FAQ's from the Joint Committee on Infant Hearing

National EHDI Conference March 14, 2022

Overview



Brief History of JCIH



Membership Organizations



New JCIH FAQ Process



FAQ Panel Presentation



Sneak Peek



- Historically: Children who are deaf or hard of hearing (DHH) were not identified until 2-3 years of age
- JCIH established in 1969
 - 1st Position Statement was in 1971; 1 page document
- Late 1980s: Recognition of new technologies and opportunities for early diagnosis and prompt intervention
- 1990s: Newborn Hearing Screening Programs emerged



Annually in the US, ~ 5000 infants who are DHH and their families have the opportunity to experience improved outcomes in the child's language development (through early access to spoken and/or signed language), as well as improved outcomes in the child's overall well-being.

Three Key Components of Early Hearing Detection & Intervention Programs





The mission of the Joint Committee on Infant Hearing is to address issues that are important to the early identification, intervention, and follow-up care of infants and young children with hearing loss.

HISTORY

MEMBERS

POSITION STATEMENTS

CONTACT US/ LINKS

and Welfare Agencies.

Representatives: American Academy of Audiology, American Academy of Otolaryngology-Head and Neck Surgery, American Academy of Pediatrics, American Speech-language-hearing Association, Council on Education of the Deaf, Directors of Speech and Hearing Programs in State Health

2019 JCIH Position Statement Executive Summary [PDF] Reference List [PDF]

> We would like to hear from you

Please provide comments or feedback to the JCIH

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American Academy of Pediatrics



DEDICATED TO THE HEALTH OF ALL CHILDREN®







Voting Organizations





Working globally to ensure that people who are deaf and hard of hearing can hear and talk.

We want all families to be informed and supported, professionals to be appropriately qualified to teach and help children with hearing loss, public policy leaders to effectively address the needs of people with hearing loss, and communities to be empowered to help their neighbors with hearing loss succeed.

The Alexander Graham Bell Association for the Deaf and Hard of Hearing (AG Bell) is the premier international organization focused on ensuring that listening and spoken language is an available outcome for individuals who are deaf or hard of hearing. The AG Bell Community comprises 70,000 individuals including people who are deaf or hard of hearing, parents/caregivers, and the professionals who serve them (e.g. audiologists, deaf educators, speech-language pathologists, psychologists, physicians, program administrators, and hearing research scientists) and university students.

www.agbell.org



The world's largest professional organization of, by and for audiologists.

Advancing the science, practice and accessibility of hearing and balance healthcare.

The AAA mission promotes professional development, education, research, and increased public awareness of hearing and balance disorders.

The AAA delivers value, promotes Diversity, Equity Inclusion and Belonging.

The AAA comprises the American Board of Audiology, the Student Academy of Audiology, The AAA Foundation, and the Accreditation Commission for Audiology Education.

www.audiology.org



The mission of the American Academy of Pediatrics is to attain optimal physical, mental, and social health and well-being for all infants, children, adolescents and young adults. To accomplish this, AAP shall support the professional needs of its members.

www.aap.org

https://www.aap.org/en/patient-care/early-hearing-detection-and-intervention/early-hearing-and-detection-resources/



Mission: We engage our members and help them achieve excellence and provide high-quality, evidence-informed, and equitable ear, nose, and throat care through professional and public education, research, and health policy advocacy.

www.aao.org



Making effective communication, a human right, accessible and achievable for all

The American Speech-Language-Hearing Association (ASHA) is the national professional, scientific, and credentialing association for 223,000 members and affiliates who are audiologists; speech-language pathologists; speech, language, and hearing scientists; audiology and speech-language pathology support personnel; and students.

www.asha.org



The Council on Education of the Deaf (CED), a national organization founded in 1930, promotes excellence in educating deaf and hard of hearing students. To achieve this mission, the organization establishes, promotes, and monitors teacher education standards embodying best practices, reflecting current research, and embracing diversity and multiculturalism.

CED implements its mission by accrediting university programs that prepare teachers of deaf and hard of hearing students, certifying highly qualified teachers who meet its standards, and collaborating with national, state, and local associations and agencies in a variety of activities, committees and workgroups.

https://councilondeafed.org/



Directors of Speech and Hearing Programs in State Health and Welfare Agencies

- 1. The mission of DSHPSHWA is to foster a better understanding of programming for speech, language, & hearing issues within the public health & welfare setting.
- 2. To encourage the development of more efficient programs for the diagnosis, treatment, and care management for children who present with speech, language and hearing issues within the public health and welfare setting.
- 3. To encourage research studies of the services for speech, language, and hearing issues within the public health and welfare setting.
 - 4. To provide a means for continued professional growth relative to programming for speech, language, and hearing issues within the public health and welfare setting.

