

# Auditory Skills Checklist Performance by Toddlers With and Without Hearing Loss

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## Objective

To compare the performance of 24-36 month olds with and without hearing loss on the Cincinnati Auditory Skills Checklist.

## Introduction

Hearing loss is the most common congenital birth defect

- 2-3:1000 newborns<sup>1</sup>

Universal Newborn Hearing Screenings (UNHS) paved the way for early identification (EI) of hearing loss

Goal of EI is to improve developmental competency among deaf/hard of hearing (DHH) children<sup>3</sup>

Effective EI requires tracking of auditory skill development of (DHH) children

The Cincinnati Auditory Skills Checklist (ASC) is one measure that may be used to identify the skill development of the DHH population<sup>4</sup>

- The ASC has not yet been used for children with other degrees of hearing loss or children with normal hearing

## Methods

### Subjects

- 30 typically developing, normally hearing toddlers aged 24-36 months
- 200 cognitively typically toddlers with bilateral hearing loss ranging from high frequency to profound

Group	Number (n)
No hearing loss	30
High frequency	13
Mild	59
Moderate	63
Moderate-Severe	16
Severe	10
Cochlear Implant	39

### Measures

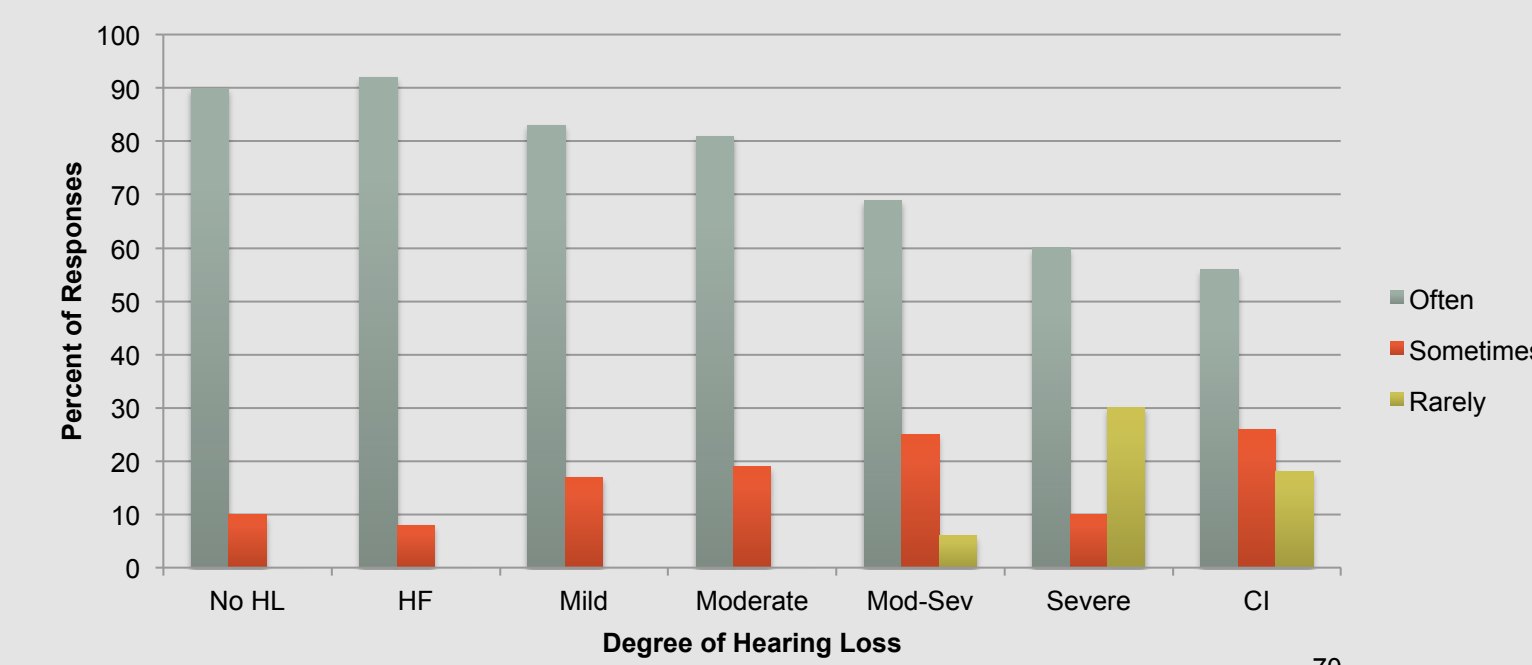
- 35 ASC items fall into four distinct categories: Detection, Discrimination, Identification, and

