HEALTH PLANS
UNIVERSITY OF UTAH

Medical Policy

Speech Generating Devices

Policy MP-067

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Disclaimer:

1. Policies are subject to change in accordance with State and Federal notice requirements.
2. Policies outline coverage determinations for U of U Health Plans Commercial, and Healthy U (Medicaid) plans. Refer to the "Policy" section for more information.

Description:

Speech is the articulation and phonation of language sounds. Language refers to symbolic communication and is the ability to converse, comprehend, repeat, read, and write. There are several different types of communication disorders (National Institute on Deafness and Other Communication Disorders [NIDCD]) which can create communication issues impacting an individual's ability to function independently. These include:

Aphasia: This disorder results from damage to portions of the brain responsible for language and impairs the ability to understand and formulate language. This disorder may result in total or partial loss of the ability and is usually caused by stroke, brain disease, or injury.

Apraxia: This is a speech sound disorder, which prevents someone from being able to say what they want correctly and consistently. Apraxia 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. The most common cause is stroke; however, apraxia may also occur with tumor or traumatic brain injury.

Dysarthria: This disorder involves the abnormal articulation of sounds or phonemes and is caused by disturbances in the strength or coordination of the muscles of the speech mechanism as a result of damage to the brain or nerves. Anarthria is a severe form of dysarthria which creates total loss of the ability to articulate speech.

Speech generating devices are used to overcome speech deficits in some individuals and allow for more independent function. These devices are defined as durable medical equipment that provides an individual who has a severe speech impairment with the ability to meet his or her functional, speaking needs. Some speech-generating devices are electronic augmentative and alternative communication systems used to supplement or replace speech or writing for individuals with severe speech impairments, enabling them to verbally communicate their needs.

Speech generating devices provide multiple methods of message formulation and are used therapeutically to establish, develop, or maintain the ability to communicate functional needs. These devices or aids are electronic, computer-based and can generate synthesized (computer-generated) and/or digitized (natural human) speech output. Speech may be generated using digitized audible/verbal speech output, prerecorded messages, synthesized audible/verbal speech output which requires message formulation by spelling and device access by physical contact with the device-direct selection techniques, synthesized audible/verbal speech output which permits multiple methods of message formation and multiple methods of device access, or software that allows a computer or other electronic device to generate speech.

Policy Statement and Criteria

1. Commercial Plans

U of U Health Plans covers speech generating devices and augmentative communication equipment in *limited circumstances.*

Criteria for Coverage of Speech Generating Devices (A-G must be met)

A. Prior to the delivery of the device, the member has had a formal evaluation of their cognitive and communication abilities by a speech-language pathologist. The formal, written evaluation must include, at a minimum, the following elements:

   i. Current communication impairment, including the type, severity, language skills, cognitive ability, and anticipated course of the impairment;

   ii. An assessment of whether the member's daily communication needs could be met using other natural modes of communication;

   iii. A description of the functional communication goals expected to be achieved and treatment options;

   iv. Rationale for selection of a specific device and any accessories;

   v. Demonstration that the patient possesses a treatment plan that includes a training schedule for the selected device;

   vi. The cognitive and physical abilities to effectively use the selected device and any accessories to communicate;

   vii. For a subsequent upgrade to a previously issued device, information regarding the functional benefit to the patient of the upgrade compared to the initially provided device.

B. The member's medical condition is one resulting in a severe expressive speech impairment;

C. Written statement is provided indicating why alternative communication methods are insufficient to meet member's need;

D. Other forms of treatment have been considered and ruled out;

E. The device is demonstrated to be necessary for patient to perform Activities of Daily Living (ADL's);

F. A copy of the speech-language pathologist's written evaluation and recommendation have been signed by the member's treating physician and provided for review;

G. The speech-language pathologist performing the evaluation is not an employee of or has a financial relationship with the supplier of the device.

