NEWBORN HEARING SCREENING FOLLOW-UP

Passed Hearing Screen
*both ears, same session

Missed/Incomplete/ Unknown Hearing Screen

Refer/Did Not Pass Hearing Screen
*Consider targeted urine testing for CMV

Outpatient hearing screen/rescreen of both ears in *1-2 weeks* (or diagnostic audiology before discharge if in NICU).

Ongoing Surveillance for Late-Onset Hearing Loss:

- **If No Hearing Loss Risk Factors:** Continue routine developmental surveillance per American Academy of Pediatrics.
- **If General Risk Factor for Hearing Loss:** Provide diagnostic hearing assessment by *9 months of age.*
- **If JCIH High Risk for Hearing Loss** (chemotherapy, head trauma, infection related to permanent hearing loss): Provide hearing assessment within *3 months of occurence.*

Pass both ears

or

Normal - Typical hearing in both ears

Refer - Did Not Pass Hearing Screen

Diagnostic audiology evaluation as soon as possible even if middle ear findings are abnormal.

- Type/degree of hearing in both ears is needed as soon as possible and before 3 months of age (or as medically feasible for NICU infants)
- Refer to Local Public Health if family is not attending appointments or experiencing barriers.
- If initial evaluation has unknown type/degree of hearing for one or both ears then schedule definitive testing as soon as feasible and remind the family that it is important to complete.

Hearing Loss Detected

Transient Conductive

- Recheck hearing when ears are clear or by 6 months of age to assess final status.
- Refer infants with persistent conductive loss lasting more than *6 months* to ENT & consider referral to early intervention & possible amplification to ensure auditory access.

Permanent

- Refer to early intervention & family support.
- Refer to ENT, genetics, and ophthalmology.
- Medical clearance for amplification and/or referral to cochlear implant team if chosen by the family.

HEARING FOLLOW-UP FOR CONFIRMED CCMV

Confirmed cCMV
*Regardless of birth hearing screen results

Diagnostic audiology evaluation by *1 month of age* or *1 month after confirmed cCMV.*

If initial evaluation has unknown type/degree of hearing for one or both ears then plan the next visit before the family leaves your office.

Hearing Loss Detected
Consider referral to infectious disease specialist for current treatment options (if not already done).

Normal/Typical Hearing

Monitor hearing & complete vestibular screening:

- *Every 3 months until age 2 years*
- *Every 6 months from age 2-6 years*
- *Annually from age 6-10 years*

Modify as needed if change in hearing is detected or to accommodate individual needs.

If late onset hearing loss develops

*Readmits to hospital in the 1st month of life - Rescreen hearing prior to discharge. Follow according to newest screen result and base surveillance on any new risk factors.

Newborn Hearing Screening Follow-up and cCMV Hearing Follow-up Flowchart Text Outline

Passed Hearing Screen at Birth (both ears, same session)

Ongoing surveillance for late-onset hearing loss which includes the following:

- If No Risk Factors for Hearing Loss: continue routine developmental surveillance per American Academy of Pediatrics.
- If General Risk Factor for Hearing Loss: provide diagnostic hearing assessment by 9 months of age.
- If JCIH High Risk Factor for Hearing **Loss**: (chemotherapy, head trauma, infection related to permanent hearing loss), provide hearing assessment within 3 months of occurrence.

Missed/Incomplete/Unknown Hearing Screen

Schedule outpatient hearing screen/rescreening of both ears by 1-2 weeks (or diagnostic audiology before discharge if in NICU)

If scheduled and then baby passes in both ears, proceed to ongoing surveillance for late onset hearing loss.

If scheduled and then baby does not pass:

- Schedule diagnostic evaluation with audiology as soon as possible even if middle ear findings are abnormal.
- Type/degree of hearing is needed before 3 months of age (or as medically feasible for NICU infants).
- Refer to Local Public Health if family is not attending scheduled visits or experiencing barriers.
- If initial evaluation has unknown type/degree of hearing for one or both ears, then schedule definitive testing as soon as feasible and remind the family that it is important to complete.

If diagnostic audiology assessment is normal/typical hearing, proceed to ongoing surveillance for late onset hearing loss.

If diagnostic audiology assessment shows transient conductive hearing loss:

- Recheck hearing when ears are clear or by 6 months of age to assess final status.
- Refer infants with persistent conductive loss lasting more than 6 months to ENT and consider referral to early intervention & possible amplification to ensure auditory access.

If diagnostic audiology assessment shows confirmed permanent hearing loss:

- Refer to early intervention and family support.
- Refer to ENT, genetics, and ophthalmology.
- Medical clearance for amplification and/or referral to cochlear implant team if chosen by the family.

Refer/Did Not Pass Hearing Screen at Birth – Consider Targeted Urine Testing for cCMV

Schedule outpatient hearing screening/rescreening of both ears within 1-2 weeks (or diagnostic audiology before discharge if in NICU).

If scheduled and then baby passes in both ears, proceed to ongoing surveillance for late onset hearing loss.

If scheduled and then the baby does not pass:

- Schedule diagnostic evaluation with audiology as soon as possible even if middle ear findings are abnormal.
- Type/degree of hearing in both ears is needed before 3 months of age (or as medically feasible for NICU infants).
- Refer to Local Public Health if family is not attending scheduled visits or experiencing barriers.
- If initial evaluation has unknown type/degree of hearing for one or both ears, then schedule definitive testing as soon as feasible and remind the family that it is important to complete.

If diagnostic audiology assessment is normal/typical hearing, proceed to ongoing surveillance for late onset risk factors.

If diagnostic audiology assessment shows transient conductive hearing loss:

- Recheck hearing when ears are clear or by 6 months of age to assess final status.
- Refer infants with persistent conductive loss lasting more than 6 months to ENT and consider referral to early intervention & possible amplification to ensure auditory access.

If diagnostic audiology assessment shows confirmed permanent hearing loss:

- Refer to early intervention and family support.
- Refer to ENT, genetics, and ophthalmology.
- Medical clearance for amplification and/or referral to cochlear implant team if chosen by the family.

Hearing Follow-up for Confirmed cCMV Diagnosis (regardless of birth hearing screen results)

Schedule Diagnostic Audiology Evaluation by 1 of age or by 1 month after urine confirmation of cCMV. If initial evaluation has unknown type/degree of hearing for one or both ears, then plan the next visit before the family leaves your office.

If initial diagnostic audiology assessment shows confirmed permanent hearing loss then consider referral to infectious disease specialist for current treatment options (if not already done) and proceed with process for confirmed permanent hearing loss.

If initial diagnostic audiology assessment shows normal/typical hearing:

- Continue to monitor hearing and complete vestibular screening as follows:
  - Every 3 months until age 2 years
  - Every 6 months from age 2-6 years
  - Annually from age 6-10 years
- If late onset hearing loss develops at any time, then consider referral to infectious disease specialist for current treatment options and proceed with process for confirmed permanent hearing loss.