

CEA Meeting

October 18, 2017

Online Participants Stay Tuned !!

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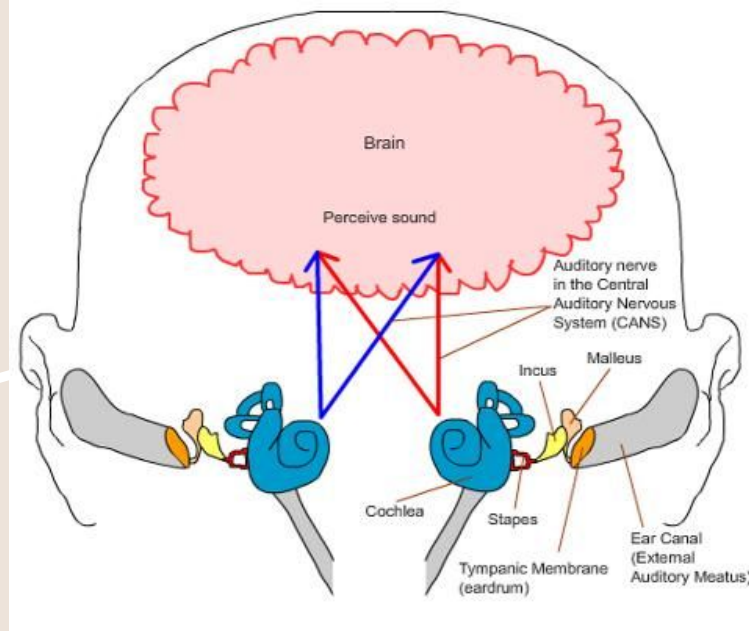
AGENDA

- **INTRODUCTION:
SHAUNA MODEN**
- APD Guidelines,
Literature, Case
Studies & Next Steps

Welcome Shauna!



APD: Literature, 2008 Guidelines, Case Studies & Next Steps



SINCE 2008...

*GUIDANCE

*Literature

*IDEAS & QUESTIONS

Guidance

2010 American Academy of Audiology

2012 Canadian Guidelines

2015: EAA Statement on APD

**2011 & 2017 British Society of
Audiology**

**The British Society of Audiology
concluded that auditory processing
disorder is “closely associated with
impaired top-down, cognitive
function” and that there is “no
evidence that it is produced by a
primary, sensory disability”**

Published Articles & AAA 2016 ARC

More and more articles are pointing to the BRAIN as being the key operator in many of the hearing processes we once thought were a domain of the peripheral auditory system...

“Hidden/Invisible Hearing Loss” (Beck 2015)

Limited role of pure tone audiogram in comprehensive assessment of hearing...

Hearing acuity intact but listening disorders (AN, spatial hearing disorders, auditory and attention disorders)

Challenge to “dig deeper” to assess the full auditory system

DeBonis 2015

Article Reviewing the Literature and posing QUESTIONS

“The reality of CAPD as a diagnostic construct is still far from any scenario that will put an end to the ongoing questioning of both its existence and its value...”

***processing of spoken language
involves simultaneous engagements
in the brain (not just auditory)**

DeBonis 2015

Article Reviewing the Literature and posing QUESTIONS

***dichotic listening tasks are significantly influenced by “attentional resources” and performance difference between ears may be minimized “when memory is controlled”**

***dichotic measures “are not well suited and for that matter are less than optimal for studying disorders of auditory perception”**

***hypothesis that the underlying deficit (in CAPD) is attention**

And....the age-old
topic....

APD as a Clinical Entity (Vermiglio 2014)

...multiple ambiguous descriptions

...APD does not fit the definition of a
clinical entity

...based on current test battery
options there are a possible 462
subcategories (possible
combinations) of results

...as number of tests increase, so does
the opportunity to perform poorly

How Young to Test APD? (Lucker 2015)

Can go below 7 as long as the audiologist “understands and is careful in making appropriate interpretations of the test results...”

