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# Intraoperative Monitoring

MEDICAL POLICY NUMBER: 295

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**INSTRUCTIONS FOR USE:** Company Medical Policies serve as guidance for the administration of plan benefits. Medical policies do not constitute medical advice nor a guarantee of coverage. Company Medical Policies are reviewed annually and are based upon published, peer-reviewed scientific evidence and evidence-based clinical practice guidelines that are available as of the last policy update. The Company reserves the right to determine the application of medical policies and make revisions to medical policies at any time. The scope and availability of all plan benefits are determined in accordance with the applicable coverage agreement. Any conflict or variance between the terms of the coverage agreement and Company Medical Policy will be resolved in favor of the coverage agreement. Coverage decisions are made on the basis of individualized determinations of medical necessity and the experimental or investigational character of the treatment in the individual case. In cases where medical necessity is not established by policy for specific treatment modalities, evidence not previously considered regarding the efficacy of the modality that is presented shall be given consideration to determine if the policy represents current standards of care.

**SCOPE:** Providence Health Plan, Providence Health Assurance, and Providence Plan Partners as applicable (referred to individually as “Company” and collectively as “Companies”).

## PLAN PRODUCT AND BENEFIT APPLICATION

Commercial

Medicaid/OHP\*

Medicare\*\*

### \*Medicaid/OHP Members

*Oregon:* Services requested for Oregon Health Plan (OHP) members follow the OHP Prioritized List and Oregon Administrative Rules (OARs) as the primary resource for coverage determinations. Medical policy criteria below may be applied when there are no criteria available in the OARs and the OHP Prioritized List.

### \*\*Medicare Members

This Company policy may be applied to Medicare Plan members only when directed by a separate Medicare policy. Note that investigational services are considered “**not medically necessary**” for Medicare members.

## COVERAGE CRITERIA

### Spine Indications

- I. Continuous intraoperative neurophysiological monitoring (CPT code: 95940; HCPCS code: G0453) using sensory evoked potentials, motor evoked potentials, electromyography or electroencephalography may be considered **medically necessary** when there is significant risk of nerve or spinal cord injury for any of the following (A.-D.):
  - A. Repeat spinal surgery with instrumentation;
  - B. Surgery for significant spinal stenosis with myelopathy (see [Policy Guidelines](#) for full definition);
  - C. Surgical instrumentation for correction of scoliosis or significant congenital, traumatic or degenerative spinal deformity;
  - D. High-risk cervical spine surgery (e.g. vertebral or intraspinal tumor, traumatic spine/spinal cord injury including subluxation/dislocation, deformity correction, or surgery of the spinal cord).
  
- II. Continuous intraoperative neurophysiological monitoring (CPT code: 95940; HCPCS code: G0453) using sensory evoked potentials, motor evoked potentials, electromyography or electroencephalography is considered **not medically necessary** when criterion I. above is not met, including but not limited to when performed with any of the following procedures (A.- G.):

- A. Spine surgery in which criterion I.A-C. above are not met (e.g., initial spine surgery, routine decompression, laminotomy);
- B. Cervical spine surgery in which criterion I.D. above is not met (e.g., anterior and/or posterior cervical fusion, discectomy or laminectomy);
- C. Lumbar spine surgery performed below spinal column level L1/L2 in which criteria I.A-C. above are not met;
- D. Radiofrequency ablation;
- E. Epidural steroid injections;
- F. Facet joint injections;
- G. Spinal cord stimulator placement.

### **Non-Spine Indications**

- III. Continuous intraoperative neurophysiological monitoring (CPT code: 95940; HCPCS code: G0453) using sensory evoked potentials, motor evoked potentials, electromyography or electroencephalography may be considered **medically necessary** for any of the following (A.-G.):
  - A. Monitoring of a cranial nerve during head and/or neck surgery (e.g., resection of skull base tumor, resection of tumor involving a cranial nerve, cavernous sinus tumor, neck dissection, epileptogenic brain tumor/tissue resection);
  - B. Monitoring of recurrent laryngeal nerve function during high-risk thyroid surgery (e.g., complete resection of a lobe of the thyroid, removal of the entire gland, malignancy, or repeat thyroid or parathyroid surgery);
  - C. Monitoring of facial nerve function during surgery (e.g., acoustic neuroma, microvascular decompression of the facial nerve for hemifacial spasm, parotid tumor resection, neurotologic/otologic procedures);
  - D. High-risk vascular surgery (e.g. surgery of the aortic arch, thoracic aorta, internal carotid endarterectomy, cerebral aneurysm, intracranial or spinal arteriovenous malformation, distal aortic procedures where there is risk of ischemia to the spinal cord);
  - E. The planned surgery poses a high risk of significant damage to an essential nervous system structure (e.g., neuroma of peripheral nerve, leg lengthening procedure when there is traction on the sciatic nerve);
  - F. The planned surgery poses a high risk of significant damage to essential brain function (e.g. surgery for intractable movement disorders, basal ganglia movement disorders, resection of brain tissue close to the primary motor cortex and requiring brain mapping.
  - G. Brachial plexus surgery.
- IV. Continuous intraoperative neurophysiological monitoring (CPT code: 95940; HCPCS code: G0453) is considered **not medically necessary** when criterion III. above is not met.

