



How LENA Helps Parents of Children with Hearing Loss Achieve Listening and Spoken Language



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Parent-Infant Program Mission Statement

Sunshine Cottage School for Deaf Children Parent-Infant Program is dedicated to:

- supporting and coaching parents to help their baby with hearing impairment learn to listen and talk.
- guiding parents to be an advocate for their child.

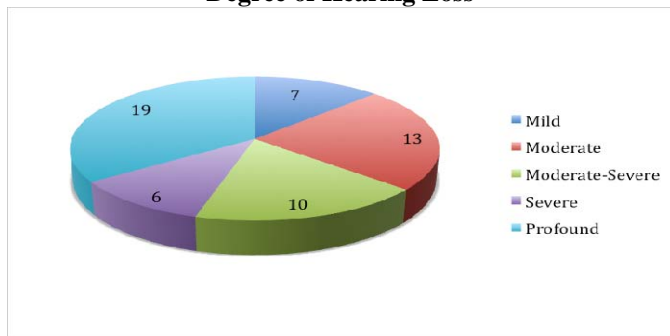
We believe that babies under the age of three, with any degree of hearing impairment, can learn to listen and talk IF:

- hearing loss is identified early (preferably newborn-6 months)
- child has access to appropriate hearing technology and dynamic audiological management
- parents commit to including auditory-verbal strategies in their daily life

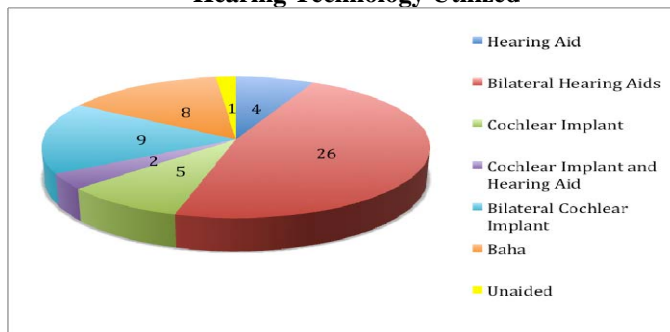
This powerful combination of factors is the most effective way for a baby with hearing impairment to learn to listen and talk.

To date 55 families have participated in LENA recordings.

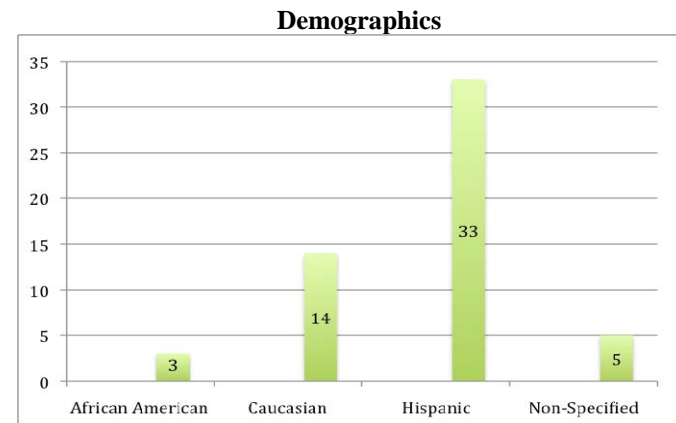
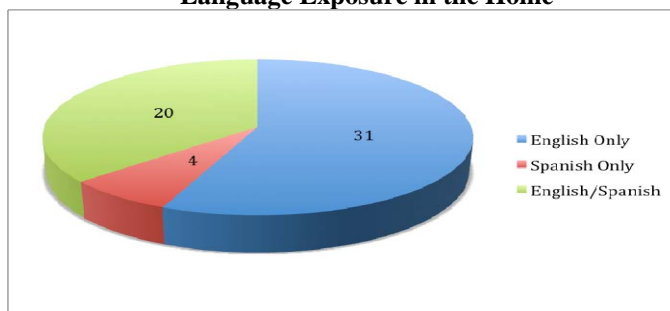
Degree of Hearing Loss



Hearing Technology Utilized



Language Exposure in the Home



How LENA Helps

Families at Sunshine Cottage School for Deaf Children Parent-Infant Program desire a spoken language outcome for their child with hearing loss. However, making changes to ingrained habits in order to achieve this goal is a much harder process than most parents anticipate.

With the use of the LENA processor, we are collecting invaluable data about the listening and language home environments of the infants and toddlers enrolled in the program. As the data are being reviewed and analyzed, it has become apparent that families can make some seemingly simple changes in their behavior and listening environment that can positively support the establishment of a strong foundation for listening and talking.

