



SASLHA  
South African Speech-Language-Hearing Association

## Guidelines: Hearing Screening in Schools

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### Ethics and Standards Committee 2011

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## **Standards and Guidelines for Speech-Language Therapists working in Hearing Screening in Schools**

### **Introduction**

The South African government has pledged to prioritise the needs of children, and has demonstrated this by the recognition given to children's' needs, in the Bill of Rights of the South African Constitution. This requires that the rights of children are upheld, and that provision is made to enable children to reach their full potential.

The school setting provides an ideal opportunity for fulfilling these aims, and thus the vision of the School Health Policy of the National Department of Health (NDOH) is:

*"the promotion of the optimal health and development of school going children and the communities within which they live and learn". (June, 2007)*

The major health barriers to learning for children in South Africa are poor nutrition, poverty, environmental factors such as poor water and sanitation provisions, and disabilities including gross loco-motor dysfunction as well as impaired vision or hearing.

"...any school health program without well-organised audiometric screening, neglects an important aspect of child health."(June 2007).

The purpose of hearing screening is to identify children with hearing losses which may affect their intellectual, emotional, social or speech / language development.

Early identification and intervention procedures provide the best opportunity for effective remediation, and aim to reduce the negative effects of hearing loss on the child's development.

The hearing screening program should be part of the total integrated school health program, and should operate within the parameters of the national health system, at a primary health care level.

Private schools should make provision for hearing screening via their own administrative systems.

### **Key concepts and definitions**

*Health Promotion* (HP) is a philosophy and process that encourages the wellness and wellbeing of the community

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*Health Promoting Schools* (HPS) endorse this philosophy by the provision of relevant services to identify health problems early and provide appropriate intervention, particularly where these impact upon the optimal performance of learners in their education and social environments

*Primary Health Care* (PHC) is a philosophy that endorses the provision of services that are easily accessible to communities and are appropriate to their needs

*Hearing Screening* - is a process that is designed to separate persons, children, who have an auditory disorder from those who do not in a simple, safe, rapid and cost effective manner

*Normal Hearing* - is described as the ability to hear sounds, pure tones, within the intensity range of 0 – 20 dB HL.

*Hearing Loss* - when persons cannot identify sounds, pure tones, within the normal range we describe the resulting threshold measurements as representing a hearing loss; this means that the sounds of speech, as represented by the pure tones, fall outside of the normal range and are perceived at levels greater than 20 dB HL.

## **Relevant legislation**

National Department of Health: *National School Health Policy and Implementation Guidelines*, June 2002

## **Contexts of practice**

The Primary Health Care (PHC) approach is the foundation of the South African health system. The emphasis of this approach is to promote preventative health care activities, and ensure that these activities reach both the general population and those sub-groups who may obtain most benefit from health promotion.

For greatest effectiveness the services provided by the PHC system should be integrated with other services focusing on the same population, namely school health, education and social development. The co-ordination between these sectors is essential in order to implement a successful school health service.

Hearing Screening in schools falls within the context of the health needs of school children and as such forms part of the integrated school health services framework.

Private schools and schools that do not fall within the government sector should arrange hearing screening according to the same schedule as that specified for government schools.

## Roles and responsibilities

In the South African context, **government** at national, provincial and district level bears responsibility for contributing to an integrated health service.

At **school** level the *school administration* should plan the program in co-operation with the trained and registered personnel who will carry out the hearing screening.

Audiologists, speech-language therapists and school nurses are the **health professionals** who are trained and have the authority to conduct hearing screening at schools.

The main objectives of school hearing-screening programs are to:

- Promote optimal hearing health
- Identify children who may have a hearing loss
- Notify a parent or guardian of a child's hearing screening failure and the need for referral to an audiologist or an Otolaryngologist (ENT)
- Establish a follow up system to ensure that the child has received appropriate care.
- Notify the teachers about the child's hearing condition and offer recommendations regarding appropriate modification of the classroom environment
- Make provision for specialised educational facilities for students with hearing loss (e.g. FM systems).

