

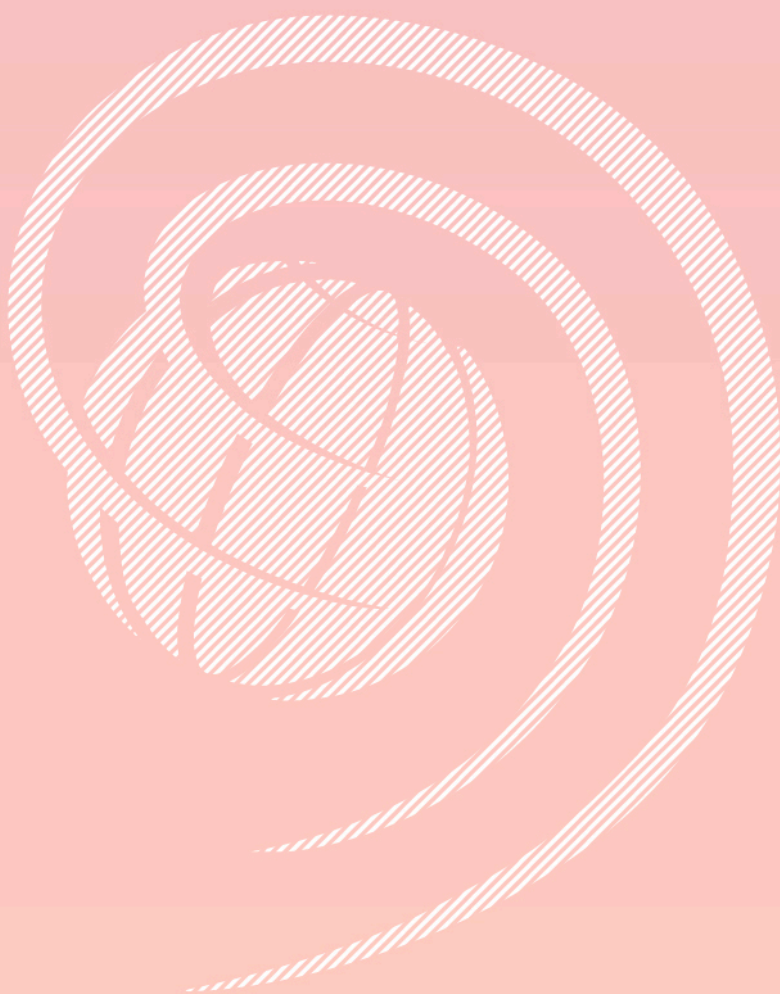


EAR AND HEARING CARE

INDICATORS FOR MONITORING PROVISION OF SERVICES



**World Health
Organization**



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World Health
Organization

Ear and hearing care: indicators for monitoring provision of services.

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EXECUTIVE SUMMARY

Globally, the prevalence of hearing loss is rising.¹ More than 5% of the world's people now experience disabling hearing loss² – the majority of whom live in low- and middle-income countries where they lack access to the services required to address hearing loss. Unaddressed hearing loss has a huge impact on all aspects of life including health, cognition, communication, education, livelihood and social engagements. In light of this, World Health Assembly resolution WHA 70.13 on hearing loss³ calls upon Member States to integrate strategies for ear and hearing care into their health systems and tasks the World Health Organization (WHO) with developing a comprehensive toolkit that provides the required comprehensive technical support to Member States for integration of ear and hearing care into health systems.

Around the world, data and services related to hearing loss prevention, care and rehabilitation are lacking. World Health Assembly resolution WHA 70.13 highlighted this issue and called upon Member States to integrate national strategies for ear and hearing care (EHC) into health systems frameworks. To support such integration, WHO is developing a complete toolkit of comprehensive technical support for Member States to help them integrate ear and hearing care into health systems. As part of this toolkit, WHO has developed a series of technical documents for the planning, implementation and monitoring of national strategies for EHC, including a set of core and supplementary indicators (set out in this document) that can be used by countries to assess and track their EHC status. This document is designed for use by national or subnational programme coordinators or managers, public health planners, researchers, funding agencies or other interested bodies to monitor the implementation of EHC interventions.

The document contains the following sections.

Health system indicators

This document provides six sets of indicators, each tailored to one of WHO's six health system blocks to enable their integration within the country's health system framework. The six building blocks are leadership and governance, service delivery, health workforce, medical products and health technology, health financing and health information. Each section refers to one health system block and provides the relevant core and supplementary indicators. **Core indicators** are those considered essential and should be integrated into the health information system and collected through countries' monitoring frameworks. **Supplementary indicators** should be included as and when they are relevant to the country and its activities in the field of ear and hearing care.

¹ Addressing the rising prevalence of hearing loss. Geneva: World Health Organization; 2018 (<http://apps.who.int/iris/bitstream/handle/10665/260336/9789241550260-eng.pdf?sequence=1&ua=1>, accessed 23 January 2019).

² Global estimates of hearing loss [PowerPoint presentation]. Geneva: World Health Organization; 2018 (<https://www.who.int/deafness/estimates/en/>, accessed 23 January 2019).

³ Resolution WHA 70.13. Prevention of deafness and hearing loss. Geneva: World Health Organization; 2017 (http://apps.who.int/gb/ebwha/pdf_files/WHA70/A70_R13-en.pdf?ua=1, accessed 23 January 2019).

The indicators listed consist of outcome and impact indicators, and when properly reported can provide an overview of the status of a country's ear and hearing care. The indicator lists do not include indicators that are required for monitoring programme-level activities, especially input/process or output indicators. These must be developed by each country as it plans its EHC strategy.

Following each section's list of indicators is an explanation of how an indicator should be estimated, the frequency of reporting, as well as possible sources of information and data to inform the indicator.

Explanation of sources

This section describes the information sources listed in the indicator lists and provides possible alternatives. It also indicates where EHC indicators should be included in other programmes and reports.

Reporting on indicators

The section refers to the relevance of a systematic and consultative approach in determining the final list of EHC indicators to be monitored and reported upon. Once the indicator data are gathered, it is important that they should be structured into a comprehensive report that summarizes observed trends, identifies gaps for action, and makes practical recommendations to address these gaps.

Determining and reporting the indicators

This section outlines the process of determining country-specific indicators, gathering information and data and reporting it. It describes relevant checks for verification and quality assurance and summarizes the process of reporting these indicators in a suitable format. The section also proposes a report structure. Such reports can be shared with WHO when considered appropriate.

Summary tables

Summary tables (derived from WHO's Ear and hearing care situation analysis tool) are designed to help implementers and planners compile a snapshot of the current status of ear and hearing care, tailored to each of the six health system building blocks. These tables should be used by countries for monitoring progress in the field of ear and hearing care. Responses to questions in the tables should be decided through discussion among members of the national committee for EHC, or a task force.

Leadership and governance indicators	
CI 1	Percentage of districts, states or counties where the EHC strategy is being implemented
CI 2	Percentage of population reached through the implementation of the EHC strategy
SI 1	Is there development or implementation of policy or legislation for newborn and infant hearing screening?
SI 2	Is there development or implementation of policy or legislation on occupational noise, environmental noise and leisure noise?
SI 3	Is there development or implementation of policy or legislation for hearing aid provision?
SI 4	Is there development or implementation of policy or legislation for sign language or captioning services?
SI 5	Is there development or implementation of standard guidelines on monitoring for ototoxicity?
SI 6	What percentage of goals in your 5-year strategic EHC plan have been accomplished as planned, during the past 12 months?

