Applying The Challenge Point Framework

Maximizing Neurological Recovery in Pediatric Rehabilitation

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The Challenge Point Framework

• Background
• Application in Rehabilitation

The Challenge Point Framework

• Task Difficulty
  – Nominal vs Functional
• Augmented Feedback
• Contextual Interference

Other Considerations

• Pediatric and Adult IRF Realities
• Confounding Factors
  – Cognitive impairments
  – Neurological structures
  – Age
  – Developmental Considerations

Pediatric Inpatient Rehabilitation

• Multidisciplinary application of CPF:
  – Speech Therapy
  – Physical Therapy
• Case Example
  – 13 yo
  – Left posterior frontal-parietal IPH (Craniotomy)
  – Right hemiparesis, right hemisensory loss, expressive-receptive aphasia, apraxia of speech
Application to SLP Treatment

- **Motor Speech**
  - Follows motor learning principles of CPF
- **Language and Cognition**
  - Developmental considerations are key
  - Vygostky’s theory of development
    - “Zone of proximal development”
- Applies to all disciplines, not just SLP

Case Example Continued

Motor Speech and Language Recovery

Task-based Neurorecovery

- Specific
- Motivating
- Intense and Repetitious
- Optimized Challenge Point
  - controlling information and error, and enabling active problem-solving

Conclusion

- Clinical Decision-making
  - Balancing Compensation and Recovery
  - Optimizing Challenge Points