GUIDELINES
This policy does not certify benefits or authorization of benefits, which is designated by each individual policyholder contract. Paramount applies coding edits to all medical claims through coding logic software to evaluate the accuracy and adherence to accepted national standards. This guideline is solely for explaining correct procedure reporting and does not imply coverage and reimbursement.

DESCRIPTION
Biofeedback is a therapeutic process that electronically monitors bodily functions, such as breathing, heart rate, blood pressure, skin temperature and muscle tension, which are fed back to the individual by means of sounds, lights or electronic gauges. It emphasizes relaxation and stress-reducing techniques. Most proponents believe that by using these techniques, individuals can learn to control a variety of physiological responses formerly thought to be completely involuntary and thereby, help manage anxiety and pain commonly associated with stress reactions. Biofeedback is considered an alternative medicine technique.

There are several different types of biofeedback. The biofeedback modality selected for therapy depends on the condition to be treated.
1. EMG biofeedback measures muscle tension and is proposed for the treatment of chronic muscle stiffness, injury and pain (e.g., neck and back pain); headaches, asthma, incontinence; and intestinal symptoms.
2. Thermal or temperature biofeedback measures skin temperature and is proposed for the treatment of circulatory disorders, such as headaches, hypertension, and Raynaud's phenomenon.
3. Galvanic skin response (GSR) biofeedback, also called electrodermal response (EDR), electrodermal activity (EDA), skin conductance response (SCR) or skin conductance level (SCL) biofeedback, measures electrical conductance in the skin associated with sweat gland activity and perspiration. GSR is proposed for the treatment of anxiety disorders and phobias.
4. Electroencephalogram (EEG) biofeedback, also called neurofeedback, brainwave biofeedback or neurotherapy, measures alpha (associated with relaxation and meditation) and theta (associated with focused attention) brainwave activity. It is proposed to counterbalance genetic and environmental tendencies by learning to alter brain wave patterns. EEG biofeedback has been proposed for the treatment of multiple conditions including insomnia, attention deficit hyperactivity disorder (ADHD), dyslexia, anxiety disorders, autism spectrum disorders, epilepsy, addictions, tinnitus, brain injury, depression, learning disabilities, pervasive developmental delay/intellectual disability, fibromyalgia, dyslexia. However, the evidence in the published peer-reviewed scientific literature does not support the efficacy of EEG biofeedback.

Although there are numerous biofeedback devices available for home use, biofeedback should be performed by a trained professional in a clinical setting. Examples of home devices include: StressEraser® (Helicor, Inc., New York, NY) for mind and body relaxation; BrainMaster (BrainMaster Technologies, Inc., Oakwood Village, OH) EEG biofeedback devices; GSR/Temp2X™ (Biofeedback Instrument Corp., New York, NY) temperature biofeedback system; and RESPeRate (Intercure Ltd., Lod, Israel) which uses therapeutic paced breathing to lower blood pressure.

The evidence in the published peer-reviewed scientific literature and professional societies support the safety and efficacy of biofeedback for the treatment of constipation, and the treatment of stress, urge, mixed and overflow urinary incontinence. The evidence in the published peer-reviewed scientific literature does not support the therapeutic effectiveness of biofeedback for any other indication due to the small number of clinical trials and/or small heterogeneous patient populations, short-term follow-ups, lack of documentation of sustained benefits and lack of a comparison to established therapeutic modalities. In most cases, patient selection criteria for biofeedback have not been established.

POLICY
Biofeedback (90901, 90911) does not require prior authorization for HMO, PPO, Individual Marketplace, & Elite, but must meet medically indicated criteria as listed below.

Biofeedback (90901, 90911) is non-covered for Advantage.

Electroencephalography (EEG) biofeedback & In-home biofeedback devices (E0746) are non-covered for all
HMO, PPO, Individual Marketplace, Elite

Biofeedback and biofeedback devices are specifically excluded under many benefit plans. In addition, biofeedback and biofeedback devices are considered behavioral training and education/training in nature, and such services are specifically excluded under many benefit plans. Please refer to the applicable benefit plan document to determine benefit availability and the terms, conditions and limitations of coverage.

If coverage is available for biofeedback, the following conditions of coverage apply.

A. Biofeedback (90901, 90911) is covered for ICD-10 diagnoses codes as listed below. When these diagnoses are not billed, procedures 90901 and 90911 will be denied.

Biofeedback is considered reasonable and medically necessary for the following:

- Muscle re-education of specific muscle groups
- Treatment of pathological (disease-based) muscle abnormalities of spasticity
- Incapacitating muscle spasm or weakness when more conventional treatments (e.g., heat, cold, massage, exercise, support) have not been successful
- The treatment of fecal incontinence when the underlying cause is determined to be an ineffective anal sphincter squeeze function
- The treatment of stress, urge, or persistent post-prostatectomy urinary incontinence when more conventional treatments (e.g., pharmacology, timed voiding, pelvic muscle exercises) have not been successful

The physician and/or the non-physician practitioner (NPP) must provide direct supervision during biofeedback training when the service is rendered in the physician's office. Direct supervision in the office setting does not mean that the physician must be present in the same room with his or her aide. However, the physician must be present in the office suite and immediately available to provide assistance and direction throughout the time the aide is performing services.

