

# WORLD REPORT ON HEARING





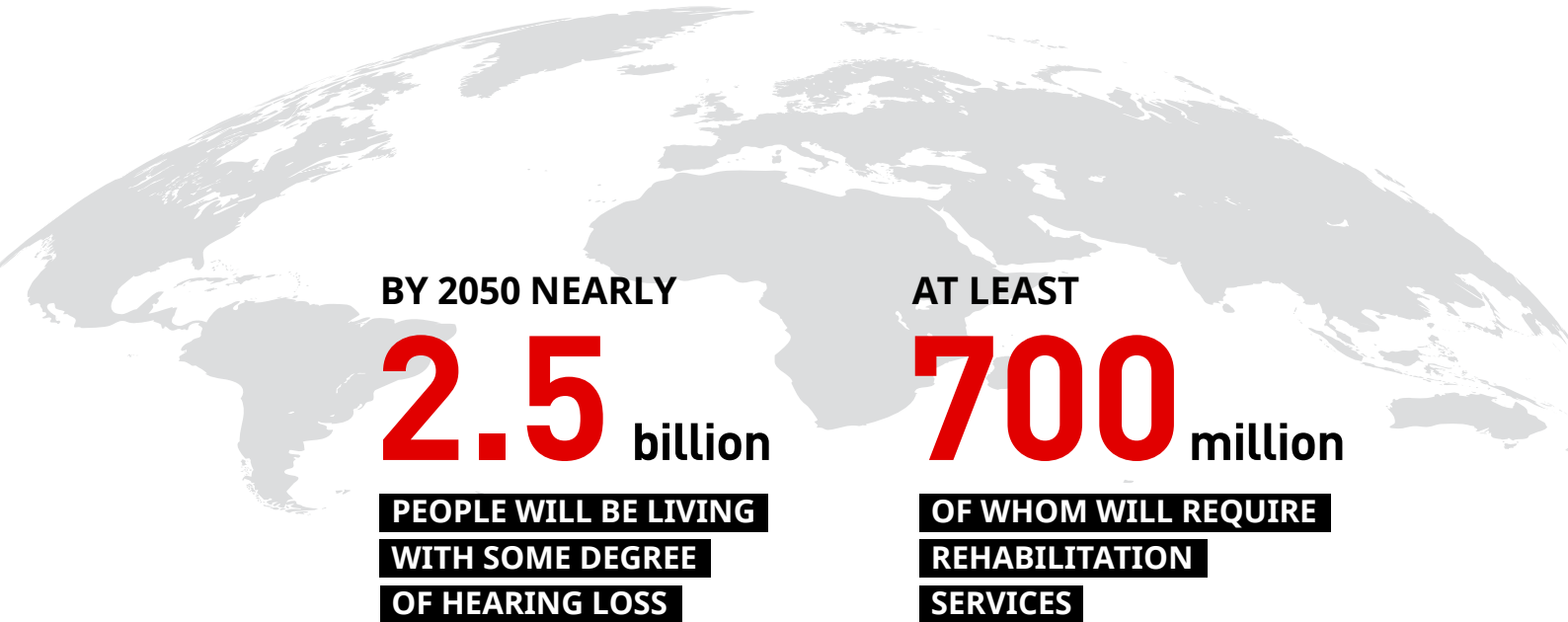
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The World report on hearing envisions a world in which no individual experiences hearing loss due to preventable causes, and those with hearing loss can achieve their full potential through rehabilitation, education and empowerment.

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# WORLD REPORT **ON HEARING**

## EXECUTIVE SUMMARY



WHO estimates that by 2050 nearly 2.5 billion people will be living with some degree of hearing loss, at least 700 million of whom will require rehabilitation services. Failure to act will be costly in terms of the health and well-being of those affected, and the financial losses arising from their exclusion from communication, education and employment.

