Getting our numbers right on Hearing Loss
Hearing Care and Hearing Aid Use in Europe

A Europe Wide Strategy

Joint AEA, EFHOH, EHIMA report

September 2016
“Getting our numbers right on Hearing Loss, Hearing Care and Hearing Aid Use in Europe”
Joint AEA, EFHOH and EHIMA report

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The European Associations for Hard of Hearing People (EFHOH), Hearing Care Aid/Care Professionals (AEA) and Hearing Instrument Manufacturers (EHIMA) join forces in this article to “Get the numbers right”. When discussing the number of people with hearing loss and the impact of professional hearing care, there are a lot of different definitions used, which makes comparisons very difficult. Hard of hearing people are not likely to search for professional help, if they do not experience any hearing problems, and the best way to define hearing loss is to use “Self-Reported Hearing Loss”.

In EuroTrak, all participants are asked whether they experience any hearing difficulties. If they confirm they have hearing difficulties, they are identified as people with self-reported hearing loss. If they answer positively, they get more detailed questions such as:

- Do you experience hearing difficulties on one ear or both?
- How would you describe the degree of your hearing difficulty? (Mild, Moderate, Severe, Profound, Don’t know)
- When NOT using a hearing aid, how difficult is it for you to follow conversations in the presence of noise (for instance, while several people are talking at the same time)? (Extremely difficult, Quite difficult, Somewhat difficult, Slightly difficult, Not at all difficult).

Introducing “EuroTrak”

EuroTrak was designed and executed by Anovum (Zurich) on behalf of the European Hearing Instrument Manufacturers Association (EHIMA). This survey works with a representative sample of the population in each country (> 13000 people per country – weighted in age, gender, education level, region etc …). For each country they have a sample of at least 1300 people with self-reported hearing loss.

In this article, we only use the latest EuroTrak results for 7 European countries. In total 9205 people with self-reported hearing loss were included in this overview. Furthermore we use the information from EFHOH, AEA and EHIMA to get the best estimates on the number of hearing aids sold and used in Europe.

How many people are hard of hearing in Europe?

When comparing the EuroTrak results on self-reported hearing loss with the EuroStat data on the 65plus population we see a very strong correlation. The higher the percentage of the population that is 65 years and older, the higher the percentage of the population that experiences hearing difficulties. The average is 10% of the population or 52 million people with self-reported hearing loss for Europe where 18.5% of the population is 65 years or older.
Germany and Italy have the highest prevalence of self-reported hearing loss (12.1 and 11.7% of the population) and also have the highest percentage of the 65+ population (21.4 and 20.8% of the population).

Slovakia and Cyprus are at the lower end with a prevalence of self-reported hearing loss lower than 8% and a percentage of the population 65 years or older 14% or less.

This allows us to estimate the prevalence of self-reported hearing loss for 29 European Countries:

<table>
<thead>
<tr>
<th>Country</th>
<th>Age&gt;65 %</th>
<th>Self-Rep HL %</th>
<th>Self Rep HL Mil</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU-29</td>
<td>18.5</td>
<td>10.0</td>
<td>52,4</td>
</tr>
<tr>
<td>Austria</td>
<td>18.3</td>
<td>9.9</td>
<td>0.8</td>
</tr>
<tr>
<td>Belgium</td>
<td>17.8</td>
<td>9.6</td>
<td>1.1</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>19.6</td>
<td>10.6</td>
<td>0.8</td>
</tr>
<tr>
<td>Cyprus</td>
<td>13.9</td>
<td>7.5</td>
<td>0.1</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>17.4</td>
<td>9.4</td>
<td>1.0</td>
</tr>
<tr>
<td>Denmark</td>
<td>18.2</td>
<td>9.8</td>
<td>0.6</td>
</tr>
<tr>
<td>Estonia</td>
<td>18.4</td>
<td>9.9</td>
<td>0.1</td>
</tr>
<tr>
<td>Finland</td>
<td>19.4</td>
<td>10.5</td>
<td>0.6</td>
</tr>
<tr>
<td>France</td>
<td>18.0</td>
<td>9.7</td>
<td>6.4</td>
</tr>
<tr>
<td>Germany</td>
<td>20.8</td>
<td>11.2</td>
<td>9.1</td>
</tr>
<tr>
<td>Greece</td>
<td>20.5</td>
<td>11.1</td>
<td>1.2</td>
</tr>
<tr>
<td>Hungary</td>
<td>17.5</td>
<td>9.5</td>
<td>0.9</td>
</tr>
<tr>
<td>Ireland</td>
<td>12.6</td>
<td>6.8</td>
<td>0.3</td>
</tr>
<tr>
<td>Italy</td>
<td>21.4</td>
<td>11.6</td>
<td>7.0</td>
</tr>
<tr>
<td>Latvia</td>
<td>19.1</td>
<td>10.3</td>
<td>0.2</td>
</tr>
</tbody>
</table>

