
Chapter 7: Case studies

The case studies below have been selected to illustrate treatment and outcomes, with children (covering an age range of 4 – 12 years) who show a range of different profiles, and who were treated using different models of service provision.

Chrissie was first seen as an unintelligible 4 year old, with some expressive language delay, as well as a moderately severe oral and verbal dyspraxia. She received weekly therapy over a period of two years, with daily practice at home.

Joseph presented with a severe speech disorder, with both dyspraxic and phonological components. He had blocks of weekly therapy, supported by practice at home and at school. For him, the acquisition of literacy skills was an ongoing problem, once his speech difficulties had been overcome.

Rickie showed an unusual speech pattern, including the use of clicks and ejective consonants. Developing appropriate motor programs for these sounds accounted for a good part of his therapy programme.

Paul and **Hannah** had particularly severe difficulties and attended the Nuffield Speech and Language Unit, in Paul's case for 18 months, and in Hannah's for 3 years. They both received intensive therapy. Their profiles, however, were quite different, necessitating a different focus in therapy, while working through the 4 Stages of the Treatment Plan (see Chapter 4: Treatment Planning). Paul had major word-finding difficulties, related to a speech processing problem which particularly affected the levels of phonological representations, motor programming and motor planning. Hannah had a severe oral and verbal dyspraxia, with respiration-laryngeal involvement.

Liam was first seen at the Nuffield Centre at 8;4 years, having had therapy since the age of 5 years, but still showing significant speech difficulties, including hypernasal resonance. He finally completed his treatment at 10 years, and when reviewed 2 years later, had normal speech.

Chrissie

Chrissie was first seen at the Nuffield Hearing and Speech Centre, aged 4 years 4 months. She had been referred to a local Speech and Language Therapy service at the age of 3 years, and had received two blocks of group therapy for five weeks each block. Her mother reported that she had made very little progress since the age of 3.

Her verbal comprehension was assessed and confirmed as age appropriate, she used a fair range of vocabulary and was able to convey information reasonably well. Her expressive language demonstrated some syntactical errors. She was unintelligible for most utterances, as a result of articulatory and phonological errors.

Speech Assessment

Oro-Motor Skills

She had no specific difficulty with respiration and breath control for speech production was developing normally. Facial expression was limited, although she had a lovely smile, which she used spontaneously. Lip shapes could be made accurately, but there was poor fluency of movement from one shape to another, especially for production of diphthongs. She demonstrated a range of movements and placements with her tongue, but was unable to control these and placement for sound production was not accurate.

Single Sounds

She was able to imitate all vowels and diphthongs, but was not able to produce them accurately without an immediate model.

Chrissie imitated the consonants /p - b - d - m - n - f - v - s - ʃ - tʃ - w - j/. She was able to sequence two consonants from her system, but was unable to sequence vowels.

CV Words

She attempted CV words with her consonant system, but these were variable in accuracy and her vowels were usually distorted as well. She was able to repeat a CV word, but was unable to produce a contrasting sequence. Most plosive consonants were voiced.

More Complex Words/Phrases and Sentences

Chrissie was unable to sustain any accuracy for vowels or consonants beyond the CV word level. Most sounds were replaced by [b] and [d].

"And she got go back to the shop." [æn di də dəʊ bʌ? du də dɒb]

"Then a lady dropping down again." [lɛn ə lædi dɒdi daʊn əde?]

Connected speech was usually unintelligible to everybody apart from her mother and brother.

Speech Processing Skills

Chrissie's auditory discrimination was developing fairly well. Work on this area had been done in her group therapy sessions, and she was able to discriminate between most minimal pairs. She was unable to imitate sounds or words more accurately than her spontaneous production, demonstrating some motor programming difficulties. Although she was very aware of which sounds were more difficult for her to produce, she was not

able to correct these without an immediate model. Her poor lip and tongue placements for sounds indicated that she was having difficulty at the motor planning level.

Diagnosis

Chrissie was found to have a moderately severe oral and verbal dyspraxia, with phonological delay. She showed evidence of difficulty with motor programming and motor planning.

Intervention

She was seen for one session per week, of one hour for speech and language therapy, over a two year period. Her parents worked with her, at home, for a minimum of five days per week, for 20 – 30 minutes per day. The therapist also visited her school, approximately once per month, to train the Learning Support Assistant, and provide new, additional work. The LSA worked with her for 30 minutes, three times per week.

Treatment Programme

Early therapy targets were aimed at:

- Improving lip shaping and fluency of movement, for more accurate diphthong production.
- Tongue exercises, to improve independent movements of her tongue and more accurate placement for both front and back tongue sounds.
- Widening her use of Facial Expressions.
- Improving voice quality, especially control of volume, and pitch.
- Long Vowel sequencing, and introduction of diphthongs in sequences.
- Accurate production and sequencing of consonants already in her system, with particular attention to voicing contrasts for /p – b/ and /t – d/.

Once these early targets were achieved with a good level of consistency, work was done to elicit the velar sounds /k/ and /g/. Chrissie was very aware of her difficulty, and having been an eager and confident worker during the sessions, she became tearful and anxious, as soon as the sounds were mentioned. Her mother suggested that if the therapist demonstrated how the sound might be elicited, she and Chrissie would try at home! The following week, Chrissie was able to produce a /k/ spontaneously, by holding her tongue down at the front, with her finger. Within two weeks, she was able to produce the sound in isolation, and in repetitive sequences (e.g. /k – k – k/), without the aid of her finger.

After this initial difficulty, Chrissie gained enough confidence to be able to work with the therapist on eliciting other sounds for her system.

After six months of therapy, she was able to use all plosives, nasals, fricatives and approximants accurately in CV, CVCV and CVC words and was beginning to self-correct in her spontaneous speech.

Progress was a little slower over the next six months, and her difficulties with motor planning became very obvious. A great deal of work was done to help her overcome these problems and continue to build up her sequencing skills. In addition, her facial expression and her voice production remained areas of difficulty for her.