



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

Joint AEA, EFHOH, EHIMA report

March 2024 edition

Getting the numbers right on Hearing Loss

Hearing Care and Hearing Aid Use in Europe

A joint AEA/EFHOH/EHIMA report

Mark Laureyns*, Nikolai Bisgaard***, Lidia Best** and Stefan Zimmer***.

*AEA (European Association of Hearing Aid Professionals), **EFHOH (European Federation of Hard of Hearing People), ***EHIMA (European Hearing Instrument Manufacturers Association).

When discussing the number of people living with hearing loss, the impact of professional hearing care, or the usage of hearing aids in various countries, one encounters numerous sets of data and varying definitions based on multiple methodologies. This makes an all-encompassing analysis of existing data very difficult. Therefore, the European Associations for **Hard of Hearing People** (EFHOH), **Hearing Aid Professionals** (AEA) and **Hearing Instrument Manufacturers** (EHIMA) have made an attempt at “getting the numbers right” by jointly publishing this article.

Data on prevalence used in this article stems from self-reported hearing loss. The reason for this is that **people are not likely to seek professional help if they do not perceive having any hearing problems**. Choi JE et al, 2019, used data from the fifth Korea National Health and Nutrition Examination Survey (KHANES) to investigate discrepancies between self-reported hearing difficulty and audiometrically measured hearing loss. The study showed that self-reporting is an effective measure of the true numbers of people with disabling hearing loss. The authors conclude that factors such as age, tinnitus, occupational noise exposure, hypertension and depression should also be incorporated into the evaluation of hearing loss in clinical practice.

A key source of data referred to in this article is EHIMA’s EuroTrak surveys¹. In EuroTrak, all participants are asked whether they experience any hearing difficulties. If they confirm they have hearing difficulties, they are then identified as people with self-reported hearing loss. Those who confirm to experience hearing difficulties are then asked more detailed questions such as:

- Do you experience hearing difficulties in one ear or both ears?
- How would you describe the degree of your hearing difficulty? (Answers: 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)? (Answers: extremely difficult; quite difficult; somewhat difficult; slightly difficult; not at all difficult).

Introducing EuroTrak

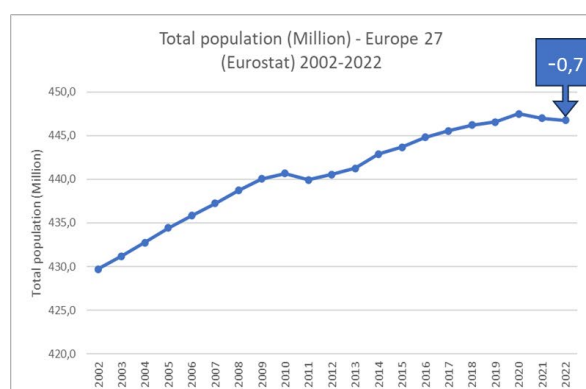
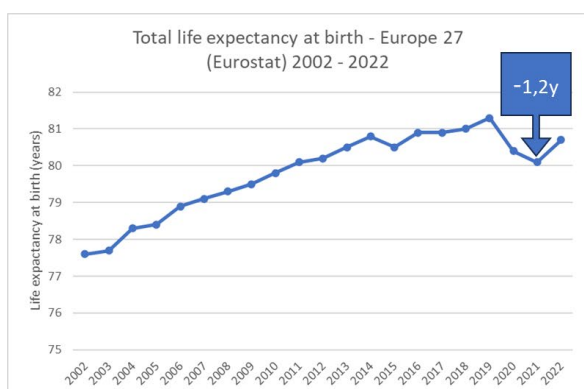
The EuroTrak surveys are designed and executed by Anovum (Zurich) on behalf of the European Hearing Instrument Manufacturers Association (EHIMA). These surveys are based on a representative sample of the population in each country (> 12,000 people per country – weighted in age, gender, education level, region etc.). For each country, a sample of at least 1,000 people with self-reported hearing loss is included.

¹ All available surveys can be found at <https://www.ehima.com/surveys/>

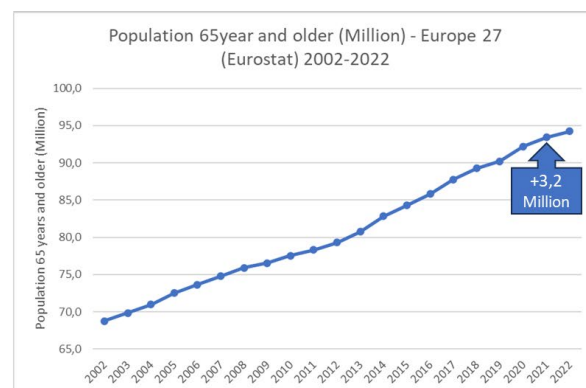
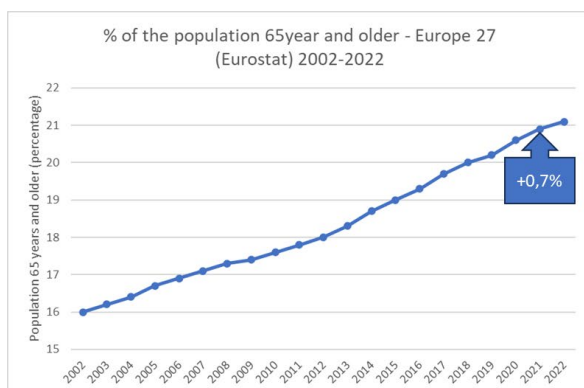
In this article, the latest EuroTrak results for 11 European countries are used to inform our findings. In total, 157,970 people were interviewed, with 14,166 people with self-reported hearing loss included in this overview. Furthermore, information from EFHOH, AEA and EHIMA is used in order to make the best possible estimates on the number of hearing aids sold and used in Europe.