### Comprehension

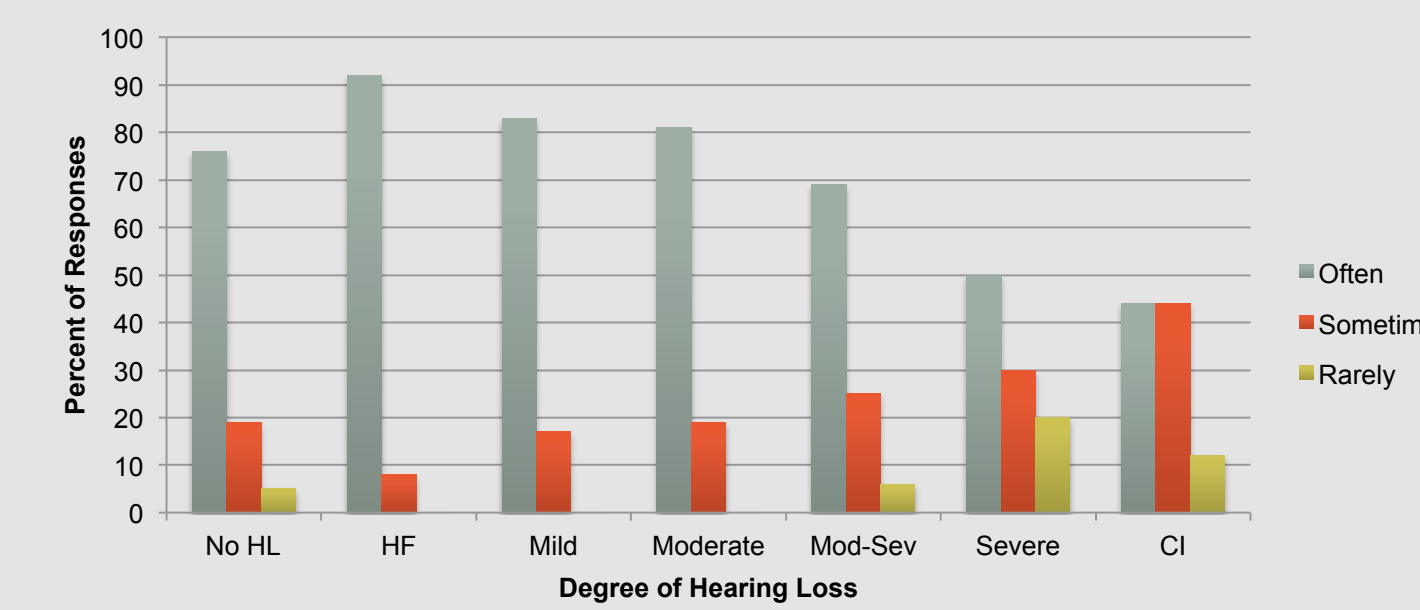
- 0 = rarely
- 1 = sometimes
- 2 = often
- Developmental quotient calculated using MINN CDI:
  - $\frac{\text{Avg (SH + SC)}}{\text{CA}} \times 100$