V. Continuous intraoperative neurophysiological monitoring of visual evoked potentials (VEP) is considered **not medically necessary**.

## **POLICY CROSS REFERENCES**

None

The full Company portfolio of current Medical Policies is available online and can be [accessed here](#).

## **POLICY GUIDELINES**

### **DOCUMENTATION REQUIREMENTS**

- All documentation must be maintained in the patient's medical record and available to the contractor upon request
- Every page of the medical record must be legible and include appropriate patient identification information (e.g. complete name, dates of service). The record must include the physician or non-physician practitioner responsible for providing the care of the patient.
- The patient's medical record should document the time spent in monitoring in correlation to the surgery performed.
- The submitted medical record should support the use of the selected diagnosis code(s)
- The submitted CPT/HCPCS code should describe the service performed.

### **DEFINITIONS**

- *Myelopathy*: Myelopathy refers to any neurological deficit related to a spinal cord injury. Corresponding clinical symptoms may include, but are not limited to the following:
  - Bowel or bladder incontinence;
  - Clumsiness of the hands
  - Frequent falls
  - Urinary urgency

Corresponding objective neurological signs may include but are not limited to the following:

- Hoffman sign
  - Hyperreflexia
  - Increased tone or spasticity
- For reimbursement, monitoring must be requested by the operating surgeon with the prior authorization submission.

- Monitoring must be performed by a physician, other than any of the following: the operating surgeon, the technical/surgical assistant; or the anesthesiologist rendering the anesthesia.
- The benefits of intraoperative neurophysiologic testing are attainable under optimal recording and interpreting conditions.
- Due to the nature of these services and the potential for significant morbidity in some procedures requiring intraoperative monitoring, these services must be used in the hospital setting only. As the level of anesthesia may significantly impact the ability to interpret intraoperative studies, continuous communication between the anesthesiologist and the monitoring physician is expected when medically indicated.
- It is also expected that a specifically trained technician, preferably registered with one of the credentialing organizations will be in continuous attendance in the operating room, recording and monitoring a single surgical case, with either the physical or electronic capacity for real-time communication with the supervising neurologist or other physician trained in neurophysiology.
- Due to the potential risk for morbidity with many of the above noted surgeries and the need for explicit and focused attention to both the monitoring and the procedure, claims submitted by operating surgeons for intraoperative monitoring in addition to surgery will not be reimbursed.
- Monitoring may be performed from a remote site, as long as a trained technician will be in continuous attendance in the operating room, with either the physical or electronic capacity for real-time communication with the supervising physician (MD/DO). Technical criteria (mandatory) include that at least eight recording channels be available (16 if EEG is monitored) for all intraoperative neurophysiological monitoring. The remotely supervising physician must have the ability to watch the tracings as they are obtained in real-time in the operating room, as well as the baseline electrophysiological test and the monitoring tracings from earlier in the case.
- Technical criteria (mandatory) for remote monitoring also include (a) routine real-time auditory or written communication between the supervising physician and the operating room and (b) the capability for telephone communications as needed between the supervising physician and the monitoring technologist, operating surgeon and the anesthesiologist.
- The equipment must also provide for all of the monitoring modalities that may be applied - auditory-evoked response, electroencephalography/electrocorticography, electromyography and nerve conduction and somatosensory-evoked response.
- Undivided attention to a unique patient may be required during some surgeries, such as during response to acute events or identification of the cerebral cortex to be resected or spared from resection. The monitoring physician must have a plan in place to transfer care to another physician of any other case during those times. When paying undivided attention to a unique patient, the physician must code and bill only for that one case during those times. For other

medically necessary intraoperative neurophysiologic monitoring, a physician may monitor up to three cases simultaneously

- Reimbursement will not be provided for "incident to" care in the hospital setting. More than one patient may be monitored at once; however, claims for physician services must be submitted only for the time devoted to monitoring when attention is directed exclusively to one patient.

## **BACKGROUND**

Intraoperative neurophysiological testing may be used to identify/prevent complications during surgery on the nervous system, its blood supply, or adjacent tissue.

Monitoring can identify new neurologic impairment; or identify separate nervous system structures (e.g. around or in a tumor); and can demonstrate which tracts of nerves are functional. Intraoperative neurophysiological testing may provide relative reassurance to the surgeon that no identifiable complication has been detected up to a certain point, allowing the surgeon to proceed further and provide a more thorough or careful surgical intervention than would have been provided in the absence of monitoring.

## **REGULATORY STATUS**

### **U.S. FOOD AND DRUG ADMINISTRATION (FDA)**

Approval or clearance by the Food and Drug Administration (FDA) does not in itself establish medical necessity or serve as a basis for coverage. Therefore, this section is provided for informational purposes only.

## **CLINICAL EVIDENCE AND LITERATURE REVIEW**

### **EVIDENCE REVIEW**

Criteria are based largely on clinical practice guidelines published through August 2024. As such, no evidence review addressing intraoperative neurophysiological testing and monitoring was conducted.

