Results

EuroTrak Netherlands 2022

1. Introduction
2. Market overview
3. Analysis of hearing aid owners
4. Analysis of hearing impaired non-owners
5. Appendix

Research to create value
Summary
1. Introduction

EuroTrak Netherlands 2022 is part of the EuroTrak / APACTrak studies:

EuroTrak Netherlands 2022 was designed and executed by Anovum (Zurich) on behalf of GAIN and EHIMA.

Sample sizes:
Representative sample (sample 1): n=13'314 people
Hearing impaired (sample 2):
  HA owners: n= 758 people
  Hearing impaired non-owners: n= 551 people

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Summary
2. Market overview

- **Stated hearing loss prevalence**
  - Total: 10.3%, 18+: 11.9% (2016: 10.1%, 18+: 11.8%).
  - Hearing Tests: 26% (2016: 27%) had a hearing test in the last 5 years, most tests done by Audiologists, followed by ENTs and family doctors.

- **Hearing aid adoption rate (HA penetration)**
  - 44.9% of those with self declared HL (2016: 41.1%).
  - 4.6% of total population (2016: 4.2%).
  - 76% of HA owners have binaural treatment (2016: 74%).

- **The route to the hearing aid**
  - 73% of the hearing impaired discussed hearing loss with an ENT doctor or family doctor.
  - 53% got hearing aids recommended from the ENT or family doctor (drop out rate=27% / 2016: 31%).
  - 68% of the GP consultations referred to an ENT, 24% to an audiologist (2016: 16%). 10% recommended no action.
  - 46% of ENT consultations referred to an audiologist, 27% recommended no action (2016: 33%).

- **Potential social cost-savings due to the use of hearing aids**
  - Hearing aids are believed to have a positive impact on the job.
  - Hearing aid owners have a lower risk of being depressed.
  - Quality of sleep seems to improve if hearing impaired use hearing aids.
Summary
3. Analysis of hearing aid owners

- Hearing aid ownership, usage and accessories
  - 58% of the currently owned HAs were bought in 2019 or later.
  - The average age of the currently owned HAs is 3.1 years.
  - The median age of hearing aids before replacement is 5 years.
  - On average, HAs are worn 8.6 hours a day.
  - 34% of today’s hearing aid owners are aware of their hearing aid brand.
  - 44% of the HA owners use an accessory/app for their hearing aids, 66% of those are satisfied with it.
  - 8% of the HA owners have already used remote fitting, but also more than half of them have never heard of it.

- Importance of listening situations and satisfaction with HAs
  - 82% of the hearing aid owners say their hearing aid works better than or as expected.
  - 76% of the HA owners are satisfied with their HAs (2016: 73%).
  - The more hours worn per day, the higher the satisfaction with the HA.
  - Satisfaction with newer hearing aids is higher than with older hearing aids.
  - Talking at home with family members, talking on a phone, conversations (small/large groups, 1 person) and noisy situations are the most important listening situations.

- Positive impact of HAs
  - Significant positive impact of HAs on different aspects: Especially Communication effectiveness, ability to participate in group activities and social life improve with hearing aids.
  - 95% of hearing aid owners declare that their hearing aids improve their quality of life at least sometimes.
Summary

4. Analysis of hearing impaired non-owners

- Reasons not to own/use HAs
  - The main reasons for not using hearing aids are the ENTs opinion, they hear well enough in most situations, do not work well in noisy situations, hearing loss not severe enough and they do not restore hearing to normal.
  - 5% who own hearing aids don’t use them at all (0 hours); 13% use them less than one hour/day (0-1 hour).

- Social rejection and triggers to buy
  - 72% of hearing aid owners feel that people never make fun of or reject them because of their hearing aids. It is more likely somebody makes fun or rejects a hearing impaired without hearing aid (only 43% say they are never made fun of because of their hearing loss).
  - The most important influencing factors for getting hearing aids are worsening hearing loss, ENT, audiologist, spouse and GP (+price, insurance coverage for the non owners).
Detailed Results: Roadmap

1. **Introduction**
   - Organisation of EuroTrak Netherlands 2022
   - Recruitment process: In search of hearing impaired people

2. **Market overview**
   - Prevalence of hearing loss and hearing aid adoption rate
   - Hearing tests and where hearing is tested
   - The route to the hearing aid: Sources of information and drop-out rates
   - Potential social cost-savings due to the use of hearing aids: Work competitiveness, depressive symptoms, sleep quality, co-morbidities

3. **Analysis of hearing aid owners**
   - Hearing aid ownership, awareness of hearing loss before getting hearing aids, lifetime of hearing aids and usage
   - Reasons for getting hearing aids sooner
   - Channels for getting hearing aids, recommendation of channel (NPS)
   - Awareness and usage of accessories
   - Satisfaction with hearing aids and drivers
   - Importance of listening situations
   - Positive impact of hearing aids, safety due to hearing aids, quality of life

4. **Analysis of hearing impaired non-owners**
   - Reasons for not having hearing aids
   - Social rejection because of hearing loss compared to the acceptance of hearing aids
   - Most important triggers to buy

5. **Appendix**
   - Demographics: Hearing aid adoption rates and populations
1. Introduction
Organisation of EuroTrak Netherlands 2022

Organisation

- Principal of the project EuroTrak Netherlands 2022 are GAIN and EHIMA.
- Anovum Zurich developed the concept of EuroTrak Netherlands, designed the questionnaire and conducted the fieldwork in cooperation with a panel company. Furthermore Anovum analyzed the data and prepared the presentation.
- The European Hearing Instrument Manufacturers Association [EHIMA] approved the questionnaire

Use of the data

- GAIN and EHIMA may use the anonymous delivered tables, charts, reports and conclusions of the survey for further research projects, for archiving and publication in any form whatsoever.

- The raw dataset remains at Anovum. If the principal uses the anonymous data (delivered tables, charts, reports) and conclusions of the survey for publications the source of the data needs to be mentioned in the following way:
  “Source: Anovum – EuroTrak Netherlands/2022/n=[relevant sample size]”

- Member companies of the principal can ask Anovum to further analyse the raw data in specific ways at their own expense.
Step 1: Screening interviews

Objective: Prevalence of hearing loss and hearing aid ownership

Process:
1. Representative sample with strict quotas that represent the overall population (Age/Gender interlocked; soft quota on region)
2. Contacts from large panellist pools
3. Screening questionnaire: Stated hearing loss and hearing aid usage + demographics
4. Result: Representative sample of n=13’314 people based on census data.

Step 2: Target population interviews

Objective: Details about satisfaction with hearing aids and reasons for non-adoption

Process:
1. Main questionnaires: Owners and hearing impaired non-owners
2. Balancing through weighting according to representative screening interviews
3. Resulting sample: n=758 hearing aid owners and n=551 hearing impaired non-owners
2. Market overview
Prevalence of hearing loss and adoption rate
Hearing loss and hearing instrument ownership by gender/age
Hearing loss prevalence Netherlands
Self declared hearing loss

% hearing loss prevalence

<table>
<thead>
<tr>
<th>Age Group</th>
<th>2022 (n=13'314)</th>
<th>2016 (n=14'339)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>10.1%</td>
<td>10.3%</td>
</tr>
<tr>
<td>Total 18+</td>
<td>11.9%</td>
<td>11.8%</td>
</tr>
<tr>
<td>74+</td>
<td>35.0%</td>
<td>33.1%</td>
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<tr>
<td>65-74</td>
<td>18.4%</td>
<td>15.0%</td>
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<td>55-64</td>
<td>11.8%</td>
<td>11.6%</td>
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<td>45-54</td>
<td>9.4%</td>
<td>10.2%</td>
</tr>
<tr>
<td>35-44</td>
<td>6.6%</td>
<td>7.6%</td>
</tr>
<tr>
<td>25-34</td>
<td>5.2%</td>
<td>6.0%</td>
</tr>
<tr>
<td>15-24</td>
<td>3.5%</td>
<td>3.5%</td>
</tr>
<tr>
<td>&lt;=14</td>
<td>3.6%</td>
<td>4.0%</td>
</tr>
</tbody>
</table>

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Hearing aid adoption rate: 45% of hearing impaired have hearing aid(s), 76% of them have binaural treatment

<table>
<thead>
<tr>
<th>% of hearing impaired</th>
<th>2022 (n=1'540)</th>
<th>2016 (n=1'637)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>44.9%</td>
<td>41.1%</td>
</tr>
<tr>
<td>Total 18+</td>
<td>45.3%</td>
<td>41.8%</td>
</tr>
<tr>
<td>65+</td>
<td>53.8%</td>
<td>47.3%</td>
</tr>
<tr>
<td>45-64</td>
<td>32.6%</td>
<td>26.5%</td>
</tr>
<tr>
<td>&lt;=44</td>
<td>27.9%</td>
<td>43.2%</td>
</tr>
</tbody>
</table>

