



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



DPH Early Hearing Detection and Intervention (EHDI) and Cytomegalovirus (CMV) Programs • August 2023

What is Connecticut EHDI?

The Connecticut Department of Public Health's **Early Hearing Detection and Intervention Program (EHDI)** is responsible for ensuring that all Connecticut-born children, up to three years old, receive timely newborn hearing screenings; congenital Cytomegalovirus (CMV) tests; diagnostic hearing evaluation; early intervention services, as provided by the Connecticut Office of Early Childhood's (ctoec.org) Birth to Three System (birth23.org); and family support, via the American School for the Deaf (asd-1817.org), to maximize developmental outcomes.

Why EHDI?

Congenital Hearing Loss is one of the most commonly occurring birth defects found in babies. Since 2011, data collected by EHDI shows that 2.33 babies per 1000 screened had a hearing loss. Unidentified hearing loss during infancy and early childhood may adversely impact the development of speech and language skills; social, emotional, cognitive, and academic development; and vocational and economic potential. Our goal is to minimize any developmental delays associated with hearing loss and congenital CMV by facilitating timely hearing detection and intervention.

Congenital Cytomegalovirus (CMV) is the most common infectious cause of birth defects in the United States. According to the Centers for Disease Control and Prevention (cdc.gov), 1 out of 5 babies with congenital CMV will have long-term health problems, such as hearing loss. Hearing loss may progress from mild to severe during the first two years of life, which is a critical period for language learning. EHDI's goal is to ensure that babies are tested, and if positive for congenital CMV, get the appropriate audiological follow-up that could catch a delayed onset of hearing loss, which is common in congenital CMV 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, healthcare 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 babies receive a newborn hearing screening at birth, or by **one month of age**.
- Ensure that babies who failed their newborn hearing screening also receive congenital CMV testing. †
- Ensure that babies who fail their newborn hearing screenings are evaluated by a pediatric audiologist and receive a diagnostic audiological follow-up test by **three months of age**.
- Ensure that babies with a hearing loss receive early intervention services by **six months of age**.
- Ensure families of the deaf or hard of hearing are enrolled in family supports by **nine months of age**.

KEY POINTS:

- Since January 1, 2003, almost 764,621 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 infants to be screened for hearing loss at birth.
- Connecticut law also requires infants who fail their newborn hearing screening be tested for congenital Cytomegalovirus (CMV). †

Connecticut Department of Public Health

860-509-8251 or Telecommunications Relay Service: 7-1-1

<https://portal.ct.gov/ehdi>

Connecticut Legislation

Connecticut amended C.G.S. § 19a-59 on **July 1, 2000**, to require all birth facilities to implement a universal newborn hearing screening (UNHS) program for the purpose of screening all babies for hearing loss. As a result, the “Early Hearing Detection and Intervention” program was established to promote and oversee the UNHS program at the state level under the auspices of the Connecticut Department of Public Health (DPH). Additional legislation amending C.G.S. § 19a-55, took effect on **January 1, 2016**, requiring birthing facilities to test all babies who failed their newborn hearing screening for congenital Cytomegalovirus (CMV). Promoting and facilitating CMV testing and education also falls under the EHDl program. †

Connecticut EHDl Data

Newborn Hearing Screening (2011-2022):

- 99.1% of babies born in Connecticut have been screened for hearing loss.
- 98.6% of all babies screened were screened before **one month of age**.
- 35,000 – 42,000 babies are screened every year.
- ~500 babies per year fail their newborn hearing screening and require CMV and audiological testing.
- 1 in 6 babies who failed their newborn hearing screening were later diagnosed with a hearing loss.

Cytomegalovirus Testing † (2016-2022):

- 91.3% of babies who failed their newborn hearing screening were also tested for congenital CMV.
- Less than 12 babies per year who failed their newborn hearing screening AND who were also tested for congenital CMV were positive for it.
- 2,966 babies have been tested for congenital CMV in accordance with this law.
- 52.9% of all babies identified as having congenital CMV under this law were later diagnosed with a hearing loss.

Diagnostic Audiological Follow-up / Timely Identification of Hearing Loss (2011-2022):

- 1,030 babies were identified as having a congenital hearing loss.
- 64.9% of babies who failed their newborn hearing screening received a complete audiological diagnosis (either with a hearing loss or with adequate hearing levels) before **three months of age**.

Early Intervention (2011-2022):

- 45.9% of babies with a hearing loss were enrolled in Birth to Three by **six months of age**.

Staffing

The program is supported by 2.20 employees.

Family Partnership

EHDl contracts with the American School for the Deaf to improve outcomes by providing support, education, and guidance to the families of children with a hearing loss.

Federal Support

EHDl is primarily supported by funds from the U.S. Department of Health and Human Services, Health Resources and Services Administration (mchb.hrsa.gov).

**Note – Rudimentary datasets became available 2003, and data standardization began January 1, 2011. Remaining hearing data is from 01/01/2011 through 12/31/2022. Congenital CMV data is from 0/01/2016 through 12/31/2022.*

†Note – At the time of publishing, there was newly passed CMV legislation that will take effect in 2025.