

Clinical Policy: Biofeedback for Behavioral Health Disorders

Reference Number: LA.CP.BH.300

Date of Last Revision: 2/24/5/2023

Coding Implications
Revision Log

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

Description

Biofeedback or neurofeedback is often referred to as electroencephalographic (EEG) biofeedback or brain wave training. It is a noninvasive technique intended to enable ~~an~~ individual a member/enrollee 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.¹~~

~~Biofeedback therapy for CABH Medicare members/enrollees may be covered under the Medicare National Coverage Determination, *Biofeedback Therapy 30.1* for outpatient services when it is reasonable and necessary for the individual patient for muscle re-education of specific muscle groups or for treating pathological muscle abnormalities of spasticity, incapacitating muscle spasm, or weakness, and more conventional treatments (heat, cold, massage, exercise) have not been successful. This therapy is not covered for treatment of ordinary muscle tension states or for psychosomatic conditions. In accordance with 21 CFR § 882.5050—Biofeedback Device, biofeedback devices are approved by the Food and Drug Administration (FDA) as Class II (special controls).~~

Policy/Criteria

- I. It is the policy of Louisiana Healthcare Connections that up to 25 sessions of initial behavioral health-related biofeedback is **medically necessary** if all the following are met:
 - A. ~~Diagnoses~~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 member/enrollee'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 member/enrollee 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 member/enrollee is capable of participating in the treatment plan (physically as well as intellectually);
 - d.E. Comprehensive treatment plan includes biofeedback as an adjunctive intervention in addition to other primary evidence-based interventions;
 - e.F. The condition can be appropriately treated with biofeedback (e.g., existing pathology does not prevent success of the treatment);
 - f.G. There is evidence that standard evidence-based outpatient treatments (including psychotherapy and medication management) are considered insufficient to treat the member/enrollee's condition safely and effectively ~~treat the patient's condition;~~

CLINICAL POLICY

~~Neurofeedback~~Biofeedback for Behavioral Health Disorders

~~g.H.~~ There is a readily identifiable response measurable by a symptom specific validated standardized scale;

~~h.I.~~ Biofeedback training is performed by a physician or qualified non-physician practitioner who has undergone biofeedback 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 Louisiana Healthcare Connections that continuation of behavioral health related neurofeedback is medically necessary if all the following are met:~~

~~C.A.~~ ~~Initial criteria are still met;~~

~~D.~~ ~~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;~~

~~E.J.~~ Treatment plan is individualized with clearly stated realistic goals and objectives;

~~F.K.~~ Treatment is structured to achieve optimum benefit and expected benefit is documented;

~~L.~~ There is documented planned transition out of biofeedback from the start of treatment, which may include ensuring the ability of the member/enrollee to continue the biofeedback-learned techniques independently after the biofeedback sessions end.

II. It is the policy of Louisiana Healthcare Connections that up to an additional 20 sessions for the continuation of behavioral health-related biofeedback will be reviewed on a case-by-case basis by a Medical Director, informed by all the following:

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;

G.C. Progress related to ~~neurofeedback~~biofeedback can be clearly described by at least a 25% reduction in severity, ~~as compared to the baseline severity score last review;~~

H.D. When medically necessary, appropriate psychopharmacological intervention is provided;

E. There is documented planned transition out of ~~neurofeedback~~planningbiofeedback from the start of treatment, which ~~may include ensuring~~includes, but is not limited to the ability of~~following:~~

I.1. Identifies a plan which ensures the patient to member/enrollee can continue the biofeedback-learned techniques independently after the biofeedback sessions end.

;

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

2. Identifies a goal with a clear and reasonable score range on a validated scale assessment which demonstrates meaningful progress from the treatment.

II.III. It is the policy of Louisiana Healthcare Connections that ~~neurofeedback~~biofeedback is **no longer medically necessary** and discharge from treatment is medically appropriate when any one of the following are met:

A. The ~~document~~documented goals and objectives have been substantially achieved, ~~or;~~

CLINICAL POLICY

~~Neurofeedback~~Biofeedback for Behavioral Health Disorders

- B. ~~Patient~~The member/enrollee no longer meets ~~admission~~initiation or continuation criteria, ~~or~~ symptom severity has dropped by 50%, ~~or~~%;
- C. ~~Patient~~Member/enrollee is not engaging in treatment, rendering biofeedback ineffective, despite multiple documented attempts to address non-participation issues, ~~or~~;
- D. ~~Patient~~Member/enrollee refuses treatment, ~~or~~;
- E. ~~Patient~~Member/enrollee 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~~biofeedback with ongoing psychotherapy, medication management and or community support.