Table 1: The Eurostat 2015 data on the percentage of the population 65 or older (Age>65%), the % of the population with self-reported hearing loss (Self-Rep HL%) and the number of people relation with self-reported hearing loss in Million (Self-Rep HL Mil). (Source of basic data: Ehima-Anovum EuroTrak & EuroStat 2015)
Interestingly, this is fully in line with earlier communication from EFHOH that there are more than 50 million hard of hearing people in Europe, 6 million in France, 9 million in Germany etc.

**The value chain – getting access to professional hearing care**

The first step is to create awareness, to ensure that hard of hearing people do not ignore that there is a problem, but accept it, so they can seek professional help. Hearing screening and awareness campaigns are essential tools to get this invisible condition to the surface. Based on the latest EuroTrak surveys in seven countries (Denmark, Germany, France, Italy, Norway, Switzerland and UK – 9205 people with self-reported hearing loss) we notice the following actions:

Once the condition is accepted, i.e. the people report to have hearing difficulties, only 73% consult a medical professional (mostly their general practitioner or ENT specialist) for their hearing problems.

The medical professionals only refer 70% of these people to a hearing care professional.

And finally 76% of the people with hearing care referral purchase hearing aids.

### Fig2: The drop-out table based on the average EuroTrak results for 7 countries. The first bar represents all the people with self-reported hearing loss. The second bar shows the percentages that visits a medical practitioner for their hearing loss. The third bar is the % of those who seek guidance that get the recommendation to visit a hearing care professional. The fourth bar is the % of people that then acquire hearing aids. And finally the disconnected bars in red at the right are the number of people with hearing care recommendation that acquire hearing aids. (Source of basic data: Ehima-Anovum EuroTrak)

**Hearing Aid Uptake by People who are referred for Hearing Care.**

So we notice that of all the people with self-reported hearing loss, only 51% are referred to Hearing Care Professionals. Further, the uptake of hearing aids by these referred people is 76%. This percentage is a very good measure to evaluate the quality and accessibility of professional hearing care in a country.

Based on the best estimates of all our associations on the number of hearing aids sold, binaural rate, the average renewal time of hearing aids and the latest EuroTrak surveys for each country, we were able to establish this overview of Uptake of Hearing Aids (Adoption) by Hearing Care Recommended people in 29 European Countries. The European average would be...
is 59% uptake. Nine countries do 10% better than this European average. Seven countries are within 10% of this European average and thirteen countries are more than 10% under this European average.

**Fig3: Uptake of Hearing Aids (Adaption) by People who are referred for Hearing Care in 29 European Countries (green bars). The European average is 59% uptake. Nine countries do 10% better than this European average. Seven countries are within 10% of this European average and thirteen countries are more than 10% under this European average. The white bars relate to hearing aid uptake for all people with self-reported hearing loss. (Source of basic data: Ehima-Anovum EuroTrak, EuroStat 2015, AEA&EFHOH reports)**

**Do people really wait seven years before they visit a Hearing Care Professional?**

In many articles and brochures we read that once people notice they have hearing problems, they wait seven years before they visit a Hearing Care Professional. Is this really so?