All patients selected for biofeedback training must have the ability to understand analog or digital signals using auditory or visual display. In addition, these patients must be self-motivated to learn voluntary control through the observation of biofeedback and perform their personalized home exercise prescription usually on a daily basis.

Documentation maintained by the performing provider must support that the indication for biofeedback training is reasonable and necessary and that more conventional treatments have not been successful (e.g., heat, cold, massage, exercise, support).

Documentation in the patient's medical record for biofeedback training for the treatment of stress, urge, or persistent post-prostatectomy urinary incontinence must support medical necessity and must provide a clear history of conventional treatments unsuccessfully tried before the initiation of biofeedback (e.g., pharmacology; lifestyle changes, such as weight loss, dietary changes, smoking cessation; behavioral modification training, such as bladder training, scheduled or prompted voiding, fluid intake modification; heat, cold, or massage). In addition, documentation must show evidence that the patient has failed a 4-week prescribed trial of pelvic muscle exercises (e.g., Kegel's exercise) to increase periurethral muscle strength, which resulted in no clinically significant improvement in urinary incontinence prior to starting biofeedback. This information is usually found in the history and physical, office/progress notes and treatment plan.

The documentation maintained by the performing provider should be legible and must be made available upon request.

Biofeedback training typically requires 2 to 3 sessions to train, observe progress, reinforce treatment, and follow-up with the patient. It is expected the medical record would document justification for additional sessions.

B. Biofeedback is non-covered for all other indications including, but not limited to:

- Addictions
- Allergy
- Anger management
• Anterior shoulder instability or pain
• Anxiety disorders
• As a rehabilitation modality for spasmodic torticollis, spinal cord injury, or following knee surgeries
• Attention deficit hyperactivity disorder (ADHD)
• Autism
• Balance training (with tongue-placed electrotactile biofeedback or visual interactive biofeedback)
• Bell's palsy (idiopathic facial paralysis)
• Cardiovascular diseases (e.g., heart failure)
• Childhood apraxia of speech
• Chronic abacterial prostatitis
• Chronic fatigue syndrome
• Chronic pain (e.g., back pain, fibromyalgia, neck pain) other than migraine and tension headache
• Cleft palate speech (nasopharyngoscopic biofeedback)
• Daytime syndrome of urinary frequency
• Depression
• Diabetes
• Epilepsy
• Facial pain
• Functional dysphonia
• Home biofeedback (for any indication)
• Hypertension (e.g. RESPeRATE Device)
• Improvement of anorectal/bowel functions after sphincter-saving surgery for rectal cancer
• Insomnia
• Labor pain
• Neurogenic bladder
• Non-neuropathic voiding disorders
• Ordinary muscle tension states
• Pain associated with multiple sclerosis
• Panic disorders (e.g., FreeSpira breathing system)
• Pelvic floor dysfunction
• Peripheral arterial disease (e.g., intermittent claudication)
• Pre-term labor
• Prophylaxis of medication overuse headache and pediatric migraine
• Post-trauma stress disorder
• Psychosis
• Psychosomatic conditions
• Raynaud's disease/phenomenon
• Sleep bruxism
• Spasticity secondary to cerebral palsy
• Toe-out gait modification/retraining in people with knee osteoarthritis
• Tourette's syndrome
• Tremor
• Type 2 diabetes
• Urinary retention
• Vaginal tear
• Vaginismus
• Vertigo/disequilibrium
• Visual disorders
• Vulvodynia

Biofeedback training will not be covered for mechanical urinary incontinence, psychosomatic conditions, or functional urinary incontinence as these types of urinary incontinence are not amenable to biofeedback training.

C. The following are considered experimental, investigational or unproven and are non-covered:
• Electroencephalography (EEG) biofeedback or neurofeedback for any diagnosis, including ADHD
• In-home biofeedback devices (E0746)
This policy applies to biofeedback therapy rendered by a practitioner in an office or other facility setting. Home use of biofeedback therapy is not covered. Biofeedback training in a group setting is not covered.

**Advantage**
Biofeedback (90901, 90911) is non-covered.

**CODING/BILLING INFORMATION**
The appearance of a code in this section does not necessarily indicate coverage. Codes that are covered may have selection criteria that must be met. Payment for supplies may be included in payment for other services rendered.