### **CLINICAL PRACTICE GUIDELINES**

#### **American Association of Neurological Surgeons and Congress of Neurological Surgeons**

In 2018, the American Association of Neurological Surgeons (AANS) and Congress of Neurological Surgeons (CNS) updated their position statement on intraoperative neurophysiologic monitoring during routine spinal surgery.<sup>1</sup> Investigators recommended intraoperative neurophysiologic monitoring, as “a reliable diagnostic tool for assessment of spinal cord integrity during surgery” (Level 1 evidence). Intraoperative motor evoked potentials may also “predict recovery in traumatic cervical spinal cord

injury.” However, AANS and Congress of Neurological Surgeons found no evidence that such monitoring provides a therapeutic benefit. The statement also recommends that intraoperative neurophysiologic monitoring should be used when the operating surgeon believes it is warranted for diagnostic value, such as with “deformity correction, spinal instability, spinal cord compression, intradural spinal cord lesions, and when in proximity to peripheral nerves or roots.”

### **American Society of Neurophysiological Monitoring**

In 2018, the American Society of Neurophysiological Monitoring (ASNM) published practice guidelines for the supervising professional on IONM.<sup>2</sup> The ASNM (2013) position statement on intraoperative MEP monitoring indicated that MEPs are an established practice option for cortical and subcortical mapping and monitoring during surgeries risking motor injury in the brain, brainstem, spinal cord or facial nerve.

### **North American Spine Society**

In 2017, the North American Spine Society published guidelines for the use of electrophysiological monitoring for surgery of the spinal column and spinal cord.<sup>3</sup> Investigators issued the following recommendations:

- Diagnostic: Level I
  - Multimodality intraoperative monitoring (MIOM), including somatosensory evoked potentials (SSEPs) and motor evoked potentials (MEPs) recording, during spinal cord/spinal column surgery is a reliable and valid diagnostic adjunct to assess spinal cord integrity and is recommended if utilized for this purpose.
  - MEP recordings are superior to SSEP recordings during spinal cord/spinal column surgery as diagnostic adjuncts for assessment of spinal cord integrity and are recommended if utilized for this purpose.
- Diagnostic: Level II
  - SSEP recordings during spinal cord/spinal column surgery are reliable and valid diagnostic adjuncts to describe spinal cord integrity and are recommended if utilized for this purpose.
- Therapeutic (Preventive): Level II
  - MIOM, including SSEPs and MEP recording, during spinal cord/spinal column surgery does not improve gross total tumor resection or improve neurological outcome, when utilized during intramedullary tumor resection procedures (no therapeutic benefit).
- Therapeutic (Preventive): Level III
  - There is insufficient evidence to suggest a therapeutic relationship between electrophysiological monitoring, including SSEP and MEP recordings, during spinal cord/spinal column surgery, and neurological outcome; its use is not recommended for this purpose. While intraoperative monitoring (IOM) may detect a neurological injury

during spinal surgery, its use does not result in improved neurological outcome, even when IOM alerts occur.

- While IOM may be considered to be integral to the technique for lateral approaches, there is insufficient evidence to support a recommendation for or against its use as a therapeutic adjunct with respect to a reduction in iatrogenic nerve injury and/or improvement in postoperative neurological outcome.

### **American Association of Neuromuscular and Electrodiagnostic Medicine**

In 2017, the American Association of Neuromuscular & Electrodiagnostic Medicine (AANEM) updated their position statement on electrodiagnostic medicine.<sup>4</sup> The recommendations indicated that intraoperative sensory-evoked potentials have demonstrated usefulness for monitoring of spinal cord, brainstem, and brain sensory tracts. The AANEM stated that intraoperative SEP monitoring is indicated for select spine surgeries in which there is a risk of additional nerve root or spinal cord injury. Indications for SEP monitoring may include, but are not limited to, complex, extensive, or lengthy procedures, and when mandated by hospital policy. However, intraoperative SEP monitoring may not be indicated for routine lumbar or cervical root decompression.

### **American Academy of Neurology**

In 2012, the American Academy of Neurology concluded that the available evidence supported IONM using SSEPs or MEPs when conducted under the supervision of a clinical neurophysiologist experienced with IONM.<sup>5</sup> Evidence was insufficient to evaluate IONM when conducted by technicians alone or by an automated device.

## **BILLING GUIDELINES AND CODING**

- Per Coding Policy 89 (“Intraoperative Neurophysiology”), CPT 95941 is not covered.
- G0453 – Remote IONM Professional services per 15 min of focused attention on one patient. This does not need to be continuous. Total professional time is the sum of all focused time spent on patient. At least 8 minutes of care must have been performed in order to bill for a 15-minute interval. (i.e., Professional time of 20 minutes—bill G0453 x 1. Professional time of 23 minutes, bill G0453 x 2.)
- CPT 95937 – Neuromuscular Junction Testing is same as Train of Four (To4) testing and is a routine part of anesthesia care and is not a separately billable service.
- CPT codes for EMG (95860, 95861, 95863, 95864) should not be billed together with 95938 (SSEP) for the same episode of intraoperative monitoring.
- Please refer to [Coding Policy 89 \(“Intraoperative Neurophysiology”\)](#) for additional information.



