

## Clinical Policy: Neurofeedback for Behavioral Health Disorders

Reference Number: CP.BH.300

Date of Last Revision: 5/21

[Coding Implications](#)

[Revision Log](#)

See [Important Reminder](#) at the end of this policy for important regulatory and legal information.

**Note:** Please refer to the Centene Policy CP.MP.168 for Biofeedback for non-behavioral health diagnoses. This policy is contingent on the member having this benefit.

### Description

Biofeedback or neurofeedback is a noninvasive technique intended to enable an individual to learn how to change a physiological activity for the purpose of improving health and performance. It employs instruments that measure physiological activities such as brainwaves, heart rate, breathing rate, muscle activity and skin temperature. Neurofeedback is a process in which a patient learns to increase or decrease specific brain activity using real-life feedback from a scalp electroencephalogram (EEG). Patients are encouraged to increase desired brain activity and decrease undesired activity. The FDA has not approved this treatment as safe and effective for any condition. CMS has not approved this treatment as Reasonable and Necessary for any condition. It currently remains Experimental and Investigational.

### Policy/Criteria

- I. It is the policy of Centene Advanced Behavioral Health that initial behavioral health related neurofeedback is medically necessary if all the following are met:
  - A. Diagnosis of anxiety disorder, or post-traumatic stress disorder as listed in the most current version of the Diagnostic and Statistical Manual of Mental Disorders (DSM), and
  - B. There are significant symptoms that interfere with the individual's ability to function in at least one life area as measured by a widely recognized validated standardized severity scale focused on the symptom profile;
  - C. The individual is motivated to actively participate in the treatment plan, including being responsive to the care plan requirements (e.g., practice and follow-through at home);
  - D. The individual is capable of participating in the treatment plan (physically as well as intellectually);
  - E. The condition can be appropriately treated with neurofeedback (e.g., existing pathology does not prevent success of the treatment);
  - F. There is evidence that standard evidence-based outpatient treatments (including psychotherapy and medication management) are considered insufficient to safely and effectively treat the patient's condition
  - G. There is a readily identifiable response measurable by a symptom specific validated standardized scale;
  - H. Neurofeedback training is performed by a physician or qualified non-physician practitioner who has undergone neurofeedback training and certification. This can include nurse practitioners, physician assistants, qualified mental health professionals, psychologists and where applicable biofeedback technicians
  
- II. It is the policy of Centene Advanced Behavioral Health that continuation of behavioral health related neurofeedback is medically necessary if all the following are met:

## CLINICAL POLICY

### Neurofeedback for Behavioral Health Disorders

- A. Initial criteria are still met;
- B. The frequency of sessions is scheduled to occur at a rate consistent with the presenting symptoms and showing results, while a lower rate may impede progress;
- C. Treatment plan is individualized with clearly stated realistic goals and objectives;
- D. Treatment is structured to achieve optimum benefit and expected benefit is documented;
- E. Progress related to neurofeedback can be clearly described by at least a 25% reduction in severity, as compared to the baseline severity score;
- F. When medically necessary, appropriate psychopharmacological intervention is provided;
- G. There is documented transition out of neurofeedback planning from the start of treatment, which may include ensuring the ability of the patient to continue the biofeedback-learned techniques independently after the biofeedback sessions end.

**Reconsideration of medical necessity should be made if more than 25 neurofeedback treatment sessions in a 12 month period are necessary.**

**III.** It is the policy of Centene Advanced Behavioral Health that neurofeedback is **no longer medically necessary** and discharge from treatment is medically appropriate when any one of the following are met:

- A. The documented goals and objectives have been substantially achieved, or
- B. Patient no longer meets admission criteria, symptom severity has dropped by 50%, or
- C. Patient is not engaging in treatment, rendering neurofeedback ineffective, despite multiple documented attempts to address non-participation issues, or
- D. Patient refuses treatment, or
- E. Patient is not making progress toward treatment goals and there is no reasonable expectation of progress with this treatment approach, or
- F. It is reasonably predicted that continuing improvement can occur after discontinuation of neurofeedback with ongoing psychotherapy, medication management and community support.

**IV.** It is the policy of Centene Advanced Behavioral Health that neurofeedback may be considered **experimental/investigational** for any behavioral health diagnosis other than what is noted in this policy. **\*\*Some states may allow for other diagnoses to be included and these will be considered when applying other medical necessity criteria.**

### Background

During neurofeedback, the patient is seated in a comfortable chair facing a computer screen. Electrodes are placed on the patient's scalp. Target brain waves and event-related potentials are recorded and processed by an electroencephalograph and computer; concurrently, presented ('fed back') to the patient, typically as a visual representation (e.g., a ball moving up or down to signify fast and slow-wave activity), or in the format of a video game. Feedback for desirable activity may include sounds or visual cues (e.g., smiley face), points, or increased control in the computer game. Undesirable activity is discouraged by similar means. Patients are instructed to use the feedback to regulate their brain activity. Sessions last between 30 and 60 minutes and up to 25 sessions are scheduled. A therapist is typically present to facilitate learning (e.g., asks the patient about strategies that seem successful, encourages the patient to try different strategies

## CLINICAL POLICY

### Neurofeedback for Behavioral Health Disorders

until a successful one is identified). Patients are instructed to practice strategies at home between sessions.

