Kaiser Foundation Health Plan

Clinical Policy for Medical Necessity Criteria for Intraoperative Neuromonitoring

Department: Neurosurgery	**Effective:** 6/2/26
Policy #: NCP 119 *(was NCP 19 until 8/4/26)*	**Last Reviewed:** 6/2/26

Overview/Definitions

Medical necessity criteria and policy are applied only after member eligibility and benefit coverage is determined. Questions concerning member eligibility and benefit coverage need to be directed to Membership Services.

GENERAL CRITERIA

1) Intraoperative neurophysiologic monitoring must be performed by either a licensed physician trained in clinical neurophysiology or a trained technologist who is practicing within the scope of his/her license/certification as defined by state law or appropriate authorities and is working under direct supervision of a physician trained in neurophysiology; AND
2) Intraoperative neurophysiologic monitoring must be interpreted by a licensed physician trained in clinical neurophysiology, other than the operating surgeon, who is either in attendance in the operating suite or present by means of a real-time remote mechanism for neurophysiologic monitoring situations and is immediately available; AND
3) Monitoring is conducted and interpreted real-time (either on-site or at a remote location) and continuously communicated to the surgical team; AND
4) The physician performing, or supervising monitoring must be monitoring no more than three cases simultaneously; AND
5) Charges related to intraoperative monitoring will only be reimbursed when billed on a HCFA 1500 claim form for professional charges; AND
6) Any charges related to intraoperative monitoring billed on a UB form are not reimbursable.

Coverage Determinations

Contractor	Determination Name/Number	Revision Date
For Medicare Members		
NCD	None	
LCD	None. This KP criteria applies for Medicare members	10/16/2025
For Medicaid Members		
OR Medicaid	This policy does not apply.	
WA Medicaid	This policy does not apply.	
Commercial and Self-Funded Plans		
OR Commercial	This policy applies	
WA Commercial	This policy applies	
Self-funded Plans	This policy applies	

Clinical Indications

Intraoperative neuromonitoring may be medically necessary during 1 or more of the following spinal, intracranial, and vascular procedures. The specific type of monitoring indicated for each procedure varies, as outlined in the below criteria and summarized in the following tables. Pre-procedural baseline testing may be separately reported, but only once per operative session.

1) **Somatosensory-evoked potentials with or without motor-evoked potentials**

   Intraoperative neuromonitoring using somatosensory-evoked potentials (SSEP), with or without motor-evoked potentials (using electrical stimulation), may be medically necessary during 1 or more of the following procedures:

   - Spinal procedures
     - Dorsal rhizotomy
     - Correction of scoliosis
     - Correction of deformity involving traction on the spinal cord
     - Spinal cord tumor removal

    - Surgery due to traumatic injury to spinal cord
    - Surgery for arteriovenous (AV) malformation of spinal cord
- Excision of neuromas of peripheral nerves of brachial plexus when there is documented risk to major sensory or motor nerves
- Leg lengthening procedures, where there is traction on sciatic nerve or other nerve trunks
- Intracranial procedures
    - Microvascular decompression of cranial nerves
    - Removal of acoustic neuroma, congenital auricular lesions, or cranial base lesions
    - Cholesteatoma, including mastoidotomy or mastoidectomy
    - Vestibular neurectomy for Meniere's
    - Surgery as a result of traumatic injury to the brain
    - Removal of cranial nerve neuromas affecting any of the following nerves:
        - Abducens
        - Facial
        - Glossopharyngeal
        - Hypoglossal
        - Oculomotor
        - Recurrent laryngeal
        - Spinal accessory
        - Superior laryngeal
        - Trochlear
    - Deep brain stimulation
    - Endolymphatic shunting for Meniere's disease
    - Oval or round window graft
    - Removal of cavernous sinus tumors
    - Resection of brain tissue near primary motor cortex and requiring brain mapping
    - Resection of epileptogenic brain tissue or tumor
    - Other intracranial procedures (e.g., aneurysm repair, intracranial AVM)
- Non-cranial vascular procedures
    - Carotid artery surgery
    - Arteriography with test occlusion of carotid artery
    - Deep hypothermic circulatory arrest
    - Distal aortic procedures
    - Surgery of the aortic arch, its branch vessels, or thoracic aorta
    - Embolization of bronchial artery AVMs or tumors

2) **Electroencephalographic monitoring**

Intraoperative electroencephalographic (EEG) monitoring may be considered medically necessary for 1 or more of the following procedures:

