

HEARING SCREENING Supporting information

This guideline has been prepared with reference to the following:

Public Health England. Newborn hearing screening: care pathways. 2015. PHE. London

<https://www.gov.uk/government/publications/newborn-hearing-screening-care-pathways>

U.S. Preventive Services Task Force. Universal Screening for Hearing Loss in Newborns: Recommendation Statement. Am Fam Physician. 2010; 81:185-6

<http://www.aafp.org/afp/2010/0115/p185.html>

Newborn screening is superior to later distraction screening for improved developmental outcomes?

A retrospective comparative study in the Netherlands (Korver, 2010) compared developmental outcomes of 263 children with permanent childhood hearing impairment born in regions that performed newborn hearing screening with 171 similarly-afflicted children born in regions that favoured later distraction hearing screening. Multivariate analysis of variance showed that overall, children in newborn hearing screening regions had higher developmental outcome scores compared with children in distraction hearing screening regions (Wilks = 0.79; $F(12) = 2.705$; $P = .003$). For social development, the mean between-group difference in quotient points was 8.8 (95% CI, 0.8 to 16.7) and for gross motor development, 9.1 (95% CI, 1.1 to 17.1). For quality of life, the mean between-group difference was 5.3 (95% CI, 1.7 to 8.9), also in favour of children in newborn hearing screening regions.

A systematic review of 17 non-randomised studies (Wolff, 2010) was unable to reach any firm conclusions on the value of newborn screening, due to the lack of high-quality research.

A recent review of past studies (Pimerpton and Kennedy 2012) has concluded that “exposure to Universal Newborn Hearing Screening and early identification of Permanent Childhood Hearing Impairment are associated with benefits to language development in deaf children, with more consistent evidence provided for links between early identification and positive language outcomes”

Korver AM, Konings S, Dekker FW et al. Newborn hearing screening vs later hearing screening and developmental outcomes in children with permanent childhood hearing impairment. JAMA 2010;304:1701-8
<http://jama.jamanetwork.com/article.aspx?articleid=186749>

Pimperpton, H and Kennedy, CR. The Impact of early identification of permanent childhood hearing impairment on speech and language outcomes. Arch Dis Child 2012; 97: 648-53
<http://adc.bmj.com/content/97/7/648.long>

Wolff R, Hommerich J, Riemsma R. Hearing screening in newborns: systematic review of accuracy, effectiveness, and effects of interventions after screening. Arch Dis Child 2010;95:130-5
<http://adc.bmj.com/content/95/2/130.long>

Evidence Level: III

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