These instruments offer almost instant “feedback” information to the user. The presentation of this information along with changes in thinking, emotions and behavior, may support learning of a skill set of techniques leading to desirable physiological changes. Over time, such changes may endure or the learned skills may be applied without the continued use of an instrument.

Neurofeedback has been used to treat children and adults with anxiety and PTSD. It has been typically performed in the outpatient setting and it is usually not provided as a stand-alone treatment, but in conjunction with other therapies such as psychotherapy and medication management.

Neurofeedback for behavioral health conditions generally do not meet the criteria standard as an evidence-based treatment. Although not conclusive, the treatment of anxiety disorders using neurofeedback is mostly based on observational history and case reports.

There is weak scientific evidence found in the nationally recognized literature about the efficacy of Neurosound/Biosound treatment as applied to billing under the Neurofeedback CPT code. CABH will not authorize Neurosound/Biosound under the Neurofeedback CPT code.

### Coding Implications

This clinical policy references Current Procedural Terminology (CPT®). CPT® is a registered trademark of the American Medical Association. All CPT codes and descriptions are copyrighted 2017, American Medical Association. All rights reserved. CPT codes and CPT descriptions are from the current manuals and those included herein are not intended to be all-inclusive and are included for informational purposes only. Codes referenced in this clinical policy are for informational purposes only. Inclusion or exclusion of any codes does not guarantee coverage. Providers should reference the most up-to-date sources of professional coding guidance prior to the submission of claims for reimbursement of covered services.

CPT® Codes	Description
90901	Biofeedback training by any modality
90875	Individual psychophysiological therapy incorporating biofeedback training by any modality (face-to-face with the patient), with psychotherapy (eg, insight oriented, behavior modifying or supportive psychotherapy); 30 minutes
90876	Individual psychophysiological therapy incorporating biofeedback training by any modality (face-to-face with the patient), with psychotherapy (eg, insight oriented, behavior modifying or supportive psychotherapy); 45 minutes

### ICD-10-CM Diagnosis Codes that Support Coverage Criteria

ICD-10-CM Code	Description
F41.1	Generalized Anxiety Disorder

## CLINICAL POLICY

### Neurofeedback for Behavioral Health Disorders

ICD-10-CM Code	Description
F43.10, F43.11, F43.12	Post-Traumatic Stress Disorder, unspecified, acute or chronic
F41.0	Panic Disorder

**\*\*\*Other behavioral health diagnoses may be considered allowable by certain states' coverage provisions as outlined in their Medicaid/Medicare manuals, LCDs, NCDs, or specific contractual requirements. In order to be covered, medical necessity must still be met.**

Reviews, Revisions, and Approvals	Revision Date	Approval Date
Policy developed by MHN specifically neurofeedback for behavioral health disorders	01/19	01/19
Reviewed by MHN QI Committee Reviewed by HN Medical Advisory Council Under 1.f – revised to state ‘insufficient, under 1.h, removed” clinical nurse specialists” and added psychologists	12/19 1/20	1/20
CBH Clinical Policy CP.BH.300 Neurofeedback for Behavioral Health Disorders adapted from MHN Clinical Policy HNCA.CP.MP.162 Neurofeedback for Behavioral Health Disorders.	05/20	5/20
Annual review. Changed Centene Behavioral Health with Centene Advanced Behavioral Health. Revisions: <u>Revision to Description Section:</u> <ul style="list-style-type: none"> <li>The FDA has not approved this treatment as safe and effective for any condition. CMS has not approved this treatment as Reasonable and Necessary for any condition. It currently remains Experimental and Investigational.</li> </ul> <u>Revision to Policy and Criteria Section, I, B, and F, G and H</u> <ul style="list-style-type: none"> <li>There are significant symptoms that interfere with the individual’s ability to function in at least one life area as measured by a widely recognized validated standardized severity scale focused on the symptom profile;</li> <li>There is evidence that standard evidence-based outpatient treatments (including psychotherapy and medication management) are considered insufficient to safely and effectively treat the patient’s condition</li> <li>There is a readily identifiable response measurable by a symptom specific validated standardized scale;</li> <li>Neurofeedback training is performed by a physician or qualified non-physician practitioner who has undergone neurofeedback</li> </ul>	5/21	6/21

## CLINICAL POLICY

### Neurofeedback for Behavioral Health Disorders

Reviews, Revisions, and Approvals	Revision Date	Approval Date
<p>training and certification. This can include nurse practitioners, physician assistants, qualified mental health professionals, psychologists and where applicable biofeedback technicians</p> <p><u>Background Section Update:</u></p> <ul style="list-style-type: none"> <li>• Neurofeedback for behavioral health conditions generally do not meet the criteria standard as an evidence-based treatment. Although not conclusive, the treatment of anxiety disorders using neurofeedback is mostly based on observational history and case reports. Description section, section I, Policy Criteria, sections B, F, G &amp; H; and the last paragraph in the background section. References reviewed and updated.</li> </ul> <p><u>Template Update:</u></p> <ul style="list-style-type: none"> <li>• Changed “Review Date” to “Date of Last Revision” in header, and “Date” in revision log table to “Revision Date.”</li> </ul>		