<b>CODES*</b>		
<u>Note:</u>		
<ul style="list-style-type: none"> <li>• Prior authorization for intraoperative neurophysiological testing and monitoring (CPT: 95940; HCPCS: G0453) may be required depending on the diagnosis codes billed.</li> <li>• Intraoperative neurophysiological testing and monitoring (CPT: 95940; HCPCS: G0453) will deny as not medically necessary when performed during lumbar surgery below spinal column level L1-L2 and/or during cervical spine surgery</li> <li>• Please refer to the appropriate section of the Billing Guideline Appendix linked below.</li> </ul>		
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)	<ul style="list-style-type: none"> <li>• Prior authorization is required when billed with these diagnosis codes: <a href="#">Appendix Link</a></li> <li>• Intraoperative monitoring is considered <u>not medically necessary</u> when billed with these diagnosis codes: <a href="#">Appendix Link</a></li> </ul>
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)	
<b>Electroencephalogram (EEG)</b>		
95707	Electroencephalogram (EEG), without video, review of data, technical description by EEG technologist, 2-12 hours; with continuous, real-time monitoring and maintenance	
95717	Electroencephalogram (EEG), continuous recording, physician or other qualified health care professional review of recorded events, analysis of spike and seizure detection, interpretation and report, 2-12 hours of EEG recording; without video	
95812	Electroencephalogram (EEG) extended monitoring; 41-60 minutes	
95813	Electroencephalogram (EEG) extended monitoring; 61-119 minutes	
95822	Electroencephalogram (EEG); recording in coma or sleep only	
95955	Electroencephalogram (EEG) during nonintracranial surgery (eg, carotid surgery)	
95957	Digital analysis of electroencephalogram (EEG) (eg, for epileptic spike analysis)	
<b>Somatosensory Evoked Potential (SSEP)</b>		
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	
<b>Motor Evoked Potential (MEP)</b>		
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	

<b>Auditory Brainstem Evoked Potential/Brainstem Auditory Evoked Potential (ABR/BAEP)</b>	
92652	Auditory evoked potentials; for threshold estimation at multiple frequencies, with interpretation and report
92653	Auditory evoked potentials; neurodiagnostic, with interpretation and report
<b>Peripheral Nerve Stimulation</b>	
95885	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)
95886	Needle electromyography, each extremity, with related paraspinal areas, when performed, done with nerve conduction, amplitude and latency/velocity study; limited (List separately in addition to code for primary procedure)
95887	Needle electromyography, non-extremity (cranial nerve supplied or axial) muscle(s) done with nerve conduction, amplitude and latency/velocity study (List separately in addition to code for primary procedure)
95907	Nerve conduction studies; 1-2 studies
95908	Nerve conduction studies; 3-4 studies
95909	Nerve conduction studies; 5-6 studies
95910	Nerve conduction studies; 7-8 studies
95911	Nerve conduction studies; 9-10 studies
95912	Nerve conduction studies; 11-12 studies
95913	Nerve conduction studies; 13 or more studies
<b>Oculomotor, Facial, Trigeminal and Lower Cranial Nerve Monitoring</b>	
95867	Needle electromyography; cranial nerve supplied muscle(s), unilateral
95868	Needle electromyography; cranial nerve supplied muscles, bilateral
95933	Orbicularis oculi (blink) reflex, by electrodiagnostic testing
<b>Free-Running Electromyography (EMG)</b>	
51785	Needle electromyography studies (EMG) of anal or urethral sphincter, any technique
95860	Needle electromyography; 1 extremity with or without related paraspinal areas
95861	Needle electromyography; 2 extremities with or without related paraspinal areas
95863	Needle electromyography; 3 extremities with or without related paraspinal areas
95864	Needle electromyography; 4 extremities with or without related paraspinal areas
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

**\*Coding Notes:**

- The above code list is provided as a courtesy and may not be all-inclusive. Inclusion or omission of a code from this policy neither implies nor guarantees reimbursement or coverage. Some codes may not require routine review for medical necessity, but they are subject to provider contracts, as well as member benefits, eligibility and potential utilization audit.
- All unlisted codes are reviewed for medical necessity, correct coding, and pricing at the claim level. If an unlisted code is submitted for non-covered services addressed in this policy then it will be **denied as not covered**. If an unlisted code is submitted for potentially covered services addressed in this policy, to avoid post-service denial, **prior authorization is recommended**.
- See the non-covered and prior authorization lists on the Company [Medical Policy, Reimbursement Policy, Pharmacy Policy and Provider Information website](#) for additional information.

- HCPCS/CPT code(s) may be subject to National Correct Coding Initiative (NCCI) procedure-to-procedure (PTP) bundling edits and daily maximum edits known as “medically unlikely edits” (MUEs) published by the Centers for Medicare and Medicaid Services (CMS). This policy does not take precedence over NCCI edits or MUEs. Please refer to the CMS website for coding guidelines and applicable code combinations.