Service delivery indicators	
CI 3	Percentage of newborns being screened through infant hearing screening programmes
CI 4	Percentage of schools implementing hearing screening programmes, as part of school health services
CI 5	Percentage of tertiary-level health facilities that provide surgical (otological) and audiological services
SI 7	Percentage of secondary-level health facilities that provide surgical (otological) and audiological services
SI 8	Percentage of primary-level health facilities that provide ear and hearing care services
SI 9	Average age of intervention for children with hearing loss, identified through hearing screening programmes

Health workforce indicators

CI 6	Ratio of ear, nose and throat (ENT) specialists available per 100 000 population: • in urban areas • in rural areas
CI 7	Ratio of audiological professionals ⁴ available per 100 000 population: • overall • in urban areas • in rural areas
CI 8	Ratio of other human resources ⁵ (for provision of EHC) available per 100 000 population: • overall • in urban areas • in rural areas
SI 10	Percentage of primary-level doctors trained for provision of EHC services
SI 11	Percentage of community-level health workers trained in EHC
SI 12	Number of ENT specialists graduating every year in the country, per 100 000 population
SI 13	Number of audiology professionals graduating every year in the country, per 100 000 population

Medical products and health technology indicators

CI 9	Percentage of target population receiving immunization for • rubella • meningitis • mumps • measles
CI 10	Number of people fitted with hearing aids and/or cochlear implants, as a percentage of persons with hearing loss, or as a ratio per 100 000 population
SI 14	Number of children (aged 0–15) fitted with hearing aids and/or cochlear implants as a percentage of children with hearing loss, or as a ratio of population aged 0–15 years
SI 15	Number of persons aged 15–60 fitted with hearing aids and/or cochlear implants, as a percentage of persons (aged 15–60) with hearing loss, or as a ratio of population aged 15–60 years
SI 16	Number of persons aged 60 or above fitted with hearing aids and/or cochlear implants, as a percentage of persons (aged 60 or above) with hearing loss, or as a ratio of population aged above 60 years
SI 17	Number of persons receiving cochlear implants, as a percentage of persons with hearing loss, or as a ratio per 100 000 population
SI 18	Percentage of hearing aid users who receive regular maintenance and follow up, as a percentage of those fitted with hearing aids
SI 19	Percentage of hearing aid users who report improved quality of life on follow up, as a percentage of those fitted with hearing aids

⁴ Audiological professionals refers to service providers with a degree or diploma in audiology or directly related fields such as speech therapy etc.

⁵ Other human resources refers to trained personnel involved in provision of screening, diagnostic or therapeutic services at community or hospital level. These may include trained health workers, ENT nurses, ENT clinical officers and others.

Health financing indicators	
CI 11	Budget allocated for the implementation of national strategy on ear and hearing care, as a percentage of the health budget
SI 20	Budget allocated for the office of the EHC coordinator, as a percentage of the health budget
SI 21	Per capita expenditure on provision of ear and hearing care services (in national currency and in US\$)

Health information	
CI 12	Indicators for ear and hearing care are included in the government-led health information system of the country
CI 13	Prevalence of hearing loss, as a percentage of the population of the country (disaggregated by severity, type, aetiology, age and gender)
CI 14	Prevalence of the ear diseases (otitis media), as a percentage of the population of the country (disaggregated by type, age and gender)



INTRODUCTION

Background and purpose

Globally, the prevalence of hearing loss is rising.⁶ More than 5% of the world's people now experience disabling hearing loss⁷ – the majority of whom live in low- and middle-income countries where they lack access to the services required to address hearing loss. Unaddressed hearing loss has a huge impact on all aspects of life including health, cognition, communication, education, livelihood and social engagements. In light of this, World Health Assembly resolution WHA 70.13 on hearing loss⁸ calls upon Member States to integrate strategies for ear and hearing care into their health systems and tasks the World Health Organization (WHO) with developing a comprehensive toolkit that provides the required comprehensive technical support to Member States for integration of ear and hearing care into health systems.

As part of this toolkit, WHO is preparing a series of validated technical support tools appropriate for different aspects of hearing care provision, including planning and monitoring. Strong indicators are an important element to consider when planning effective implementation of ear and hearing care services.

This document provides a set of uniform and universally applicable indicators that give planners a standardized tool for assessing the status of ear and hearing care provision in their country. Such standardized indicators should be integrated within countries' health information systems, in order to measure progress over time on ear and hearing care. They also enable cross-country comparisons, which can facilitate mutual learning, including the identification of barriers and challenges, and the sharing of lessons learned.

Development

This document has been developed through a consultative process that began with a consultation on national strategies and indicators for ear and hearing care, organized by WHO in July 2016. The indicators included are based on the outcomes of the discussions held and have been reviewed by experts from around the world in the field of otolaryngology, audiology and public health.

How to use this tool

The indicators can be used by national or subnational programme coordinators or managers, public health planners, researchers, funding agencies or other interested bodies. They can help them to assess the current situation and monitor the implementation of EHC interventions within countries, regions or districts.

⁶ Addressing the rising prevalence of hearing loss. Geneva: World Health Organization; 2018 (<http://apps.who.int/iris/bitstream/handle/10665/260336/9789241550260-eng.pdf?sequence=1&ua=1>, accessed 23 January 2019).

⁷ Global estimates of hearing loss [PowerPoint presentation]. Geneva: World Health Organization; 2018 (<https://www.who.int/deafness/estimates/en/>, accessed 23 January 2019).

⁸ Resolution WHA 70.13. Prevention of deafness and hearing loss. Geneva: World Health Organization; 2017 (http://apps.who.int/gb/ebwha/pdf_files/WHA70/A70_R13-en.pdf?ua=1, accessed 23 January 2019).

For countries developing their national strategies, this document should be referred to and used along with WHO's *Ear and hearing care planning and monitoring of national strategies: a manual*, and WHO's Ear and hearing care situation analysis tool.⁹ This document does not provide a detailed list of all the indicators that may be required for comprehensive monitoring of strategic plan implementation. The indicators for monitoring the different objectives and activities of a strategic plan must be discussed and determined at the time of developing the plan.

⁹ Ear and hearing care planning and monitoring of national strategies: a manual. Geneva: World Health Organization; 2015 (https://www.who.int/deafness/news/ear_hearing/en/, accessed 23 January 2019).



EAR AND HEARING CARE TOOLKIT

The Ear and Hearing Care Toolkit is a complete guidance package for Member States and other partners to develop national and subnational strategies for ear and hearing care. The toolkit contains materials that will help the development and implementation of ear and hearing care services. Figure 1 outlines the key sections of the toolkit, and a short description of what each contains.

The toolkit is designed for:

- planning and implementation of EHC services;
- undertaking hearing loss survey and screening programmes;
- training health workers.
- Developing rehabilitation programmes

Figure 1: Structure of WHO Ear and hearing care toolkit

Planning	<ul style="list-style-type: none"> • A planning and monitoring manual • An ear and hearing care situation analysis tool (EHCSAT) for country assessment • Best practices and core indicators to monitor country progress
Awareness and Advocacy	<ul style="list-style-type: none"> • An advocacy handbook and generic materials available to Member States for policymaking • Concrete messaging resources and tools for raising awareness in communities
Survey and Screening	<ul style="list-style-type: none"> • Protocols for early identification through screening in high-risk population cohorts including: <ul style="list-style-type: none"> - Neonates and infants - Pre-school and primary school children - Adults exposed to loud sounds in occupational and recreational settings - Those receiving ototoxic medications - Adults over 65 years of age
Training and Capacity Building	<ul style="list-style-type: none"> • EHC training modules and supporting digital materials • Information on the minimum resource requirements for ear and hearing services • Training standards and methods of performance monitoring
Rehabilitation and Assistive Devices	<ul style="list-style-type: none"> • Preferred profile of hearing aids • Options for total communication • Requirements for therapy



HEALTH SYSTEM INDICATORS FOR EAR AND HEARING CARE

Ear and hearing care indicators are specific measures that reflect progress made by countries or programmes towards the goal of making ear and hearing care accessible to all people. An indicator can be compared to a tracking device that helps to assess and compare progress.