DSHPSHWA represents the "Voice" of EHDI Coordinators

www.dshpshwa.org



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and Welfare Agencies.



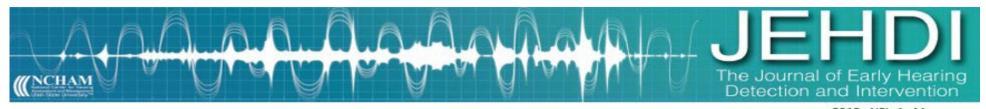
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2019; 4(2): 1-44

Year 2019 Position Statement: Principles and Guidelines for Early Hearing Detection and Intervention Programs

The Joint Committee on Infant Hearing

Executive Summary Endorsements

Need for audiology oversight of hearing screening programs

For well-born infants only, who are screened by AABR and do <u>not</u> pass, rescreening and passing by OAE is acceptable

Rescreening in the medical home in some circumstances

Provider is responsible for reporting results to the state EHDI program

Frequently Asked Questions



JCIH published its most recent document in 2019



Statement covered screening, identification/ diagnosis, medical care, early intervention, language acquisition and public policy recommendations.



Published FAQ's were drawn from questions addressed to the Committee over the past year



http://www.jcih.org/posstate mts.htm

JCIH FAQ Workgroups

Newborn Hearing Screening

Audiology

Early Intervention

Family Support

Medical Considerations

JCIH FAQ Process

Moving forward, the Joint Committee on Infant Hearing (JCIH) will use WorkGroups to streamline Frequently Asked Questions (FAQs). For this process, the committee will utilize Quality Improvement methodology (Plan-Do-Study-Act) thus processes are subject to change.

Assigned to:	STEPS			
JCIH Co-Chairs	 As new questions come in, JCIH Co-Chairs will determine which workgroup should generate a response and subsequently send an email to the Workgroup Chair. 			
Workgroup Lead	Lead 2) The Workgroup Lead will lead efforts with the workgroup and come up with a response. We will leave it at the discretion of each Chair to determine how that is done.			
Workgroup Lead	 Within 1 week of receiving question, the Workgroup Lead will send a response to the full JCIH Committee for Discussion Period for 48 hours. 			
Workgroup Lead	 Make modifications to the draft response based on feedback and send to JCIH Co-Chairs for voting. 			
JCIH Co-Chairs	 An email will be sent to all JCIH Voting members for Voting Period for 1 week. 			
JCIH Co-Chairs	Chairs 2) When all votes are received JCIH Co-Chairs will respond to email request with an official response from the JCIH.			
JCIH Co-Chairs	 JCIH Co-Chairs will work with NCHAM staff to post responses online once system is set up. 			
	GOAL: 2 Week Turnaround or Sooner			



History

Position Statements



Members

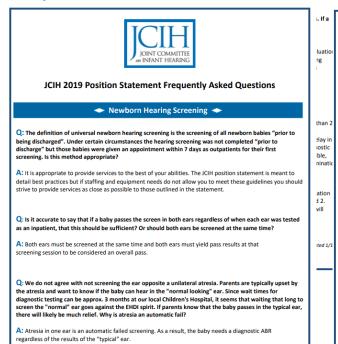
Contact Us/ Links

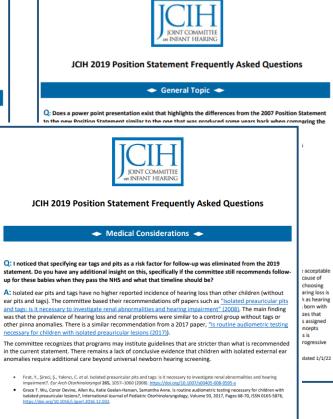
Position Statements from the Joint Committee on Infant Hearing

2019

- JCIH 2019 Position Statement
- JCIH 2019 Position Statement Frequently Asked Questions
 - Audiology FAQs [PDF]
 - General Topic FAQs [PDF]
 - Medical Considerations FAQs [PDF]
 - Newborn Hearing Screening FAQs [PDF]







Q: What about assisted ventilation? Is this still considered a risk factor for possible delayed HL? If so, what

type(s) of devices are considered assisted ventilation?

Today's Panel

To answer some of the most frequently asked questions, today's panel consists of several members of the Joint Committee on Infant Hearing



Patricia Burk, M.S., CCC-SLP, LSLS Cert AVT JCIH Co-Chair

Patricia Burk is the Program Coordinator/Oklahoma EHDI Coordinator for the Newborn Hearing Screening Program at the Oklahoma State Department of Health. Patricia helps to promote early identification, diagnosis, and amplification of children with hearing loss throughout the State of Oklahoma. Before becoming the state educator for Newborn Hearing, she worked for an internationally acclaimed cochlear implant clinic where she specialized in intervention services for children and adults with hearing loss.