## REFERENCES

1. American Association of Neurological Surgeons and Congress of Neurological Surgeons. AANS/CNS Joint Section on Disorders of the Spine and Peripheral Nerves Updated Position Statement: Intraoperative Electrophysiological Monitoring. <https://spinesection.org/about/position-statements/interoperative-electrophysiological-monitoring/>. Published 2018. Accessed 7/22/2024.
2. Gertsch JH, Moreira JJ, Lee GR, et al. Practice guidelines for the supervising professional: intraoperative neurophysiological monitoring. *Journal of clinical monitoring and computing*. 2019;33(2):175-183.
3. Hadley MN, Shank CD, Rozzelle CJ, Walters BC. Guidelines for the Use of Electrophysiological Monitoring for Surgery of the Human Spinal Column and Spinal Cord. *Neurosurgery*. 2017;81(5):713-732.
4. American Association of Neuromuscular & Electrodiagnostic Medicine. Recommended Policy for Electrodiagnostic Medicine. <https://www.aanem.org/Advocacy/Position-Statements/Recommended-Policy-for-Electrodiagnostic-Medicine>. Published 2014. Accessed 7/22/2024.
5. American Academy of Neurology Professional Association. Principles of Coding for Intraoperative Neurophysiologic Monitoring and Testing Model Policy. [https://www.aan.com/siteassets/home-page/tools-and-resources/practicing-neurologist-administrators/billing-and-coding/model-coverage-policies/18iommodelpolicy\\_tr.pdf](https://www.aan.com/siteassets/home-page/tools-and-resources/practicing-neurologist-administrators/billing-and-coding/model-coverage-policies/18iommodelpolicy_tr.pdf). Published 2012. Accessed 7/22/2024.

## POLICY REVISION HISTORY

DATE	REVISION SUMMARY
2/2023	Converted to new policy template.
9/2023	Interim update. Billing guidelines updated
11/2023	Annual update. No changes.
10/2024	Annual review. No changes.

## APPENDICES

### Prior Authorization Required

Intraoperative neurophysiological testing and monitoring (CPT: 95940; HCPCS: G0453) will require prior authorization when billed with any of the following diagnosis codes:

M40.03	M40.04	M40.05	M40.12	M40.13
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M40.14	M41.25	M47.14	M48.44XA	S12.200A
M40.15	M41.26	M47.15	M48.45XA	S12.201A
M40.202	M41.27	M47.16	M48.46XA	S12.230A
M40.203	M41.34	M50.01	M48.47XA	S12.231A
M40.204	M41.35	M50.020	M48.48XA	S12.24XA
M40.205	M41.41	M50.021	M48.51XA	S12.250A
M40.292	M41.42	M50.022	M48.52XA	S12.251A
M40.293	M41.43	M50.023	M48.53XA	S12.290A
M40.294	M41.44	M50.03	M48.54XA	S12.291A
M40.295	M41.45	M51.04	M48.55XA	S12.300A
M40.35	M41.46	M51.05	M48.56XA	S12.301A
M40.36	M41.47	M51.06	M48.57XA	S12.330A
M40.37	M41.52	M51.9	M48.58XA	S12.331A
M40.45	M41.53	M96.2	M80.08XA	S12.34XA
M40.46	M41.54	M96.3	M80.88XA	S12.350A
M40.47	M41.55	M96.4	M84.58XA	S12.351A
M40.55	M41.56	M96.5	M84.68XA	S12.390A
M40.56	M41.57	P11.5	S12.000A	S12.391A
M40.57	M41.82	Q05.0	S12.001A	S12.400A
M41.02	M41.83	Q05.1	S12.01XA	S12.401A
M41.03	M41.84	Q05.2	S12.02XA	S12.430A
M41.04	M41.85	Q05.3	S12.030A	S12.431A
M41.05	M41.86	Q05.5	S12.031A	S12.44XA
M41.06	M41.87	Q05.6	S12.040A	S12.450A
M41.07	M43.8X1	Q05.7	S12.041A	S12.451A
M41.08	M43.8X2	Q05.8	S12.090A	S12.490A
M41.112	M43.8X3	Q07.00	S12.091A	S12.491A
M41.113	M43.8X4	Q07.01	S12.100A	S12.500A
M41.114	M43.8X5	Q07.02	S12.101A	S12.501A
M41.115	M43.8X6	Q07.03	S12.110A	S12.530A
M41.116	M43.8X7	Q27.9	S12.111A	S12.531A
M41.117	M43.8X8	Q28.2	S12.112A	S12.54XA
M41.122	M47.011	Q28.3	S12.120A	S12.550A
M41.123	M47.012	Q85.00	S12.121A	S12.551A
M41.124	M47.013	Q85.01	S12.130A	S12.590A
M41.125	M47.014	Q85.02	S12.131A	S12.591A
M41.126	M47.015	Q85.03	S12.14XA	S12.600A
M41.127	M47.016	Q85.09	S12.150A	S12.601A
M41.22	M47.11	M48.41XA	S12.151A	S12.630A
M41.23	M47.12	M48.42XA	S12.190A	S12.631A
M41.24	M47.13	M48.43XA	S12.191A	S12.64XA

