



CIGNA HEALTHCARE COVERAGE POSITION

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Subject **Speech Generating Devices**

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Devices for Voice Rehabilitation following
 Total Laryngectomy
 Sensory and Auditory Integration Therapy -
 Facilitated Communication
 Speech/ Language Therapy
 Speech Therapy for Swallowing and
 Feeding Disorders
 Stuttering Treatment Devices

INSTRUCTIONS FOR USE

Coverage Positions are intended to supplement certain **standard** CIGNA HealthCare benefit plans. Please note, the terms of a participant's particular benefit plan document [Group Service Agreement (GSA), Evidence of Coverage, Certificate of Coverage, Summary Plan Description (SPD) or similar plan document] may differ significantly from the standard benefit plans upon which these Coverage Positions are based. For example, a participant's benefit plan document may contain a specific exclusion related to a topic addressed in a Coverage Position. In the event of a conflict, a participant's benefit plan document **always supercedes** the information in the Coverage Positions. In the absence of a controlling federal or state coverage mandate, benefits are ultimately determined by the terms of the applicable benefit plan document. Coverage determinations in each specific instance require consideration of 1) the terms of the applicable group benefit plan document in effect on the date of service; 2) any applicable laws/regulations; 3) any relevant collateral source materials including Coverage Positions and; 4) the specific facts of the particular situation. Coverage Positions relate exclusively to the administration of health benefit plans. Coverage Positions are not recommendations for treatment and should never be used as treatment guidelines. Proprietary information of CIGNA. Copyright ©2008 CIGNA

Coverage Position

Coverage for speech generating devices is subject to the terms, conditions and limitations of the applicable benefit plan's Durable Medical Equipment (DME) benefit and schedule of copayments. Please refer to the applicable CIGNA HealthCare benefit plan document to determine benefit availability and the terms, conditions and limitations of coverage. Under many benefit plans, coverage for DME is limited to the lowest-cost alternative.

If coverage for speech generating devices is available, the following conditions of coverage apply.

CIGNA HealthCare covers speech generating devices as medically necessary when ALL of the following criteria are met:

- The patient has a permanent and severe expressive speech impairment such as dysarthria, anarthria, aphasia, or aphonia.
- A speech evaluation, conducted by a speech-language pathologist, has documented the severity of the individual's disability, specific to their primary language.
- Speaking needs cannot be met using natural communication methods.
- Other forms of treatment have failed, are contraindicated, or are otherwise not appropriate.
- A speech generating device is available in the patient's primary language and is being requested for the sole purpose of speech generation.

CIGNA HealthCare does not cover devices that can run a word processing package, an accounting package, or perform other nonmedical functions. This includes personal digital assistants (PDAs), computers, cell phones, electronic mail devices and pagers, as these are not medical in nature.

General Background

Speech is the ability to vocalize by coordinating the muscles controlling the vocal apparatus. It is the mechanical aspect of oral communication. Language refers to symbolic communication. It is the ability to converse, comprehend, repeat, read, and write. Language ability depends on central processing for either comprehension or formulation for expressing the sounds and symbols of prepositional communication.

Difficulty in articulation or vocalization implies a speech disorder, whereas the inability to find words, comprehend, read, or write is indicative of a language disorder. Differentiation of speech and language disorders has important localizing value for the underlying pathology within the nervous system and helps distinguish among different etiological processes (Swanberg, 2003).

Types of Speech Disorders

Dysarthria: The dysarthrias are a group of motor disorders that affect the ability of the vocal organs to execute the motor instructions required to produce intelligible speech. Dysarthric speech is characterized by problems with articulation (i.e., production of speech sounds), voicing (i.e., volume and quality of speech) and prosody (i.e., speech rate, rhythm and naturalness). Dysarthria is associated with many neurological conditions, including amyotrophic lateral sclerosis (ALS or Lou Gehrig's disease), cerebral palsy, Parkinson's disease, locked-in syndrome, multiple sclerosis and traumatic brain injury. For some individuals with severe dysarthria or anarthria (i.e., the complete lack of speech), the use of natural speech is not a realistic goal of intervention (Sandin, 2006).

An individual with severe dysarthria is able to formulate intent to communicate (i.e., to formulate a thought, linguistically encode it appropriately as a message, and program the motor sequence necessary to produce the message as speech). However, that individual's body is unable, because of the disability, to execute those commands that control speech production. It should be noted that dysarthria also may arise from other diseases with neurological sequelae, including tumor, postoperative complications, inflammatory and metabolic diseases, and other sporadic, degenerative neurological conditions (Sandin, 2006).