EuroTrak Netherlands 2022
HA owners (Base: 704)

EuroTrak Netherlands 2016
HA owners (Base: 695)
Overview hearing loss prevalence and hearing aid adoption

- **2022**
  - Hearing impaired (stated): 10.3%
  - Adoption (% of population): 4.6%
  - Adoption (% of stated impaired): 44.9%

- **2016**
  - Hearing impaired (stated): 10.1%
  - Adoption (% of population): 4.2%
  - Adoption (% of stated impaired): 41.1%
The more severe the hearing loss, the higher the adoption rate

* Construction of 6 groups: A factor analysis was performed to identify one factor “degree of hearing loss”. The following questions were included in the factor:
  • Number of ears impaired (one or two)
  • Stated hearing loss (Mild to Profound)
  • Scores on 6 APHAB-EC-like questions (Scaled 1-5)
  • When NOT using a hearing aid, how difficult is it for you to follow conversations in the presence of noise
→ People were segmented into 6 groups of same size (16.67% of all hearing impaired in the sample).
Hearing loss characteristics: Owners compared to non-owners

<table>
<thead>
<tr>
<th></th>
<th>HA-Non-owner</th>
<th>HA Owner</th>
<th>Hearing Aid Adoption (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n=551</td>
<td>n=758</td>
<td></td>
</tr>
<tr>
<td><strong>Ears impaired</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unilateral loss</td>
<td>44%</td>
<td>24%</td>
<td>34%</td>
</tr>
<tr>
<td>Bilateral loss</td>
<td>56%</td>
<td>76%</td>
<td>57%</td>
</tr>
<tr>
<td><strong>Perceived loss</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mild</td>
<td>35%</td>
<td>12%</td>
<td>24%</td>
</tr>
<tr>
<td>Moderate</td>
<td>46%</td>
<td>47%</td>
<td>47%</td>
</tr>
<tr>
<td>Severe</td>
<td>12%</td>
<td>32%</td>
<td>65%*</td>
</tr>
<tr>
<td>Profound</td>
<td>7%</td>
<td>9%</td>
<td></td>
</tr>
</tbody>
</table>

* combined “severe” and “profound” because n is too small
Hearing tests and where hearing is tested
Hearing Tests: 26% had a hearing test in the last 5 years (2016: 27%), most tests done by Audiologists, followed by ENTs and family doctors.

Have you ever taken a hearing test?
- Yes, in the last 12 months: 11%
- Yes, in the last 1-5 years: 15%
- Yes, more than 5 years ago: 16%
- No, never: 57%

Where/how was your hearing tested?
- Audiologist: 34%
- Ear doctor (ENT): 30%
- Family doctor: 27%
- Audiologisch Centrum: 13%
- Online test, smartphone app: 3%
- Other: 10%
- DNK: 5%

Base=10'597

Base= 2'830
The route to the hearing aid:
Sources of information and drop-out rates
Doctors/HCPs are the most important sources of information and therefore the major gatekeepers.

Where did you gather information about hearing aids?

- Family doctor, ear doctor (ENT), Hearing Care Professional, Audiologist: 55%
- Internet research: combined (all three): 36%
- Internet research: websites of hearing aid clinics: 20%
- Internet research: websites of hearing aids manufacturers: 18%
- Conversations with friends, relatives already fitted with a hearing aid: 12%
- Internet research: other websites, google…: 9%
- Articles in magazines or newspapers: 7%
- Print ads received in your mailbox: 5%
- I did not gather information about hearing aids: 52%
- Other: 3%
Of those who discussed the hearing loss with a doctor, 2 out of 3 talked to a family doctor first

Those who discussed hearing loss with family doctor and/or ENT:
Who was the doctor you discussed your hearing loss with for the **first time** – your family doctor or the Ear, Nose and Throat specialist (ENT)?

- **Ear, Nose and Throat specialist (ENT)**: 33%
- **Your family doctor**: 67%

Total n= 930

- **Hearing aid (n=612)**:
  - Ear, Nose and Throat specialist (ENT): 32%
  - Your family doctor: 68%

- **Hearing loss but no hearing aid (n=318)**:
  - Ear, Nose and Throat specialist (ENT): 35%
  - Your family doctor: 65%
The route to the hearing aid

Base: n=1'309

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Much higher drop-out-rates for the lower hearing loss segments

Top 50% hearing loss*

Low 50% hearing loss*

* Construction of 6-groups: A factor analysis was performed to identify one factor "degree of hearing loss". The following questions were included in the factor:
- Number of ears impaired (one or two)
- Stated hearing loss (Mild to Profound)
- Scores on 6 APHAB-EC – like questions (Scaled 1-5)
- When NOT using a hearing aid, how difficult is it for you to follow conversations in the presence of noise

People were segmented into 6 groups of same size (16.67% of all hearing impaired in the sample).

Base: n=1'309
### The route to the hearing aid: GP/Family doctor

Have you discussed your hearing problem with your family doctor?

#### % Discussed with GP

<table>
<thead>
<tr>
<th></th>
<th>2022</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total hearing impaired</td>
<td>59%</td>
<td>54%</td>
</tr>
<tr>
<td>HA owner</td>
<td>71%</td>
<td>69%</td>
</tr>
<tr>
<td>Hearing impaired non-owners</td>
<td>48%</td>
<td>43%</td>
</tr>
</tbody>
</table>

#### What did he/she recommend?

**HA owner (n=501)**

- Referred to an ear doctor (ENT): 73%
- Referred to an Audiologist: 31%
- Recommended to get a hearing aid: 15%
- Recommended no further action: 1%

**Impaired non-owner (n=258)**

- Referred to an ear doctor (ENT): 61%
- Referred to an Audiologist: 14%
- Recommended to get a hearing aid: 7%
- Recommended no further action: 23%
The route to the hearing aid: ENT
Have you ever discussed your hearing problem with an Ear, Nose and Throat specialist (ENT)?

% Discussed with ENT

- **Total hearing impaired**
  - 2022: 61%
  - 2016: 56%

- **HA owner**
  - 2022: 79%
  - 2016: 79%

- **Hearing impaired non-owners**
  - 2022: 45%
  - 2016: 41%

What did he/she recommend?

**HA owner (n=589)**
- Referred to an Audiologist: 61%
- Did prescribe a hearing aid: 51%
- Recommended no further action: 2%

**Impaired non-owner (n=262)**
- Referred to an Audiologist: 25%
- Did prescribe a hearing aid: 17%
- Recommended no further action: 64%
The route to the hearing aid: Audiologist
Have you ever discussed your hearing problem with an Audiologist?

% Discussed with Audiologist

- Total hearing impaired
  - 2022: 57%
  - 2016: 64%
- HA owner
  - 2022: 88%
  - 2016: 92%
- Hearing impaired non-owners
  - 2022: 37%
  - 2016: 40%

What did he/she recommend?

- HA owner (n=704)
  - Recommended to get a hearing aid: 98%
  - Recommended not to get a hearing aid: 2%

- Impaired non-owner (n=227)
  - Recommended to get a hearing aid: 57%
  - Recommended not to get a hearing aid: 43%
Recommendations by profession

- **GP**
  - Referred to an ear doctor (ENT): 68%
  - Referred to an audiologist: 24%
  - Recommended to get a hearing aid: 12%
  - Recommended no further action: 10%

- **ENT**
  - Referred to an ear doctor (ENT): 46%
  - Referred to an audiologist: 37%
  - Recommended to get a hearing aid: 27%
  - Recommended no further action: 10%

- **Audiologist**
  - Referred to an ear doctor (ENT): 84%
  - Referred to an audiologist: 16%
  - Recommended to get a hearing aid: 12%
  - Recommended no further action: 10%

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Potential social cost-savings due to the use of hearing aids: Work competitiveness, depressive symptoms, sleep quality, co-morbidities
Work competitiveness: 90% of the working hearing aid owners state their hearing aid(s) are useful on their job.

How useful are your hearing aids on your job?

- Of no use: 10%
- Of some use: 25%
- Of significant use: 65%

Base: n=232
Work competitiveness: People with hearing aids recognize that hearing aids increase the chance of hearing impaired to get promoted, to get the right job and to get more salary.
General health problems: Hearing aid owners have a lower risk of being depressed (PHQ-2 Screening) compared to impaired non-owners with comparable hearing loss (Top50% hearing loss group*).

