

Results

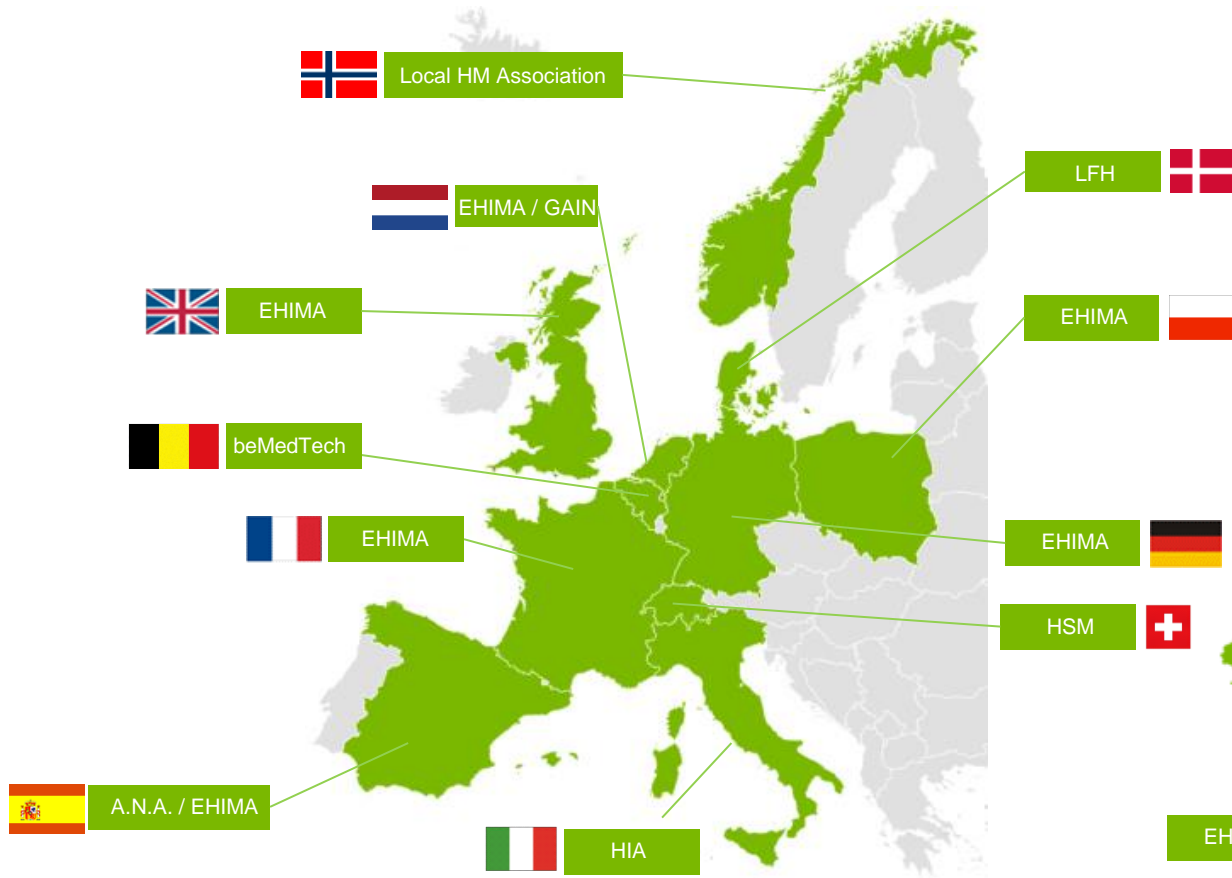
NewZealandTrak 2022

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

Summary

1. Introduction

NewZealandTrak 2022 is part of the EuroTrak / APACTrak studies:



NewZealandTrak 2022 was designed and executed by Anovum (Zurich) on behalf of New Zealand Hearing Industry Association (HIA) and EHIMA.

Sample sizes:

Representative sample (sample 1): n=15'480 people

Hearing impaired (sample 2): n=1'316 people

HA owners: n= 683 people

Hearing impaired non-owners: n= 633 people



Summary

2. Market overview

- Stated hearing loss prevalence
 - Total: 10.3%, 18+: 12.4% (2018: 10.1%, 18+: 12.3%).
 - Hearing Tests: 40% (2018: 38%) had a hearing test in the last 5 years, most tests done by audiologists/audiometrists.
- Hearing aid adoption rate (HA penetration)
 - 44.4% of those with self declared HL (2018: 41.6%).
 - 4.6% of total population (2018: 4.2%).
 - 74% of HA owners have binaural treatment (2018: 78%).
- The route to the hearing aid
 - 53% of the hearing impaired discussed hearing loss with an ENT doctor or family doctor (drop out=47%).
 - 46% got hearing aids recommended from the ENT or family doctor (drop out=13%).
 - 68% of the hearing impaired discussed hearing loss with an audiologist/audiometrist.
 - 59% of the GP consultations referred to an audiologist/audiometrist.
 - 60% of ENT consultations referred to an audiologist/audiometrist, 15% recommended no action (2018: 22%).
- 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.
 - Hearing aid owners believe that wearing HAs helps reduce risk of dementia.
 - Quality of sleep seems to improve if hearing impaired use hearing aids.
 - Hearing aid owners are less exhausted in the evening.

Summary

3. Analysis of hearing aid owners

- Hearing aid ownership, usage and accessories
 - 62% of the currently owned HAs were bought in 2019 or later.
 - The average age of the currently owned HAs is 3.0 years.
 - The median age of hearing aids before replacement is 6 years.
 - On average, HAs are worn 7.6 hours a day.
 - RIC is the most often purchased type of HA.
 - Cochlear Implants: <1% of HA owners have a CI. 27% of the HA owners with severe/profound HL have been informed about CIs by a medical professional.
 - 38% of the HA owners use a hearing aid app, 81% of those are satisfied with it.
 - 19% of the HAs are (to the knowledge of the owners) equipped with Telecoil. Main usage of Telecoil with phone and in schools / universities.

- Importance of listening situations and satisfaction with HAs
 - 87% of the hearing aid owners say their hearing aid works better than or as expected
 - 78% of the HA owners are satisfied with their HAs (2018: 79%).
 - 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, noisy situations and watching TV with others 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, social life and relationship at home/work improve with hearing aids.
 - 95% of hearing aid owners declare that their hearing aids improve their quality of life at least sometimes.
 - 70% of the hearing aid owners feel more confident moving in a city since wearing hearing aids.

Summary

4. Analysis of hearing impaired non-owners

- Reasons not to own/use HAs
 - The main reasons for not using hearing aids are that they think that they can't afford it, have more serious priorities, they hear well enough in most situations, hearing loss is not severe enough and hearing aids are uncomfortable.
 - 7% who own hearing aids don't use them at all (0 hours); 15% use them less than one hour/day (0-1 hour).
- Social rejection and triggers to buy
 - 64% 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 29% say they are never made fun of because of their hearing loss).
 - The most important triggers to get hearing aids are audiologists/audiometrists, followed by worsening hearing loss and the spouse.

Detailed Results: Roadmap

1. Introduction

- Organisation of NewZealandTrak 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, 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 hearing aid apps, Telecoil
- 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 NewZealandTrak 2022

Organisation

- Principal of the project NewZealandTrak 2022 are HIA and EHIMA.
- Anovum Zurich developed the concept of NewZealandTrak, 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

- HIA 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 – NewZealandTrak/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.

Recruitment process: In search of hearing impaired people

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=15'480** people based on census data.

Step 2: Target population interviews

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

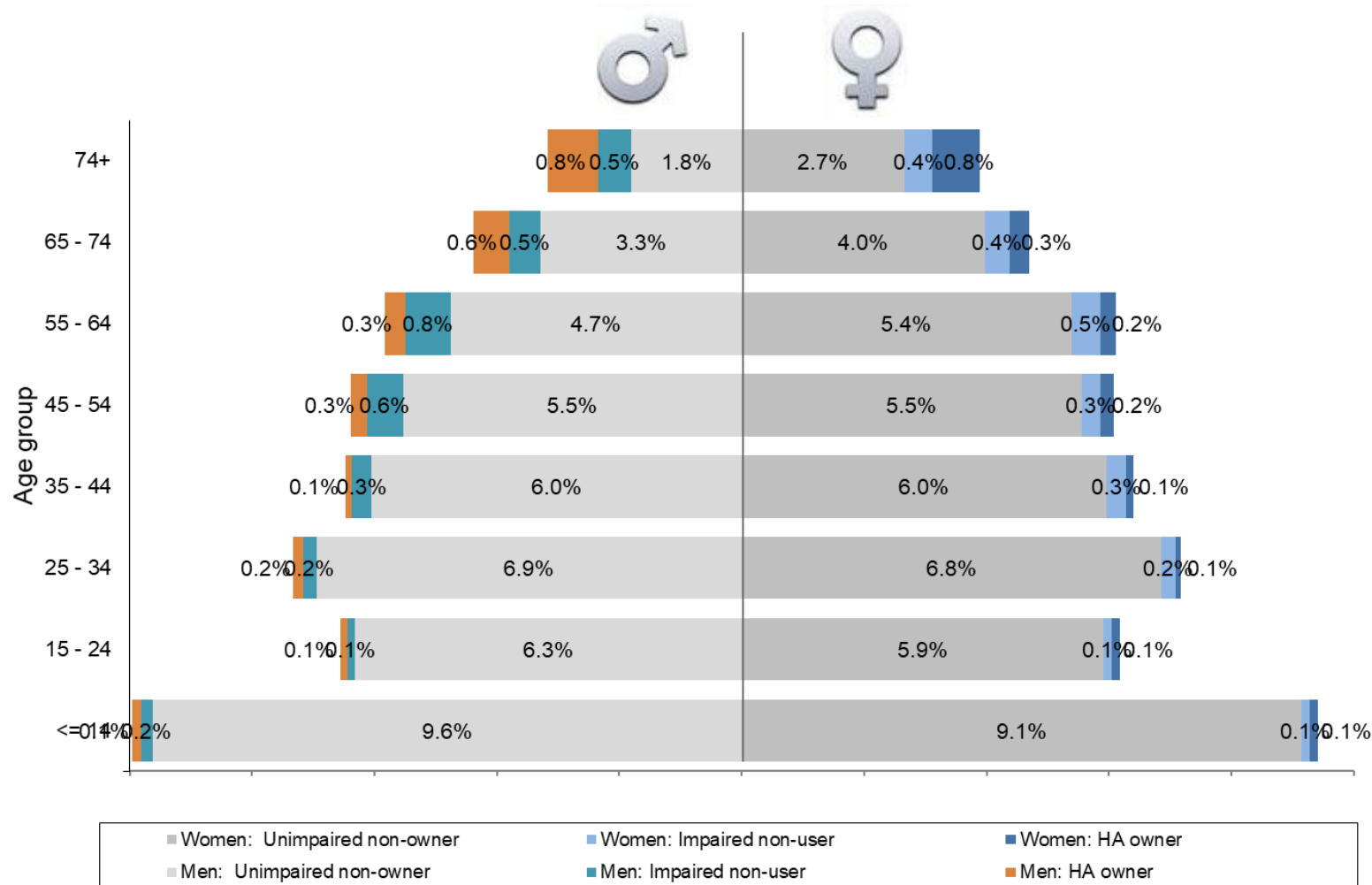
Process:

1. Main questionnaires: Owners and hearing impaired non-owners
2. Balancing through weighting according to representative screening interviews
3. Resulting sample: **n=683** hearing aid owners and **n=633** hearing impaired non-owners

2. Market overview

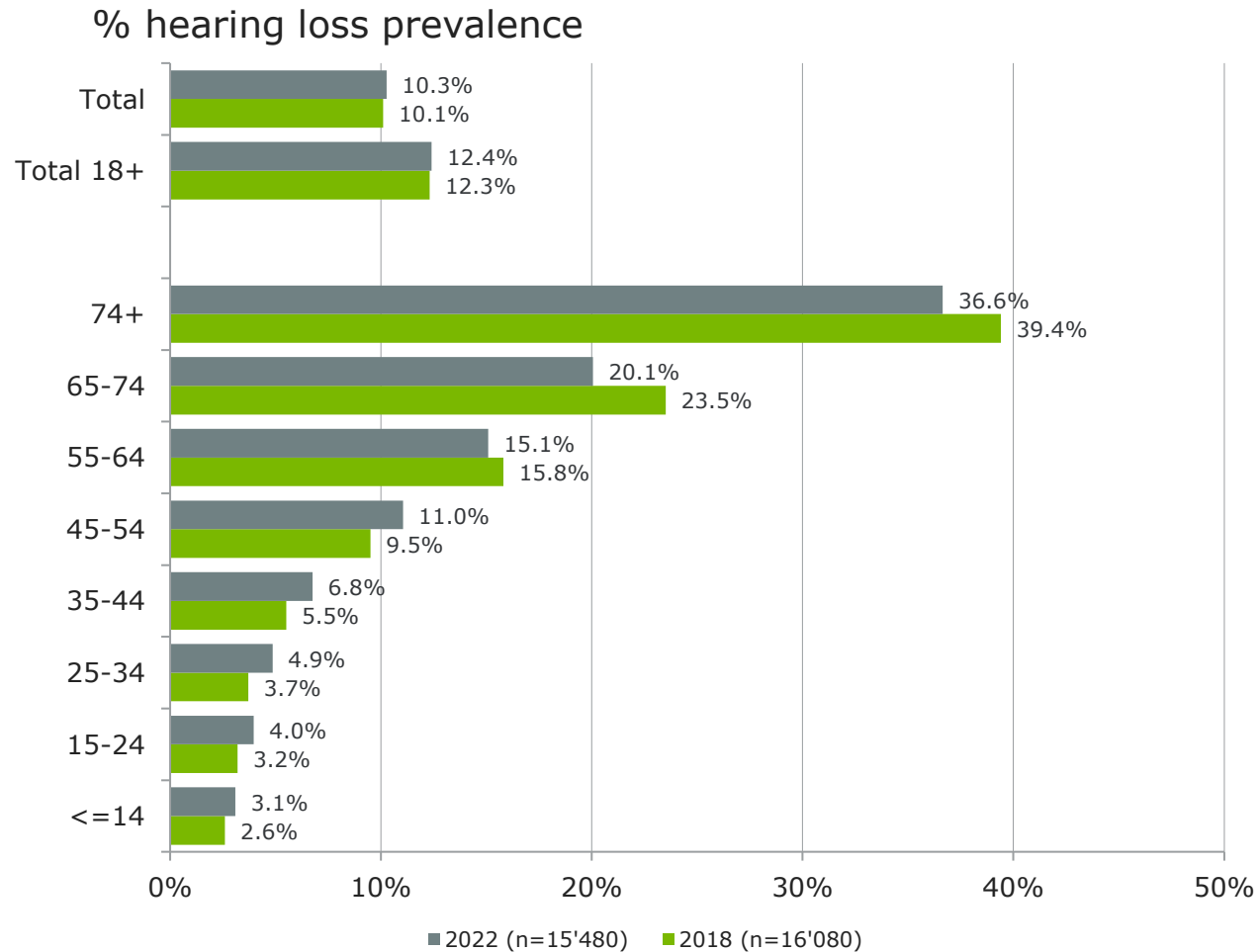
Prevalence of hearing loss and adoption rate

