

April 21, 2021

David E. Mino, M.D., M.B.A.
Senior Medical Director
Cigna Healthcare, Clinical Performance and Quality
National Medical Director Orthopaedic Surgery and Spinal Disorders
150 S. Warner Ave #310
King of Prussia, PA 19406

Transmitted via email

Subject: Coverage for Intraoperative Neurophysiologic Monitoring

Dear Dr. Mino,

On behalf of over 34,000 orthopaedic surgeons and residents represented by the American Academy of Orthopaedic Surgeons (AAOS), we appreciate the opportunity to respond to your inquiry regarding Cigna's revision of coverage for intraoperative neurophysiologic monitoring (IONM) during cervical spine surgery. These following specialty societies fully endorse our position as outlined below and also have agreed to sign this letter and include: The North American Spine Society (NASS), the Scoliosis Research Society (SRS), the Cervical Spine Research Society (CSRS), and the International Society for the Advancement of Spine Surgery (ISASS).

We reviewed the evidence you have shared in favor of your decision to revise coverage for IONM. However, from your evidence, one of our main conclusions is that the surgeon should have the ultimate choice to determine what is clinically necessary and appropriate. Cigna's proposed revision of coverage is conflicting with what is considered best practice by a multi-specialty group of spine and neurosurgeons who advised the AAOS on this topic.

In addition to the procedures your letter names under the umbrella of "cervical spine surgery (anterior and/or posterior cervical fusion, discectomy or laminectomy) in the absence of a vertebral or intraspinal tumor, traumatic spine/spinal cord injury with subluxation/dislocation, or surgery of the spinal cord" our medical experts believe that the following procedures may also require IONM:

- Cervical pedicle, lateral mass screw placement
- Reduction maneuvers for some cervical fractures
- Deformity correction
- Decompression of the spinal cord for cervical myelopathy
- Surgery on a syrinx of the spinal cord
- Decompression of cervical nerve root for radiculopathy

It is the opinion of the AAOS and our colleagues from the relevant specialty societies that the necessity of this monitoring is a surgeon's decision which is essential in many cases. In fact, the American Association

of Neuromuscular and Electrodiagnostic Medicine (AANEM) asserts in their “Recommended Policy for Electrodiagnostic Medicine” that “...Intraoperative somatosensory evoked potentials (SEP) monitoring is indicated for selected 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.”¹

Furthermore, the “Guidelines for the Use of Electrophysiological Monitoring or Surgery of the Human Spinal Column and Spinal Cord” published in the journal *Neurosurgery* and endorsed by the American Association of Neurological Surgeons/Congress of Neurological Surgeons (AANS/CNS) clarifies in their literature review that “IONM appears to be a reliable, safe, and valid means to measure the functional integrity of the spinal cord during spinal column operative procedures.”²

The report continues to state that “Its utility as a diagnostic tool is supported by robust class I and class II and supportive class III medical evidence.” While the report concedes that it is unclear whether “the use of multimodality spinal cord monitoring improves patient outcomes (useful as a therapeutic tool or adjunct) during spinal column or spinal cord surgery”, it does make clear that the diagnostic value is robust.³ The AANS/CNS further asserts in their position statement “Intraoperative Electrophysiological Monitoring” that “IOM should be performed in procedures when the operating surgeon feels that the diagnostic information is of value, such as deformity correction, spinal instability, spinal cord compression, intradural spinal cord lesions and when in proximity to peripheral nerves or roots.”⁴

A critical distinction between the clinical view of the literature and the real-world experience of surgeons is the human impact of patient outcomes. While in some cases the use of IONM is considered unnecessary given the low risk associated with a particular spinal procedure, it is nonetheless of value to patients, whose ability to participate in normal activities of daily living could be either jeopardized or fortified using IONM. For example, in procedures where Kerrison rongeur is utilized, the use of electromyography (EMG) acts as a warning sign when a nerve has been brushed against or when a tight nerve root has been compressed. Further, in cases where spinal cord compression or cervical myelopathy is present, the use of IONM should be covered without question or requirement for further documentation. In instances where preventable nerve damage can be detected using IONM, during procedures such as graft placement or the formation of a haematoma during closure, it would be both clinically and morally undesirable to deny coverage for monitoring which could prevent irreversible neurologic harm.

¹ American Association of Neuromuscular & Electrodiagnostic Medicine, 2019. *Recommended Policy for Electrodiagnostic Medicine*. [online] pp.11-12. Available at: <https://www.aanem.org/getmedia/c741353a-354b-4527-b8aa-ed24e42218ca/Recommended-Policy-for-Electrodiagnostic-Medicine_2019.pdf> [Accessed April 2021]

² Hadley, M., Shank, C., Rozzelle, C. and Walters, B., 2017. Guidelines for the Use of Electrophysiological Monitoring for Surgery of the Human Spinal Column and Spinal Cord. *Neurosurgery*, 81(5), pp.713-732.