S12.650A	S22.061A	S32.042A	M41.9	M50.921
S12.651A	S22.062A	S32.048A	M43.07	M51.16
S12.690A	S22.068A	S32.049A	M43.12	M51.17
S12.691A	S22.069A	S32.050A	M43.16	M51.25
S14.2XXA	S22.070A	S32.051A	M43.17	M51.26
S14.3XXA	S22.071A	S32.052A	M47.22	M51.27
S22.010A	S22.072A	S32.058A	M47.26	M51.36
S22.011A	S22.078A	S32.059A	M47.27	M51.86
S22.012A	S22.079A	S32.10XA	M47.811	M53.0
S22.018A	S22.080A	S32.110A	M47.812	M53.2X1
S22.019A	S22.081A	S32.111A	M47.816	M54.12
S22.020A	S22.082A	S32.112A	M47.817	M54.16
S22.021A	S22.088A	S32.119A	M47.896	M54.17
S22.022A	S22.089A	S32.120A	M48.02	M54.5
S22.028A	S24.2XXA	S32.121A	M48.03	M54.9
S22.029A	S32.010A	S32.122A	M48.04	M96.0
S22.030A	S32.011A	S32.129A	M48.05	M96.1
S22.031A	S32.012A	S32.130A	M48.061	M99.71
S22.032A	S32.018A	S32.131A	M48.062	Q67.5
S22.038A	S32.019A	S32.132A	M48.07	S12.9XXA
S22.039A	S32.020A	S32.139A	M50.122	S22.009G
S22.040A	S32.021A	S32.14XA	M50.123	S32.009A
S22.041A	S32.022A	S32.15XA	M50.20	M71.38
S22.042A	S32.028A	S32.16XA	M50.21	M79.601
S22.048A	S32.029A	S32.17XA	M50.221	G60.9
S22.049A	S32.030A	S32.19XA	M50.222	G54.1
S22.050A	S32.031A	S32.2XXA	M50.223	G54.2
S22.051A	S32.032A	S34.21XA	M50.30	G54.3
S22.052A	S32.038A	S34.22XA	M50.31	G54.4
S22.058A	S32.039A	S34.4XXA	M50.322	
S22.059A	S32.040A	G95.20	M50.821	
S22.060A	S32.041A	G95.9	M50.823	

### Medically Necessary Without Prior Authorization

Intraoperative neurophysiological testing and monitoring (CPT: 95940; HCPCS: G0453) may be considered medically necessary and covered without prior authorization only when billed with any of the following diagnosis codes:

A18.01	C70.1	C72.21	C72.32	C72.50
C41.2	C72.0	C72.22	C72.41	C72.59
C70.0	C72.1	C72.31	C72.42	C72.9

C73	G46.0	H74.42	I63.033	I63.431
C79.31	G46.1	H74.43	I63.09	I63.432
C79.32	G46.2	H83.11	I63.10	I63.433
C79.49	G50.0	H83.12	I63.111	I63.441
D21.0	G50.1	H83.13	I63.112	I63.442
D32.0	G52.9	I60.00	I63.113	I63.443
D32.1	G53	I60.01	I63.12	I63.449
D33.0	G54.0	I60.02	I63.131	I63.49
D33.1	G56.11	I60.11	I63.132	I63.50
D33.2	G56.12	I60.12	I63.133	I63.511
D33.3	G56.13	I60.2	I63.19	I63.512
D33.4	G56.21	I60.31	I63.20	I63.513
D33.7	G56.22	I60.32	I63.211	I63.521
D33.9	G56.23	I60.4	I63.212	I63.522
D42.0	G56.31	I60.51	I63.213	I63.523
D42.1	G56.32	I60.52	I63.22	I63.531
D42.9	G56.33	I60.6	I63.231	I63.532
D43.0	G57.01	I60.8	I63.232	I63.533
D43.1	G57.02	I60.9	I63.233	I63.541
D43.2	G57.03	I61.0	I63.29	I63.542
D43.3	G80.4	I61.1	I63.30	I63.543
D43.4	G80.8	I61.2	I63.311	I63.59
D43.8	G80.9	I61.3	I63.312	I63.6
D44.3	G93.5	I61.4	I63.313	I63.81
D44.4	G95.0	I61.5	I63.321	I63.89
D44.5	H71.01	I61.6	I63.322	I63.9
D44.6	H71.02	I61.8	I63.323	I65.01
D44.7	H71.03	I61.9	I63.331	I65.02
D49.6	H71.11	I62.00	I63.332	I65.03
G06.1	H71.12	I62.01	I63.333	I65.1
G40.011	H71.13	I62.02	I63.341	I65.21
G40.019	H71.21	I62.03	I63.342	I65.22
G40.111	H71.22	I62.1	I63.343	I65.23
G40.119	H71.23	I62.9	I63.39	I65.8
G40.211	H71.31	I63.00	I63.40	I66.01
G40.219	H71.32	I63.011	I63.411	I66.02
G45.0	H71.33	I63.012	I63.412	I66.03
G45.1	H71.91	I63.013	I63.413	I66.11
G45.2	H71.92	I63.02	I63.421	I66.12
G45.8	H71.93	I63.031	I63.422	I66.13
G45.9	H74.41	I63.032	I63.423	I66.21