COVID-19 impact demographics in Europe.

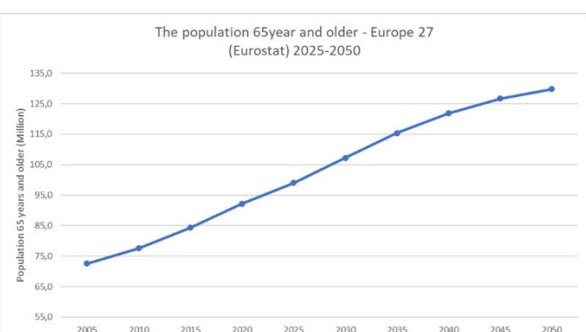
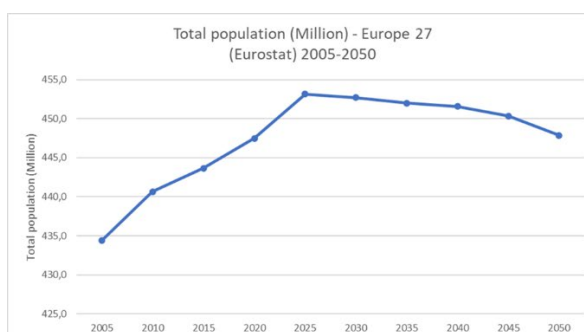
The total life expectancy at birth in the European Union (EU) dropped 1.2 years in the year 2021, compared to the year 2019 (from 81.3 years to 80.1 years). The total population in the EU decreased by 0.7 million in 2022 compared to 2020 (from 447.5 million to 446.7 million).



Yet the proportion of the population in older age groups did not decrease. The population in the EU of those aged 65 years and older actually increased by 0.7% (3.2 million people) between 2019 and 2021.



When we look at the projections until 2050 from Eurostat, published in 2023, while the total population in the EU will start declining from 2025 onwards, the population aged 65 years and older will continue to increase until at least 2050.



How many people are hard of hearing in Europe?

How many people in Europe self-report to have hearing difficulties? When comparing the EuroTrak results on self-reported hearing loss with the Eurostat data on the population 65 years or older, a very strong correlation is observed. It is clear that the higher the percentage of the population aged 65 and older, the higher the percentage of the population that experience hearing difficulties. Based on the latest EuroTrak studies, the relation between the percentage of the population which is over 65 years and the percentage of the total population self-reporting hearing loss is 50.3%. This percentage is lower for Western Europe (49.1%) and higher for Eastern Europe (61.8%), which is in line with the findings of the WHO (2018). The WHO indicates that prevalence of hearing loss is higher in Eastern Europe than Western Europe by a factor of 1.35. These observations can be used to estimate the proportion of people that would self-report a hearing loss in the countries where no EuroTrak survey has been carried out.

In table 1, you can find the number of people in 30 European countries that would self-report a hearing loss. Some are results from EuroTrak, while others are estimated.

Country	Eurostat Age >65 %	Self Rep Hloss %	Self Rep Hloss Mill	Country	Eurostat Age >65 %	Self Rep Hloss %	Self Rep Hloss Mill
EU27 + Norway, Swiss & UK	20,7%	11,1%	59,06	EU27 + Norway, Swiss & UK	20,7%	11,1%	59,06
Austria*	19,4%	9,7%	0,87	Latvia*	20,9%	14,3%	0,27
Belgium	19,5%	9,4%	1,10	Lithuania*	20,0%	13,6%	0,38
Bulgaria*	21,7%	14,9%	0,96	Luxembourg*	14,8%	7,1%	0,05
Croatia*	22,5%	15,6%	0,60	Malta*	19,2%	9,6%	0,05
Cyprus*	16,5%	8,0%	0,07	Netherlands	20,0%	10,3%	1,81
Czech Republic*	20,6%	14,1%	1,52	Norway	18,2%	9,3%	0,50
Denmark	20,3%	10,9%	0,65	Poland	19,1%	11,8%	5,69
Estonia*	20,4%	13,9%	0,19	Portugal*	23,7%	12,2%	1,26
Finland*	23,1%	11,9%	0,66	Romania*	19,5%	13,2%	2,51
France	21,0%	9,7%	6,58	Slovakia*	17,4%	11,6%	0,63
Germany	22,1%	11,1%	9,36	Slovenia*	21,1%	14,5%	0,30
Greece*	22,7%	11,6%	1,21	Spain	20,1%	10,6%	5,09
Hungary*	20,5%	14,0%	1,36	Sweden*	20,3%	10,2%	1,07
Ireland*	15,0%	7,2%	0,37	Switzerland	19,0%	7,4%	0,65
Italy	23,8%	12,5%	7,38	United Kingdom	18,4%	8,8%	5,90

Table 1: Data from Eurostat on the percentage of the population over 65 years of age, the percentage of people that would self-report hearing loss as well as the total number of people in millions with self-reported hearing loss. An asterisk in the country name indicates that the value is estimated. No asterisk indicates a country with EuroTrak data. (Source of basic data: EHIMA-Anovum EuroTrak 2021-2023 & Eurostat 2022)

On average, **11.1% of the population of the European Union, Norway, Switzerland, and UK, or 59 million people, will self-report hearing loss.** Among the population of 65+-year-olds, this proportion rises to 20.7%.