Purpose of EHC indicators

- To provide countries or projects with standardized measures, to be gathered at regular intervals, in order to gain an overview of progress in the field of ear and hearing care.
- Assist WHO in gathering comparable information from multiple countries to assess global trends in ear and hearing care.

Core and Supplementary Indicators

- Core indicators are essential and should be integrated by all countries into their monitoring frameworks and health information systems.
- Supplementary indicators are optional and can be used according to the different activities being undertaken by a country.

Health information systems (HIS)

HIS are used to collect, standardize code and manage information relevant to indicators of health status, determinants of health, and health systems, and underpin decision-making in health policy, management and clinical care.

Key characteristics of EHC indicators

- The EHC indicators refer to WHO's six health system building blocks, in line with the health systems approach to planning and implementation of EHC strategies (see Figure 2). A health system consists of organizations, people, and actions whose primary purpose is to promote, restore, or maintain health by delivering interventions via these six building blocks.

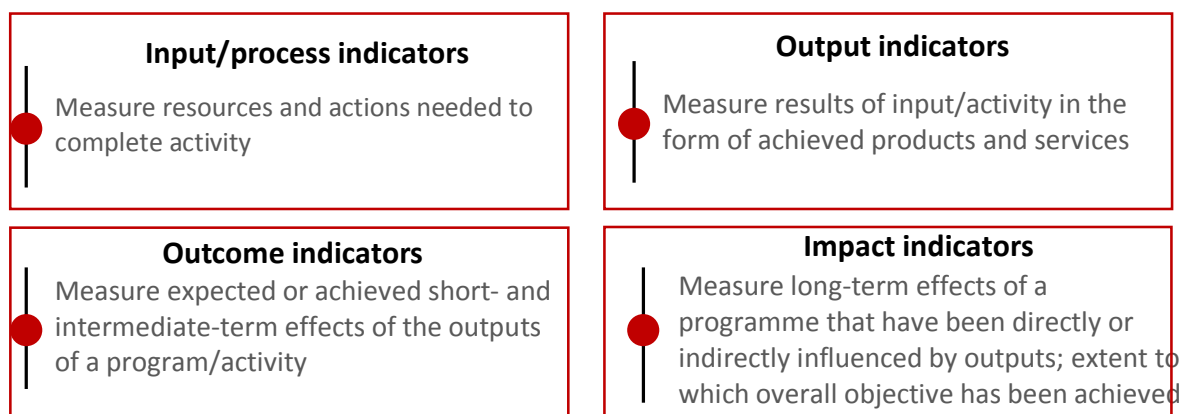


Figure 2: WHO health system building blocks

1. Ensure strategic policy frameworks; coalition-building; appropriate regulations; attention to system design, and accountability
2. Provide effective, safe, good quality, personal and non-personal health interventions to those who require them
3. A well-performing health workforce
4. Equitable access to necessary medical products, vaccines, and technologies that are of quality standard, scientifically sound and cost-effective
5. Ensure that people can use necessary services without risking financial catastrophe or impoverishment
6. Production, analysis, dissemination, and use of reliable and timely information

The EHC indicators include a mix of different types of indicators with a focus on outcome and impact indicators (see Figure 3).

Figure 3: Types of indicators



Components of EHC indicators

The following sections include lists of the proposed EHC indicators relevant to each health system block alongside information on:

- frequency of collection;
- possible sources from which required information can be sought.

After each table, the indicator is briefly described along with the method for its estimation.

Sources include existing data such as censuses, registers and hospital records. Certain indicators will require special surveys or studies to be conducted, which needs to be considered at the time of planning.

Summary tables

The summary tables which form a part of WHO's Ear and hearing care situation analysis tool (EHCSAT)¹⁰ can be used for monitoring the country's progress in the field of ear and hearing care. These tables are to be used along with indicators and should be filled in through consultation and discussion with members of the task force or national committee for ear and hearing care. Summary tables from the EHCSAT can be found in Annex 1

Developing national EHC indicators

Developing national indicators should be undertaken by the national committee on ear and hearing care,¹¹ if it exists. If such a national committee does not exist, a designated task

¹⁰ Ear and hearing care situation analysis tool. Geneva: World Health Organization; 2015 (http://www.who.int/pbd/deafness/news/ear_hearing/en/, accessed 23 January 2019).

¹¹ Refer to WHO's Ear and hearing care planning and monitoring of national strategies: a manual, for more on the role of the coordinator.

force should be appointed. Members of the national committee/designated task force should discuss each of the proposed indicators prior to its inclusion in the HIS list of indicators.

The final list should include:

- **Core indicators:** ideally, all core indicators should be integrated within the country's health information system.
- **Supplementary indicators:** those that are relevant to the country should be included.
- **Additional indicators** may also be required for monitoring the different objectives and activities of the country's strategic plan for ear and hearing care. Such indicators will be specific to the priorities and objectives of each plan and are not listed here.

The list of final indicators should be accompanied by suitable monitoring tools, as required (refer to "Explanation of sources" section).

Important note: *This document does not aim to provide a comprehensive list of all indicators which may be required for detailed monitoring of a national EHC strategic plan⁷ implementation. The indicators for monitoring the different objectives and activities of a strategic plan must be discussed and determined at the time of developing the plan. Such indicators will be specific to the priorities and objectives of each plan and are not listed in this document.*

Collecting information for the indicators

Indicator data and information should be collated by the national coordinator for ear and hearing care.⁷ If such a position does not exist, this should be coordinated by the department responsible for ear and hearing care services within the Ministry of Health. A coordinator/consultant should be designated for the purpose of this exercise.

Use of information

The information collected should be structured into a report (refer to "Reporting the indicators" section) which can be published by the Ministry of Health at regular (annual/biennial) intervals. The report should be presented to the national committee for ear and hearing care. It should summarize the country's progress in the field of EHC (based on indicators) and identify gaps in planning and implementation. The indicators should be used to stimulate discussion on future actions to strengthen ear and hearing care services in the country. The report on progress made should be shared with WHO.

LEADERSHIP AND GOVERNANCE INDICATORS

Indicator	Expressed as	Frequency of collection	Possible sources of information
CORE			
CI 1: Percentage of districts, states or counties where the EHC strategy is being implemented	%	Annual	- Reports of national committee meetings - Implementation reports
CI 2: Percentage of population reached through the implementation of the EHC strategy	%	Annual	- Reports of national committee meetings - Implementation reports
SUPPLEMENTARY			
SI 1: Is there development or implementation of policy or legislation for newborn and infant hearing screening?	<ul style="list-style-type: none"> • No policy/ legislation • Policy/legislation passed, implementation pending • Partially implemented • Fully implemented 	Once in 3 years	- Legislation - Government reports - Discussion with concerned health authorities regarding implementation
SI 2: Is there development or implementation of policy or legislation on occupational noise, environmental noise, and leisure noise?	<ul style="list-style-type: none"> • No policy/ legislation • Policy/legislation passed, implementation pending • Partially implemented • Fully implemented 	Once in 3 years	- Legislation - Government reports - Discussion with concerned authorities (occupational health division, industry regulatory agencies, department of environment, department of technology) regarding implementation