Hearing loss and hearing instrument ownership by gender/age



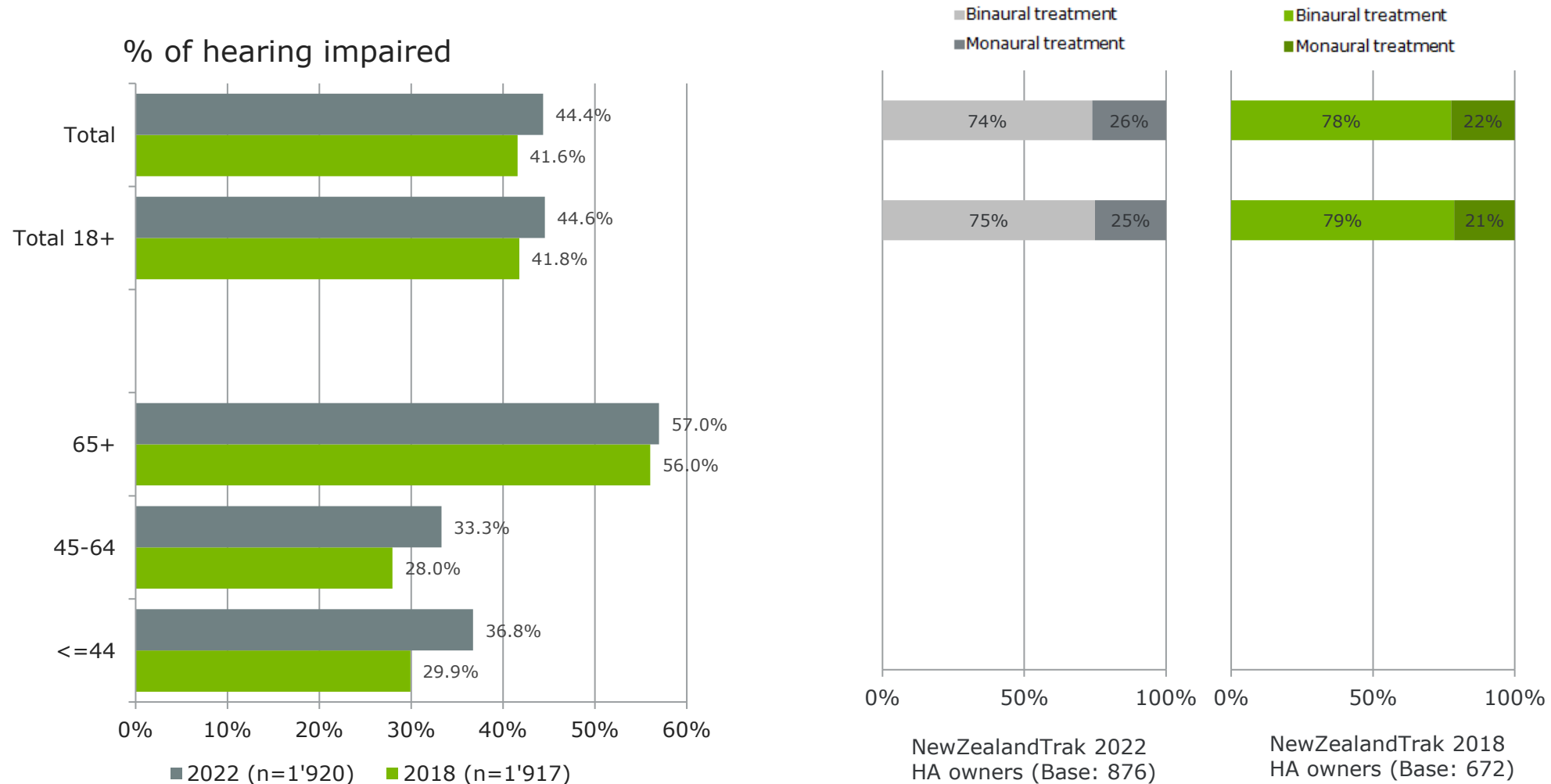
Hearing loss prevalence New Zealand

Self declared hearing loss

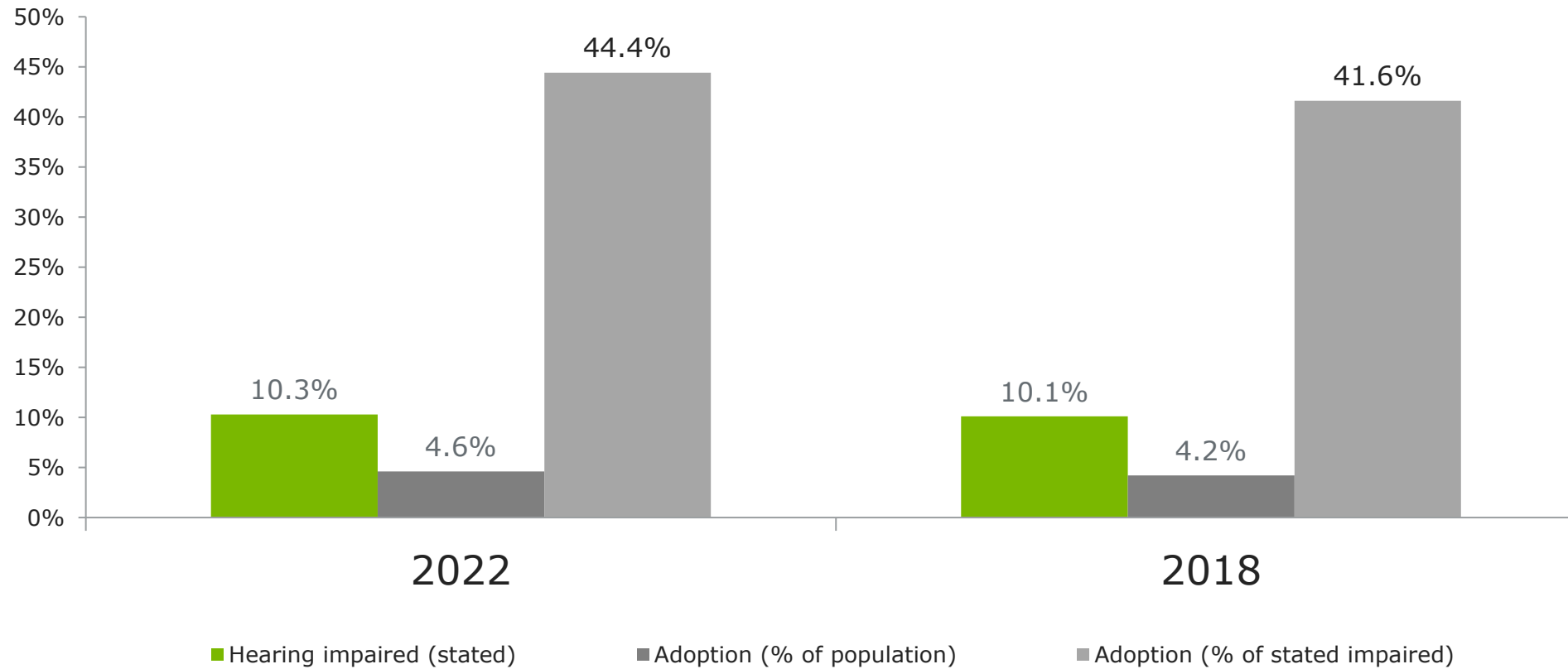




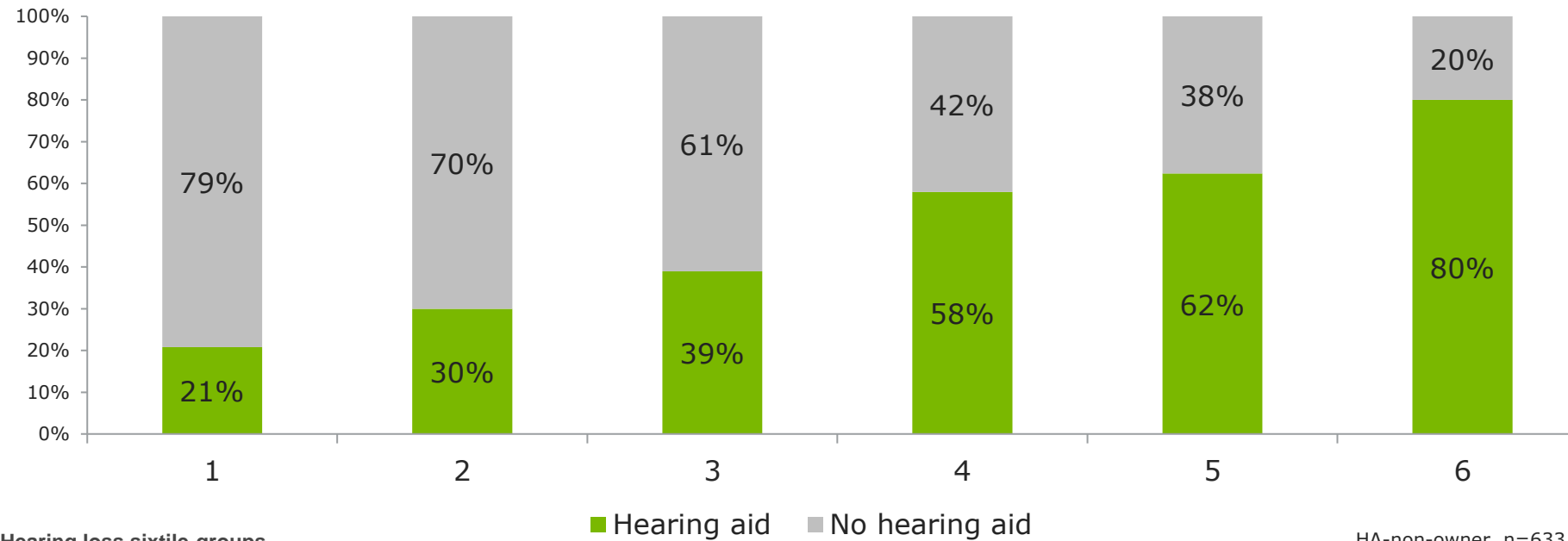
Hearing aid adoption rate: 44% of hearing impaired have hearing aid(s), 74% of them have binaural treatment



Overview hearing loss prevalence and hearing aid adoption



The more severe the hearing loss, the higher the adoption rate



HA-non-owner, n=633
HA-owner, n=683

* 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

Hearing loss characteristics: Owners compared to non-owners

	HA-Non-owner n=633	HA Owner n=683	Hearing Aid Adoption (%)
Ears impaired (stated)			
Unilateral loss	34%	18%	33%
Bilateral loss	66%	82%	53%
Perceived loss			
Mild	43%	16%	24%
Moderate	46%	51%	47%
Severe	9%	28%	71%*
Profound	2%	4%	

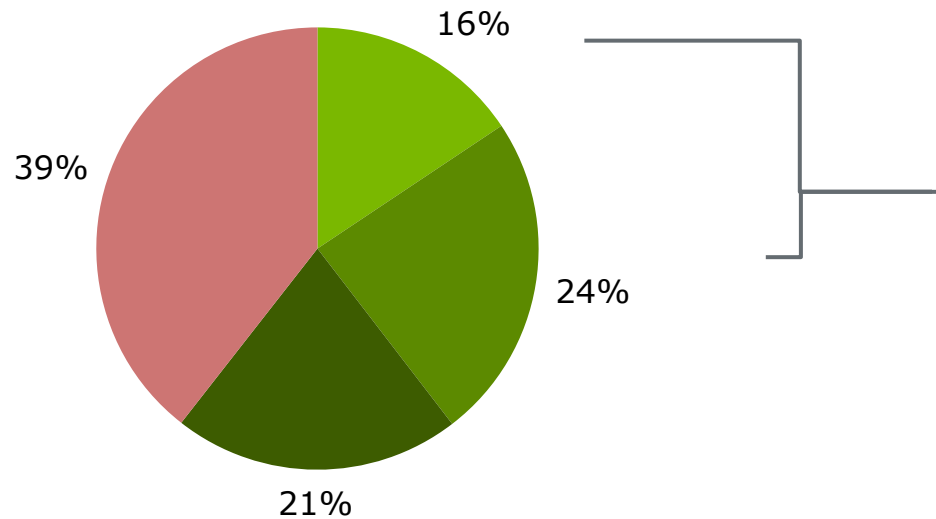
* combined "severe" and "profound" because n is too small

Hearing tests and where hearing is tested

Hearing Tests: 40% had a hearing test in the last 5 years (2018: 38%), most tests done by Audiologists/audiometrists, followed by family doctors and ENTs.

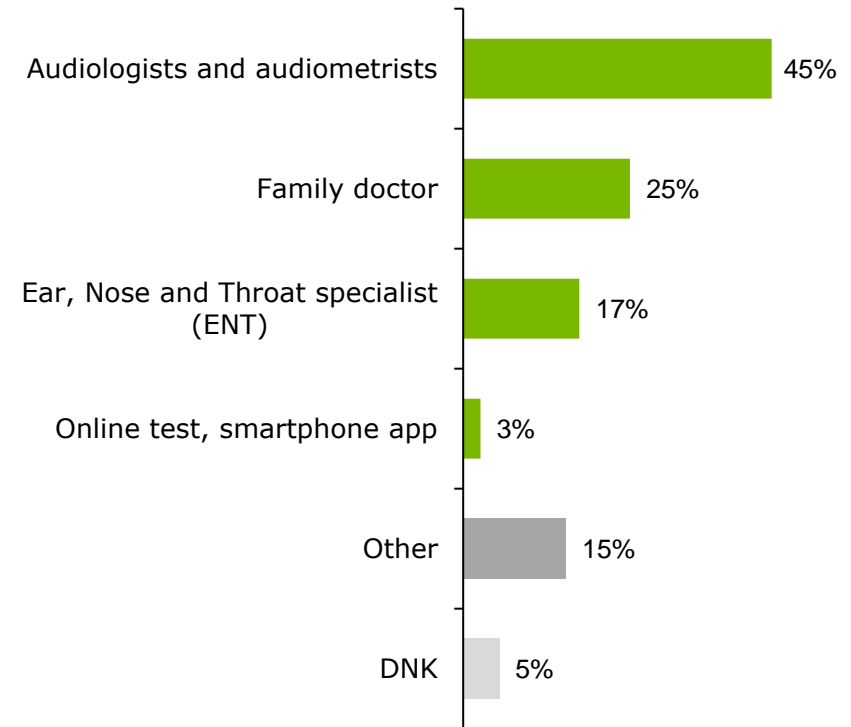
Have you ever taken a hearing test?

- Yes, in the last 12 months
- Yes, in the last 1-5 years
- Yes, more than 5 years ago
- No, never



Base=11'139

Where/how was your hearing tested?



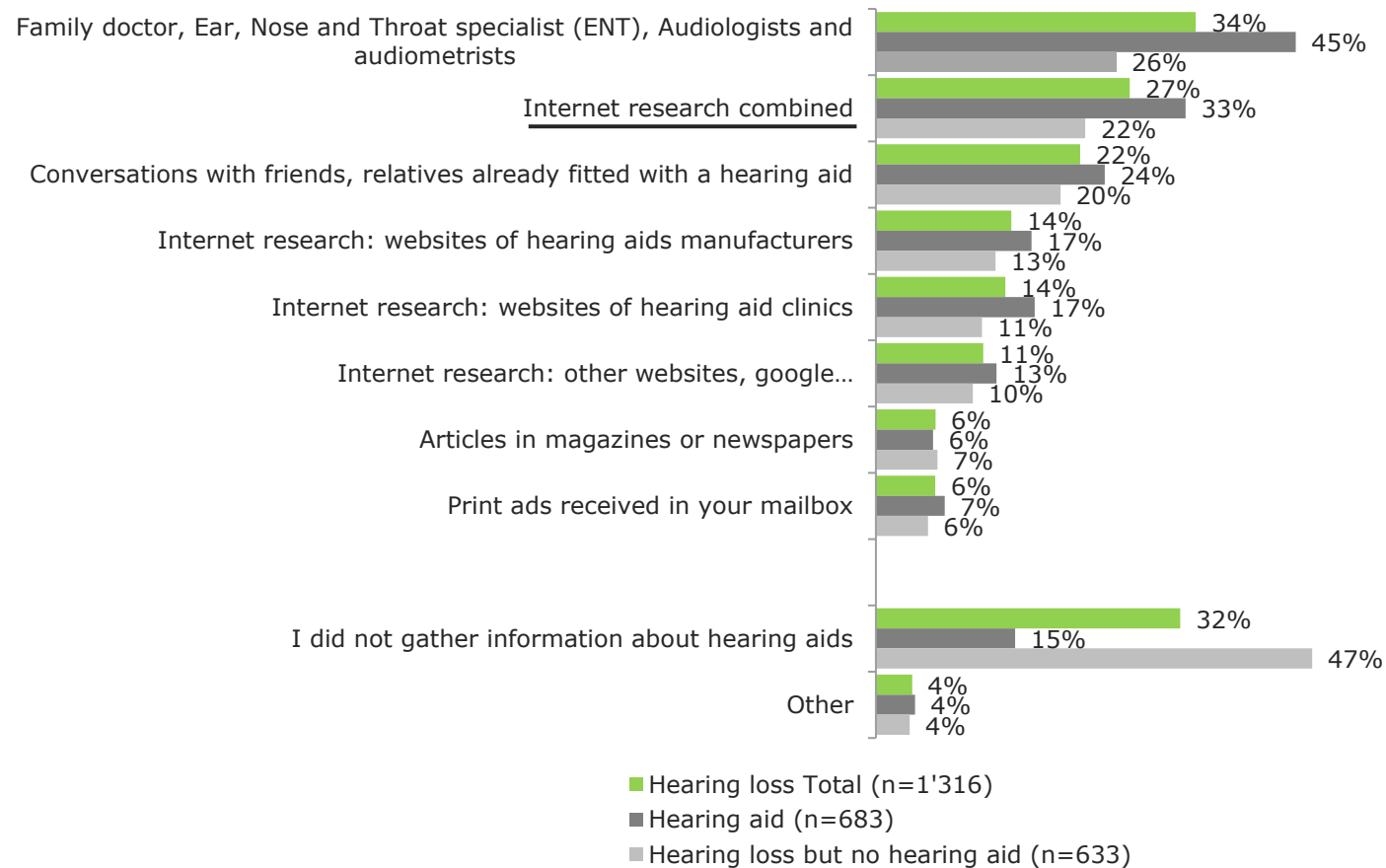
Base= 4'450



The route to the hearing aid: Sources of information and drop-out rates

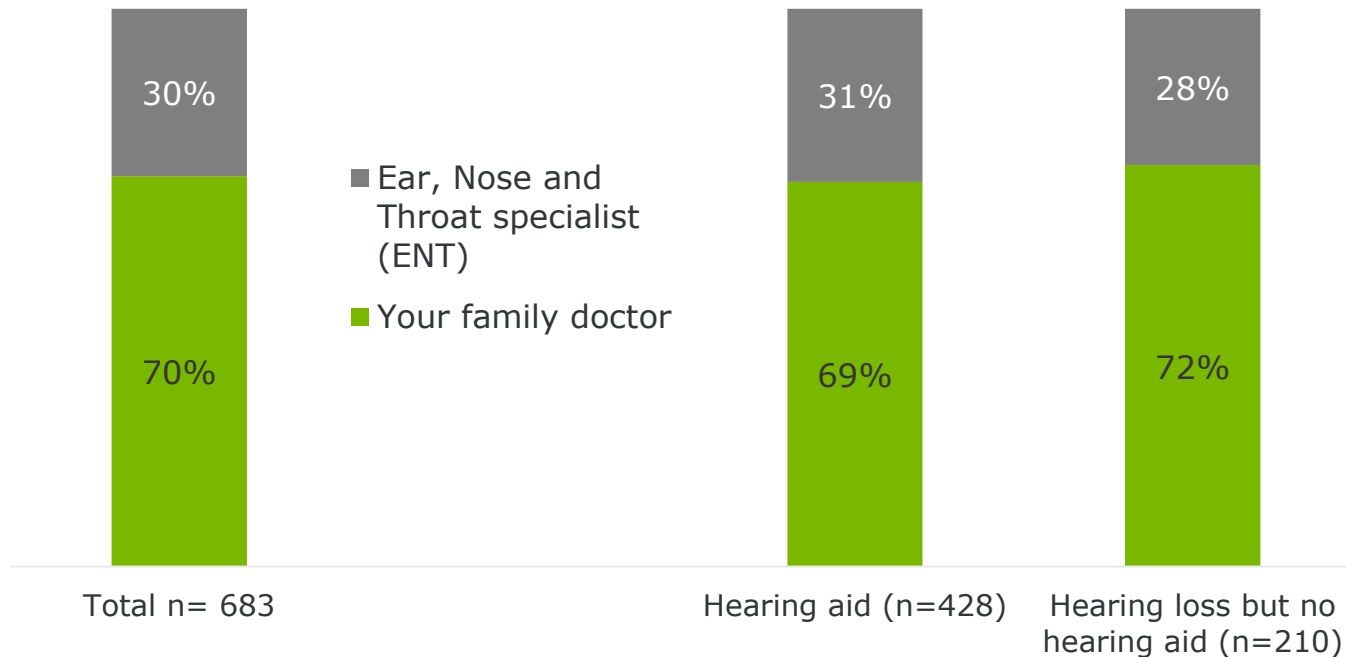
Doctors/HCPs are the most important sources of information and therefore the major gatekeepers.

Where did you gather information about hearing aids?

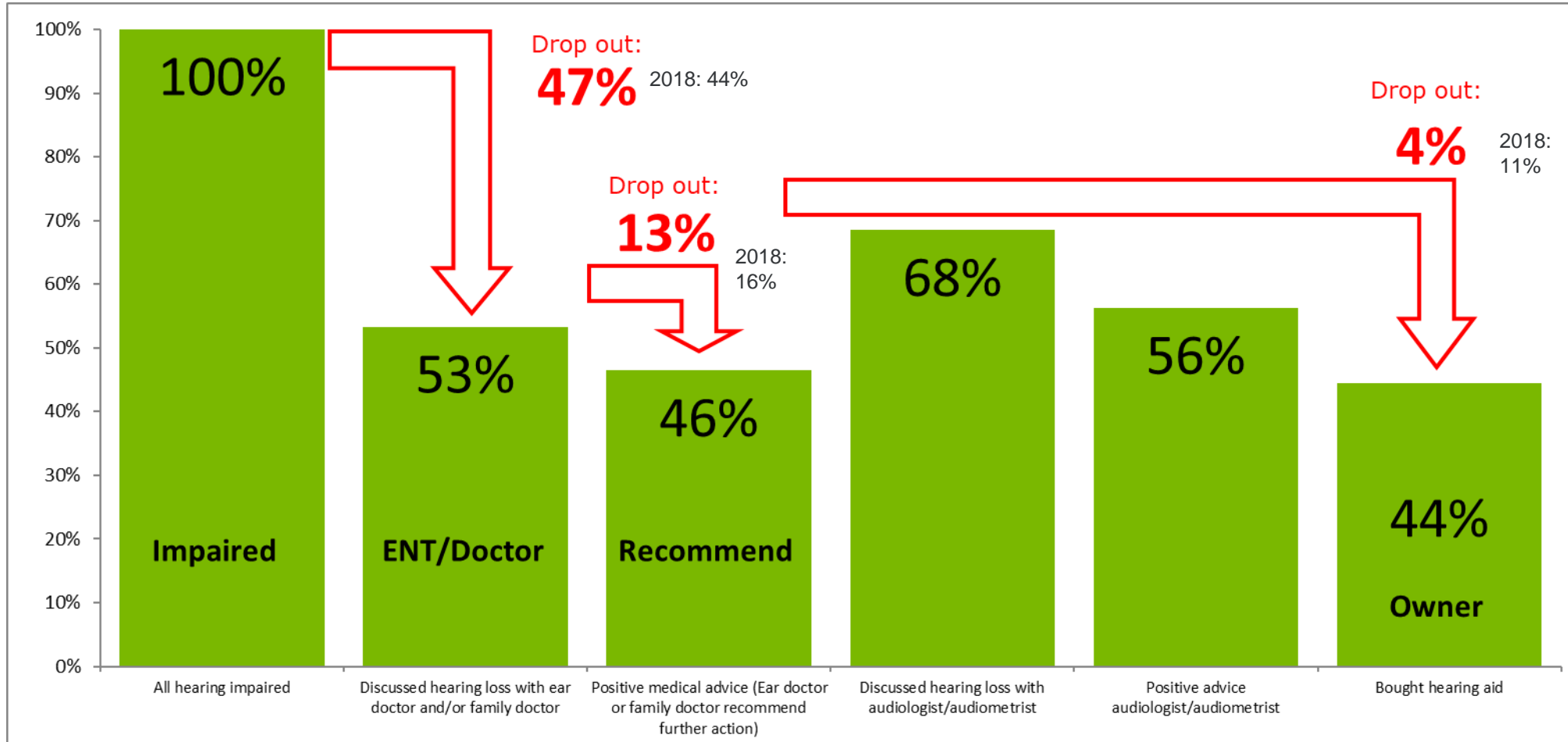


Of those who discussed the hearing loss with a doctor, 70% talked to a family doctor first

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)?



The route to the hearing aid

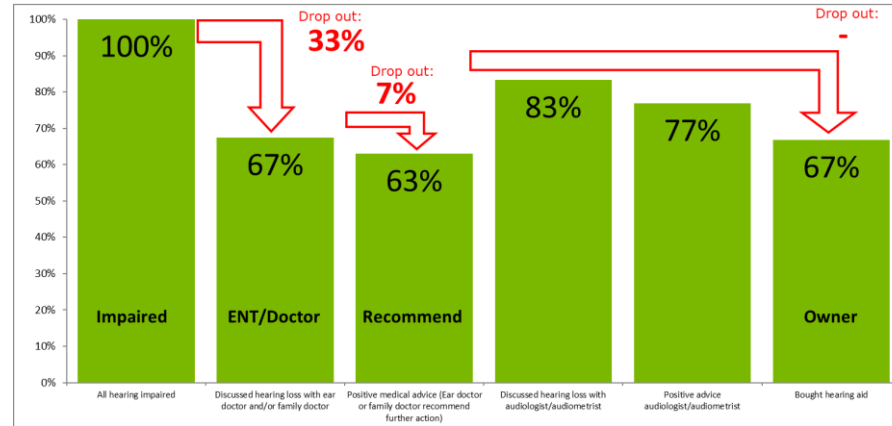


Base: n=1'316

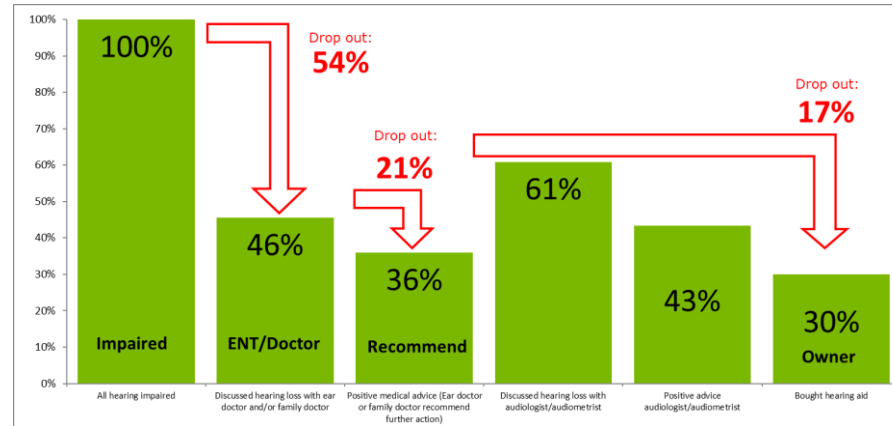


Much higher drop-out-rates for the lower hearing loss segments

Top 50% hearing loss*



Low 50% hearing loss*



Base: n=1'316

* 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

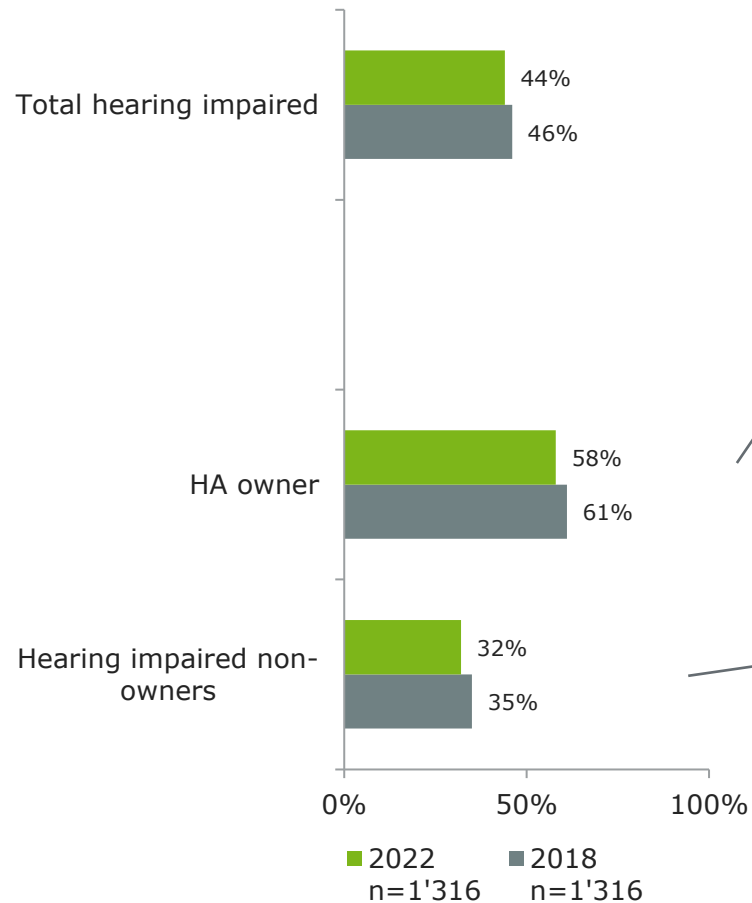
→ People were segmented into 6 groups of same size (16.67% of all hearing impaired in the sample).



