Medical Policy

Blue Cross Blue Shield Blue Care Network of Michigan

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Category: Durable Medical Equipment
***Current Policy Effective Date: 5/1/12**

Title: Altered Auditory Feedback Devices for the Treatment of Stuttering

**Procedure Code(s): E1399

Description/Background

Stuttering is a disturbance in the normal fluency and time patterning of speech that is inappropriate for the person's age. Developmental stuttering is the most common form, with an onset prior to the age of 12, and generally between the ages of two to five years. Preschool children normally undergo a transient period of dysfluency. It is estimated that 50 to 80 percent of children with developmental stuttering will recover before puberty, regardless of the implementation of speech therapy.

Persistent developmental stuttering is stuttering that has not undergone spontaneous or therapy related remission. Proposed etiologies include abnormal cerebral dominance with differences in regional brain activation patterns in regions of the brain that modulate verbalization. A genetic component has also been observed.

Acquired stuttering in a previously fluent individual is much rarer than developmental stuttering, and may be neurogenic resulting from brain damage associated with conditions such as traumatic brain injury, Alzheimer's disease and Parkinson's disease. Psychogenic stuttering is also recognized following emotional trauma.

Altered auditory feedback (AAF) devices use audio feedback by means of an earpiece worn in or behind the ear. These devices, alone or in combination, utilize the following techniques:

*See policy history boxes for any previous effective dates if applicable
**See section "CPT/HCPCS Level II Codes and Description" for code nomenclature and for additional code(s) if applicable.

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- Delayed auditory feedback (delaying the user's voice to their own ears by a user set time delay); and
- Frequency shifting auditory feedback or frequency altered feedback (this method shifts the pitch of the user's voice in their own ears).

CPT / HCPCS Level II Codes and Description *(Note: The inclusion of a code in this list is not a guarantee of coverage. Please refer to the medical policy statement to determine the status of a given procedure)*

Established codes:
N/A

Other codes (investigational, not medically necessary, etc.):
E1399

Diagnoses / Medical Conditions

Stuttering

Medical Policy Statement

Altered auditory feedback devices are considered experimental and investigational in the treatment of stuttering. There is currently a lack of evidence in the peer reviewed published medical literature on the effectiveness of these devices.

Rationale

Traditional treatments for developmental stuttering have involved various speech therapy techniques and in some cases pharmacologic therapy. AAF has been investigated as a potential therapy. The rationale for AAF rests in the observation that individuals who stutter tend to become more fluent when speaking in unison with others (known as the "choral effect"). AAF attempts to emulate the choral effect by allowing the user to hear his own voice with a slight time delay and/or a pitch shift, which is said to create the illusion of another individual speaking at the same time. Such devices include the SpeechEasy®, Casa Futura's Pocket Speech Lab, the SmallTalk and the Telephone Fluency System.

The published literature on the clinical use and effectiveness of these devices consists of limited reports with small numbers of patients in uncontrolled case series. The results are somewhat mixed, but suggest a decrease in stuttering in some individuals performing reading tasks more so than monologue. There is minimal data on its effect on everyday

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social fluency. There is little, if any, data on the long term use of these devices, and no data to support that fluency would persist following discontinuation of the device.

The U.S. Food and Drug Administration (FDA) states that an anti-stammering device is a device that electronically generates a noise when activated or when it senses the user's speech and that is intended to prevent the user from hearing the sounds of his or her own voice. The device is used to minimize a user's involuntary halting or repetitive speech. It is classified as Class1 medical device. Class 1 medical devices are exempt from the premarket notification procedures.

Larger prospective randomized controlled studies are required to demonstrate the effectiveness of AAF for everyday communication and fluency compared both to no treatment and to other forms of established therapy.

Medical Policy Position Summary (Nonclinical summary statement for customer use)

Stuttering is a disturbance in normal speech with unintentional pauses or repeating words. Altered auditory feedback (AAF) devices are used alone or with other speech therapy techniques or medications. Altered auditory feedback devices are considered experimental and investigational in the treatment of stuttering. There is currently a lack of evidence in medical literature that shows these devices are better than the standard treatment methods.

Inclusionary and Exclusionary Guidelines (Clinically based guidelines that may support individual consideration and pre-authorization decisions)

N/A

Related Policies

N/A

Medicare Information

There is currently no national or local Medicare policy addressing this specific service.

(The above Medicare information is current as of the review date for this policy. However, the coverage issues and policies maintained by the Centers for Medicare & Medicaid Services [CMS, formerly HCFA] are updated and/or revised periodically. Therefore, the most current CMS information may not be contained in this document. For the most current information, the reader should contact an official Medicare source.)

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References

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- Downey, Debora, MA and Richard Hurtig, PhD, "Augmentative and Alternative Communication," *Pediatric Annals*, Vol. 32, No. 7, July 2003, pp. 467-474.
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- National Institute on Deafness and Other Communication Disorders, "Stuttering," *National Institutes of Health*, updated March 2010, <http://www.nidcd.nih.gov/health/voice/stutter.html#treated>, (September 14, 2010).
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- Saltuklaroglu, Tim, et al., "Comparisons of stuttering frequency during and after speech initiation in unaltered feedback, altered auditory feedback and choral speech conditions," *International Journal of Language and Communication Disorders*, Vol. 44, No. 6, March 2009, pp. 1000-1017.
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International Journal of Language and Communication Disorders," Vol. 39, No. 1, January 2004-March 2004, pp. 93-113.

- U.S. Food and Drug Administration (FDA), *Centers for Devices and Radiological Health,* Therapeutic Devices, Class 1, exempt from premarket notification.

The articles reviewed in this research include those obtained in an Internet based literature search for relevant medical references through 1/4/12, the date the research was completed.

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Joint BCBSM/BCN Medical Policy History

Policy Effective Date	BCBSM Signature Date	BCN Signature Date	Comments
5/1/08	3/6/08	5/1/08	Joint policy established
7/1/09	4/21/09	5/11/09	Routine maintenance
1/1/11	10/12/10	10/27/10	Routine maintenance
5/1/12	2/21/12	2/21/12	Routine maintenance; policy retired

Next Review Date: No further review

Pre-Consolidation Medical Policy History

Original Policy Date	Comments
BCN: N/A	Revised: N/A
BCBSM: N/A	Revised: N/A

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I. Short Description:

Altered auditory feedback (AAF) devices use audio feedback by means of an earpiece worn in or behind the ear. These devices are utilized alone or in conjunction with the following techniques:

- Delayed auditory feedback (delaying the user's voice to his ears a fraction of a second {this delay is adjustable}); and
- Frequency shifting auditory feedback or frequency altered feedback (this method shifts the pitch of the user's voice in his ears).

II. Coverage Determination:

Commercial HMO (includes Self-Funded groups unless otherwise specified)	Not covered
BCNA (Medicare Advantage)	Not covered
BCN65 (Medicare Complementary)	Coinsurance covered if primary Medicare covers the service.
BlueCaid	Not covered

III. Administrative Guidelines:

N/A

IV. Effective Dates:

Policy updated: 7/1/09, 1/1/11, 5/1/12
JUMP policy effective date: 5/1/08

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