Directors of Speech and Hearing Programs in State Health and Welfare Agencies (DSHPSHWA)

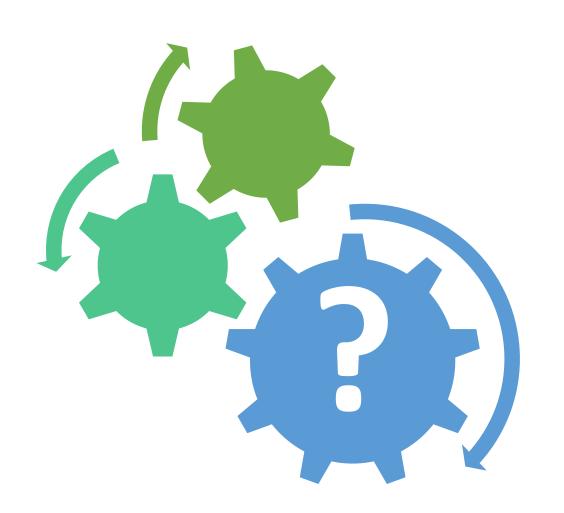




Kirsten Coverstone, AuD JCIH Co-Chair

Kirsten Coverstone is the EHDI Coordinator for the state of Minnesota and an audiologist. She works directly with birth facilities to establish and maintain effective hearing screening programs, audiologists for timely follow-up & confirmation of hearing status, provides education and guidance to PCP clinics, and supports stakeholders and outreach locally and nationally to improve early hearing detection and intervention.

Directors of Speech and Hearing Programs in State Health and Welfare Agencies (DSHPSHWA)



FAQ – Newborn Hearing

Is it accurate to say that if a baby passes the screen in both ears regardless of when each ear was tested as an inpatient, that this should be sufficient?

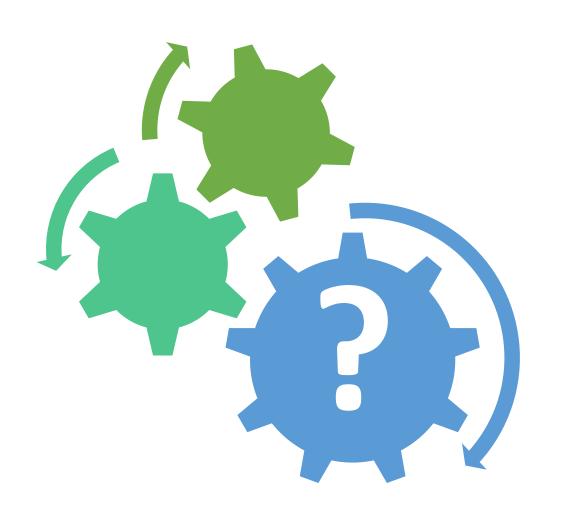
Or should both ears be screened at the same time?

Screen both ears

Both ears must yield pass results in the same screening session to be considered an overall pass

Even if each ear has separately passed a screening, this does <u>not</u> constitute a pass outcome

Rescreening should comprise a single valid rescreen of both ears in the same session, regardless of initial screening results, to ensure that fluctuation or progression in hearing levels are not missed



FAQ – Newborn Hearing

Our facility has a difficult time making the 1-3-6 benchmarks. What if we cannot make the 1-2-3 benchmark?

JCIH 2007

EHDI Benchmarks

JCIH 2019

1 month

Hearing Screening Outpatient Rescreen (if needed)

1 month

3 months

Diagnostic Hearing Evaluation by Audiologist Medical and Otologic Evaluation

2 months

6 months

Early Intervention
Enrollment in Part C Services

3 months

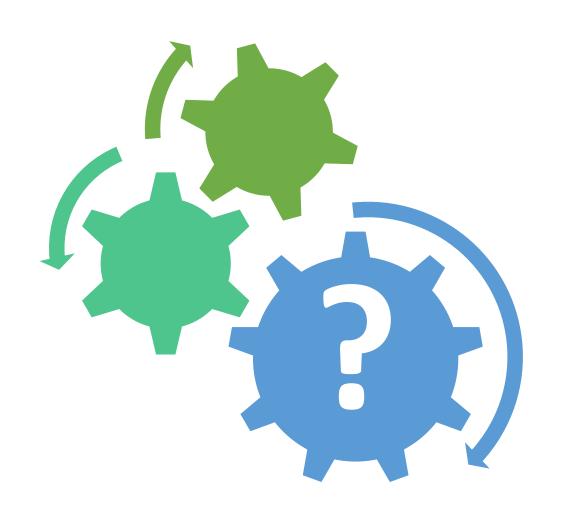
Programs that currently meet the 1-3-6 benchmark goals should strive for a 1-2-3 timeline to further promote early access to optimal language and learning.