Depression symptoms:
PHQ-2 Screening:
In the last 2 weeks:
- Little interest or pleasure
- Feeling down, depressed, hopeless

Probability of major depressive disorder

<table>
<thead>
<tr>
<th></th>
<th>very high</th>
<th>medium</th>
<th>very low</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hearing aid</td>
<td>2%</td>
<td>54%</td>
<td>44%</td>
</tr>
<tr>
<td>Top 50% hearing loss, no hearing aid</td>
<td>7%</td>
<td>60%</td>
<td>33%</td>
</tr>
</tbody>
</table>

Base: hearing aid n=580 / top 50% HL, no hearing aid =112

*Construction of 6-groups: A factor analysis was performed to identify one factor "degree of hearing loss". The following questions were included in the factor:
- Number of ears impaired (one or two)
- Stated hearing loss (Mild to Profound)
- Scores on 6 APHAB-EC – like questions (Scaled 1-5)
- When NOT using a hearing aid, how difficult is it for you to follow conversations in the presence of noise

→ People were segmented into 6 groups of same size (16.67% of all hearing impaired in the sample).
In the evenings I often feel physically exhausted

- In the evenings I often feel mentally exhausted

General health problems: Compared to impaired hearing aid non-owners with significant hearing loss (Top50% hearing loss group*), hearing aid owners feel less exhausted in the evenings.

*Construction of 6-groups: A factor analysis was performed to identify one factor “degree of hearing loss”. The following questions were included in the factor:

- Number of ears impaired (one or two)
- Stated hearing loss (Mild to Profound)
- Scores on 6 APHAB-EC-like questions (Scaled 1-5)
- When NOT using a hearing aid, how difficult is it for you to follow conversations in the presence of noise

† People were segmented into 6 groups of same size (16.67% of all hearing impaired in the sample).
General health problems: Quality of sleep seems to improve if hearing impaired use hearing aids

Are you generally satisfied with the quality of your sleep?

- Top 50% hearing loss, no hearing aid (n=112):
  - No: 53%
  - Yes: 47%

- Hearing aid (n=580):
  - No: 31%
  - Yes: 69%
21% of all hearing impaired think that hearing loss could be linked to depression.

Please tick all of the health issues below which you think could be linked to one’s hearing loss.

- Depression: 21%
- Sleeping disorder: 16%
- High blood pressure: 10%
- Poor eyesight: 7%
- Diabetes: 7%
- Dementia: 6%
- Back problems: 5%

Hearing loss is not linked to any of those health issues: 60%

Hearing impaired, n=1'309
3. Analysis of hearing aid owners
Hearing aid ownership, awareness of hearing loss before getting hearing aids, lifetime of hearing aids and usage
Low adoption rates within mild hearing loss

<table>
<thead>
<tr>
<th>Stated hearing loss</th>
<th>(% of impaired population*)</th>
<th>Adoption rate %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profound</td>
<td>(8%)</td>
<td>65%*</td>
</tr>
<tr>
<td>Severe</td>
<td>(21%)</td>
<td>47%</td>
</tr>
<tr>
<td>Moderate</td>
<td>(46%)</td>
<td>24%</td>
</tr>
<tr>
<td>Mild</td>
<td>(24%)</td>
<td></td>
</tr>
</tbody>
</table>

Base: n=1'309
Sums can differ from 100% due to rounding
* combined "severe" and "profound" because n is too small
58% of the currently owned HAs were acquired in 2019 or later. RIC is the most often purchase type of HA.

**Year of purchase**

- **2021**: 3.1 years
- **2016**: 3.1 years

**Type of HA**

- **Behind the ear hearing aid with speaker in the ear connected by a thin wire**: 61%
- **Behind the ear hearing aid with a tube and earpiece**: 28%
- **In the ear hearing aid**: 10%
- **Cochlear Implant**: 1%

**Age of currently owned HAs (Mean):**

- **2022**: 3.1 years
- **2016**: 3.1 years
On average 3 years pass between becoming aware of the hearing loss and the purchase of hearing aids. Hearing aids are used for 5 years before they are being replaced.

Thinking back before you acquired your first hearing aid: How many years have passed since you became aware of your hearing loss until you acquired a hearing aid?

- 17%: 1 year
- 29%: 2 years
- 29%: 3 years
- 16%: 4-6 years
- 9%: more than 6 years

Age of HA before it has been replaced:
- 2022: 5 years (median)
- 2016: 5 years (median)
Thinking back before you obtained your first hearing aid(s): do you think, you should have gotten them sooner?

67% of all HA owners think they should have gotten their HAs sooner! Main reason is missing out on social life.

IF YES:
What are the reasons why you think you should have gotten your hearing aid(s) sooner? What are the opportunities you think you have missed because of this?
Please tick all that apply

- Better social life: 59%
- Less fatigue in the evening: 39%
- Better mental/emotional health: 30%
- Better performance at work: 21%
- Other opportunity: 7%

Base: n=503

HA-owner, n=758

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89% received 3rd party reimbursement. Information deficit non-owners: only 37% know whether HAs would be reimbursed

**Owners**: To what extent did you pay for your hearing aid yourself?
This is the amount you paid the hearing care professional for the device; therefore excluding the costs of any extras such as dry box, cleaning set, extra batteries, etc.

**Non-owners**: Will your hearing aid(s) be fully or partially reimbursed, as far as you know now? (health insurance, ...)

- I did not have to pay anything myself; the full amount was reimbursed: 35%
- I had to pay a part myself; the rest was reimbursed: 52%
- I paid for the hearing aid myself in full: 8%
- don’t know: 3%

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HA-owner, n=758

- I did not have to pay anything myself; the full amount was reimbursed: 35%
- I had to pay a part myself; the rest was reimbursed: 52%
- I paid for the hearing aid myself in full: 8%
- don’t know: 3%

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HA-non-owners, n=551

- Yes: 37%
- No: 52%
- don’t know: 11%
Specialized hearing aid stores are by far the preferred place for obtaining hearing aids (both for owners and non owners).

**OWNERS:**
Where was your most current hearing aid obtained?

- **Specialized hearing aid store:** 68%
- **Optician:** 20%
- **Pharmacy:** 5%
- **Online:** 4%
- **Other:** 2%

HA-owner, n=758

**NON OWNERS:**
If you were to get hearing aids, where would you go?

- **Specialized hearing aid store:** 75%
- **Optician:** 15%
- **Pharmacy:** 1%
- **Online:** 3%
- **Other:** 5%

HA-non-owner, n=551
NPS place of purchase
Recommendation intention of the place where the hearing aid(s) have been obtained is good, with a positive NPS score of 11.

Considering your complete experience, how likely would you be to recommend the place where you obtained your hearing aids to a friend or colleague?

NPS = PROMOTERS – DETRACTORS = 11

HA-owner, n=758
On average, HAs are worn 8.6 hours a day

How many hours a day are HA worn?

<table>
<thead>
<tr>
<th>Hours</th>
<th>2022</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>&gt;0-1</td>
<td>12%</td>
<td>13%</td>
</tr>
<tr>
<td>&gt;1-2</td>
<td>19%</td>
<td>19%</td>
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<td>&gt;2-3</td>
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<tr>
<td>&gt;6-7</td>
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<td>3%</td>
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<tr>
<td>&gt;7-8</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>&gt;8-9</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>&gt;9-10</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>&gt;10-11</td>
<td>1%</td>
<td>1%</td>
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<tr>
<td>&gt;11-12</td>
<td>1%</td>
<td>1%</td>
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<tr>
<td>&gt;12-13</td>
<td>1%</td>
<td>2%</td>
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<tr>
<td>&gt;13-14</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>&gt;14-15</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>&gt;15-16</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>&gt;16-17</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>&gt;17+</td>
<td>1%</td>
<td>1%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cumulative %</th>
</tr>
</thead>
<tbody>
<tr>
<td>5%</td>
</tr>
<tr>
<td>12%</td>
</tr>
<tr>
<td>19%</td>
</tr>
<tr>
<td>4%</td>
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<tr>
<td>11%</td>
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<tr>
<td>5%</td>
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<tr>
<td>5%</td>
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<tr>
<td>3%</td>
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<td>2%</td>
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<tr>
<td>1%</td>
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<tr>
<td>1%</td>
</tr>
</tbody>
</table>

HA-worn: 2022 Mean: 8.6 hours/day
2016 Mean: 9.1 hours/day

In the drawer (0 hours):
2022: 5%
2016: 5%
34% of today’s hearing aid owners are aware of their hearing aid brand

Are you aware of the brand of your hearing aid(s)?