The route to the hearing aid: GP/Family doctor

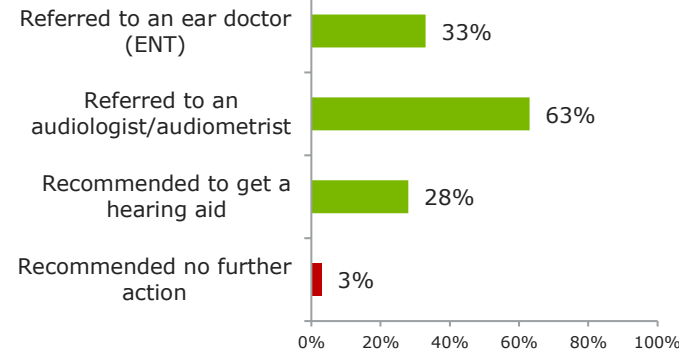
Have you discussed your hearing problem with your family doctor?

% Discussed with GP

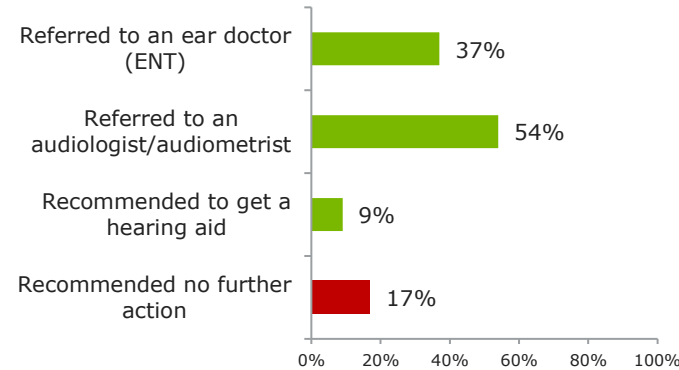


What did he/she recommend ?

HA owner (n=380)



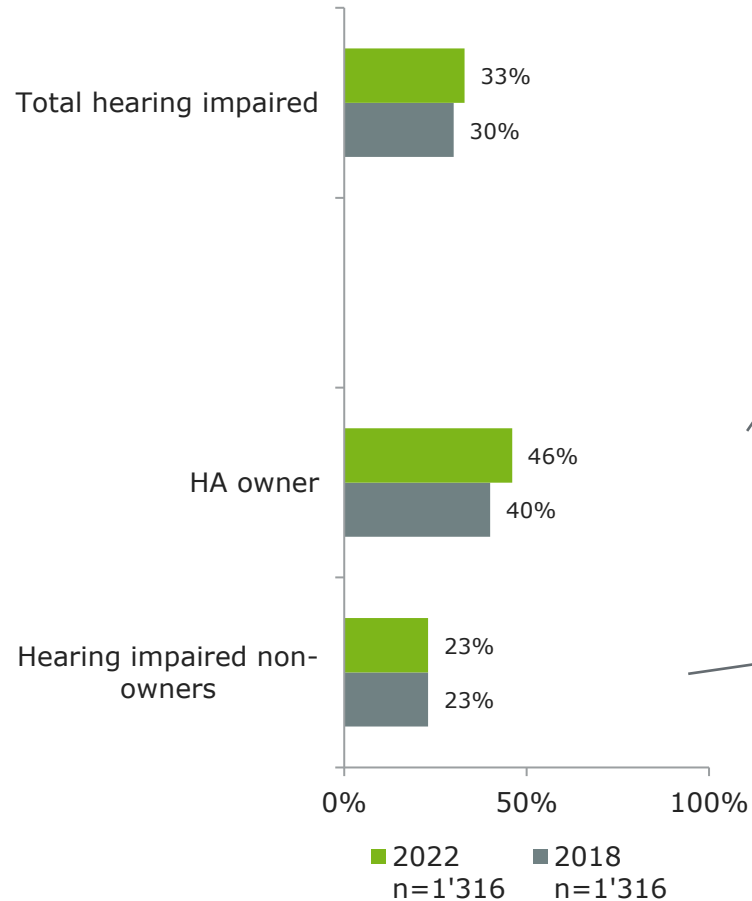
Impaired non-owner (n=183)



The route to the hearing aid: ENT

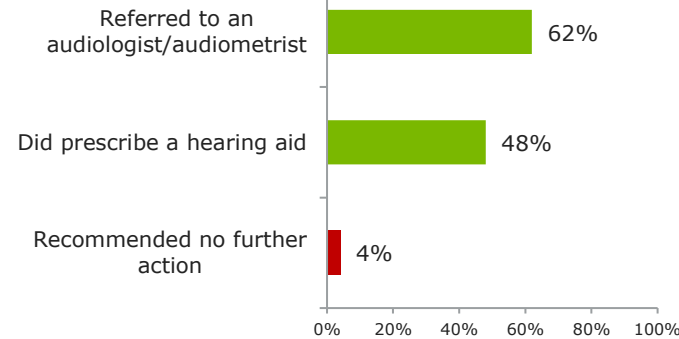
Have you ever discussed your hearing problem with an Ear, Nose and Throat specialist (ENT)?

% Discussed with ENT

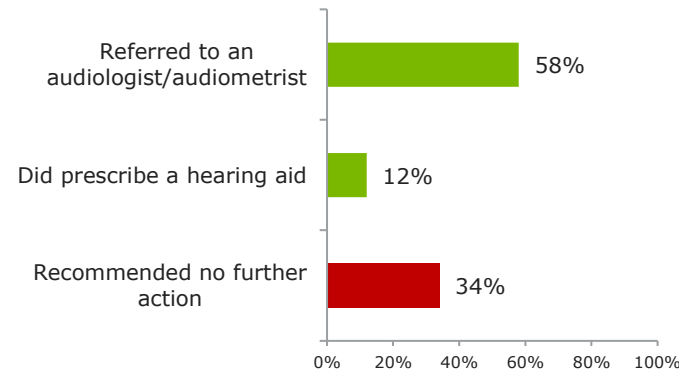


What did he/she recommend ?

HA owner (n=275)



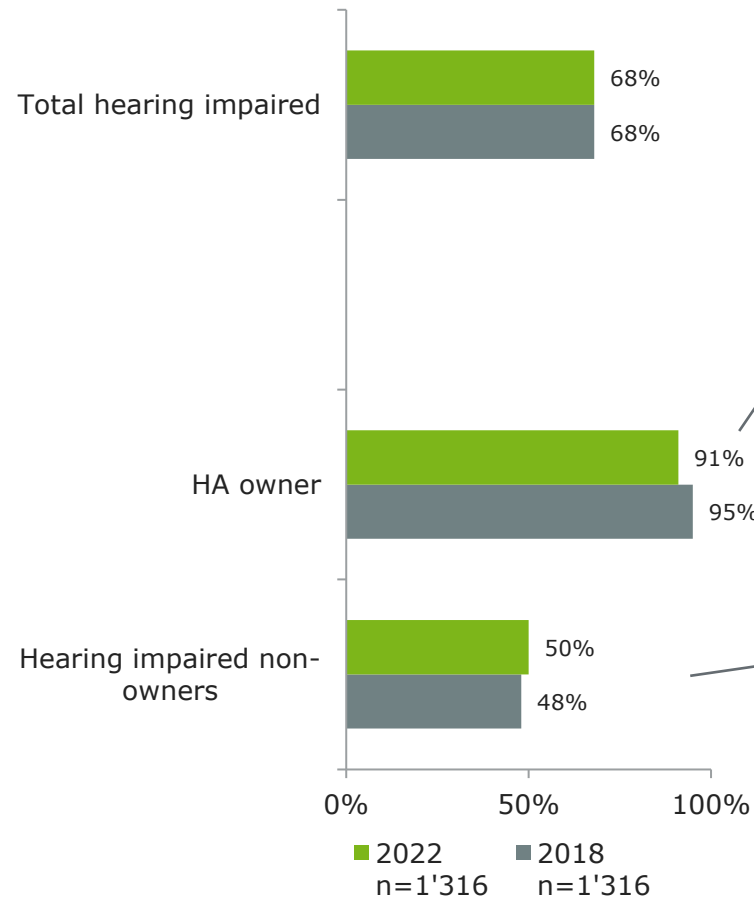
Impaired non-owner (n=128)



The route to the hearing aid: Audiologist/audiometrist

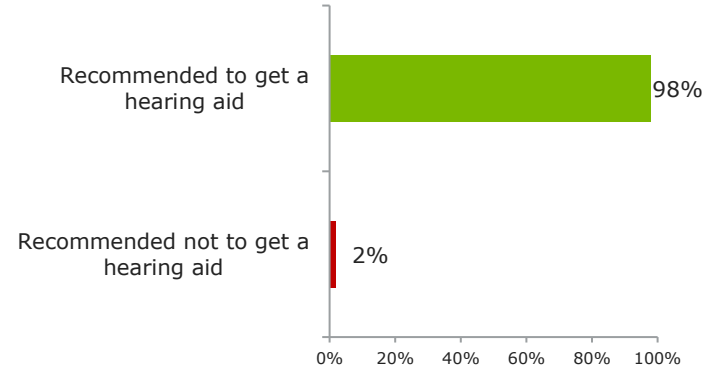
Have you ever discussed your hearing problem with an audiologist/audiometrist?

% Discussed with audiologist/audiometrist

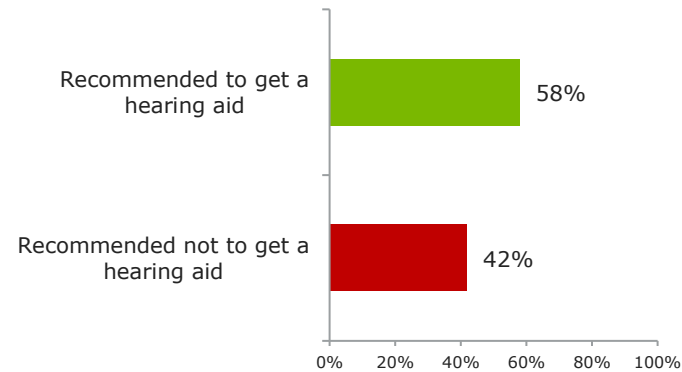


What did he/she recommend ?

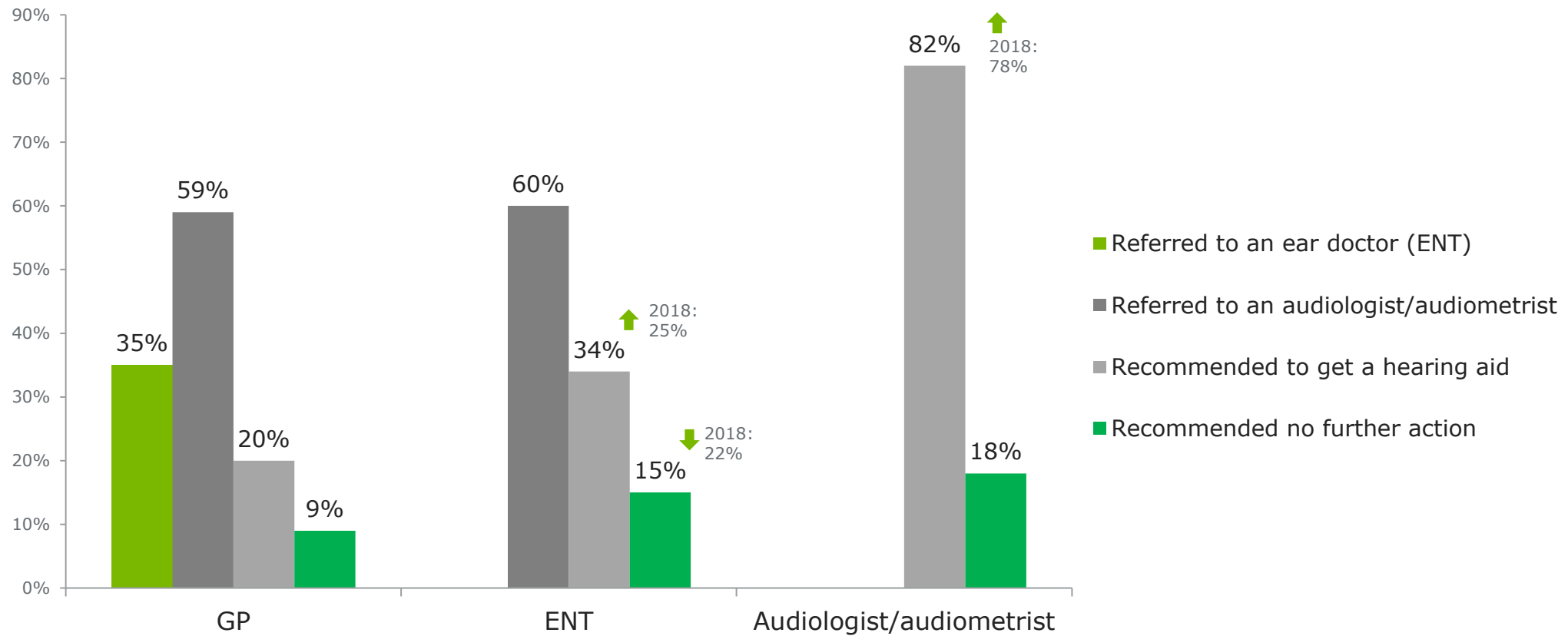
HA owner (n=621)



Impaired non-owner (n=300)



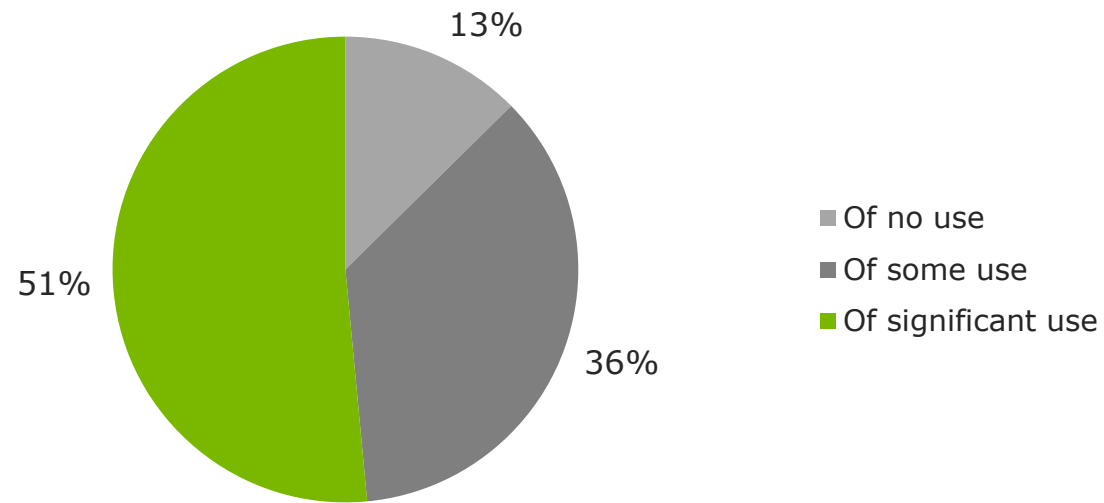
Recommendations by profession



Potential social cost-savings due to the use of hearing aids: Work competitiveness, depressive symptoms, sleep quality, co-morbidities

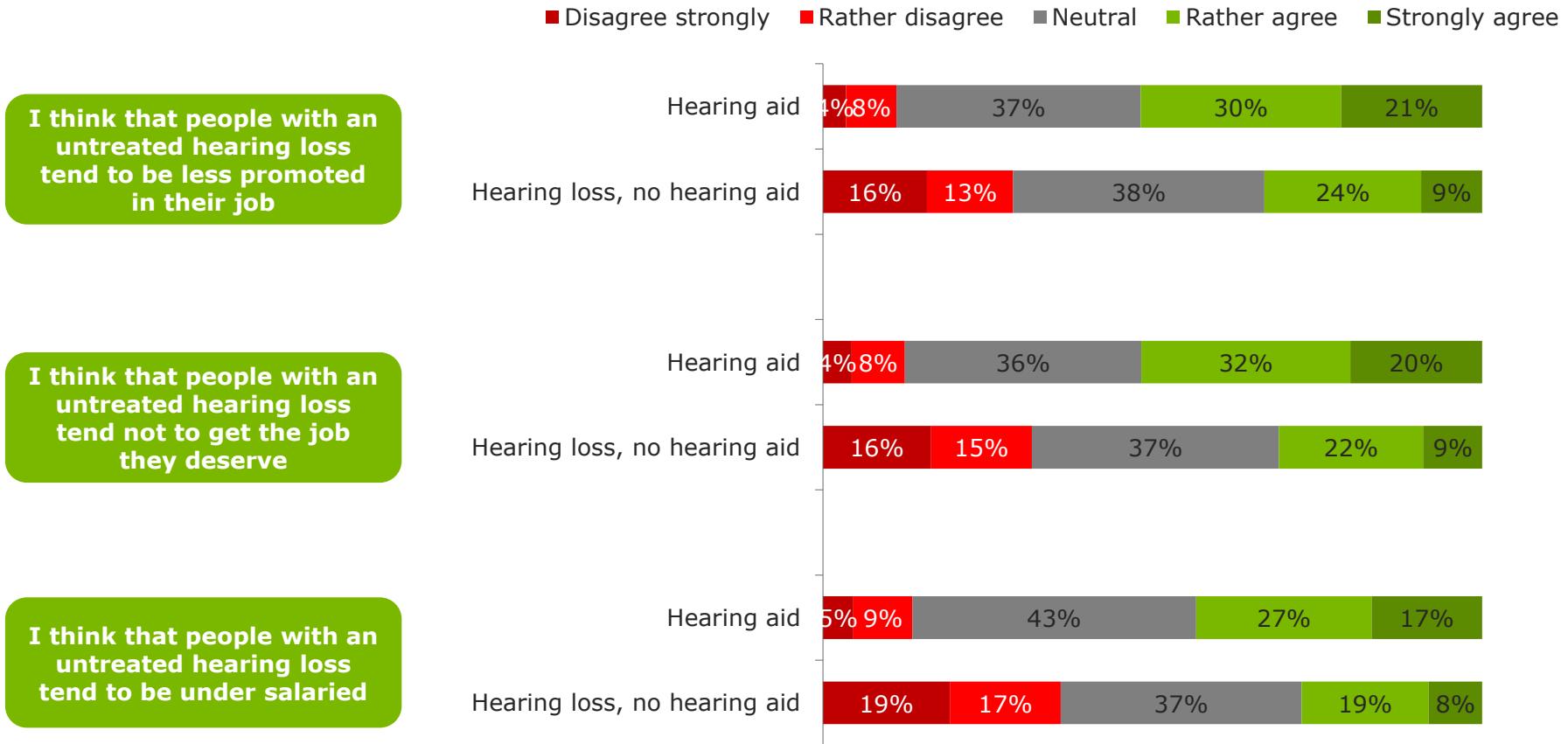
Work competitiveness: 87% of the working hearing aid owners state their hearing aid(s) are useful on their job.

How useful are your hearing aids on your job?



Base: n=198

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.