## Results

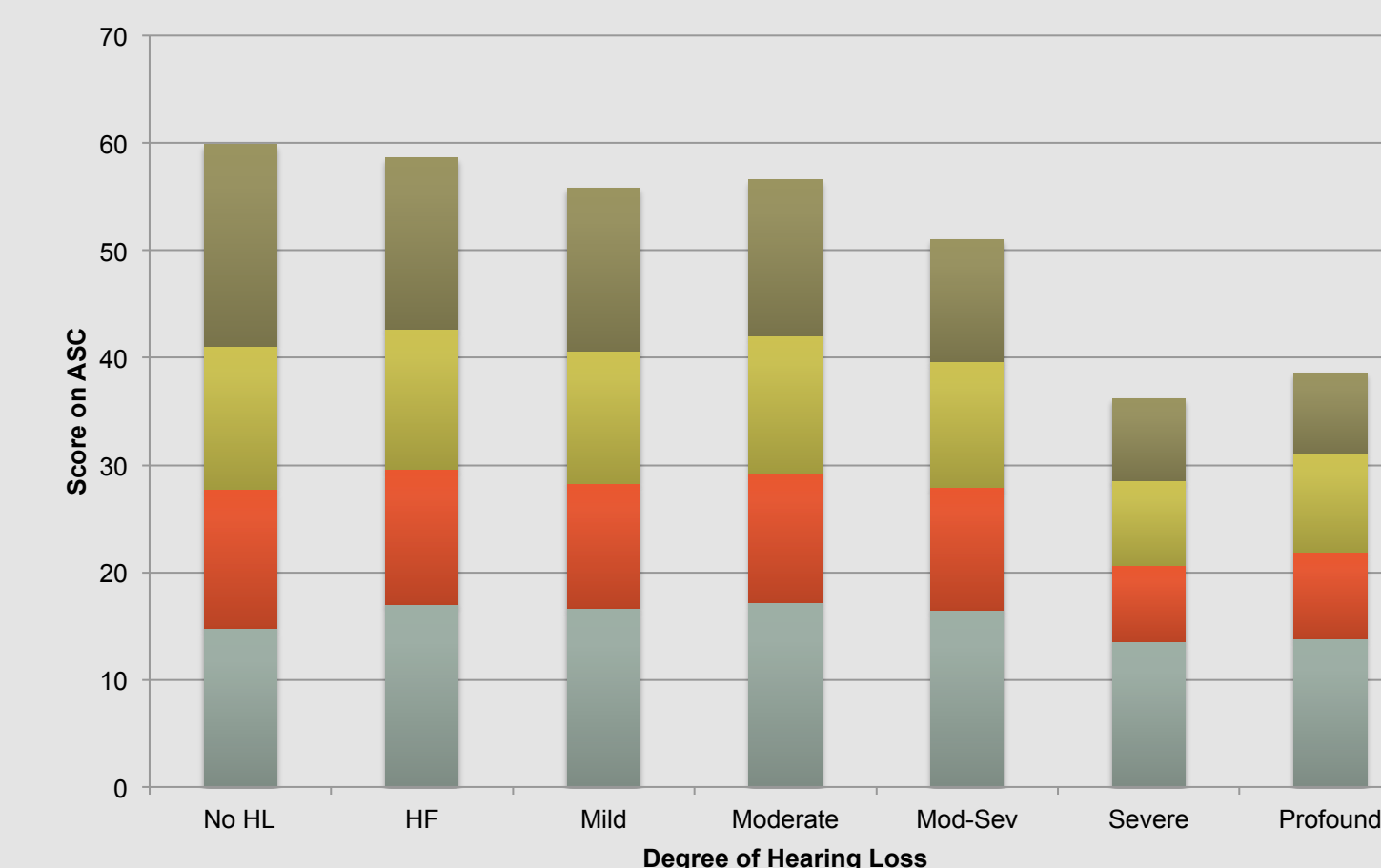
Item 9: Localization to the correct sound source?



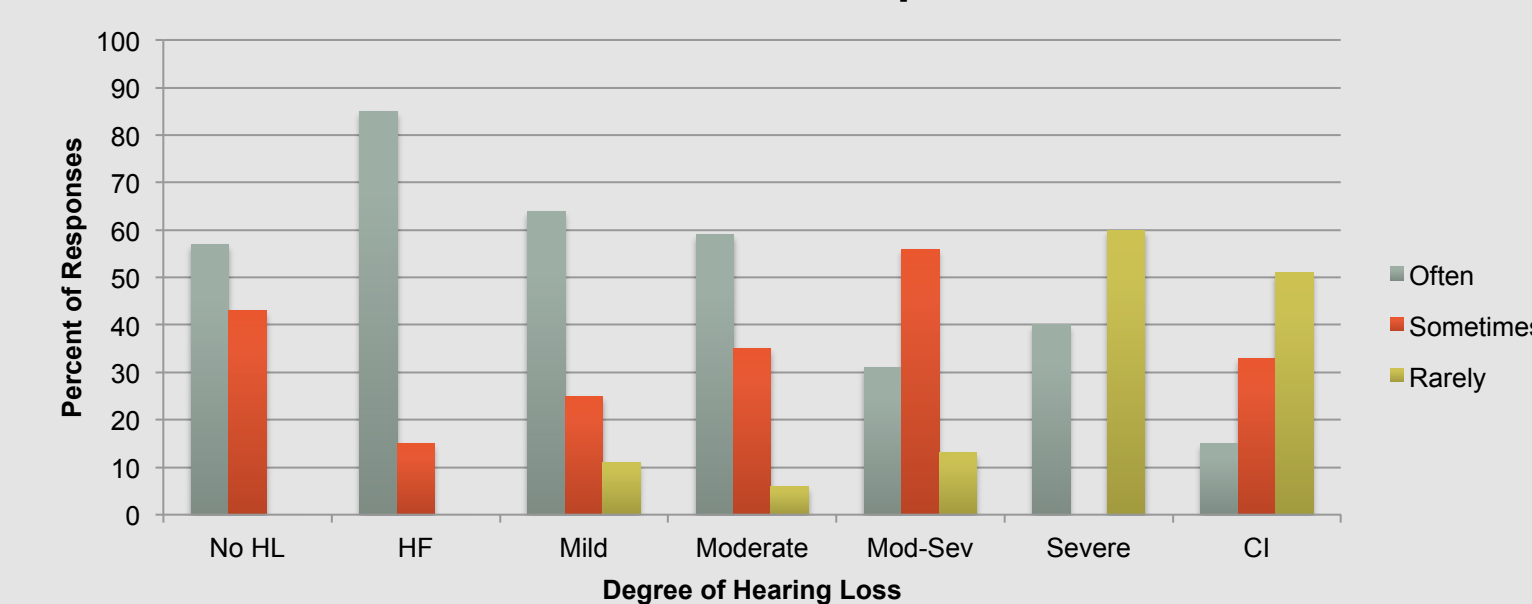
Item 15: Notice difference between minimal pair words