- Yes, I know it by heart (34%)
- No, but I could find out (21%)
- No, and can't find out (45%)

HA-owner, n=758
44% of the HA owners use an accessory/app for their hearing aids, 66% of those are satisfied with it.

Have you been informed by your hearing care professional about hearing aid accessories, such as TV-Streamer/ Apps / Remote Control / etc.? (HA owners, n=758)

- Yes: 68%
- No: 22%
- don't know / no answer: 9%

Do you personally use accessories for your hearing aids (TV-Streamer/ Apps / Remote Control / etc.)? (HA owners, n=758)

- Yes: 44%
- No: 56%

IF ACCESSORIES USED (n=315):
Overall, how satisfied with the performance of your accessorie(s)?

- very dissatisfied: 8%
- dissatisfied: 8%
- somewhat dissatisfied: 8%
- neutral: 10%
- somewhat satisfied: 20%
- satisfied: 33%
- very satisfied: 13%
Awareness and usage of solutions/alternatives for hearing impaired is higher among HA owners. Headphones and customized mobile phone settings are the most often used solutions.

### Are you aware/do you use the following solutions/alternatives for the hearing impaired?

<table>
<thead>
<tr>
<th>Solution</th>
<th>HA Owners (n=758)</th>
<th>HA Non-owners (n=551)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headphones for music/TV watching</td>
<td>22% 14% 30% 33%</td>
<td>10% 13% 35% 42%</td>
</tr>
<tr>
<td>Customized settings on your mobile phone</td>
<td>21% 11% 24% 43%</td>
<td>8% 10% 28% 54%</td>
</tr>
<tr>
<td>Modified doorbell (flash, or vibrator)</td>
<td>17% 13% 36% 35%</td>
<td>5% 11% 41% 42%</td>
</tr>
<tr>
<td>Modified smoke detector (flash)</td>
<td>15% 7% 20% 58%</td>
<td>9% 5% 29% 62%</td>
</tr>
<tr>
<td>Modified wake-up system (flash, or vibrating cushion)</td>
<td>15% 6% 26% 53%</td>
<td>9% 5% 29% 64%</td>
</tr>
<tr>
<td>Modified home phone</td>
<td>13% 11% 30% 46%</td>
<td>9% 9% 37% 50%</td>
</tr>
<tr>
<td>Table microphone for meetings / lapel microphone for speakers (in combination with hearing aid)</td>
<td>13% 7% 22% 58%</td>
<td>9% 6% 21% 69%</td>
</tr>
<tr>
<td>Airpods with sound amplification or similar technology</td>
<td>7% 8% 20% 65%</td>
<td>4% 6% 21% 69%</td>
</tr>
</tbody>
</table>

- **Yes, use it**
- **No, but I think it would benefit me**
- **No, I don’t think it would benefit me**
- **not aware of this solution**
8% of the HA owners have already used remote fitting, but also more than half of them have never heard of it.

Have you ever heard of Remote fitting for your hearing aids?
(Remote fitting: enables your hearing care professional to fit and fine-tune hearing aids from a distance (in real-time via video chat via an app), so that you don't need to leave your house to get your hearing aids adjusted)

- Yes, I have used it
- Heard of it but never used it
- No, never heard of it

HA-owner, n=758
Satisfaction with hearing aids and drivers
82% of the hearing aid owners say their hearing aid works better than or as expected

How have the expectations you had towards hearing aids before trying them on for the first time been met?

- 53% hearing aids work better than I expected
- 28% hearing aids work as I expected
- 18% hearing aids work worse than I expected

Base: n=758
Overall satisfaction with HA: 76% of hearing aid owners are satisfied with their hearing aid(s)
Satisfaction with current hearing aids

**Audiologist**
- Professionalism of audiologist: 8% dissatisfied, 83% satisfied
- Quality of service during hearing aid fitting period: 8% dissatisfied, 81% satisfied
- Quality of audiologists counseling: 8% dissatisfied, 81% satisfied
- Quality of service after purchase: 18% dissatisfied, 78% satisfied

**Sound quality**
- Natural sounding: 14% dissatisfied, 73% satisfied
- Richness or fidelity of sound: 12% dissatisfied, 73% satisfied
- Clearness of tone and sound: 14% dissatisfied, 73% satisfied
- Comfort with loud sounds: 18% dissatisfied, 65% satisfied

**Product features**
- Ease of changing battery: 6% dissatisfied, 83% satisfied
- Overall fit/ Comfort: 9% dissatisfied, 82% satisfied
- Reliability: 11% dissatisfied, 80% satisfied
- Visibility to others: 11% dissatisfied, 77% satisfied
- Value (performance versus money spent): 12% dissatisfied, 74% satisfied
- Battery life: 14% dissatisfied, 73% satisfied
- Managing whistling/feedback/buzzing: 13% dissatisfied, 71% satisfied

%dissatisfied = % very dissatisfied + % dissatisfied + % somewhat dissatisfied
%satisfied = % somewhat satisfied + % satisfied + % very satisfied

Trend*:
- Professionalism: -2%
- Quality of service during fitting: -7%
- Quality of counseling: -3%
- Quality of service after purchase: -8%
- Natural sounding: +/-0%
- Richness: +1%
- Clarity: +/-0%
- Comfort with loud sounds: +1%
- Ease of changing battery: -4%
- Overall fit: -2%
- Reliability: -1%
- Visibility to others: -2%
- Value: -1%
- Battery life: -2%
- Managing whistling: +1%

*% of satisfied HA owners compared to 2016

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Satisfaction with current hearing aids

Listening situation

- Conversation with one Person: 8% dissatisfied, 82% satisfied
- Listening to Music: 10% dissatisfied, 79% satisfied
- Outdoors: 9% dissatisfied, 79% satisfied
- When riding in a car: 9% dissatisfied, 77% satisfied
- In a store, when shopping: 11% dissatisfied, 77% satisfied
- At home with family members: 12% dissatisfied, 76% satisfied
- Watching TV: 13% dissatisfied, 75% satisfied
- When talking to children: 13% dissatisfied, 74% satisfied
- Conversation in small groups: 13% dissatisfied, 74% satisfied
- At a movie theater: 12% dissatisfied, 73% satisfied
- In the workplace: 14% dissatisfied, 71% satisfied
- Leisure activities: 11% dissatisfied, 71% satisfied
- On the telephone: 16% dissatisfied, 70% satisfied
- In a larger lecture hall (e.g., theater, concert hall): 18% dissatisfied, 68% satisfied
- Conversation in large groups: 22% dissatisfied, 65% satisfied
- In school or a classroom (as an observer or student): 18% dissatisfied, 65% satisfied
- Use in noisy situations: 25% dissatisfied, 64% satisfied

Trend*

- Conversation with one Person: -5%
- Listening to Music: +2%
- Outdoors: -2%
- When riding in a car: -1%
- In a store, when shopping: -5%
- At home with family members: -5%
- Watching TV: -2%
- When talking to children: -3%
- Conversation in small groups: -2%
- At a movie theater: +4%
- In the workplace: +3%
- Leisure activities: +2%
- On the telephone: -1%
- In a larger lecture hall: +1%
- Conversation in large groups: +/0%
- In school or a classroom: -1%
- Use in noisy situations: +2%

*% of satisfied HA owners compared to 2016

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Overall satisfaction with HA by channel: “Where was your most current hearing aid purchased?”

Specialized hearing aid store n=540
- Very satisfied: 23%
- Satisfied: 37%
- Somewhat satisfied: 12%
- Neutral: 9%
- Somewhat dissatisfied: 6%
- Dissatisfied: 5%
- Very dissatisfied: 4%

Optician n=158
- Very satisfied: 28%
- Satisfied: 23%
- Somewhat satisfied: 12%
- Neutral: 32%
- Somewhat dissatisfied: 12%
- Dissatisfied: 7%
- Very dissatisfied: 6%

% Satisfied
- 2022: 76%
- 2022: 72%
Satisfaction with current hearing aids by channel: “Where was your most current hearing aid purchased?”

