

## SPEECH DISORDERS (DEVELOPMENTAL)

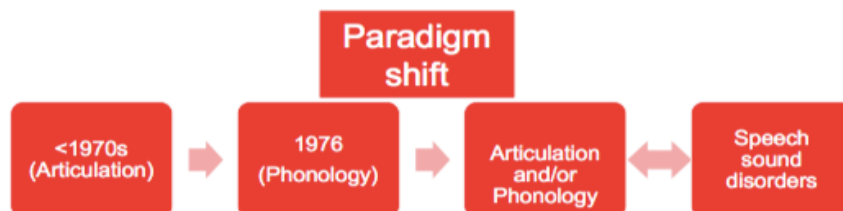
### Speech Sound Disorder (SSD)

Combination of difficulties including

- Perception
- Articulation/motor production
- Phonological representation of speech segments (consonants/vowels)
- Phonotactics (syllable and word shapes)
- Prosody (lexical and grammatical tones, rhythm, stress, intonation)

### Components of Communication

- Speech
- Language
- Voice
- Fluency
- Hearing



### Impact of SSD on Children

#### Short and Long-Term Impacts on:

- Speech production
- Academic achievement
- Vocation choices
- Social and emotional wellbeing

#### Social Impact

- More likely experience difficulties with making friends, more bullying, lower self-esteem and less enjoyment than children with no SSD
- More likely to be avoided in conversations with peers and more likely to talk to adults

#### Educational Impact

- More likely to experience literacy difficulties

### Example of Questions Parents may ask during Case History

- Will \_ be able to get a job when he grows up?
- Will \_ have trouble at school?
- Will \_ grow out of those problems?
- Will \_ be able to make friends at school?
- Will \_ brother also have problems with his speech?

### Risk Factors (not the same as causes)

#### Factors found to increase risk of developing a SSD (risk factors)

- Being a boy
- Hearing loss
- Positive family history
- Maternal education

#### Inconclusive whether these are risk factors (some research says yes/no)

- Pre and post-natal factors (e.g. stress, medications, forceps delivery, low birth weight)
- Oral sucking habits (use of dummy)
- Socioeconomic status

## DEVELOPMENTAL SPEECH DISORDERS

### Typical Speech Acquisition

Why is understanding of typical speech acquisition important in clinical practice?

- Ensure kids are reaching typical milestones
- Compare what we find with them to what is typical
- Prioritise for speech knowledge

### Areas of Clinical Practice

Areas of clinical practice "informed by a comprehensive understanding of speech sound acquisition"

- |              |                                  |
|--------------|----------------------------------|
| 1 Referral   | 5 Selecting intervention targets |
| 2 Assessment | 6 Intervention                   |
| 3 Analysis   | 7 Dismissal/Discharge            |
| 4 Diagnosis  |                                  |

Typical Speech Acquisition: Research Driven

- Age focused norms = ‘normal’ statistically
- Some norms for mastery differ
- Consonants, clusters and vowels
- Mostly English-speaking research

Acceptable Speech Acquisition: Think ICF (Think Function and Participation)

There is more than one use of the word ‘typical’

- Needs and tasks at different ages
- Societal expectations of rights, responsibilities for the age
- Societal stereotypes/attitudes

The notion of desirability within context

- Adult pronunciations
- Dialectic differences
- Historical differences
- Parental bias
- Social context
- Your own bias

Aspects of Speech Acquisition

- Oral mechanism
- Perception
- Intelligibility
- Acquired sounds
- Percent consonants correct
- Common mismatches
- Phonological processes
- Phonetic inventory
- Syllable structure
- Prosody
- Metalinguistic/phonological awareness skills

Infant Auditory Perception

- 33-41-week foetuses – sensitivity to mother’s voice and native language
- 3-day old newborns – distinguish between mothers and strangers voice
- < 3 months infants can discriminate in place and manner for consonants
- Newborns: different responses to continuous speech vs. non-speech
- Infants < 10 weeks – audio visual matching between sound/articulatory movements

General Stages of Development (Phonetic and Phonological)

<b>Stage</b>	<b>Age</b>
Laying the foundations for speech	Birth to 1 year
Transitioning from words to speech	1 to 2 years
The growth of the inventory	2 to 5 years
Mastery of speech and literacy	5+ years

Laying the Foundations for Speech

- Babbling is ‘purposeless egocentric soliloquy’
- Most researchers believe: continuity between babbling and speech
- True words - sound similar to adult production
  - o Used consistently in certain situations or presence of an object

Vocalisations: Pre-linguistic Period

<b>Age</b>	<b>Stage</b>	<b>Examples</b>
Birth – 2 months	Reflexive Vocalisation	Crying, coughing, vowel-like elements, grunting
1 – 4 months	Control of phonation	Resonant nuclei, raspberries, clicks, chuckles
3 – 8 months	Expansion	Isolated vowels, two vowels in a row, squeals, marginal babbling
5 – 10 months	Canonical syllables	Canonical babbling, CV, CVCV/reduplicated babbling
9 – 18 months	Advanced forms	Stress, intonation, gibberish, more complex syllabic structures, VC, CCVC, diphthongs

## Transitioning from Words

First 50 Words	Early-8, Middle-8 and Late-8 Consonants
<ul style="list-style-type: none"> <li>- Individual variability</li> <li>- 1 or 2 syllables</li> <li>- Limited syllable shapes</li> <li>- Consonants produced at the front of mouth</li> </ul> <p>Selection and avoidance</p> <ul style="list-style-type: none"> <li>- First words learned as 'whole word patterns'</li> </ul>	<ul style="list-style-type: none"> <li>- 24 English consonants in three groups</li> <li>- Decreasing order of occurrence</li> <li>- Research with 64 children (aged 3 to 6 years old) with speech delay</li> </ul>

Early-8	Middle-8	Late-8
/m, b, j, n, w, d, p, h/	/t, ŋ, k, g, f, v, tʃ, dʒ/	/ʃ, θ, s, z, ð, l, r, ʒ/

## THEORETICAL CONCEPTS IN CHILDREN'S SPEECH DEVELOPMENT

### What is Phonology?

- Sound knowledge
- Accounts for linguistic diversity
- Explains rules in different languages

Clarifies use and function of speech sounds in a language	
<ul style="list-style-type: none"> <li>- Phone</li> <li>- Phoneme</li> <li>- Allophone</li> <li>- Minimal pairs</li> <li>- Features</li> </ul>	<ul style="list-style-type: none"> <li>- Naturalness and markedness</li> <li>- Sonority</li> <li>- Constraints</li> <li>- Phonotactics</li> </ul>