Luxemburg and Ireland are at the lower end with a prevalence of self-reported hearing loss of 7% (and 15% among 65+-year-olds).

Italy has the highest percentage of the 65+ population (23.8%), and a high prevalence of self-reported hearing loss of the general population (12.5%). Croatia and Bulgaria have the highest prevalence of self-reported hearing loss (15.1% and 15.6% respectively)

In Fig. 1, the correlation between the aged population and self-reported hearing loss is obvious, with the exception of one outlier, Switzerland.

Switzerland has a prevalence of only 7.4% in the latest EuroTrak survey from 2022, which is lower than expected with 18.5% of the population being over 65+ of age. The estimate based on the population over 65 years of age is 9.9%.

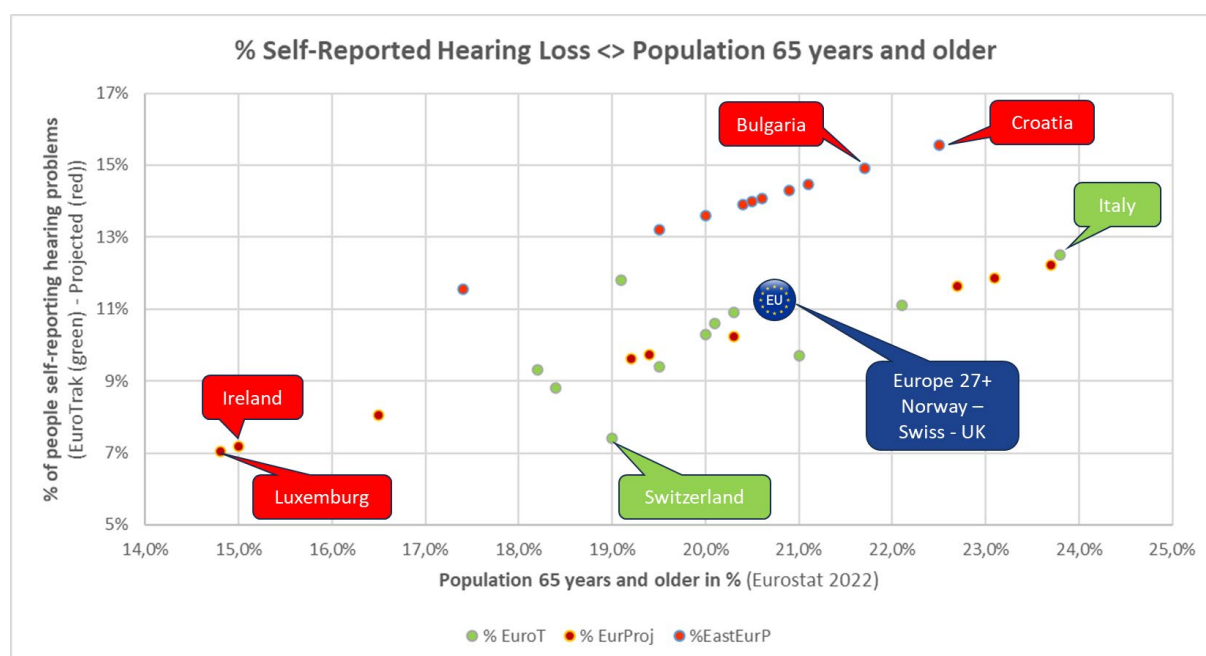


Fig1: The relation between the % of people self-reporting hearing difficulties and the Eurostat data on the % of the population aged 65 or older. (EuroTrak data in green, projected data in red and the European average in blue) (Source of the basic data: EHIMA-Anovum EuroTrak2021-2023 & Eurostat 2022)

The value chain – getting access to professional hearing care

The first step to addressing this issue is to create awareness, ensuring that hard of hearing people acknowledge there is a problem and also accept it, so they can seek professional help. Hearing screening and wide-ranging public campaigns are essential tools to increase awareness of this invisible condition.

Based on the latest EuroTrak surveys in 11 countries (Belgium, Denmark, Germany, France, Italy, Norway, Poland, Spain, Switzerland, The Netherlands and UK – covering 14,006 people with self-reported hearing loss) we notice the following “go-to” action behaviour:

- Once the condition is recognised, i.e. people report hearing difficulties, 75% consult a medical professional (typically their general practitioner or ENT specialist) for their hearing problems.
- Of those who have this first interaction with a medical professional, 73% are referred to a hearing care professional. This means that out of the total population who have noticed hearing loss, 55% will eventually see a hearing care professional.
- And finally, 76% of those referred to a hearing care professional start using hearing aids. This means that from the initial total population reporting hearing loss, 42% are cascaded down the referral pathways to hearing aid usage. The total drop-out rate from the initial recognition of a hearing problem is 58%.