At this time especially, when the world is faced with the devastation caused by the COVID-19 pandemic, investing efforts and resources to prevent and address hearing loss is warranted for several reasons:

- Many cases of hearing loss can be prevented through effective and available measures. With more than 1 billion young people at risk of avoidable hearing loss, and around 200 million suffering with preventable or treatable chronic ear infections, this gives cause for urgent action.
- Innovative, cost-effective technological and clinical solutions can improve the lives of most individuals with hearing loss. Millions are already benefitting from these developments. Combining the power of technology with sound public health strategies can ensure that these benefits reach all, especially those in underserved and remote areas of the world.

- The lockdowns precipitated by COVID-19 have highlighted the importance of hearing, and the need for ear and hearing care. When deprived of visual and social contact, the sense of hearing allows us to remain connected.
- At the current rate of prevalence, nearly 1 trillion International dollars are lost annually from unaddressed hearing loss. Unless action is taken, this figure will continue to rise in the coming decades. At the same time, investment in ear and hearing care has been shown to be cost-effective, and governments can expect a return of nearly 16 International dollars for every 1 dollar invested.
- This phase in the world's history, with all governments and global agencies focused on public health and health-systems strengthening, presents a unique opportunity to integrate ear and hearing care into health systems. Integration at this time will benefit millions of people at risk of, or living with, hearing loss, bring financial gains to countries, and advance the global vision of universal health coverage.

This first-ever *World report on hearing* elaborates these points and presents an imperative call to action. It summarizes the current status and extent of ear and hearing problems, the causative and preventive factors of hearing loss, and cost-effective clinical and public health solutions. The report acknowledges the challenges of implementation, shares potential solutions, and provides direction on the way forward through integration within universal health coverage. The report is structured into four sections with three annexes providing quality of evidence, and details both of the indicators and of the cost-effectiveness of ear and hearing care interventions.

## SECTION 1

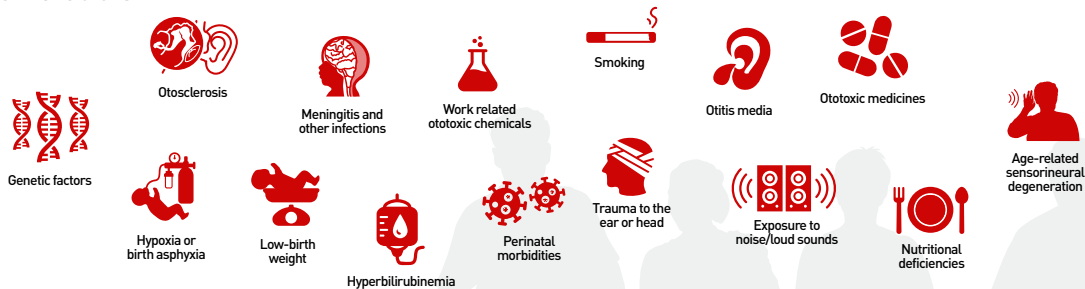
# THE IMPORTANCE OF HEARING ACROSS THE LIFE COURSE



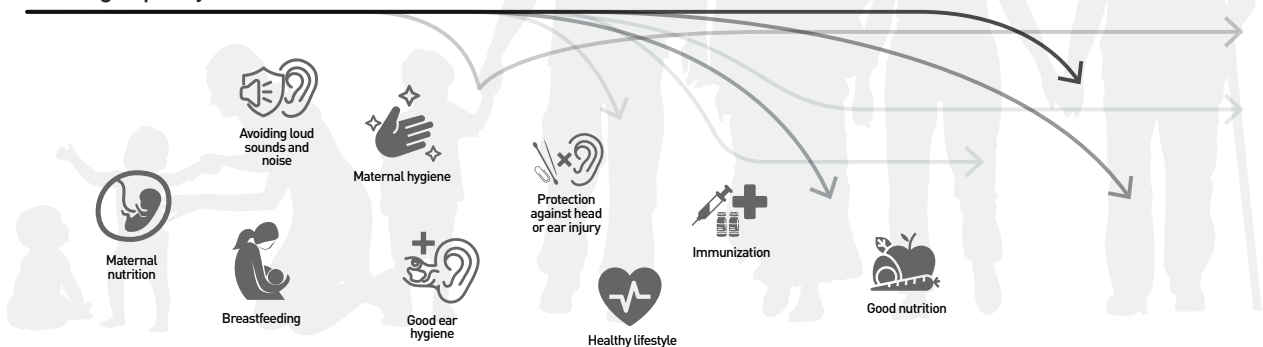
The sense of hearing is a key aspect of functioning at all stages of life; and its loss, unless appropriately addressed, impacts society as a whole.