U of U Health Plans does NOT cover the following medical devices and/or service as they are considered not medically necessary:

A. Devices not specifically dedicated as speech devices (e.g., personal laptop or desktop computers, personal digital assistants (PDA's), word processing or accounting packages and programs)*

B. Communications boards.

C. Multilingual modules.

D. Use of a speech generating device in a member without a documented severe speech impairment.

E. Internet connection or other phone services.

** Benefit exception for these devices will be considered in the following circumstances (ALL MUST BE MET):*

i. Member has unique needs met by device not met by other devices; and

ii. Device meets medical necessity standard; and

iii. Requested Device is a lower cost alternative to other covered devices; and

iv. Device is only to be used for speech generating.

2. Medicaid Plans

Coverage is determined by the State of Utah Medicaid program; if Utah State Medicaid has no published coverage position and InterQual criteria are not available, the U of U Health Plans Commercial criteria will apply. For the most up-to-date Medicaid policies and coverage, please visit their website at: http://health.utah.gov/medicaid/manuals/directory.php or the Utah Medicaid code Look-Up tool

3. **Medicare Plans**
   Coverage is determined by the Centers for Medicare and Medicaid Services (CMS); if a coverage determination has not been adopted by CMS and InterQual criteria are not available, the U of U Health Plans Commercial criteria will apply. For the most up-to-date Medicare policies and coverage, please visit their search website at: http://www.cms.gov/medicare-coverage-database/overview-and-quick-search.aspx?from2=search1.asp& or the manual website

Clinical Rationale

In 2016, the National Joint Committee for the Communication Needs of People with Severe Disabilities (NJC) reviewed literature regarding practices for people with severe disabilities in order to update guidance provided in documents originally published in 1992. (Brady, et al.) A revised version of the Communication Bill of Rights, changes in laws, definitions, and policies that affect communication attainments by persons with severe disabilities were presented, along with guidance regarding assessment and intervention practices. The review found that in the past two decades there has been tremendous change in the technologies that we harness to support the communication of individuals with significant disabilities. Technological advances have enabled new options for augmentative and alternative communication system design and features as well as device control (for example, eye gaze, brain waves, and other methods requiring minimal voluntary movement). The NJC asserts that all people have the right to communicate and it is their purpose to synthesize and disseminate information that informs policy, practice, and research. However, the authors acknowledged that more research is needed to actualize the principles incorporated in this review. As the principles are not static concepts and will continue to evolve based on emerging research findings and their translation into policy and practice.

In a 2010 systematic review (Rispoli et al.) assessed communication interventions that involved the use of speech generated devices (SGD) for individuals with developmental disabilities. Searches of electronic databases, journals and reference lists identified 35 studies meeting the inclusion criteria. These studies were evaluated in terms of participants, SGD function, SGD characteristics, intervention procedures, intervention results and certainty of evidence. Across these studies, intervention was provided to a total of 86 subjects aged 1 to 42 years. Communication skills targeted included requesting, social or conversational skills, labeling items and receptive language. Intervention approaches were categorized as using Discrete Trial Training, Milieu teaching or a combined instructional approach. Positive outcomes were reported in 86% of the studies with 54% of studies categorized as providing conclusive evidence. The authors concluded that this literature base looks promising due to the large number of conclusive studies and the replication of intervention approaches.

A 2017 meta-analysis (Ganz et al.) reviewed studies on individuals with intellectual/developmental disabilities who had complex communication needs. The review identified 24 studies on high-technology AAC devices that had a total of 56 participants. Studies differed in the interventions they evaluated and the outcome variables they measured. All of the interventions provided statistically significant benefits, compared with baseline, and the overall pooled effect size was 0.70 (95% confidence interval [CI]; 0.63 to 0.77). The authors concluded that further studies are needed before recommendations related to clinical decision making are possible.