~~III.~~IV. It is the policy of Louisiana Healthcare Connections that ~~neurofeedback may be considered experimental/investigational~~biofeedback that current evidence does not support the safety and efficacy of biofeedback for any behavioral health diagnosis other than what is noted in this policy. ~~– as medically necessary.~~

Background

~~During biofeedback, 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 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.~~

~~Biofeedback 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.~~

During a biofeedback session, a therapist applies electrical sensors to various parts of a patient's body. These sensors will monitor the physiological response to stress, for example, muscle contraction during a tension headache, and then feed the information back to a person via auditory (hearing) and visual (seeing) cues. These cues may be in the form of a beeping sound or a flashing light. Target signal (e.g., related to a symptom of disorder) is measured and fed back

CLINICAL POLICY

Neurofeedback/Biofeedback for Behavioral Health Disorders

to a participant enabling them to find their own strategy to control this signal and then adjust this strategy to master self-regulatory performance which then may be generalized to everyday life. ²

The Foundation for Peripheral Neuropathy states, “Biofeedback is a physiologically based learning tool to help people recognize how their physiologies are functioning under various circumstances. They can use this information to learn how to control those aspects that are not functioning optimally. Biofeedback is NOT used as a treatment alone, nor can it be used alone to make a diagnosis. It is an adjunctive tool to be combined with other standard interventions carried out by knowledgeable clinicians, educators, or coaches.”²

“There are different physiological processes that have been implemented for biofeedback procedures, including both the central and autonomous nervous systems. Electromyography biofeedback (EMGB), skin conductance biofeedback or heart rate variability biofeedback (HRVB) are some of the most used peripheral responses, while electroencephalographic (EEG) and functional magnetic resonance imaging neurofeedback (fMRI-NF) are two of the most common techniques using neural activity”³

The practical implementation of neurofeedback as a clinical therapy is currently not regulated. This applies to the educational standards, medical security, and the usage of standard protocols indicated for specific disorders. the need for further research into the effectiveness of already available and newly developed neurofeedback protocols (i.e., the number of sessions, targeted brain area, selected brain parameter, working mechanism) in addition to proper “agreed-upon standards” and training within the field of neurofeedback.⁴

Biofeedback 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. LHCC will not authorize Neurosound/Biosound under the Neurofeedback CPT code.

Coding Implications

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CLINICAL POLICY

~~Neurofeedback~~Biofeedback for Behavioral Health Disorders

NOTE: Coverage is subject to each requested code's inclusion on the corresponding LDH fee schedule. Non-covered codes are denoted (*) and are reviewed for Medical Necessity for members under 21 years of age on a per case basis.

CPT® Codes	Description
90901*	<u>Biofeedback training by any modality</u>
90875	30 minutes of individual psychophysiological therapy incorporating biofeedback training by any modality (face-to-face with patient), with psychotherapy
90876	45 minutes of individual psychophysiological therapy incorporating biofeedback training by any modality (face-to-face with the patient), with psychotherapy

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

ICD-10-CM Code	Description
F41.1	Generalized Anxiety Disorder
F43.10, F43.11 F43.12	Post-Traumatic Stress Disorder, unspecified, acute or chronic
F41.0	Panic Disorder

Reviews, Revisions, and Approvals	Revision Date	Approval Date
Converted corporate to local policy.	08/15/2020	
Annual review conducted. Neurofeedback references changed to biofeedback to align with the Centene Policy CP.MP.168 for Biofeedback for non-behavioral health diagnoses; Added references to CMS NCD - Biofeedback Therapy (30.1) and FDA approved as Class II; and 45 minutes to CPT code 90875, and 30 minutes to CPT code 90876. Added “and may not support medical necessity” to coding implications. Added “Revision” to date in Revision Log. Changed Last Review to “Date of last revision” in header on page 1. Changed all instances of member to member/enrollee. Updated references.	8/2022	

CLINICAL POLICY

~~Neurofeedback~~ **Biofeedback** for Behavioral Health Disorders

Reviews, Revisions, and Approvals	Revision Date	Approval Date
<p>Removed statement “Note: Please refer to the Louisiana Healthcare Connections Policy LA.CP.MP.168 for Biofeedback for non-behavioral health diagnoses. This policy is contingent on the member/enrollee having this benefit.” The policy referenced is retired. Updated “24” to “25” in Reconsideration of medical necessity located under part II to coincide the Background information. Removed “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.” This statement is not specific to LHCC guidance. Reviewed and updated CPT codes.</p>	1/5/23	3/6/23
<p><u>Annual Review. Changed instances of the word “patient” and “individual” within the criteria section to “member/enrollee.” Added I.E., “Comprehensive treatment plan includes biofeedback as an adjunctive intervention in addition to other primary evidence-based interventions.” In section II. Added the statement “that up to 20 sessions for the continuation of behavioral health-related biofeedback will be reviewed on a case-by-case basis by a Medical Director”. Removed ICD 10 Code chart. Background and references reviewed and updated. Reviewed by external specialist. Clarified policy description statement II. adding that “up to an additional” 20 sessions for the continuation of behavioral health-related biofeedback will be reviewed. In II.C. Removed the statement “as compared to the base line severity score” and added the statement “compared to the last review.” Clarified policy statement in II.E. adding: “II.E.1. Identifies a plan which ensures the member/enrollee can continue biofeedback-learned techniques independently after the biofeedback sessions end; and II.E.2: Identifies a goal with a clear and reasonable score range on a validated scale assessment which demonstrates meaningful progress from the treatment.”</u></p>	2/24	