## Tasks

An effective hearing screening program must provide clear and measurable guidelines for planning, delivery and management of the program; the following aspects should be specified:

- Target Group:
  - Children 3 –13 years of age
  - Children 3yrs of age, to scholars in Grade 3 should receive annual hearing screening
  - Scholars in Grade 4 and above should be screened at least every 3 years
  - Children previously identified with hearing loss should not be screened but should be referred back to their audiologist

- Target Condition:  
Uni- or bi-lateral hearing loss
  
- Test environment
  - The choice of screening environment is crucial. The area must be reasonably quiet. The screening site should be selected during school hours to ensure that it is away from noise problems caused by excessive noise created in stairwells, heating/cooling vents, proximity of playgrounds and tuck shops, traffic and machine rooms.
  - The screening room should have access to power and a work surface is essential.
  - Ambient noise levels should first be established.
  
- Screening Protocol

Normally screening is conducted using a pure tone audiometer; tympanometry may be included as a supplementary screening test. Other procedures such as Otoacoustic Emissions (OAEs) are optional.

First conduct a biological screening check to determine the effect of the ambient noise; this may be at a level that requires an adjustment to the presentation level of the 500 Hz stimulus.

  - Administer screening at the pure tone frequencies of 500, 1000, 2000 and 4000 Hz at 25 dB HL (and 30 dB HL for 500 Hz, depending on the level of ambient noise)
  - Record a Pass or Fail result for each frequency; if the result is a 'fail' at one or more frequencies, schedule for re-screening
  - Repeat the screening using the same procedure
  - If the result is a 'fail' at one or more frequencies in one or both ears then refer the child for a diagnostic evaluation
  - If tympanometry is included in the protocol then children whose measurements fall outside of the norms for the equipment should be referred immediately without the need for the rescreen
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- Information Sharing
  - Prior to the screening, parents must give written consent for their child's hearing to be screened
  - Parents must be informed about any costs
  - All information should be treated confidentially
  - Parents/guardians should receive written feedback; if a child fails the screening the limitations of the screening procedure must be indicated while the need for further assessment should be strongly recommended.
  
- Record Keeping
  - Records should be maintained according to the usual protocols of the profession and in alignment with relevant legal requirements.
  - Each child should have an individual screening form that includes his/her identifying information, grade and class, date of the test and the results, name and title of the person who conducts the screening and the test itself.
  
- Infection Control
  - Use a disinfectant wipe on headphones and band prior to use.
  - Disinfect any re-usable immittance probe tips or otoscopic speculums or use disposable ones.
  - Wash hands thoroughly if ear drainage is visible or suspected.

### **Minimum requirements to perform the tasks**

(infrastructure, facility, equipment, information technology,)

A screening program should fulfil the objective of providing a cost-effective method of identifying those who require further assessment or treatment. While it is vital to maintain the standards required to reliably achieve this objective, the program should avoid attempting to provide diagnostic assessment.

- Infra Structure:

Co-operation between the principal, the teaching staff, and the administrators of the screening program is required to identify and follow up those scholars with hearing difficulties.

## Facility

Provision needs to be made for:

- an appropriate quiet test environment
- suitable work surfaces; a power supply point
- the noise level in the room may be checked by confirming that a person with documented normal hearing, can pass the screening test in that environment.

- Equipment
  - Otoscope
  - Calibrated Screening Pure Tone Audiometer
  - Screening Tympanometer (if this information is to supplement the pure tone thresholds)
- Data collection
  - Appropriate software programmes should be used to record the information collected during the process

- Competence

Ideally hearing screening should be conducted by an audiologist or a speech-language therapist or take place under their direct supervision. However school nurses who have received appropriate training in the screening procedure may conduct hearing screening under this proviso.

## **Resources** (internet links, documents)

ASHA: Guidelines for screening procedures

SASLHA: Guidelines for service provision in the private and public sectors (2011);

Guidelines for Early Intervention (2011)

HPCSA: Guidelines on Record Keeping (May 2007)

## **Key references**

National Department of Health. Cluster: Maternal Child and Woman's Health and Nutrition. Sub Directorate: Child Health. *National Schools Health Policy Implementation Guidelines*. June 2002.



Parliamentary Report: Right to Basic Education; Inclusive Education (Mainstreaming): Report On Hearings by the SA Human Rights Commission. March, 2007.

School Hearing Screening Guidelines: The University of State of New York. The State Education Department. Student Support Services Team, April, 2008.

Guidelines for Hearing Screening: Missouri Department of Health and Senior Services. (September,2004).

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**Acknowledgments:**

Heidi Allen, Speech Therapist and Audiologist, Durban, KwaZulu Natal; SASLHA Ethics and Standards Committee, 2008.





