UHL IMPact: Examining the effect of unilateral hearing loss on infant vocal development

Incidence estimates for congenital unilateral hearing loss (UHL) range from 0.8 to 2.7 infants per 1,000 births (Dalzell et al., 2000; Johnson et al., 2005). In Australia, the reported prevalence of neonatal UHL approximates 0.5/1,000 to 1/1000 births (Healthy Hearing, Queensland, 2012; SWISH NSW, 2010.) Some young children with UHL are known to experience delays in speech and language development by school-age (Lieu et al., 2010), yet others do not (Briggs et al., 2011). Some 24% of infants with UHL are reported to progress to more severe loss or bilateral hearing loss (Fitzpatrick et al., 2014), yet up to 58% of infants diagnosed with mild-moderate UHL are reported to pass undetected through newborn screening (Ghogomu et al., 2014).

The Infant Monitor of vocal Production (IMP) is a parent education tool and clinical instrument that evaluates the nature of an infant’s transition from innate vocal behaviours to audition-led imitations of verbal patterns typical of emergent speech (Cantle Moore, 2004, 2014). In research and clinical use the IMP has demonstrated capacity to differentiate the trajectory of infant vocal progress toward speech as a function of hearing acuity and experience (Cantle Moore, 2011; O’Connor, 2014). This presentation reports on the IMP results of a cohort of infants diagnosed with UHL through newborn hearing screening in NSW, Australia, 2011-2014. Data are examined, and findings presented based on gender, degree of UHL, type of hearing loss (ANSD, sensorineural, conductive), ear of hearing loss (Right, Left) and infant birth order.

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References