**Submission Template**

**Pediatric Audiology**

# **Descriptive Title of Case. Replace this heading with your title.**

# **Authors**

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ACKNOWLEDGMENTS: Mary Jane, Au.D., Cool Medical Externship Site, City, State

# **User Agreement**

The user agreement is within the Submission Guidelines www.AudCases.com) Type the initials of the authors below to electronically sign the user agreement, most importantly, that you have thoroughly checked that the case is completely de-identified:

# **Table of Content Items**

List the items for your table of content here. Do not indent. Use a separate line per item.

# **Educational Level**

Choose one educational level that most adequately describes your case and delete the others.

Introductory

Intermediate

Advanced

# **Learning / Assessment Objectives**

Replace the list below with your own objectives. Use the format provided.

By completing this case, the student will be able to:

1. Identify the type of loss
2. Describe the loss severity

# **Case History**

Initials, a \_\_ year old (gender if appropriate), . . .

* What question do you want to insert here? Delete if no question is to be used.
* If a question is given, please provide the answer to the question as it would appear in the Instructor Guide. Delete this bullet if no question is to be used.

# **Otoscopy**

* What question do you want to insert here? Delete if no question is to be used.
* If a question is given, please provide the answer to the question as it would appear in the Instructor Guide. Delete this bullet if no question is to be used.

# **Tympanometry**

226 Hz / Y tympanograms should be included in this section. For infants, if a 1000 Hz tympanogram is used, please make note in text and omit the Multifrequency section below if only the 1000 Hz Y trace was obtained.

* What question do you want to insert here? Delete if no question is to be used.
* If a question is given, please provide the answer to the question as it would appear in the Instructor Guide. Delete this bullet if no question is to be used.

# **Advanced Middle Ear Analysis**

If multiple types of middle ear analysis are included, please use this ordering. Omit sections for tests not performed.

## **Multifrequency Tympanometry**

Provide traces. The preferred format is for B/G traces to be on the same printout with a separate Y trace.

Ensure that probe frequency is clearly noted.

* What question do you want to insert here? Delete if no question is to be used.
* If a question is given, please provide the answer to the question as it would appear in the Instructor Guide. Delete this bullet if no question is to be used.

## **Wideband Acoustic Immittance (WAI)**

Provide high-quality graphics

* What question do you want to insert here? Delete if no question is to be used.
* If a question is given, please provide the answer to the question as it would appear in the Instructor Guide. Delete this bullet if no question is to be used.

## **Middle Ear Absorption**

Provide high-quality graphics

* What question do you want to insert here? Delete if no question is to be used. Questions can be moved to the subheadings above, they need not appear after all of the middle ear data are provided.
* If a question is given, please provide the answer to the question as it would appear in the Instructor Guide. Delete this bullet if no question is to be used.

# **Acoustic Reflexes**

## **Thresholds**

Please put acoustic reflex results in the table below. Thresholds are assumed to be in dB HL. If in dB SPL then change the upper left-hand table notation AND note in text.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **(dB HL)**  **Probe Ear** | **Hz 🡪**  **Stimulated Ear (Mode)** | **500** | **1000** | **2000** | **4000** | **BBN** |
| Right | Right  (Ipsi) | 85 | 105 | 110 | Absent | 95 |
| Right | Left  (Contra) | 80 | 100 | Absent | Absent | 90 |
| Left | Left  (Ipsi) | 90 | 105 | 110 | Absent | 100 |
| Left | Right  (Contra) | 95 | 110 | Absent | Absent | 95 |

* What question do you want to insert here? Delete if no question is to be used.
* If a question is given, please provide the answer to the question as it would appear in the Instructor Guide. Delete this bullet if no question is to be used.

## **Acoustic Reflex Decay**

Insert high-quality reproductions of the test results.

* What question do you want to insert here? Delete if no question is to be used.
* If a question is given, please provide the answer to the question as it would appear in the Instructor Guide. Delete this bullet if no question is to be used.

# **Otoacoustic Emissions**

## **Transient-Evoked**

Insert high-quality reproductions of the test results.

Use of a tabular format, either as a way of presenting the results. Adjust table, adding and removing and relabeling frequencies as appropriate to the case.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Freq (Hz)** | **500** | **1000** | **2000** | **3000** | **4000** | **6000** |
| **Right Ear** | **OE Level** |  |  |  |  |  |  |
|  | **SNR** |  |  |  |  |  |  |
| **Left Ear** | **OE Level** |  |  |  |  |  |  |
|  | **SNR** |  |  |  |  |  |  |

* What question do you want to insert here? Delete if no question is to be used.
* If a question is given, please provide the answer to the question as it would appear in the Instructor Guide. Delete this bullet if no question is to be used.

## **Distortion-Product**

Insert high-quality reproductions of the test results.

Use of a tabular format, either as a way of presenting the results. Adjust table, adding and removing and relabeling frequencies as appropriate to the case.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Freq (Hz)** | **500** | **1000** | **2000** | **3000** | **4000** | **6000** |
| **Right Ear** | **OE Level** |  |  |  |  |  |  |
|  | **SNR** |  |  |  |  |  |  |
| **Left Ear** | **OE Level** |  |  |  |  |  |  |
|  | **SNR** |  |  |  |  |  |  |

* What question do you want to insert here? Delete if no question is to be used.
* If a question is given, please provide the answer to the question as it would appear in the Instructor Guide. Delete this bullet if no question is to be used.

