

Just In Time

for

Pediatric Primary Care Providers

Early Hearing Detection and Intervention (EHDI)



SAFER · HEALTHIER · PEOPLE™



Just In Time

So That Your Patient's Care Is Right On Time

1 Before **ONE** month of age:
Hearing Screening

3 Before **THREE** months of age:
Hearing Diagnostic Audiological
Evaluation

6 Before **SIX** months of age:
Early Intervention

Just In Time

A Message for the Primary Care Provider

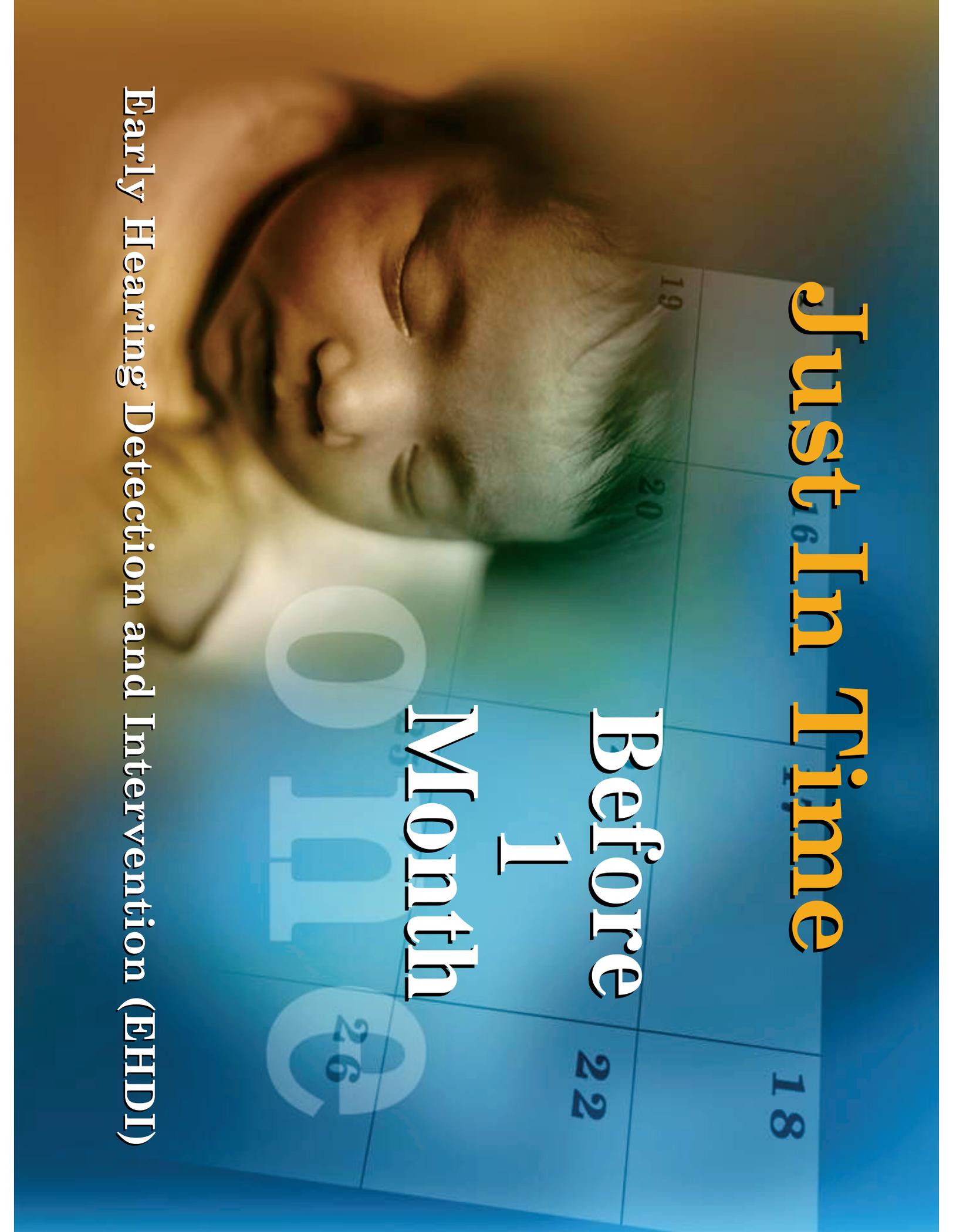
**Materials in this kit will help
you provide hearing health
care for the infants and
children in your practice**

**Just in Time materials can assist
you and the families you serve meet
the 1-3-6 goals of Early Hearing
Detection and Intervention (EHDI)**



Facts About Infant Hearing Loss

- 3 infants out of every 1,000 have a hearing loss
- Hearing loss is one of the most common congenital disorders
- Only 50% have an identified risk factor
- 90% of infants born with hearing loss have two hearing parents
- Early intervention (programs and services for families) before 6 months of age provides improved communication outcomes

A baby with dark hair is lying on their back on a calendar grid. The baby's eyes are closed, and they appear to be sleeping. The calendar grid is blue and white, with numbers 18, 19, 20, 22, and 26 visible. The text 'Just In Time' is written in large, bold, yellow letters across the top of the image. Below it, 'Before 1 Month' is written in white, bold letters. At the bottom, 'Early Hearing Detection and Intervention (EHDI)' is written in white, bold letters.

