

# Speech therapy

Clinical Policy ID: CCP.1302

Recent review date: 12/2024

Next review date: 4/2026

Policy contains: Oral feeding therapy; oral aversion; speech disorder; speech fluency; speech therapy; swallowing disorder.

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## Coverage policy

Speech therapy is clinically proven and, therefore, may be medically necessary when all of the following criteria are met (American Speech-Language-Hearing Association, 2015):

- Either:
  - Objective standardized testing does not demonstrate age-appropriate, speech-language communication (Brady, 2016; Gubiani, 2015; Roulstone, 2015; Tosh, 2017).
  - Clinical assessment or objective standardized testing demonstrates a pediatric feeding disorder (impaired oral intake that is not safe or age-appropriate) and an associated medical, nutritional, feeding skill, or psychosocial dysfunction (World Health Organization International Classification of Functioning, Disability, and Health, 2001).
- Services are administered as part of a care plan with clearly defined type, amount, duration, and frequency of therapy services, and clearly defined therapeutic goals. Amount, frequency, and duration must be reasonable under accepted standards of practice.
- Services are administered by a trained, licensed healthcare professional experienced in the diagnosis and treatment of speech and feeding disorders.
- The member's condition is expected to improve from the services provided.

## Limitations

Speech therapy services for which there is no evidence of improved outcomes or for which there is no defined benefit in state or federal policy are not medically necessary, including, but not limited to:

- Speech therapy administered for achievement of academic goals (e.g., grammar, vocabulary, and reading).
- Speech therapy administered in a language other than the member's language at home.
- Voice therapy for members undergoing gender reassignment in the absence of a functional limitation.
- Speech therapy for a member who is able to: 1) feed or swallow to maintain adequate nutrition, hydration, and pulmonary status, or 2) manage oral and pharyngeal saliva accumulations (American Speech-Language-Hearing Association, 2015).

A reevaluation of the member's performance and goals is medically necessary when a significant improvement, decline, or change in the member's condition occurs, or if it is requested by the Plan to determine the medical necessity of an ongoing intervention. A trained, licensed health care professional experienced in the diagnosis and treatment of speech disorders should perform the reevaluation.

## Alternative covered services

Routine in-network evaluation and management by primary care physicians and specialists, including specialty therapists, working in the area of speech deficit, speech fluency, or swallowing disorders.

## **Background**

A speech disorder is an impairment of the articulation of speech sounds, fluency, or voice (American Speech-Language-Hearing Association, 2024b). The prevalence of speech sound disorders in young children is 8% to 9%, mostly attributed to articulation disorders or phonologic disorders (National Institute on Deafness and Other Communication Disorders, 2016). By school age, an estimated 5% of children have noticeable speech disorders (e.g., stuttering, speech sound disorders, and dysarthria) with no clear etiology.

Aberrations in development and execution of speech are usually identified as a congenital or developmental deficit or as the result of an insult to the auditory organs or the brain during pediatric or adult life. Speech disorders can be organic resulting from an underlying motor/neurologic, structural, or sensory/perceptual cause, whereas functional speech disorders are idiopathic. Evaluation of speech consists of clinical examination and age-appropriate standardized tests with "standard scores" designed specifically to identify speech deficits and difficulties in speech fluency (American Speech-Language-Hearing Association, 2024b). Serial measurements can be administered at intervals over the course of therapy.

Speech therapy is a collection of interventions that focuses on improving speech/language production, voice production, swallowing function, cognitive-linguistic skills, or general communication abilities that have been impaired as a result of a disease, injury, developmental delay, or surgical procedure (American Speech-Language-Hearing Association, 2015). Management of speech deficit and aberrations of speech fluency generally is conducted in the language of the home at intervals appropriate to the global condition of the patient. Modern treatment focuses on individualized behavioral approaches combined with education and training. In children, the emphasis of treatment is on manipulating environmental factors (indirect approaches) and working exclusively on the speech of the child with direct therapeutic approaches (Blomgren, 2013).

## Pediatric feeding disorders

Feeding involves any aspect of eating or drinking, including food and liquid gathering and preparation, sucking or chewing, and swallowing (American Speech-Language-Hearing Association, 2024a). Pediatric feeding disorders encompass a range of eating activities that may or may not include problems with swallowing

(dysphagia). Feeding problems may involve food refusal, disruptive meal-time behavior, rigid food preferences, suboptimal growth, or failure to master self-feeding skills commensurate with the child's developmental abilities.