“Testing young children is critical for early intervention and prevention of more serious problems”

2017 British Society of Audiology identified shared themes

- Agreement regarding limitations of the pure-tone audiogram in providing information about speech perception in both quiet and noise and day-to-day demands on hearing and listening
- Need to reduce number of tests while increasing quality - appropriate norms, reliability, validity
- Concern that listening problems are neither identified nor treated before the age of 7. Early fitting of devices for hearing loss clearly demonstrates that early identification and management provide best results
- Importance of relating skill testing to everyday hearing and listening, and to effective rehabilitation
- Importance of cognitive functions, and their impairments, for APD and all other aspects of hearing
- Value of individualised medical and audiological care, especially given the heterogeneous nature of APD

BSA's 3 Recommended Categories has international acceptance

- **Developmental APD:** Cases presenting in childhood with normal audiometric hearing and no other known aetiology or potential risk factors other than a family history of developmental communication and related disorders. These individuals may retain APD into adulthood

- **Acquired APD:** Cases associated with ageing or a known medical or environmental event (e.g. brain lesion, noise exposure, ototoxicity)

- **Secondary APD:** Cases where APD occurs in the presence, or as a result of either transient or permanent peripheral hearing impairment

2008 CDE Guidelines Review & Next Steps



2008 GUIDELINES REVIEW

Originally written in 1997 and then updated in 2008 after the ASHA 2005 Consensus Statement

2008 GUIDELINES REVIEW

Pages 1-6 Introduction

- Definitions
- Roles
- Special Ed Eligibility
- How to use guidelines
- Special considerations
- Criteria to determine CAPD (d is for deficit)
- Re-evaluation
- Independent evaluations

2008 GUIDELINES REVIEW: Definition

Uses ASHA 2005 definition

Current language: “central” is back in vogue

Per Chermak: CAPD is a disorder of the central auditory nervous system that manifests as deficits in the perceptual processing of auditory stimuli in the CANS, and in the underlying neurobiological activity that gives rise to the electrophysiological auditory potentials

2008 GUIDELINES REVIEW: Special Ed Eligibility

- SLD
- SLI

Need to consider OHI

2008 GUIDELINES REVIEW: Special Considerations

Criteria to determine APD

- New / review age criterion
- Multidisciplinary focus
- No change in criteria to determine APD

Outside Evaluations

Hints on how to handle:

- Review assessment
- Focus on collaboration
- Interpret terminology
- Offer to speak with outside audiologist
- Offer to provide additional testing

2008 GUIDELINES REVIEW

APPENDICES

Useful tools:

FAQ

Parent Information

History Form

List of tools/tests

Management strategies

Referral Protocols

Referral Criteria

Please confirm ALL of the following:

- The student has passed the hearing screening in the past year.
- The student is seven years of age or older.
- English is his/her first or primary language of use. All assessments are normed on native English speakers.
- The student must have intelligible speech as per Colorado Severity Rating Scale. If speech is not intelligible, it will be difficult to ascertain a production error from a processing error.
- The student's estimated cognitive ability must be within the average range.

Referral Checklist

All of the items below must be attached to this referral. Please do not submit until all items have been checked off.

- Referral form
- CHAPPS auditory checklist has been completed by the classroom teacher, special educator, and parent.
- Current (within the last year) Speech/Language Assessment
- Current (within the last year) Educational Assessment
- Current (within the last year) Psychological Assessment
- Current (within the last year) Health History

Please state specific referral concerns:

Currently favored
assessment
battery...no
agreement!

Screening Tools?

Parent Interview/History?

Teacher Questionnaires?

Electroacoustic Measures?

Behavioral Measures?

