

2016 LEGISLATIVE UPDATE: FIRST SOUND

South Carolina's Success in Newborn Hearing Screening



What is First Sound?

In 2001, legislation was enacted to require hearing screenings for all newborns prior to discharge from any South Carolina hospital averaging 100 deliveries or more per year. Established under this mandate, **First Sound is South Carolina's early hearing detection and intervention (EHDI) program.** Currently, all 46 birthing hospitals in South Carolina actively perform newborn hearing screenings.

Through early identification, the program enables intervention during the critical window of a child's language development. This approach leads to greater opportunities for academic success, as well as a greater quality of life for deaf and hard of hearing children. By maximizing a child's academic readiness, our program **provides long-term savings in special education expenses and public assistance¹** from infancy.

Our 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 working:

- Since the initiation of our program, **1,298** infants have been identified with confirmed hearing loss and have received intervention.

"Our daughter was identified at birth with a hearing loss. Over the last six years, it has been a journey working with a network of providers to ensure our daughter's access to hearing via hearing aids and cochlear implants. We are proud to say First Sound was a great resource in the early years which set our daughter on the path to success. At six, she is progressing in mainstream classrooms and performing similar to her peers. Thank you First Sound!"



Jocelyn Ross, parent of Alyssa—Richland County

- Approximately **53,277** infants were screened for hearing loss prior to hospital discharge in SC in 2015.
- At 97%, 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.

First Sound is Improving Standards with Quality Improvement Initiative:

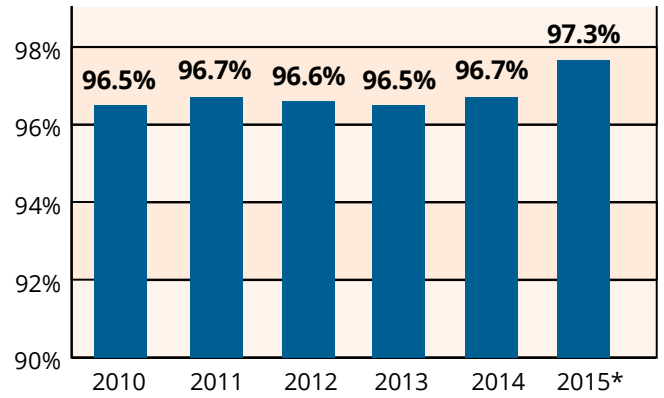
- First Sound is engaging SC hospitals in a quality improvement project to improve infant hearing screening practices and reduce rates of infants not rescreened (i.e. "lost to follow up").
 - Eight hospitals completed the project in December 2015
 - A second group of eight hospitals completed the project on June 30, 2016
 - A third group of eight hospitals began participation in the project on August 1, 2016
- The following outcomes are the focus of the quality improvement project:
 1. Maintain a 95% or better screening rate (American Academy of Pediatrics (AAP) guidelines)
 2. Maintain a 4% or less annual referral rate for non-NICU babies (AAP benchmark to assure testing quality)
 3. Achieve 95% of all non-NICU newborn hearing screening results reported within 7 days of access to the record in the First Sound data system
 4. Achieve 30% or lower no show rates to follow up appointment with audiologist made prior to discharge for babies who did not pass the inpatient screening
- The program is currently conducting a return on investment (ROI) analysis with the University of South Carolina's Rural Health Research Center funded by the Association of Maternal Child Health Programs (AMCHP) Birth Outcomes Collaborative Project. Results will help guide First Sound in developing additional quality improvement opportunities.

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.

- Hospitals have internally identified best practices to ensure all infants are properly screened.
- Positive Impact on Outcomes to Date:
 - 0.34% reduction in referral rates
 - 5.25% reduction in lost to follow up rate
 - 11.91% increase in the number of infants confirmed with hearing loss by 3 months old
- 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).

Screening success rate:



*Provisional data