Base: Hearing loss, no hearing aid n=390/ hearing aid n=414



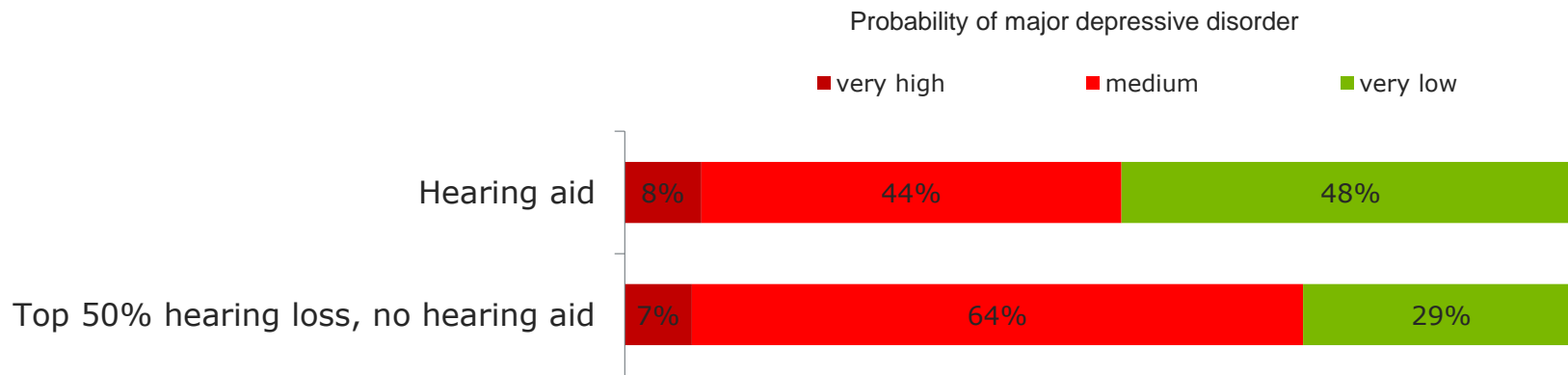
General health problems: Hearing aid owners have a lower risk of being depressed (PHQ-2 Screening) compared to impaired non-owners with comparable hearing loss (Top50% hearing loss group*).

Depression symptoms:

PHQ-2 Screening:

In the last 2 weeks:

- Little interest or pleasure
- Feeling down, depressed, hopeless



Base: hearing aid n=495 / 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:

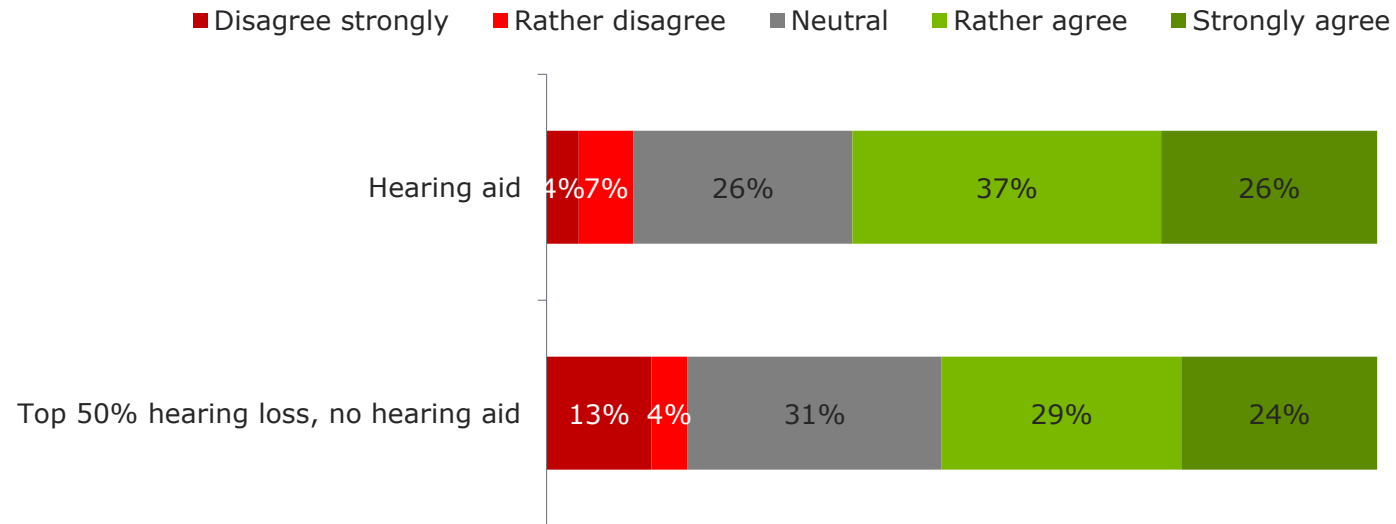
- Number of ears impaired (one or two)
- Stated hearing loss (Mild to Profound)
- Scores on 6 APHAB-EC - like questions (Scaled 1-5)
- When NOT using a hearing aid, how difficult is it for you to follow conversations in the presence of noise

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



Dementia: Compared to impaired hearing aid non-owners with significant hearing loss (Top50% hearing loss group*), hearing aid owners believe that wearing HAs helps reduce risk of dementia

I believe that wearing hearing aids and staying active in conversations will help reduce my risk of getting dementia



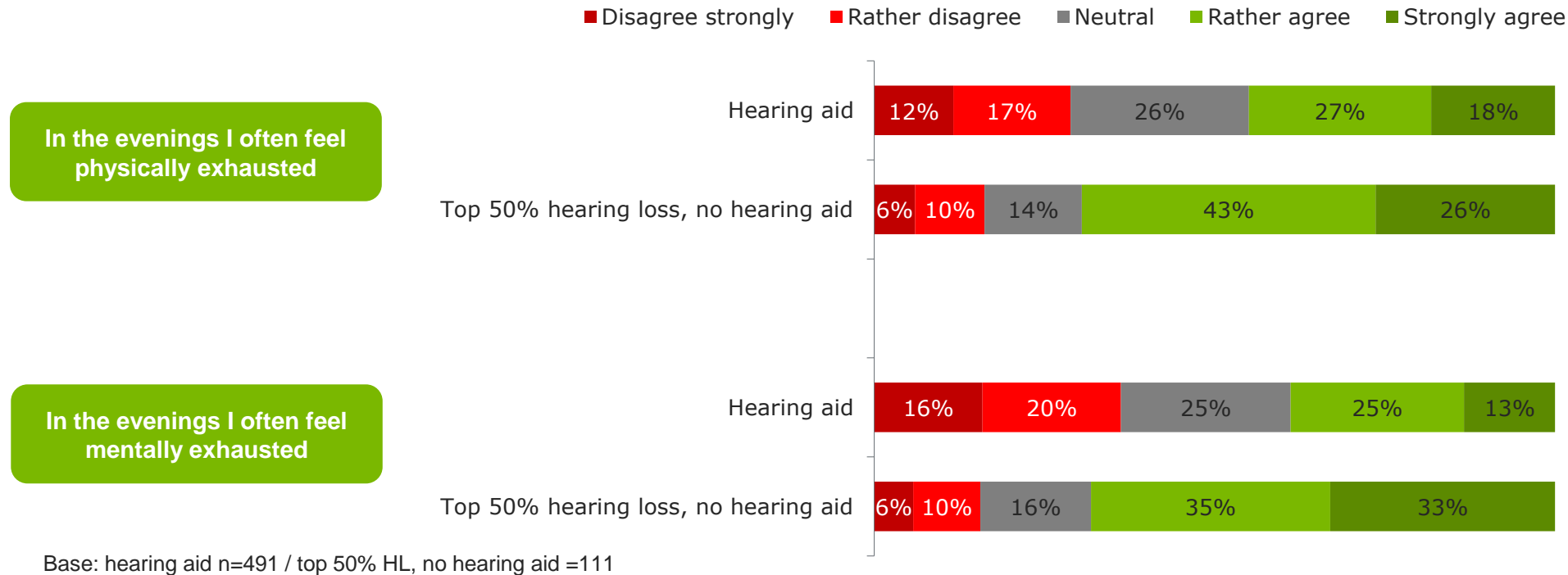
Base: hearing aid n=421 / top 50% HL, no hearing aid =86

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



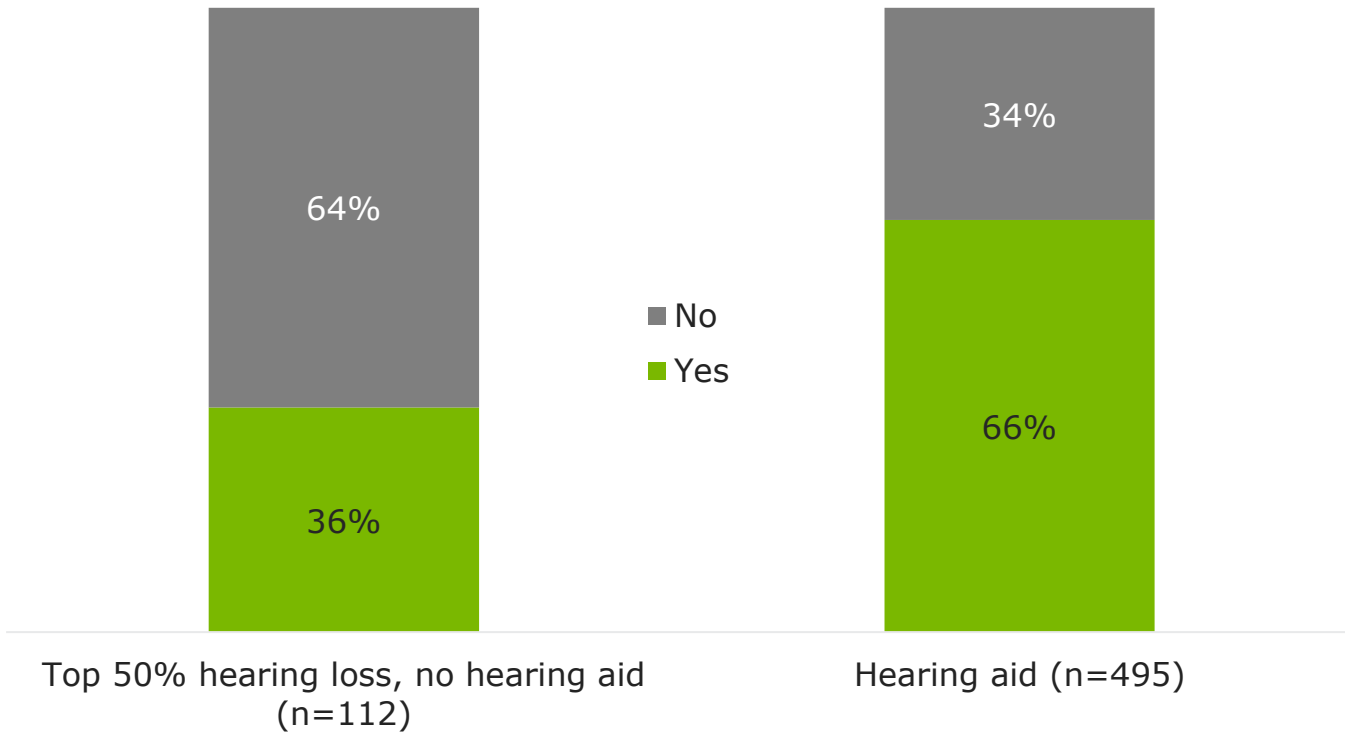
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 - When NOT using a hearing aid, how difficult is it for you to follow conversations in the presence of noise
- People were segmented into 6 groups of same size (16.67% of all hearing impaired in the sample).



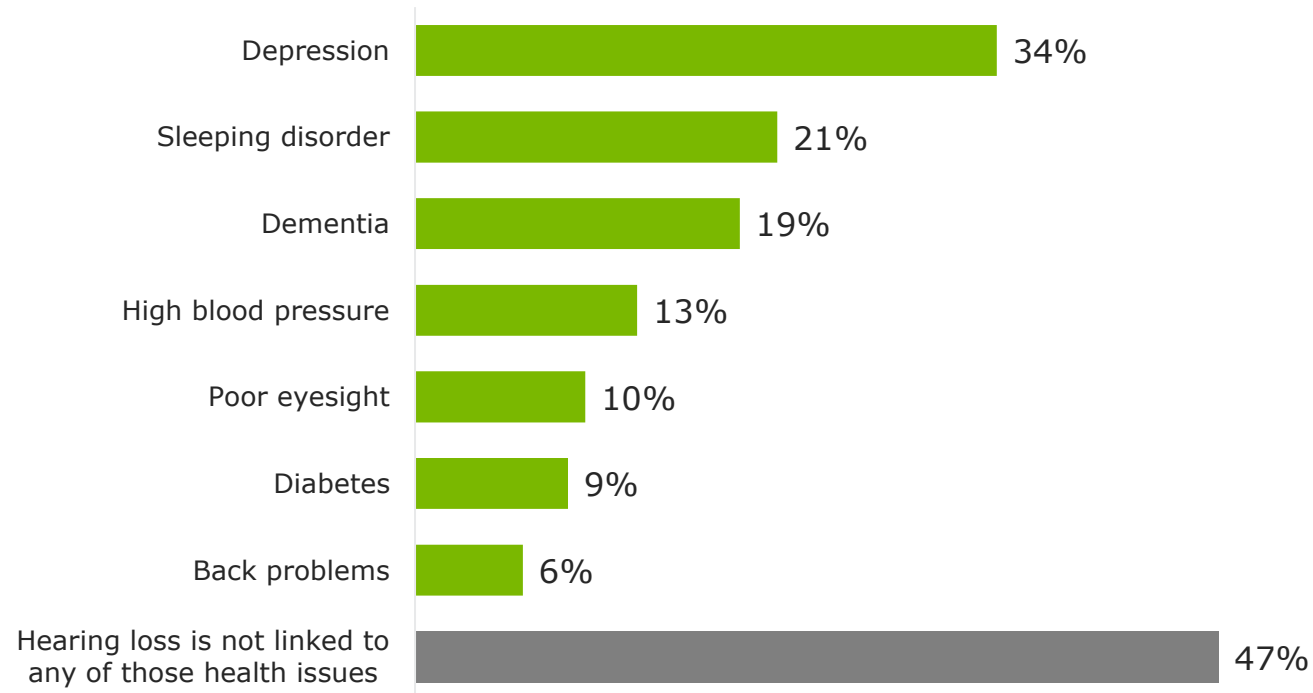
General health problems: Quality of sleep seems to improve if hearing impaired use hearing aids

Are you generally satisfied with the quality of your sleep?



34% 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.

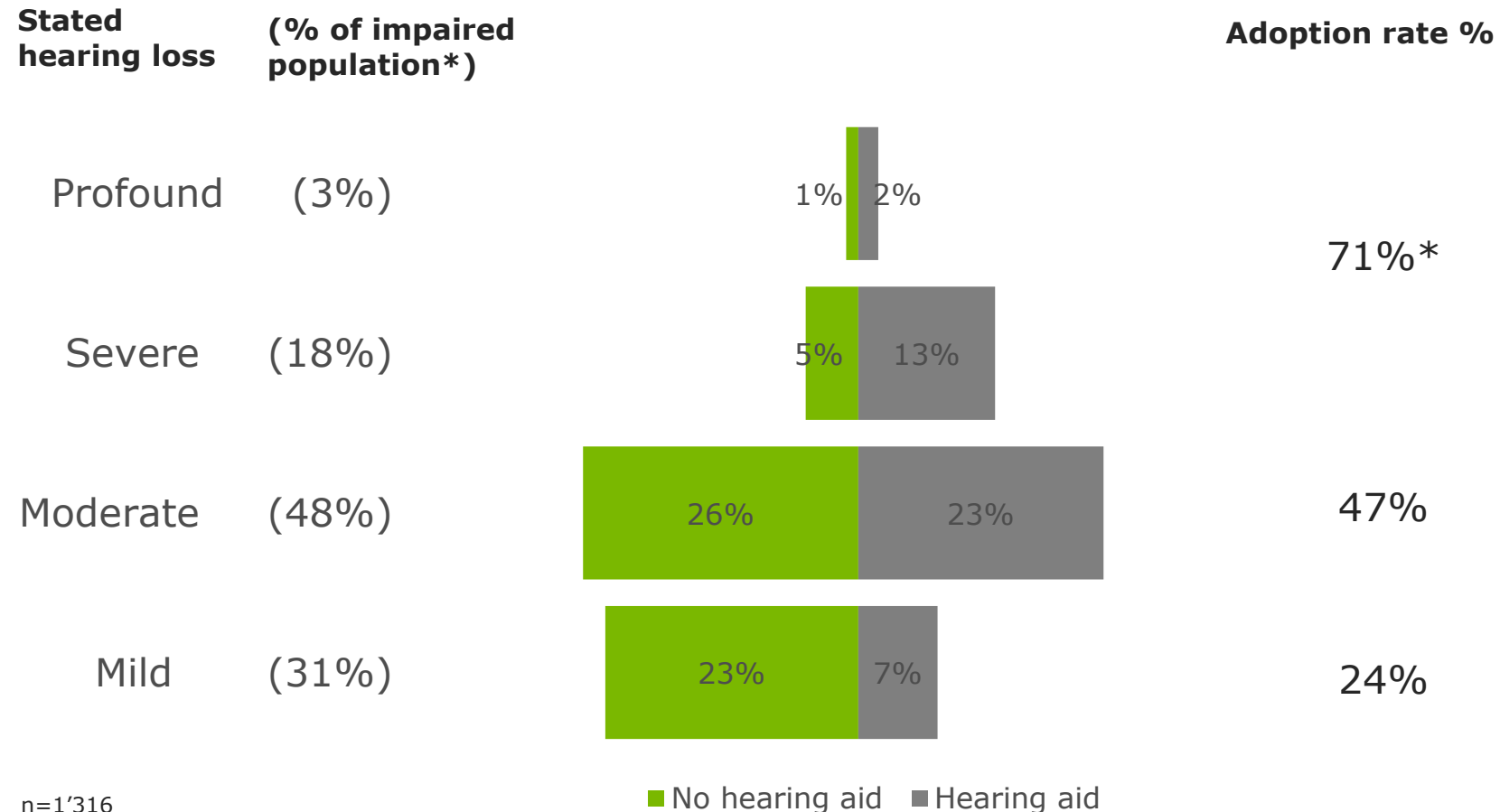


Hearing impaired, n=1'316

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



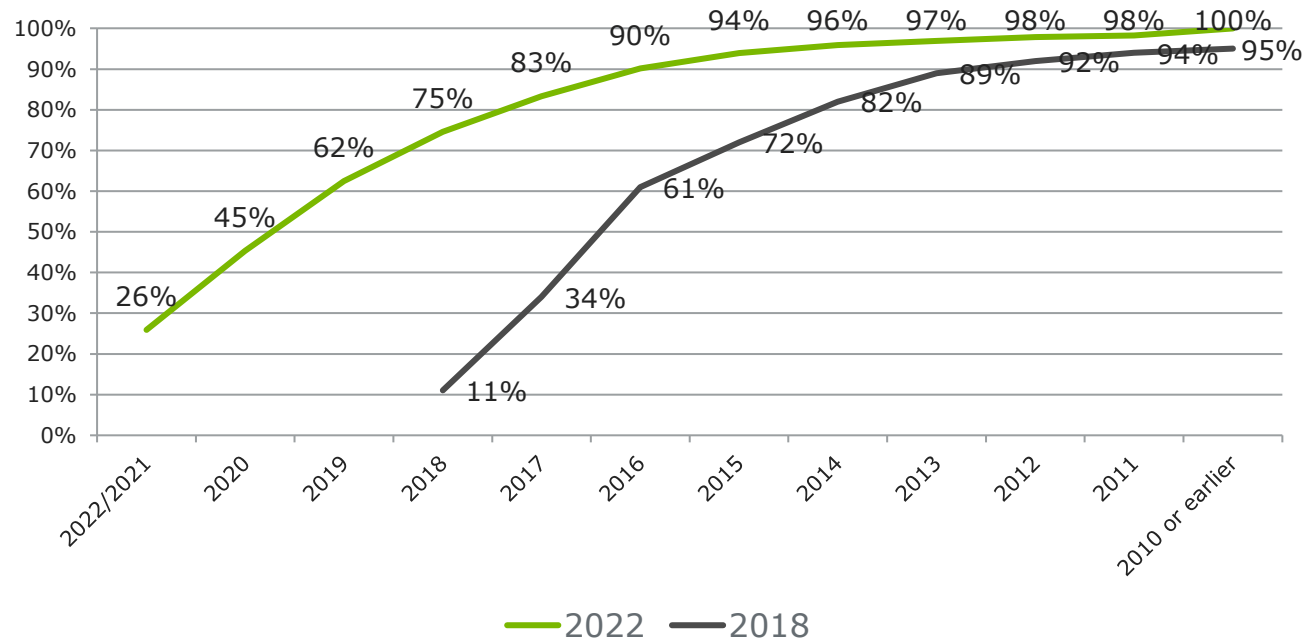
n=1'316

Sums can differ from 100% due to rounding

* combined "severe" and "profound" because n is too small

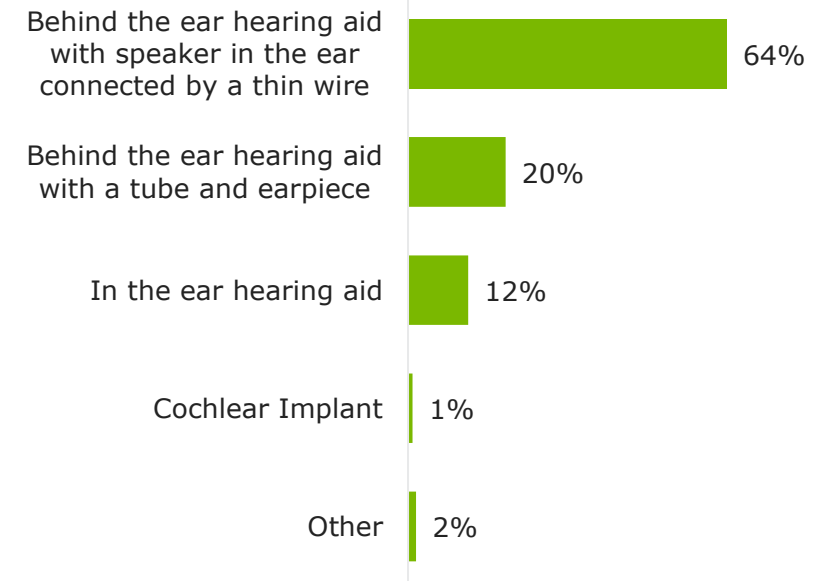
62% of the currently owned HAs were acquired in 2019 or later RIC is the most often purchase type of HA