The findings of Hart and Risley (1995), validated by Montgomery, Gilkerson, Richards and Dongxin Xu (2009) show that the amount of adult words spoken in the home is crucial for spoken language development. It is significantly more crucial for a child with hearing impairment. LENA enables parents to know their percentile ranking for adult words and improve it accordingly.

An equally important LENA feature for our program is the ability to assess background noise. This provides parents feedback about the acoustic environment of their home so that they can make changes to the environment.

Coaching Strategies

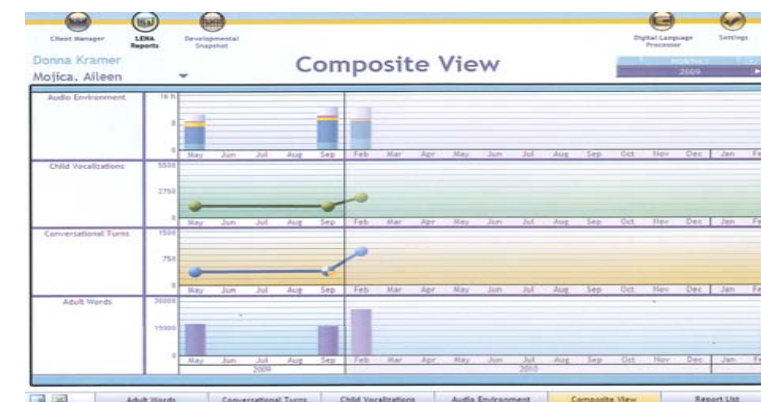
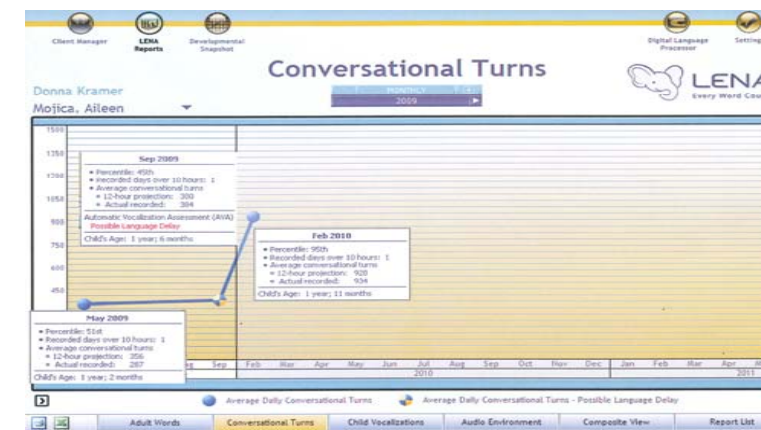
Information gained from LENA has led us to establish a mnemonic that helps parents easily recall five Auditory-Verbal strategies vital to the facilitation of listening and spoken language: S.T.A.R.R. Each of the strategies is directly related to a LENA system measure.

	Strategy	Measured by
S	Stay Close	Auditory Environment: meaningful speech
T	Talk, Talk, Talk	Adult Words
A	Auditory Environment	Audio Environment
R	Reciprocity	Conversational Turns
R	Repeat	Conversational Turns or Adult Words Listening to LENA recordings for repeated occurrence of daily routine language

LENA Recordings

These reports show improvement over 3 recordings. The family was coached in STARR strategies after the first recording.

Child D.O.B: 2-13-08
Fitted with Hearing Aids: 6-5-08 (4 months old)



What We Are Learning About LENA

- Repeated recordings will demonstrate whether a parent has a cognitive grasp about the importance of their role as the primary language facilitator
- Assists some parents in the process of the necessary paradigm shift to modify communicative behaviors
- Provides an unbiased snapshot of each family's interactions in their natural environment vs. interactions in a clinical setting
- Ability to investigate if family members are supporting or unintentionally delaying their child's language acquisition
- Allows parents to establish goals for their own behavior to support listening and language outcomes after reviewing reports
- Encourages therapist to be in coaching mode
- Generates elevated AVA scores for some children with multiple disabilities in addition to a hearing loss due to atypical phonation
- May cause parents to feel judged and move out of learning mode due to emotion attached to experience
- Caused us to rethink our own assessment measures. We started using Minnesota IDI and CDI
- Discrepancies between AVA and Development Snapshot
- Implementation of policy for lost Digital Language Processors (DLP)
- Printing the LENA charts for parents is time intensive
- Necessity to fully learn and utilize LENA's robust abilities is essential to effectively communicate results with parents