## HEARING ACROSS THE LIFE COURSE

### Causative factors



### Hearing capacity



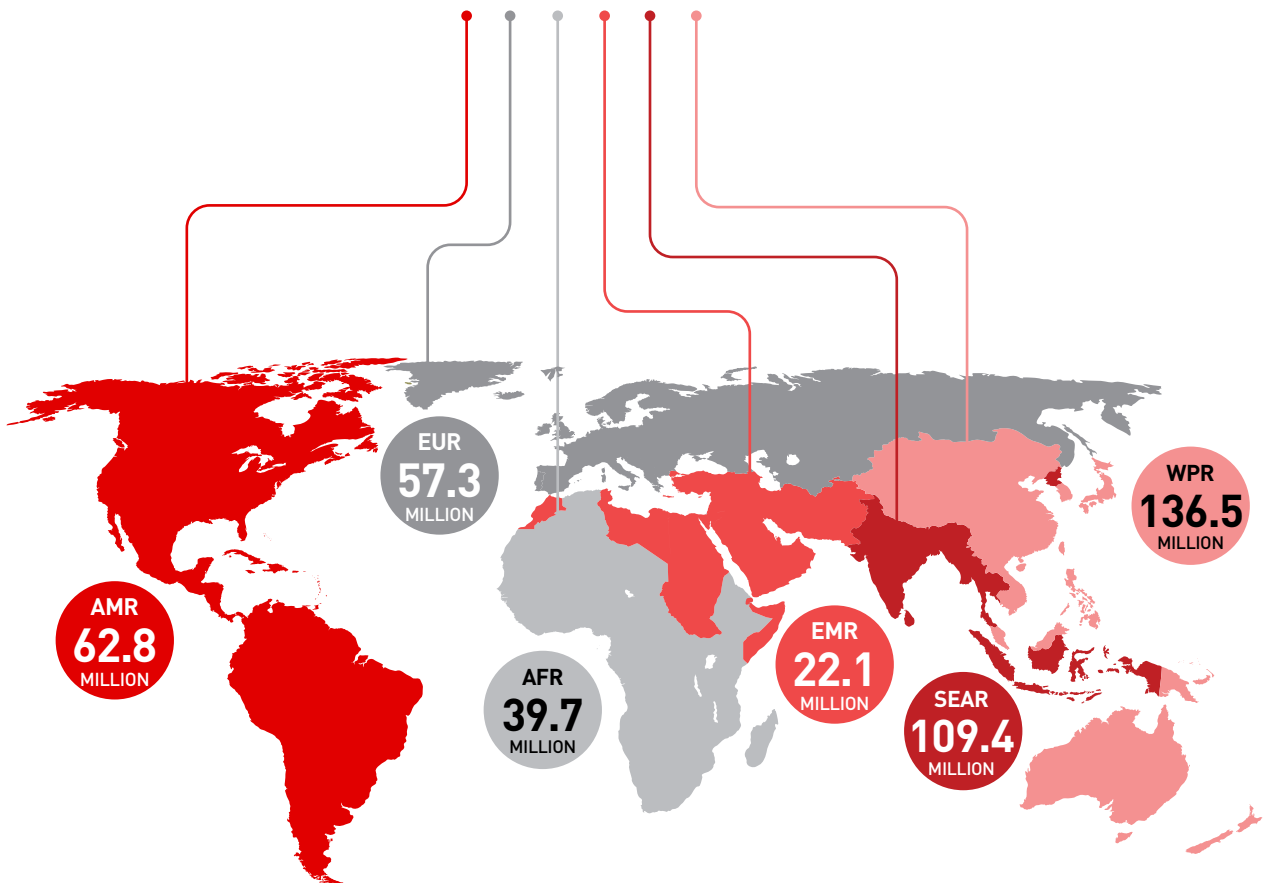
### Protective factors

Every individual has a unique hearing trajectory that is shaped by genetic characteristics and influenced by biological, behavioural and environmental factors experienced throughout the life course. Hearing capacity results from the interplay between negative (causative) and positive (protective) influences. Causative factors that impact the hearing capacity range from birth-related adverse events and ear infections, to viral infections, noise exposure, ototoxic medicines and lifestyle choices. Many of these can be prevented throughout the life course by following good ear hygiene, avoiding loud sounds and adopting healthy lifestyles.

Currently, around

**430 million**

**people globally require  
rehabilitation services  
for their hearing loss**



Note: This illustration represents WHO regions, not country boundaries.

When measured audiometrically, hearing thresholds greater than 20 dB denote clinical hearing loss. Hearing loss currently affects more than 1.5 billion people worldwide, of whom 430 million have moderate or higher levels of hearing loss in the better hearing ear, and are more likely to be adversely affected unless the condition is addressed in a timely manner. This epidemiological measure excludes single-sided and mild hearing loss which also pose significant challenges and require care based on the level of difficulty experienced. Rather than being determined solely by severity, the impact of hearing loss is measured largely by the effectiveness of the clinical or rehabilitative interventions adopted, and the extent to which the environment is responsive to the needs of those with hearing loss.

Hearing loss if unaddressed, can impact negatively many aspects of life: communication; the development of language and speech in children; cognition; education; employment; mental health; and interpersonal relationships.

## SECTION 2

# SOLUTIONS ACROSS THE LIFE COURSE: HEARING LOSS CAN BE ADDRESSED



Effective and timely interventions can benefit all those at risk of, or living with, hearing loss.