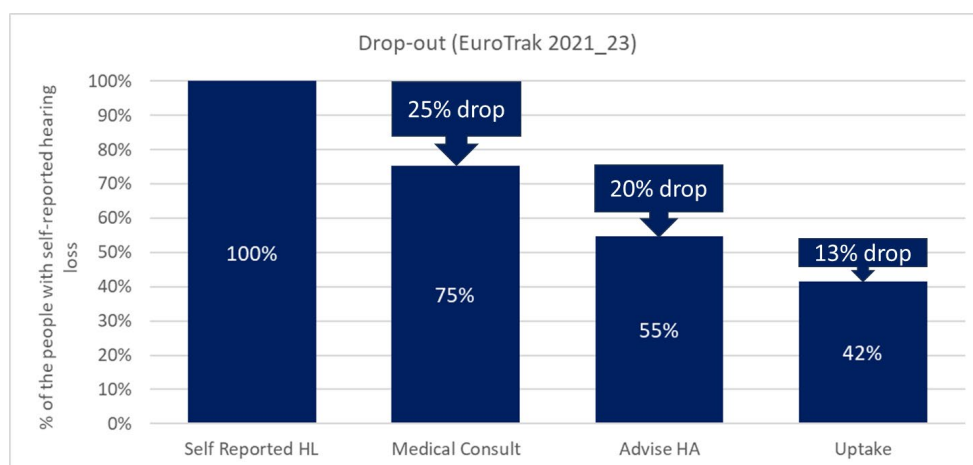


Fig2: The drop-out table based on the average EuroTrak results for 11 countries. The first bar represents all the people with self-reported hearing loss. The second bar shows the percentages that consult a medical practitioner for their hearing loss. The third bar is the % of those who were advised to visit a hearing care professional. The fourth bar is the % of people that then acquire hearing aids. (Source of basic data: EHIMA-Anovum EuroTrak 2021-23)

Hearing aid uptake by people self-reporting to have hearing problems

Across the latest 11 EuroTrak surveys, approximately 55% of people with self-reported hearing loss are advised to use hearing aids and referred to hearing care professionals. In total, 42% use hearing aids (referred to as uptake).

Based on the best estimates of all relevant associations and using the model by Bisgaard (2022), an overview of uptake of hearing aids by people with self-reported hearing problems in 30 European countries could be devised. It was seen that the European average is 36% uptake; 15 countries have more than 30% uptake, while 8 countries have less than 20% uptake.

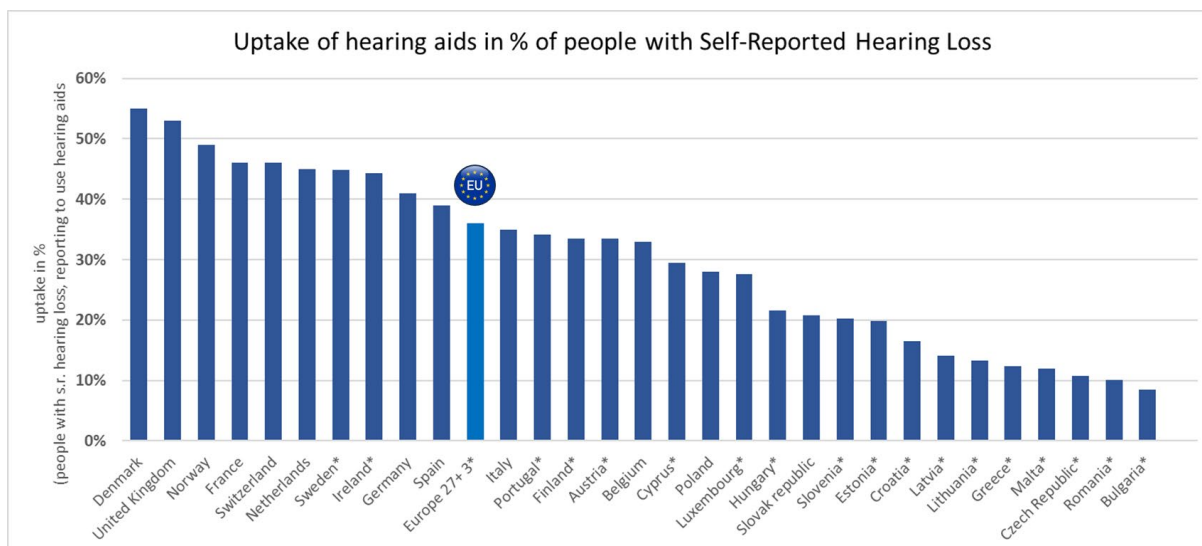


Fig3: Uptake of Hearing Aids by people with self-reported hearing problems in all 30 European Countries. The European average is 36% uptake (light blue bar). An asterisk in the country name indicates that the value is estimated. No asterisk indicates a country with EuroTrak data (Source of basic data: EHIMA-Anovum EuroTrak 2021-2023, EuroStat 2022, AEA&EFHOH reports)

What are the factors influencing the uptake of hearing aids?

When the uptake of hearing aids for people self-reporting mild hearing loss is analysed, significant differences are observed between the results for the different countries in the latest EuroTrak surveys.