SI 3: Is there development or implementation of policy or legislation for hearing aid provision?	<ul style="list-style-type: none"> • No policy/ legislation • Policy/legislation passed, implementation pending • Partially implemented • Fully implemented 	Once in 3 years	<ul style="list-style-type: none"> - Legislation - Discussion with concerned authorities, such as department of health, ageing, department of social welfare; and any others, regarding implementation
SI 4: Is there development or implementation of policy or legislation for sign language or captioning services?	<ul style="list-style-type: none"> • No policy/legislation • Policy/legislation passed, implementation pending • Partially implemented • Fully implemented 		
SI 5: Is there development or implementation of standard guidelines on monitoring for ototoxicity?	<ul style="list-style-type: none"> • No guidelines • Guidelines exist, but not implemented • Partially implemented • Fully implemented 	Once in 3 years	<ul style="list-style-type: none"> - Standard treatment guidelines - Government reports - Discussion with departments of medicine, paediatrics and tuberculosis in leading institutions, regarding implementation
SI 6: What percentage of goals in your 5-year strategic EHC plan have been accomplished as planned, during the past 12 months?	%	Annual	Reports of national committee meetings

Core indicator 1

Percentage of districts, states or counties where the EHC strategy is being implemented

This can be estimated as: number of districts, states, counties (or any other demographic subdivision, as followed by the country) where the EHC strategy is being implemented, expressed as a percentage of the total number of districts, states or counties.

$$\frac{\text{Number of districts, states, counties where the EHC strategy is implemented}}{\text{Total number of districts, states or counties}} \times 100$$

Core indicator 2

Percentage of population reached through the implementation of the EHC strategy

This can be estimated as: population of those areas covered by implementation of the EHC strategy, expressed as a percentage of the total population of the country

$$= \frac{\text{Population of areas covered by implementation of the EHC strategy}}{\text{Total population of the country}} \times 100$$

Supplementary indicators 1, 2, 3, 4

Is there development or implementation of legislation for:

- infant hearing screening;
- occupational noise, environmental noise and leisure noise;
- hearing aid provision;
- sign language and captioning;

In each of these, the response will need to consider if the policy or legislation has been developed and adopted by the relevant authority. Once the policy/legislation has been adopted, the state of its implementation could be determined based on reports from the authorities that passed the policy/legislation in the first place. In the absence of such formal reports, the assessment can be based on discussions held with the bodies or institutions responsible for the policy or legislation's implementation.

Supplementary indicator 5

Is there development or implementation of standard guidelines on monitoring for ototoxicity?

The information needs to be sought from standard treatment guidelines which are commonly issued by regulatory governmental bodies or medical associations. If such guidance exists, its implementation needs to be determined by discussions with members of those departments which commonly prescribe ototoxic medicines, including physicians, paediatricians, physicians involved in treatment and care of tuberculosis and AIDS patient

Supplementary indicator 6

What percentage of goals in your 5-year strategic EHC plan have been accomplished as planned, during the past 12 months?

This can be estimated as: number of goals achieved during the year, over the number of goals set for the year, expressed as a percentage.

$$= \frac{\text{Number of goals achieved during the year}}{\text{Total number of goals set for the year}} \times 100$$

The term “goals” refers to the targets due to be met during a given calendar year as part of implementation of the national strategic plan for ear and hearing care.

SERVICE DELIVERY INDICATORS

Indicator	Expressed as	Frequency of collection	Possible sources of information
CORE			
CI 3: Percentage of newborns being screened through infant hearing screening programmes	%	Annual	- Reports from hospitals implementing infant hearing screening programmes
CI 4: Percentage of schools implementing hearing screening programmes, as part of school health services	%	Annual	- Implementation reports - School health reports
CI 5: Percentage of tertiary-level health facilities that provide surgical (otological) and audiological services	%	Once in 3 years	- Implementation reports - Hospital reports and websites
SUPPLEMENTARY			
SI 7: Percentage of secondary-level health facilities that provide surgical (otological) and audiological services	%	Once in 3 years	- Implementation reports - Hospital reports and websites
SI 8: Percentage of primary-level health facilities that provide ear and hearing care services	%	Once in 3 years	- Implementation reports - Hospital reports and websites
SI 9: Average age of intervention for children with hearing loss, identified through hearing screening programmes	Average age in years	Once in 3 years	Reports from hospitals implementing infant hearing screening programmes

Core indicator 3

Percentage of newborns being screened through infant hearing screening programmes.

This can be estimated as: number of infants screened through infant hearing screening programmes, expressed as a percentage of the total number of births in the country over the same time period (one calendar year).

$$= \frac{\text{Number of infants screened through infant hearing screening programmes}}{\text{Total number of births in the country over the same time period}} \times 100$$

Core indicator 4

Percentage of schools implementing hearing screening programmes, as part of school health services

This can be estimated as: number of schools (public, private or both) implementing hearing screening for their students, either as part of school health programme or as a separate programme, expressed as a percentage of the total number of schools in the country (public, private or both).

$$= \frac{\text{Number of schools implementing hearing screening for their students}}{\text{Total number of schools in the country (including private and public)}} \times 100$$

Core indicator 5

Percentage of tertiary-level health facilities that provide surgical (otological) and audiological services

This can be estimated as: number of tertiary-level health facilities (including medical colleges, referral hospitals) providing medical and routine surgical ENT services¹² as well as routine audiological services,¹³ expressed as a percentage of the total number of tertiary-level health facilities in the country.

$$= \frac{\text{Number of tertiary – level health facilities providing medical and routine surgical ENT and audiological services}}{\text{Total number of tertiary – level health facilities in the country}} \times 100$$

Supplementary indicator 7

Percentage of secondary-level health facilities that provide surgical (otological) and audiological services

This can be estimated as: number of secondary-level health facilities that are providing medical and routine surgical ENT services as well as routine audiological services, expressed as a percentage of the total number of secondary-level health facilities in the country.

¹² Routine surgical ENT services refers to provision of common otological surgeries including myringotomy, ventilation tube insertion, tympanoplasty and mastoidectomy.

¹³ Routine audiological services refers to pure tone audiometry, otoacoustic emission testing, auditory brainstem response testing and hearing aid fitting.

$$= \frac{\text{Number of secondary – level health facilities providing medical and routine surgical ENT and audiological services}}{\text{Total number of secondary – level health facilities in the country}} \times 100$$

Supplementary indicator 8

Percentage of primary-level health facilities that provide ear and hearing care services

This can be estimated as: number of primary-level health facilities that are providing basic ear and hearing care services,¹⁴ expressed as a percentage of the total number of primary level-health facilities in the country.

$$= \frac{\text{Number of primary – level health facilities providing basic ear and hearing care services}}{\text{Total number of primary – level health facilities in the country}} \times 100$$

Supplementary indicator 9

Average age of intervention for children with hearing loss, identified through hearing screening programmes

This information has to be sought from hospitals running infant screening and early intervention programmes. The indicator must be included as a part of the screening programme and reported. The national average would be the average from each unit (hospital or state or district), divided by the number of such units implementing such programmes.

¹⁴ Basic ear and hearing care services refers to diagnosis of common ear conditions, such as acute and chronic otitis media, medical management of common ear diseases, identification of hearing loss through clinical and behavioural assessment and referral to secondary or tertiary level, as appropriate.