References

1. ~~CMS Medicare Coverage~~, American Psychological Association. Biofeedback and Applied Psychophysiology. <https://www.apa.org/ed/graduate/specialize/biofeedback>. Published September 2019. Accessed May 16, 2023.
2. The Foundation for Peripheral Neuropathy. Biofeedback Therapy. <https://www.foundationforpn.org/living-well/integrative-therapies/biofeedback-therapy/>. Accessed May 16, 2023.
3. Fernández-Alvarez J, Grassi M, Colombo D, et al. Efficacy of bio- and neurofeedback for depression: a meta-analysis. Psychol Med. 2022;52(2):201-216. doi:10.1017/S0033291721004396
4. Enriquez-Geppert S, Smit D, Pimenta MG, Arns M. Neurofeedback as a Treatment Intervention in ADHD: Current Evidence and Practice. Curr Psychiatry Rep. 2019;21(6):46. Published 2019 May 28. doi:10.1007/s11920-019-1021-4

CLINICAL POLICY

Neurofeedback/Biofeedback for Behavioral Health Disorders

5. International Society for Neuroregulation and Research. What is Neurofeedback.
<https://isnr.org/what-is-neurofeedback>. Published January 10, 2019. Updated June 11, 2020.
Accessed May 16, 2023.
- ~~4.6. National Coverage Determination, (NCD): Biofeedback Therapy (Publication Number 100-3; Manual Section Number 30.1; Manual Section Title Biofeedback Therapy; version 1; effective date, longstanding NCD;).~~ Centers for Medicare and Medicaid Services. ~~NCD– Biofeedback Therapy (30.1) (cms.gov)~~<https://www.cms.gov/medicare-coverage-database/view/ncd.aspx?NCDId=41>. Accessed May 16, 2023.
- ~~2. Mayo Clinic. Anxiety disorders. 2017. https://www.mayoclinic.org/diseases-C~~
- ~~3. Combined neurofeedback and heart rate variability training for individuals with symptoms of anxiety and depression: A retrospective study (White et al., 2017), NeuroRegulation;~~
- ~~4.7. Blaskovits F, Tyerman J, Luctkar-Flude M. 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; System Rev Implement Rep. 2017;15(7):1765-1769. doi:10.11124/JBISRIR-2016-003118~~
- ~~5. Effectiveness of neurofeedback therapy in children with separation anxiety disorder (Sadjadi and Hashemian, 2014), African Journal of Psychiatry;~~
- ~~6. Marzbani H, Marateb HR, Mansourian M. Neurofeedback: A Comprehensive Review on System Design, Methodology and Clinical Applications Hengameh Marzbani,¹ Hamid-Reza Marateb,¹ and Marjan Mansourian^{2,*}~~
- ~~8. Basic Clin Neurosci. 2016 Apr; 7(2):143–158. doi: 10.15412/J.BCN.03070208~~
- ~~7. GAD 7 source: https://patient.info/doctor/generalised-anxiety-disorder-assessment-gad-7~~
- ~~8. PTSD Scale Self Report for DSM 5 (PSS-SR5): https://www.div12.org/wp-content/uploads/2014/11/PSS-SR5.pdf~~
- ~~9. Adult ADHD Scale Self Report Screening Scale for DSM 5 (ASRS-5): https://www.hep.med.harvard.edu/nes/ftplib/adhd/ASRS-5-English.pdf~~
- ~~10. ADHD Symptom Test for Children, Parents' Self Report Scale: https://www.additudemag.com/adhd-symptoms-test-children/~~
- ~~11.9. 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, Behav. 2021;11(3). https://doi.org/10.1002/brb3.2024~~
- ~~10. Tolin DF, Davies CD, Moskow DM, Hofmann SG. Biofeedback and Neurofeedback for Anxiety Disorders: A Quantitative and Qualitative Systematic Review. Adv Exp Med Biol. 2020; 1191:265-289. doi:10.1007/978-981-32-9705-0_16~~
- ~~11. Melnikov MY. The Current Evidence Levels for Biofeedback and Neurofeedback Interventions in Treating Depression: A Narrative Review. Neural Plast. 2021; 2021:8878857. Published 2021 Feb 4. doi:10.1155/2021/8878857~~
- ~~12. Chiba T, Kanazawa T, Koizumi A, et al. Current Status of Neurofeedback for Post-traumatic stress disorder: A Systematic Review and the Possibility of Decoded Neurofeedback. Front Hum Neurosci. 2019; 13:233. Published 2019 Jul 17. doi:10.3389/fnhum.2019.00233~~

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

CLINICAL POLICY

~~Neurofeedback~~Biofeedback for Behavioral Health Disorders

standards of medical practice; peer-reviewed medical literature; government agency/program 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. LHCC 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.

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~~Neurofeedback~~Biofeedback for Behavioral Health Disorders

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