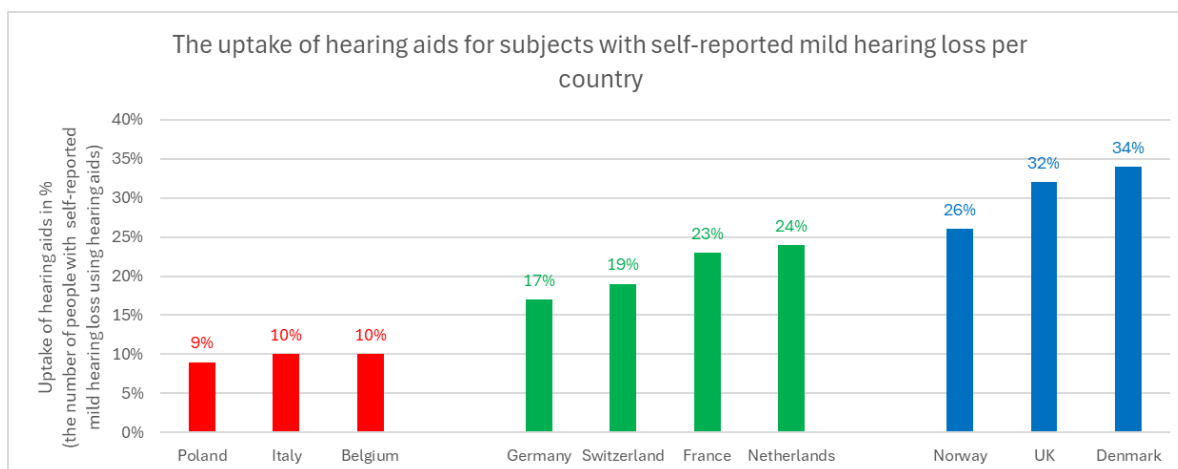


Fig4: Uptake of hearing aids by people with self-reported mild hearing loss in 10 European Countries with a reimbursement system for hearing aids. Red bars are countries without coverage for mild hearing loss, green bars are countries with coverage for mild hearing loss, blue bars are countries with coverage for mild hearing loss provided free of charge by a public system. (Source of basic data: EHIMA-Anovum EuroTrak 2019-2023, AEA&EFHOH reports)

The three countries in red (Poland, Italy and Belgium), have an uptake of 10% or less, and they all have a reimbursement system that does not cover hearing aids for people with mild hearing loss (<40dBHL WHO index). Hearing aids are provided via a private system.

The four countries in green (Germany, Switzerland, France and The Netherlands), have a reimbursement system that does cover hearing aids for people with mild hearing loss (<40dBHL WHO index). The hearing aids are also provided via a private system in these countries.

The three countries in blue (Norway, UK and Denmark), have a reimbursement system, which does cover hearing aids for people with mild hearing loss and hearing aids are provided free of charge by the public health system.

When the impact of these three different reimbursement systems is analysed (Fig 5), we see that next to the consequences for mild hearing loss, they also impact the uptake of hearing aids for people with self-reported moderate and severe/profound hearing loss. The latter effect could also be influenced by the fact that the countries in red have a lower reimbursement level.

The system with the highest uptake is the one which covers hearing aids for people with mild hearing loss and hearing aids are provided free of charge by a public system. Unfortunately, this system results in a lower satisfaction rating, which may be explained by the limited freedom of choice, longer waiting lists and possible reduced availability of person-centred hearing care.

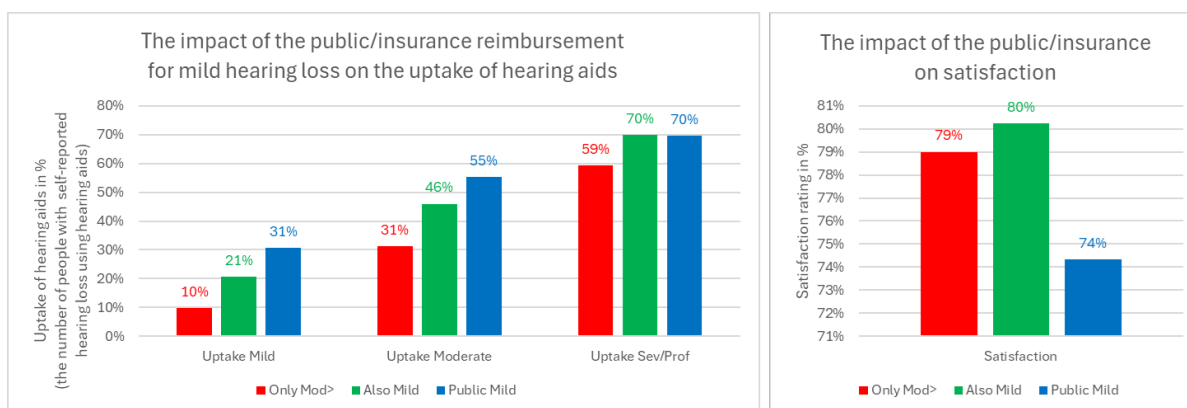


Fig5: Uptake of Hearing Aids by people with self-reported mild, moderate and severe/profound hearing loss (left pane) and satisfaction (right pane) in 10 European Countries with a reimbursement system for hearing aids. Red bars are countries without coverage for mild hearing loss, green bars are countries with coverage for mild hearing loss, blue bars are countries with coverage for mild hearing loss provided free of charge by a public system. (Source of basic data: EHIMA-Anovum EuroTrak 2019-2023, AEA&EFHOH reports)

Johnson and Bisgaard (2024) developed a system rating the level of reimbursement and the eligibility for hearing aids and correlated this with the uptake of hearing aids (based on the earlier model (Bisgaard et al 2022)). When this system is applied to the 30 European countries (EU, Norway, Switzerland, and the UK), we get the following results:

In countries where only groups with additional needs are eligible for hearing aids, the uptake is 25%. When people with moderate hearing loss and upwards are eligible, the uptake increases to 36% and when mild loss is covered, the uptake increases further to 51%.