I66.22	I67.5	I71.2	I77.79	P11.3
I66.23	I67.841	I71.3	I79.0	P11.4
I66.3	I67.848	I71.4	Q27.39	P14.0
I66.8	I71.01	I71.5	C79.51	P14.1
I66.9	I71.02	I71.6	G80.1	P14.2
I67.0	I71.03	I77.71	M47.021	P14.3
I67.1	I71.1	I77.74	M47.022	P14.8

**Not Medically Necessary**

Intraoperative neurophysiological testing and monitoring (CPT: 95940; HCPCS: G0453) will deny as not medically necessary and not covered when billed with any of the following diagnosis codes for lumbar surgery below L1 and L2 or cervical surgery:

C41.4	M46.88	M49.88	M99.83	S32.009G
D16.8	M46.96	M51.37	M99.84	S32.009K
G83.4	M46.97	M51.46	Q76.426	S32.009S
G95.81	M46.98	M51.47	Q76.427	S32.019B
M43.06	M47.28	M51.87	Q76.428	S32.019D
M43.08	M47.818	M53.2X6	S32.000A	S32.019G
M43.18	M47.897	M53.2X7	S32.000B	S32.019K
M43.26	M47.898	M53.2X8	S32.000D	S32.019S
M43.27	M48.08	M53.3	S32.000G	S32.020B
M43.28	M48.16	M53.86	S32.000K	S32.020D
M43.5X6	M48.17	M53.87	S32.000S	S32.020G
M43.5X7	M48.18	M53.88	S32.001A	S32.020K
M43.5X8	M48.26	M54.18	S32.001B	S32.020S
M45.6	M48.27	M54.30	S32.001D	S32.021B
M45.7	M48.36	M54.31	S32.001G	S32.021D
M45.8	M48.37	M54.32	S32.001K	S32.021G
M46.26	M48.38	M54.40	S32.001S	S32.021K
M46.27	M48.56XD	M54.41	S32.002A	S32.021S
M46.28	M48.56XG	M54.42	S32.002B	S32.022B
M46.36	M48.56XS	M99.23	S32.002D	S32.022D
M46.37	M48.57XD	M99.24	S32.002G	S32.022G
M46.38	M48.57XG	M99.33	S32.002K	S32.022K
M46.46	M48.57XS	M99.34	S32.002S	S32.022S
M46.47	M48.58XD	M99.43	S32.008A	S32.028B
M46.48	M48.58XG	M99.44	S32.008B	S32.028D
M46.56	M48.58XS	M99.53	S32.008D	S32.028G
M46.57	M48.8X6	M99.54	S32.008G	S32.028K
M46.58	M48.8X7	M99.63	S32.008K	S32.028S
M46.86	M48.8X8	M99.64	S32.008S	S32.029B
M46.87	M49.86	M99.73	S32.009B	S32.029D
	M49.87	M99.74	S32.009D	S32.029G

S32.029K	S32.048S	S32.112B	S32.139D	S33.130A
S32.029S	S32.049B	S32.112D	S32.139G	S33.130D
S32.030B	S32.049D	S32.112G	S32.139K	S33.130S
S32.030D	S32.049G	S32.112K	S32.139S	S33.131A
S32.030G	S32.049K	S32.112S	S32.14XB	S33.131D
S32.030K	S32.049S	S32.119B	S32.14XD	S33.131S
S32.030S	S32.050B	S32.119D	S32.14XG	S33.140A
32.031B	S32.050D	S32.119G	S32.14XK	S33.140D
S32.031D	S32.050G	S32.119K	S32.14XS	S33.140S
S32.031G	S32.050K	S32.119S	S32.15XB	S33.141A
S32.031K	S32.050S	S32.120B	S32.15XD	S33.141D
S32.031S	S32.051B	S32.120D	S32.15XG	S33.141S
S32.032B	S32.051D	S32.120G	S32.15XK	S33.2XXA
S32.032D	S32.051G	S32.120K	S32.15XS	S33.2XXD
S32.032G	S32.051K	S32.120S	S32.16XB	S33.2XXS
S32.032K	S32.051S	S32.121B	S32.16XD	S33.30XA
S32.032S	S32.052B	S32.121D	S32.16XG	S33.30XD
32.038B	S32.052D	S32.121G	S32.16XK	S33.30XS
S32.038D	S32.052G	S32.121K	S32.16XS	S33.39XA
S32.038G	S32.052K	S32.121S	S32.17XB	S33.39XD
S32.038K	S32.052S	S32.122B	S32.17XD	S33.39XS
S32.038S	S32.058B	S32.122D	S32.17XG	S33.6XXA
S32.039B	S32.058D	S32.122G	S32.17XK	S33.6XXD
S32.039D	S32.058G	S32.122K	S32.17XS	S33.6XXS
S32.039G	S32.058K	S32.122S	S32.19XB	S33.8XXA
S32.039K	S32.058S	S32.129B	S32.19XD	S33.8XXD
S32.039S	S32.059B	S32.129D	S32.19XG	S33.8XXS
S32.040B	S32.059D	S32.129G	S32.19XK	S34.102A
S32.040D	S32.059G	S32.129K	S32.19XS	S34.102D
S32.040G	S32.059K	S32.129S	S32.2XXB	S34.102S
S32.040K	S32.059S	S32.130B	S32.2XXD	S34.103A
S32.040S	S32.10XB	S32.130D	S32.2XXG	S34.103D
S32.041B	S32.10XD	S32.130G	S32.2XXK	S34.103S
S32.041D	S32.10XG	S32.130K	S32.2XXS	S34.104A
S32.041G	S32.10XK	S32.130S	S33.100A	S34.104D
S32.041K	S32.10XS	S32.131B	S33.100D	S34.104S
S32.041S	S32.110B	S32.131D	S33.100S	S34.105A
S32.042B	S32.110D	S32.131G	S33.101A	S34.105D
S32.042D	S32.110G	S32.131K	S33.101D	S34.105S
S32.042G	S32.110K	S32.131S	S33.101S	S34.109A
S32.042K	S32.110S	S32.132B	S33.120A	S34.109D
S32.042S	S32.111B	S32.132D	S33.120D	S34.109S
S32.048B	S32.111D	S32.132G	S33.120S	S34.112A
S32.048D	S32.111G	S32.132K	S33.121A	S34.112D
S32.048G	S32.111K	S32.132S	S33.121D	S34.112S
S32.048K	S32.111S	S32.139B	S33.121S	S34.113A