HEALTH WORKFORCE INDICATORS

Indicator	Expressed as	Frequency of collection	Possible sources of information
CORE			
CI 6: Ratio of ENT specialists available per 100 000 population: <ul style="list-style-type: none"> in urban areas in rural areas 	Ratio per 100 000 population	Once in 3 years	<ul style="list-style-type: none"> - Ministry of Health reports on human resources - Medical council registers; - Registers of relevant registration and certification bodies - National associations of ENT specialists
CI 7: Ratio of audiological professionals ¹⁵ available per 100 000 population: <ul style="list-style-type: none"> overall in urban areas in rural areas 	Ratio per 100 000 population	Once in 3 years	<ul style="list-style-type: none"> - Ministry of Health reports on human resources - Registers of relevant registration and certification bodies - National associations
CI 8: Ratio of other human resources ¹⁶ (for provision of EHC) available per 100 000 population: <ul style="list-style-type: none"> overall in urban areas in rural areas 	Ratio per 100 000 population	Once in 3 years	<ul style="list-style-type: none"> - Ministry of Health reports on human resources - Registers of relevant registration and certification bodies
SUPPLEMENTARY			
SI 10: Percentage of primary-level doctors trained for provision of EHC services	%	Annual	Training implementation reports
SI 11: Percentage of community-level health workers trained in EHC	%	Annual	Training implementation reports
SI 12: Number of ENT specialists graduating every year in the country, per 100 000 population	Ratio per 100 000 population	Once in 10 years	<ul style="list-style-type: none"> - Medical council registers; - Registers of relevant registration and certification bodies

¹⁵ Audiological professionals refers to service providers with a degree or diploma in audiology or directly related fields such as speech therapy etc.

¹⁶ Other human resources refers to trained personnel involved in provision of screening, diagnostic or therapeutic services at community or hospital level. These may include trained health workers, ENT nurses, ENT clinical officers and others.

SI 13: Number of audiology professionals graduating every year in the country, per 100 000 population	Ratio per 100 000 population	Once in 10 years	- Registers of relevant registration and certification bodies
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Core indicator 6

Ratio of ENT specialists available per 100 000 population in urban and rural areas

This information can be sought from certifying/qualifying agencies such as college of ENT specialists, where this exists. The information may also be sought from registering bodies, such as medical councils, with which registration of professionals is mandatory. In certain places, such information may be available in reports of the Ministry of Health. In the absence of these, such information can be sought from a national professional association (of ENT specialists) and estimated on the basis of its membership.

This can be estimated as below:

$$= \frac{\text{Total number of ENT specialists working in public and private sectors across the country}}{\text{Total population of the country}} \times 100\,000$$

Whenever possible, the numbers should also be quoted separately for urban and rural parts of the country.

Core indicator 7

Ratio of audiological professionals available per 100 000 population in urban and rural areas

This information can be sought from certifying/qualifying agencies such as a college of audiologists/speech and hearing professionals, where one exists. The information may also be sought from registering bodies such as audiological or para-medical councils, with which registration of audiological professionals is mandatory. In certain places, such information may be available in Ministry of Health reports. In the absence of these, information can be sought from national professional association/s (of audiologists/speech and hearing professionals) and estimated on the basis of its membership. As the job titles of audiological professionals may vary from one place to another, the job titles of hearing care professionals should be specified along with their numbers.

This can be estimated as below:

$$= \frac{\text{Total number of audiological professionals working in public and private sectors across the country}}{\text{Total population of the country}} \times 100\,000$$

Core indicator 8

Ratio of other human resources for EHC available per 100 000 population in urban and rural areas

“Other human resources” refers to trained personnel involved in provision of screening, diagnostic or therapeutic services at community or hospital level. These may include trained health workers, ENT nurses, ENT clinical officers and others. As there is no uniformity in designation and nomenclature of such service providers, it is essential to also note the different service providers available in the country and then to note their numbers or ratios as described below. This information can be sought from certifying, qualifying, and registering agencies, or from reports of Ministry of Health.

This can be estimated as below:

$$= \frac{\text{Total number of trained personnel working in public and private sector across the country}}{\text{Total population of the country}} \times 100\,000$$

Supplementary indicator 10

Percentage of primary-level doctors trained for provision of EHC services

This indicator is relevant to places where special training or refresher courses are provided to general physicians in order to update and refresh their knowledge and skills for provision of ear and hearing care services. When such trainings are undertaken, it is useful to know how many doctors have been trained annually and whether this is in line with pre-determined training goals. Such information has to be sought from Ministry of Health training and implementation reports.

This can be estimated as below:

$$= \frac{\text{Total number of primary – level doctors trained in ear and hearing care}}{\text{Total number of primary – level doctors available in the country}} \times 100$$

Supplementary indicator 11

Percentage of community-level health workers trained in EHC

This indicator is relevant to places where special training courses are undertaken to impart knowledge and develop skills in ear and hearing care service provision among community-level health workers. When such trainings are undertaken, it is useful to know how many health workers have been trained annually and whether this is in line with pre-determined

training goals. Such information can be sought from Ministry of Health training and implementation reports.

This can be estimated as below:

$$= \frac{\text{Total number of community – level health workers trained in ear and hearing care}}{\text{Total number of community – level health workers available in the country}} \times 100$$

Supplementary indicator 12 and 13

Number of ENT specialists and audiology professionals graduating every year in the country, per 100 000 population.

Periodic assessment of the number of qualifying professionals can provide useful information regarding the development of educational opportunities in the field of ear and hearing care and the growth of this sector within the country. This information can be sought from certifying/qualifying/registering agencies.

This can be estimated as below:

$$= \frac{\text{Total number of ENT specialists graduating every year in the country}}{\text{Total population of the country}} \times 100\,000$$

Or

$$= \frac{\text{Total number of audiology specialists graduating ever year in the country}}{\text{Total population of the country}} \times 100\,000$$

MEDICAL PRODUCTS AND HEALTH TECHNOLOGY INDICATORS

Indicator	Expressed as	Frequency of collection	Possible sources of information
CORE			
CI 9: Percentage of target population receiving immunization for <ul style="list-style-type: none"> • rubella • meningitis • mumps • measles 	%	Annual	<ul style="list-style-type: none"> - Ministry of Health reports - Reports from child health department - WHO country data
CI 10: Number of people fitted with hearing aids and/or cochlear implants, as a percentage of persons with hearing loss, or as a ratio per 100 000 population	% or ratio per 100 000 population	Annual	<ul style="list-style-type: none"> - Government reports - NGO reports
SUPPLEMENTARY			
SI 14: Number of children (aged 0–15) fitted with hearing aids and/or cochlear implants as a percentage of children with hearing loss or as a ratio of population aged 0–15 years	% or ratio per 100 000 population aged 0-15 years	Annual	<ul style="list-style-type: none"> - Government reports - NGO reports
SI 15: Number of persons aged 15–60 fitted with hearing aids and/or cochlear implants, as a percentage of persons (aged 15–60) with hearing loss, or as a ratio of population aged 15–60 years	% or ratio per 100 000 population aged 15-60 years	Annual	<ul style="list-style-type: none"> - Government reports - NGO reports
SI 16: Number of persons aged 60 or above fitted with hearing aids and/or cochlear implants, as a percentage of persons (aged 60 or above) with hearing loss, or as a ratio of population aged above 60 years	% or ratio per 100 000 population aged above 60 years	Annual	<ul style="list-style-type: none"> - Government reports - NGO reports
SI 17: Number of persons receiving cochlear implants, as a percentage of persons with hearing loss, or as a ratio per 100 000 population	% or ratio per 100 000 population	Annual	<ul style="list-style-type: none"> - Government reports - Cochlear implant companies

SI 18: Percentage of hearing aid users who receive regular maintenance and follow up, as a percentage of those fitted with hearing aids	%	Annual	- Government reports - Hearing aid providers
SI 19: Percentage of hearing aid users who report improved quality of life on follow up, as a percentage of those fitted with hearing aids	%	Once in 10 years	Survey questionnaire, as part of population-based survey

Core indicator 9

Percentage of target population receiving immunization for rubella, meningitis, mumps and measles

This information can often be found in reports of the child health department or annual reports of the ministry of health. Immunization coverage of the population is also reported through the WHO country reports and its Global Health Observatory.