# **Audiometric Data**

Create a digital audiogram using this link. <http://www.audsim.com/audgenJS/> If alternative symbols (e.g. S or A) are needed, use the “Annotate” features. The submission guidelines document details when other formats can/should be used.

Describe techniques used to obtain results (BOA, VRA, play). Describe reliability if appropriate.

* What question do you want to insert here? Delete if no question is to be used.
* If a question is given, please provide the answer to the question as it would appear in the Instructor Guide. Delete this bullet if no question is to be used.
* Use this table for speech testing results, inserting patient-specific results. If using alternative stimuli (e.g. QuickSIN) then use your preferred format. Replace SRT with SAT if appropriate.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **PTA (dB HL)** | **SRT (dB HL)** | **WRS** | **WRS Intensity (dB HL)** |
| **Right Ear** | 80 | 80 | 44 | 100 |
| **Left Ear** | 10 | 15 | 100 | 50 |
|  |  |  |  | |
| Spondee Technique | MLV | WRS Technique | Recorded | |
|  |  | List and Number | WIPI Right: 1A Left: 2A | |
|  |  | Number of Items | Right: 25 Left: 25 | |

MLV = Monitored Live Voice PP = Picture Pointing

NU-6 = Northwestern University List 6 CID W-22 = Central Institute of the Deaf, Word List 22.

10 MD = 10 Most Difficult

NU-ChiPS = Northwestern University Children’s Perception of Speech

WIPI = Word Intelligibility by Picture Identification

PB-K = Phonetically Balanced – Kindergarten

## **Speech-in-Noise Assessment**

Use the table below. If a test other than BKB-SIN is used, replace that label with the name of the test(s) used. Delete unneeded rows.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Right Side** | **dB HL** | **SNR** | **%** | **dB HL** | **SNR** | **%** | **dB HL** | **SNR** | **%** |
| **BKB-SIN** |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| **Left Side** |  |  |  |  |  |  |  |  |  |
| **BKB-SIN** |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |

* What question do you want to insert here? Delete if no question is to be used.
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# **Click ABR**

Display results of an otoneurologic ABR here if appropriate. Delete section if not salient to the case.

Use this form if appropriate to the case. Remove normative data for use with young children. (Substitution of age-appropriate norms is encouraged.)

Click Intensity: 80 dB nHL, 21.7 clicks/second stimulus repetition rate

**I.** **Wave Peak Latencies Interpeak Latencies**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **I** | **III** | **V** | **I-III** | **III-V** | **I-V** |
| **Right Ear** |  |  |  |  |  |  |
| Left Ear |  |  |  |  |  |  |
| Mean \* | 1.54 | 3.70 | 5.60 | 2.20 | 1.84 | 4.04 |
| Range of Normal (ms) (+/- 2 SD)\* | 1.34-  1.74 | 3.40-  4.00 | 5.22-  5.98 | 1.88-  2.52 | 1.50-  2.18 | 3.68-  4.40 |
| Outer Limits for Cochlear\*\* |  |  |  | 2.55 | 2.35 | 4.60 |

1. **Interaural Latency Differences**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **I** | **III** | **V** | **I-III** | **III-V** | **I-V** |
| **Difference** |  |  |  |  |  |  |
| Range of Normal (ms) (+/- 2 SD)\* | .21 | .26 | .29 | .25 | .25 | .28 |
| Outer Limits for Cochlear\*\* | .65 | .59 | .52 | .41 | .37 | .46 |

**III. Latency Increase with Stimulus Repetition Rate Increase**

|  |  |  |  |
| --- | --- | --- | --- |
|  | Wave V Latency  (at 71.1 cl/sec) | Latency Increase  (with rate increase) | Significance |
| Right Ear |  |  |  |
| Left Ear |  |  |  |

**IV.**  **Amplitude Ratio of Waves I/V**

Right Ear: \_\_\_ Normal \_\_\_ Wave I larger than Wave V \_\_\_ Wave I more than 2x Wave V

Left Ear: \_\_\_ Normal \_\_\_ Wave I larger than Wave V \_\_\_ Wave I more than 2x Wave V

**V.**  **Morphology and Replicability**

**VI. Quality of Traces - Assessment of Control Run, Artifact Rejection**

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**VII. Additional Comments**

**\*** Schwartz et al., 1989

\*\* Hall & Mueller, 1997

* What question do you want to insert here? Delete if no question is to be used.
* If a question is given, please provide the answer to the question as it would appear in the Instructor Guide. Delete this bullet if no question is to be used.

# **Tone-burst ABR Testing**

Display results and include text-based information here. Ensure that results are clear in whether thresholds are dB EHL (estimated hearing loss) or dB nHL (physical intensity).

* What question do you want to insert here? Delete if no question is to be used.
* If a question is given, please provide the answer to the question as it would appear in the Instructor Guide. Delete this bullet if no question is to be used.

# **Auditory Steady-State Response Testing**

Display results and include text-based information here.

* What question do you want to insert here? Delete if no question is to be used.
* If a question is given, please provide the answer to the question as it would appear in the Instructor Guide. Delete this bullet if no question is to be used.

# **Summary and Discussion**

Omit this category if not appropriate to the case. You may reorder this heading vs recommendations as fits your case.

* What question do you want to insert here? Delete if no question is to be used.
* If a question is given, please provide the answer to the question as it would appear in the Instructor Guide. Delete this bullet if no question is to be used.

# **Recommendations**

Omit this category if it is not appropriate to your case.

* What question do you want to insert here? Delete if no question is to be used.
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