Alison Grimes, AuD Past JCIH Chair

Director of Audiology and Newborn
Hearing at UCLA Health. An
audiologist for 40+ years, she has
worked in a variety of practice sites
across the country involving pediatric
Audiology. Alison has been a delegate
to JCIH representing the American
Academy of Audiology since 2007.

American Academy of Audiology





FAQ – Audiology

When should an ABR be done?

What is a "comprehensive" pediatric audiologic evaluation?

What tests need to be included in a diagnostic ABR?

Timing of ABR

- 1-3-6 vs 1-2-3 diagnostic goal
- Sedation can be avoided if infants are tested at a younger age, optimally 2-3 months.
 - Evaluation in NICU or PICU
 - Evaluation in conjunction with anesthesia for other procedures
- For infants in NICU for a prolonged period of time, comprehensive audiologic diagnosis can and should be completed during hospitalization.

Audiologic Evaluation for the Child Under 3 Years

A "comprehensive" diagnostic audiology evaluation should include a battery of tests that define type, degree, and configuration of hearing thresholds for each ear.

Behavioral

Physiologic

Electrophysiologic

Audiologic Evaluation for the Child Under 3 Years

REFER baby to
Audiology facility
where <u>ALL</u>
equipment,
protocols, &
personnel are
available & used

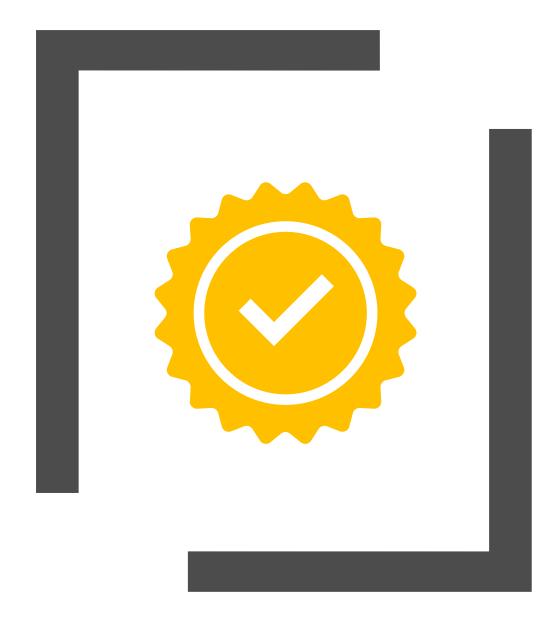
Requires audiologists skilled in infant assessment

Possessing all necessary equipment

Use of evidence-based protocols

Goal is to determine type and degree of hearing loss comprising frequencyand ear-specific air and bone conduction thresholds

Sufficient information to guide fitting of hearing aids



Gold Standard for Threshold Estimation

- ABR is the gold standard test for infants & children who cannot complete reliable & valid behavioral audiological assessment
 - Air- and bone-conduction
- Behavioral Assessment of hearing is the gold standard dependent on child's developmental age
 - VRA for infants 6-24 months
 - Conditioned Play Audiometry for toddlers 24+ months

Additional Tests to complete/complement/confirm ABR findings

Presence of Middle Ear Fluid Should Not Delay Diagnosis

- AC vs BC ABR thresholds indicate presence of or degree of conductive component
- When bone-conduction thresholds indicate PCHL, hearing aid fitting and/or CI candidacy evaluations, as well as enrollment in Early Intervention, should proceed

Tympanometry or wideband reflectance

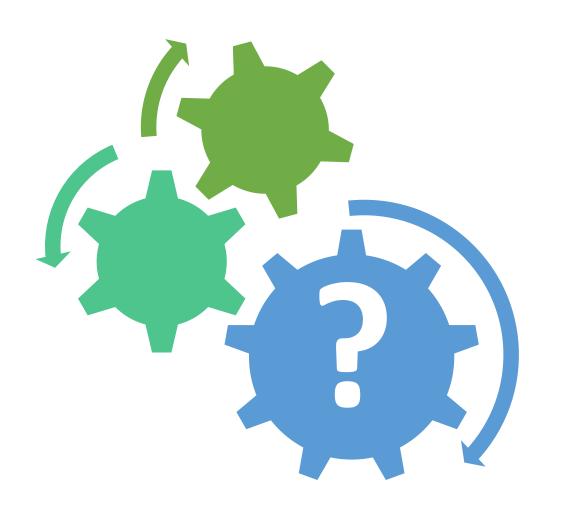
• with high frequency probe tone as indicated

Acoustic reflexes

- Test of middle ear function
- Integrity of auditory brainstem pathways

Otoacoustic emissions

- Integrity of outer hair cells
- Differential diagnosis of auditory neuropathy and SNHL
- Cannot be used as a single measure of monitoring hearing



FAQ - Audiology

The new risk factor table recommends diagnostic audiology follow-up for all risk factors.