<table>
<thead>
<tr>
<th>CPT CODES</th>
<th>Description</th>
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<tbody>
<tr>
<td>90901</td>
<td>Biofeedback training by any modality</td>
</tr>
<tr>
<td>90911</td>
<td>Biofeedback training, perineal muscles, anorectal or urethral sphincter, including EMG and/or manometry</td>
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**HCPCS CODE**
E0746 Electromyography (EMG), biofeedback device

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<thead>
<tr>
<th>ICD-10-CM CODES</th>
<th>Description</th>
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<tbody>
<tr>
<td>G04.1</td>
<td>Tropical spastic paraplegia</td>
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<tr>
<td>G35</td>
<td>Multiple sclerosis</td>
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<tr>
<td>G81.00 - G81.94</td>
<td>Flaccid hemiplegia affecting unspecified side - Hemiplegia, unspecified affecting left nondominant side</td>
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<tr>
<td>G82.20 - G82.22</td>
<td>Paraplegia, unspecified - Paraplegia, incomplete</td>
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<tr>
<td>G82.50 - G82.54</td>
<td>Quadriplegia, unspecified - Quadriplegia, C5-C7 incomplete</td>
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<tr>
<td>G83.0</td>
<td>Diplegia of upper limbs</td>
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<tr>
<td>G83.10 - G83.34</td>
<td>Monoplegia of lower limb affecting unspecified side - Monoplegia, unspecified affecting left nondominant side</td>
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<td>G83.4</td>
<td>Cauda equina syndrome</td>
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<td>I67.89</td>
<td>Other cerebrovascular disease</td>
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<td>K59.00 - K59.09</td>
<td>Constipation, unspecified - Other constipation</td>
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<td>K59.4</td>
<td>Anal spasm</td>
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<td>M25.78</td>
<td>Osteophyte, vertebrae</td>
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<td>M47.011 - M47.9</td>
<td>Anterior spinal artery compression syndromes, occipito-atlanto-axial region - Spondylosis, unspecified</td>
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<td>M48.10 - M48.9</td>
<td>Ankylosing hyperostosis [Forester], site unspecified - Spondylopathy, unspecified</td>
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<td>M62.40 - M62.49</td>
<td>Contracture of muscle, unspecified site - Contracture of muscle, multiple sites</td>
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<td>M62.81</td>
<td>Muscle weakness (generalized)</td>
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<td>M62.830 - M62.838</td>
<td>Muscle spasm of back - Other muscle spasm</td>
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<td>N31.2</td>
<td>Flaccid neuropathic bladder, not elsewhere classified</td>
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<td>N31.9</td>
<td>Neuromuscular dysfunction of bladder, unspecified</td>
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<tr>
<td>N36.42</td>
<td>Intrinsic sphincter deficiency (ISD)</td>
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<td>N36.43</td>
<td>Combined hypermobility of urethra and intrinsic sphincter deficiency</td>
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<tr>
<td>N36.44</td>
<td>Muscular disorders of urethra</td>
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<td>N39.3</td>
<td>Stress incontinence (female) (male)</td>
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<td>N39.41</td>
<td>Urgo incontinence</td>
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<tr>
<td>N39.42</td>
<td>Incontinence without sensory awareness</td>
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<td>N39.43</td>
<td>Post-void dribbling</td>
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<td>N39.44</td>
<td>Nocturnal enuresis</td>
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<td>Continuous leakage</td>
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<td>N39.46</td>
<td>Mixed incontinence</td>
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<td>N39.490</td>
<td>Overflow incontinence</td>
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<td>Incomplete defecation - Full incontinence of feces</td>
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<td>R32</td>
<td>Unspecified urinary incontinence</td>
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<td>Drug induced retention of urine</td>
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<td>R33.8</td>
<td>Other retention of urine</td>
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<td>R33.9</td>
<td>Retention of urine, unspecified</td>
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<td>R35.0</td>
<td>Frequency of micturition</td>
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<td>R39.14</td>
<td>Feeling of incomplete bladder emptying</td>
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<td>R39.15</td>
<td>Urgency of urination</td>
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<tr>
<td>R39.191</td>
<td>Need to immediately re-void</td>
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**REVISION HISTORY EXPLANATION**
09/11/12: Per the Medical Policy Steering Committee, procedure 90911 will be covered for all members when medically necessary without prior authorization.
01/14/14: Removed CPT codes 51784-51785, 97110, 97112, 97530 & 97535. ICD-10 Codes added from ICD-9 conversion. Policy reviewed and updated to reflect most current clinical evidence. Approved by Medical Policy Steering Committee as revised.

REFERENCES/RESOURCES
Centers for Medicare and Medicaid Services, CMS Manual System and other CMS publications and services
Ohio Department of Medicaid http://jfs.ohio.gov/
American Medical Association, Current Procedural Terminology (CPT®) and associated publications and services
Centers for Medicare and Medicaid Services, Healthcare Common Procedure Coding System, HCPCS Release and Code Sets
Industry Standard Review
Hayes, Inc.