



Increasing Diagnostic Testing Access for Newborns with Suspected Hearing Loss

Bryan Hujsak, PT, DPT, NCS; Evelina Berman, MA; Maria Begliomini, MHA, Randi Tepper, AuD, CCC-A; Derek Petti, MPhil, AuD, CCC-A; Ralph Lambiasi, MPA, FACHE

Background: The Ear Institute at the New York Eye and Ear Infirmary of Mount Sinai provides diagnostic testing for infants that have “failed” their newborn hearing screening. In partnership with the New York State Department of Health’s Early Hearing Detection Initiative, and in support of the Mount Sinai Health System which operates the 3rd and 6th largest birthing hospitals in the State of New York, the Pediatric Audiology team provides mandated diagnostic testing for infants who demonstrated absent responses on Otoacoustic Emission (OAE) testing following birth. Traditionally, Auditory Brainstem Response (ABR) testing has been the gold standard follow-up test, but has proven to require protracted testing cycle times resulting in scheduling bottlenecks, increased patient wait times, and a decreased year-over-year volume.

Objectives: The goal of this project was to improve patient access by decreasing ABR wait times. The challenge was to meet this goal without increasing existing capacity around staffing or space.

Planning/Research Methods: This initiative was part of a grant from the New York State Practice Transformation Network (NYSPTN) funded by CMS with the intent to prepare healthcare practices for Alternative Payment Models as an Accountable Care Organization. In an effort to improve patient access, ABR year-over-year average wait times and volume trends were analyzed from 2016-2018. During this period, average wait times increased from 36 to 41 days, and volume decreased from 302 to 194 visits annually. Process mapping was used to identify bottlenecks and opportunities for improvement in patient flow. In addition, new technology in diagnostic testing, Auditory Sustained Stimulus Response (ASSR) was evaluated and found to be reliable in identifying OAE false positives. This testing protocol required only half the time of traditional ABR testing.

Implementation Methods: A triage model was implemented in January 2019 using ASSR technology to further identify children with normal hearing. Infants that failed the initial OAE screening were scheduled for this test to determine if they, in fact, had intact hearing. Infants with absent or questionable responses would then be scheduled for the more comprehensive, yet time-consuming ABR test.

Results: Following implementation of this triage model, average wait times were significantly reduced from 41 to 33 days ($p < 0.0001$), trending towards 20 days by the end of 2019. Patient volume increased by 116% from 194 to 419 visits with a subsequent additional \$50,987 in revenue. In addition, this initiative led to the Ear Institute receiving the Exemplary Practice designation from the NYSPTN.