Just In Time

**Before
1
Month**

Early Hearing Detection and Intervention (EHDI)

Just In Time

Before 1 Month of Age

- Ensure hearing screening for all newborns
- Review results & risk factors for late onset or progressive hearing loss with parent/guardian (refer to risk factors page)
- Schedule diagnostic audiological evaluation for all “Refers”



Hearing Screening

Hearing Screening Technologies

Otoacoustic Emissions (OAE)

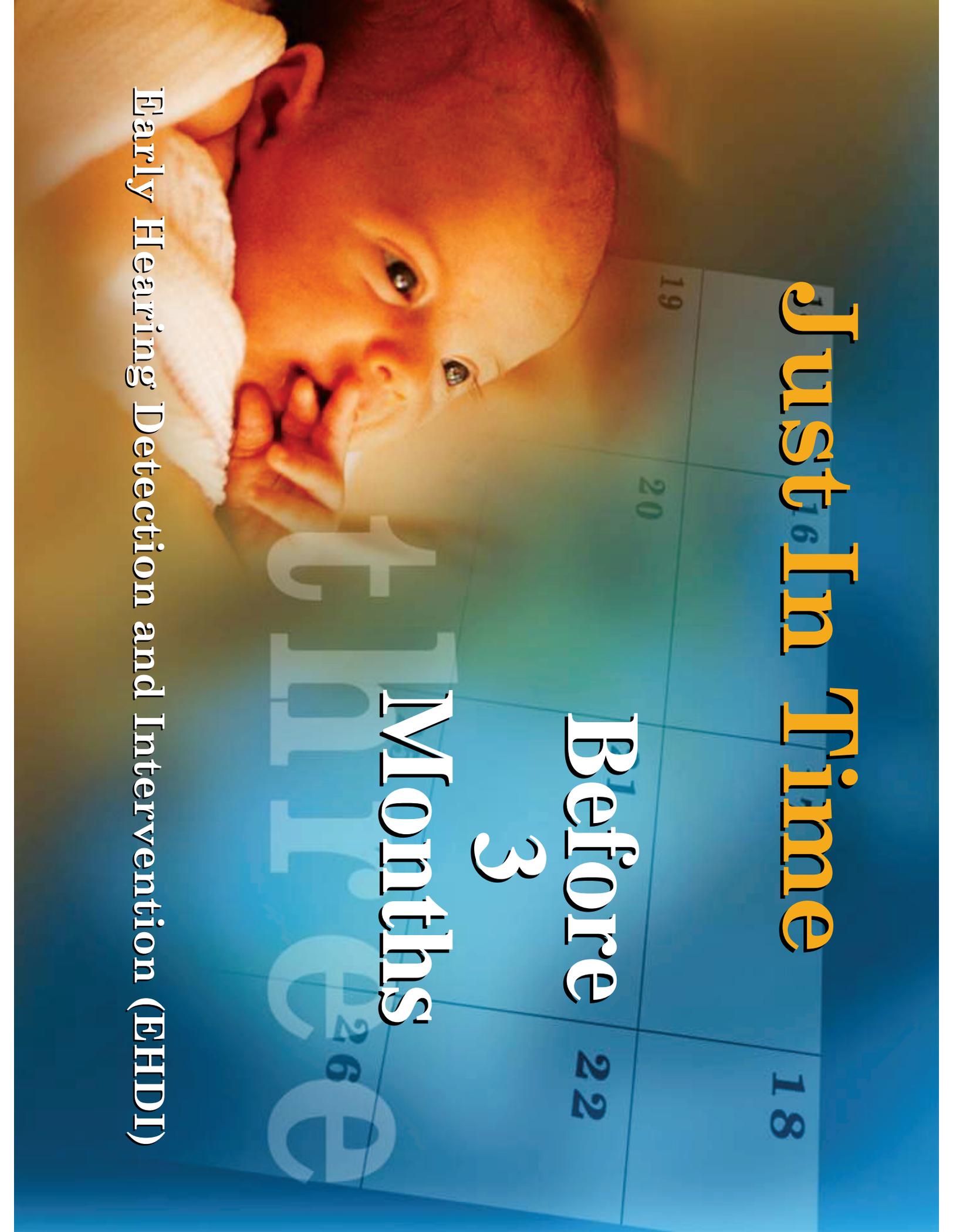
- OAE measures sound waves (emissions) generated by the outer hair cells in the cochlea



Automated Auditory Brainstem Response (AABR)

- AABR measures neural responses to clicks presented via electrodes



A close-up photograph of a baby's face, looking towards the camera with a curious expression. The baby's hand is near their mouth. In the background, a calendar is visible, showing dates like 19, 20, 21, 22, 18, and 16. The overall lighting is warm and soft.