If a baby has passed AABR, is re-screening with OAEs for the risk factor follow-up appropriate?

Can the committee expand on this topic and the rationale for diagnostic testing?

Risk Factor Follow Up

A comprehensive diagnostic audiologic evaluation is recommended

- tympanometry
- OAE
- acoustic reflexes
- behavioral testing when developmentally appropriate

Continued use of OAE alone for monitoring hearing is insufficient for assessing children with mild hearing loss.

Table 1
Risk Factors for Early Childhood Hearing Loss: Guidelines for Infants who Pass the Newborn Hearing Screen

	Risk Factor Classification	Recommended Diagnostic Follow-up	Monitoring Frequency	
	Perinatal			
1	Family history* of early, progressive, or delayed onset permanent childhood hearing loss	by 9 months	Based on etiology of family hearing loss and caregiver concern	
2	Neonatal intensive care of more than 5 days	by 9 months		
3	Hyperbilirubinemia with exchange transfusion regardless of length of stay	by 9 months	As per concerns of on-going surveillance of hearing skills and speech milestones	
4	Aminoglycoside administration for more than 5 days**	by 9 months		
5	Asphyxia or Hypoxic Ischemic Encephalopathy	by 9 months		
6	Extracorporeal membrane oxygenation (ECMO)*	No later than 3 months after occurrence	Every 12 months to school age or at shorter intervals based on concerns of parent or provide	
7	In utero infections, such as herpes, rubella, syphilis, and toxoplasmosis	by 9 months	As per concerns of on-going surveillance	
	In utero infection with cytomegalovirus (CMV)*	No later than 3 months after occurrence	Every 12 months to age 3 or at shorter intervals based on parent/provider concerns	
	Mother + Zika and infant with no laboratory evidence & no clinical findings	standard	As per AAP (2017) Periodicity schedule	
	Mother + Zika and infant with laboratory evidence of Zika + clinical findings Mother + Zika and infant with laboratory evidence of Zika - clinical findings	AABR by 1 month AABR by 1 month	ABR by 4-6 months or VRA by 9 months ABR by 4-6 months Monitor as per AAP (2017) Periodicity schedule (Adebanio et al., 2017)	
8	Certain birth conditions or findings: - Craniotacial malformations including microtia/atresia, ear dysplasia, oral facial defiting, white forelock, and microphthalmia. - Congenital microcephaly, congenital or acquired hydrocephalus. - Temporal bone abnormalities	by 9 months	As per concerns of on-going surveillance of hearing skills and speech milestones	
9	Over 400 syndromes have been identified with atypical hearing thresholds***. For more information, visit the Hereditary Hearing Loss website (Van Camp & Smith, 2016)	by 9 months	According to natural history of syndrome or concerns	
	Perinatal or Postnatal			
10	Culture-positive infections associated with sensorineural hearing lose***, including confirmed bacterial and viral (especially herpes viruses and varicella) meningitis or encephalitis	No later than 3 months after occurrence	Every 12 months to school age or at shorter intervals based on concerns of parent or provide	
11	Events associated with hearing loss: - Significant head trauma especially basal skull/temporal bone fractures - Chemotherapy	No later than 3 months after occurrence	According to findings and or continued concerns	
12	Caregiver concern**** regarding hearing, speech, language, developmental delay and or developmental regression	Immediate referral	According to findings and or continued concerns	

Risk Factor:

Family history of early, progressive or delayed-onset permanent childhood hearing loss

- Infants at increased risk of delayedonset or progressive hearing loss
- Recommended diagnostic follow-up
 - 9 months
- Based on etiology of family hearing loss and caregiver concern
- Caregiver concern regarding hearing, speech, language, developmental delay and/or developmental regression
 - Requires immediate referral

American Academy of Otolaryngology-Head and Neck Surgery

Oliver Adunka, MD, FACS

Oliver Adunka is a Professor and Vice Chair for Clinical Operations in the Department of Otolaryngology, Head & Neck Surgery at the Ohio State University Wexner Medical Center. He is the Director, Division of Otology, Neurotology, Cranial Base Surgery there. Additionally, he is the Director of Pediatric Otology & Hearing Program of Nationwide Children's Hospital in Columbus, OH.