Pediatric feeding disorders are complex to diagnose and treat and often occur in children with other medical, developmental, or behavioral problems. Impairment in oral-motor control and function and swallowing and behavioral and/or sensory issues may interfere with normal feeding, resulting in choking, pulmonary complications, inadequate nutrition and hydration, weight loss, and failure to thrive (Borowitz, 2018; Riaz, 2021).

Pediatric feeding disorders comprise four related and complementary domains — medical, psychosocial, feeding skill-based systems, and associated nutritional complications — but have lacked a universally accepted definition (Goday, 2019). The World Health Organization International Classification of Functioning, Disability, and Health (2001) proposed defining a pediatric feeding disorder as “impaired oral intake that is not age-appropriate, and is associated with medical, nutritional, feeding skill, and/or psychosocial dysfunction.” This framework complements the 10th revision of the International Classification of Diseases and presents a holistic linkage to the physiologic and functional impact that is critical to treatment planning and improving quality of life.

A systematic review/meta-analysis of 67 studies determined that 25% of preterm infants experienced oromotor feeding difficulties in late infancy and/or childhood, with 20% classified as challenging eating behaviors. These figures exceed those for term infants. Authors note that mothers of preterm infants had increased anxiety while feeding and utilized coercive food parenting practices, while their children received less human milk, started solid foods earlier, and had poorer diet quality (Walton, 2022).

Pediatric feeding problems are typically treated in outpatient settings by individual practitioners or interdisciplinary care teams to address medically complex cases. The role of speech-language pathology is to identify the etiology and develop specific therapies and skills to make the process of eating easier, safer, and more nutritious, and enjoyable (American Speech-Language-Hearing Association, 2024a). Clinical and age-appropriate instrumented assessments are needed to document the functional impairment and associated disability. Interventions may include: modifying the nature, consistency, and volume of food and liquid intake; altering swallowing behavior; improving oral, pharyngeal, and laryngeal coordination, control, speed, and strength; and patient and caregiver counseling.

## Findings

### Guidelines

Inconsistent application of formal tools such as standardized tests to evaluate outcomes in speech therapy hampers consistent interpretation of the available data. There is awareness in the rehabilitative community that testing interventions are varied, often poorly described, and of limited quality. A single standardized test may not measure all valid and accepted means of communication (e.g., gestures, facial expressions, tone of voice) encountered in a “functional” environment (Colquhoun, 2017; Costantino, 2014).

Moreover, the evidence on different approaches to speech and language therapy have lacked consistent focus sufficient to draw conclusions based on sound medical evidentiary principles (American Speech-Language-Hearing Association, 2015; Gubiani, 2015; Roulstone, 2015). Professional organizations within the speech and language therapy community, such as the International Collegium of Rehabilitative Audiology (Akeroyd, 2015), have begun promulgating guidelines to promote a valid comparative basis for outcomes effectiveness.

The American Academy of Otolaryngology-Head and Neck Surgery Foundation published a guideline on treating patients who present with dysphonia. The Academy issued strong recommendations for voice therapy for patients with dysphonia from a cause amenable to voice therapy (Stachler, 2018).

For children with complex feeding problems, the American Speech-Language-Hearing Association (2024a) supports an interdisciplinary team approach for implementing individualized treatment plans. The goals of feeding and swallowing intervention include supporting safe and adequate nutrition and hydration, achieving safe and age-appropriate eating skills, and preventing future feeding issues.

### Evidence review

There is sufficient evidence for the effectiveness of speech therapy in terms of improved “functional communication” (e.g., reading, writing, and expressive language) compared with no therapy (standardized mean difference = 0.28, 95% confidence interval 0.06 to 0.49,  $P = .01$ ), based on the results of a Cochrane review of 57 randomized controlled trials ( $n = 3,002$  participants) (Brady, 2016).

There is limited evidence (Brady, 2016) that speech therapy at high intensity, high dose (four to 15 hours of speech therapy per week), or over a longer period (up to eight years) may be beneficial for persons with aphasia. However, the benefits of high-intensity/high-dose speech therapy are diminished by a significantly higher dropout rate in these intervention groups. There is modest evidence that home speech therapy is an efficacious service delivery model, but it must be administered consistently and with direct parental involvement (Tosh, 2017).

Several systematic reviews have examined the effectiveness of feeding therapy with a focus on speech-language pathology interventions for oral aversion and other feeding difficulties. The results confirm the complex and multifactorial nature of pediatric feeding disorders. The contribution of speech-language pathology interventions is best recognized as an integral component of a treatment protocol with clearly defined objectives that link the feeding problem with oral-motor interventions and a measurable reduction in impairment.

