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Mr Elton Humphery
Committee Secretary
Inquiry into Hearing Health in Australia
Senate Community Affairs References Committee
Parliament of Australia

Dear Mr Humphery,

I refer to your letter to Brian Pink, the Australian Statistician, on 14 September 2009 inviting him to make a submission to the Senate Community Affairs References Committee Inquiry into Hearing Health in Australia. I am responding on his behalf. The ABS submission to this inquiry is attached.

The ABS would also be happy to assist the committee in its inquiry by providing further data, should it be requested.

Yours sincerely,

Garth Bode
First Assistant Statistician
Social Statistics Group

27 October 2009

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ABS Submission: Senate Community Affairs References Committee Inquiry into Hearing Health in Australia

The information below provides an overview of the data available from the Australian Bureau of Statistics that are likely to be relevant to this Inquiry. There are three sections in this submission:

1) An overview of key findings about this topic from relevant ABS collections
2) An outline of data availability, including key data sources and comments on data collection methodologies
3) Contact information at the ABS.

1. Key Findings about Hearing Health in Australia

Prevalence

According to the 2007-08 National Health Survey, around 2.1 million people (10%) have partial or total loss of hearing, of whom 1.5% or 31,000 have total loss of hearing.

Men were more likely to have hearing loss than women. Around 13% of men reported partial or total hearing loss compared with around 7% of women.

A relationship between age and hearing loss is apparent. Rates of partial or total hearing loss ranged from 1.4% amongst those aged under 15, to 42% of those aged 75 and over.

Indigenous Australians

According to the National Health Survey (NHS) and National Aboriginal and Torres Strait Islander Health Survey (NATSIHS), Indigenous people were more likely than non-Indigenous people to report hearing loss across all age groups, except for those aged 55 and over where rates were similar. Amongst children aged under 15, Indigenous children were more than 3 times as likely to be recorded as having complete or partial hearing loss as non-Indigenous children.

Aboriginal and Torres Strait Islander children are twice as likely to be recorded as having ear and hearing problems as other Australian children. This is due in part to high rates of otitis media (middle ear infection) among children in many Indigenous communities. Recurrence of chronic otitis media is often characterised by a perforated tympanic membrane, which can lead to hearing loss, deafness and further complications such as learning difficulties. In 2004-05, rates of otitis media were three times as high among Indigenous children under 15 as non-Indigenous children in this age group.

Implications of hearing loss

A person is considered to have a limitation if they have difficulty doing a particular activity, need assistance from another person or use an aid. According to the 2003 Survey of Disability Ageing and Carers, of the people with hearing loss, 61% were limited or restricted by their hearing loss.

Of those people with complete or partial hearing loss, 33% reported using a hearing aid or cochlear implant.

Of those who used a hearing aid or cochlear implant, 51% reported that they could hear better when using a hearing aid or cochlear implant but still not normally, 35% reported that they could hear normally when using a hearing aid or cochlear implant, and 14% reported that their hearing was not improved by using a hearing aid or cochlear implant.

The vast majority of people with hearing loss (94%) reported participating in social or community activity away from home in the last two weeks.

2. Data availability and comments on data collection methodologies

As Australia's statistical agency, the ABS conducts a number of statistical collections that provide a large amount of data that will assist the committee in its inquiry into the extent and implications of hearing impairment in Australia.

The ABS collects a range of information on hearing health in the Survey of Disability, Ageing, and Carers, the National Health Survey, and the National Aboriginal and Torres Strait Islander Health Survey.

Survey of Disability, Ageing, and Carers

The Survey of Disability, Ageing, and Carers is the major source of information on hearing and the effect of hearing loss. The Survey is run 6-yearly, with the latest data available coming from 2003. The 2009 survey is currently underway, with results expected to become available late next year. It collects data from persons in private households as well as in cared accommodation.

The survey collects a range of information on hearing, including:

- whether has loss of hearing

- whether limited or restricted by hearing loss
- whether using a hearing aid or cochlear implant improves hearing
- whether uses aids to assist in hearing
- main condition causing loss of hearing
- whether hearing loss is the main cause of disability.

This data can be tabulated by a range of demographic and other items, including age, sex, labour force status, social and community participation, and a range of geographic breakdowns.

National Health Survey

The National Health Survey brings together information including chronic conditions, health risk factors (such as smoking and alcohol use), service use, and social and demographic determinants of health (such as income, occupation, and country of birth). It is run every 3 years, with the latest data available from the 2007-08 survey. It collects data from persons in private households only.

The survey collects information on a range of conditions of the ear, including partial and complete hearing loss, Menieres disease, and Otitis Media.

National Aboriginal and Torres Strait Islander Health Survey

The National Aboriginal and Torres Strait Islander Health Survey is a large survey of Indigenous persons in both remote and non-remote areas. It is run every 6 years in conjunction with every second National Health Survey, and is designed to provide broad information about the health of Indigenous Australians, allow the relationships between health status, risk factors and health-related actions of Indigenous Australians to be explored, and provide comparisons with results for the non-Indigenous population from the National Health Survey.

As with the National Health Survey, the National Aboriginal and Torres Strait Islander Health Survey collects information on a range of conditions of the ear.

Comments on data collection methodologies

In order to establish the prevalence of conditions such as hearing loss, population representative surveys must be undertaken. Since some conditions are relatively rare, these surveys must be large involving some thousands of respondents. This is expensive, and surveys are therefore relatively infrequent, being conducted only every few years. However, prevalence rates do not change rapidly over time.

Survey based data generally relies on respondents accurately reporting which conditions they have to an interviewer, or responding on someone's behalf, if that person is too young or otherwise unable to respond. In some cases, particularly for very young children, it is possible that hearing loss may go undiagnosed, and therefore will not be reported. Similarly there may be differences between the presence and extent of hearing impairment reported by a respondent and the level of impairment that would be apparent from a "gold-standard" formal audiological assessment.

However, estimating the population prevalence of hearing loss using surveys that use formal hearing assessments presents many practical and technical issues. Those conducting the testing must be trained audiologists, and the infrastructure required (sound attenuated booths etc) means that these surveys are logistically difficult. To date, the only Australian study that has attempted to estimate the population prevalence of hearing impairment using audiological measurement was a South Australian study conducted in 1994 and 1995. It involved 689 persons who reported some level of hearing impairment, and 237 persons who reported no hearing impairment.

Surveys such as this present a range of potential difficulties. For a number of reasons, it is difficult to establish a population representative sample. For cost reasons, surveys may exclude people who live in rural areas, or be highly clustered, which limits the generality of their results. Surveys that require people to volunteer for testing also tend to have low response rates, which means that there is considerable potential for self-selection bias. For example, if people who have concerns about their hearing are more likely to volunteer for a hearing test, this will likely lead to resultant estimates of hearing impairment that are an overestimate of true population prevalence. Finally, due to the practical difficulties and cost considerations, these types of surveys are usually relatively small, leading to relatively high levels of sampling error, particularly for any detailed analysis. Sampling error occurs because only a small proportion of the population is used to produce estimates that represent the whole population. Generally, the larger the sample size the lower the sampling error.

3. Contact information

For further information on the availability of statistics that might further support the work of the Inquiry, or if you have questions about the information given above or accessed from our website, please contact:

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