



## Early Hearing Detection and Intervention (EHDI) Quality Improvement (QI) Project Change Package

### Project Overview

The American Academy of Pediatrics Early Hearing Detection and Intervention (EHDI) program is dedicated to promoting the role of the medical home and primary care clinicians in EHDI. The EHDI program supports a network of over 60 Chapter Champions, who provide ongoing EHDI education and resources to pediatric clinicians, and play a vital role in coordinating health efforts between pediatricians, other health care professionals, and state EHDI programs.

The EHDI Quality Improvement (QI) project uses the Learning Collaborative model to test strategies that will enhance pediatrician knowledge and practice related to documentation of newborn hearing screening results, referrals to sub-specialists, documentation of risk factors for delayed or late-onset hearing loss, and communication of these results with families. The project will result in potential dissemination of promising practices/strategies and education on topics of relevance to practicing pediatric primary care clinicians.

Data collection for quality improvement purposes will involve de-identified patient record reviews, completion/submission of monthly progress reports, and completion of pre- and post- project surveys completed by the participating teams. Teams will also participate in monthly educational webinars/conference calls to learn from experts and each other and to receiving coaching and mentorship from the project Quality Improvement advisor.

### Instructions

The goal of this document is to provide change ideas for improving care and outcomes for infants following newborn hearing screening. The change ideas listed in this document are not intended to be seen as recommended evidence-based interventions or guidelines for care. Rather, teams participating in this learning collaborative should test these change ideas in their respective practice(s) and, based on the results, develop and implement improved processes in their system. These ideas are compiled to support improvement teams as they work to accomplish breakthrough improvement. This document will be updated as new ideas emerge that lead to improvement.

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### AIM

By July 2017, five pediatric offices will make practice-based improvements that lead to enhanced care across the delivery system and strengthen the role of the medical home within the EHDI system. The participating pediatric practices will make improvements so that:

- 97% or more of all newborns have documentation of the results of their final newborn hearing screening in their medical records by 6 weeks of age
- 97% of newborns have documentation in their medical record that the results of the newborn hearing screening were discussed with the family no later than 6 weeks of age
- 97% or more of all newborns identified to have risk factors associated with hearing loss will have documentation of those risk factors in their medical record by 6 weeks of age and will have an individualized care plan by the 4 months of age
- 100% of children who do not pass their newborn hearing screening have completed an audiological evaluation by 3 months of age and documentation will be in their medical record by 4 months of age

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<b>Primary Driver 1: Newborn hearing screening results are reviewed with all families</b>	
<b>Secondary Driver</b>	<b>Change Ideas</b>
Newborn hearing screening results are shared promptly with the infants primary care provider	<ol style="list-style-type: none"> <li>1. Hospital staff verifies identity of pediatrician and sends screen result by day of discharge</li> <li>2. Use standardized process (ie, fax-back, phone call, data system) to <a href="#">communicate results of screen/rescreen and diagnostic evaluation to pediatrician</a></li> <li>3. Pediatric practices form partnerships with local hospitals and midwives to expedite results sharing through electronic transfer</li> <li>4. “Do not pass” results communicated differently than “pass” results, treated like a modified critical value requiring pediatrician confirmation, or mail pass results/ fax-back referrals</li> </ol>
Families receive standardized and consistent communication about hearing screening results	<ol style="list-style-type: none"> <li>1. Pediatrician creates a family focused process for notifying all families of screening results</li> <li>2. Pediatrician delivers semi-scripted messages using <a href="#">appropriate terminology for all screening/rescreening results</a></li> <li>3. All screening/rescreening results are given to families both verbally and in writing</li> <li>4. Prioritize conversations on newborn hearing screening so that they occur before the child is 6 weeks of age</li> <li>5. For children who do not pass the newborn hearing screen, the PCP gives written, did not pass information, including <a href="#">a place to indicate time and location of pediatric diagnostic audiology appointment</a></li> </ol>
Document conversations with families about hearing screening results in the medical record	<ol style="list-style-type: none"> <li>1. Create processes for pediatricians to <a href="#">document when conversations occur regarding newborn hearing screening results</a></li> <li>2. Identify codes within the electronic medical record that allow accurate accounting of activities and eases data extraction</li> <li>3. Families of infants who do not pass their newborn hearing screen should receive documentation that describes next steps and importance of diagnostic follow up</li> <li>4. Next steps and discharge education completed and documented by support staff following interaction with pediatrician</li> </ol>
Families of children who do not pass newborn hearing screening or have risk factors demonstrate engagement in next steps for follow-up	<ol style="list-style-type: none"> <li>1. Family is able to recall next steps (when applicable) to show comprehension of expectations</li> <li>2. Family is provided with adequate opportunity to ask questions and receive information</li> <li>3. Family is provided with the <a href="#">contact information for the state EHDI program, Hands &amp; Voices</a>, and/or <a href="#">Family Voices</a> for resources and support</li> <li>4. Family is provided with <a href="#">typical developmental milestone information</a> to assist them with monitoring their child’s development</li> </ol>