**Fig4: Histogram of the years that people wait between the moment they notice they have hearing problems and the time they start using hearing aid. Source: Laureyns et al, Thomas More University College & CRS 2015**
In a study that was conducted by the Thomas More University College in Antwerp and CRS in 2015, 266 hearing aid users in four countries (Belgium, Germany, Italy and Israel) responded to a questionnaire on this topic. This study revealed that most people (53%) visit a Hearing Care Professional and start using hearing aids between 0 and 5 years after they realise they have hearing problems. However, some people wait up to 40 years before they take action. You will notice that this not a normal distribution, so therefore we should stop using the average of seven years.

This abnormal distribution is also confirmed in the EuroTrak 2015 data. When asked how many years had passed between the time people became aware of their hearing loss and the moment they acquired hearing aids, the majority responded they had waited 1 or 2 years.

![Histogram of the years that people wait between the moment they became aware of their hearing loss and the time they acquired hearing aids. (Source basic data: Ehima-Anovum EuroTrak2015)](image)

Is Hearing Aid Uptake all that matters?

We need to be careful not to be too enthusiastic when the hearing aid uptake is reasonable or high in a country. The number of people getting professional hearing care and acquiring hearing aids is only the beginning. The true added value of hearing care, customer satisfaction, active use and impact on overall quality of life are the true goals that matter!

Does the way that Hearing Health Care is organized and funded in a country have an impact on these outcomes?

To evaluate this, we clustered the EuroTrak results of the countries that have a “State Organised Model”, where hearing care is free of charge, but the end-user has no or little freedom of choice – Denmark, Norway and UK. You need to be aware, however, that in all these countries there are also private free market hearing care services available, so there is a mix of both State Organised and Privately Delivered Hearing Care. That is why we will label these results as “State Organised (Mix)”. We also clustered the countries where hearing care is organised as a “Free Market Model”, Germany, France, Italy, Switzerland, where the health care system refunds hearing aids (mostly with a flat fee) so a basic solution can be nearly free of charge, the end-user has freedom of choice and the option to top up if wanted.
The uptake of hearing aids by the hearing care recommended people is highest (84%) for the State Organised Model and lower (70%) for the Free Market Model.

**Fig 6**: Left pane, the percentage of Hearing Instrument Uptake by People who receive the recommendation to go for hearing care (The uptake is higher for the State Organised Model – black bar).

Middle pane, the percentage of people using the hearing aids 1 hour or less – lower is better (This percentage is lower for the Free Market Model – red bar).

Right pane, the percentage of people that are satisfied with the received hearing care (This percentage is higher for the Free Market Model – red bar) - (Source of basic data: Ehima-Anovum EuroTrak)

The hearing aids are used more actively by users in the Free Market Model (11% only use the instruments 1 hour or less versus 19% for the State Organised Model). Customer satisfaction is also higher in the Free Market Model (80% satisfied users versus 71% for the State Organised Model).

If we dig deeper in the changes attributed to Professional Hearing Care … we notice the same trend.

The use of hearing aids leads next to improvement in communication and participation also to improved Self-confidence, Social life, Sense of safety, Sense of independence, Mental and Physical Health. Notice that the Free Market Model is over-performing the State Model in all these aspects.

**Fig 7**: The percentage of people indicating better or significantly better results for all the aspects mentioned attributed to the use of hearing aids (professional hearing care) – (Source of basic data: Ehima-Anovum EuroTrak)
**Recommendations**

As you can see, both models have positive and negative aspects … but for most European Countries the existing models can certainly be optimised to achieve better results with only small strategy adjustments.

**The focus should not only be on uptake – but on the quality of hearing care.**

The return on investment of systems where a high proportion of people get access to hearing aids, but they are not used actively must be questionable. A low degree of customer satisfaction and smaller quality of life improvements are signs of a process in need of improvements. Furthermore, the impact of untreated hearing loss on cognition, depression, independence, quality of life should make it clear to most that more should be taken into account.

Quality professional hearing care, truly involving the end-user in the full process – from motivation – hearing profile - needs assessment – selection – counselling – optimising results and verification of functionality and satisfaction is essential. This process is more time consuming, but leads to better results, acceptance and use.