Just In Time

**Before
3**

Months

Early Hearing Detection and Intervention (EHDI)

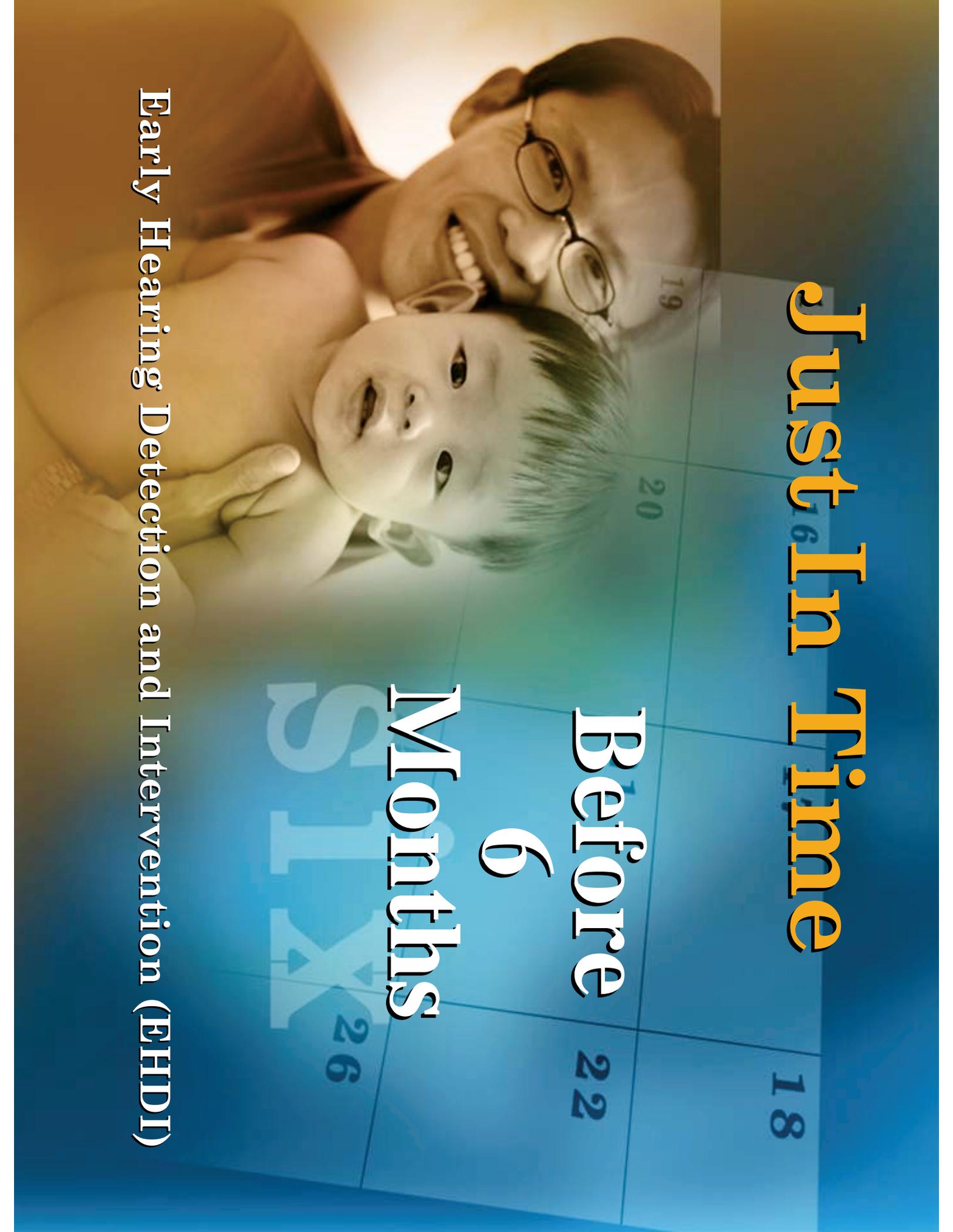
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Before 3 Months of Age

- Schedule a pediatric diagnostic audiological evaluation for babies who do not pass the initial screen or re-screen
- If a diagnosis is confirmed:
 - Refer to Early Intervention (Part C)
 - Schedule ENT exam and ophthalmology exam
 - Provide medical clearance for hearing aids\cochlear implants\therapies if chosen by the family
 - Provide medical referrals: genetics, neurology, developmental pediatrics



**Diagnostic
Audiological Evaluation**

A smiling man with glasses is holding a baby. The background features a calendar with dates 18, 19, 20, 22, and 26 visible. The text 'Just In Time' is written in a large, bold, yellow font, and 'Before 6 Months' is written in a large, bold, white font.

