EDITORIAL

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Ensuring Our Children Can Hear: Are We Doing Enough?

Hearing loss is one of the most common congenital conditions worldwide, yet it remains underrecognized and often neglected. According to the World Health Organization (WHO) 2021 report, an estimated 34 million children globally experience disabling hearing loss. In the United States, congenital deafness occurs in 2 to 3 per 1,000 live births, with an even higher prevalence among Neonatal Intensive Care Unit (NICU) admissions[1]. A study by the Ministry of Health Malaysia (MOH) reported a prevalence of 11 per 1,000 live births over a two-year period (2013–2014), highlighting the significance of this issue[2].

The Importance of Early Detection

Hearing plays a crucial role in a child's speech, language, cognitive, and social development. Neonatal hearing screening (NHS) facilitates early detection, allowing timely intervention that can profoundly impact a child's future. Research has shown that the critical period for auditory and speech-language development occurs within the first few years of life. Infants diagnosed with hearing impairment can receive habilitation with hearing aids as early as three months of age. For severe to profound hearing loss, cochlear implantation is an option as early as one year old. Missing this critical window can lead to long-term consequences, including speech and language delays, reduced academic performance, and limited employment opportunities in adulthood.

Expanding Coverage and Accessibility

Neonatal hearing screening can be either universal (UNHS) or targeted at high-risk infants (HRNHS). UNHS is considered the gold standard as nearly 50% of infants with hearing loss do not present with identifiable risk factors at birth. Limiting screening to high-risk groups risks missing a substantial number of affected infants. The American Academy of Paediatrics (AAP) supports universal hearing detection in infants before three months of age, emphasizing its importance in early intervention programs.

In Malaysia, neonatal hearing screening has been progressively implemented. Hospital Universiti Sains Malaysia (HUSM) initiated UNHS as early as 2003, followed by Pusat Perubatan Universiti Kebangsaan Malaysia (PPUKM, now Hospital Canselor Tuanku Mukhriz) in the early 2000s. The MOH launched its own program later, focusing initially on high-risk neonatal screening in 26 hospitals before expanding UNHS to seven hospitals by 2013. However, in some institutions, such as Sultan Ahmad Shah Medical Centre at IIUM (SASMEC@IIUM), plans for UNHS initiated in 2022 have yet to be fully realized, with only HRNHS currently in place.

Internationally, the implementation of UNHS has been more robust. In the United States, screening is mandatory in all 50 states, following the enactment of the Early Hearing Detection and Intervention (EHDI) Act in 2017. Singapore has successfully mandated UNHS since 2002, achieving a remarkable 99% coverage across all hospitals. These examples underscore the importance of strong governmental policies and funding to sustain universal screening initiatives.

Challenges and the Way Forward

Despite progress, significant barriers remain in Malaysia's neonatal hearing screening efforts. Studies indicate that some hospitals have discontinued UNHS due to funding constraints and equipment shortages[2]. Otoacoustic emission (OAE) and automated auditory brainstem response (AABR) devices, essential for screening, require frequent maintenance and replacement. Ensuring a dedicated federal budget for neonatal hearing screening is crucial.

Moreover, trained personnel are vital for an effective screening program. While the process is automated and time-efficient, tasking overburdened nurses with additional responsibilities may not be ideal. Instead, specially trained hearing screening personnel should be

employed, with audiologists providing oversight and expertise.

Beyond screening, follow-up care remains a major challenge. Many infants who fail initial screening do not return for further assessment, often due to logistical difficulties or lack of parental awareness. Implementing an electronic tracking system accessible nationwide could improve follow-up rates. Studies have found that families often relocate postpartum, making it difficult to track patients. In states like Kelantan, where newborns require identity cards for property eligibility, integrating hearing test data into official records may facilitate better follow-up adherence.

Raising Awareness and Education

Lack of awareness among healthcare professionals and the public further impedes the success of neonatal hearing screening programs. Recent research from SASMEC@IIUM in 2024 demonstrated that targeted educational interventions significantly improve healthcare professionals' knowledge and attitudes toward UNHS. Among medical specialties, otolaryngology (ORL) staff exhibited the highest awareness, likely due to their direct involvement in the field. Other studies across Malaysia have echoed similar findings, reinforcing the need for continuous medical education.

Equally important is parental awareness. Many parents remain uninformed about the impact of untreated hearing loss and the necessity of follow-up care[3]. Healthcare providers must actively educate parents on the importance of neonatal screening and available intervention options. Public health campaigns, including mass media outreach and advertisements, can further enhance awareness and reduce stigma surrounding hearing aids and cochlear implants.

The inclusion of hearing health in medical and nursing school curricula is another crucial step. Additionally, integrating hearing awareness topics into primary and secondary school education could foster long-term awareness and proactive attitudes toward hearing health.

Conclusion: Are We Doing Enough?

While neonatal hearing screening has advanced significantly worldwide, challenges remain in accessibility, funding, follow-up care, and awareness. Stronger governmental policies, sustained funding, and widespread education are essential to ensuring that all children receive early hearing screening, diagnosis, and intervention. Malaysia must strive to follow the example of countries with successful UNHS programs, ensuring that no child is left behind due to undetected hearing loss.

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Prof. Dr. Dinsuhaimi Sidek
Consultant ENT Surgeon/Audiological Physician,
Dept. of ORL-HNS,
Kulliyyah of Medicine,
International Islamic University Malaysia