Year of purchase



Age of currently owned HAs (Mean):
2022: 3.0 years
2018: 2.8 years

Type of HA

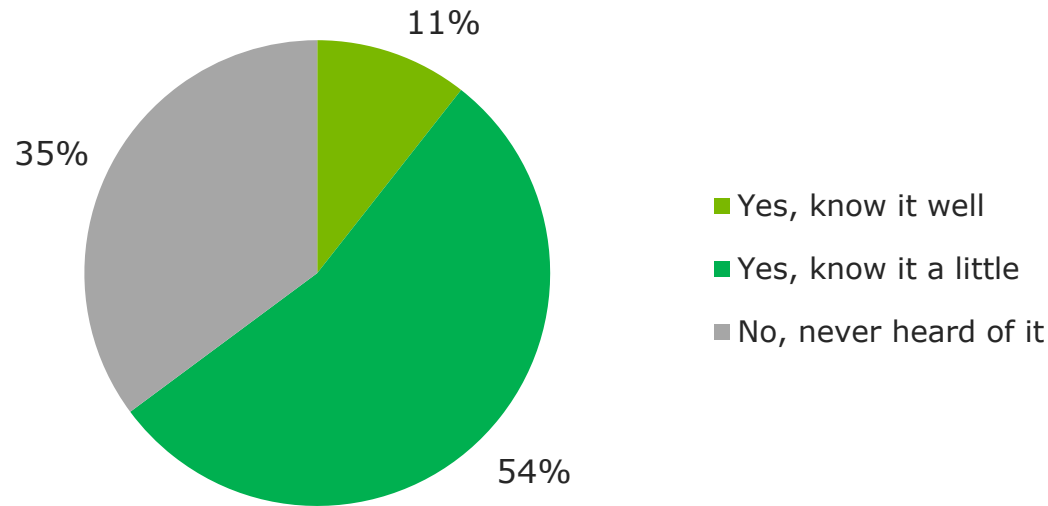


HA-owner, n=683



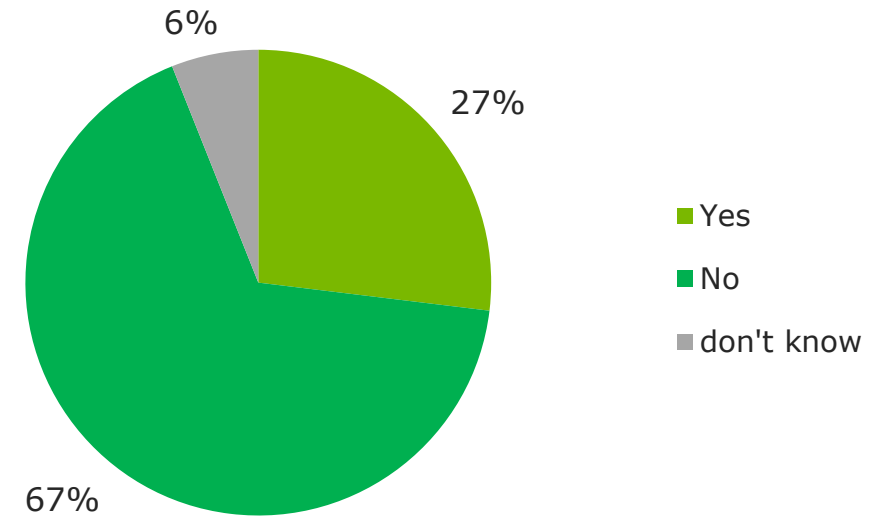
35% of the population in NZ have never heard of Cochlear Implants.
 27% of the HA owners with severe/profound HL have been informed about CIs by a medical professional.

Do you know what a cochlear implant (CI) is?



n=3'998

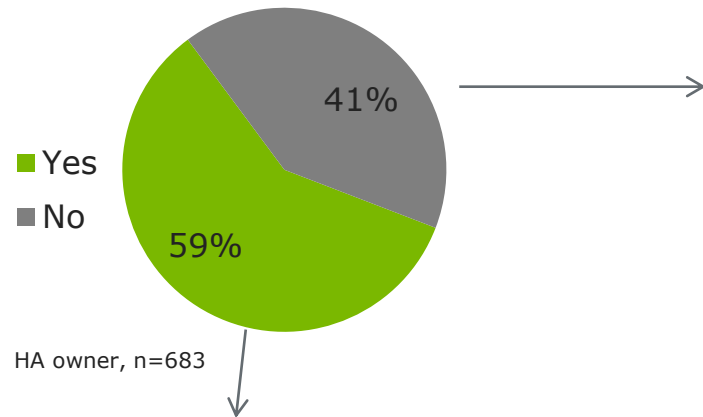
Have you been informed about cochlear implants by a medical professional?



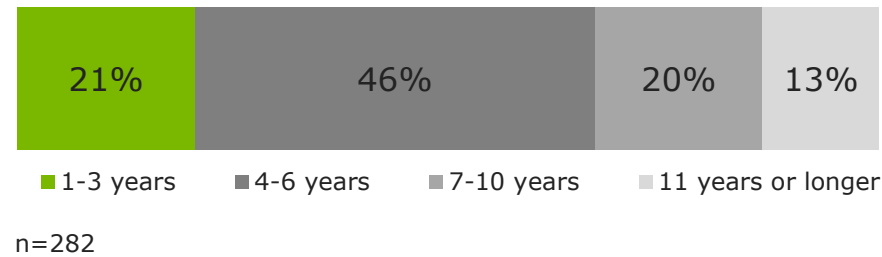
n=210 (HA owners with severe/profound HL)

Hearing aids are used for 6 years before they are being replaced. On average 3 years pass between becoming aware of the hearing loss and the purchase of hearing aids.

Current HAs = first HAs?



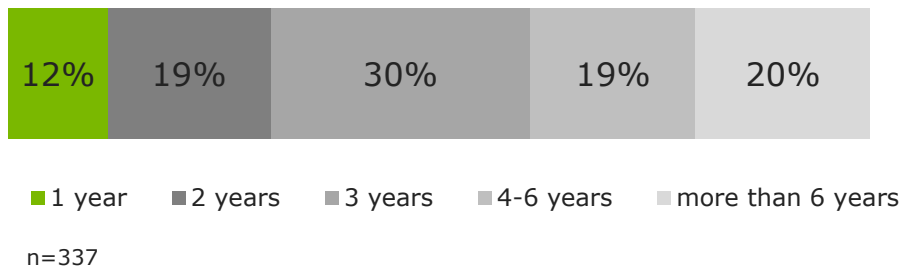
How many years did you own your previous HAs?



Age of HA before it has been replaced:
 2022: 6 years (median)
 2018: 6 years (median)

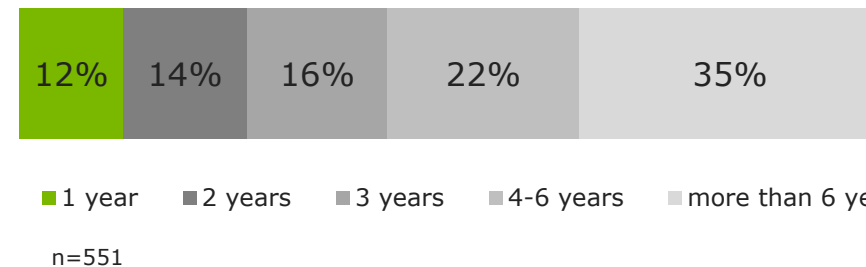
HA non owners (1st HA):

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?



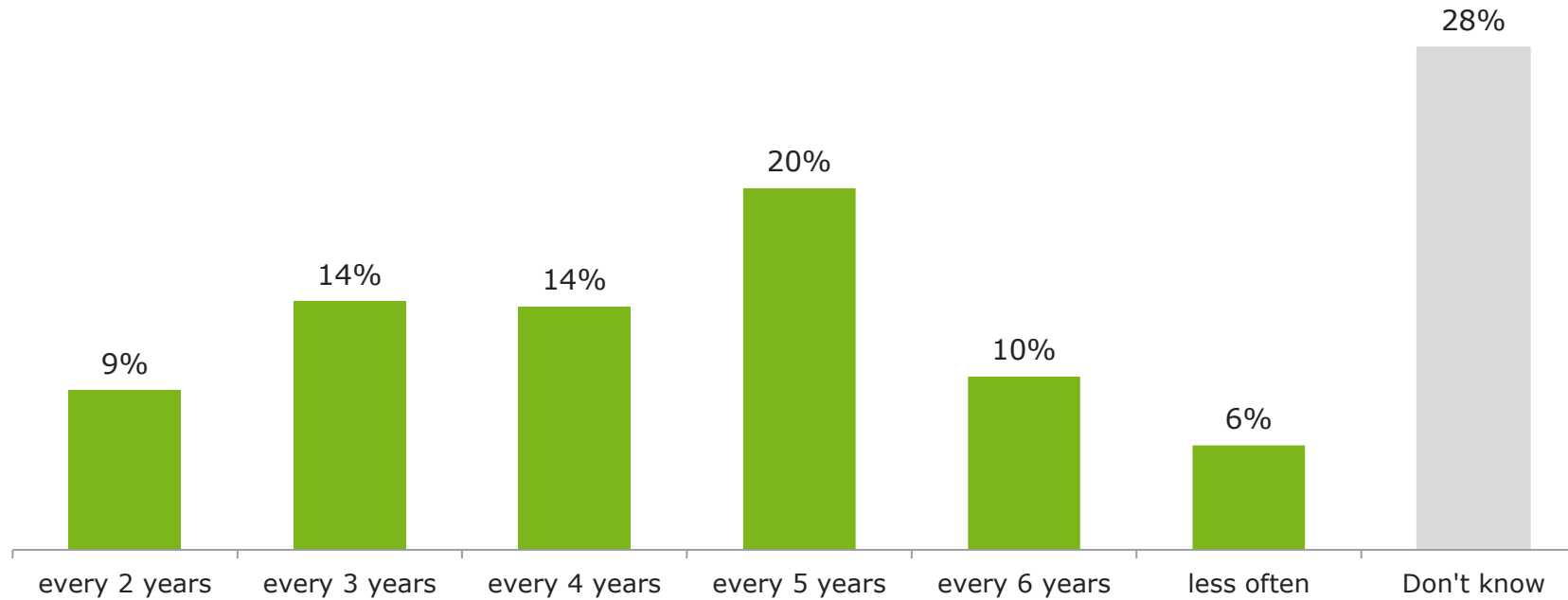
HA non owners:

How many years had passed since you became aware of your hearing loss?



23% of current owners think that their HAs should be upgraded to the latest technology every 2-3 years.

With technology advancing so quickly , how often do you believe that you need to upgrade your hearing aid to the latest technology?



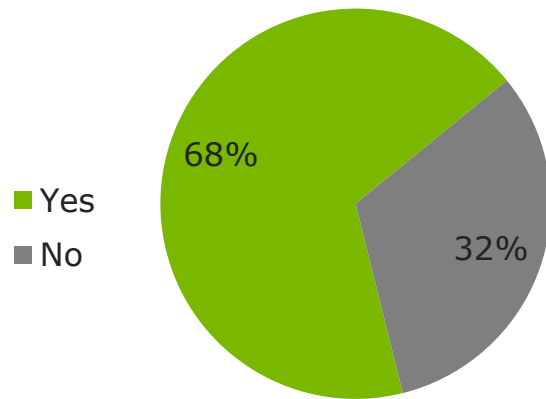
HA-owner, n=683

Country specific question



68% of all HA owners think they should have gotten their HAs sooner! Main reason is missing out on social life.

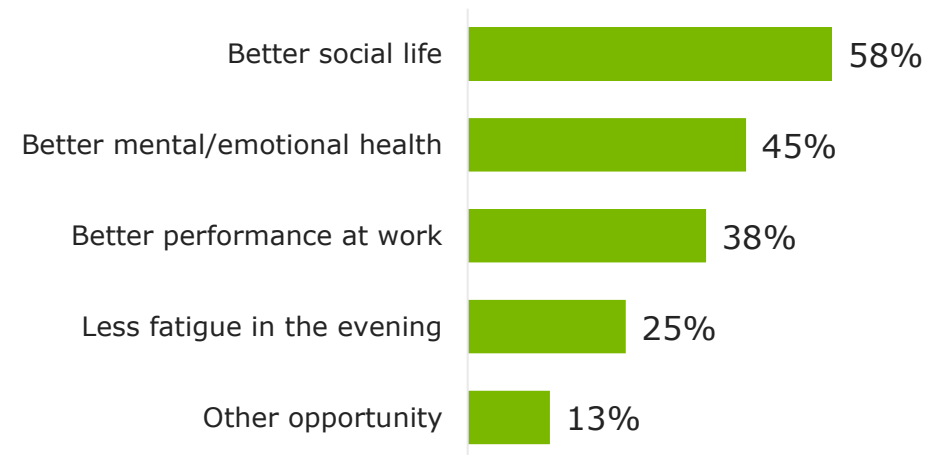
Thinking back before you obtained your first hearing aid(s): do you think, you should have gotten them sooner?



HA-owner, n=683

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

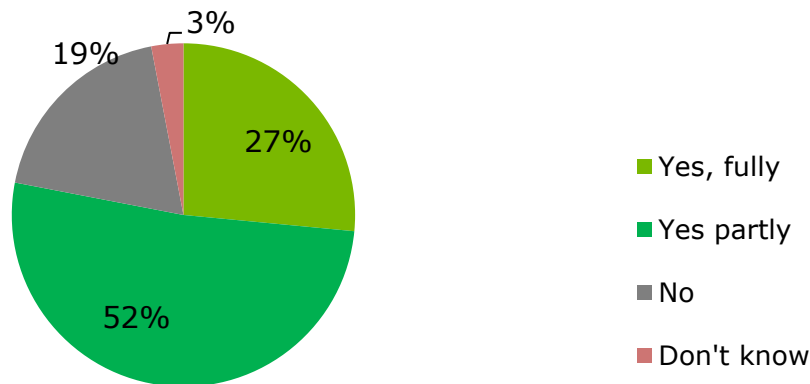


n=445



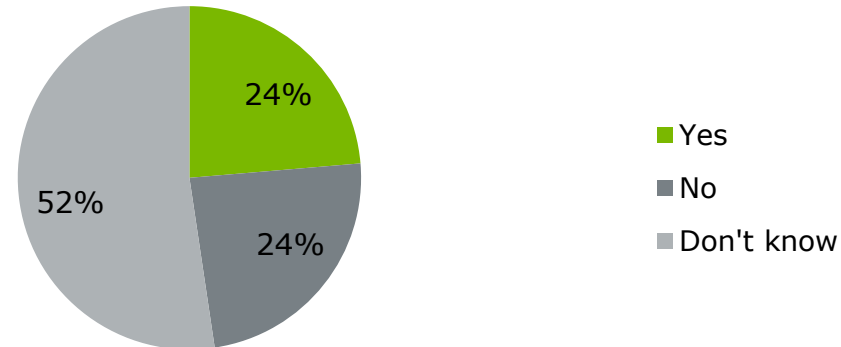
79% received some kind of 3rd party reimbursement – only 24% of the non owners think that a third party would pay.

Owners: Have your current hearing aids at least partially been paid by State Ministry of Health, ACC or Ministry of Social Development funding, or Insurance?



HA-owner, n=683

Non-owners: Based on your current knowledge, would any part or all of your hearing aid(s) be paid for by a third party ? (State Ministry of Health, ACC or Ministry of Social Development funding, or Insurance)

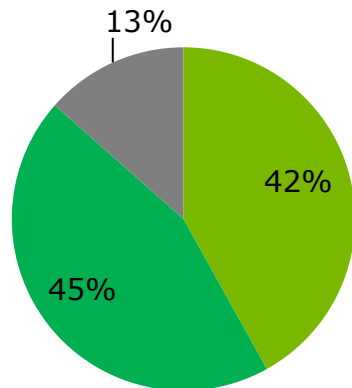


HA-non-owners, n=633

Almost 90% of the HA owners are familiar or have at least heard of the funding options available from the government – 65% of the non owners have never heard of these options!

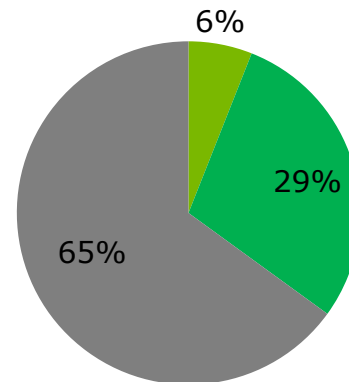
Are you familiar with the funding options for hearing aids available to you from the government?

Owners



HA-owner, n=683

Non-owners



HA-non-owners, n=633

- Yes, know it well
- Yes, have heard of it
- No, never heard of it

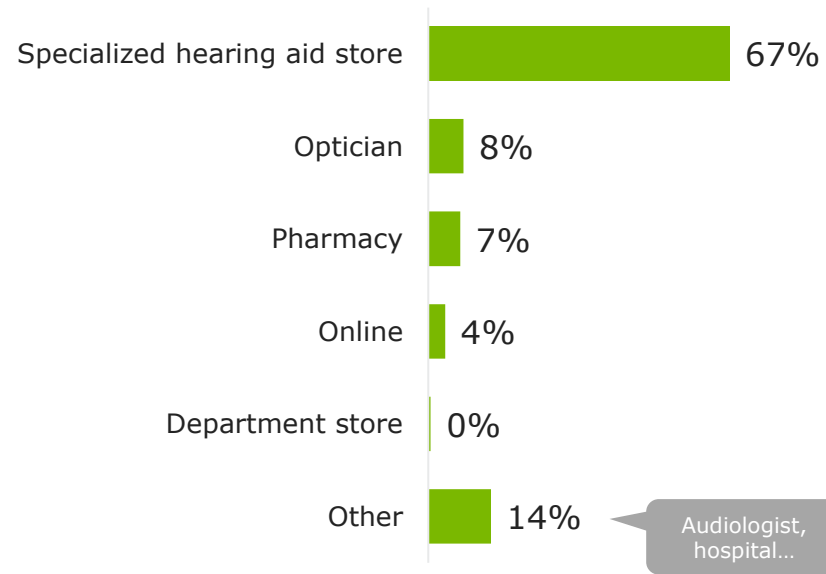
- Yes, know it well
- Yes, have heard of it
- No, never heard of it



Specialized hearing aid store is by far the preferred place for obtaining hearing aids (both for owners and non owners).

OWNERS:

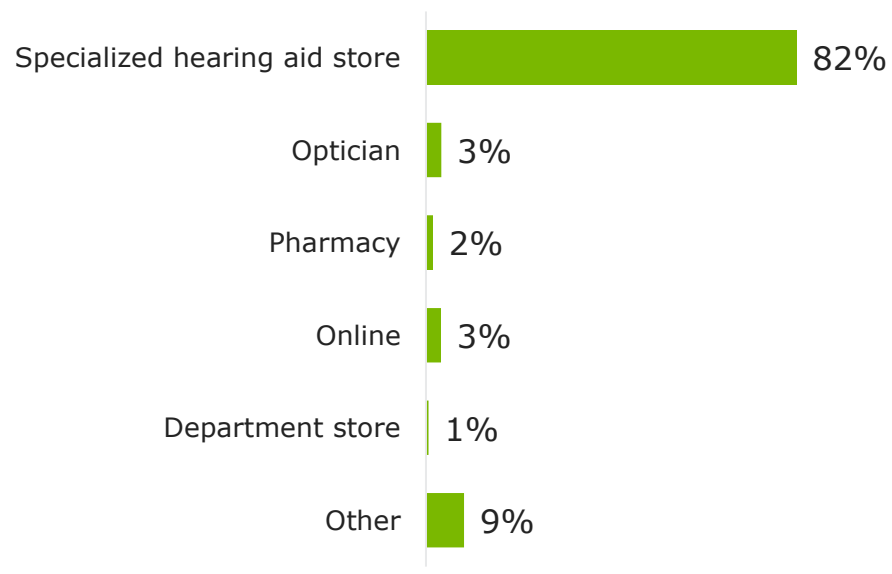
Where was your most current hearing aid obtained?



HA-owner, n=683

NON OWNERS:

If you were to get hearing aids, where would you go?

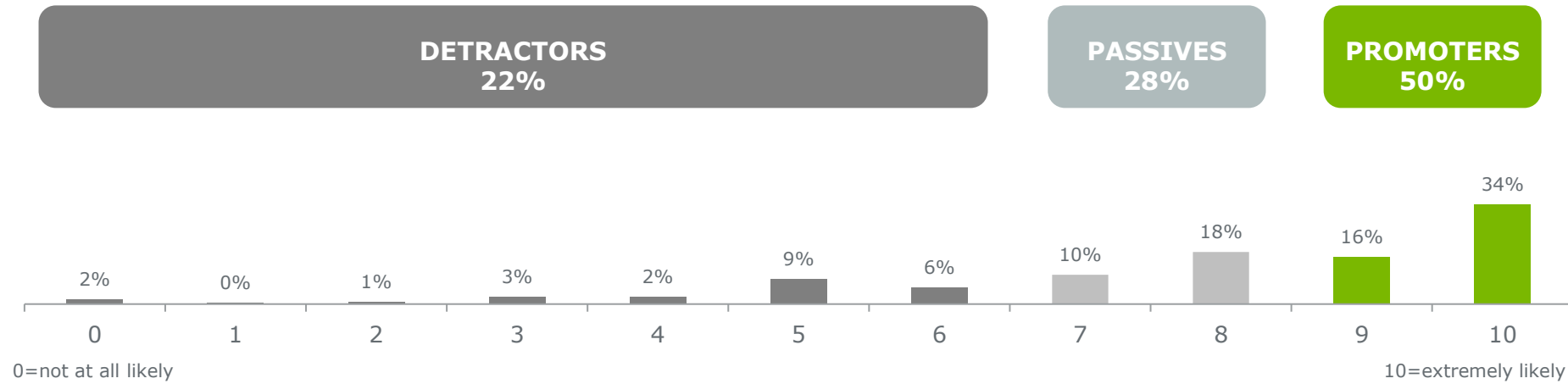


HA-non-owner, n=633



Recommendation intention of the place where the hearing aid(s) have been obtained: Positive NPS score of 28.