"The information in this presentation does not represent an endorsement or an official opinion/position of the American Academy of Otoloryngology-Head and Neck Surgery"



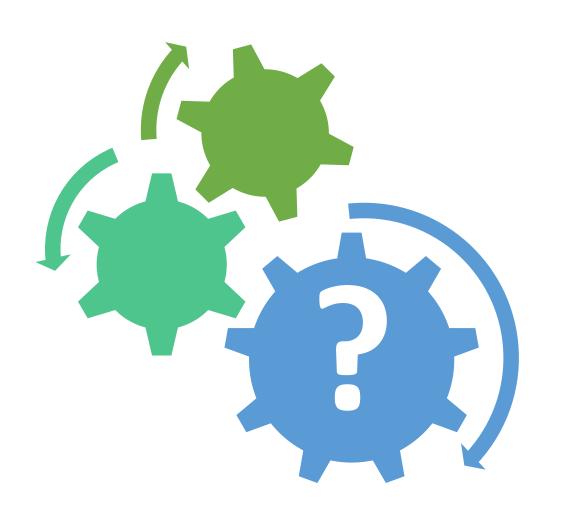


American Academy of Pediatrics

Susan Wiley, MD

Susan Wiley is a developmental pediatrician at Cincinnati Children's Hospital Medical Center (CCHMC) in Cincinnati Ohio. She is the co-director of the CHARGE program at CCHMC. Her clinical and research interests are in children who are "Deaf/Hard of Hearing Plus" She is the American Academy of Pediatrics (AAP) liaison to the Joint Committee on Infant Hearing and the Ohio AAP Chapter Champion for FHDI.

"The information in this presentation does not represent an endorsement or an official opinion/position of the American Academy of Pediatrics."



Medical Considerations - Risk Factors -

 Why are risk factors so confusing?

 Can you tell us more about what a risk factor is?

Risk Factor: why are these so confusing?

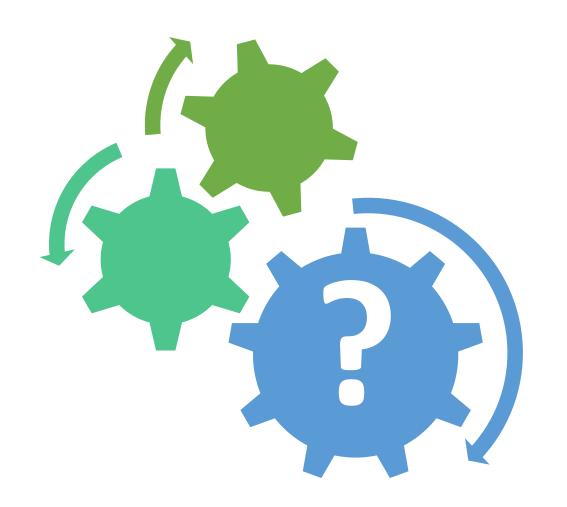
A risk factor is something that increases risk or susceptibility for a condition

 The older I am, the more likely I am to have cancer. Not all who live to the age of 90 get cancer. Some risk factors place the child on a causal pathway for hearing differences, such as a congenital infection with CMV

- Children with CMV may have a hearing difference as it directly impacts the hair cells (causes hearing changes)
- Not all children with CMV have hearing threshold differences

Other risk indicators highlight a likelihood of one or many factors that are at play in impacting hearing thresholds, such as the NICU risk factor

- Children in the NICU experience many various risk factors for hearing differences.
- The NICU is a marker that is readily identifiable but in and of itself, is not causing changes in hearing thresholds



FAQ - Medical Considerations

What is considered a 'prolonged stay in the NICU' and how are recommendations different for babies in a Special Care Nursery versus a NICU?

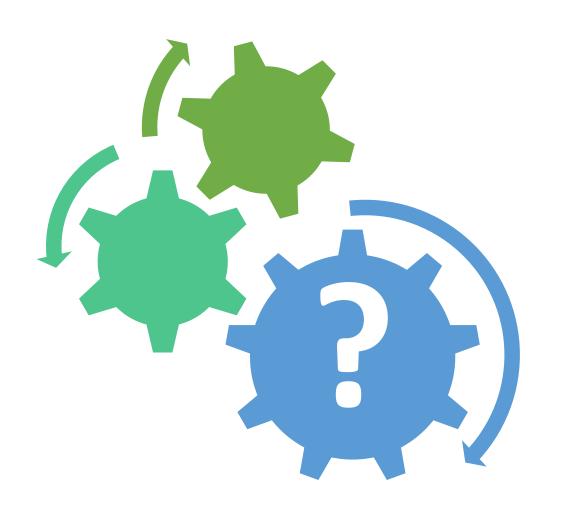
Definition of Prolonged Stay in the NICU What about Special Care Nursery?

The definition of prolonged stay in the NICU is greater than 5 days (Table 1, risk factor 2).

Considerations for babies in the special care nursery should be individualized for the infant based on specific risk factors.

• Lack of evidence in SCN: Literature does not delineate populations





FAQ - Medical Considerations

What about assisted ventilation?

