Provider Fact Sheet

Positive Result:

Blood Spot Screen Result Notification

Cytomegalovirus (CMV) Detected

Next Steps

This week, you should take the following recommended actions:

- **Contact** family to notify them of the newborn screening result as MDH has **not** notified them. Share the follow-up plan and collect labwork.
- **Evaluate** infant (petichiae, jaundice, microcephaly, hepatosplenomegaly); arrange referral to a pediatric infectious disease specialist if symptomatic. Contact information can be found on the resource list provided.
- **Collect** urine CMV PCR **before the infant is 21 days old**. If collection happens after 21 days of age, it is unclear if the newborn was infected in utero or not. Consult with a pediatric infectious disease specialist for guidance.
- **Fax** urine CMV PCR results to MDH program staff at (651) 215-6285.

If urine CMV PCR results abnormal and confirm the screening result, see page 2 for additional evaluations needed.

If urine CMV PCR results are normal, no additional follow-up is required.

If you have questions about the newborn screening result or your next steps, an on-call Newborn Screening Program genetic counselor is available at (651) 201-3548.

Additionally, further resources and information can be found on our website at: www.health.state.mn.us/newbornscreening

False Positives

Unlikely. Result could be from contamination.

Differential Diagnosis

The detection of CMV in newborn dried blood spots is primarily associated with:

- Congenital cytomegalovirus (cCMV) — Incidence of 1 in 200 births

Clinical Summary

Cytomegalovirus (CMV) is part of the herpes virus family. A person infected with CMV (acquired CMV), typically experiences cold-like symptoms. When a pregnant person has a CMV infection, the virus can pass through the placenta to the fetus and cause long-term health problems.

Congenital CMV has a variable presentation:

- Majority are asymptomatic at birth and are never expected to develop sequelae.
- Up to 20% will have permanent hearing loss that may be present at birth or manifest later in childhood.
- Some newborns will have signs/symptoms at birth such as petechiae, microcephaly, jaundice, hepatosplenomegaly, chorioretinitis, and/or brain imaging abnormalities.

Not all infants with cCMV need to be referred to a peds ID specialist. However, if an infant has ANY signs or symptoms of cCMV disease, then a referral may be helpful in determining eligibility for treatment with antivirals. The decision to treat involves weighing the risks and benefits. Initiation of antivirals should involve a peds ID specialist and the family.

Continued...Cytomegalovirus (CMV) Detected

Follow-up Recommendations after Urine CMV PCR Confirmation

Follow-up, monitoring, and early intervention may help minimize the impact of congenital cytomegalovirus (cCMV). Additional evaluations for infants with confirmed cCMV infections may include:

Lab:

Collect complete blood count (CBC) with differential and liver function tests (LFT) to assess for thrombocytopenia, hemolytic anemia, hepatitis and hyperbilirubinemia.

Imaging:

Obtain baseline cranial ultrasound. A brain MRI may be recommended to clarify nonspecific ultrasound findings.

Audiology:

Schedule a pediatric diagnostic audiology evaluation even if baby passed their newborn hearing screen. Regular audiologic evaluations will be recommended to monitor for late-onset hearing loss.

Ophthalmology:

Schedule ophthalmology examination for baseline visual assessment and retinal exam. Follow-up as recommended.

Development:

Perform developmental assessments with a standardized screening tool at regular intervals throughout childhood.

Offer family a referral to an Early Intervention Program.

Support/Resources for Parents:

CDC's Babies Born with Congenital CMV (www.cdc.gov/cmv/congenital-infection.html)

National CMV Foundation (www.nationalcmv.org)

Minnesota Department of Health (www.health.state.mn.us/diseases/cytomegalovirus/index.html)

Minnesota Hands & Voices (www.mnhandsandvoices.org)

DEPARTMENT OF HEALTH
Newborn Screening Program, 601 Robert St. N., St. Paul, MN 55155
Phone (800) 664-7772, Fax (651) 215-6285 ***interpreters available***

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