- Intracranial procedures
    - Basal ganglia procedures (surgery for the correction of movement
    - disorders)
    - Microvascular decompression of cranial nerves
    - Removal of acoustic neuroma, congenital auricular lesions, or cranial base lesions
    - Cholesteatoma, including mastoidotomy or mastoidectomy
    - Vestibular neurectomy for Meniere's
    - Removal of cranial nerve neuromas affecting any of the following nerves:
        - Abducens
        - Facial
        - Glossopharyngeal
        - Hypoglossal
        - Oculomotor
        - Recurrent laryngeal
        - Spinal accessory
        - Superior laryngeal
        - Trochlear
    - Deep brain stimulation
    - Endolymphatic shunting for Meniere's disease
    - Oval or round window graft
    - Removal of cavernous sinus tumors
    - Resection of brain tissue near primary motor cortex and requiring brain mapping
    - Resection of epileptogenic brain tissue or tumor
    - Other intracranial procedures (e.g., aneurysm repair, intracranial AVM)
    - Surgery as a result of traumatic injury to the brain
- Non-cranial vascular procedures
    - Carotid artery surgery
    - Arteriography with test occlusion of carotid artery

3) Electromyographic monitoring

Intraoperative electromyographic (EMG) monitoring may be considered medically necessary when monitoring is during 1 or more of the following procedures:

- Intracranial procedures
  - Basal ganglia procedure (surgery for the correction of movement disorders)
  - Cavernous sinus tumor resection
  - Dorsal rhizotomy
  - Microvascular decompression of cranial nerves
  - Removal of acoustic neuroma, congenital auricular lesions, or cranial base lesions or foramen magnum
  - Cholesteatoma, including mastoidotomy or mastoidectomy
  - Cochlear implant surgery
  - Vestibular neurectomy for Meniere's
  - Removal of cranial nerve neuromas affecting any of the following nerves:
    - Abducens
    - Facial
    - Glossopharyngeal
    - Hypoglossal
    - Oculomotor
    - Recurrent laryngeal
    - Spinal accessory
    - Superior laryngeal
    - Trochlear
  - Endolymphatic shunt for Meniere's
  - Oval or round window grafting

EXCLUSIONS

EXPERIMENTAL AND INVESTIGATIONAL

IONM is considered experimental/investigational for all indications not meeting the above criteria. Examples of procedures for which there is insufficient evidence to establish net benefit of IONM include, but are not limited to, the following:

- Routine lumbar or cervical laminectomies and fusions
- Spinal cord stimulator implantation
- Cochlear implantation
- Vagal nerve stimulator implantation
- Spinal injections
- Hip replacement
- Parotid gland surgery

Intraoperative monitoring of visual evoked potentials is experimental and investigational for all indications.

Intraoperative monitoring of motor evoked potentials using transcranial magnetic stimulation is experimental and investigational for all indications.

Nerve conduction studies for intraoperative monitoring purposes are considered experimental and investigational for all indications.

Coding

General Neuromonitoring

CPT Codes	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)

Somatosensory-evoked potentials (SSEP)

NOTE: CPTs 95925 and 95926 should not be billed during the same procedure if both upper and lower limbs are monitored; instead, CPT 95938 should be used. CPT 95938 should not be coded in conjunction with either 95925 or 95926. Similarly, 95928 and 95929 should not be billed together; instead 95939 should be used if both upper and lower limbs are monitored

CPT Codes	Description
95925	Short-latency somatosensory evoked potential study, stimulation of any/all peripheral nerves or skin sites, recording from the central nervous system; in upper limbs
95926	Short-latency somatosensory evoked potential study, stimulation of any/all peripheral nerves or skin sites, recording from the central nervous system; in lower limbs
95927	Short-latency somatosensory evoked potential study, stimulation of any/all peripheral nerves or skin sites, recording from the central nervous system; in the trunk or head
95938	Short-latency somatosensory evoked potential study, stimulation of any/all peripheral nerves or skin sites, recording from the central nervous system; in upper and lower limbs

Motor evoked potentials (MEP)

CPT Codes	Description
95928	Central motor evoked potential study (transcranial motor stimulation); upper limbs
95929	Central motor evoked potential study (transcranial motor stimulation); lower limbs
95939	Central motor evoked potential study (transcranial motor stimulation); in upper and lower limbs

Electroencephalography

CPT Codes	Description
95813	Electroencephalogram (EEG) extended monitoring >1h
95822	Electroencephalogram (EEG); recording in coma or sleep only
95955	Electroencephalogram (EEG) during non-intracranial surgery (e.g., carotid surgery) **(can be used for qualified thyroid procedures too)**

Electromyography

CPT Codes	Description
95860	Needle electromyography; 1 extremity with or without related paraspinal areas
95861	Needle electromyography; 2 extremities with or without related paraspinal areas
95865	Needle electromyography; larynx **(for qualified thyroid procedures)**
95867	Needle electromyography; cranial nerve supplied muscle(s), unilateral
95868	Needle electromyography; cranial nerve supplied muscles, bilateral
95870	Needle electromyography; limited study of muscles in 1 extremity or non-limb (axial) muscles (unilateral or bilateral), other than thoracic paraspinal, cranial nerve supplied muscles, or sphincters
95872	Needle electromyography of thoracic paraspinal muscles, excluding T1 or subcostal muscles **(for qualified thyroid procedures)**
95885	Needle electromyography, each extremity, with related paraspinal areas, when performed, done with nerve conduction, amplitude and latency/velocity study; limited. This is an add-on code and should be billed with a primary nerve conduction study code (95907-95913)
95886	Needle electromyography, each extremity, with related paraspinal areas, when performed, done with nerve conduction, amplitude and latency/velocity study; complete, five or more muscles studied, innervated by three or more nerves or four or more spinal levels (List separately in addition to code for primary procedure; this is done with nerve conduction, amplitude and latency/velocity study
95887	Needle electromyography, non-extremity (cranial nerve supplied or axial) muscle(s) when done with nerve conduction, amplitude and latency/velocity study
95900	Nerve conduction, amplitude and latency/velocity study, each nerve; motor, without F-wave study

