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## Maintaining High and Appropriate Language Expectations for DHH Children – Utilizing FCEI Principles and Knowledge of Typical Language Development to Inform SLP Assessment, Treatment, and Recommendations

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### BACKGROUND

- Early identification of hearing loss and early enrollment in intervention contributes to improved language outcomes for d/hh children<sup>(1)</sup>. However, mere enrollment in early intervention does not guarantee age-appropriate language acquisition.
- Maintaining **high and appropriate expectations** for language development is key to ensuring that DHH children are exposed to—and thus develop—high-level language skills as d/hh children require direct instruction to learn vocabulary & complex language<sup>(3, 4)</sup>.
- The SLPs in the Deaf and Hard of Hearing Program (DHHP) at Boston Children's Hospital use a data driven approach to maintain high expectations of language development with the goal of achieving age-appropriate language outcomes.

#### This is accomplished by:

1. Meeting EHDl and FCEI guidelines<sup>(2)</sup>
2. Using established data about typical language development to set goals
3. Frequent progress monitoring to ensure goals are being met by early intervention services; adjusting service plan as needed

### REFERENCES

1. Yoshinaga-Itano, C., Sedey, A. L., Wiggan, M., & Chung, W. (2017). Early Hearing Detection and Vocabulary of Children With Hearing Loss. *Pediatrics*, 140(2), doi:10.1542/peds.2016-2964
2. Sankowski, A., Gale, C., Mary Pat Wheeler, Smith, T., Binkley, B. C., Moodie, S. T. F., Carr, G., Stredler-Brown, A., Yoshinaga-Itano, C., None FCEI-DHH International Consensus Panel, & Holzinger, D. (2024). Family-Centered Early Intervention Deaf/Hard of Hearing (FCEI-DHH): Structure Principles. *Journal of Deaf Studies and Deaf Education*, 29(5), 5186–51104. doi:10.1093/deafed/evad040
3. Lund, E., & Douglas, W. M. (2016). Teaching Vocabulary to Preschool Children With Hearing Loss. *Exceptional Children*, 83(1), 26–41. doi:10.1177/0014402916651848
4. Vachio, M., Lund, E., & Werfel, K. L. (2023). An analysis of mental state verbs and complex syntax use in children who are deaf and hard of hearing. *Language, Speech, and Hearing Services in Schools*, 54(4), 1282–1294. doi:10.1044/2023\_LSHSS-23-00001

### APPROACH TO INTERVENTION

#### FCEI – DHH Principles

Foundation	Principle 1: Early intervention following identification
	Principle 2: Family-EI Provider relationships
	Principle 3: Family support
Support	Principle 4: Child well-being
	Principle 5: Language and communication
	Principle 6: Family decisions
	Principle 7: Trained FCEI-DHH Providers
Structure	Principle 8: Teamwork among professionals
	Principle 9: Developmental assessment
	Principle 10: Progress monitoring

#### DHHP Structure

7. Connect patient and family to local DHH specialty service programs to ensure DHH trained providers including SLPs and TODs. Provide therapy through DHHP if community DHH services are unavailable.
8. Collaborate with community providers to share assessment results, goals, and resources. Collaborate within our team for developmental assessments.
9. Initial assessment at 6 mo; assess all areas of language development, including play. Set goals to achieve in next 6 months.
10. Assessments every 6 months to measure progress toward goals, with expectations for accelerated progress toward age-level skills; **adjustments made in service plan as needed.**

### ASSESSMENT

1. **Standardized assessments**
2. **Criterion referenced assessments**
3. **Dynamic assessment**

Resources to guide assessment, intervention goals, & share with parents and providers:



Standardized and criterion measures to identify intervention targets based on skills expected at that child's age in typical language development.

Dynamic assessment to determine successful strategies to implement during intervention to support acquisition of age-expected skill.

**Recommendations for intervention are made based on specific gaps noted in age-expected skills with therapeutic strategies provided as identified in dynamic assessment.**

### CASE STUDY

- Born with severe-profound SNHL due to GJB2, identified on NBHS in home country in Asia.
- Family goal is for child to develop heritage language.
- First seen through DHHP at 3mo; enrolled in EI and 2 local specialty service programs before 3mo.
- Parent counseling about high expectations, responsive language modeling, and sign language at initial visit and ongoing.
- Wore loaner hearing aids from 3mo until CI surgery at 9mo.
- Multilingual approach including heritage language, ASL, and English.
- Play-based therapy including scaffolding language by attaching meaning to vocalizations and gesture.
- Provided 1 skill for the family to practice that week, set by CDI, Rossetti, Brown's stages, and dynamic assessment during therapy.

#### Results

**8mo:** babbling; gestures emerging, ex. waving.  
**11mo:** first ASL signs independently; first spoken words shortly after.  
**14 mo: MacArthur Words and Gestures**  
*Phrases Understood:* 12 (of 28); 25th percentile  
*Words Understood:* 71 (of 396); 26th percentile  
*Words Produced:* 36 (of 396); 79th percentile  
*Total Gestures:* 38 (of 63); 75th percentile  
**16mo:** Combining words/signs; ex. CAR "give-me"  
**18mo: MacArthur Words and Sentences**  
*Words produced:* 107; **60-65th percentile**  
spoken words: 98  
signs: 65