Rationale for Biofeedback
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Biofeedback training is a widely used modality with well-established efficacy in the treatment of several disorders. The evidence supporting the use of biofeedback comes from numerous research studies and meta-analyses published in peer-reviewed journals. Despite the evidence supporting the use of biofeedback, it continues to be misrepresented and overlooked; many insurance carriers deny or restrict access to biofeedback training. The Association for Applied Psychophysiology and Biofeedback (AAPB) is providing this document to help third party carriers make informed decisions concerning biofeedback reimbursement.

Within the psychological realm, anxiety disorders are most amenable to treatment incorporating biofeedback. Anxiety is a complex condition, and both cognitive and physiological mechanisms are involved in its etiology. Panic attacks, which are brief episodes of intense, overwhelming anxiety, are characterized by sweating, trembling, tachycardia, nausea, dizziness and several other symptoms related to excessive arousal. Other anxiety disorders also display many of these symptoms although they are typically less severe than in panic attacks. Biofeedback training is an ideal modality for helping patients learn to control the physiological aspects of anxiety.

The treatment of anxiety disorders is predicated upon lowering arousal and altering thoughts and behaviors in anxiety provoking situations. Treatment can be pharmacological, behavioral or a combination of these two modalities. The behavioral treatment of anxiety emphasizes relaxation training—it is impossible to be simultaneously relaxed and anxious.

A number of research articles have demonstrated the efficacy of biofeedback training for the treatment of anxiety. In 2004, AAPB published an updated monograph entitled "Evidence-Based Practice in Biofeedback and Neurofeedback." The section on anxiety reports on 11 research articles that studied biofeedback and anxiety. The report concludes that the evidence supporting the use of biofeedback for anxiety to be sufficient to yield a rating of four (efficacious) on a 1-5 scale. The authors do note that biofeedback training, "Shares characteristics with other relaxation techniques." A copy of that report is enclosed with this document.

Biofeedback training is also used in the treatment of a variety of medical conditions. In some conditions, symptoms are exacerbated by stress and the biofeedback training is provided to enhance relaxation training and improve stress management skills. In other cases, the training is more specific and addresses the underlying pathophysiology. An example of the latter is biofeedback training of the pelvic floor muscular contractions for incontinence.

It is widely recognized that stress plays a key role in the manifestation of symptoms for many chronic disorders. Biofeedback training has been employed in the treatment of many of these illnesses and the best evidence supporting the use of biofeedback is in the treatment of headaches. Biofeedback training for headaches has an almost 30-year
history now and its efficacy has been extensively documented. The American Academy of Neurology has published practice guidelines for the treatment of migraine headaches. These guidelines were established after an extensive literature review and they provide the consensus opinion of what constitutes optimal treatment options. The section on biofeedback and behavioral options is provided below in its entirety.

Many migraine patients try nonpharmacologic treatment to manage their headaches before they begin drug therapy or concurrently with drug therapy. Behavioral treatments are classified into three broad categories: relaxation training, biofeedback therapy, and cognitive-behavioral training (stress-management training). Physical treatment includes acupuncture, cervical manipulation, and mobilization therapy. These are treatment options for headache sufferers who have one or more of the following characteristics:

A. Patient preference for nonpharmacologic interventions
B. Poor tolerance to specific pharmacologic treatments
C. Medical contraindications for specific pharmacologic treatments
D. Insufficient or no response to pharmacologic treatment
E. Pregnancy, planned pregnancy, or nursing
F. History of long-term, frequent, or excessive use of analgesic or acute medications that can aggravate headache problems (or lead to decreased responsiveness to other pharmacotherapies)
G. Significant stress or deficient stress-coping skills

Cognitive and behavioral treatment recommendations

- Relaxation training, thermal biofeedback combined with relaxation training, electromyographic biofeedback, and cognitive-behavioral therapy may be considered as treatment options for prevention of migraine (Grade A). Specific recommendations regarding which of these to use for specific patients cannot be made.

- Behavioral therapy may be combined with preventive drug therapy to achieve additional clinical improvement for migraine relief (Grade B).

It is interesting to note that the evidence supporting the use of biofeedback and behavioral techniques is ranked as Grade A. This is a ranking of the quality of evidence supporting a conclusion and for Grade A it requires, "Multiple well-designed randomized clinical trials, directly relevant to the recommendation, yielded a consistent pattern of findings." Given these recommendations, failure to authorize biofeedback training for the treatment of migraines could potentially lead an insurer vulnerable to lawsuits.
It is not difficult to understand why biofeedback training is marginalized by many insurance companies. Biofeedback relies on a different model of treatment. Medical treatment emphasizes pharmacotherapy and surgery. The patient has a passive role and is the recipient of an intervention; a drug or surgical procedure. Biofeedback employs a teaching model of enhanced self-regulatory skills. The patient plays an active role, and with the help of the biofeedback therapist, he or she learns to modify physiological activity. Relaxation skills are enhanced and patients are empowered to learn that they have the capacity to manage their symptoms more effectively.

Financial and political factors also play a role in constraining availability of biofeedback services. The biofeedback community is relatively small and does not have the financial resources that are available within the pharmaceutical industry. Drug companies can spend millions of dollars to test and market their products. Medications with only a modest degree of clinical value can be shown to be statistically effective if the sample size is sufficiently large. Meanwhile, it is almost impossible to get funding for large scale studies of behavioral treatments. In addition, pharmaceutical representatives are a constant presence in physician offices, enticing doctors to prescribe their products with a stream of free samples and other inducements.

Not all of the blame for the failure of biofeedback training to achieve recognition can be placed in the hands of the medical community. Certainly, patient preferences also play a role, and the demand for biofeedback may be modest. Biofeedback training also takes considerable time and effort; it is far simpler to take a pill for a problem than to learn self-regulation skills. However, the benefits of biofeedback training and behavioral approaches should not be minimized. A relatively brief period of biofeedback training with a skilled provider can make a profound impact on the health and well-being of a patient. It can alter the patients' belief system and empower them to adopt additional health maintenance activities (dietary changes, exercise, smoking cessation, etc.). We urge all insurance companies and managed care entities to expand their coverage for biofeedback.