Is this still considered a risk factor for possible delayed Hearing Loss?

If so, what type(s) of devices are considered assisted ventilation?

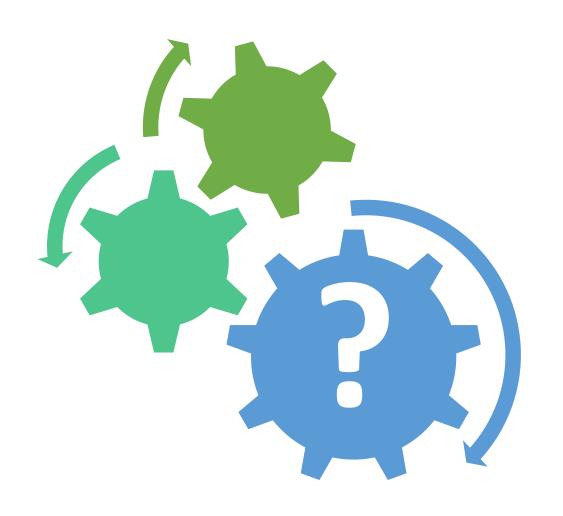
Assisted Ventilation:

Is assisted ventilation considered a risk factor for delayed hearing loss, and if so, what type of assisted ventilation?

The literature has supported the association of assisted ventilation to be an independent risk factor on hearing status.

The literature does not specifically describe the type of assisted ventilation.

Hille ET, Van Straaten HI, and Verkerk PH. Prevalence and independent risk factors for hearing loss in NICU infants. Acta Paediatr. 2007;96, 1155-1158.



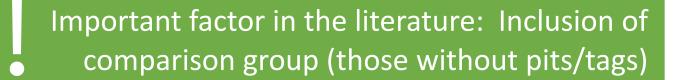
FAQ- Medical Considerations

I noticed that specifying ear tags and pits as a risk factor for follow-up was eliminated from the 2019 statement.

Do you have any additional insight on this, specifically if the committee still recommends follow-up for these babies when they pass the NHS and what that timeline should be?

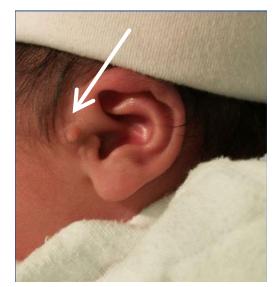
Ear Tags and Pits: Removed as a risk factor

Hearing differences among children with isolated ear pits and tags is not higher or different as compared to children without ear pits and tags.



- Firat, Y., Şireci, Ş., Yakıncı, C. et al. Isolated preauricular pits and tags: is it necessary to investigate renal abnormalities and hearing impairment?. Eur Arch Otorhinolaryngol 2008: 265; 1057–1060.
- Grace T. Wu, Conor Devine, Allen Xu, Katie Geelan-Hansen, Samantha Anne. Is routine audiometric testing necessary for children with isolated preauricular lesions?, International Journal of Pediatric Otorhinolaryngology, 2017: 93; 68-70.



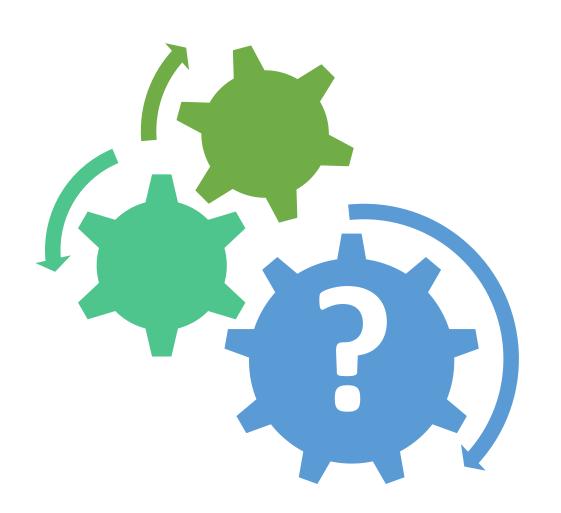


Stacy Abrams, MA

Stacy Abrams is the Project Manager-Early Intervention at the Laurent Clerc National Deaf Education Center. Stacy has worked in the Deaf Education field for more than 20 years. Ms. Abrams is a representative for the Council on Education of the Deaf on the Joint Committee on Infant Hearing committee. She is a proud mom of two deaf bilingual teens. Stacy started the #whyisign campaign to encourage individuals to share their stories.

Council on Education of the Deaf





FAQ – General Topics

Is the term "hearing loss" no longer recommended for usage in early intervention?