Further, another 2017 systematic review (Russo et al.) evaluated studies on high-technology AAC devices for adults with post-stroke aphasia. The review included 30 publications and included a total of

250 individuals with acquired non-progressive post-stroke aphasia. Study sample sizes ranged from 1 to 10. AAC included computer software (n=20), dedicated AAC devices (n=6) and software applications for tablets and/or smartphones (n=4). A total of 16 studies showed positive outcomes, 11 studies reported mixed outcomes and 3 studies did not demonstrate improvement in communication. Study findings were not pooled due to heterogeneity of interventions and outcome measures. Conclusions from the authors were that taken together with positive results in heterogeneous studies, high-technology devices represent a compensatory strategy to enhance communicative skills in individuals with post-stroke aphasia. However, further studies are needed with improvements in the design of studies and reporting of results, which may lead to better interpretation of the already existing scientific results from aphasia management.

In 2018, a community-based, piloted-randomized controlled study (Gilroy et al.) evaluated the effects of the Picture Exchange Communication System (PECS) to a teaching sequence using a high-tech SGD to teach social communication behaviors. The two approaches were compared to evaluate the effectiveness of the newer, more high-tech intervention using technology to improve social and communicative behavior of children diagnosed with autism spectrum disorder (ASD). A total of 35 school-age children were randomized to either a high-tech (SGD device) or low-tech (PECS cards) form of AAC. Subjects received 4 months of communication training delivered in their classrooms, and the primary outcome measures of the trial were several functional communication skills emphasized in the PECS teaching sequence. Results indicated that both high-tech and low-tech AAC approaches resulted in significant improvements in communication, and that these improvements did not differ significantly between the two approaches. These findings supported the use of high-tech AAC, and highlighted the need for evidence-based guidelines for its use as well as evaluation with individuals with various impairments and disabilities. In conclusion, the authors found that these findings indicated that both "high-tech" and "low-tech" interventions were effective for improving behavior and that there was not a significant difference between the two approaches.

Finally, a 2018 study (Thiemann-Bourque et al.) reviewed the effects of incorporating a peer-mediated approach into a SGD intervention on communication of 45 non-verbal and minimally verbal preschoolers with ASD and 95 peers without disabilities. The SGD was an iPad 2 (Apple) with voice output app. Effects were evaluated using a multi-variate RCT design with repeated measures for 4 cohorts across baseline, intervention, generalization, and maintenance phases. Children were randomly assigned to an experimental treatment that trained peers on use of the SGD or a business-as-usual comparison condition with untrained peers. Communication outcomes were measured for both children with ASD and peers. Children receiving the treatment demonstrated significant increases in rates of communication and more balanced responses and initiations (a measure of reciprocity) than children in the comparison group. They were able to generalize improvements and maintain communication gains. Treatment fidelity was high for school staff and peer implementation. In conclusion, the findings of this study supported positive effects on communication of teaching young children with ASD and peers without disabilities to use the same SGD system in typical preschool activities. The authors went on to further state that SGD interventions that utilize peer-mediated approaches may improve core deficits in communication and reciprocity and allow for greater classroom social participation and interactions with peers. However, further studies are needed that focuses on support and training for early education service providers working with this population in inclusive settings; and given the recent advances in the use of iPads as SGDs in classrooms and in clinical practice without evidence of effectiveness, it will be essential for future research to incorporate what is already known as effective SGD and peer-mediated instructional strategies.

Applicable Coding

CPT Codes

92605	Evaluation for prescription of non-speech-generating augmentative and alternative communication device, face-to-face with the patient; first hour
92618	Evaluation for prescription of non-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)
92606	Therapeutic service(s) for the use of non-speech-generating device, including programming and modification
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

E1902	Communication board, non-electronic augmentative or alternative communication device
E2500	Speech generating device, digitized speech, using prerecorded messages, less than or equal to eight minutes recording time
E2502	Speech generating device, digitized speech, using prerecorded messages, greater than eight minutes but less than or equal to 20 minutes recording time
E2504	Speech generating device, digitized speech, using prerecorded messages, greater than 20 minutes but less than or equal to 40 minutes recording time
E2506	Speech generating device, digitized speech, using prerecorded 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
E2512	Accessory for speech generating device, mounting system
E2599	Accessory for speech generating device, not otherwise classified

Not Covered

E2511	Speech generating software program, for personal computer or personal digital assistant

V5336 Repair/modification of augmentative communicative system or device (excludes adaptive hearing aid)

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