This can be estimated as the total number of individuals in the target population receiving immunization as a percentage of the total target population. The target population will depend on the vaccine as well as the country's policy and immunization schedule. See formula below:

$$= \frac{\text{Total number of individuals in the target population receiving immunization}}{\text{Total target population}} \times 100$$

Core indicator 10

Number of people fitted with hearing aids and/or cochlear implants, as a percentage of persons with hearing loss, or as a ratio per 100 000 population.

Information regarding the number of hearing aids and/or cochlear implants fitted can be sought from reports of the relevant government department responsible for provision of hearing aids (the responsible department or ministry may vary from country to country). Where government initiatives do not exist or where they are supported by nongovernmental organizations (NGOs) providing hearing aid services, information should be sought from the relevant NGOs.

Information on the number of persons with hearing loss (denominator) should come from available epidemiological studies published in literature or included in the health information system. Where such data is not available, the total population can be taken as the denominator for this estimation.

This can be estimated as below:

$$= \frac{\text{Total number of people fitted with hearing aids and/or cochlear implants}}{\text{Total number of people with hearing loss}} \times 100$$

or

$$= \frac{\text{Total number of people fitted with hearing aids and/or cochlear implants}}{\text{Total population of country}} \times 100\,000$$

Supplementary indicator 14

Number of children (aged 0–15) fitted with hearing aids and/or cochlear implants as a percentage of children with hearing loss or as a ratio of population aged 0–15 per 100 000 population)

This can be estimated as below:

$$= \frac{\text{Total number of people aged 0 to 15 years fitted with hearing aids and/or cochlear implants}}{\text{Total number of aged 0 to 15 years, with hearing loss}} \times 100$$

or

$$= \frac{\text{Total number of people fitted with hearing aids and/or cochlear implants}}{\text{Total population aged 0 to 15 years in the country}} \times 100\,000$$

Supplementary indicator 15

Number of persons aged 15–60 fitted with hearing aids and/or cochlear implants, as a percentage of persons (aged 15–60) with hearing loss, or as a ratio of population aged 15–60 per 100 000 population

This can be estimated as below:

$$= \frac{\text{Total number of people aged 15 to 60 years fitted with hearing aids and/or cochlear implants}}{\text{Total number of people aged 15 to 60 years, with hearing loss}} \times 100$$

or

$$= \frac{\text{Total number of people aged 15 to 60 fitted with hearing aids and/or cochlear implants}}{\text{Total population aged 15 to 60 in the country}} \times 100\,000$$

Supplementary indicator 16

Number of persons aged 15–60 fitted with hearing aids and/or cochlear implants, as a percentage of persons (aged 15–60) with hearing loss, or as a ratio of population aged 15–60 per 100 000 population

This can be estimated as below:

$$\frac{\text{Total number of persons aged above 60 fitted with hearing aids and/or cochlear implants}}{\text{Total number of persons aged above 60 with hearing loss}} \times 100$$

or

$$= \frac{\text{Total number of people aged above 60 fitted with hearing aids and/or cochlear implants}}{\text{Total population aged above 60 in the country}} \times 100\,000$$

(These indicators exclude hearing aids sold through commercial service providers and bought by individuals.)

Supplementary indicator 17

Number of persons receiving cochlear implants, as a percentage of persons with hearing loss, or as a ratio of population per 100 000 population.

Information regarding number of cochlear implants fitted in the country can be sought from reports of relevant government departments, where such services are provided through the government. However, when services are not centralized, such information can be sought from distributors of cochlear implants active within the country.

This can be estimated as below:

$$= \frac{\text{Total number of persons receiving cochlear implants}}{\text{Total number of persons with hearing loss}} \times 100$$

Where prevalence estimates with number of people having hearing loss are not available, the indicator/s can be estimated as: total number of cochlear implants fitted (through government/nongovernmental initiatives) in the entire country per 100 000 population.

$$= \frac{\text{Total number of cochlear implants fitted in the entire country}}{\text{Total population of the country}} \times 100\,000$$

Supplementary indicator 18

Percentage of hearing aid users who receive regular maintenance and follow up, as a percentage of those fitted with hearing aids

This indicator is relevant where follow up services are extended by the government or NGO-led hearing service provider. Assessing the number of people that return and take advantage of the maintenance and follow-up services can provide an indication of how many people are actually using hearing aids. This can give an indication of whether these services are actually bringing the intended benefit to the community.

This can be estimated as below:

$$= \frac{\textit{Total number of hearing aid users visiting follow up services and receiving regular maintenance}}{\textit{Total number of people fitted with hearing aids}} \times 100$$

Supplementary indicator 19

Percentage of hearing aid users who report improved quality of life on follow up, as a percentage of those fitted with hearing aids

In order to understand whether hearing care services and hearing devices are benefitting the community, it is relevant to assess their impact on the quality of life of users. Such assessments can be undertaken through a questionnaire-based survey,¹⁷ conducted alone or as part of a population-based prevalence study. In either situation, such a study is likely to be time-consuming and resource intensive. It is recommended that this assessment be made at least once every 10 years.

This can be estimated as below:

$$= \frac{\textit{Total number of hearing aid users reporting improved quality of life}}{\textit{Total number of people fitted with hearing aids}} \times 100$$

¹⁷ The WHO quality of life instrument can be used
http://www.who.int/mental_health/publications/whoqol/en/

HEALTH FINANCING INDICATORS

Indicator	Expressed as	Frequency of collection	Possible sources of information
CORE			
CI 11: Budget allocated for the implementation of national strategy on ear and hearing care, as a percentage of the health budget.	%	Annual	- Ministry of Health reports
SUPPLEMENTARY			
SI 20: Budget allocated for the office of the EHC coordinator, as a percentage of the health budget	%	Annual	- Ministry of Health reports
SI 21: Per capita expenditure on provision of ear and hearing care services (in national currency and in US\$)	National currency and US\$	Annual	- Ministry of Health reports

Core indicator 11

Budget allocated for the implementation of national strategy on hearing, as a percentage of the health budget

This information can often be found in the financial planning documents and reports of the ministry.

This can be estimated as below:

$$= \frac{\text{Total amount of money allocated to activities relating to ear and hearing care}}{\text{Total budget of the ministry}} \times 100$$

Supplementary indicator 20

Budget allocated for the office of the EHC coordinator, as a percentage of the health budget

This information can often be found in the financial planning documents and reports of the of the ministry.

This can be estimated as below:

$$= \frac{\text{Total amount of money allocated for the office of the EHC coordinator}}{\text{Total budget of the ministry}} \times 100$$

Supplementary indicator 21:

What is the per capita expenditure on provision of ear and hearing care services (in national currency and in US\$)

This information can often be found in the financial planning documents and reports of the ministry.

This can be estimated as below:

$$= \frac{\text{Total amount of money allocated to activities relating to ear and hearing care (in US\$)}}{\text{Total population of the country}} \times 100$$

HEALTH INFORMATION INDICATORS

Indicator	Expressed as	Frequency of collection	Possible sources of information
CORE			
CI 12: Indicators for ear and hearing care are included in the government-led health information system of the country	<ul style="list-style-type: none"> • There is no functional HIS in the country • No EHC indicators included in HIS • Some indicators are included as part of HIS • All relevant indicators are included as part of HIS 	Annual	<ul style="list-style-type: none"> - Ministry of Health reports - National annual health report
CI 13: Prevalence of hearing loss, as a percentage of the population of the country (disaggregated by severity, type, aetiology, age and gender)	%	Once in 10 years (or less)	Population-based survey
CI 14: Prevalence of the ear diseases (otitis media), as a percentage of the population of the country (disaggregated by type, age and gender)	%	Once in 10 years	Population-based survey

Core indicator 12

Indicators for ear and hearing care are included in the government-led health information system of the country

Indicators for ear and hearing care should be collected and reported on through the country's HIS. Information regarding HIS and indicators reported through it can be sought from the Ministry of Health and its reports. It can be based on the availability of HIS in the country and indicators included within this system.