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<b>Primary Driver 2: Children with risk factors associated with delayed, late-onset, or progressive hearing loss have an individualized care plan to address each risk factor</b>	
<b>Secondary Driver</b>	<b>Change Ideas</b>
All children are assessed for risk factors using a systematic approach	<ol style="list-style-type: none"> <li>1. Obtain risk factor assessments done during hospital stay and verify accuracy of assessment with family</li> <li>2. Utilize the Joint Committee <a href="#">2007 Position Statement: Principles and Guidelines for Early Hearing Detection and Intervention Programs</a> to establish criteria for assessing risk factors</li> <li>3. Utilize the NCHAM E Book <a href="#">Chapter 10: Risk Monitoring for Delayed-Onset Hearing Loss</a> to train staff in risk factors for delayed onset hearing loss</li> <li>4. Prioritize risk factor assessment so that it occurs before the child is 6 weeks of age</li> <li>5. Utilize nursing staff for support in assessing for risk factors while rooming family and before the provider sees the infant</li> </ol>
Documentation of risk factor assessment and outcomes are easily found within the infant's medical record	<ol style="list-style-type: none"> <li>1. Create processes and standard operating procedures for providers and other clinicians in the practice to document when risk factor assessment is completed</li> <li>2. Identify codes within the electronic medical record that allow accurate identification and tracking of risk factor assessment and have those codes easily referenced</li> <li>3. Create reporting function to allow easy extraction of data</li> </ol>
Follow up plan is created for all children with identified risk factors and this plan is communicated with the family	<ol style="list-style-type: none"> <li>1. Children identified with risk factors receive a specific, individualized care plan addressing specific risk factors</li> <li>2. Co-create follow up plan with the family to address any identified risk factors based on the outcomes of the risk factor assessment</li> <li>3. Families receive written summaries of next steps including the timeline, significant next steps, and key contacts</li> <li>4. Create scripted messages so that all pediatricians and support staff provide consistent information to families</li> </ol>

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<b>Primary Driver 3: All children who do not pass their newborn hearing screening receive reliable and timely audiological evaluation and this care is co-managed with the pediatrician</b>	
<b>Secondary Driver</b>	<b>Change Ideas</b>
Ensure next necessary referrals and medical appointments are made and the family understands next steps	<ol style="list-style-type: none"> <li>1. Pediatrician documents confirmation of follow up appointment with audiologists by 6 weeks of age</li> <li>2. Additional needed <a href="#">referrals</a> are made within 24 hours of visit</li> <li>3. Office staff supports family in scheduling needed appointments and ensure these are at a time that is conducive to the families' needs</li> <li>4. Pediatric office staff provides reminder calls before appointments and reminds family of the importance of diagnostic follow up</li> </ol>
Diagnostic audiological evaluation completed no later than 3 months of age	<ol style="list-style-type: none"> <li>1. <a href="#">Standardize approach to confirm the diagnosis of hearing loss</a>; use <a href="#">template orders</a> and <a href="#">referrals for evaluation and diagnosis</a></li> <li>2. Ensure all diagnostic evaluations are received and documented within the medical record (and update problem list if the infant is diagnosed with hearing loss)</li> <li>3. Develop and implement <a href="#">system to track infants progress in receiving diagnostic follow up</a></li> <li>4. Pediatric office confirms follow-up appointment for diagnostic appointment with families at time of first newborn visit; primary care pediatrician/clinician reinforces its importance</li> <li>5. Pediatric office reminder calls to the family before the appointment to eliminate barriers, answer questions and discuss reasons why appointment is important</li> <li>6. Share instructions from referred audiology center with family prior to audiology appointment to maximize possibility of completion of testing</li> <li>7. Utilize the <a href="#">Hands &amp; Voices Parent Roadmap</a> with families to outline expected care and referrals during the first year               <ol style="list-style-type: none"> <li>a. Contact local Hands &amp; Voices chapter to verify if a road map has been created with state/local resources included</li> </ol> </li> </ol>
Create partnership with diagnostic providers to ensure timely transfer of information	<ol style="list-style-type: none"> <li>1. Partner with local pediatric audiologists, Otolaryngologists, and other medical sub-specialists critical to hearing issues in order to create collaborative relationships to manage infants in need of follow up care</li> </ol>

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Primary Driver 4: Engage family representation in your practice based Quality Improvement efforts	
Secondary Driver	Change Ideas
Identify family representation to inform your Quality Improvement efforts	<ol style="list-style-type: none"> <li>1. Contact state EHDI office or your <a href="#">Hands &amp; Voices</a> to assist you with identifying family leaders who could support your quality improvement efforts</li> <li>2. Identify families of infants served in the pediatric practice who are interested in engaging in quality improvement efforts within the practice. Refer to the project “Parents as Partners” guide (available in the <a href="#">QIDA</a> Workspace) for assistance with selecting a parent partner or to the <a href="#">NICHQ: Family Engagement Guide</a></li> <li>3. Recruit more than one family; having at least two improves ability to have parent engagement at all meetings and in all discussions and improves parent comfort with this role</li> </ol>
Include family representation in key decision processes to improve the system of care	<ol style="list-style-type: none"> <li>1. Families are represented at key practice meetings</li> <li>2. Provide opportunity for family leadership development and systems representation is available</li> <li>3. Families and medical providers have access to, and training with, decision tools (eg, <a href="#">Ottawa Decision Guide</a> that may help families with making difficult decisions)</li> <li>4. Parent partners review all materials for clarity, readability, and ease of message</li> </ol>
Utilize family experience/knowledge to identify improvement opportunities	<ol style="list-style-type: none"> <li>1. Parent partners create satisfaction survey to be used by to survey the experience of new patients/families</li> <li>2. Measure family experience of care with the newborn hearing screening and follow up process: quantitative (survey) and qualitative (focus groups)</li> </ol>