Hearing loss is preventable throughout the life course through effective public health interventions. **In children, almost 60% of hearing loss is due to causes that can be prevented** through measures such as immunization, improved maternal and neonatal care, and screening for, and early management of, otitis media. In adults, legislation on noise control and safe listening, and surveillance of ototoxicity can help maintain hearing trajectories and reduce the potential for hearing loss.

Identification is the first step in addressing hearing loss and related ear diseases. Clinical screening at strategic points of life ensure that these conditions can be identified at the earliest possible stage. Recent technological advances, including accurate and easy-to-use tools, can identify ear disease and hearing loss at any age, in clinical or community settings, and with limited training and resources. Screening can even take place in difficult situations such as those encountered during the current COVID19 pandemic.

### HEARING LOSS CAN BE ADDRESSED THROUGH SYSTEMATIC SCREENING TO IDENTIFY HEARING LOSS EARLY IN



Newborn babies and infants

Pre-school and school-age children

People exposed to noise or chemicals at work

People receiving ototoxic medicines

Older adults

Once diagnosed, early intervention is the key to successful outcomes. Medical and surgical treatment can cure most ear diseases, potentially reversing the associated hearing loss. However, where hearing loss is irreversible, rehabilitation can ensure that those affected, and society at large, avoid the adverse consequences. Significant progress has been made during the past decades in this respect, and a range of effective options are now available to address the needs and preferences of people with hearing loss.

Hearing technology, such as hearing aids and cochlear implants are effective and cost-effective and can benefit children and adults alike. However, it is essential that their use is accompanied by appropriate support services and rehabilitative therapy to ensure the desired outcomes, and that any decisions relating to treatment and rehabilitation follow a person-centred approach and involve the individual's family or carers. The use of sign language and other means of sensory substitution (such as speech reading) are also valuable options for many deaf people; hearing assistive technology and services (such as captioning and sign language interpretation) can further improve access to communication and education for those with hearing loss.