Core indicator 13

Prevalence of hearing loss, as a percentage of the population of the country (disaggregated by severity, type, aetiology, age and gender)

Core indicator 14

Prevalence of the ear diseases (otitis media), as a percentage of the population of the country (disaggregated by type, age and gender)

The prevalence and incidence of hearing loss and ear diseases should be gathered periodically within the country. Such a study should at least be undertaken every 10 years. This will allow researchers to monitor trends in prevalence and causes of hearing loss and enable policy-makers to assess the efficacy of public health strategies and update these strategies based on trends observed.

The data must be gathered through a population-based survey, which should include a hearing test and ear examination. The *WHO Ear and hearing survey handbook* can be used for this purpose.



EXPLANATION OF SOURCES

Cochlear implant companies: Records regarding number and types of cochlear implants fitted in the country are likely to be available with manufacturers of these devices.

Discussion with concerned health authorities regarding implementation: Where the required information is not available in a government-issued document, it may be found during discussion with the person/s responsible. Topics for discussion may include:

- **Occupational noise control policies:** information regarding policies for occupational noise can be sought from relevant authorities such as occupational health divisions, industry regulatory agencies, and departments of environment, and technology.
- **Policies for hearing aid provision:** information can be sought from concerned authorities such as departments of health, ageing, social welfare, and any others.
- **Policy for ototoxicity monitoring:** information can be sought from departments of medicine, oncology, paediatrics, tuberculosis and AIDS in leading institutions.

Government/Ministry of Health reports: Formal reports issued by government departments on a regular basis that provide information on departments' activities and initiatives as well as on human resource availability.

When the relevant information is not being reported in the regular government reports, it is important to initiate a dialogue with the concerned departments in order to advocate for inclusion of the relevant human resource and other data.

Hearing aid providers: Information regarding follow-up services for people receiving hearing aids could be gathered from hearing aid providers when it is not available from the government.

Implementation reports: Reports received from the implementing organizations at state, district or field level that document or report on implementation of ear and hearing care activities. These reports should report on key activities outlined in the national strategy e.g. infant or school hearing screening; screening of older adults; hearing aid services provision; trainings etc.

Legislation: Laws adopted by the government. In case of ear and hearing care, legislation may be relevant in the context of hearing screening; hearing device provision; control of noise in occupational or recreational settings; access to care; recognition of sign languages; and access to alternate methods of communication, such as sign language and captioning.

Medical council registers/registers of relevant registering/certification bodies: Most countries have a medical council with which qualified doctors and specialists register. Similar councils may exist for audiological professionals. The records from such an organization can provide information regarding number of qualified specialists available in

the country. Where such a medical/para-medical council does not exist, the same purpose may be served by other governmental or government-approved organizations.

National annual health report: These are annual reports that are commonly issued by the Ministry of Health to document the key indices for health.

National associations of ENT specialists/audiological professionals: In the absence of any other sources, information on human resource availability can be sought from national associations of ENT specialists and audiological professionals.

At the time of planning the national strategy and/or relevant programmes, the inclusion of these indicators within reports of the implementing organizations such as state governments or hospitals should be considered and required actions undertaken in this regard.

Reports from hospitals: These contain information on programmes that are typically implemented at hospital and health facility level. This could include:

- newborn/infant screening (CI 3, SI 9);
- provision of surgical care (CI 5, CI 6);
- audiological services (CI 5, CI 7);
- primary-level ear and hearing care services (e.g. diagnosis, basic audiological tests, referral, management of common ear problems, hearing aid services, information sharing etc).

In places where such a programme is under implementation but where there is no centralized collation or reporting of relevant information, such information can be gathered from health facilities' programme reports.

At the time of planning the national strategy and/or relevant programmes, the inclusion of these indicators within reports of the implementing organizations such as hospitals and health centres should be undertaken. Standardized and uniform formats for monitoring and reporting on these activities should be developed under the national strategy and these should be provided to the implementing organizations and hospitals. This will ensure consistency of information gathered from across the country.

Reports of national committee meetings: Reports or minutes of any planning or review meetings organized by the Ministry of Health in respect of ear and hearing care. In countries where a formally designated committee does not exist, such meetings may include key experts or other stakeholders.

Reports of nongovernmental organizations (NGOs): In places where NGOs play a leading role in undertaking activities for provision of ear and hearing care training or services, reports prepared by them can be a useful source of information.

School health reports: In places that have an active school health service/programme, there may be regular reports on its activities.

The inclusion of relevant EHC indicators within school health reports should be undertaken at time of planning. When appropriate, a standardized format should be developed and provided for inclusion in school health reports.

Standard treatment guidelines: These are systematically developed statements designed to assist practitioners and patients in making decisions about appropriate health care for specific clinical circumstances. Guidelines issued by the government can provide information regarding the policy on monitoring for different ototoxic medicines.

Training implementation reports: These may be available in countries conducting special courses or programmes for updating the skills of primary-level physicians and community-level health workers in ear and hearing care. Reports on training implementation may be compiled by the Ministry of Health and will provide relevant information. Where there is no centralized compilation, reports can be sought from organizations implementing the trainings.

A uniform format for the implementation reports should be developed and provided to the implementing organizations. This will ensure consistency of information from across the



REPORTING THE INDICATORS

The national committee or task force for ear and hearing care should meet regularly and have an annual monitoring meeting. The national coordinator is responsible for gathering, collating and reporting data. Where the national coordinator is unable to undertake the task directly, it can be outsourced to a consultant. However, overall responsibility must lie with the national coordinator or another government-appointed person.

Determining country-specific indicators

- The task force should determine which of the indicators are suitable for application in the country. This decision should be based on the national strategic plan – and in the absence of such a plan, on ear and hearing care activities currently undertaken in the country.
- Additional indicators (including other outcome and impact indicators and relevant input and output indicators), based on the activities planned should be discussed and included. A final list of indicators to be reported should be prepared.
- Where required, monitoring tools should be developed and implemented, in order to ensure uniform collection and reporting of the indicators (see section on “Explanation of sources” for further information).

Gathering indicators

- Once the indicators are agreed, it is important to ensure that these aspects are reported upon by the relevant authorities, e.g. hospital reports should include information on the number of surgeries performed to be able to report on Core Indicator 5.

Reporting indicators

- When information relevant for an indicator has been gathered, the information must be carefully assessed for quality and clarity.
- Where data are insufficient, appropriate measures should be taken to improve this situation.
- When more than one data-set exists with respect to the same indicator, a decision must be taken regarding which set is to be used.
- When the data reveal a considerable shift from earlier assessments, they must be re-examined to ensure that they have been properly collected and collated. Once this is verified, the reason for the shift must be explored.
- Wherever possible, data should be disaggregated.
- A comparison should be done with previous years’ report to determine trends. Comparison for core indicators can also be undertaken with other countries. Where this is to be done, the any comparator country must be determined beforehand, and the basis for selection clearly noted.

- Based on the data and its analysis, the task force/national committee should review and respond to the questions in the summary tables (Annex 1)

Information gathered should be presented in a comprehensive report that documents clearly the status of ear and hearing care provision in the country for the reporting period. This can be structured according to the outline in the next section.

