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With the Increase In Measles Cases In Canada, Should Early Hearing Detection and Intervention Programs Include It As A Risk Indicator During Newborn Hearing Screening?

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No. Although measles is reoccurring in the general population due to increased non-vaccinated infants, the infections are often not proven during screening. Risk indicators are used as part of universal newborn hearing screening (UNHS) for three reasons: (1) to determine whether we should skip screening and send the baby directly for an audiology assessment; (2) to decide which screening technology to use (e.g., ADPOAE); and (3) to record information that will determine whether the infant should receive an audiology assessment later in childhood.

We are doing population hearing screenings of newborns, so we try to do it within the first few days to weeks of life. Since a measles infection will often not be confirmed that early, identifying it as a risk indicator will not be possible. It is also important to note that pregnant women who contract the measles will have complications with her health, and the infection may impact the developing fetus. Premature delivery, miscarriage, stillbirth, and low birth weight are important complications of a maternal measles infection. Measles does not cause congenital conditions like hearing loss, but a maternal infection, particularly near the end of the pregnancy, can lead to severe respiratory complications in the newborn. Some common newborn hearing loss risk indicators include low birthweight and baby characteristics or a medical procedure used because of prematurity. Examples of these are injuries to the brain such as hypoxic-ischemic encephalopathy (HIE) and intraventricular hemorrhage (IVH), and ventilatory support using high-frequency oscillatory ventilation (HFO).

A more suitable risk indicator in some early hearing detection and intervention programs (EHDI) is described as “Other risk identified by the physician.” Since the infected infant will likely be diagnosed with measles by their pediatrician or family physician after UNHS is complete, this “other” risk indicator will capture infants and young children infected with it during or beyond the newborn period. In that regard, the child can have a re-screen or hearing assessment once they have recovered from the infection, and if hearing loss exists, it will be identified as early as possible through the EHDI system.

Measles can be prevented with the measles-mumps-rubella-varicella (MMRV) vaccine that is routinely given in childhood in Canada. Since measles is highly contagious, it is a “nationally notifiable disease” in Canada. This means that cases identified by health professionals in Canadian provinces and territories that meet the measles case definition must be reported to their local public health authorities. Data are forwarded to the Public Health Agency of Canada (PHAC), where measles cases are monitored through the Canadian Measles and Rubella Surveillance System (CMRSS). Collection of national measles data informs weekly summaries of measles cases across

Canada (https://www.canada.ca/en/public-health/services/diseases/measles/surveillance-measles/measles-rubella-weekly-monitoring-reports.html). With these supports in place, our national health system has a close watch on measles cases and health professionals are involved in ensuring the best follow-up care.