

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28th Edition. (2025). Retrieved 2 2025, from MCG: <https://careweb.careguidelines.com/ed28/index.html>

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Provider Manuals. (2025). Retrieved 2 2025, from DMAS: <https://www.dmas.virginia.gov/for-providers/>

Keywords:

neuro, monitoring, intra, intraoperative, operative, electroencephalogram , neuromonitoring, Intraoperative Neurophysiological Monitoring, SHP Surgical 40, IONM, cerebral ischemia, Aortic arch, Aortic arch branch vessels, Thoracic aorta, Internal carotid artery surgery, epileptogenic brain tissue, epileptogenic brain tumor, cranial nerves, Tympanoplasty, embolization, Arteriography, Neuromas, Spinal cord tumors, spinal fractures, cord compression, Electromyogram (EMG), Direct Cortical Stimulation, Brainstem Auditory-evoked Potentials, Electrocorticography (ECoG), Somatosensory-evoked Potentials (SSEP), Motor Evoked Potentials (MEP), Electroencephalogram (EEG), and Nerve Conduction Velocity testing