S34.113D	G96.01	M48.42XD	Q76.49	S12.431D
S34.113S	G96.02	M48.43XD	S12.000D	S12.44XD
S34.114A	G96.08	M48.51XD	S12.001D	S12.450D
S34.114D	G96.09	M48.52XD	S12.01XD	S12.451D
S34.114S	G96.11	M48.53XD	S12.02XD	S12.490D
S34.115A	G96.12	M49.81	S12.030D	S12.491D
S34.115D	G97.41	M49.82	S12.031D	S12.500D
S34.115S	G97.48	M49.83	S12.040D	S12.501D
S34.119A	G97.49	M50.00	S12.041D	S12.530D
S34.119D	G97.61	M50.10	S12.090D	S12.531D
S34.119S	G97.62	M50.11	S12.091D	S12.54XD
S34.122A	G97.63	M50.120	S12.100D	S12.550D
S34.122D	G97.64	M50.121	S12.101D	S12.551D
S34.122S	M25.78	M50.13	S12.110D	S12.590D
S34.123A	M42.01	M50.220	S12.111D	S12.591D
S34.123D	M42.02	M50.23	S12.112D	S12.600D
S34.123S	M42.03	M50.320	S12.120D	S12.601D
S34.124A	M42.11	M50.321	S12.121D	S12.630D
S34.124D	M42.12	M50.323	S12.130D	S12.631D
S34.124S	M42.13	M50.33	S12.131D	S12.64XD
S34.125A	M43.01	M50.80	S12.14XD	S12.650D
S34.125D	M43.02	M50.81	S12.150D	S12.651D
S34.125S	M43.03	M50.820	S12.151D	S12.690D
S34.129A	M43.3	M50.822	S12.190D	S12.691D
S34.129D	M43.4	M50.83	S12.191D	S13.0XXA
S34.129S	M45.1	M50.90	S12.200D	S13.0XXD
S34.131A	M45.2	M50.91	S12.201D	S13.0XXS
S34.131D	M45.3	M50.920	S12.230D	S13.100A
S34.131S	M47.029	M50.922	S12.231D	S13.100D
S34.132A	M47.21	M50.923	S12.24XD	S13.100S
S34.132D	M47.23	M50.93	S12.250D	S13.101A
S34.132S	M47.813	M53.1	S12.251D	S13.101D
S34.139A	M47.891	M53.81	S12.290D	S13.101S
S34.139D	M47.892	M53.82	S12.291D	S13.4XXA
S34.139S	M47.893	M53.83	S12.300D	S13.4XXD
S34.21XD	M48.01	M54.01	S12.301D	S13.4XXS
S34.21XS	M48.11	M54.02	S12.330D	S13.8XXA
S34.22XD	M48.12	M54.03	S12.331D	S13.8XXD
S34.22XS	M48.13	M54.11	S12.34XD	S13.8XXS
S34.3XXA	M48.21	M54.13	S12.350D	S13.9XXA
S34.3XXD	M48.22	M54.2	S12.351D	S13.9XXD
S34.3XXS	M48.23	M54.81	S12.390D	S13.9XXS
S34.4XXD	M48.31	M99.01	S12.391D	S14.119A
S34.4XXS	M48.32	M99.81	S12.400D	S14.119D
G95.89	M48.33	Q76.411	S12.401D	S14.119S
G96.00	M48.41XD	Q76.412	S12.430D	S14.159A

S14.159D  
S14.159S  
T84.216A  
T84.216D  
T84.216S  
T84.226A  
T84.226D  
T84.226S  
T84.296A  
T84.296D  
T84.296S  
T84.428A  
T84.428D  
T84.428S  
T84.498A  
T84.498D  
T84.498S  
T84.85XA  
T84.85XD  
T84.85XS  
T84.89XA  
T84.89XD  
T84.89XS  
T85.698A  
T85.698D  
T85.698S  
T85.898A  
T85.898D  
T85.898S  
Z47.2  
Z48.811

