

Otolaryngologic Evaluation of Infants with Hearing Loss



The Road to Establishing
ENT Guidelines in
Michigan.

National EHDI Conference
2011. Atlanta, GA.

Presentation Overview

- Why are Pediatric Otolaryngology Guidelines Needed?
- The Process of Developing Guidelines in Michigan.
- Elements of the Document.
- Distribution Plans.

Why Are Guidelines Needed

- To ensure families access to pediatric otolaryngology services that are in agreement with the current Joint Committee on Infant Hearing (JCIH) recommendations.



Why Are Guidelines Needed (cont.)

- “The success of EHDI programs depends on families working in partnership with professionals as a well coordinated team. The roles and responsibilities of each team member should be well defined and clearly understood”.

JCIH 2007

Why are Guidelines Needed (cont.)

- Lack of Pediatric Otolaryngologists across the State.
- Lack of consistency in pediatric otologic evaluation among practices. ***Is it only for medical clearance for hearing aids?***
- The Medical Home may not be familiar with necessary components of pediatric evaluation.
- Parents may not know what to expect.

Why Are Guidelines Needed (cont.)

- Physicians may not be familiar with EHDI goals and timelines.
- Multiple rescreens can delay diagnosis.
- Consideration should be given to technology used for rescreens.
- An audiology test battery is needed to define type and degree of hearing loss.

EHDI Parent Survey



- “I was told it was fluid and to come back in 6 months”.
- “My son’s OAE rescreen was abnormal and they said it most likely was fluid in the ears”.
- “I wish my ENT and audiologist were on the same page”.
- “I was told to wait until my baby was older to get another test”.

The Process

- Contacted The National Otolaryngology Society for guidance.
- Good fortune to have a **Pediatric Otolaryngologist** on MI EHDI Advisory Board and involvement of EHDI Co-Chapter Champions.
- Reviewed medical recommendations from other states.
- Sought buy-in from The Michigan Otolaryngology Society.

Disclaimer

- *“This guideline is not intended as a sole source of guidance in evaluating children with hearing loss. It is not intended to establish protocol for all children with this condition or to supersede clinical judgment, and may not provide the only appropriate approach to diagnosing and managing infants and children with hearing loss”.*

Elements of the Document

Educational Opportunity

- Background on 1-3-6 goals of EHDI.
- Hearing screening protocols in well-infant nursery and NICU.
- Pitfalls of repeated screenings.
- Use of OAE for outpatient rescreen when A-ABR was the initial screen (potentially missing auditory neuropathy).

Outpatient Rescreen



- “For infants who do not pass an outpatient rescreen, referral should be made directly to an audiologist for more comprehensive evaluation. A diagnostic test battery should be able to determine an underlying sensorineural component to the hearing loss, even with the presence of middle ear fluid. Repeated outpatient rescreens are discouraged, as this can delay the diagnosis of permanent sensorineural hearing loss”.
- Test both ears, even if only one ear failed the inpatient screening.

Mandatory Reporting in Michigan- Public Act 31 of 2006

- Effective February 23, 2006, Public Act 31 mandated that health professionals in charge of care for newborn infants (includes hospitals, health departments, audiologists, and any person administering hearing tests or screenings) must report results to the State of Michigan.

The Nuts and Bolts of the Otolaryngologic Exam

- Comprehensive history to identify risk factors.
- Complete head and neck exam.
- Review of prior audiological evaluation.

Diagnostic Audiology Test Battery- Birth to 6 Months

- Frequency specific ABR using air conducted clicks and tone bursts and bone-conducted tone bursts when indicated.
- Click evoked ABR using both condensation and rarefaction single polarity (neural hearing loss).
- Diagnostic OAE.
- 1000 Hz tympanometry.
- Clinical observation as a cross check.

Diagnostic Audiological Test battery 6 to 36 Months

- Behavioral audiometry (either visual reinforcement or conditioned play), including pure-tone audiometry across the frequency range for each ear and speech detection and speech recognition measures.
- OAE.
- Tympanometry with acoustic reflexes.
- ABR testing if responses to behavioral testing are unreliable or if ABR testing has not been performed in the past.

Consideration of Additional Testing

- Congenital Cytomegalovirus (CMV).
- Temporal bone imaging.
- Extensive battery of laboratory testing.

Referral for Genetic Evaluation

- “Historically, at least 50% of congenital hearing loss has a genetic etiology. This proportion is likely to increase as the prevalence of acquired causes including infectious agents and ototoxic medications decreases. Consideration should be given to testing for the mutations in GJB-2 (Connexin26), which are responsible for approximately 50% of autosomal recessive non-syndromic hearing loss”.
- The brochure, “Hearing Loss, Genetics and Your Child”, is available from MI EHDI at no charge.

Other Medical Specialists

- Ophthalmology
- Referrals to developmental pediatricians, neurologists, cardiologists and nephrologists should be coordinated by the medical home (primary care health care professional).

Next Steps



- Referral to *Early On*®, Michigan's Birth to Three Program.
- Closely monitor unilateral hearing loss.
- Longitudinal monitoring to detect and manage coexisting otologic pathology (such as otitis media with effusion) which may impact management of hearing loss.

Next Steps (cont.)

- Cochlear implants may be a consideration for infants with bilateral profound hearing loss.
- Families should be referred to the parent support program *Guide By Your Side*.

Distribution Plans

- Target audience to include all licensed otolaryngologists in the State, as well as pediatricians and family practice physicians.
- Contact through mailings or professional listservs.
- Available on EHDI Website at www.michigan.gov/ehdi.
- Future plans-to develop a family friendly version.

By Working Together....

- We can make a difference in the lives of families!



Questions?



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