Page 2 of the 2019 JCIH Position Statement explains the following:

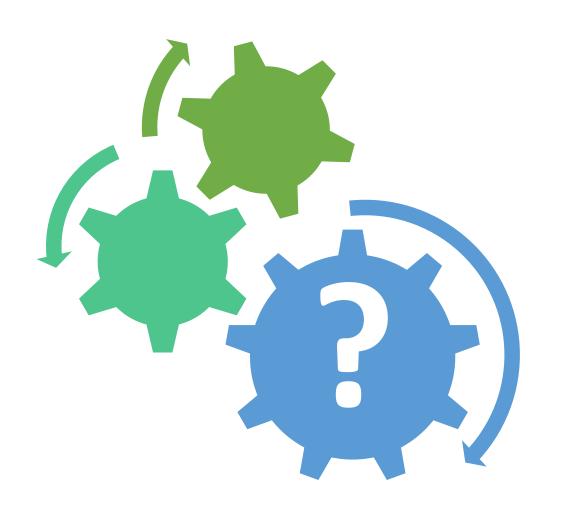
In this 2019 Statement, the Joint Committee on Infant Hearing (JCIH) seeks to use terms that:

- (a) are acceptable to a range of stakeholders
- (b) clearly convey the intended meaning to the entire community.
- terms like hearing loss, hearing impairment, and hearing level have different values or interpretations depending on one's cultural perspective
- convey audiological concepts using culturally sensitive language whenever possible.
- there are times the term hearing loss is retained to clearly convey audiological concepts/conditions

Because of the diversity of the committee's composition and represented viewpoints, a compromise resulted in choosing currently recognized terms that reflect accepted, person-first language.

Ex. The commonly used term <u>hearing loss</u> is replaced, with the terminology such as <u>hearing thresholds</u> in the mild, moderate, severe, or profound range

- Done when it is grammatically appropriate to the written English language
- Acknowledges that for an infant who is born with hearing thresholds outside the typical (normal) range, no loss has actually occurred.

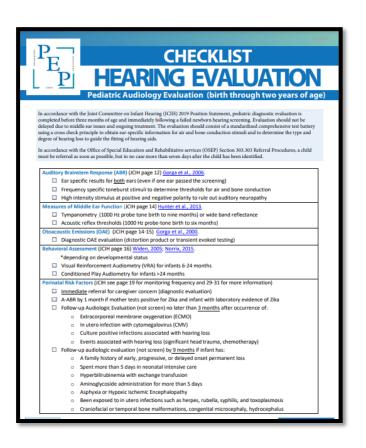


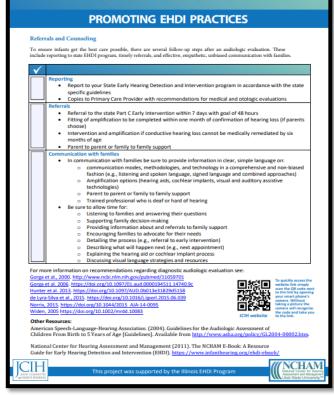
FAQ – General Topics

Does a power point presentation exist that highlights the differences from the 2007 Position Statement to the new Position Statement similar to the one that was produced some years back when comparing the 2000 to 2007 Statement as noted at

www.jcih.org/posstatemts.htm

2019 Position Statement Resources





The committee is working together and with partners such as the Promoting EHDI Practices (PEP) workgroup on several items related to the 2019 position statement:

- Ongoing FAQ documents
- Checklists
- Learning modules

Moving Forward





Sneek Peek

- Shorter, topic focused documents
- 2 Simultaneous Documents:
 - Risk factors
 - Late onset or progressive hearing loss
- Resource Gathering
 - Please share research and resources you would like the JCIH to review

www.jcih.org/contactus.htm



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Alexander Graham Bell



Don Goldberg



Meredith Sugar

American Academy of Otolaryngology-Head & Neck Surgery



Craig Buchman



Oliver Adunka

American Academy of Audiology



Alison Grimes



Eileen Rall

American Speech-Language **Hearing Association**



Meredith Holcomb



Karen Munoz

Directors of Speech and Hearing Programs in State Health and Welfare Agencies (DSHPSHWA)



Patricia Burk



Kirsten Coverstone

American Academy of Pediatrics



Susan Wiley



Robert Nutt

Council on Education of the Deaf



Tawny Holmes Hlibok



Stacy Abrams















Supporting Organizations

American Speech-Language Hearing Association







Regina Zappi

Centers for Disease Control and Prevention



Marcus Gaffney

National Center for Hearing Assessment and Management (NCHAM)



Karl White

Boys Town National Research Hospital



Ryan McCreery

Health Resources and Services Administration (HRSA) Maternal and Child Health Bureau



Treeby Brown

National Institute on Deafness and Other Communication Disorders (NIDCD)



Kelly King

Thank You www.jcih.org