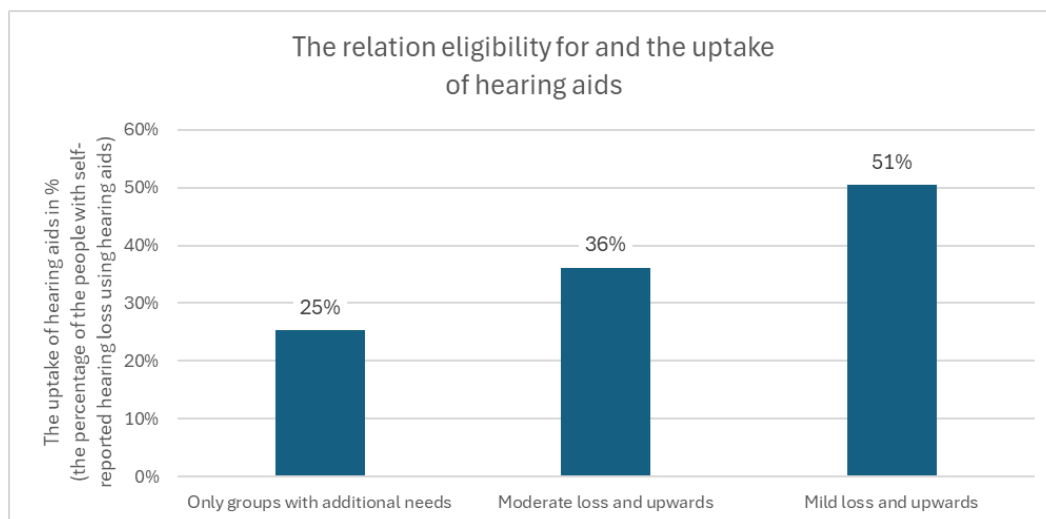


Fig6: Uptake of Hearing Aids in relation to the eligibility for 30 European countries.

In countries where reimbursement is around 20% of the total cost, the uptake is 19%, but when reimbursement is around 50%, the uptake is 27%. When reimbursement is around 80%, the uptake increases to 41%, and when hearing aids are free of charge, uptake is 49%.

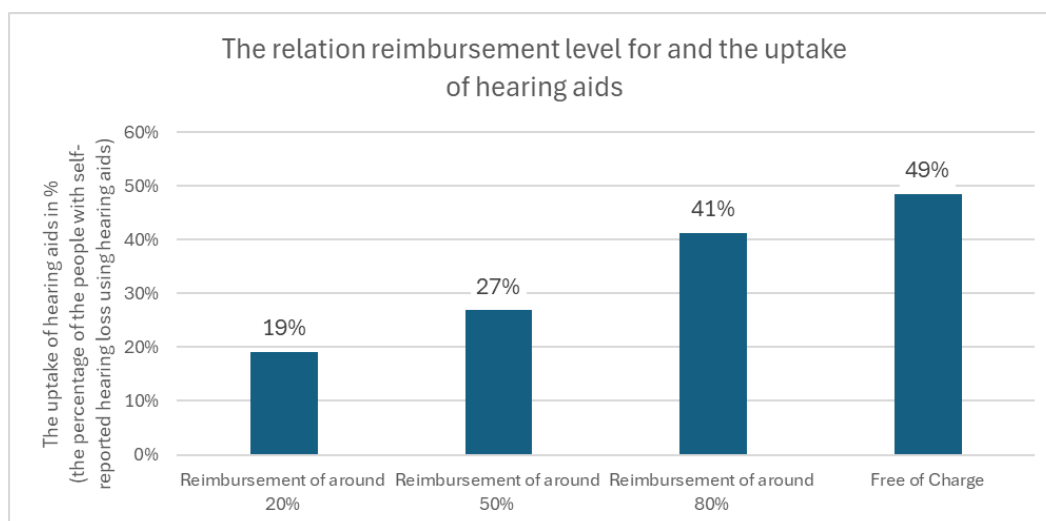


Fig7: Uptake of Hearing Aids in relation to the reimbursement level for 30 European countries.

The EFHOH reimbursement report (2022) advocates for increasing eligibility to people with mild hearing loss and increasing the level of reimbursement. EFHOH also advocates strongly for freedom of choice based on person-centred care and the interest of the end-user, in order to have a solution that allows them to reach their full potential.

Trends and future directions

As this is our third “Getting the Numbers Right” report since 2016, and given we have access to EuroTrak surveys since 2009, trends over a 13-year period can be seen.

Countries with the longest track record of EuroTrak surveys show a consistently increasing uptake of hearing aids over time. This is also evident from all three “Getting the Numbers Right” reports as there is an increase from 29% in 2016 to 33% in 2020 and again to 36% in this latest report (2024).

