Medical Home and Ongoing Surveillance

Regardless of previous hearing-screening outcomes, all infants with or without risk factors should receive ongoing surveillance of communicative development beginning at 2 months of age during well-child visits in the medical home (AAP Committee, 2017). This recommendation provides an alternative, more inclusive strategy of surveillance of all children within the medical home based on the pediatric periodicity schedule (AAP Committee, 2017; AAP, 2014a). All Infants who do not pass the speech-language portion of a medical home global screening or for whom there is a concern regarding hearing or language should be referred for speech-language evaluation and audiology assessment. This protocol permits the detection of children with either missed neonatal or delayed-onset hearing loss, irrespective of the presence or absence of a high-risk indicator.

Ongoing and Continuous Surveillance, Screening, and Referral of Infants and Toddlers
To this point, the 2019 JCIH Position Statement has outlined the sequence of events for screening the hearing of all newborns, providing prompt audiology evaluation for those who do not pass newborn screening, and offering timely intervention for identified infants. However, the child who has a passing result on newborn hearing screening may develop, or show evidence of, childhood hearing loss. If one to two infants out of every thousand are diagnosed as deaf or hard of hearing at birth, it is estimated that another one to two per thousand will later be diagnosed with permanent hearing loss (Mehra, Eavey, & Keamy, 2009). This may reflect delayed-onset hearing loss as well as missed conductive, sensory, or neural hearing loss at the time of newborn hearing screen. Infants with minimal/mild hearing loss are likely to pass newborn screening. The rate of being deaf or hard of hearing is known to increase from approximately 1.2/1000 in newborns to 3/1000 in early school age. In a recent report (Watkin & Baldwin, 2012), the prevalence of children confirmed as deaf or hard of hearing by school age was 3.65/1000 compared to a neonatal yield of 1.79/1000.

For these reasons, all children should receive surveillance of speech and language milestones and auditory responsiveness in the medical home (AAP Committee, 2017). Continuing efforts to inform and educate primary care providers about the importance of ongoing surveillance and screening are encouraged. In addition, programs and resources that inform and educate families and caregivers about typical auditory development and about typical spoken and/or signed language development can result in more rapid identification of delayed-onset or progressive hearing loss and/or fluctuating hearing thresholds. Families can be encouraged to seek evaluation should they have concerns about their child's progress. Education of the families and caregivers about typical language development (spoken and/or signed) and how to encourage and facilitate language growth in their child would also foster earlier identification of delayed-onset or progressive hearing loss, or otherwise unidentified elevated hearing threshold levels.

Surveillance and Rescreening for Children with Risk Factors
Risk factor information should be collected, stored, and easily accessible in the electronic medical record, since the presence of risk factors places the infant at increased risk of delayed-onset hearing loss, regardless of the newborn hearing screen results. The majority of all infants identified as deaf or hard of hearing will be followed closely by an audiologist and otolaryngologist and receive indicated intervention and support services. However, a significant number of children will pass the newborn screen or rescreen who are at risk for later-onset hearing loss. Table 1 shows a revised list of risk factors since the 2007 JCIH statement. The recommendations for follow-up and evaluation on this list of risk factors pertain to infants who pass the newborn screen or rescreen. These recommendations for follow-up are based on the fact that standard newborn screening procedures and protocols do not identify all children who are deaf or hard of hearing due to missed mild or neural hearing loss, progressive hearing loss, and delayed-onset hearing loss (Johnson, 2005a; Walker et al., 2014; Nance, 2003).