Miscellaneous

CPT Codes	Description
51792	Stimulus evoked response. Measures the electrical activity in the anal or urethral sphincter muscles in response to stimulation to assess nerve function in the pelvic floor. Supported for use for surgeries implicating the nerve supply to this region.

92650 **92651** **92652** **92653** **92517**	Auditory evoked potentials comprehensive. Each code covers different aspects of auditory evoked potential testing. Supported for use when surgery implicates the auditory nerve.
92585	Auditory evoked potentials for evoked response audiometry and/or testing of the central nervous system; comprehensive
92586	Auditory evoked potentials for evoked response audiometry and/or testing of the central nervous system; limited

Considered experimental and investigational and are not covered

CPT Codes	Description
95903	Nerve conduction, amplitude and latency/velocity study, each nerve; motor, with F- wave study
95904	Nerve conduction, amplitude and latency/velocity study, each nerve; sensory
95905	Motor and/or sensory nerve conduction, using preconfigured electrode array(s), amplitude and latency/velocity study, each limb, includes F-wave study when performed, with interpretation and report
95907 **95908** **95909** **95910** **95911** **95912** **95913**	Nerve conduction studies 1-2, 3-4, 5-6, 7-8, 9-10, 11-12, 13+
95930	Visual evoked potential (VEP) testing central nervous system, checkerboard or flash
95937	Neuromuscular junction testing (repetitive stimulation, paired stimuli), each nerve, any 1 method
95999	Unlisted neurological or neuromuscular diagnostic procedure
95829	Electrocorticogram
95921 **95922** **95923** **95924**	Testing autonomic function (vagal, adrenergic, sudomotor, tilt study)
95933	Orbicularis oculi / blink reflex testing
95961	Functional brain mapping, in-person attendance
95962	Functional brain mapping, in-person attendance

Discussion/General Information

SPINAL PROCEDURES	SSEP (with or without MEP) 95925,95926, 95927,95938 With MEP – 95928, 95929, 95939	EEG 95822 95955	EMG 95860 95861 95867 95868 95870
Dorsal rhizotomy	☑		☑
Correction of scoliosis	☑		
Correction of deformity involving traction on the spinal cord	☑		
Spinal cord tumor removal	☑		
Surgery due to traumatic injury to spinal cord	☑		
Surgery for AV malformation of spinal cord	☑		

NON-CRANIAL VASCULAR PROCEDURES	SSEP (with or without MEP) 95925,95926, 95927,95938 With MEP – 95928, 95929, 95939	EEG 95822 95955	EMG 95860 95861 95867 95868 95870

Carotid artery surgery	☑	☑	
Arteriography w/ test occlusion of carotid artery	☑	☑	
Deep hypothermic circulatory arrest	☑		
Distal aortic procedures (due to risk of ischemia to spinal cord)	☑		
Surgery of aortic arch, its branch vessels, or thoracic aorta	☑		

INTRACRANIAL PROCEDURES*	SSEP (with or without MEP) 95925,95926, 95927,95938 With MEP – 95928, 95929, 95939	EEG 95822 95955	EMG 95860 95861 95867 95868 95870
Microvascular decompression of cranial nerves	☑	☑	☑
Removal of acoustic neuroma, congenital auricular lesions, cranial base lesions	☑	☑	☑
Cholesteatoma, including mastoidotomy or mastoidectomy	☑	☑	☑
Vestibular neurectomy for Meniere's	☑	☑	☑
Removal of cranial nerve neuromas affecting any of following nerves: *Abducens* *Facial* *Glossopharyngeal* *Hypoglossal* *Oculomotor* *Recurrent laryngeal* *Spinal accessory* *Superior laryngeal*	☑	☑	☑

	Trochlear			
	Deep brain stimulation	☑	☑	
	Endolymphatic shunt for Meniere's disease	☑	☑	
	Oval or round window graft	☑	☑	
	Removal of cavernous sinus tumors	☑	☑	
	Resection of brain tissue near primary motor cortex and requiring brain mapping	☑	☑	
	Resection of epileptogenic brain tissue or tumor	☑	☑	
	Other intracranial vascular procedures (e.g. aneurysm repair, intracranial AV malformation)	☑	☑	

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History Details

Type	Action	Date
Review/Revised	Reviewed at UM Quality Oversight Committee	5/19/26
Changed NCP #	NCP # changed from 19 to 119	8/4/24