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



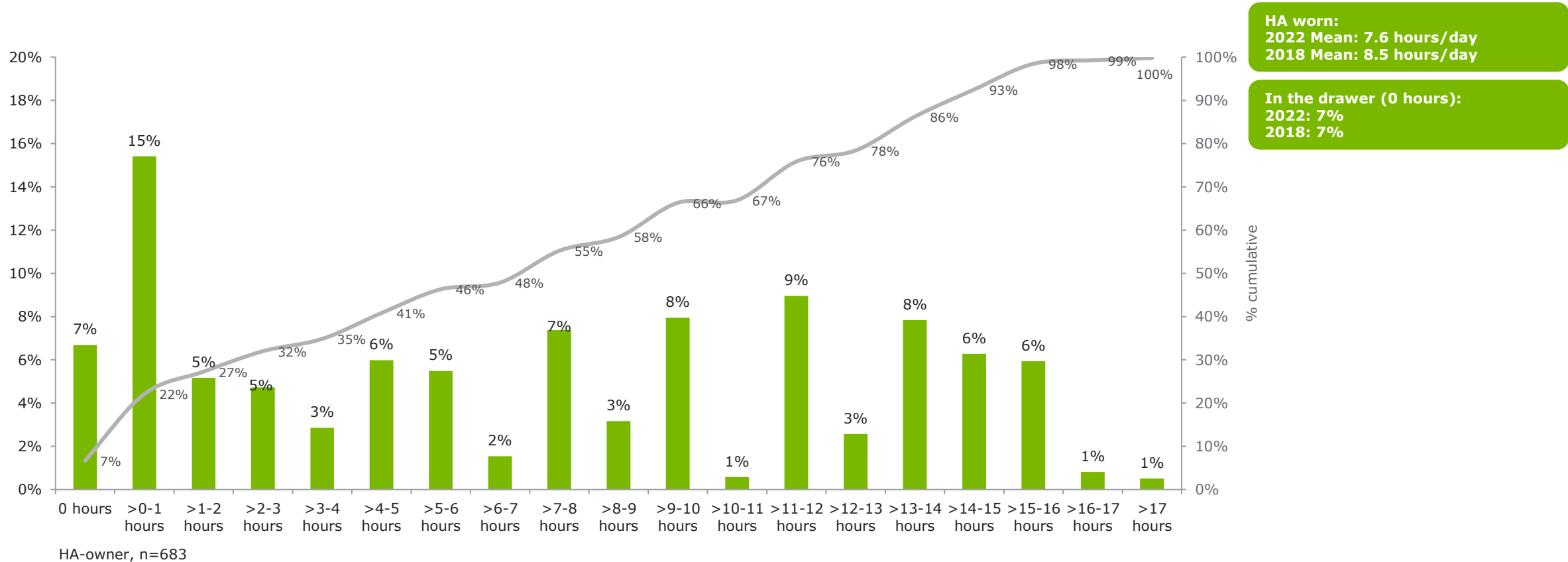
NPS = PROMOTERS – DETRACTORS = 28

HA-owner, n=683



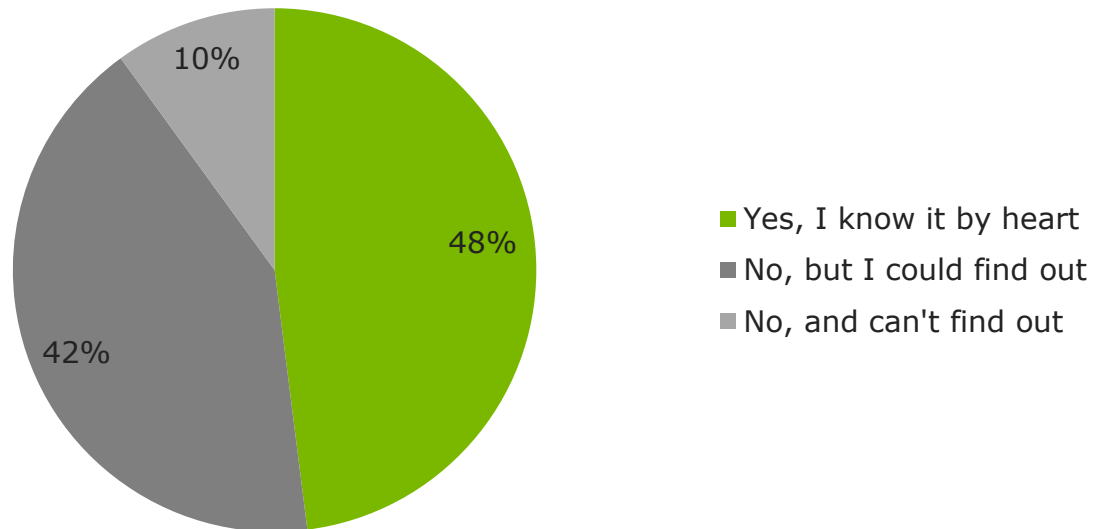
On average, HAs are worn 7.6 hours a day

How many hours a day are HA worn?



48% of today's hearing aid owners are aware of their hearing aid brand.

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



HA-owner, n=683

38% of the HA owners use a hearing aid app, 81% of those are satisfied with it.

Have you been informed by your hearing care professional about hearing aid apps?
(HA owners, n=683)



Do you personally use apps for your hearing aids?
(HA owners, n=683)

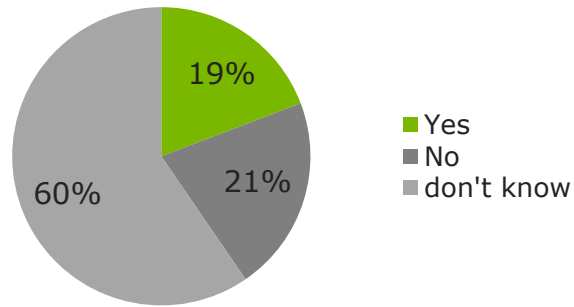


IF APPS USED (n=246):
Overall, how satisfied with the performance of your accessorie(s)?



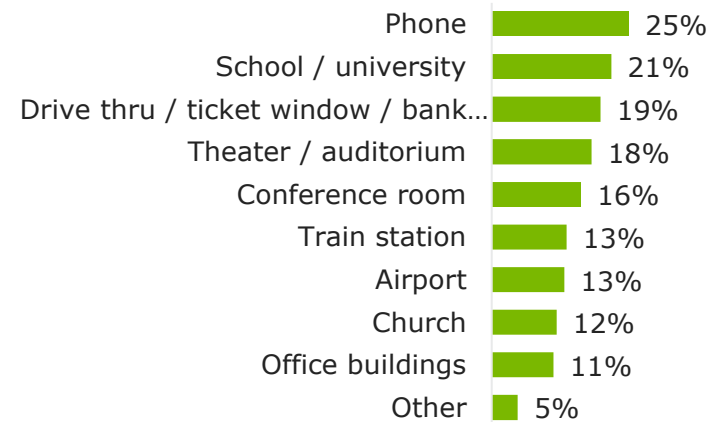
19% of the HAs are (to the knowledge of the owners) equipped with Telecoil. Main usage of Telecoil with phone and in schools / universities.

Are your hearing aids equipped with Telecoil?



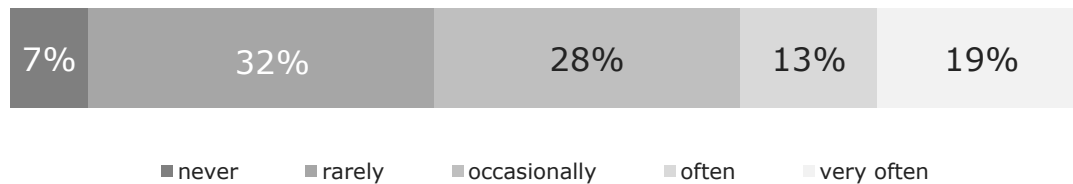
HA-owner, n=683

Where do you use your telecoil to improve your hearing?



HA-owner (use Telecoil), n=95

How often do you use the telecoil to improve your hearing?



HA-owner (equipped with Telecoil), n=104

How satisfied are you with the telecoil option?

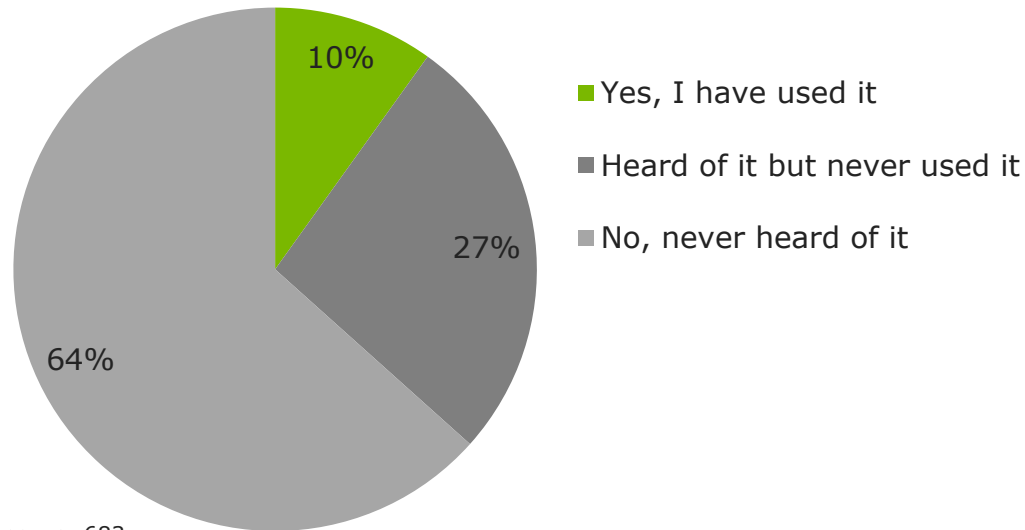


HA-owner (use Telecoil), n=95



10% of the HA owners have already used remote fitting, 27% have at least heard of it, 64% 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)

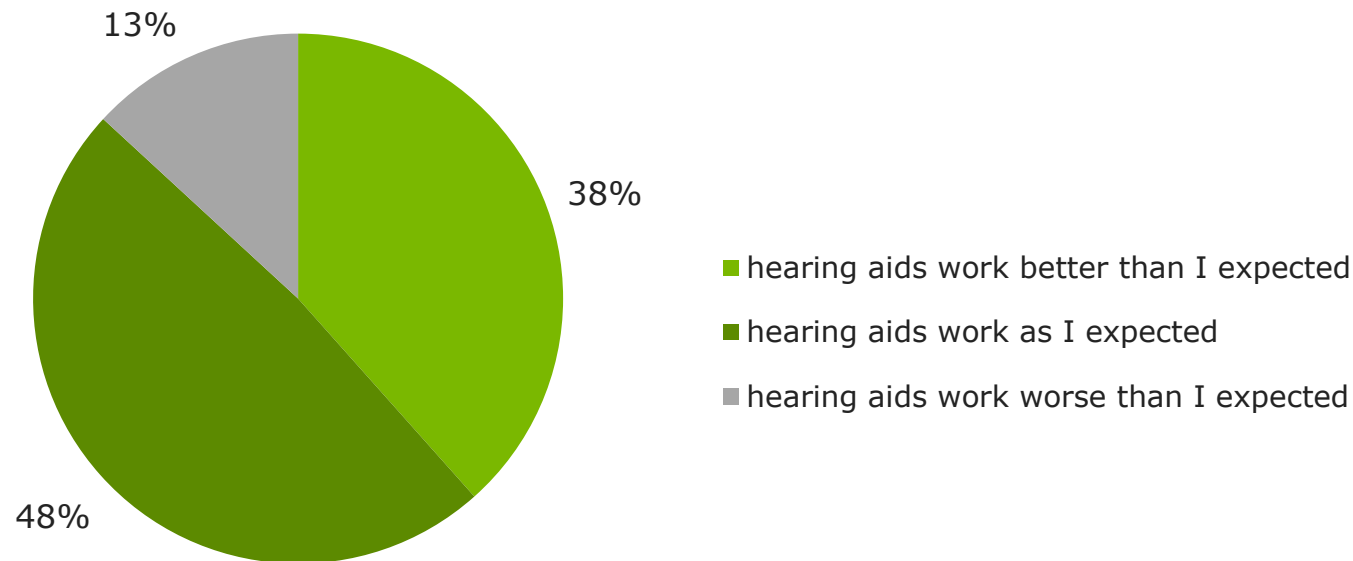


HA-owner, n=683

Satisfaction with hearing aids and drivers

87% of the hearing aid owners say their hearing aid works better than or as expected

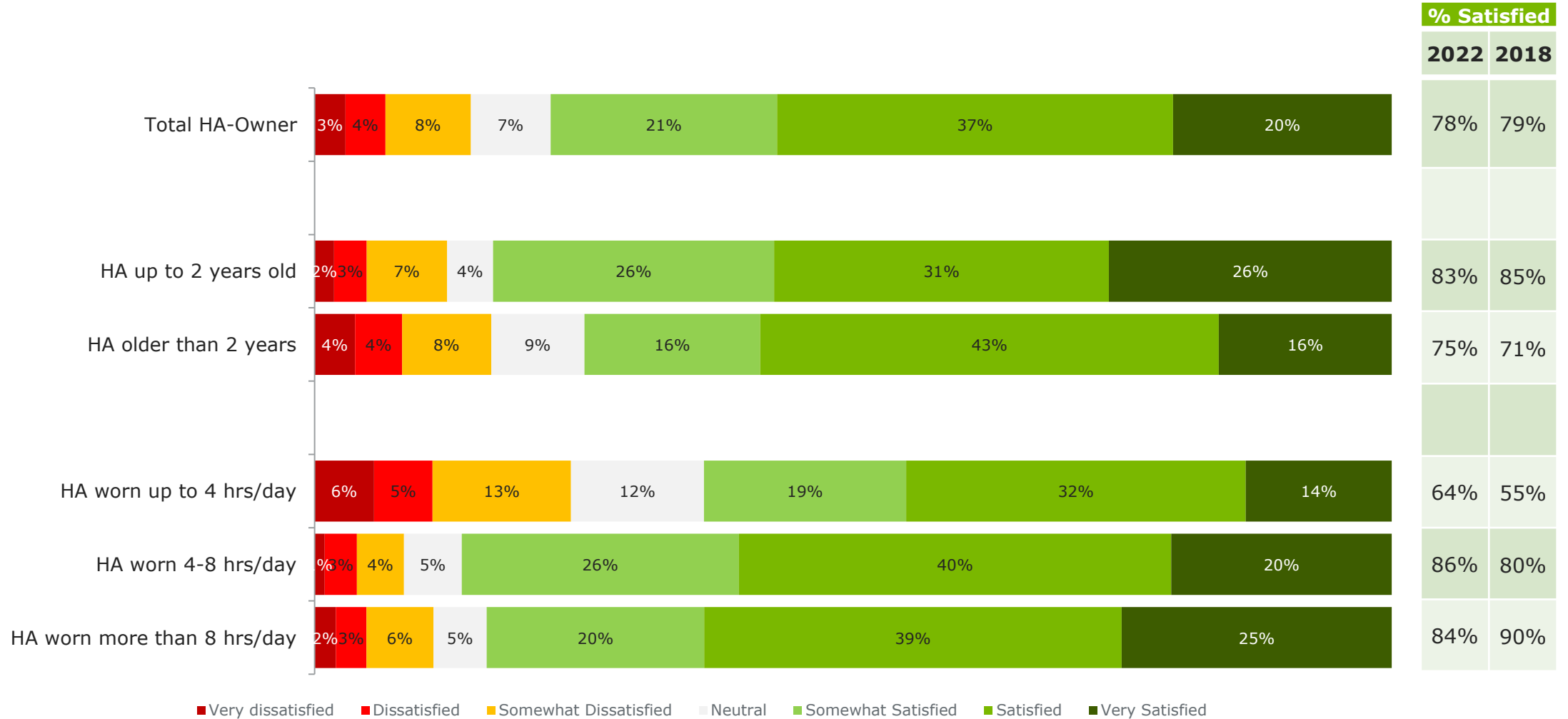
How have the expectations you had towards hearing aids before trying them on for the first time been met?



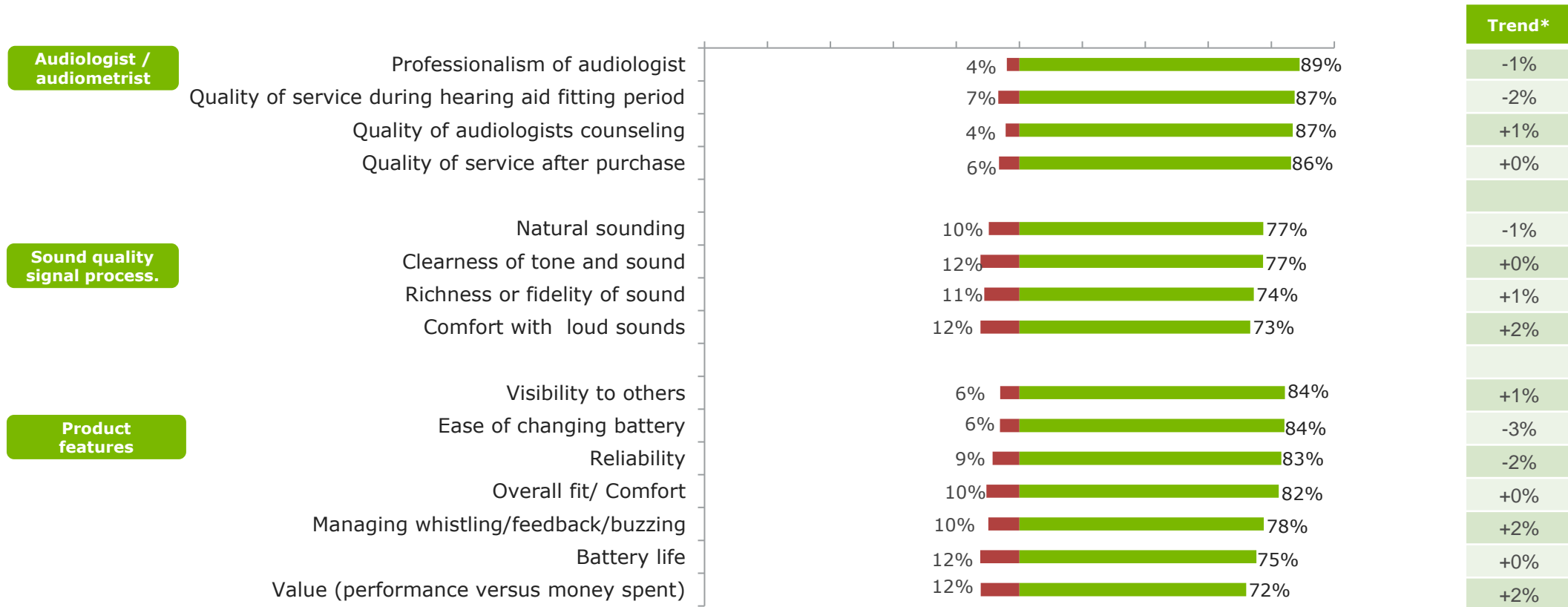
n=683



Overall satisfaction with HA: 78% of hearing aid owners are satisfied with their hearing aid(s)



