Indiana EHDI Matters

Indiana State Department of Health
Division of Maternal and Child Health - Genomics and Newborn Screening
Early Hearing Detection and Intervention (EHDI) Program

EHDI—Staff Highlight

ALYSSA K. REX, Au.D.—FOLLOW-UP COORDINATOR
EARLY HEARING DETECTION AND INTERVENTION PROGRAM

Alyssa K. Rex, Au.D. is the follow-up coordinator for EHDI. The follow-up coordinator is responsible for the monthly summary reporting of each of the birthing facilities in Indiana, aiding parents in finding follow-up facilities, and is the primary data reporter to the Centers for Disease Control and Prevention (CDC) for the EHDI program funding. She relocated to Indianapolis last year, after spending five years with ENT & Associates in Fort Wayne as a clinical audiologist and associate director. She fell in love with pediatric audiology as an undergraduate at Purdue University, received her doctorate of audiology at Central Michigan and remains impassioned about children who are deaf or hard of hearing. She is the mother of five children and two dogs. She enjoys spending time with her family, running and a good challenge.

How did Indiana EHDI do in 2014?

Below is Indiana’s data that has been submitted to the CDC. Indiana is a national leader in EHDI efforts.

<table>
<thead>
<tr>
<th>Total Births</th>
<th>84,907</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Screened</td>
<td>82,488</td>
</tr>
<tr>
<td>Total Did Not Pass</td>
<td>2,287</td>
</tr>
</tbody>
</table>

**Outcomes for failed UNHS (2,278)**

<table>
<thead>
<tr>
<th>Passed</th>
<th>Hearing loss</th>
<th>Lost to Follow-Up</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,626</td>
<td>165</td>
<td>283</td>
</tr>
</tbody>
</table>

* n = total ears

![Graph showing Total Hearing Loss 2014](image)
According to the Centers for Disease Control and Prevention (CDC), in 2013, the national average lost-to-follow-up rate was 32%. Indiana's lost-to-follow-up rate was 13% in 2013 and 12.5% in 2014. The national average for babies screened is 98%; Indiana had a screening rate of 97.1% in 2014.

Please note from the graphs above that approximately 35% of babies identified as deaf/hard of hearing have unilateral hearing loss (similar for 2013 and 2014). It is important to encourage families to pursue appropriate follow-up even if only one ear does not pass the screening! In 2013, there was no categorization for slight (16-25 dB HL) and moderately-severe (56-70 dB HL) degree of hearing loss.
Dear Colleagues:

In the wake of the current Zika outbreak in Central and South America and the Caribbean, it is apparent that there is still much to learn about this infection and how it manifests itself in affected adults, infants and children.

Zika virus is a single-stranded RNA virus of the Flaviviridae family, genus Flavivirus. Zika virus is transmitted to humans primarily through the bite of an infected Aedes species mosquito.

- Perinatal, in utero, sexual and possible transfusion transmission events have also been reported. Zika virus can be transmitted from a pregnant mother to her fetus during pregnancy (congenital transmission) or around the time of birth (perinatal transmission).
- Most people infected with Zika virus are asymptomatic. Characteristic clinical findings are acute onset of fever with maculopapular rash, arthralgia, or conjunctivitis, myalgia and headache. Clinical illness is usually mild, with symptoms lasting for several days to a week; severe disease requiring hospitalization is uncommon, and case fatality is low. Cases of Guillain-Barre syndrome have been reported in patients following suspected Zika virus infection.
- The CDC concluded that Zika virus infection during pregnancy is a cause of microcephaly and other severe fetal brain defects. Fetuses and infants of women infected with Zika virus during pregnancy should be evaluated for possible congenital infection and neurologic abnormalities.
- Current evidence suggests that the benefits of breastfeeding outweigh the theoretical risk of Zika virus infection transmission through breast milk.

The most recent guidance from the CDC for healthcare providers includes Appendix G – the US Zika Pregnancy Registry Infant Health Follow-up Form (attached). Please note on this form that not only is the hearing screening result requested but the audiological evaluation result is also requested. The CDC also recommends in the Interim Guidelines for Health Care Providers Caring for Infants and Children with Possible Zika Virus Infection — United States, February 2016 that, among other examinations, evaluation of hearing be completed (http://www.cdc.gov/mmwr/volumes/65/wr/mm6507e1.htm#B1_down). The correlation between microcephaly and hearing loss has long been established. The World Health Organization has also produced a bulletin which states, “The range of abnormalities seen and the likely causal relationship with Zika virus infection suggest the presence of a new congenital syndrome. WHO has set in place a process for defining the spectrum of this syndrome. The process focuses on mapping and analyzing the clinical manifestations encompassing the neurological, hearing, visual and other abnormalities, and neuroimaging findings.” (http://www.who.int/bulletin/volumes/94/6/16-176990/en/)

In-utero viral infections such as cytomegalovirus, rubella and toxoplasmosis have been recognized as risk factors for hearing loss for many years. At this time, Indiana EHDI is recommending that the Zika virus also be considered a risk factor for hearing loss. Although it is unlikely that an encounter with a baby or mother with Zika virus will occur, it is important that the relationship between hearing and Zika be brought to everyone’s attention.

Most respectfully,

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Division of Maternal and Child Health
- Genomics and Newborn Screening
Early Hearing Detection and Intervention (EHDI Program)

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IMPORTANT LINKS

Joint Commission on Infant Hearing
www.jcih.org

National Center for Hearing Assessment and Management
http://www.infanthearing.org

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We’re on the web! Check out our website at:
www.hearing.in.gov