- **Specialized hearing aid store**
  - **n=540**
  - Satisfaction overall: 76%
  - Quality of service during hearing aid fitting period: Satisfied 84%
  - Quality of service after purchase: Satisfied 82%
  - Professionalism of dispenser: Satisfied 87%
  - Quality of dispensers counseling: Satisfied 83%

- **Optician**
  - **n=158**
  - Satisfaction overall: 72%
  - Quality of service during hearing aid fitting period: Satisfied 77%
  - Quality of service after purchase: Satisfied 70%
  - Professionalism of dispenser: Satisfied 78%
  - Quality of dispensers counseling: Satisfied 82%

 `%dissatisfied = % very dissatisfied + % dissatisfied + % somewhat dissatisfied`

`%satisfied = % somewhat satisfied + % satisfied + % very satisfied`
Factors influencing satisfaction with current HA: Sound quality/signal processing and reliability are most important for overall satisfaction with HA

| Audiologist | Quality of service during hearing aid fitting period | 0.69 |
|            | Quality of service after purchase                  | 0.66 |
|            | Professionalism of audiologist                     | 0.65 |
|            | Quality of audiologists counseling                 | 0.63 |
| Sound quality signal process. | Richness or fidelity of sound | 0.74 |
|            | Cleanness of tone and sound                         | 0.73 |
|            | Natural sounding                                   | 0.73 |
|            | Comfort with loud sounds                           | 0.66 |
| Product features | Reliability                                    | 0.76 |
|            | Overall fit/ Comfort                               | 0.68 |
|            | Value (performance versus money spent)             | 0.65 |
|            | Visibility to others                               | 0.58 |
|            | Ease of changing battery                           | 0.56 |
|            | Managing whistling/feedback/buzzing                | 0.55 |
|            | Battery life                                       | 0.52 |

*The Influence has been calculated with a correlation: 0 means no relation between a criterion and overall satisfaction, 1 means a maximal relationship. Read: Reliability is the most important criteria for satisfaction.
In which of these situations is it most important for you to hear well? (choose up to 5)

- At home with family members
- When talking on a phone
- In conversations with small groups
- In conversations with large groups
- In conversations with 1 person
- In noisy situations
- When watching TV with others
- In the workplace
- When listening to music
- When talking to children
- In a larger lecture hall (e.g., theater, concert hall, place...)
- When riding in a car
- In a store, when shopping
- Outdoors
- During leisure activities (e.g., exercising, taking a walk,..)
- At a movie theater
- In school or a classroom (as an observer or student)
HA owners who experienced a high degree of freedom when choosing the HA, are most satisfied with their device!

What degree of freedom did you experience in choosing your hearing aid?

- None. I was prescribed a specific hearing aid by the ENT doctor/ Audiological Center: 9%
- None. I was prescribed a specific hearing aid by the hearcare professional: 17%
- I was able to choose from a limited range of hearing aids offered by the hearcare professional: 24%
- I feel like I was offered every possible solution by the hearcare professional and made the final decision myself: 23%
- The hearcare professional guided me towards a hearing instrument that fits my situation: 21%
- I already knew what hearing aid I wanted before my visit to the hearcare professional and made the final decision myself: 3%
- don’t know: 3%

Overall Satisfaction with HA

<table>
<thead>
<tr>
<th>Agency Type</th>
<th>% Satisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Agency (n=188)</td>
<td>63%</td>
</tr>
<tr>
<td>Limited Agency (n=181)</td>
<td>77%</td>
</tr>
<tr>
<td>Full Agency (n=369)</td>
<td>83%</td>
</tr>
</tbody>
</table>

HA-owner, n=758
Most HA owners had aftercare for their HAs – those who didn’t receive aftercare, wear the HAs for fewer hours per day!

Did you have any evaluations /checkups regarding your hearing aids after you had made the purchase?

- No, there was no need for that: 8%
- No, but I would have liked to: 6%
- Yes, to a limited degree: 31%
- Yes, until I was satisfied: 49%
- Too early to tell: 5%
- don’t know: 1%

HA-owner, n=758

Hours HA is worn per day

- No Aftercare (n=98): 35% <4 hours, 33% 4-8 hours, 32% >8 hours
- Aftercare (n=616): 21% <4 hours, 27% 4-8 hours, 52% >8 hours
HA owners who are contacted proactively by their hearcare professional, are far more satisfied with their HAs!

Are you contacted proactively by your hearcare professional for aftercare/checkups/evaluation?

- No, as far as there have been any, it was on my own initiative: 28%
- Yes, after purchase, but after that no more: 19%
- Yes, my hearcare professional contacts me every year for aftercare: 25%
- Yes, my hearcare professional contacts me every 6 months for aftercare: 13%
- Yes, but I haven't taken them up on it: 4%
- Too early to tell: 8%
- don't know: 3%

Overall Satisfaction with HA

- No proactive aftercare (n=227): 65%
- Limited proactive aftercare (n=142): 70%
- Proactive aftercare (n=309): 85%

HA-owner, n=758
HA owners who didn’t see their hearcare professional in the last 12 months, wear the HAs for fewer hours per day.

How many times have you seen your hearcare professional in the past twelve months for aftercare/checkup/service?

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>I haven't</td>
<td>20%</td>
</tr>
<tr>
<td>Once</td>
<td>34%</td>
</tr>
<tr>
<td>2-3 times</td>
<td>30%</td>
</tr>
<tr>
<td>4-5 times</td>
<td>9%</td>
</tr>
<tr>
<td>More than 5 times</td>
<td>4%</td>
</tr>
<tr>
<td>Don't know</td>
<td>3%</td>
</tr>
</tbody>
</table>

HA-owner, n=758

Hours HA is worn per day

- No aftercare last 12 months (n=178):
  - <4 hours: 29%
  - 4-8 hours: 27%
  - >8 hours: 43%

- Aftercare once in last 12 months (n=248):
  - <4 hours: 17%
  - 4-8 hours: 30%
  - >8 hours: 52%

- Aftercare more than once in last 12 months (n=311):
  - <4 hours: 24%
  - 4-8 hours: 28%
  - >8 hours: 48%
Most HAs were purchased in categories 3-5 – but 40% of the owners don’t know in which category their HA falls into.

In which category does the hearing aid you have purchased fall?

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Categorie 1</td>
<td>8%</td>
</tr>
<tr>
<td>Categorie 2</td>
<td>8%</td>
</tr>
<tr>
<td>Categorie 3</td>
<td>15%</td>
</tr>
<tr>
<td>Categorie 4</td>
<td>14%</td>
</tr>
<tr>
<td>Categorie 5</td>
<td>13%</td>
</tr>
<tr>
<td>Free market / Private market</td>
<td>2%</td>
</tr>
<tr>
<td>I do not know in what category my hearing aids are classified</td>
<td>40%</td>
</tr>
</tbody>
</table>

HA-owner, n=758
HA owners with category 1-3 HAs are less satisfied and wear the HAs for fewer hours per day than higher categories/private market.

<table>
<thead>
<tr>
<th>Category</th>
<th>% Satisfied</th>
<th>Hours HA is worn per day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Categories 1-3</td>
<td>71%</td>
<td>27% 36% 37%</td>
</tr>
<tr>
<td>(n=216)</td>
<td></td>
<td>&lt;4 hours 4-8 hours &gt;8 hours</td>
</tr>
<tr>
<td>Categories 4-5</td>
<td>81%</td>
<td>24% 23% 54%</td>
</tr>
<tr>
<td>(n=206)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private market</td>
<td>84%</td>
<td>12% 25% 63%</td>
</tr>
<tr>
<td>(n=24, low sample!)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Around half of the HA owners were offered the option to pay extra for a higher category HA – those who received the offer are slightly more satisfied with the HA.

In my choice for a hearing aid, I was able to make use of the option to pay extra. By paying extra, we mean the option to choose a hearing aid from a higher category than you are entitled to from the health insurer and to pay the difference yourself. Some health insurers allow you to pay the difference yourself. Have you made use of this option?

<table>
<thead>
<tr>
<th>Option</th>
<th>Satisfaction (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I don't know</td>
<td>20</td>
</tr>
<tr>
<td>Yes I was offered the opportunity and I made use of it</td>
<td>30</td>
</tr>
<tr>
<td>Yes I was offered the opportunity but I haven't made use of it</td>
<td>17</td>
</tr>
<tr>
<td>No it hasn't been offered</td>
<td>32</td>
</tr>
</tbody>
</table>

Overall Satisfaction with HA

- Yes, was offered to pay extra (n=328): 78%
- No, it wasn't offered to pay extra (n=270): 74%
Those who paid nothing towards their HAs, wear them for fewer hours than those who paid any amount. First time HA users wear the HA for fewer hours per day than non first time users.