**Easy and low entry access to quality of hearing care is essential.**

Access to quality hearing care can be improved in many ways. First of all, adult hearing screening and awareness campaigns should be promoted and supported by all health care systems. Why is it normal that we all get our eyes and teeth checked at regular intervals… and that campaigns suggesting getting your hearing checked are very rare?

When people with self-reported hearing loss visit a medical practitioner, the recommendation to receive professional hearing care should be given more frequently. On average 30% of these people do not get a hearing care recommendation, for which there could be medical reasons, but how can we explain that this ranges from 18% in one country to 37% in another country? Typically medical professionals working in the “State Organised Model” will more easily recommend professional hearing care (79% - drop-out 21%) than the ones working in the “Free Market Model” (64% - drop-out 36%).

![Fig8: The percentage of hard of hearing people that do not receive the recommendation to go for professional hearing care (State organised <> Free market model) – (Source of basic data: Ehima-Anovum EuroTrak)](image)
When people get the recommendation to receive professional hearing care, in countries with a State Organised Model, the waiting list can be long. In this case, motivation and access to care can certainly decrease.

When looking at the time it takes before people who are aware of their hearing loss and actually start using hearing aids, the difference between State organised Models and Free Market Models is smaller than could be expected. Surprisingly, in the State Organised Model, fewer people act in the first year, which could be partly caused by waiting lists, and more people wait more than 6 years.

![Histogram of the years that people wait between the moment they became aware of their hearing loss and the time they purchased hearing aids.](State organised <> Free market model) – (Source of basic data: Ehima-Anovum EuroTrak)

Price and coverage by the health care system can also be a bottle neck in the process of going for hearing care. Even in State Organised Models, many hard of hearing people are not always aware of their right to receive hearing care. In the “Free Market Model” all health care professionals, including the hearing care professionals, need to inform the hard of hearing people that affordable basic hearing solutions are available when budget is an issue. Transparent and easy to understand information should be given to inform the new users on the true benefits and drawbacks of different solutions and care models, to allow the user to make an informed choice … freedom of choice should always be in the interest of the user. Although freedom of choice may be more limited in the “State Organised Model” this should not lead to a one size fits all solution without any options for the user. When a solution is not matched to allow the user to fully accept it or to lead to satisfaction, the hearing aids may end up in the drawer or may be used very little.

**Share success stories!**

Professional hearing care is improving significantly decade by decade. The end-users are much more involved, satisfaction is increasing, hearing aid technology is advancing and cooperation between all healthcare providers is getting better … so we have a lot of success
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stories to share. Why is the general public opinion on hearing care and hearing aids still negative? We all need urgently to start spreading the good news.

Did you know that hard of hearing people are significantly less embarrassed to wear hearing aids and that users are more satisfied in difficult situations in 2015 compared to 2009?

Fig10: Left panel: The percentage of hard of hearing people that indicate to be embarrassed to wear hearing aids - Right panel: The percentage of hearing aid users that are satisfied in difficult listening situations – Conversation in large groups, On the telephone and in Noisy situations. Notice the increased satisfaction for all aspects (Average of France, Germany and UK in 2009, 2012 and 2015) (Source: Ehima-Anovum EuroTrak)

Did you know that more than 80% of the users experience that their hearing aids improve their quality of life?

Fig 11: How often do your hearing aids improve your quality of life? (Average of France, Germany and UK in 2015) (Source basic data: Ehima-Anovum EuroTrak)

We are sure you know many more of these success stories … help us to get the word out!
References:
Best, Lida. - Are the users and their representatives the experts by experience? – Presentation at the AEA MiniSymposium – May 2016

Bisgaard Nikolai et al, A new model for calculating adoption rates, article waiting for publication – August 2016.


EuroTrak data retrieved at: http://www.ehima.com/documents/


Hougaard, Soeren. - Key results overview EuroTrak 2015 – Presentation at the AEA MiniSymposium – May 2015

Hougaard, Soeren. - Hearing Aids improve Hearing - and a LOT more – Presentation at the AEA MiniSymposium – May 2016

Laureyns, Mark. - Diabetes & Hearing Loss, what are the consequences for hearing aid fitting? - Presentation at the AEA MiniSymposium – May 2015