

2018 LEGISLATIVE UPDATE: FIRST SOUND

South Carolina's Success in Newborn Hearing Screening



What is First Sound?

In 2001, legislation was enacted to require hearing screening for all newborns prior to discharge from any South Carolina hospital averaging 100 deliveries or more per year. Currently, all **42 birthing hospitals** in South Carolina actively perform newborn hearing screening. **First Sound is a state mandated early hearing detection and intervention (EHDI) program.** Through this program, infants are identified earlier for potential hearing loss and referred for early intervention.

Through early identification, the program enables families to have access to services during the critical window of a child's language development. When successful, opportunities for a child's academic success can be realized, improving the quality of life for deaf and hard of hearing children. Preparing deaf and hard of hearing children for academic achievement maximizes their development skills and translates into long-term saving in special education expenses and public assistance¹ in adulthood.

South Carolina's First Sound program uses the 1-3-6 targets: Infants screened by **1 month**, confirmed by **3 months** and beginning early intervention by **6 months**.

First Sound is Improving Standards with Quality Improvement Initiative:

- First Sound is engaging SC hospitals in a quality improvement project to improve infant hearing screening practices and reduce rates of infants not rescreened (i.e., "lost to follow up").
- To date, all SC birthing hospitals, a total of **45 hospitals over 5 cohorts** have completed the quality improvement project.
- The focus of the quality improvement project aims to improve screening rates, referral rates, timely reporting of results and reduce lost to follow up.

First Sound Highlights

- Approximately **52,257** infants were screened for hearing loss prior to hospital discharge in SC in 2017.
- At 97.5%, our First Sound Program **surpasses the American Academy of Pediatrics (AAP) benchmark goal** of 95% of newborns screened annually.

- The First Sound data system has been described as **"very impressive" by the Centers for Disease Control and Prevention** and is a leader in successful database integration with Vital Records.



"We are so grateful for the newborn hearing screening program. Two of our three children have moderately severe bilateral hearing loss. Our son failed his newborn hearing screening at the hospital and we did a repeat two weeks later. He was officially diagnosed by his audiologist of a hearing loss at 6 weeks old, and was aided at 9 weeks old. This allowed us to start essential therapies very early, and he is now thriving in preschool and learning how to sound out words to read! Our daughter was born three years later, and she failed her newborn hearing screening as well. Because we were established with an audiologist, she was diagnosed with hearing loss at 8 days old. Because our son had a spare pair of hearing aids, she was aided at 26 days old! Due to the relationships and therapies already established for our son, we were able to receive support for our daughter before she was able to enroll in BabyNet. She is now a very happy toddler and developing language very well. There are always bumps in the road on this journey, as both of my children have experienced, but their early identification was a key component that allows us to be as pro-active as we can be, despite their progressive hearing loss. First Sound was the first step in our education, and we are grateful for the part they played in our children's journeys.

**Amanda Campbell, parent of Micah & Mia—
Lexington County**

¹ "When deaf children are not identified early and given appropriate services, additional special education services beyond what would have otherwise been required can cost an additional \$500,000 for the local school district."

Johnson JL, Mauk GW, Takekawa KM, Simon PR, Sia CCJ, Blackwell PM. Implementing a statewide system of services for infants and toddlers with hearing disabilities. *Seminars in Hearing*. 1993;14:105-119.

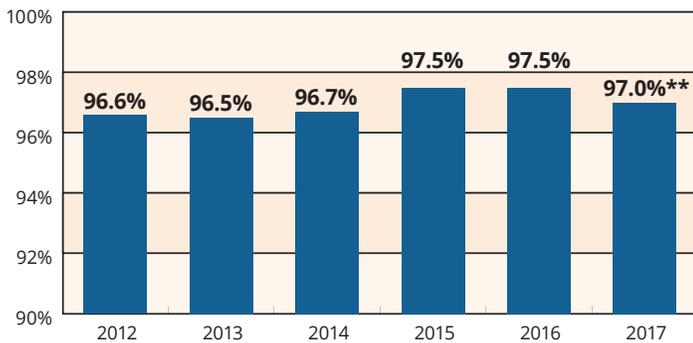
First Sound is Working

- Since the initiation of our program, **1,470 infants** have been identified with confirmed hearing loss and have been referred to early intervention.
- Hospitals have internally identified best practices to ensure all infants are properly screened.
- Positive impact on outcomes to date:
 - 24% increase in timely reporting of hearing screening results.
- First Sound will continue to enhance quality improvement program methodology based on insights from key stakeholders, best practices identified by professional groups and pending continued federal funding from Health Resources and Services Administration (HRSA).