Stages of Severity of Dysarthria

	Description	Treatment Approaches
Stage I	No detectable speech disorder	Educate the patient, family, and caregivers regarding the course of the disease and future communication needs and options.
Stage II	Obvious speech disorder with intelligible speech	Reduce the impairment through strengthening muscles related to speech production and range of motion exercises.
Stage III	Reduction in speech intelligibility	Same as above. In addition, introduce the speaker and listeners to strategies that improve intelligibility (e.g., slower rate of speech, first-letter cueing).
Stage IV	Residual natural speech and SPD	Supplement natural speech and teach compensatory strategies to individual and their partners. Introduce speech therapy, such as a speech (SP) device.
Stage V	Loss of useful speech	Provide a multipurpose SP device and accessories as well as nonelectronic (backup) strategies.

Apraxia: Acquired apraxia of speech is a term used to refer to a speech disorder that results from brain injury and is characterized by changes in articulation and prosody. The disorder stems from a deficit in

the planning and programming of the sequence of movements for speech and occurs despite the fact that the same muscles move normally when speech is not involved. Although the most common cause is stroke, apraxia may also occur with tumor or traumatic brain injury. Apraxia rarely (approximately 10% of the time) occurs as an isolated disorder, and, when severe, it almost always (approximately 85% of the time) coexists with aphasia. An individual with severe apraxia may produce no speech or perhaps a few stereotypical utterances that may or may not be meaningful (Swanberg, 2003; Sandin, 2006).

Aphasia: Aphasia is the impairment of an individual's ability to understand and formulate language. Aphasia results from brain damage, typically involving the language-dominant (i.e., left) cerebral hemisphere. Strokes result in 80,000 new cases of aphasia annually. The prevalence of aphasia in the United States is estimated at approximately one million people. Most are over the age of 60, with an equal distribution across gender, ethnicity, and educational and socioeconomic backgrounds.

Depending on its severity, aphasia can significantly affect an individual's ability to converse, exchange information, and, in some cases, to communicate basic needs. Aphasia is most commonly caused by stroke, but may also result from brain tumors, head injuries, or other insults to the areas of the brain that mediate language processing (Swanberg, 2003; Sandin, 2006).

Individuals with Broca's aphasia have damage to the frontal lobe of the brain. These individuals may speak in short, meaningful phrases that are produced with great effort. It is characterized as a nonfluent aphasia. These individuals often omit small words such as: is, and, the (National Institute on Deafness and Other Communication Disorders [NIDCD], 2007).

Damage to the temporal lobe may result in a fluent aphasia referred to as Wernicke's aphasia. Individuals may speak in long sentences that have no meaning, add unnecessary words and even create new "words". They also may have difficulty understanding speech and are therefore unaware of their mistakes (NIDCD, 2007).

A third type of aphasia is global aphasia and this results from damage to extensive portions of the language areas of the brain. Individuals with this condition have severe communication difficulties and may be extremely limited in their ability to speak or comprehend language (NIDCD, 2007).

Aphonia: Aphonia refers to an inability to produce voice naturally (i.e., due to physical impairment) and/or inability to produce voice by using a speech prosthesis (e.g., Passy-Muir valve, electrolarynx, tracheoesophageal puncture) due to physical disability or absence of larynx (Swanberg, 2003; Sandin, 2006).

Speech Assessment

A speech evaluation is performed in order to determine the severity and motor deficit of each individual. This evaluation is conducted by a speech-language pathologist (SLP). The SLP is a licensed health professional, educated at the graduate level in the study of human communication, its development and its disorders. The SLP must hold a Certificate of Clinical Competence (CCC) in speech-language pathology from the American Speech-Language-Hearing Association.

The evaluation consists of five parts: a case history, the examination of the oral mechanism during nonspeech activities, an assessment of perceptual speech characteristics, an assessment of intelligibility, and acoustic physiological analyses. The SLP will be able to determine, based on these factors and on the natural course of the disease or condition, when a speech generating device or treatment is necessary and what type of device or treatment would best meet the needs of the specific patient in question.

Individuals with severe disabilities present a wide range of physical, cognitive, linguistic, sensory and motor deficits, as well as different daily communication needs. Upon completion of the evaluation, a speech generating device may be recommended according to the permanence and severity of expressive speech impairment, as well as the short- and long-term goals for these individuals.