### **TIMELY AND APPROPRIATE CARE CAN ENSURE THAT PEOPLE WITH EAR DISEASES OR HEARING LOSS HAVE THE CHANCE TO ACHIEVE THEIR FULL POTENTIAL**



**Medicines and surgery**



**Hearing aids and implants**



**Rehabilitative therapy**



**Sign language access**



**Hearing assistive technology**



**Captioning services**



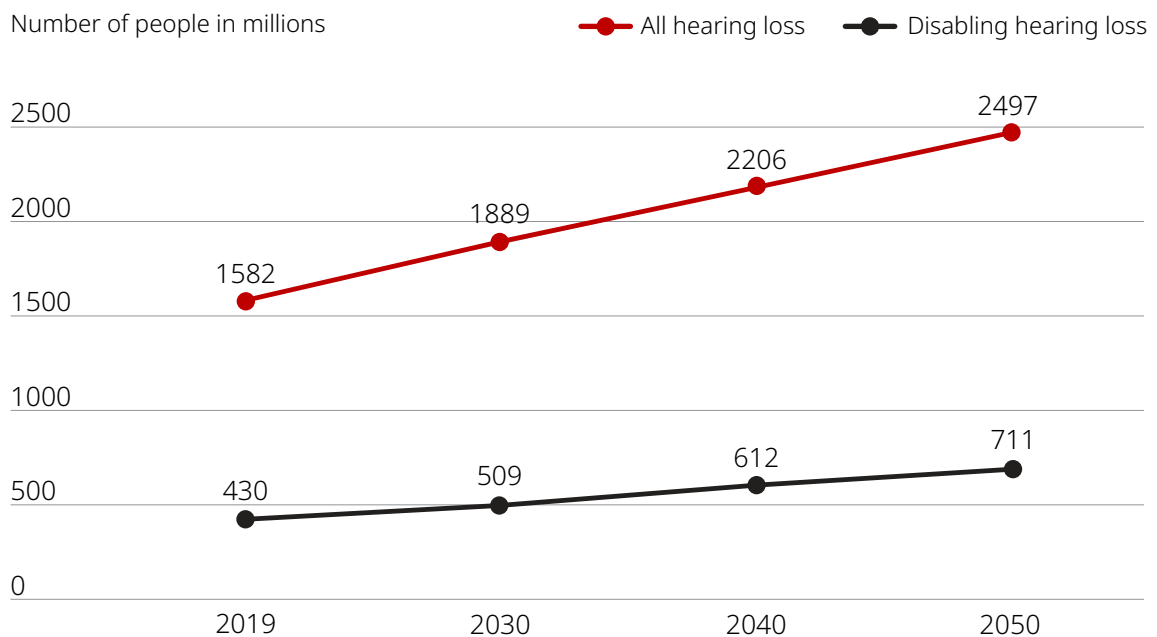
## SECTION 3

# CHALLENGES FACING EAR AND HEARING CARE



There are a number of challenges in the field of ear and hearing care, but they can be addressed. Health is an investment and the cost of doing nothing is one we cannot afford.

### PROJECTED INCREASE IN PREVALENCE OF HEARING LOSS, 2019-2050



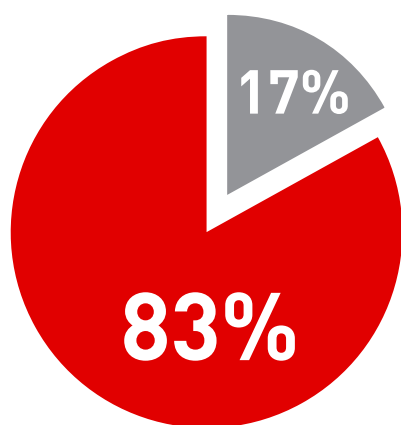
Demographic and population trends reflect the high and rising prevalence of hearing loss globally across the life course. The number of people with hearing loss may increase more than 1.5-fold during the next three decades, with over 700 million likely to experience a moderate or higher level of hearing loss. Unless action is taken, this outcome will almost certainly result in a proportionate rise in associated costs.