Proposed structure of report

1. **Executive summary:** This should provide an overview of the indicators and allow readers to understand the overall situation and progress, without reading the entire report.
2. **Introduction:** This should include a brief description of the objectives, structure and content of the report. It should mention the authors and members of task force/national committee involved in data collation and analysis.
3. **Actions for ear and hearing care (EHC):** This should summarize the actions being taken for ear and hearing care in the country at governmental and nongovernmental level, and mention the geographical and population coverage of these activities.
4. **Indicators:** The indicators chosen should be listed first. The overall approach, methodology and timeframe should be described. This should be followed by a series of chapters based on the six health systems building blocks. Each chapter should report on the country's relevant indicators in the following way:
 - a. Brief definition and purpose of the indicator
 - b. Latest value (aggregated)
 - c. Wherever possible, the data should also be disaggregated according to geographical or political divisions, as appropriate
 - d. Time-series data (wherever available)
 - e. Target (if any has been determined)
 - f. Sources of information
 - g. Wherever possible, each indicator should also be presented in a graphic format, for example; pie chart, line graph or a form of visual aid.
 - h. Within health system block chapter, an assessment of the country's current status should be made based on the summary tables in Annex 1.
5. **Comparisons:** This section can provide indicator-wise comparison with other selected countries. The indicators to be included for such comparison should be pre-determined, and core indicators should be prioritized over supplementary ones for comparison. The objective of such comparison and the rationale for the country selected for this purpose should be clearly stated.
6. **Conclusions and recommendations:** The conclusions should summarize the areas where progress has been made during the reporting period and others where progress is desirable. Recommendations should offer practical solutions to promote ear and hearing care through addressing gaps identified by the indicators. The

recommendations can focus on policies, strengthening implementation, human resource development and monitoring, among other things.

7. **Annexes:** should include

- Relevant policy and strategy documents
- Subnational reports, where relevant
- Sources of information
- Any other documents as considered appropriate

Annex 1: Summary tables

These tables (taken from WHO's Ear and hearing care situation analysis tool) provide a mechanism for countries to record their progress on different aspects of ear and hearing care services, over a period of time. These should be in addition to the indicators.

Based on the results of the monitoring process, the national committee should determine which response most accurately reflects the situation of their country in each of the summary tables. This should be done for each reporting cycle and compared to previous years. It will allow the country to determine and monitor its own progress in the field of ear and hearing care.

Preparedness for development and implementation of EHC strategies	
How would you summarize the overall situation regarding the preparedness of your country for development and implementation of ear and hearing care strategies?	
Circle the most suitable response. If none of the statements accurately reflects the situation in your country, add what seems most appropriate in your country's context.	
1	There is no awareness among policy-makers in the country about the need for ear and hearing care services. Development and implementation of a strategic plan for hearing care is highly unlikely at present.
2	There is some awareness among policy-makers about the need for ear and hearing care services. However, development and implementation of a strategic plan for hearing care is unlikely at present.
3	There is awareness among policy-makers about the need for ear and hearing care services. A strategic plan for ear and hearing care is likely to be developed soon.
4	There is awareness among policy-makers about the need for ear and hearing care services. The country is ready to develop and implement a national strategic plan, provided resources are available.
5	There is awareness among policy-makers about the need for ear and hearing care services. The country is ready to develop and implement a national strategic plan, and resources are available for this purpose.
6	None of the above. The current status can be stated as:

Service delivery

How would you summarize the overall situation regarding services for provision of EHC in the country?

Circle the most suitable response. If none of the statements accurately reflects the situation in your country, add what seems most appropriate in your country's context.

1	EHC services (including surgical and audiological services) are not available at tertiary, secondary or primary level.
2	EHC services (including surgical and audiological services) are available in limited centres at tertiary level only. There are no EHC services at primary and secondary levels.
3	EHC services (including surgical and audiological services) are available at all tertiary level centres. There are no EHC services at primary and secondary levels.
4	EHC services (including surgical and audiological services) are available at all tertiary and secondary-level health facilities. No EHC services are provided at primary-level health facilities.
5	EHC services (including surgical and audiological services) are available at all tertiary, secondary and primary-level health facilities.
6	None of the above. The current status can be stated as:

Educational facilities for human resource development

How would you summarize the overall situation regarding availability of educational facilities for training of human resources for EHC within the country?

Circle the most suitable response. If none of the statements accurately reflects the situation in your country, add what seems most appropriate in your country's context.

1	Educational facilities for development of human resources for EHC are not available in the country.
2	Training facilities for health workers in EHC are available. There are no educational facilities for professional training of ENT specialists, audiologists and other professionals.
3	Training facilities for health workers in EHC are available. Educational facilities for professional training of human resources for hearing care are also available, but these are inadequate to provide EHC for the entire country.
4	Training facilities for health workers are available as well as educational facilities for professional training, and these are adequate to provide EHC for the entire country.
5	None of the above. The current status can be stated as:

Medical products/hearing devices

How would you summarize the overall situation regarding the availability and accessibility hearing devices in the country?

Circle the most suitable response. If none of the statements accurately reflects the situation in your country, add what seems most appropriate in your country's context.

1	There is no availability of hearing aid services or cochlear implants in the country.
2	Hearing aid services ³ are available but are not accessible to most (because of high cost or location of services). CI ⁹ are not accessible to the majority.
3	Hearing aid services ³ are available and accessible to most people in urban areas of the country. However, CI ⁹ are not accessible to the majority.
4	Hearing aid services ³ are available and accessible to most people in urban and rural parts of the country. However, CI ⁴ are not accessible to the majority.
5	Hearing aid services are available and accessible to most people in urban and rural areas of the country. CI ⁴ are available and accessible to those requiring them.
6	None of the above. The current status can be stated as:

³ Including fitting and maintenance.

⁴ Including follow-up and therapy.

Health financing

How would you summarize the overall situation regarding the health financing in the country?

Circle the most suitable response. If none of the statements accurately reflects the situation in your country, add what seems most appropriate in your country's context.

1	EHC services are not affordable and no health financing is available.
2	Part of the expenses for EHC are covered through government-led health financing schemes, but it is still not affordable for the majority.
3	Most of the expenses for EHC are covered through government-led health financing schemes, and it is affordable for the majority.
4	Most of the expenses for EHC are covered through government-led health financing schemes, and it is affordable for all.
5	All expenses related to EHC are covered through government-led health financing schemes.
6	None of the above. The current status can be stated as:

Health information

How would you summarize the overall situation regarding the health information system in the country?

Circle the most suitable response. If none of the statements accurately reflects the situation in your country, add what seems most appropriate in your country's context.

1	There is no functional health information system in the country.
2	There is no government-led health information system in the country. Health-related indicators are collated by state or provincial governments or NGOs.
3	There is a government-led health information system in the country. It does not include information or indicators on EHC.
4	There is a government-led health information system in the country. It includes some information or indicators on EHC.
5	There is a government-led health information system in the country. It includes all relevant information and indicators on EHC.
6	None of the above. The current status can be stated as:

Stakeholders

How would you summarize the overall situation regarding the interest and commitment of stakeholders to EHC?

Circle the most suitable response. If none of the statements accurately reflect the situation in your country, add what seems most appropriate in your country's context.

1	There are currently no interested stakeholders in governmental and nongovernmental sectors for promotion of EHC.
2	A few stakeholders are committed to EHC. This is insufficient to drive forward the policy development and implementation process.
3	Multiple groups of stakeholders, including government, are committed to EHC. However, there is a lack of stakeholders that can provide financial support to drive the process.
4	Multiple groups of stakeholders are committed to EHC, including government and financial sponsors.
5	All groups of stakeholders are committed to EHC, including financial sponsors.
6	None of the above. The current status can be stated as:

FOR MORE INFORMATION

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