Once the speech assessment of the individual has been completed, the following clinical indicators are used to evaluate the appropriate category of speech generating devices required to meet the individual's communication needs:

- The individual has a communication disability with a diagnosis of severe dysarthria, apraxia and/or aphasia.
- The individual's communication needs that arise in the course of current and projected daily activities cannot be met using natural communication methods.
- The individual requires a speech output communication device to meet his/her functional communication goals.
- The individual possesses the linguistic capability to formulate language (i.e., messages) independently.
- The individual will produce messages most effectively and efficiently using spelling.
- The individual will require a speech generating device with extensive language storage capacity and rate enhancement features.
- The individual will access the device most effectively and efficiently by means of physical contact, direct-selection technique, such as a finger, other body part, stylus, and hand-held pointer, head-stick or mouth-stick.

If the individual needs additional accessories to use the device, then the medical necessity of each accessory must be clearly documented within the evaluation. The use of only one speech generating device or speech generating program at a time is considered a medical necessity. This device or program should be limited to the primary language of the individual, not multilingual in capability.

Upgrades to these devices or programs must first be assessed through a speech-language evaluation. The SLP evaluation should clearly document the medical need for the upgrade.

Speech Generating Devices (SGDs)

Speech generating devices (SGDs) assist individuals with severe speech impairments with the ability to meet their functional speaking needs. A SGD may also be considered an electronic augmentative and alternative communication device that generates speech output. Augmentation and alternative communication involves the attempt to compensate for the impairments of individual with severe impairment.

SGDs have been divided into these technologically and clinically distinct categories:

- SGD with digitized speech output
- SGD with synthesized speech output, includes these two types:
 - devices which requires message formulation by spelling and device access by physical contact, with direct-selection techniques
 - devices which permits multiple methods of message formulation and multiple methods of device access

The devices vary in the features found in each. The features may include:

- methods of displaying language/message components: this may include dynamic or static display
- methods of storing and retrieving language: this includes the levels and encoding strategies utilized (e.g., numeric, letter, semantic)
- Rate enhancing method (e.g., message prediction)

Digitized Speech Devices: Digitized speech devices utilize words or phrases that have been recorded by an individual other than the SGD user for playback upon command of the SGD user. They are also referred to as devices with whole message speech output.

Synthesized Speech Devices: Unlike the prerecorded messages of digitized speech, synthesized speech technology translates a user's input into device-generated speech. Users of synthesized speech devices are not limited to prerecorded messages but rather can independently create messages as their communication needs dictate. These devices require that the user make physical contact with a keyboard, touch screen or other display containing an alphanumeric display.

Synthesized speech devices permit the user multiple methods of message formulation and multiple methods of access. Multiple methods of message formulation must include the capability for message selection by two or more of the following methods: letters, words, pictures or symbols. Multiple methods of access must include the capability to access the device by two or more of the following methods: direct physical contact via a keyboard or touch screen, or indirect selection techniques via a specialized access device such as a joystick, a head-mouse, an optical head-pointer, a switch, a light pointer, an infrared pointer, a scanning device, or Morse code.

Speech generating software programs enable a laptop computer, desktop computer or personal digital assistant (PDA) to function as an SGD. Within this CIGNA HealthCare Coverage Position, an SGD pertains to the speech generating software programs only (i.e., HCPCS code E2511).

Personal digital assistants (PDAs) are handheld devices that integrate the functions of a small computer with features such as a cell phone, personal organizer, electronic mail or pager. Information may be entered either via a pen-based system using a stylus and handwriting recognition software, or via a keyboard, or it may be downloaded from a personal computer using special cables and software. When these devices are not used for the sole purpose of speech generation, they are not considered to be speech generating devices and therefore are not covered.

Speech generating software programs enable hardware equipment such as a laptop computer, desktop computer or personal digital assistant (PDA) to function as an SGD. Within this CIGNA HealthCare Coverage Position, an SGD pertains to the speech generating software programs only (i.e., HCPCS code E2511) and not the hardware. PDAs are handheld devices that integrate the functions of a small computer with features such as a cell phone, personal organizer, electronic mail or pager. Information may be entered either via a pen-based system using a stylus and handwriting recognition software, or via a keyboard, or it may be downloaded from a personal computer using special cables and software. These devices or hardware are not considered to be speech generating devices, are considered to be not medical in nature, and therefore are not covered.