<table>
<thead>
<tr>
<th>Hours HA is worn per day</th>
<th>Paid nothing (n=266)</th>
<th>Paid any amount (n=473)</th>
<th>First time user (n=402)</th>
<th>not first time user (n=356)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10%</td>
<td>21%</td>
<td>24%</td>
<td>35%</td>
<td>10%</td>
</tr>
<tr>
<td>4-8 hours</td>
<td>34%</td>
<td>25%</td>
<td>32%</td>
<td>23%</td>
</tr>
<tr>
<td>&gt;8 hours</td>
<td>45%</td>
<td>50%</td>
<td>33%</td>
<td>67%</td>
</tr>
<tr>
<td>&lt;4 hours</td>
<td>21%</td>
<td>24%</td>
<td>35%</td>
<td>10%</td>
</tr>
<tr>
<td>4-8 hours</td>
<td>34%</td>
<td>25%</td>
<td>32%</td>
<td>23%</td>
</tr>
<tr>
<td>&gt;8 hours</td>
<td>45%</td>
<td>50%</td>
<td>33%</td>
<td>67%</td>
</tr>
</tbody>
</table>
Positive impact of hearing aids, quality of life
Significant positive impact of HAs on different aspects: Especially Communication effectiveness, ability to participate in group activities and social life improve with hearing aids.

Since you started using your hearing aid(s), please rate the changes you have experienced in each of the following areas, that you believe are due to your hearing aid(s).

<table>
<thead>
<tr>
<th>Area</th>
<th>a lot worse</th>
<th>worse</th>
<th>the same</th>
<th>better</th>
<th>a lot better</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall ability to communicate</td>
<td>5%</td>
<td>23%</td>
<td>47%</td>
<td>22%</td>
<td></td>
</tr>
<tr>
<td>more effectively</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ability to participate in group</td>
<td>5%</td>
<td>31%</td>
<td>41%</td>
<td>20%</td>
<td></td>
</tr>
<tr>
<td>activities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social life</td>
<td>5%</td>
<td>37%</td>
<td>37%</td>
<td>18%</td>
<td></td>
</tr>
<tr>
<td>Relationships at work</td>
<td>8%</td>
<td>39%</td>
<td>32%</td>
<td>20%</td>
<td></td>
</tr>
<tr>
<td>Confidence in yourself</td>
<td>5%</td>
<td>44%</td>
<td>33%</td>
<td>17%</td>
<td></td>
</tr>
<tr>
<td>Sense of safety</td>
<td>4%</td>
<td>44%</td>
<td>32%</td>
<td>18%</td>
<td></td>
</tr>
<tr>
<td>Relationships at home</td>
<td>4%</td>
<td>46%</td>
<td>32%</td>
<td>17%</td>
<td></td>
</tr>
<tr>
<td>Sense of independence</td>
<td>4%</td>
<td>45%</td>
<td>32%</td>
<td>16%</td>
<td></td>
</tr>
<tr>
<td>Feelings about yourself</td>
<td>5%</td>
<td>48%</td>
<td>29%</td>
<td>16%</td>
<td></td>
</tr>
<tr>
<td>Mental/emotional health</td>
<td>4%</td>
<td>52%</td>
<td>27%</td>
<td>16%</td>
<td></td>
</tr>
<tr>
<td>Mental ability</td>
<td>3%</td>
<td>57%</td>
<td>23%</td>
<td>15%</td>
<td></td>
</tr>
<tr>
<td>Physical health</td>
<td>5%</td>
<td>60%</td>
<td>20%</td>
<td>13%</td>
<td></td>
</tr>
</tbody>
</table>

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HA-owner, n=758
Impact of HAs is perceived more positive by patients with a Top 50% hearing loss in all aspects

% of HA owners feeling better/a lot better
68% of the hearing aid owners feel more confident moving in a city since wearing hearing aids!

Since wearing a hearing aid, do you feel more confident moving in a city, e.g. because you hear traffic signals/vehicles approaching?

- Yes: 68%
- No: 32%

Base: n=758
Also for other people in the household/relatives, the situation improves when the person with hearing loss starts wearing hearing aids.

How did the following aspects change since person X is wearing hearing aids?

- **Communication with Person**: 3% a lot worse, 8% worse, 37% the same, 34% better, 18% a lot better
- **Social activities together with Person**: 2% a lot worse, 7% worse, 54% the same, 22% better, 14% a lot better
- **Personal relationship with Person**: 9% a lot worse, 6% worse, 64% the same, 19% better, 12% a lot better
- **Quarrels/disputes with Person**: 4% a lot worse, 4% worse, 67% the same, 14% better, 12% a lot better
95% of hearing aid owners declare that their hearing aids improve their quality of life at least sometimes.
4. Analysis of hearing impaired non-owners
To analyse reasons of non-adoption we look at the Top 50% HL group, as the structure of hearing loss is more similar to that of HA owners

Hearing loss characteristics: Owners compared to non-owners

<table>
<thead>
<tr>
<th></th>
<th>HA Owner n=758</th>
<th>HA-Non-owner Low 50% HL n=302</th>
<th>Non-owner Top 50% HL n=144</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ears impaired (stated)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unilateral loss</td>
<td>24%</td>
<td>44%</td>
<td>42%</td>
</tr>
<tr>
<td>Bilateral loss</td>
<td>76%</td>
<td>56%</td>
<td>58%</td>
</tr>
<tr>
<td>More similar hearing loss structure</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived loss</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mild</td>
<td>12%</td>
<td>43%</td>
<td>7%</td>
</tr>
<tr>
<td>Moderate</td>
<td>47%</td>
<td>47%</td>
<td>55%</td>
</tr>
<tr>
<td>Severe</td>
<td>32%</td>
<td>8%</td>
<td>20%</td>
</tr>
<tr>
<td>Profound</td>
<td>9%</td>
<td>2%</td>
<td>18%</td>
</tr>
</tbody>
</table>

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# Top 10 reasons for not having a hearing aid (I/II)

<table>
<thead>
<tr>
<th>Reason</th>
<th>Base: non owners Top 50% HL: n=144</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ear doctors opinion (ENT)</strong></td>
<td></td>
</tr>
<tr>
<td>Hear well enough in most situations</td>
<td>37% 23% 57% 39% 2%</td>
</tr>
<tr>
<td>They do not work well in noisy situations</td>
<td>44% 14% 41% 57% 42%</td>
</tr>
<tr>
<td>Hearing loss not severe enough</td>
<td>44% 17% 41% 57% 43%</td>
</tr>
<tr>
<td>They do not restore your hearing to normal</td>
<td>44% 13% 52% 57% 44%</td>
</tr>
<tr>
<td>Have tinnitus (ringing in ears)</td>
<td>52% 3% 41% 57% 43%</td>
</tr>
<tr>
<td>Hearing Care Professional/Audiologists opinion</td>
<td>46% 6% 52% 57% 47%</td>
</tr>
<tr>
<td>Family doctors opinion (GP)</td>
<td>43% 9% 52% 57% 48%</td>
</tr>
<tr>
<td>Uncomfortable</td>
<td>42% 7% 41% 57% 51%</td>
</tr>
<tr>
<td>Have hearing loss only with high pitch sounds</td>
<td>36% 9% 37% 57% 55%</td>
</tr>
</tbody>
</table>
### Less important reasons for not having a hearing aid (II/II)

<table>
<thead>
<tr>
<th>Reason</th>
<th>Somewhat a reason</th>
<th>Not a reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have hearing loss in only one ear</td>
<td>35%</td>
<td>8%</td>
</tr>
<tr>
<td>Have tried hearing aid and they do not work</td>
<td>30%</td>
<td>9%</td>
</tr>
<tr>
<td>Have Sensor-neural hearing loss (nerve deafness)</td>
<td>30%</td>
<td>4%</td>
</tr>
<tr>
<td>Had surgery - hearing aids wont help</td>
<td>28%</td>
<td>6%</td>
</tr>
<tr>
<td>Bad design</td>
<td>24%</td>
<td>10%</td>
</tr>
<tr>
<td>Have hearing loss only with low frequency sounds</td>
<td>28%</td>
<td>5%</td>
</tr>
<tr>
<td>Have more serious priorities</td>
<td>23%</td>
<td>9%</td>
</tr>
<tr>
<td>Hearing problem requires surgery</td>
<td>26%</td>
<td>5%</td>
</tr>
<tr>
<td>Have not had hearing tested yet</td>
<td>27%</td>
<td>4%</td>
</tr>
<tr>
<td>Do not admit I have a hearing loss in public</td>
<td>19%</td>
<td>11%</td>
</tr>
<tr>
<td>Cannot afford a hearing aid</td>
<td>19%</td>
<td>7%</td>
</tr>
<tr>
<td>Would be embarrassed to wear a hearing aid</td>
<td>18%</td>
<td>7%</td>
</tr>
<tr>
<td>Do not trust Hearing Care Professional/Audiologist</td>
<td>20%</td>
<td>4%</td>
</tr>
<tr>
<td>Social / Family opinion such as child, spouse, friend</td>
<td>17%</td>
<td>6%</td>
</tr>
<tr>
<td>I have vision or dexterity problems</td>
<td>13%</td>
<td>9%</td>
</tr>
<tr>
<td>Another hearing aid owners opinion</td>
<td>13%</td>
<td>8%</td>
</tr>
<tr>
<td>Do not know where to get hearing aids</td>
<td>10%</td>
<td>4%</td>
</tr>
</tbody>
</table>

