



School age hearing screening and pediatric audiology

- Report of EFAS Working Group on School Age Hearing Screening
Jan Wouters, Leuven, BE
- Hearing loss in children and the development of on-line non-speech hearing screening for school-age children
Jan de Laat, Leiden, NL
- Optimization and evaluation of a language independent hearing screening test based on sound perception in noise
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EFAS Working Group SHS

- **Aim**
- focus in pilot project on the investigation of
 - more efficient methodology for hearing screening (Q1)
 - Incidence of hearing impairment at post-neonatal age until 18 year (Q2)
- pilot project may be a stimulant for large study across-Europe and application for an EU-project



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- 31 May 2017: WHA (executive committee of WHO) resolution about actions to prevent and treat hearing loss, and intensify hearing screening in babies, children and adults.

http://apps.who.int/gb/ebwha/pdf_files/EB139/B139_5-en.pdf

<http://www.who.int/mediacentre/news/releases/2017/vector-control-ncds-cancer/en/>

- 22 years since the last strong resolution and action plan about hearing loss!



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- Q1: Methodology
- The Sound Ear Check: a new screening methodology for SHS
- language independent, based on ecologically relevant sounds
- developed and optimized by partners Netherlands-Leuven
- with child friendly pictures
- will be administered in combination with the locally used SHS screening methodology in a few 1000 children (by each contributing partner), possibly at different ages, at least at school-entry (5 or 6 year old)
- The Sound Ear Check will provide an across-partner and across-language reference measure.



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- Q2: Evidence/Incidence
- Investigation of evidence for necessity of SHS
- inventory of the already available information
- pilot studies in some countries on a regional or county scale, based on typically a few 1000 children (by each contributing partner) with records tracked from NHS (Neonatal Hearing Screening) to SHS
- whatever the used screening methodology is for SHS
- the comparison of SHS data with NHS databases will be made to extract information about incidence
- Important info for health policy making



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- **Action plan 2017 (1/2)**
- Organize, prepare and start pilot project with application of Sound Ear Check together with school age hearing screening as applied in own country (Q1) and, if applicable, compare with the NHS data for all screened children (Q2).
- pilot project will be covered with own resources of the partners
- Partners Leuven and Netherlands developed and implemented the test on tablet, ready for use at the time of the EFAS congress
- A number of measurement sets (with Sound Ear Check only, or plus Digit Triplet Test in own language) will be provided for partners



EFAS Working Group SHS

- **Action plan 2017 (2/2)**
- At the Interlaken EFAS-congress a 1 hour meeting to discuss
- A meeting of EFAS WG SHS and project partners will be organized in Leuven in the late summer 2017 to:
- **deliver the measurement sets** of calibrated headphone plus tablet with software installed, manual, training and supplementary info,
- **make test protocol** with aspects: power calculations, how to deal with conductive hearing loss, test-retest reliability, distribution of thresholds, precise test procedures
- **make agreements about use of material**, a price per set will be requested for rent. Each partner is owner of the own data, and will (only) have the transcription of child vs identification key of the own data, the layer above is completely anonymized.



EFAS Working Group SHS

- **Questions**

- Who is interested and will be able in concrete terms to collaborate in the pilot project?

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- Partners in the project:

- | | | |
|----------------|--------|--|
| • Finland: | (Q1)Q2 | Tytti Willberg |
| • Israel | Q1(Q2) | Limor Lavie |
| • Turkey | Q1Q2 | Gonca Sennaroglu |
| • Romania: | Q1(Q2) | Madalina Georgescu |
| • Norway | Q1(Q2) | Vinay Swarnalatha Nagaraj |
| • Ireland: | Q1&Q2 | Theresa Pitt |
| • Netherlands: | Q1 | Wouter Dreschler, Jan de Laat ⁹ |



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