Newborn Hearing and cCMV in Connecticut:
Identifying, Tracking, and Supporting.

Connecticut Department of Public Health

Early Hearing Detection and Intervention (EHDI) Program • July 2021

What is Connecticut EHDI?

The **Early Hearing Detection and Intervention Program** (EHDI) is responsible for ensuring that all Connecticut-born infants receive appropriate and timely newborn hearing screenings, congenital Cytomegalovirus (cCMV) tests, diagnostic hearing evaluations, Birth to Three early intervention services, and family support and mentoring services to maximize developmental outcomes.

KEY POINTS:

- **Since January 1, 2003, almost 692,000 infants have been screened for hearing loss. ***
- **Developmental delays due to hearing loss may be lessened with timely detection and appropriate hearing intervention services.**
- **Connecticut law requires all babies to be screened for hearing loss at birth.**
- **Connecticut also law requires babies who fail their newborn hearing screening be tested for congenital Cytomegalovirus (cCMV).**

Why EHDI?

Congenital hearing loss is one of the most commonly occurring birth defects found in infants. A 2009 Centers for Disease Control and Prevention (CDC) study showed that 1.4 babies out of 1000 screened had a hearing loss. Unidentified hearing loss during infancy and early childhood adversely impacts: development of speech and verbal language skills; social, emotional, cognitive, and academic development; and vocational and economic potential. Our goal is to minimize the consequences of hearing loss and keep development on track through timely diagnosis and intervention.

Congenital CMV is a commonly occurring virus that may harm the brain, eyes, and inner ear of an unborn baby. According to the American Academy of Pediatrics, the virus is responsible for approximately 25% of all congenital hearing losses. These losses often go unnoticed for years compounding the problem with preventable developmental delays in speech. Our goal is to ensure that children are tested, and if positive for cCMV, get the appropriate audiological follow-up, which could catch the delayed onset of hearing loss, which is common in these cases.

EHDI Mission Statement and Strategies

The program uses data collection and analysis; epidemiological case surveillance and management; data quality improvement methods; and outreach, education, and partnership-building with parents, medical providers, early intervention providers, and family-based organizations to meet the below goals of the nationally accepted **1-3-6-9 model**:

- Ensure that all Connecticut newborns receive hearing screenings at birth, or by **one month of age**.
- Ensure that infants who failed their hearing screening also receive a cCMV testing.
- Ensure that infants who fail their hearing screenings are evaluated by a pediatric audiologist and receive a diagnostic audiological follow-up test by **three months of age**.
- Ensure that infants diagnosed with a hearing loss are receiving early intervention services (Connecticut Office of Early Childhood's Birth to Three program) by **six months of age**.
- Ensure families of the deaf or hard of hearing are enrolled in family supports by **nine months of age.**

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Connecticut Legislation

Connecticut passed a law **July 1, 2000** that requires all birth facilities to implement a universal newborn hearing screening (UNHS) program for the purpose of screening Connecticut-born infants for hearing loss. As a result, the Connecticut Early Hearing Detection and Intervention (EHDI) program was established to promote and oversee the UNHS program at the state level and is under the auspices of the Connecticut Department of Public Health (DPH). *(C.G.S. § 19a-59).* Additional legislation took effect on **January 1, 2016**, which required birthing facilities to test all babies who failed their newborn hearing screening for congenital Cytomegalovirus (cCMV). Promoting and facilitating cCMV testing also falls under the EHDI program umbrella. *(C.G.S. § 19a-55)*

Statewide EHDI Data

Newborn Hearing Screening (2011-2020):

- >99% of all Connecticut newborns have been screened for hearing loss during the past decade.
- >98% of these children were screened before **one month of age**.
- 35,000 – 42,000 children are screened every year.
- 450 children per year is the average that require further testing (diagnostic audiological follow-up) to determine if there is a hearing loss.
- 1 in 6 Connecticut babies who fail newborn hearing screening will later have a diagnosed hearing loss.

Cytomegalovirus Testing (2016-2020):

- >91% of all newborns who failed their newborn hearing screening were also tested for cCMV.
- 2047 children have been tested for cCMV.
- 33 children have been identified as having cCMV.
- 0.018% is the cCMV prevalence rate amongst children born in Connecticut.

Diagnostic Audiological Follow-up / Identifying Hearing Loss (2011-2020):

- 835 infants were identified as having a congenital hearing loss.
- 65% of children with a hearing loss were diagnosed before **3 months of age**.
- 0.23% is the average percentage of hearing loss identified in Connecticut-born infants, trending slightly upwards while the population slightly decreases.

Early Intervention (2011-2020):

- 87% of infants with a hearing loss were referred to Connecticut Birth to Three (B23).
- 67% of infants referred to B23 were enrolled in services.
- 45% of hearing loss infants enrolled in B23 did so before **6 months of age**.

Staffing

The program is supported by 2.20 full-time positions.

Federal Support

The DPH EHDI Program is primarily supported by funds from the U.S. Department of Health and Human Services, Health Resources and Services Administration (HRSA). A portion of these funds are being used to contract with the **Connecticut Family Support Network** (www.ctfsn.org) to improve overall outcomes by providing direct support, education, and guidance to the parents of children with a hearing loss.

**Note – Rudimentary datasets became available 2003 and data standardization began January 1, 2011. Data is current through 12/31/2020.*

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