Satisfaction with current hearing aids



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

*% of satisfied HA owners compared to 2018

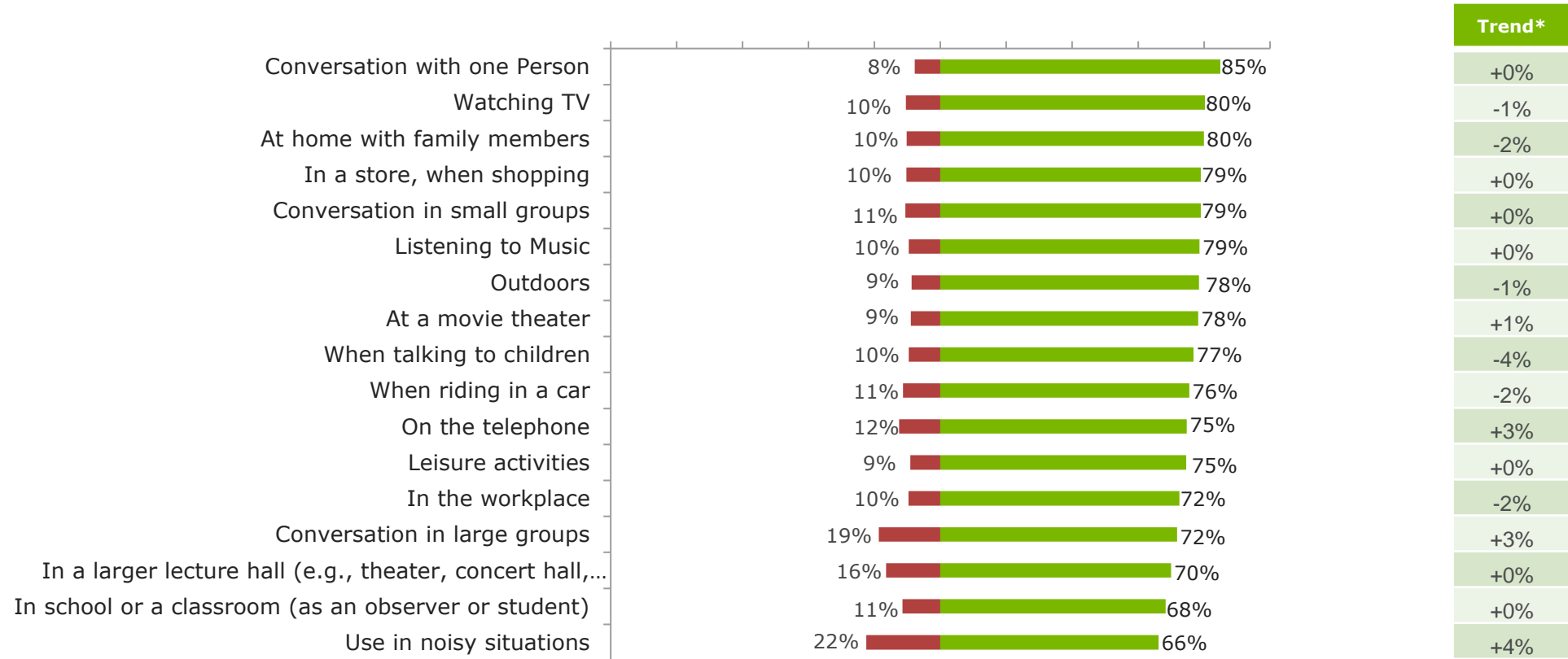
■ dissatisfied ■ satisfied

HA-owner, n=683



Satisfaction with current hearing aids

Listening situations



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

■ dissatisfied ■ satisfied

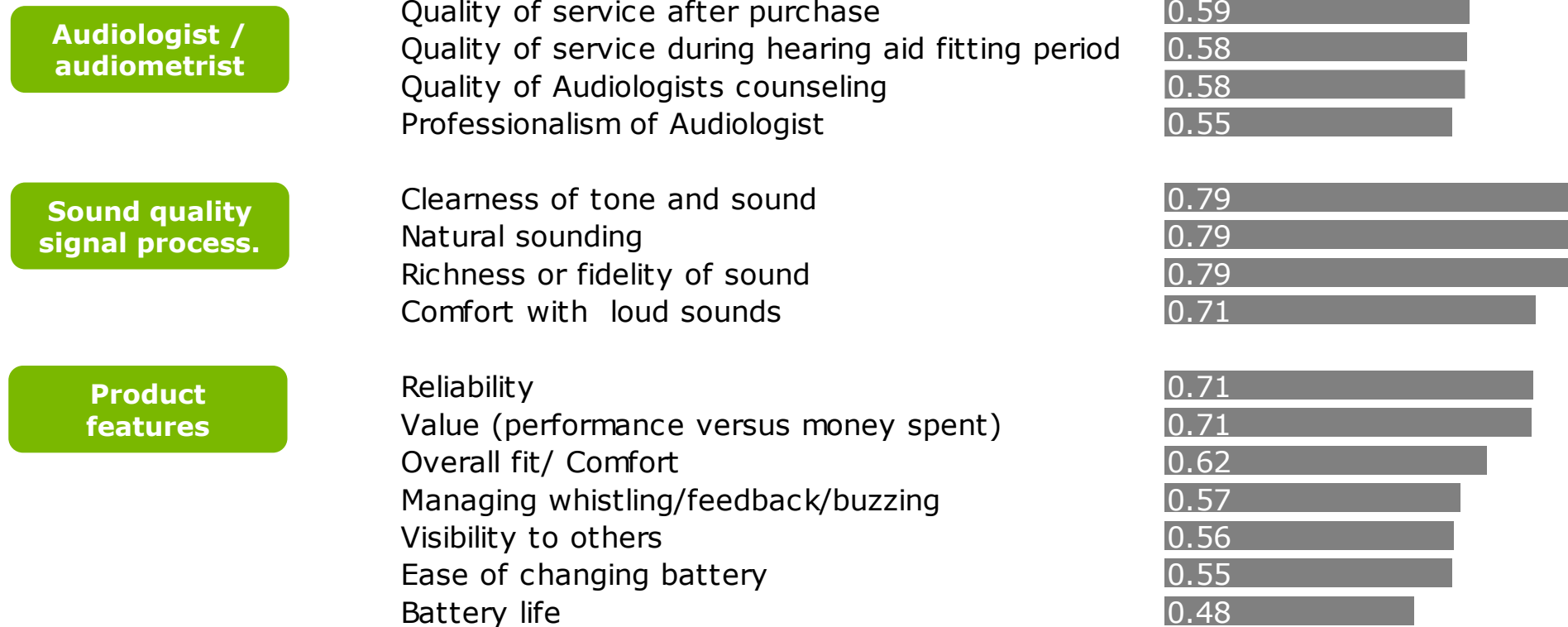
*% of satisfied HA owners compared to 2018

HA-owner, n=683



Factors influencing satisfaction with current HA: Sound quality/signal processing is most important for overall satisfaction with HA

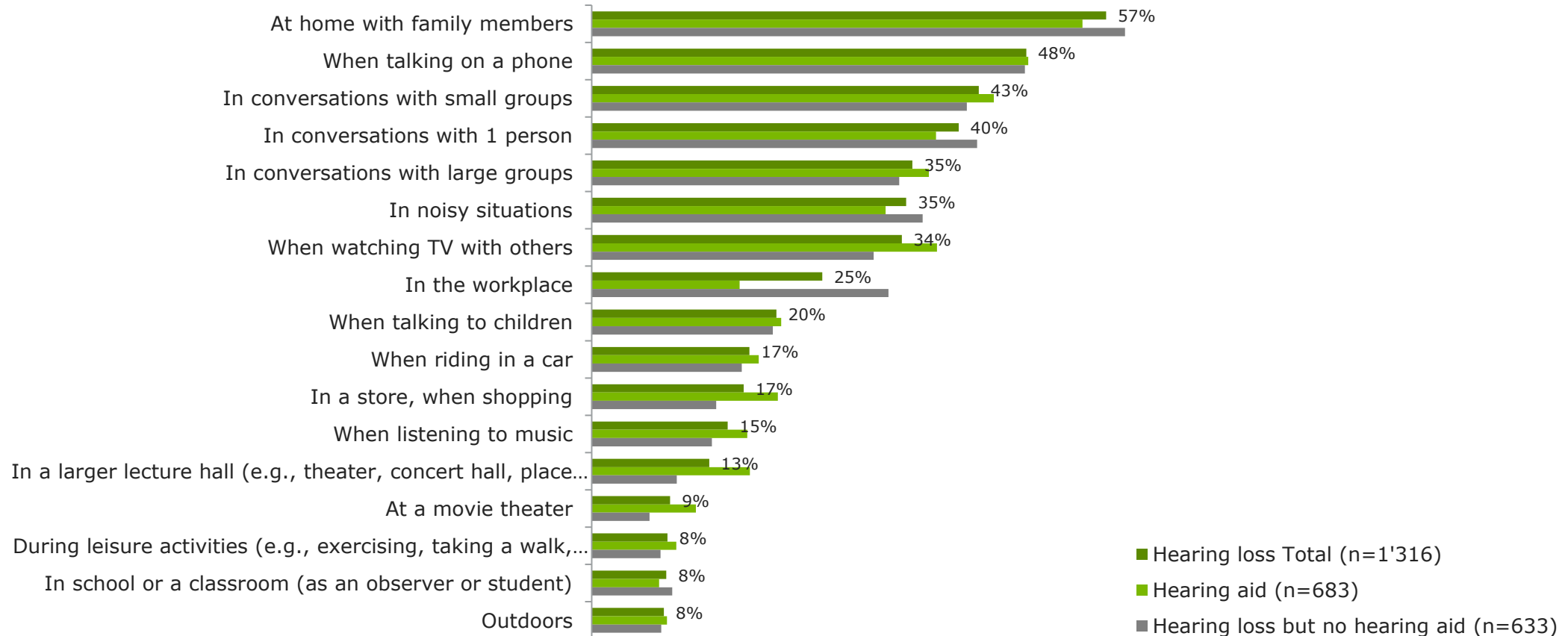
Influence on overall satisfaction with HA*



*The Influence has been calculated with a correlation: 0 means no relation between a criterion and overall satisfaction, 1 means a maximal relationship. Read: Clearness of tone and sound, natural sounding and richness or fidelity of sound are the most important criteria for satisfaction.

Important listening situations

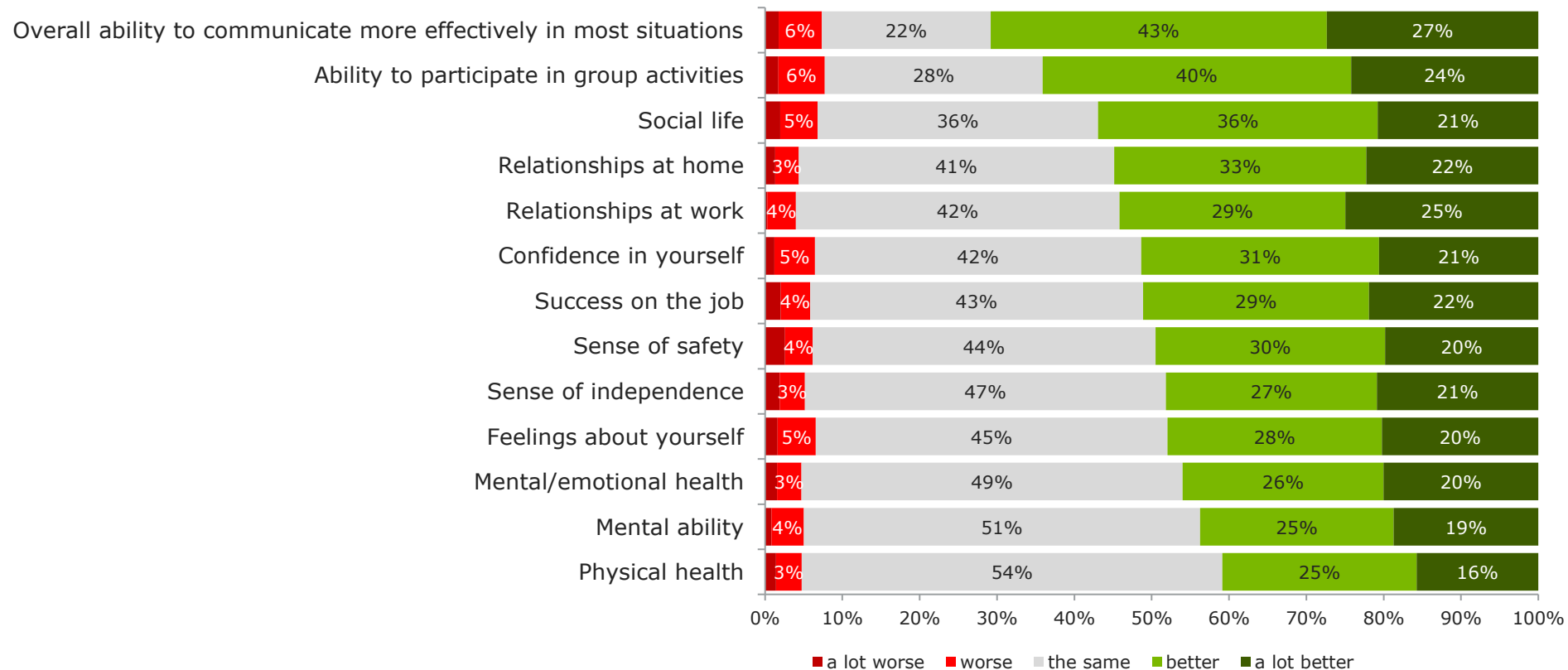
In which of these situations is it most important for you to hear well?
(choose up to 5)



Positive impact of hearing aids, quality of life

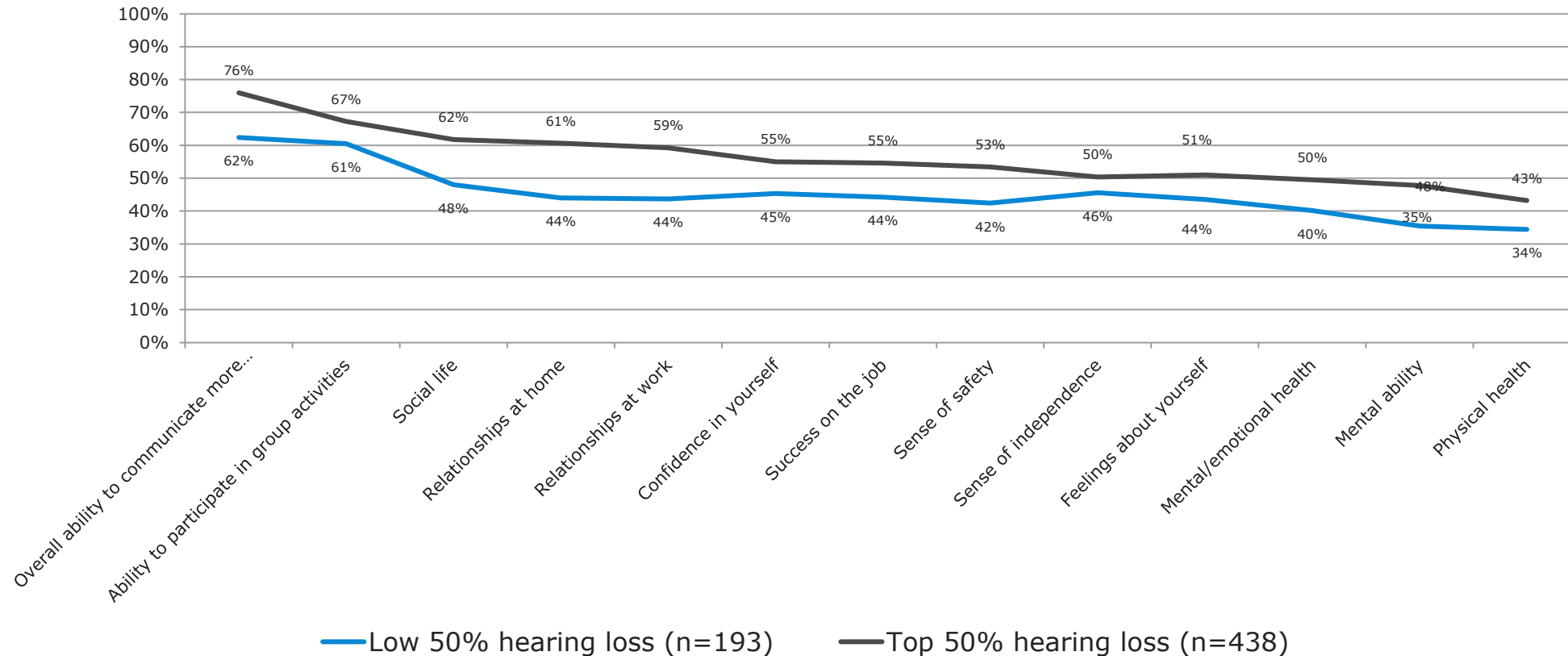
Significant positive impact of HAs on different aspects: Especially Communication effectiveness, ability to participate in group activities, social life and relationship at home/work improve with hearing aids.

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).



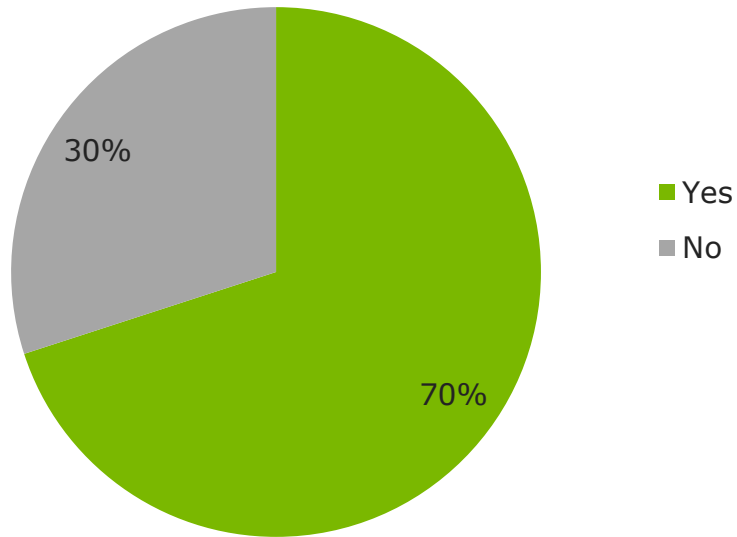
Impact of HAs is perceived more positive by patients with a Top 50% hearing loss in all aspects

% of HA owners feeling better/a lot better



70% of the hearing aid owners feel more confident moving in a city since wearing hearing aids.

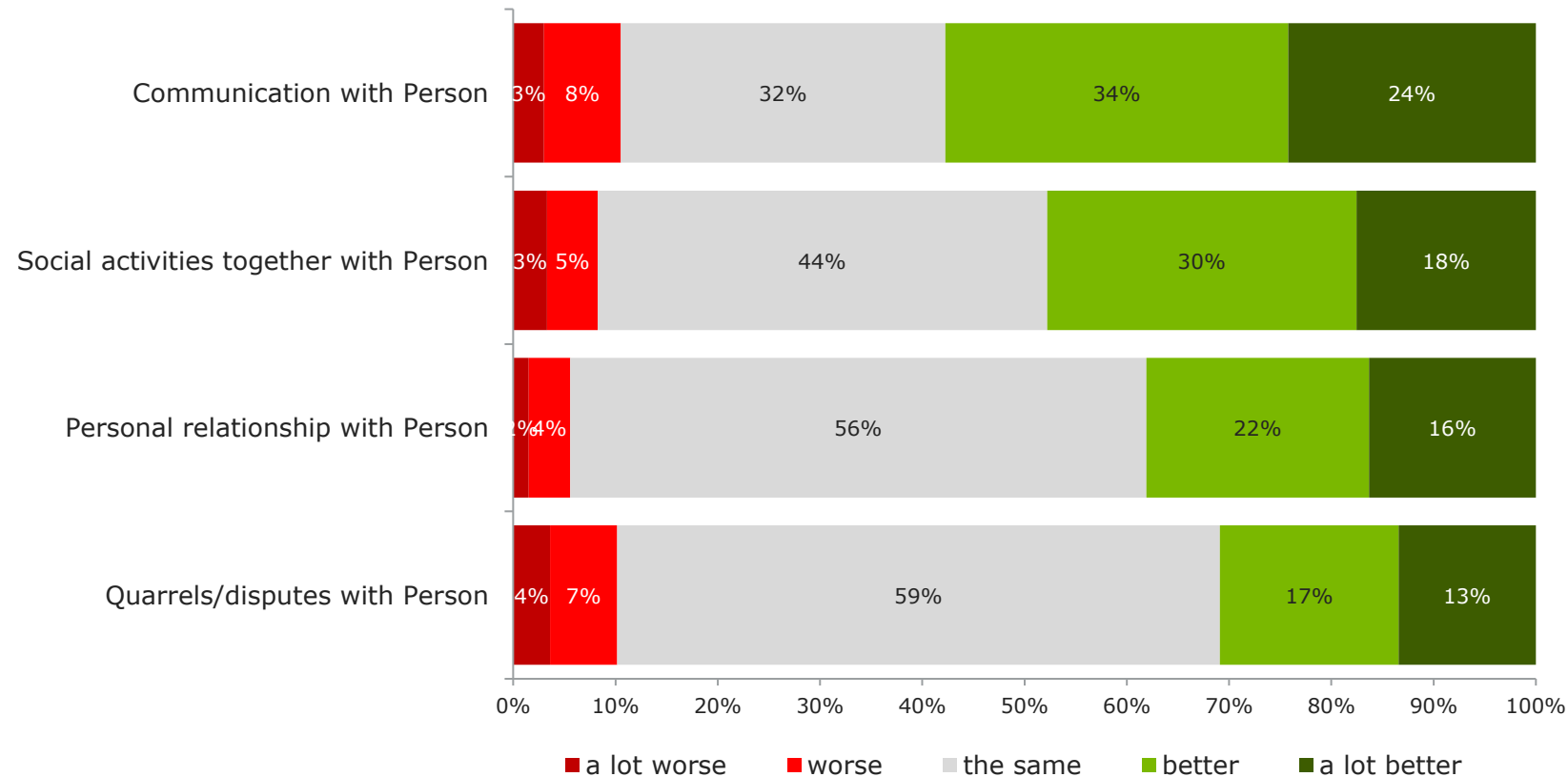
Since wearing a hearing aid, do you feel more confident moving in a city, e.g. because you hear traffic signals/vehicles approaching?



n=683

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?