Base: non owners Top 50% HL: n=144
Top 10 reasons for HA owners NOT using them

- Uncomfortable: 50% Reason, 24% Somewhat a reason, 26% Not a reason
- They do not restore your hearing to normal: 54% Reason, 18% Somewhat a reason, 29% Not a reason
- Hear well enough in most situations: 42% Reason, 29% Somewhat a reason, 29% Not a reason
- Hearing loss not severe enough: 45% Reason, 20% Somewhat a reason, 34% Not a reason
- Have more serious priorities: 36% Reason, 28% Somewhat a reason, 36% Not a reason
- Have tinnitus (ringing in ears): 52% Reason, 10% Somewhat a reason, 38% Not a reason
- They do not work well in noisy situations: 55% Reason, 7% Somewhat a reason, 38% Not a reason
- Have tried hearing aid and they do not work: 48% Reason, 14% Somewhat a reason, 39% Not a reason
- Have hearing loss only with high pitch sounds: 48% Reason, 12% Somewhat a reason, 40% Not a reason
- Have hearing loss in only one ear: 51% Reason, 1% Somewhat a reason, 48% Not a reason

Owners who don't use, n=41 (low sample)
Social rejection because of hearing loss compared to the acceptance of hearing aids
72% of hearing aid owners feel that people never make fun of or reject them because of their hearing aids. It is more likely somebody makes fun or rejects a hearing impaired without hearing aid.

Hearing aid owners:
How often do you feel you are made fun of or rejected because you are wearing a hearing aid?

- Never: 72%
- Rarely: 13%
- Occasionally: 11%
- Regularly: 3%

Hearing impaired non-owners:
How often do you feel you are made fun of or rejected because your hearing loss?

- Never: 43%
- Rarely: 35%
- Occasionally: 20%
- Regularly: 2%

Base: n=758

Base: Top 50% hearing loss, no hearing aid n=144
Most important triggers to buy
The most important influencing factors are worsening hearing loss, ENT, audiologist, spouse and GP (+price, insurance coverage for the non owners).

**Owner:** Thinking back to when you obtained your first hearing aid(s), what influenced you to obtain /purchase the hearing aid(s)?

**Non-owner:** What do you think would influence you to obtain / purchase a hearing aid?

<table>
<thead>
<tr>
<th>Influence</th>
<th>Hearing aid (n=758)</th>
<th>Hearing loss but no hearing aid (n=551)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hearing loss got worse</td>
<td>45%</td>
<td>30%</td>
</tr>
<tr>
<td>ENT/ Ear Doctor</td>
<td>48%</td>
<td>35%</td>
</tr>
<tr>
<td>Hearing Care Professional / Audiologist</td>
<td>33%</td>
<td>16%</td>
</tr>
<tr>
<td>Spouse</td>
<td>24%</td>
<td>13%</td>
</tr>
<tr>
<td>GP / Family doctor</td>
<td>17%</td>
<td>11%</td>
</tr>
<tr>
<td>Free due to coverage by Insurance / Received hearing aid free of</td>
<td>14%</td>
<td>14%</td>
</tr>
<tr>
<td>Price of hearing aid</td>
<td>17%</td>
<td>16%</td>
</tr>
<tr>
<td>Relative, friend</td>
<td>14%</td>
<td>14%</td>
</tr>
<tr>
<td>Another hearing aid owner (word of mouth)</td>
<td>14%</td>
<td>14%</td>
</tr>
<tr>
<td>Child</td>
<td>14%</td>
<td>14%</td>
</tr>
<tr>
<td>Safety concerns</td>
<td>10%</td>
<td>10%</td>
</tr>
<tr>
<td>Financial Situation improved</td>
<td>6%</td>
<td>2%</td>
</tr>
<tr>
<td>TV advertisement</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>Co-worker or boss</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>Direct mail piece</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>Internet: Websites of hearing aids manufacturers</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>Information/advice about hearing loss from consumer...</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>Internet: Websites of hearing aid clinics</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>Hearing loss article or literature</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>Magazine advertisement</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>Internet: Other websites, google...</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>Newspaper advertisement</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>Telemarketing phone call</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>Radio advertisement</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>Celebrity or public Personality</td>
<td>3%</td>
<td>3%</td>
</tr>
</tbody>
</table>

* = Top influences for HA owners in EuroTrak 2016
★ = Top influences for non owners in EuroTrak 2016
The most important trigger to buy a hearing aid is worsening hearing loss, followed by ENTs, audiologists and the spouse.

What made you finally decide to get your actual hearing aid(s)?

- Hearing loss got worse: 27%
- ENT/Ear Doctor: 20%
- Audiologist: 11%
- Spouse: 10%
- Price of hearing aid: 4%
- Free due to coverage by Insurance/Received hearing aid free of charge: 4%
- GP/Family doctor: 4%
- TV advertisement: 3%
- Another hearing aid owner (word of mouth): 3%
- Friend/relative: 2%
- Radio advertisement: 2%
- Child: 2%
Demographics (1) Hearing instrument adoption rates and populations

<table>
<thead>
<tr>
<th>Gender</th>
<th>Count</th>
<th>Hearing difficulty</th>
<th>Hearing aid adoption rate % (Base=hearing impaired)</th>
<th>No hearing loss</th>
<th>Hearing loss but no hearing aid</th>
<th>Hearing aid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>6'582</td>
<td>10.8%</td>
<td>43.9%</td>
<td>49.1%</td>
<td>52.8%</td>
<td>50.8%</td>
</tr>
<tr>
<td>Female</td>
<td>6'732</td>
<td>9.8%</td>
<td>45.9%</td>
<td>50.9%</td>
<td>47.2%</td>
<td>49.2%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age</th>
<th>Count</th>
<th>Hearing difficulty</th>
<th>Hearing aid adoption rate % (Base=hearing impaired)</th>
<th>No hearing loss</th>
<th>Hearing loss but no hearing aid</th>
<th>Hearing aid</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - 14</td>
<td>2'142</td>
<td>4.0%</td>
<td>36.8%</td>
<td>17.2%</td>
<td>7.1%</td>
<td>5.1%</td>
</tr>
<tr>
<td>15 - 24</td>
<td>1'577</td>
<td>3.5%</td>
<td>41.6%</td>
<td>12.7%</td>
<td>4.3%</td>
<td>3.7%</td>
</tr>
<tr>
<td>25 - 34</td>
<td>1'695</td>
<td>6.0%</td>
<td>49.4%</td>
<td>13.3%</td>
<td>6.8%</td>
<td>8.2%</td>
</tr>
<tr>
<td>35 - 44</td>
<td>1'575</td>
<td>7.6%</td>
<td>43.3%</td>
<td>12.2%</td>
<td>9.0%</td>
<td>8.4%</td>
</tr>
<tr>
<td>45 - 54</td>
<td>1'809</td>
<td>10.2%</td>
<td>23.7%</td>
<td>13.6%</td>
<td>18.5%</td>
<td>7.1%</td>
</tr>
<tr>
<td>55 - 64</td>
<td>1'839</td>
<td>11.6%</td>
<td>40.3%</td>
<td>13.6%</td>
<td>16.9%</td>
<td>14.0%</td>
</tr>
<tr>
<td>65 - 74</td>
<td>1'507</td>
<td>15.0%</td>
<td>49.2%</td>
<td>10.7%</td>
<td>15.2%</td>
<td>18.1%</td>
</tr>
<tr>
<td>74+</td>
<td>1'171</td>
<td>33.1%</td>
<td>56.5%</td>
<td>6.6%</td>
<td>22.3%</td>
<td>35.5%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type of household</th>
<th>Count</th>
<th>Hearing difficulty</th>
<th>Hearing aid adoption rate % (Base=hearing impaired)</th>
<th>No hearing loss</th>
<th>Hearing loss but no hearing aid</th>
<th>Hearing aid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single household</td>
<td>1'858</td>
<td>15.9%</td>
<td>52.0%</td>
<td>13.1%</td>
<td>18.8%</td>
<td>25.0%</td>
</tr>
<tr>
<td>Couple, no kids</td>
<td>3'513</td>
<td>13.5%</td>
<td>49.4%</td>
<td>25.5%</td>
<td>31.6%</td>
<td>37.9%</td>
</tr>
<tr>
<td>Couple with kid(s)</td>
<td>5'680</td>
<td>7.0%</td>
<td>37.1%</td>
<td>44.2%</td>
<td>33.1%</td>
<td>24.0%</td>
</tr>
<tr>
<td>Single mom/dad with kid(s)</td>
<td>965</td>
<td>5.5%</td>
<td>32.4%</td>
<td>7.6%</td>
<td>4.7%</td>
<td>2.8%</td>
</tr>
<tr>
<td>Retirement home, hospital etc.</td>
<td>184</td>
<td>29.5%</td>
<td>61.5%</td>
<td>1.1%</td>
<td>2.8%</td>
<td>5.4%</td>
</tr>
<tr>
<td>Other</td>
<td>1'114</td>
<td>8.8%</td>
<td>30.7%</td>
<td>8.5%</td>
<td>9.0%</td>
<td>4.9%</td>
</tr>
</tbody>
</table>

