

Special Populations of Children with Speech Sound Disorders

- developmental apraxia of speech
- congenital neuromuscular impairment
- intellectual disability
- orofacial anomalies
- hearing loss

General principles of treatment for special populations

- Differentiate developmental (natural) error patterns from those attributable to a child's special condition
 - remember that even though a child is a member of a special population, he is still a child who must acquire a phonological system
 - you should expect the child's special condition to interact with the process of phonological learning
- Work to remediate the special sensory, motor, or intellectual impairments of the child
 - children with mental retardation should receive additional environmental stimulation
 - children with cerebral palsy should receive surgery, drugs, and PT to improve neuromuscular function
 - children with cleft lip/palate will have surgical and prosthetic repairs
 - children with hearing loss will have amplification

General principles of treatment for special populations

- Error patterns should be analyzed and prioritized according to their effect on intelligibility
- Treatment for some error patterns may be deferred if the child's special condition is likely to impede progress
 - if cleft palate repair is incomplete, poor VP closure will impede the production of consonants that require high intraoral pressure
 - children with severe spasticity from cerebral palsy may lack the motor control needed for fricatives, affricates, clusters
 - mental retardation may slow the rate of language learning such that the child lacks vocabulary to support phonological teaching
 - without adequate amplification, a child with hearing loss may have inconsistent auditory input or inadequate input in certain frequency ranges

Children with intellectual disability

- Health issues may compromise treatment
 - visual problems
 - poorer personal hygiene, resulting in dental or middle ear problems
 - health problems requiring surgery, interfering with education and socialization
- Poor generalization of new learning
 - expect progress in therapy to be slower
 - avoid approaches with high cognitive demands, e.g., cycles, multiple opposition

Children with intellectual disability

- Some evidence of phonological differences among subgroups
 - children with Fragile X syndrome show error patterns comparable to typically developing children
 - children with Down syndrome show more problems with syllabicity: syllable deletions and additions are common

Children with congenital neuromuscular impairment

- Different types
 - spastic (most common)
 - athetoid (dyskinesia)
 - ataxic
- Impairment is likely in all speech systems: respiration, phonation, articulation
 - work to improve function in that order
- Intellectual disability often co-exists
- Nonspeech communication (AAC) is a viable alternative

Children with congenital neuromuscular impairment

- Health issues may compromise treatment
 - middle ear infection due to poor eustachian tube function, poor hygiene
 - prevalence of hearing impairment (all types) estimated at between 8-18%
 - dental problems (<http://cerebralpalsy.org/about-cerebral-palsy/conditions/oral-health/>)
 - Visual problems, e.g., misalignment of the eyes (strabismus)

Children with orofacial anomalies

- Health issues may compromise treatment
 - middle ear infection due to poor eustachian tube function
 - dental problems
 - recovery from orofacial surgeries
- Problems with velopharyngeal closure
- Problems from avoiding palatal or labial contact
- Problems from compensatory articulatory gestures
 - pharyngeal and velar fricatives