First Sound Future Endeavors

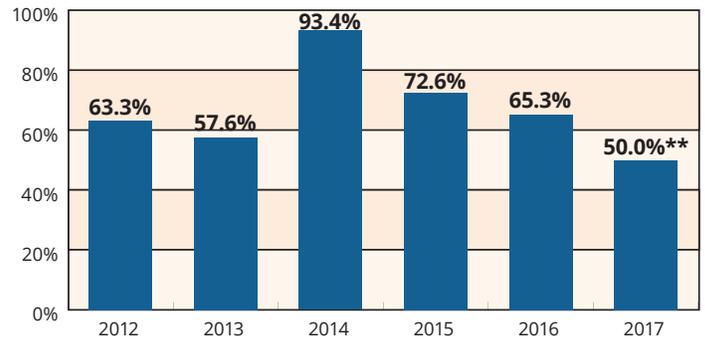
- First Sound will be collaborating with family-based organizations to increase the number of infants identified with hearing loss that are enrolled in early intervention in a timely manner.
- First Sound is collaborating with stakeholders through a learning community to increase awareness of the program and its initiatives and implement changes for improvement.
- First Sound is collaborating with newborn screening and the birth defects programs to implement data sharing that will positively impact all programs by enabling them to identify more infants.

Screening success rate:



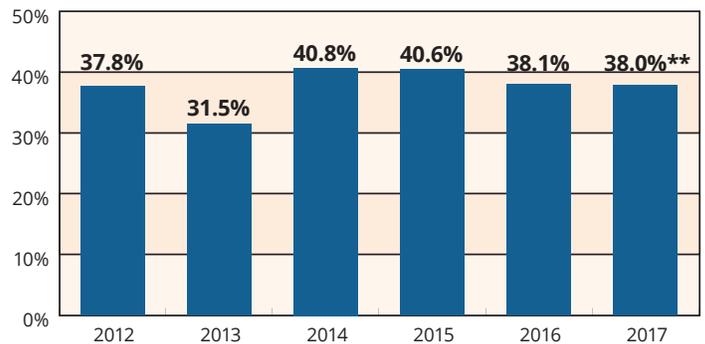
AAP Benchmark is $\geq 95\%$
 National Average for 2016 was 98%.
 Data for 2017 is provisional and is subject to change.

Confirmed Hearing Loss by 3 Months:



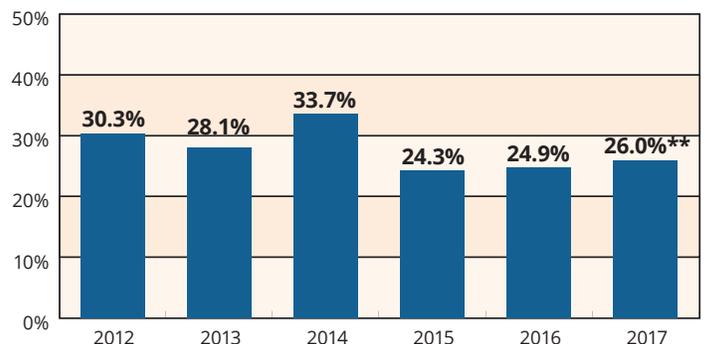
AAP Benchmark is 100%
 National Average for 2016 was 62.7%.
 Data for 2017 is provisional and is subject to change.

Early Intervention by 6 Months:



AAP Benchmark is 100%
 National Average for 2016 was 67.2%.
 Data for 2017 is provisional and is subject to change.

Lost to Follow Up/Documentation:



No AAP Benchmark for lost of follow up
 National Average for 2016 was 45%.
 Data for 2017 is provisional and is subject to change.

*National average data from Centers for Disease Control and Prevention (CDC) Annual EHD Data.

**Preliminary data

Contact Information:

Tara P. Carroll, MCD, CCC/A
 First Sound Program Manager/Audiologist
 803-898-0708