

- 1  **Phonemic Treatment Principles**
  - Focus is patterns of errors, groups of sounds
  - Goal is to establish phonemic contrasts
  - Naturalistic communicative contexts are often emphasized, i.e., word level targets
  - Assumption that generalization will occur to other sounds or possibly to other sound classes
- 2  **Minimal Pairs**
  - Pairs of words that differ by one phoneme
  - Used to establish phonemic contrasts
  - Typically, minimal pairs differ by the fewest number of distinctive features or they differ by the least number of production features (place, manner, voicing)
  - Minimal pairs have been used in different therapies
    - distinctive features therapy, minimal opposition contrast therapy, phonological process therapy
- 3  **Phonological Process Therapy**
  - Phonological processes are the target of treatment, minimal pairs are used to establish phonemic contrasts
  - Young children who have a limited number of phonological processes may be the best candidates
  - Originally, this therapy was heavily influenced by Stampe's Natural Phonology theory - so use of the term "suppression"
- 4  **Phonological Process Therapy: Goal Selection**

Factors that affect selection of target processes:

  - frequency of occurrence
  - effect on intelligibility
  - phonological development and age of child

Factors that affect selection of target phonemes or minimal pairs:

  - developmental sequence
  - stimulability
  - distinctive features
- 5  **Phonological Process Therapy: Procedures**
  - After selecting the target process, word pairs are selected for beginning minimal contrast training
  - Step1: concept and discrimination training
  - Step 2: production training
    - word level
    - child can "be the teacher," child produces error
    - clinician responds to meaningful word
- 6  **Phonological Process Therapy: Procedures**
  - If the phoneme is not stimutable, phonetic techniques are used
  - Production practice proceeds with games that involve minimal pairs
    - communicative breakdown focuses attention on the targeted phonemic contrast
  - Child's production is considered correct if it fits with elimination of the process
    - /bop/ correct for "boat" for child with DFC
- 7  **Cycles**
  - Hodson and Paden (1983, 1991) Targeting Intelligible Speech
  - designed to treat children who are highly unintelligible, severe to profound phonological impairments
  - claim to remediate children in 2 to 3 cycles (cycle is equivalent of a semester)
  - Cyclical goal strategy is the hallmark

- Cycle = 2 to 6 hours for each phonological pattern, multiple phonemes per pattern

## 8 Cycles: Basic Principles

- Speech sounds and phonological knowledge is acquired gradually
- Auditory sense plays an important role
- Kinesthetic knowledge is matched to auditory knowledge
- Context is important
- Children are active learners
- Generalization can be expected
- Learning improves with pleasure and success

## 9 Cycles: Goal Selection

Suggestions for selecting targets, stimulability also is a factor:

- Syllableness - if child does not use 2-3 syllable words
  - use spondees - baseball, cowboy, hotdog
- Word Initial Singletons - if child doesn't produce CV syllables
  - start with anterior stops, nasals, and glides
- Word Final Singletons - if child doesn't close syllables
- Consonant Sequences - often targeted using /s/ clusters

## 10 Cycles: Goal Selection (cont'd)

- Glides - only target if this is deficient >70% on the APP-R
- Alveolars - only if child backs to velars

The following classes are potential targets if they occur >40% on the APP-R:

- Nasals
- Stridents - first targeted as /s/ clusters, then /f/ or /ʃ/
- Velars
- Liquids

## 11 Cycles: Lesson Plan

- Review - previous session's production words
- Auditory Bombardment - 12 to 15 words with the target phoneme with slight amplification
- Word cards/practice words - carefully selected based on stimulability and context
- Production practice activities - bulk of the treatment session
- Probes - check stimulability for next session's phoneme
- Auditory Bombardment - repeat
- Homework - auditory bombardment list plus word cards

## 12 Maximal Oppositions Approach

- Associated with Judith Gierut and colleagues at Indiana University
- Many published research studies by Gierut and colleagues showing the efficacy of this approach, also suggests increased generalization to untreated phonemes
- Builds off of Phonological Knowledge Continuum - 6 levels of productive phonological knowledge

## 13 Maximal Oppositions Approach

- Uses minimal pairs - words that differ by a single phoneme
- Yet, phonemes are maximally distinct
- minimal = “pig” and “big” - voicing feature, but maximal = “chop” and “mop” - feature differences include nasal, sonorant, delayed release, strident, voice, anterior, etc.
- Also, look for major class distinctions - sonorant, consonantal, or syllabic (ex. “th” and /g/ maximally different for features but not a major class distinction)

- 14  **Maximal Oppositions Approach**
- Traditional minimal pair treatment uses one “known” phoneme paired with its error or an “unknown” phoneme
  - Maximal Oppositions pairs use two “unknown” phonemes in a contrast that is maximally distinct
  - Nonsense Words are used throughout
  - Two Treatment phases:
    - Imitative (criterion = 75%)
    - Spontaneous (criterion = 90%)
- 15  **Metaphon Assumptions**
- Metaphonology (def.) - ability to pay attention to and think about the phonological rule system
  - (1) Children with phonological impairments have problems in metaphonology.
  - (2) Children with phonological impairments fail to recognize how the phonological rule system underlies effective communication
- 16  **Metaphon Treatment Principles**
- Child must have knowledge that change is required.
  - Child must have knowledge that change can be made.
  - Child must have information that can be used to make the change.
- 17  **Metaphon Goal Selection**
- Select processes not typically seen for child’s chronological age
  - First priority is processes for which the child has variable use - signs of changing system
  - Effect on intelligibility is important
  - Sounds not in the inventory, but able to be imitated are good targets
- 18  **Metaphon Phase 1**
- Goal of Phase 1 - Developing phonological awareness, 4 levels, child is listener only
- Concept Level - teach characteristics of sounds, “beginning” vs. “end” or “long” vs. “short,” play materials are used
  - Sound Level - apply concepts to sound in general (instruments, environmental sounds)
  - Phoneme Level - apply concepts to individual phonemes
  - Word Level - discriminate concepts in minimal pair words
- 19  **Metaphon Phase 2**
- 3 goals:
- transfer metaphonological knowledge to real communicative environments
  - child able to recognize when productions and targets are not matched
  - child able to repair productions to achieve successful communication
  - Core Activity - clinician and child take turns producing minimal pairs, use word cards and convey “secret messages”