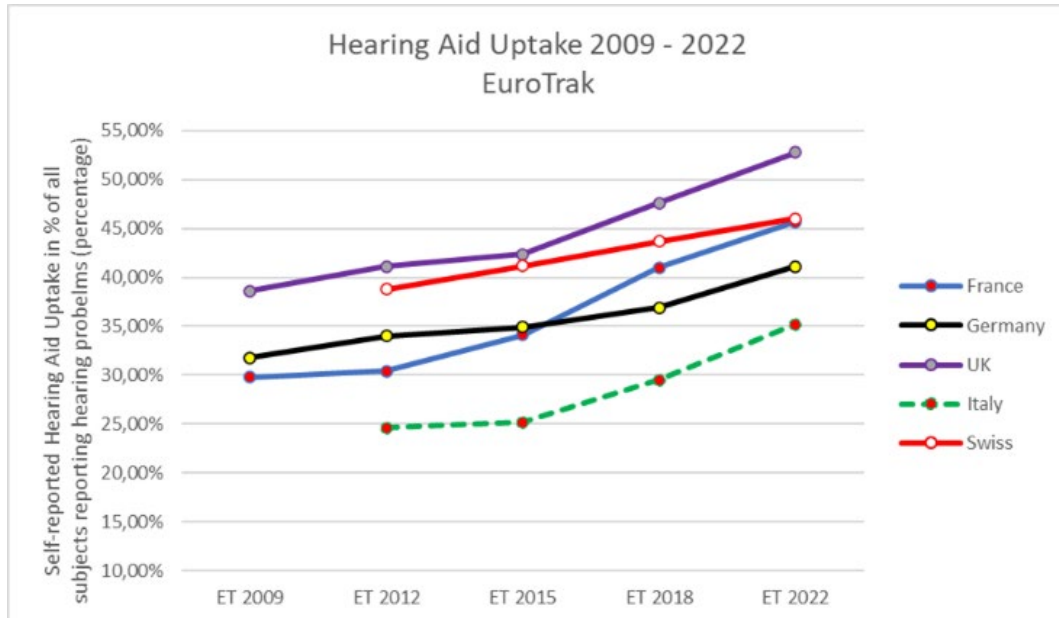


Fig8: Uptake of Hearing Aids between 2009 and 2022 for 5 countries in EuroTrak.

It can also be seen that the percentage of self-reported hearing loss declines slowly in most countries, except for Italy.

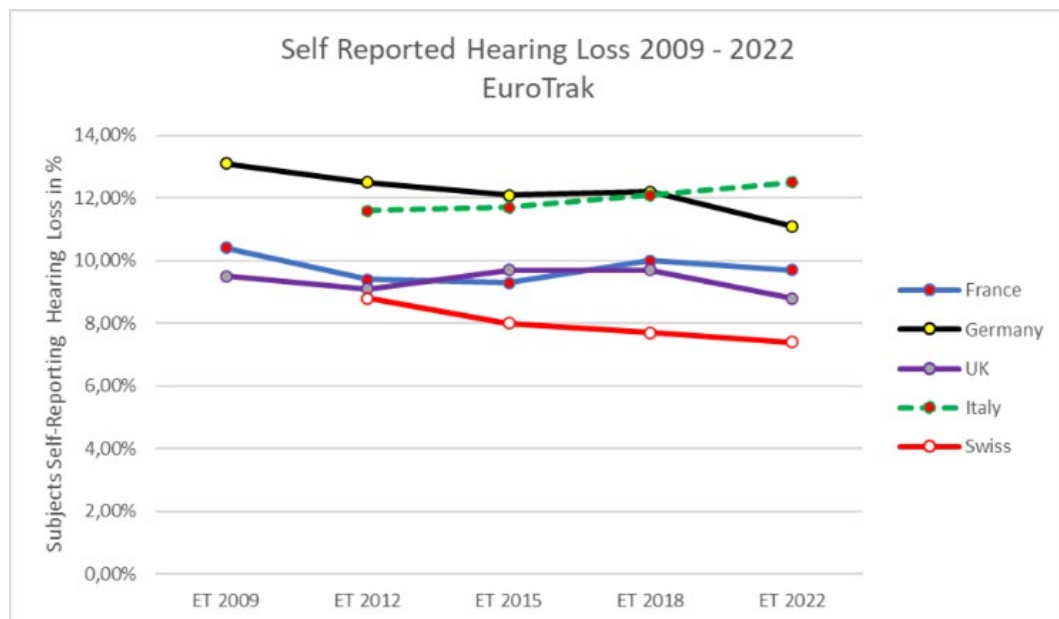


Fig9: The prevalence of self-reported hearing loss between 2009 and 2022 for 5 countries in EuroTrak.

Anovum also found a significant difference between the group with self-reported hearing problems reported between 2009 and 2022 for three age groups (≤ 34 years, 35-54 years and ≥ 55 years) and for the total sample from France, Germany, and the UK.