Classroom & Auditory Behaviors Observation Tools

**Children's Auditory Processing
Performance Scale (CHAPPS)**

**Fisher's Auditory Problems
Checklist**

**Screening for Central Auditory
Processing Difficulties**

The Listening Inventory

**Classroom Performance/Impact
Questionnaire (Appendix F-3 of CDE
Guidelines)**

APD Test Battery: Dichotic Tests

Dichotic Digits Test

Staggered Spondaic Word

Competing Sentences Test

SCAN 3- Competing Words

SCAN 3 - Competing Sentences

APD Test Battery: Low Redundancy & Speech-in-Noise Tests

PBK's in Noise

W-22 Speech in Noise (Katz Battery)

Time Compressed Sentence Test

SCAN 3 - Filtered Words

SCAN 3 - Auditory Figure Ground

Low Pass Filtered NU-6

BKB-SIN

APD Test Battery: Temporal Processing

Four Temporal Areas:
resolution
ordering/sequencing
integration
masking

**Frequency Patterns / Pitch Pattern
Test (only measures temporal
sequencing)**

Gaps in Noise (temporal resolution)

IDEAL Battery

Minimum of 1-2 tests in each area

Do not overtest

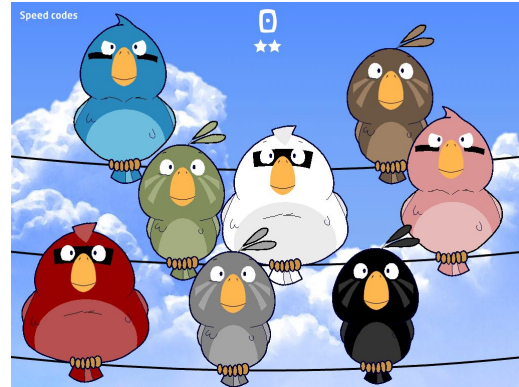
Interpret along with the primary concerns and other multidisciplinary testing

New Tool: Acoustic Pioneer

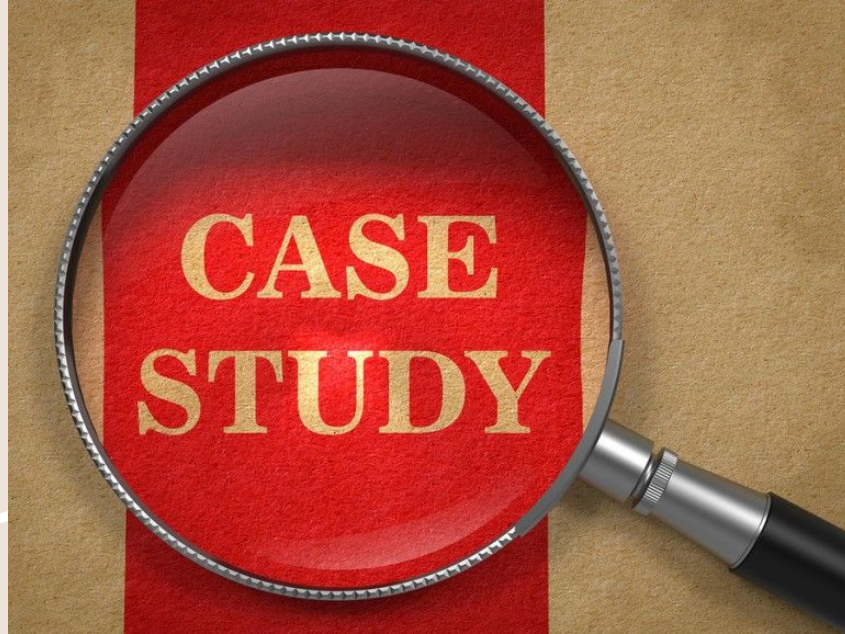
Feather Squadron Assessment Tool

Free App

<https://www.youtube.com/watch?v=GMd25ZMa6zM>



Case Studies



#1 H.B. 6 year old referral

Parent request to evaluate

Full evaluation for special education

Did not qualify

Put on a 504 Plan

#2 L.R.
9 year old

Parent request to evaluate

Full evaluation for special education

Did qualify OHI (not SLD)

**Services from sped in
organization/planning**

#3 L.D.
Outside Evaluation
Received & 504
Requested