Accessories for speech generating devices (i.e., HCPCS code E2512, E2599) include, but are not limited to, access devices that enable direct or indirect selection of letters, words or symbols via direct or indirect selection techniques. Mounting systems may be necessary to place the SGD device, switches and other access devices within the patient's reach. Examples of access devices include optical head-pointers, joysticks, switches, wheelchair integration devices and SGD/scanning devices. The medical necessity of these accessories should be clearly indicated as part of the speech-language evaluation.

U.S. Food and Drug Administration (FDA)

SGDs are classified as Class II devices by the U.S. Food and Drug Administration (FDA) and are exempt from the premarket notification procedures. The FDA has described these devices as: "system, communication, powered" devices". The FDA identifies them as, "A powered communication system is an AC- or battery-powered device intended for medical purposes that is used to transmit or receive information. It is used by persons unable to use normal communication methods because of physical impairment."

Examples of Speech Generating Devices

Digitized speech devices that use prerecorded messages of four minutes or less, include, but are not limited to the following devices (i.e., HCPCS code E2500):

- Base Trainer™ (Empowering Resources, Inc., Hicksville, NY)
- BIGmack® (AbleNet, Inc., Roseville, MN)
- Chatbox, Chatbox Deluxe, Chatbox 40 or 40-XT (Saltillo Corp., Millersburg, OH)
- Cheap Talk 8 (Enabling Devices, Hastings on Hudson, NY)
- GoTalk™ Series (Attainment Co., Verona, WI)
- Hawk II (Adamlab, LLC, Troy, MI)
- Hip Talker (Technical Solutions, Victoria, Australia)
- iTalk2™ Communication Aid (Inclusive Technology Ltd., Delph Oldham, UK)
- Little Mack® (AbleNet, Inc., Roseville, MN)
- Message/Mates™ (e.g., 20/60 or 20/120) (Words+, Inc., Lancaster, CA)

- One by Four Talker (Attainment Co., Verona, WI)
- One Step Communicator (AbleNet, Inc., Roseville, MN)
- Partner/One™, Partner/Two™ (Advanced Multimedia Devices, Inc. [AMDi], Hicksville, NY)
- Personal Talker (Attainment Co., Verona, WI)
- Sequencer (Adaptivation, Sioux Falls, SD)
- SpeakEasy (AbleNet, Inc., Roseville, MN)
- Step-by-Step Communicator or Communicator—with Levels (AbleNet, Inc., Roseville, MN)
- Talk Back 24 (Crestwood Communication Aids, Inc., Milwaukee, WI)
- TalkTrac™ Plus or Plus with Levels (AbleNet, Inc., Roseville, MN)
- Talking Photo Album (Attainment Co., Verona, WI)
- Talking Symbols (AbleNet, Inc., Roseville, MN)
- TECH/Scan: 8, 8+, 32 or 32+ (Advanced Multimedia Devices, Inc. [AMDi], Hicksville, NY)
- Tech/Speak™, Tech/Speak 2x32 (Advanced Multimedia Devices, Inc. [AMDi], Hicksville, NY)
- Tech/Talk™, Tech/Talk 6x8, Tech/Talk with Environmental Controls (Advanced Multimedia Devices, Inc. [AMDi], Hicksville, NY)
- Ultimate 4 (Tash Inc., Richmond, VA)
- VoicePal, VoicePal Max or VoicePal Pro (Adaptivation, Sioux Falls, SD)

Digitized speech output devices that use prerecorded messages of four to eight minutes include, but are not limited to the following devices (i.e., HCPCS code E2500):

- 6 Level Communicator (Enabling Devices, Hastings on Hudson, NY)
- Black Hawk (Adamlab, LLC, Troy, MI)
- Hand Held Voice (Ability Research, Inc., Minnetonka, MN)
- MessageMate 40/300 (Words+, Inc., Lancaster, CA)
- SpeakEasy (AbleNet, Inc., Roseville, MN)
- TalkBack 24 (Crestwood Communication Aids, Inc., Milwaukee, WI)
- Tech/Speak 4x32 or 6x32 (Advanced Multimedia Devices, Inc. [AMDi], Hicksville, NY)
- Tech/Talk 8x8 or 12x8 (Advanced Multimedia Devices, Inc. [AMDi], Hicksville, NY)

Digitized speech output devices that use prerecorded messages of nine to sixteen minutes include, but are not limited to the following devices (i.e., HCPCS code E2502):