The lack of accurate information and stigmatizing mindsets surrounding ear diseases and hearing loss often limit people from accessing care for these conditions. Even among health-care providers, knowledge relevant to prevention, early identification and management of hearing loss and ear diseases is commonly lacking, thereby hampering their ability to provide the care required.

In most countries, ear and hearing care is not integrated into the national health system, and accessing care at different levels of service provision (community, primary, secondary and tertiary) may prove challenging for those with ear diseases and hearing loss. Moreover, access to ear and hearing care is poorly measured and documented, and relevant indicators often lacking in the health information system.

Perhaps the most glaring gap in health system capacity is in human resources. Among low-income countries, for example, approximately 78% have fewer than one ear, nose and throat specialist per million population; 93% have fewer than one audiologist per million; only 17% have one or more speech therapist per million; and 50% have one or more teacher for the deaf per million. Even in countries with relatively high proportions of professionals in the field of ear and hearing care, inequitable distribution and other factors can limit access to them. This not only poses challenges for people in need of care, but also places unreasonable demands on the cadres providing these services.

#### **GLOBALLY THERE IS A 83% SERVICE GAP**



These, among other factors relating to regulation, pricing and stigmatization, reflect the notable gap in the use of hearing aids: of those who could benefit from a hearing aid, only 17% actually use one. The gap is consistently high in all parts of the world, ranging from 77% to 83% across WHO regions, and from 74% to 90% across income levels.

Such challenges can be overcome through a strategic government-led planning and prioritization process.

## SECTION 4

# DESIGNING THE WAY FORWARD: A PUBLIC HEALTH FRAMEWORK FOR EAR AND HEARING CARE



Integrated people-centred ear and hearing care implemented through a strengthened health system can overcome the challenges faced.

Ear and hearing care is an integral component of universal health coverage. Goal 3 of the Sustainable Development Goals for 2030<sup>1</sup> requires that all people, including those with hearing loss and ear diseases, have access to high-quality services without experiencing financial hardship. This can be achieved through an integrated, people-centred ear and hearing care (IPC-EHC) approach, with ear and hearing care services included in national health plans and delivered through a strong health system to ensure that those affected have equitable access to a continuum of care across the life course.

Essential public health interventions for the provision of ear and hearing care services across the life course are summarized in the acronym “H.E.A.R.I.N.G.”: **H**earing screening and intervention; **E**ar disease prevention and management; **A**ccess to technologies; **R**ehabilitation services; **I**mproved communication; **N**oise reduction; and **G**reater community engagement. The first four (H.E.A.R.) can be integrated and delivered through strengthened health systems.

### UNIVERSAL ACCESS TO QUALITY EAR AND HEARING CARE IS POSSIBLE THROUGH

- H** HEARING SCREENING & INTERVENTION
- E** EAR DISEASE PREVENTION & MANAGEMENT
- A** ACCESS TO TECHNOLOGIES
- R** REHABILITATION SERVICES
- I** IMPROVED COMMUNICATION
- N** NOISE REDUCTION
- G** GREATER COMMUNITY ENGAGEMENT

<sup>1</sup> See: <https://www.un.org/sustainabledevelopment/health/>

Countries should determine which interventions best suit their needs by conducting an evidence-based consultative prioritization exercise. Implementation using the IPC-EHC approach requires actions at all levels of the health system through:

- policy guidance and planning with a collaborative approach, including the setting of realistic and time-bound targets;
- sustainable financing and health protection to ensure that people access high-quality ear and hearing care services without impoverishment;
- workforce capacity development, achieved by expanding education programmes for the relevant ear and hearing care workforce; task-sharing with, and training of, non-ear and hearing care cadres;
- health information and data that help determine population needs and priorities, identify gaps, and track progress towards the targets set;
- equitable access to high-quality hearing technologies, which could be furthered by their inclusion in governments' lists of essential devices;
- access to safe and high-quality diagnostic and surgical equipment, as well as the medicines required for ear and hearing care; and
- relevant and impact-oriented research that supports implementation of IPC-EHC across the life course.