Just In Time

**Before
6**

Months

Early Hearing Detection and Intervention (EHDI)

Just In Time

Before 6 Months of Age

- Complete the ENT evaluation
- Provide pediatric audiology services including ear molds, hearing aids, information about cochlear implants, follow-up, etc
- Enroll child in Early Intervention Services (Part C)
- Provide family with information regarding communication options
- Communicate with family and other service providers for continuity of care



Early Intervention

Communication Choices

Early Intervention and
Communication Choices

Communication Choices



Communication Choices

It is the family's choice

Communication programs include:

- American Sign Language (ASL)
- Auditory-Oral
- Auditory-Verbal
- Cued Speech
- Total Communication

Families could benefit from visiting their state/local early intervention programs and talking with professionals and other parents to determine which methodology is compatible with the needs of the child and the family.

Primary Care Provider's Role (Medical Home)

What is a medical home?

“The pediatric health care professionals and parents act as partners in a medical home to identify and access all the medical and non-medical services needed to help children and their families achieve their maximum potential.”

American Academy of Pediatrics



Primary Care Provider's Role

- Ensure that all newborns in your practice have been screened prior to hospital discharge or before one month of age
- Refer all babies who do not pass screening for pediatric diagnostic audiology evaluation
- Review any risk factors and discuss hearing monitoring with parents

Risk Factors for Late Onset or Progressive Hearing Loss



Facts about Late Onset or Progressive Hearing Loss

- A late onset or progressive hearing loss can occur at any time after birth
- Even babies who “pass” their initial screening test can develop a hearing loss
- Infants with risk factors need to have periodic hearing assessments (every 6 months until 3 years of age)

Risk Factors for Late Onset or Progressive Hearing Loss

- Family history of childhood hearing loss
- Craniofacial anomalies or syndromes associated with hearing loss
- TORCH (T)oxoplasmosis, (O)ther Agents, (R)ubella, (C)ytomegalovirus, and (H)erpes
- Ototoxic medications (aminoglycosides, diuretics, others)
- Bacterial meningitis

Risk Factors for Late Onset or Progressive Hearing Loss

- Persistent Pulmonary Hypertension (PPHN), prolonged ventilator use, or ECMO
- Hyperbilirubinemia (requiring exchange transfusion)
- Neurodegenerative disorders
- Head trauma
- Recurrent or persistent otitis media with effusion (lasting 3 months or longer)

Just In Time

*Thank you for your time,
Please refer to the websites
on the next pages for
further information.*

Brought to you in part by the Provider
Education Subcommittee, Family Issues Committee

For more information:

Web Sites

- Alexander Graham Bell Association
for the Deaf
<http://www.agbell.org>
- American Academy of Audiology
<http://www.audiology.org>
- American Academy of Pediatrics
<http://www.aap.org>
- American Society for Deaf Children
<http://www.deafchildren.org>
- American Speech-Language-Hearing
Association
<http://www.asha.org>

Web Sites

- Auditory-Verbal International, Inc.
<http://www.auditory-verbal.org>
- Beginnings For Parents of Children Who Are Deaf or Hard-of-Hearing
<http://www.beginningssvcs.com>
- Boys Town National Research Hospital
<http://www.boystownhospital.org>
<http://www.babyhearing.org> (My Baby's Hearing)
- Centers for Disease Control and Prevention, Early Hearing Detection and Intervention
<http://www.cdc.gov/ncbddd/ehdi>
Email: ehdi@cdc.gov

Web Sites

- Family Voices
<http://www.familyvoices.org>
- Hands & Voices
<http://www.handsandvoices.org>
- Health Resources and Services Administration
<http://www.hrsa.gov>
- John Tracy Clinic
<http://johntracyclinic.org>
- Joint Committee on Infant Hearing
<http://www.jcih.org>

Web Sites

- Marion Downs National Center for Infant Hearing
<http://www.colorado.edu/slhs/indnc>
- National Association of the Deaf
<http://www.nad.org>
- National Center for Hearing Assessment and Management
<http://www.infanthearing.org>
- National Cued Speech Association
<http://www.cuedspeech.org>
- Laurent Clerc National Deaf Education Center
<http://clerccenter.gallaudet.edu/InfoToGo>

Web Sites

- National Institutes of Health, National Institute on Deafness and Other Communication Disorders
<http://www.nidcd.nih.gov>
- Office of Special Education and Rehabilitative Services
<http://www.ed.gov>
- Raising Deaf Kids
<http://www.raisingdeafkids.org>
- Telecommunications for the Deaf, Inc.
<http://www.tdi-online.org>