- Digivox2 (DynaVox Technologies, Pittsburgh, PA)
- EasyTalk (Synapse Adaptive, San Rafael, CA)
- Hand Held Voice (Ability Research, Inc., Minnetonka, MN)
- Macaw3 (ZYGO Industries, Inc., Portland, OR)
- MessageMate (Words+, Inc., Lancaster, CA)
- SideKick (Prentke Romich Company, Wooster, OH)

Digitized speech output devices that use prerecorded messages of 17+ minutes include, but are not limited to the following devices (e.g., HCPCS codes E2504 or E2506):

- AlphaTalker (Prentke Romich Company, Wooster, OH)
- Communication Boards (AbleNet, Inc., Roseville, MN)
- DigiPad (Prentke Romich Company, Wooster, OH)
- Digivox (DynaVox Technologies, Pittsburgh, PA)
- Dynamo (DynaVox Technologies, Pittsburgh, PA)
- Hawk (Adamlab, LLC, Troy, MI)
- Macaw 3+, Macaw 5 series, Green Macaw 5, DACtyl Macaw 5 (ZYGO Industries, Inc., Portland, OR)
- Talara-32 (ZYGO Industries, Inc., Portland, OR)

Synthesized speech devices that require message formulation by spelling and access to physical contact with the device include, but are not limited to the following devices (i.e., HCPCS codes E2508, E2510):

- Dubby (Synapse Adaptive, San Rafael, CA)
- Dynamyte 3100 (DynaVox Technologies, Pittsburgh, PA)
- Dynavox 3100 (DynaVox Technologies, Pittsburgh, PA)

- DynaWrite (DynaVox Technologies, Pittsburgh, PA)
- Freedom 2000 (Words+, Inc., Lancaster, CA)
- Freestyle (Assistive Technology Inc., Newton, MA)
- Liberator (Prentke Romich Company, Wooster, OH)
- Light WRITER: SL5, SL25, SL35, 35/C, SL56, SL85, SL86, or SL87 (ZYGO Industries, Inc., Portland, OR)
- Link, Link Plus (Assistive Technology Inc., Newton, MA)
- Optimist 100 or 160 (ZYGO Industries, Inc., Portland, OR)
- Polyana 3 with Persona (ZYGO Industries, Inc., Portland, OR)
- Portable Chat II (Saltillo Corp., Millersburg, OH)
- Vanguard (Prentke Romich Company, Wooster, OH)

Summary

Speech generating devices provide multiple methods of message formulation and can be accessed in multiple ways. By assessing the individual's specific condition and communication needs, the speech-language evaluation helps determine the optimal speech generating device or program most appropriate for that individual's cognitive and functional needs.

Coding/Billing Information

Note: This list of codes may not be all-inclusive.

Covered when medically necessary:

CPT [®] * Codes	Description
92607	Evaluation for prescription for speech-generating augmentative and alternative communication device, face-to-face with the patient; first hour
92608	Evaluation for prescription for speech-generating augmentative and alternative communication device, face-to-face with the patient; each additional 30 minutes (List separately in addition to code for primary procedure)
92609	Therapeutic services for the use of speech-generating device, including programming and modification

HCPCS Codes	Description
E2500	Speech generating device, digitized speech, using pre-recorded messages, less than or equal to eight minutes recording time
E2502	Speech generating device, digitized speech, using pre-recorded messages, greater than 8 minutes but less than or equal to 20 minutes recording time
E2504	Speech generating device, digitized speech, using pre-recorded messages, greater than 20 minutes but less than or equal to 40 minutes recording time
E2506	Speech generating device, digitized speech, using pre-recorded messages, greater than 40 minutes recording time
E2508	Speech generating device, synthesized speech, requiring message formulation by spelling and access by physical contact with the device
E2510	Speech generating device, synthesized speech, permitting multiple methods of message formulation and multiple methods of device access
E2511	Speech generating software program, for personal computer or personal digital assistant (PDA)
E2512	Accessory for speech generating device, mounting system
E2599	Accessory for speech generating device, not otherwise classified

ICD-9-CM Diagnosis	Description
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Codes	
784.3	Aphasia
784.41	Aphonia
784.49	Other voice disturbance
784.5	Other speech disturbance
	Multiple/Varied

***Current Procedural Terminology (CPT®) © 2007 American Medical Association: Chicago, IL.**

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