



Emerging Practice: CMV Screening and Coordination with the Medical Home Team



Early Hearing
Detection & Intervention

a program of the American Academy of Pediatrics

Screening for cytomegalovirus (CMV) infection is a topic of growing interest within newborn screening and pediatrics. There is currently a paucity of guidelines related to CMV screening. Information from the emerging practice below highlights strategies for the medical home in implementing a targeted CMV screening program for infants who do not pass their newborn hearing screening. As this program is still in its preliminary stages, outcomes from this program are not available at this time.

Background

When a baby is born with cytomegalovirus (CMV) infection, it is called congenital CMV (cCMV). About 1 out of every 200 babies is born with cCMV infection. About 1 in 5 babies with cCMV infection will have long-term health problems¹. The majority of babies who test positive for CMV are asymptomatic at birth but may develop hearing loss later so early diagnosis is missed. Babies who are CMV positive are not only at risk for being born Deaf or hard of hearing, but also for late-onset or progressive hearing loss in addition to other neurodevelopmental disabilities.

Program Highlights

In 2021, Adventist Healthcare White Oak Medical Center and its sister hospital, Adventist Healthcare Shady Grove Medical Center, implemented the first targeted CMV screening program in the state of Maryland (MD) for infants who did not pass their newborn hearing screening (NBHS).

- When a baby does not pass the NBHS prior to discharge, the hearing screening technician notifies the nursing staff so that the CMV screening sample can be obtained.
- There is a process in place for the audiologist to receive notifications of results for any baby that had a CMV screening, whether in the Well-Baby Nursery (WBN) or the Neonatal Intensive Care Unit (NICU). The audiologist notifies the baby's **medical home** team of the results and potential need for audiological monitoring.
- Through coordination with the medical home team, the program supports comprehensive coordinated follow up care for the child and family/caregiver, including connection to early intervention (EI) services.

Program Implementation Strategies

- Create standing order in electronic medical system to authorize CMV screening for every baby who does not pass the NBHS.
- Work with the practice/institution's billing/coding team to explore and obtain needed approvals for additional laboratory costs associated with CMV screening.
- Confirm nurses are familiar with collection procedures and have the correct swab kits for taking the saliva or urine samples.
- Notify the audiologist in writing when a CMV screening has been ordered so that results can be tracked in the EMR.
- Develop a system for tracking and documenting the results of CMV screening and notifying the child's medical home team and the state health department NBHS reporting system.
- Create letters to the child's medical home team notifying them of either positive or negative CMV test results, include a list of recommended specialist referrals if positive.

1. "Cytomegalovirus (CMV) and Congenital CMV Infection." *Centers for Disease Control and Prevention*, Centers for Disease Control and Prevention, 18 Aug. 2020, <https://www.cdc.gov/cmvi/index.html>.

How the Medical Home Team Can Support this Work

- Monitor results for all infants with CMV screening regardless of NBHS results as cCMV can lead to late-onset or progressive hearing loss.
- Evaluate CMV symptomatic disease and consult with a pediatric infectious disease expert for infants with confirmed cCMV infection.
- Provide audiological monitoring and developmental follow up along with medical monitoring throughout childhood for infants with cCMV infection.
- Communicate CMV results and recommendations for monitoring hearing status to the infant's parents/caregivers or guardians with appropriate referral to a pediatric audiologist.
- Refer newborn patients with cCMV infection to the local EI program.
- Work with obstetricians to educate pregnant people about the risks and prevention methods for CMV.

Background Information

Adventist HealthCare White Oak Medical Center has served the community for 115 years, first in Takoma Park, MD, and now in their state-of-the-art facility in White Oak, MD.

- **Type of Practice:** Hospital
- **City/State:** Silver Spring, MD
- **Population Served:** Primarily serves non-English speaking, immigrant populations in the Mother-Baby Unit

Contact Information

- For more information about this program, contact [Ruth S Marin, PhD](#), Audiology Supervisor, Adventist Healthcare White Oak Medical Center.
- For more information about the American Academy of Pediatrics (AAP) EHDI program, visit aap.org/ehdi.
- To find a list of birthing hospitals in your state providing hearing targeted early CMV screening, or for additional information about CMV, visit the [National CMV Foundation](#).

This resource has undergone review by AAP clinical experts on early hearing detection and intervention and infectious disease.

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

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