³ Ibid

⁴ American Association of Neurological Surgeons/Congress of Neurological Surgeons, 2018. *AANS/CNS Joint Section on Disorders of the Spine and Peripheral Nerves Updated Position Statement: Intraoperative Electrophysiological Monitoring*. [online] Available at: <<https://www.spinesection.org/statement-detail/intraoperative-electrophysiological-monitoring>> [Accessed April 2021].

Beyond prevention in and of itself, several peer-reviewed articles provide evidence for the clinical value of IONM for radiculopathic patients. Xu et. al. (2011) examined the use of IONM in 57 patients without myelopathy and reported on three cases where IONM changes were present, a surgical intervention was performed, and then subsequent improvement in IONM signals was observed.⁵ This demonstrates the potential clinical impact that IONM may have on patient outcomes. Further support for this conclusion can be found in “Neurophysiological monitoring during cervical spine surgeries: Longitudinal costs and outcomes” published in *Clinical Neurophysiology*.⁶ This study examined the longitudinal cost and outcomes associated with single level anterior cervical discectomy and fusion (ACDF) by comparing monitored and unmonitored groups. Although the study did not explicitly control for diagnosis, the assumption in the study is that it was heavily biased towards radiculopathic cases. Upon the performance of regression analyses to isolate the effects of IONM on individual variables, the use of IONM was found to decrease costs and improve outcome. Despite cost being associated with additional spending during the period of surgical admission, overall, the IONM group saw lower total spending in the year after surgical admission.

In addition to the decrease in net spending observed by Ney and Kessler, they also found that the use of IONM during ACDF led to a significant decrease in patient length of stay, with those patients also experiencing complication rates 80% lower than those without IONM.⁷ Readmission rates were also significantly lower at thirty-day post-operative and one-year post-operative. Those cases with IONM were further associated with a significant decline in the rate of opioid prescription one-year post-operative. In light of these findings, the researchers concluded that when all relevant variables were controlled for using proper statistical analyses, the routine use of IONM generally decreased neurological complications without creating additional costs.

Although, in some cases, overall cost savings to the health care system are realized with IONM, we are also concerned with the uptick in surprise bills sent to patients for intraoperative monitoring fees. To mitigate the burden of surprise bills, we request that charges for IONM be reasonable and disclosed to the patient prior to surgery. Furthermore, the issue of surprise bills is often caused by the refusal of commercial insurers to expand their networks and allow for the inclusion of more physicians to practice as in-network providers. We ask that Cigna consider the downstream effects of this policy and expand networks. By engaging IONM providers and bringing them in-network, insurers can contain costs while continuing to provide quality care.

Considering the multiple clinical scenarios discussed in this letter and based on the feedback of our surgeon colleagues across multiple specialties, we urge Cigna to reconsider the proposal to deny coverage for IONM during cervical spine surgery. Although the range of evidence may vary on the effectiveness of intraoperative neurophysiologic monitoring for therapeutic purposes, we can all agree that the best outcomes for our patients should be the foremost priority when determining coverage.

⁵ Xu R, Ritzl EK, Sait M, et al. A role for motor and somatosensory evoked potentials during anterior cervical discectomy and fusion for patients without myelopathy: Analysis of 57 consecutive cases. *Surg Neurol Int.* 2011;2:133. doi:10.4103/2152-7806.85606

⁶ Ney JP, Kessler DP. Neurophysiological monitoring during cervical spine surgeries: Longitudinal costs and outcomes. *Clin Neurophysiol.* 2018;129(11):2245-2251. doi:10.1016/j.clinph.2018.08.002

⁷ Ibid

Thank you for your time and attention to the concerns of the American Academy of Orthopaedic Surgeons (AAOS) and all the signatory medical societies. Should you have questions on any of the above comments, please do not hesitate to contact Shreyasi Deb, PhD, MBA, AAOS Office of Government Relations at deb@aaos.org.

Sincerely,



Daniel K. Guy, MD, FAAOS
President, AAOS

cc: Felix H. Savoie, III, MD, FAAOS, First Vice-President, AAOS
Kevin J. Bozic, MD, MBA, FAAOS, Second Vice-President, AAOS
Thomas E. Arend, Jr., Esq., CAE, CEO, AAOS
Nathan Glusenkamp, Chief Quality and Registries Officer, AAOS
Graham Newson, Director, Office of Government Relations, AAOS



Morgan Lorio, MD
ISASS Coding and Reimbursement Taskforce



John M. Rhee, MD
President, CSRS



Muharrem Yazici, MD
President, SRS



Eeric Truumees, MD
President, NASS