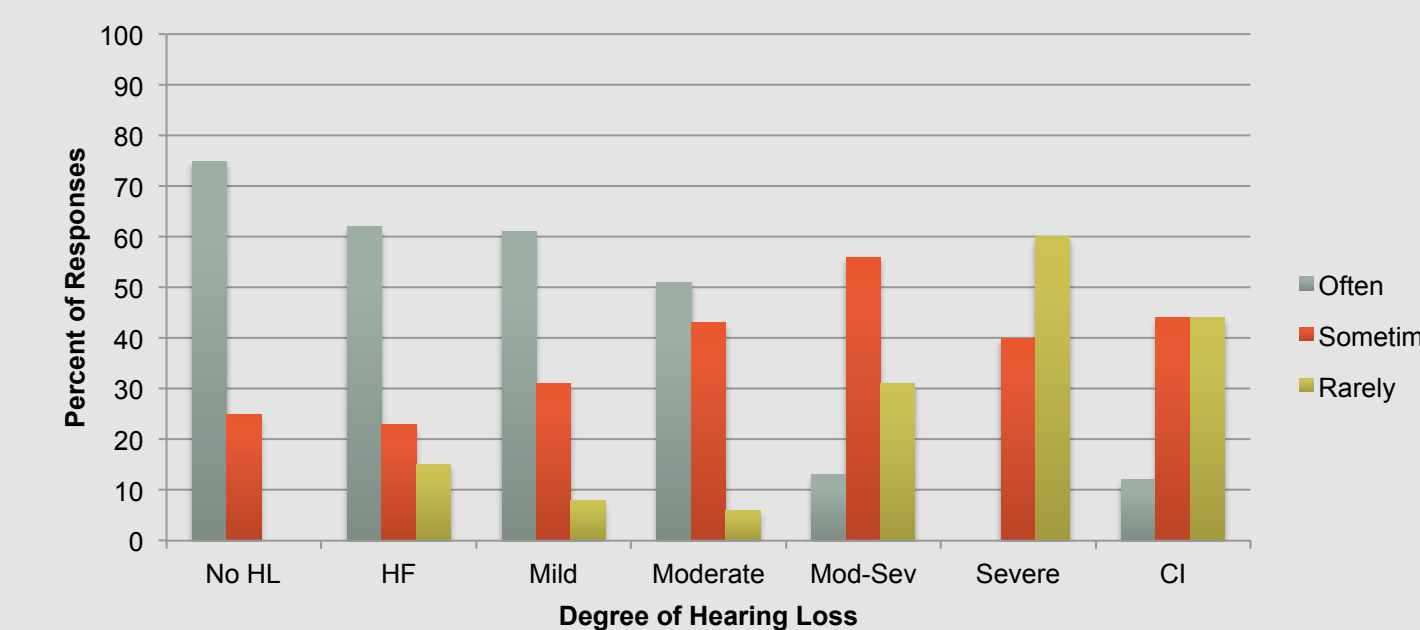
Subscale Scores on the ASC



Item 26: Follow 2-step directions



Item 34: Obtain information incidentally through hearing alone?



## Conclusions

As degree of hearing loss increases, skill performance decreases

No HL – Mod-Sev HL: scores of 1 or 2  
 - May not be a developmentally sensitive instrument

Severe HL – CI: scores of 0 or 1

For many Comprehension items no group reached 80% mastery

With established norms, the ASC may be a good way to determine the efficacy of EI, guide EI programming, and help close the skill gap that currently exists along the spectrum of pediatric hearing impairment

## Future Directions

Item-by-item comparative performance of DHH children:

- Degree of hearing loss
- Developmental Quotient
- Maternal Level of Education

Establish normative data for DHH groups

## Key References

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