Surface Electromyography (sEMG) Testing

MEDICAL POLICY NUMBER: 136

Effective Date: 7/1/2023

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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, Providence Plan Partners, and Ayin Health Solutions 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

Surface electromyography testing, such as the MyoVision PhysioMonitoring Systems, is considered **not medically necessary** as a treatment of any condition.

Link to Evidence Summary

POLICY CROSS REFERENCES

None

The full Company portfolio of current Medical Policies is available online and can be accessed here.

POLICY GUIDELINES

BACKGROUND

Surface electromyography (sEMG) is marketed to be a surface electrophysiological technique that quantifies muscle contractions in specific muscle groups. Testing has been proposed to evaluate the performance of muscles and nerves in patients with a variety of neuromuscular disorders.

Dynamic sEMG testing and static sEMG testing are techniques where electrodes are used to measure muscle contractions.

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

A review of the ECRI, Hayes, Cochrane, and PubMed databases was conducted regarding the use of sEMG testing for myopathic and neuropathic conditions such as low back pain, myofascial pain, paraspinal fatigue and other neuromuscular disorders. Below is a summary of the available evidence identified through May 2023.

Study results regarding the use of surface electromyography (sEMG) in the assessment neuropathic and myopathic conditions were inconsistent.[1-7] There was variability of results dependent on which muscle groups were being studied. In addition, study results were mixed regarding the use of sEMG to distinguish between neuropathic and myopathic conditions or to diagnose specific neuromuscular diseases.

Most studies which evaluated the use of sEMG were limited by small sample size and were retrospective in nature, with 8-10 year follow-up. Large, well-designed, randomized controlled trials are needed to determine the accuracy and validity of sEMG testing for the diagnosis of neuropathic and myopathic pain.

CLINICAL PRACTICE GUIDELINES

The Council on Chiropractic Practice

In 2013, the Council on Chiropractic Practice published consensus guidelines indicating sEMG may be used for recording changes in the electrical activity muscle changes associated with subluxation.[8] Data used to support this recommendation contained similar limitations as noted above, such as a lack of randomized study design comparing sEMG to standard of care diagnostic techniques.

BILLING GUIDELINES AND CODING

HCPCS code S3900 is not recognized as a valid code for claim submission as indicated in the relevant Company Coding Policy (HCPCS S-Codes and H-Codes, 22.0). Providers need to use alternate available CPT or HCPCS codes to report for this service. If no specific CPT or HCPCS code is available, then an unlisted code may be used. Note that unlisted codes are reviewed for medical necessity, correct coding, and pricing at the claim level. Thus, if an unlisted code is billed related to a non-covered service addressed in this policy, it will be denied as not covered.

CODES*		
CPT	95999	Unlisted neurological or neuromuscular diagnostic procedure
	96002	Dynamic surface electromyography, during walking or other functional activities, 1-12 muscles
HCPCS	S3900	Surface electromyography (emg)

***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

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4. Geisser ME, Ranavaya M, Haig AJ, et al. A meta-analytic review of surface electromyography among persons with low back pain and normal, healthy controls. *J Pain.* 2005;6(11):711-726. https://www.ncbi.nlm.nih.gov/pubmed/16275595
5. Brandt M, Andersen LL, Samani A, Jakobsen MD, Madeleine P. Inter-day reliability of surface electromyography recordings of the lumbar part of erector spinae longissimus and trapezius descendens during box lifting. *BMC Musculoskelet Disord.* 2017;18(1):519. https://www.ncbi.nlm.nih.gov/pubmed/29228936
6. Kothari M, Stubbs PW, Pedersen AR, Jensen J, Nielsen JF. Reliability of surface electromyography measurements from the suprahyoid muscle complex. *J Oral Rehabil.* 2017;44(9):683-690. https://www.ncbi.nlm.nih.gov/pubmed/28644567

7. Musto F, Rosati R, Sforza C, Toma M, Dellavia C. Standardised surface electromyography allows effective submental muscles assessment. *J Electromyogr Kinesiol.* 2017;34:1-5. https://www.ncbi.nlm.nih.gov/pubmed/28273612
8. Council on Chiropractic Practice | Clinical Practice Guidelines | Fourth Edition - 2013, "Subluxation Chiropractic Practice". https://ccp-guidelines.org/wp-content/uploads/2019/11/guideline-2013.pdf. Accessed 3/21/2023.

POLICY REVISION HISTORY

DATE	REVISION SUMMARY
2/2023	Converted to new policy template.
7/2023	Annual Update. Change denial to not medically necessary.