

Ear and Hearing Healthcare Services in India



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The profession of otolaryngology in ancient India dates back in time between 1000 BC and 100 AD¹, however, otology as an independent profession gained more recognition after 1950s². The profession of audiology is relatively new and took roots nearly half a century ago here. Since then both professions have undergone major developments to offer a wide range of ear and hearing healthcare services. This paper gives an overview of the ear and hearing healthcare services in India.

Prevalence of hearing impairment

Table 2 shows the results of the 58th round survey by the National Sample Survey Organisation (NSSO) in 2002³ and World Health Organization (WHO) in 1999.⁴

The figures from a recent study on disability show that old age (26%), other illness (25%), ear discharge (15%) and injury other than burns (5%) are the main causes of hearing disability in India.⁵ Estimated figures on prevalence show that adult onset deafness is about 8% and childhood onset deafness is about 2%.⁶ Owing to the tropical weather conditions, large numbers of adults and children develop hearing impairment as a result of ear infections such as otitis media. Among school age children, the incidence of ear infection is significantly more in children from rural areas compared to those who live in the cities.^{7,8}

Professionals

Audiologists and otolaryngologists are the professionals mainly offering ear and hearing healthcare services in India. Few otologists and otoneurologists are practising exclusively in their speciality. Some services are also offered by general medical practitioners, teachers of the deaf, health workers and community volunteers at

various levels. Table 3 indicates the approximate number of professionals offering ear and hearing healthcare services and its ratio to the general population. The number of audiologists double if we include those who are trained as both audiologists and speech-language pathologists (SLPs) and working as SLPs. The data for the table is taken from a document produced by the WHO Regional Office for the South East in 2007.⁶ This data clearly indicates that the Indian population is under-served in terms of ear and hearing healthcare due to the general shortage of qualified professionals and infrastructure. These personnel are not equally distributed over the country with a massive shortage of such professionals in rural areas.

Services offered

Ear-care services are available at primary or community levels, secondary and also tertiary levels, however, hearing care may only be available at secondary and tertiary levels. At primary levels the services are provided by primary care nurses, community volunteers and / or health workers and these centres may not be exclusively devoted to ear and hearing healthcare. However, they offer basic ear examination, medication, public awareness and referral.

Table 1: Country information

Country name	Republic of India
Population	1.14 billion (2008)
Area (square miles)	1,269,219
GDP (PPP)	\$3.26 trillion (2008)
Languages	Hindi (Official) & 14 regional languages

Table 2: Estimated prevalence of hearing impairment in India

Survey	Number	%	Includes population having
NSSO (2002)	3,061,700	16.56	Some form of hearing difficulty
WHO (1999)	NA	5.9	Disabling hearing impairment

Table 3: Ear and hearing care professionals in India

Professionals	Approximate number	Ratio to the population
Audiologists	1,200	1:950,000
Otolaryngologists	8,000	1:142,500
Micro-ear surgeons	4,000	1:285,000
Teachers of the deaf	4,039	1:282,248
Physicians	500,000	1:2,280

Note: These are approximate numbers and the population ratio was calculated using a population of 1.14 billion (2008) and the data on professionals was based on the report published in 2007.⁶

Table 4: Approximate number of ear and hearing healthcare centres in India

Centres	Level	Approximate number
Primary health centres	Primary	22,974
District health centres	Secondary	600
Specialist centres	Tertiary	350/120*

*: which have facilities for early diagnosis and rehabilitation

a recent study showed that old age, other illness, ear discharge and injury other than burns are the main causes of hearing disability in India

Some of the ENT / audiology institutes and / or departments also carry out regular residential screening and awareness camps at community levels and piloting school screening and newborn hearing screening programmes. Secondary levels are usually district health centres. Services such as ear and hearing evaluation, appropriate medical intervention for ear disorders and simple ear surgery are offered by either general medical practitioners or otolaryngologists at this level. Tertiary levels are usually an ENT department / centre consisting of a wide range of expert staff including otolaryngologists, audiologists, audiometricians, hearing aid specialists, ENT nurses, speech therapists, teachers of the deaf, and so on. Depending on the department they offer a wide range of services such as medical examination and treatment, micro-surgery, detailed audiological investigations and interventions. Table 4 provides approximate numbers of centres at various levels.⁶

Services offered by otolaryngologists, otologists and otoneurologists

Otolaryngologists in India offer a wide range of ear-care services and also diagnosis and treatment for otologic disorders such as acute and chronic ear infections, otosclerosis, congenital abnormalities, trauma and tumours. Some specialists also have the expertise to deal with vestibular disorders. In many specialist centres there are facilities for microsurgery and a very few centres have temporal bone laboratories. Many otologists and otoneurologists are performing advanced surgical techniques such as vestibular nerve section, acoustic neuroma surgery, total decompression of facial nerve, skull base surgery and cochlear implant surgery. There are about 40 cochlear implant centres in India.

A few of the private otolaryngology centres have become popular throughout Southeast Asia attracting patients from many Middle East and African countries.

Audiological services

Audiological services in India are available in both the public and private sectors. Both sectors offer services such as hearing assessment, selection and fitting of hearing aids, and aural rehabilitation. Some of the centres have successful cochlear implantation programmes, however, the services in some of the specialised audiology areas like vestibular assessment and rehabilitation, assessment and management of auditory processing disorders, and tinnitus rehabilitation are limited.

Services provided in the public sector are funded by the Department of Health or the State Governments which usually offer free services mainly at district level hospitals, educational institutes and district health rehabilitation centres. There is also provision for free body level hearing aids and solar driven rechargeable batteries through the scheme 'Assistance to Disabled Persons for Purchase (ADIP)' funded by the Ministry of Social Justice and Empowerment. The paediatric population has a provision of subsidised BTE hearing aids under the National Program for Prevention and Control of Deafness (NPPCD) scheme. Private audiology centres in India are generally equipped with all the necessary diagnostic instruments. Their main focus of work is in hearing aid dispensing. However, these clinics or institutes are not easily accessible to people living in rural settings as most of them are

based in urban locations. You can refer to the paper 'Audiology in India' for more information.⁹

Non-governmental organisations / charities

In recent years many non-governmental organisations (NGOs) and charities have become very active and are working towards improving ear and hearing healthcare services / facilities in India. The following are some of the major non-governmental organisations / charities:

- Aural Education for the Hearing Impaired (AURED),
- Development Education Empowerment for the Disadvantaged in Society (DEEDS),
- Deafchild India,
- Hearing International – India,
- Indian Deaf Children's Society,
- I Hear Foundation,
- Research Education & Audiological Development Society (READS),
- Rotary International,
- Society to Aid the Hearing Impaired (SAHI),
- Vani Pradan Kendra.

Current major projects

- Ongoing research into the development of an 'indigenous cochlear implant' by a group in the Defence Research and Development Organisation (DRDO),
- National Program on Prevention and Control of Deafness (NPPCD) funded by the Ministry of Health and Family Welfare, Government of India,
- Project Deaf India funded by the Rotary Foundation,

- SWANIRMAN – Graham Bell Project India funded by the National Deaf Children's Society (NDCS). ■

USEFUL WEBSITES

<http://ishaindia.org.in/>
<http://www.audiologyindia.com/>
<http://www.indiansocietyofotology.com/>
<http://www.entaoi.com/>
www.cigi.in/

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