### References

1. Mayo Clinic. Anxiety disorders. 2017. <https://www.mayoclinic.org/diseases-conditions/anxiety/symptoms-causes/syc-20350961>
2. Combined neurofeedback and heart rate variability training for individuals with symptoms of anxiety and depression: A retrospective study (White et al., 2017), NeuroRegulation;
3. Effectiveness of neurofeedback therapy for anxiety and stress in adults living with a chronic illness: a systematic review protocol (Blaskovits et al., 2017), JBI Database of Systematic Reviews and Implementation Reports;
4. Effectiveness of neurofeedback therapy in children with separation anxiety disorder (Sadjadi and Hashemian, 2014), African Journal of Psychiatry;
5. Neurofeedback: A Comprehensive Review on System Design, Methodology and Clinical Applications Hengameh Marzbani,<sup>1</sup> Hamid Reza Marateb,<sup>1</sup> and Marjan Mansourian<sup>2,\*</sup> Basic Clin Neurosci. 2016 Apr; 7(2): 143–158.
6. GAD-7 source: <https://patient.info/doctor/generalised-anxiety-disorder-assessment-gad-7>
7. PTSD Scale Self-Report for DSM-5 (PSS-SR5): <https://www.div12.org/wp-content/uploads/2014/11/PSS-SR5.pdf>
8. Adult ADHD Scale Self-Report Screening Scale for DSM-5 (ASRS-5): [https://www.hcp.med.harvard.edu/ncs/ftplib/adhd/ASRS-5\\_English.pdf](https://www.hcp.med.harvard.edu/ncs/ftplib/adhd/ASRS-5_English.pdf)
9. ADHD Symptom Test for Children, Parents’ Self-Report Scale: <https://www.additudemag.com/adhd-symptoms-test-children/>
10. Hou, Y., Zhang, S., Li, N., Huang, Z., Wang, L., & Wang, Y. (2021). Neurofeedback training improves anxiety trait and depressive symptom in GAD. Brain and Behavior, 11(3). <https://doi.org/10.1002/brb3.2024>

### Important Reminder

This clinical policy has been developed by appropriately experienced and licensed health care professionals based on a review and consideration of currently available generally accepted standards of medical practice; peer-reviewed medical literature; government agency/program

## CLINICAL POLICY

### Neurofeedback for Behavioral Health Disorders

approval status; evidence-based guidelines and positions of leading national health professional organizations; views of physicians practicing in relevant clinical areas affected by this clinical policy; and other available clinical information. The Health Plan makes no representations and accepts no liability with respect to the content of any external information used or relied upon in developing this clinical policy. This clinical policy is consistent with standards of medical practice current at the time that this clinical policy was approved. “Health Plan” means a health plan that has adopted this clinical policy and that is operated or administered, in whole or in part, by Centene Management Company, LLC, or any of such health plan’s affiliates, as applicable.

The purpose of this clinical policy is to provide a guide to medical necessity, which is a component of the guidelines used to assist in making coverage decisions and administering benefits. It does not constitute a contract or guarantee regarding payment or results. Coverage decisions and the administration of benefits are subject to all terms, conditions, exclusions and limitations of the coverage documents (e.g., evidence of coverage, certificate of coverage, policy, contract of insurance, etc.), as well as to state and federal requirements and applicable Health Plan-level administrative policies and procedures.

This clinical policy is effective as of the date determined by the Health Plan. The date of posting may not be the effective date of this clinical policy. This clinical policy may be subject to applicable legal and regulatory requirements relating to provider notification. If there is a discrepancy between the effective date of this clinical policy and any applicable legal or regulatory requirement, the requirements of law and regulation shall govern. The Health Plan retains the right to change, amend or withdraw this clinical policy, and additional clinical policies may be developed and adopted as needed, at any time.

This clinical policy does not constitute medical advice, medical treatment or medical care. It is not intended to dictate to providers how to practice medicine. Providers are expected to exercise professional medical judgment in providing the most appropriate care, and are solely responsible for the medical advice and treatment of members. This clinical policy is not intended to recommend treatment for members. Members should consult with their treating physician in connection with diagnosis and treatment decisions.

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**Note: For Medicaid members**, when state Medicaid coverage provisions conflict with the coverage provisions in this clinical policy, state Medicaid coverage provisions take precedence.

## CLINICAL POLICY

### Neurofeedback for Behavioral Health Disorders

Please refer to the state Medicaid manual for any coverage provisions pertaining to this clinical policy.

**Note: For Medicare members,** to ensure consistency with the Medicare National Coverage Determinations (NCD) and Local Coverage Determinations (LCD), all applicable NCDs, LCDs, and Medicare Coverage Articles should be reviewed prior to applying the criteria set forth in this clinical policy. Refer to the CMS website at <http://www.cms.gov> for additional information.

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