**SCALING UP EAR AND HEARING CARE SERVICES TO COVER 90% POPULATION BY 2030 WOULD:**

**REQUIRE**

**an additional annual investment of \$ 1.33 per capita**



**AVERT**

**130 million DALYs**



**BENEFIT**

**1.4 billion people**



**EARN**

**\$16 for every \$1 invested**



Implementation of these public health interventions through the health system will benefit not only the lives of those affected and their families but also yield significant economic benefits and productivity gains. It is estimated that scaling up ear and hearing care during the next 10 years, through integrating the H.E.A.R interventions into health systems, will require only an additional annual per capita investment of US\$ 1.33. The resulting health gain over 10 years will avert nearly 130 million DALYs (disability adjusted life years) and yield a return of nearly US\$ 16 for each 1 dollar invested in ear and hearing care.

# TARGETS FOR SCALING UP EAR AND HEARING CARE BY 2030

To energize global action for ear and hearing care, WHO has identified tracer indicators and set ambitious but realistic targets that aim to achieve:

**20%** 

**relative increase in the effective coverage of newborn hearing screening services**

**20%** 

**relative increase in the effective coverage of adults with hearing loss that use hearing technology**  
(i.e. hearing aids and implants)

**20%** 

**relative reduction in the prevalence of chronic ear diseases and unaddressed hearing loss in school-age children, aged 5-9 years**

# RECOMMENDATION: MAKE EAR AND HEARING CARE ACCESSIBLE TO ALL

Integrated people-centred ear and hearing care must be available and accessible to all, where and when needed, without causing financial hardships.

Ear and hearing care interventions should be systematically integrated into national health care plans, taking into consideration the needs and priorities of each country. All stakeholders in the field of public health should take the following actions:



## MINISTRIES OF HEALTH

1. Include people-centred ear and hearing care in universal health coverage.
2. Strengthen health systems to deliver IPC-EHC at all levels of care.
3. Undertake awareness campaigns that address attitudes towards, and stigma, related to ear diseases and hearing loss.
4. Determine targets, monitor national trends and evaluate progress.
5. Promote high-quality public health research on ear and hearing care.



## INTERNATIONAL AND NONGOVERNMENTAL ORGANIZATIONS

1. Align with WHO's global targets for ear and hearing care and support their monitoring.
2. Take steps to improve knowledge, attitude and practices with respect to ear and hearing care.
3. Stimulate generation and dissemination of knowledge on ear and hearing care.
4. Participate actively in global action for ear and hearing care.



## STAKEHOLDERS IN EAR AND HEARING CARE, INCLUDING PROFESSIONAL GROUPS, CIVIL SOCIETY AND PRIVATE SECTOR ENTITIES

1. Support national governments and WHO in the provision and monitoring of ear and hearing care.
2. Contribute to the generation of knowledge regarding the public health aspects of ear diseases and hearing loss.
3. Collaborate to ensure that all stakeholders can contribute to, and have a common vision of, ear and hearing care.
4. Highlight the importance, need, and means for ear and hearing care and advocate for its prioritization.



- 0 The number of people living with unaddressed hearing loss and ear diseases is unacceptable.
- 0 Timely action can prevent and address hearing loss across the life course.
- 0 Investing in cost-effective interventions will benefit people with hearing loss and bring financial gains to the society.
- 0 Countries must act to integrate people-centered ear and hearing care within national health plans for universal health coverage.



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For more details refer to:  
<https://www.who.int/health-topics/hearing-loss>