Profiles: Categories add to 100%*
Demographics (2) Hearing instrument adoption rates and populations

<table>
<thead>
<tr>
<th>Status</th>
<th>Count</th>
<th>Hearing difficulty</th>
<th>Hearing aid adoption rate % (Base=hearing impaired)</th>
<th>No hearing loss</th>
<th>Hearing loss but no hearing aid</th>
<th>Hearing aid</th>
</tr>
</thead>
<tbody>
<tr>
<td>The head of the household (alone or together with someone)</td>
<td>6'608</td>
<td>14.2%</td>
<td>48.3%</td>
<td>47.5%</td>
<td>64.1%</td>
<td>73.6%</td>
</tr>
<tr>
<td>The spouse of the head of the household</td>
<td>2'907</td>
<td>9.9%</td>
<td>44.7%</td>
<td>21.9%</td>
<td>21.1%</td>
<td>21.0%</td>
</tr>
<tr>
<td>Daughter/son of head of household</td>
<td>3'162</td>
<td>2.9%</td>
<td>19.3%</td>
<td>25.7%</td>
<td>9.6%</td>
<td>2.8%</td>
</tr>
<tr>
<td>Other person</td>
<td>637</td>
<td>8.6%</td>
<td>29.7%</td>
<td>4.9%</td>
<td>5.1%</td>
<td>2.6%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Employment</th>
<th>Count</th>
<th>Hearing difficulty</th>
<th>Hearing aid adoption rate % (Base=hearing impaired)</th>
<th>No hearing loss</th>
<th>Hearing loss but no hearing aid</th>
<th>Hearing aid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zelfstandig ondernemer</td>
<td>966</td>
<td>11.0%</td>
<td>49.2%</td>
<td>8.8%</td>
<td>7.7%</td>
<td>9.0%</td>
</tr>
<tr>
<td>Werkzaam in loondienst</td>
<td>4'628</td>
<td>7.7%</td>
<td>37.2%</td>
<td>43.8%</td>
<td>31.6%</td>
<td>22.6%</td>
</tr>
<tr>
<td>Werkzaam bij de overheid</td>
<td>432</td>
<td>9.0%</td>
<td>38.3%</td>
<td>4.0%</td>
<td>3.4%</td>
<td>2.6%</td>
</tr>
<tr>
<td>Arbeidsongeschikt</td>
<td>657</td>
<td>14.8%</td>
<td>33.6%</td>
<td>5.7%</td>
<td>9.2%</td>
<td>5.6%</td>
</tr>
<tr>
<td>Werkloos / werkzoekend / bijstand</td>
<td>427</td>
<td>9.4%</td>
<td>42.2%</td>
<td>4.0%</td>
<td>3.3%</td>
<td>2.9%</td>
</tr>
<tr>
<td>Gepensioneerd of VUT</td>
<td>2'201</td>
<td>23.7%</td>
<td>54.3%</td>
<td>17.2%</td>
<td>34.0%</td>
<td>48.6%</td>
</tr>
<tr>
<td>Studerend / schoolgaand</td>
<td>877</td>
<td>2.3%</td>
<td>11.0%</td>
<td>8.8%</td>
<td>2.6%</td>
<td>0.4%</td>
</tr>
<tr>
<td>Huisvrouw / huisman / anders</td>
<td>865</td>
<td>12.4%</td>
<td>45.7%</td>
<td>7.8%</td>
<td>8.3%</td>
<td>8.4%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Education</th>
<th>Count</th>
<th>Hearing difficulty</th>
<th>Hearing aid adoption rate % (Base=hearing impaired)</th>
<th>No hearing loss</th>
<th>Hearing loss but no hearing aid</th>
<th>Hearing aid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geen onderwijs / basisonderwijs / cursus inburgering / cursus Nederlandse taal</td>
<td>419</td>
<td>19.2%</td>
<td>47.4%</td>
<td>3.5%</td>
<td>6.0%</td>
<td>6.6%</td>
</tr>
<tr>
<td>LBO / VBO / VMBO (kader- of beroepsgerechte leerweg) / MBO 1 (assistentenopleiding)</td>
<td>1'356</td>
<td>16.1%</td>
<td>49.6%</td>
<td>11.6%</td>
<td>15.7%</td>
<td>18.6%</td>
</tr>
<tr>
<td>MAVO / HAVO of VWO (eerste drie jaar) / VMBO (theoretische of gemengde leerweg) / voortgezet speciaal onderwijs MBO 2, 3, 4 (basisberoeps-, vak-, middenkader of specialistenopleiding) of MBO oude structuur (voor 1998)</td>
<td>1'259</td>
<td>13.3%</td>
<td>48.9%</td>
<td>11.2%</td>
<td>12.2%</td>
<td>14.1%</td>
</tr>
<tr>
<td>HBO propedeuse of WO propedeuse / HBO (behalve HBO-master) / WO-kandidaats of WO-bachelor</td>
<td>3'118</td>
<td>10.4%</td>
<td>41.3%</td>
<td>28.6%</td>
<td>27.1%</td>
<td>22.9%</td>
</tr>
<tr>
<td>HAVO of VWO (overgegaan naar de 4e klas)</td>
<td>985</td>
<td>10.8%</td>
<td>44.4%</td>
<td>9.0%</td>
<td>8.4%</td>
<td>8.1%</td>
</tr>
<tr>
<td>HBO propedeuse of WO propedeuse / HBO (behalve HBO-master) / WO-kandidaats of WO-bachelor</td>
<td>2'704</td>
<td>9.8%</td>
<td>44.0%</td>
<td>25.0%</td>
<td>21.2%</td>
<td>20.1%</td>
</tr>
<tr>
<td>WO-doctoraal of WO ander</td>
<td>776</td>
<td>8.7%</td>
<td>51.6%</td>
<td>7.3%</td>
<td>4.6%</td>
<td>6.0%</td>
</tr>
<tr>
<td>HBO propedeuse of WO propedeuse / HBO (behalve HBO-master) / WO-kandidaats of WO-bachelor</td>
<td>436</td>
<td>12.9%</td>
<td>38.7%</td>
<td>3.9%</td>
<td>4.9%</td>
<td>3.7%</td>
</tr>
</tbody>
</table>
Sample size and random sample error: Rules of thumb

READ: At a sample size of n=500 and a value of 15% we would expect the real value in an interval $\pm 3.1$ around 15% - which means between 11.9% and 18.1% (Conservative assumption: 95% confidence level)

<table>
<thead>
<tr>
<th>Sample size</th>
<th>Random sample error</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Real value is within interval:</td>
</tr>
<tr>
<td></td>
<td>Level of proportion: 50%/50%</td>
</tr>
<tr>
<td>50</td>
<td>$\pm 13.9$</td>
</tr>
<tr>
<td>100</td>
<td>$\pm 9.8$</td>
</tr>
<tr>
<td>250</td>
<td>$\pm 6.2$</td>
</tr>
<tr>
<td>500</td>
<td>$\pm 4.4$</td>
</tr>
<tr>
<td>1’000</td>
<td>$\pm 3.1$</td>
</tr>
<tr>
<td>5’000</td>
<td>$\pm 1.4$</td>
</tr>
<tr>
<td>10’000</td>
<td>$\pm 1.0$</td>
</tr>
</tbody>
</table>