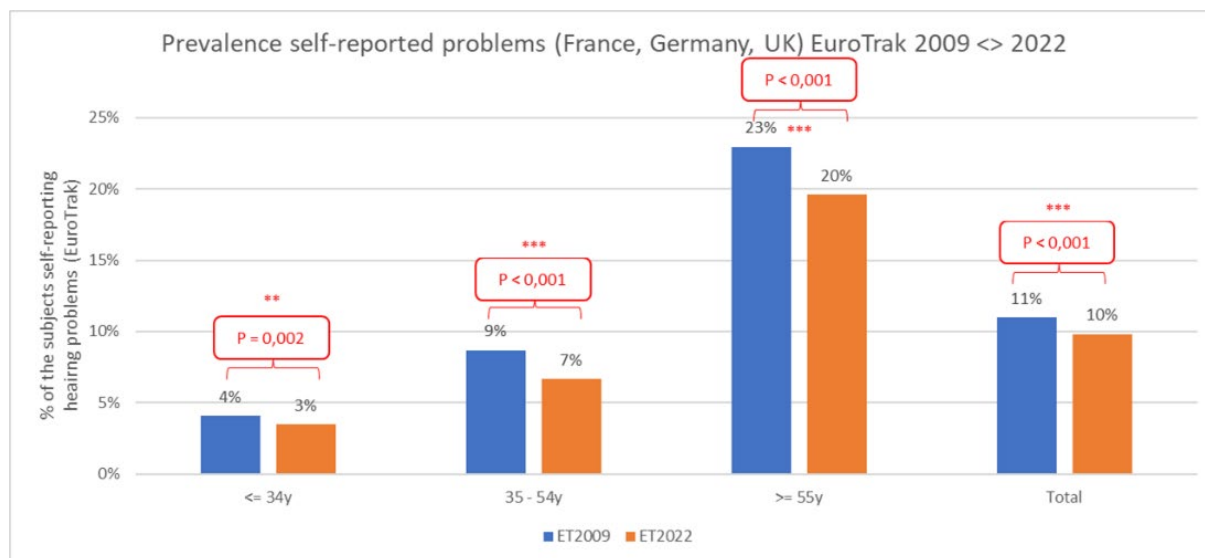


Fig10: The difference in the prevalence of self-reported hearing loss between 2009 and 2022 for 3 countries in EuroTrak (France, Germany and UK).

Conclusion:

Europe has a rapidly-ageing population. As its population gets older, hearing loss will become a more prevalent health condition. Uptake of hearing aids among the population with self-reported hearing loss is subpar, at 36% across 30 European countries. While a significant proportion of those who self-report hearing loss see a medical professional, there remains a significant drop out rate. It is evident that the level of reimbursement and the eligibility (the level of hearing loss) have a tangible and significant impact on the uptake of hearing aids. More generous reimbursement and a lower barrier to access increases overall uptake, while there is higher satisfaction with hearing intervention provided via the private sector. While hearing aid usage is increasing slowly over time, more work must be done in terms of raising awareness among the general public and primary healthcare providers about the consequences of untreated hearing loss and the convenience and benefits of hearing aids to minimise dropout rates. There is also a role for advocacy in individual countries to improve the system of reimbursement in order to ensure optimal access for all who will benefit.

References:

Best L & Laureyns M. The history of person-centred hearing care. ENT & Audiology News, 2023; Vol 32, N°5. Retrieved at: <https://www.entandaudiologynews.com/features/audiology-features/post/the-history-of-person-centred-hearing-care>

Bisgaard N & Ruf S. Findings From EuroTrak Surveys From 2009 to 2015: Hearing Loss Prevalence, Hearing Aid Adoption, and Benefits of Hearing Aid Use. American Journal of Audiology 2017 Oct 12;26(3S): p451-461.

Bisgaard N, Zimmer S, Laureyns M, Groth J. A model for estimating hearing aid coverage world-wide using historical data on hearing aid sales. Int J Audiol. 2022 Oct;61(10):841-849. doi: 10.1080/14992027.2021.1962551. Epub 2021 Aug 24. PMID: 34428121.

Choi JE, et al. Discrepancies between self-reported hearing difficulty and hearing loss diagnosed by audiometry: prevalence and associated factors in a national survey. BMJ Open 2019;9:e022440.

EFHOH State of provision of Hearing Aids in EUROPE 2022 Report. Retrieved at: <https://www.efhoh.org/hearing-reimbursement-report/>

EuroStat 2023 data retrieved at: <http://ec.europa.eu/eurostat>

EuroTrak 2021-2023 reports retrieved at: <https://www.ehima.com/surveys/>

Johnson E and Bisgaard N, Explaining the Differences Among Countries in Coverage Rate for Hearing Aids (2024 in press)

Laureyns M, Best L, Bisgaard N and Hougaard S “Getting our numbers right on Hearing Loss, Hearing Care and Hearing Aid Use in Europe” - Joint AEA, EFHOH and EHIMA report 2016.

Laureyns M, Bisgaard N, Bobeldijk M and Zimmer S “Getting the numbers right on Hearing Loss, Hearing Care and Hearing Aid Use in Europe” - Joint AEA, EFHOH and EHIMA report 2020. - Available at:

- <https://www.aea-audio.org/portal/index.php/aea-action-plan/awareness>
- <https://efhoh.org/wp-content/uploads/2017/04/Getting-our-Numbers-Right-joint-paper-EHIMA-AEA-EFHOH.pdf>
- https://www.ehima.com/wp-content/uploads/2020/08/Getting-the-numbers-right-AEA_EFHOH_EHIMA-June-2020-final.pdf

WHO – Global costs of unaddressed hearing loss and cost-effectiveness of interventions. retrieved at: <http://www.who.int/pbd/deafness/world-hearing-day/CostOfUnaddressedHearingLossExecSummary.pdf>.

WHO - Addressing the rising prevalence of hearing loss, WHO 2018. Retrieved at: <https://iris.who.int/bitstream/handle/10665/260336/9789241550260-eng.pdf?sequence=1>