Interventions for improving feeding outcomes in preterm infants include oral, swallow/gustatory, olfactory, tactile/kinesthetic, and auditory stimulation (Sheikh-Mohamed, 2024). These interventions may be provided alone or in combination. The strongest evidence from systematic reviews supports the efficacy of oral stimulation protocols. In particular, protocols incorporating non-nutritive sucking can significantly reduce the time to independent oral feeds, improve feeding efficacy, and reduce hospital length of stay. However, its effects on weight gain and growth in preterm infants require further study (Muñoz-Gómez, 2024; Sheikh-Mohamed, 2024; Zhao, 2024).

In a systematic review (Sharp, 2017) of 11 studies, multi-component interventions that applied operant conditioning, systematic desensitization, and changes to environment and familial practices were effective for children with complex medical or developmental histories who displayed persistent feeding concerns requiring formula supplementation. Three of the studies included oral-motor therapy, which consisted of decreasing tactile hypersensitivity or increasing the range, strength, and control of the lips, cheeks, jaw, and tongue. Reported outcomes of multi-component treatment were rates in successful weaning from tube feeding at discharge (71%, 95% confidence interval 54% to 83%), which persisted at varying lengths of follow up, and subjective improvements in oral intake and mealtime behaviors and reductions in parenting stress. The authors recommended multidisciplinary intervention, including speech-language pathology or occupational therapy, to ensure the necessary oversight and clinical guidance needed to address the behavioral, organic, dietary, and oral-motor concerns pervasive in severe feeding disorders.

A systematic review (Gosa, 2017) of 61 mixed-quality studies found sufficient evidence from four high-quality studies to establish the efficacy and benefit of joint nutrition and behavior intervention programs to improve functional feeding and swallowing outcomes in children with swallowing and feeding disorders. For other interventions, such as oral-motor or sensory therapies, there continues to be weak or conflicting evidence supporting their impact on functional feeding outcomes in pediatric populations.

A systematic review (Rhooms, 2019) of 35 low-quality studies examined the effects of unimodal (26 studies) and multimodal (nine studies) sensorimotor interventions on oral feeding outcomes (transition to full oral feeding,

volume intake, weight gain, and length of hospital stay) in preterm infants. Unimodal interventions primarily targeted oral sensorimotor input and, to a lesser extent, tactile, auditory, and olfactory input. Multimodal interventions combined tactile and kinesthetic stimulation. The heterogeneity in the studies limited the ability to determine the effects of sensorimotor interventions on feeding outcomes provided by either mode. Shortland (2021) reached similar conclusions.

In 2018, we updated the references and made no policy changes.

In 2019, we updated the references and added a bullet clarifying the requirements of a care plan as outlined by the American Speech-Language-Hearing Association (2015). The policy ID was changed from CP# 15.02.11 to CCP.1302.

In 2020, we updated the references and added to the limitations section that voice therapy is generally considered cosmetic in the absence of a functional limitation.

In 2021, we updated the references and addressed a field request to determine the medical necessity of oral feeding therapy for pediatric feeding disorders, and for oral aversion, in particular. We modified the coverage based on American Speech-Language-Hearing Association (2015) guidelines.

In 2023, we added no new references to the policy.

In 2024, we reorganized the findings section and updated the references. No policy changes are warranted.

## References

On October 10, 2024, we searched PubMed and the databases of the Cochrane Library, the U.K. National Health Services Centre for Reviews and Dissemination, the Agency for Healthcare Research and Quality, and the Centers for Medicare & Medicaid Services. Search terms were “speech deficit,” “speech fluency,” “Feeding and Eating Disorders of Childhood/therapy” (MAJR), “Feeding behavior/therapy” (MeSH), “deglutition disorders” (MeSH), “dysphagia,” and “speech therapy” (MeSH). We included the best available evidence according to established evidence hierarchies (typically systematic reviews, meta-analyses, and full economic analyses, where available) and professional guidelines based on such evidence and clinical expertise.

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## Policy updates

4/2017: initial review date and clinical policy effective date: 6/2017

6/2018: Policy references updated.

6/2019: Policy references updated. Policy modified and ID changed.

6/2020: Policy references updated. Limitations modified.

6/2021: Policy references updated. Coverage modified.

12/2022: Policy references updated.

12/2023: Policy references updated.

12/2024: Policy references updated.