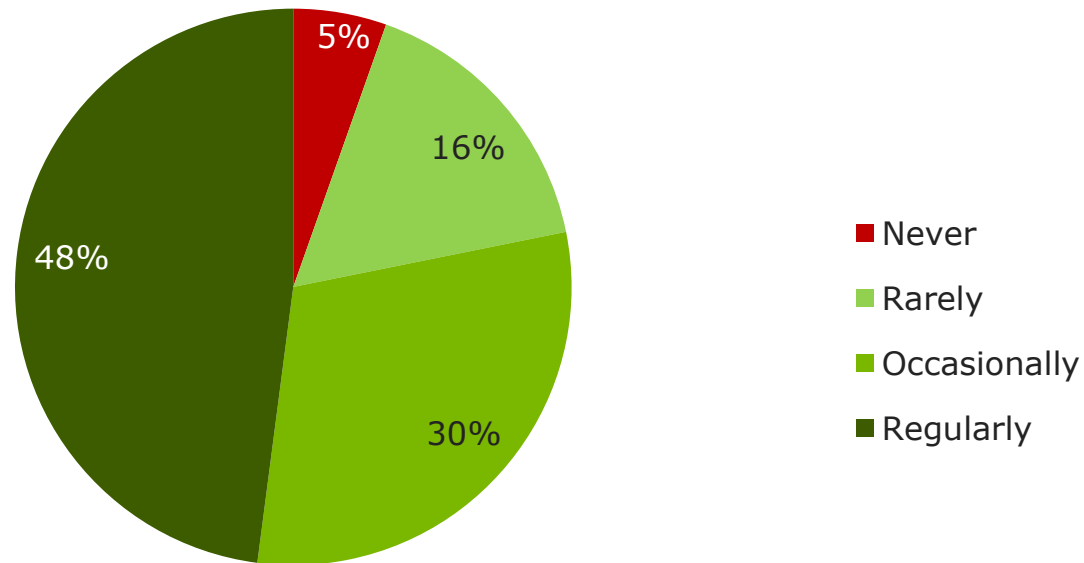


Someone in HH / parent has HA, n=620



95% of hearing aid owners declare that their hearing aids improve their quality of life at least sometimes

How often do your hearing aids improve your quality of life?



n=683

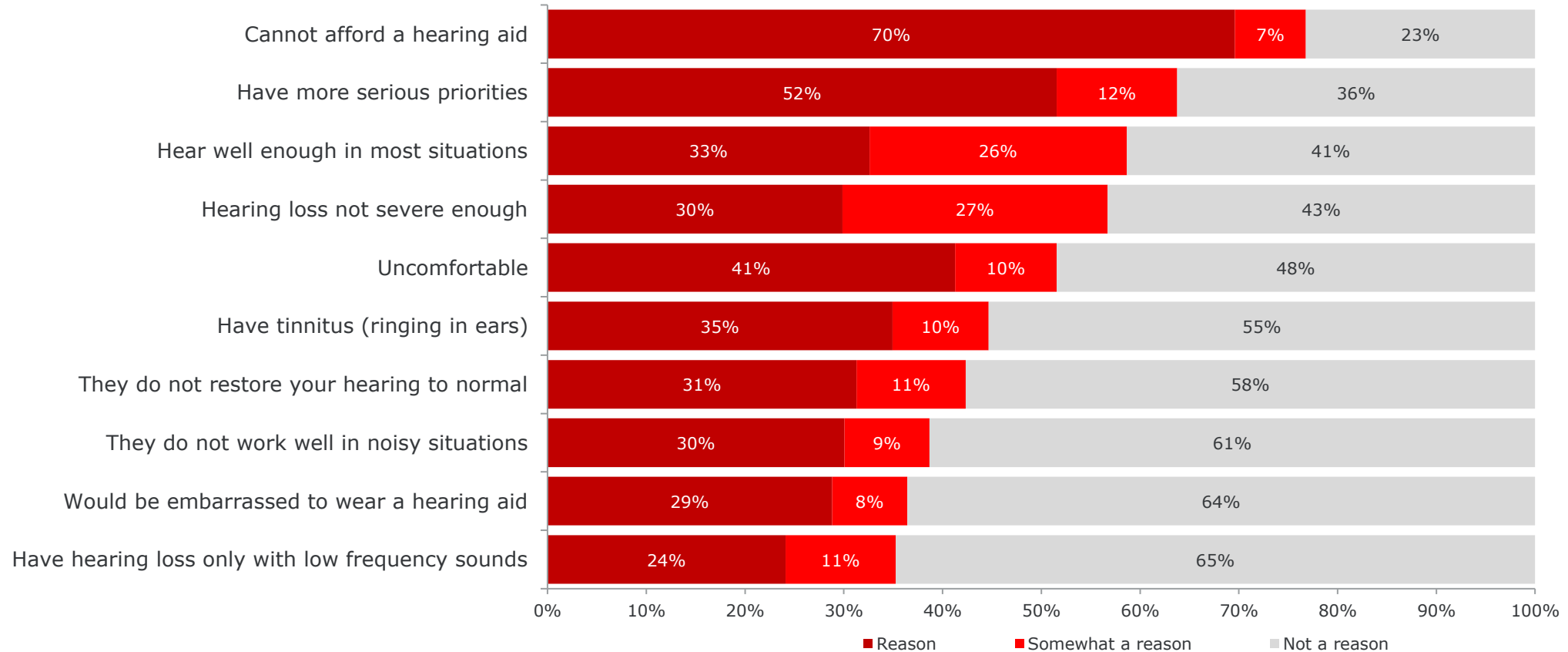
4. Analysis of hearing impaired non-owners

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

	HA Owner n=683	HA-Non-owner Low 50% HL n=335	Non-owner Top 50% HL n=167
Ears impaired (stated)			
Unilateral loss	18%	34%	36%
Bilateral loss	82%	66%	64%
		More similar hearing loss-structure	
Perceived loss			
Mild	16%	56%	6%
Moderate	51%	40%	62%
Severe	28%	3%	24%
Profound	4%	0%	7%

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

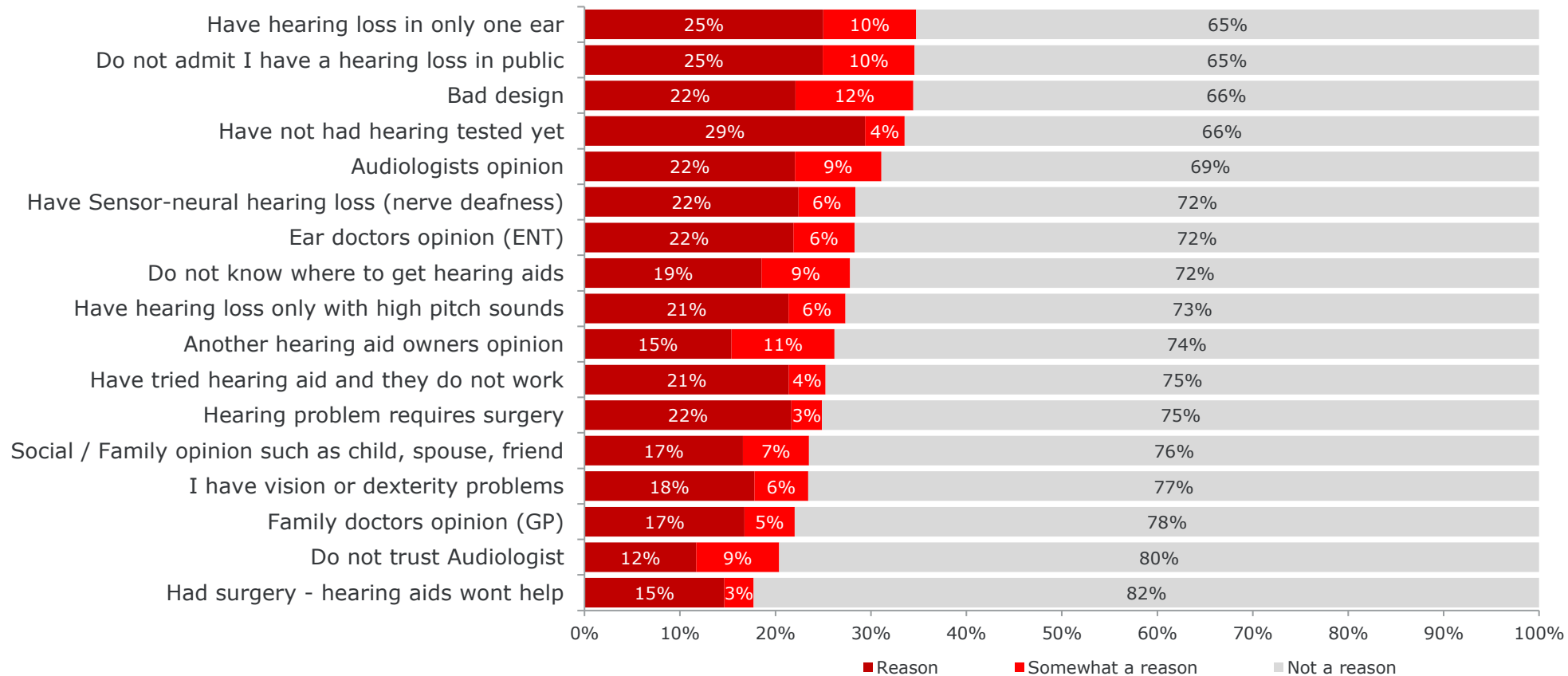


Base: non owners Top 50% HL: n=167





Less important reasons for not having a hearing aid (II/II)

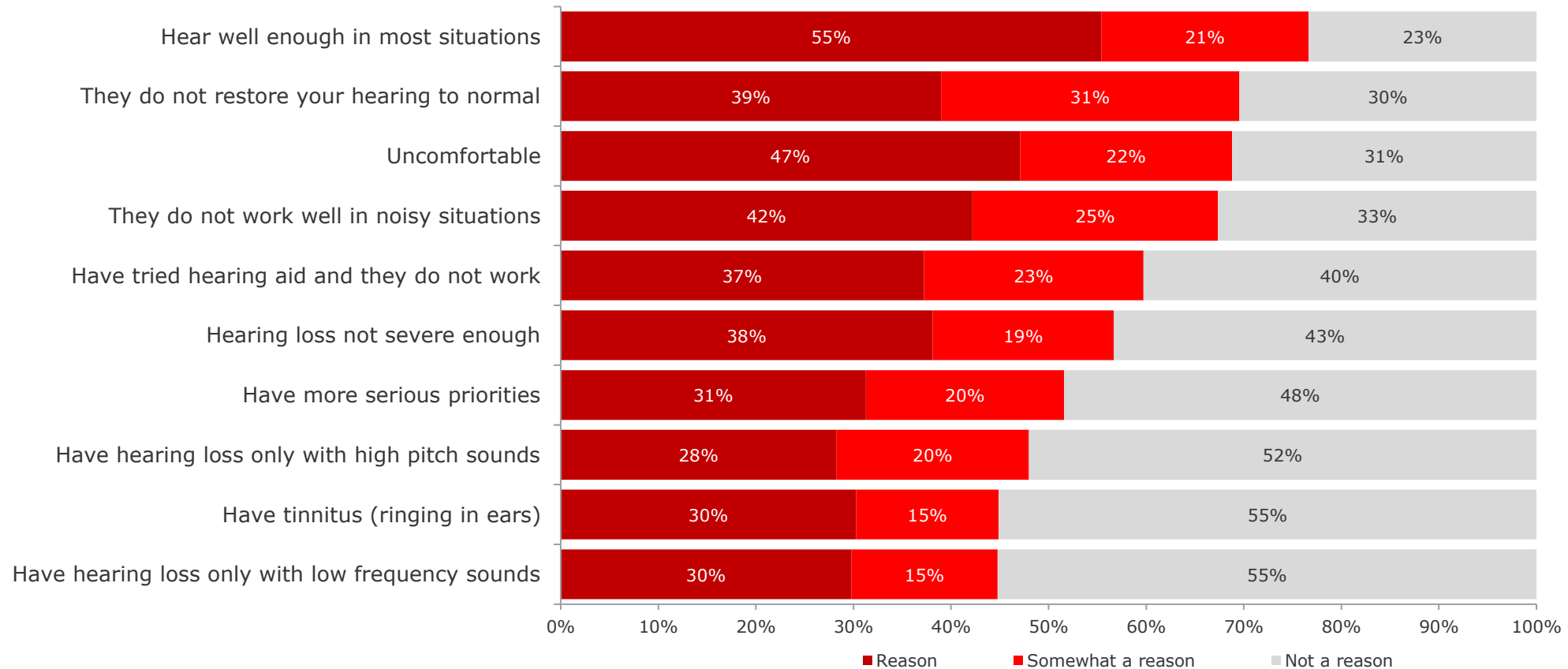


Base: non owners Top 50% HL: n=167





Top 10 reasons for HA owners NOT using them



Owners who don't use, n=48 (small sample size!)

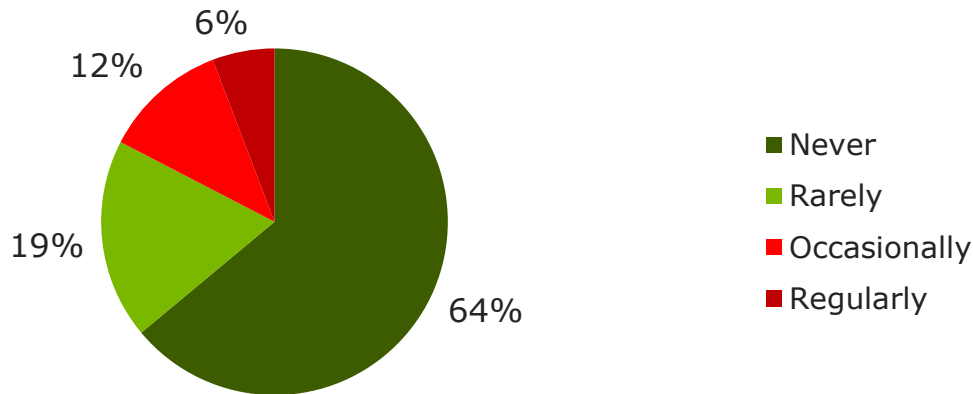


Social rejection because of hearing loss compared to the acceptance of hearing aids

64% 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:

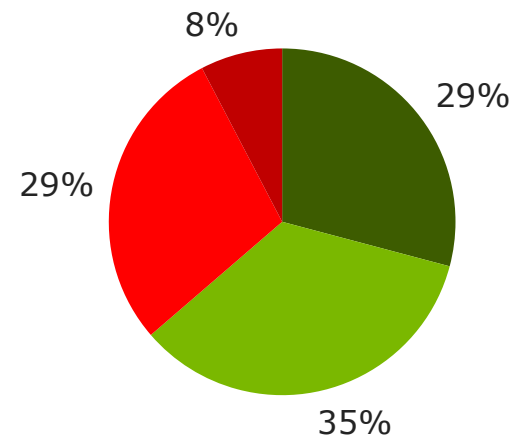
How often do you feel you are made fun of or rejected because you are wearing a hearing aid?



n=683

Hearing impaired non-owners:

How often do you feel you are made fun of or rejected because your hearing loss?



Base: Top 50% hearing loss, no hearing aid n=167

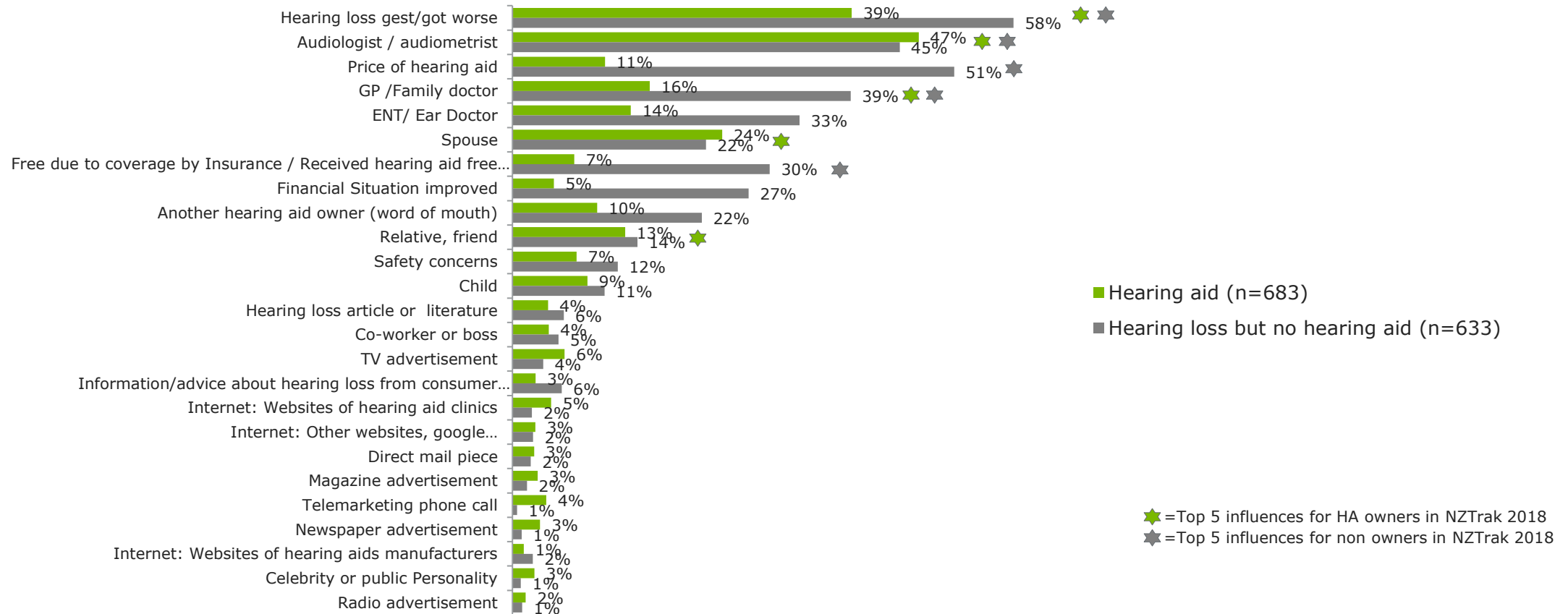


Most important triggers to buy

The most important influencing factors are worsening hearing loss, audiologist/audiometrist, GP, ENT and spouse (+price, insurance coverage for the non owners)

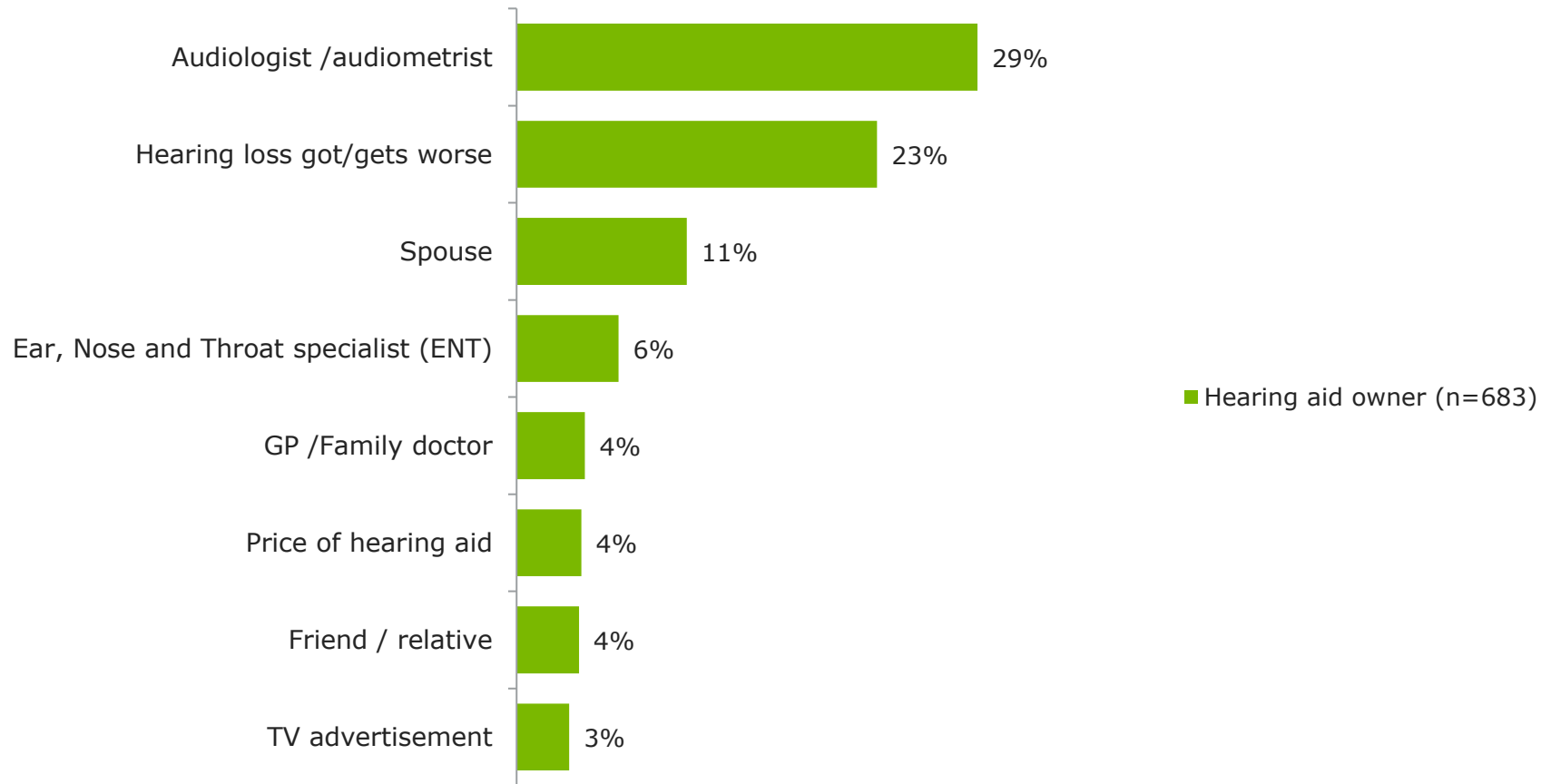
Owner: Thinking back to when you obtained your first hearing aid(s), what influenced you to obtain /purchase the hearing aid(s)?

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



The most important trigger to buy a hearing aid is the audiologist/audiometrist, followed by worsening hearing loss and the spouse.

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





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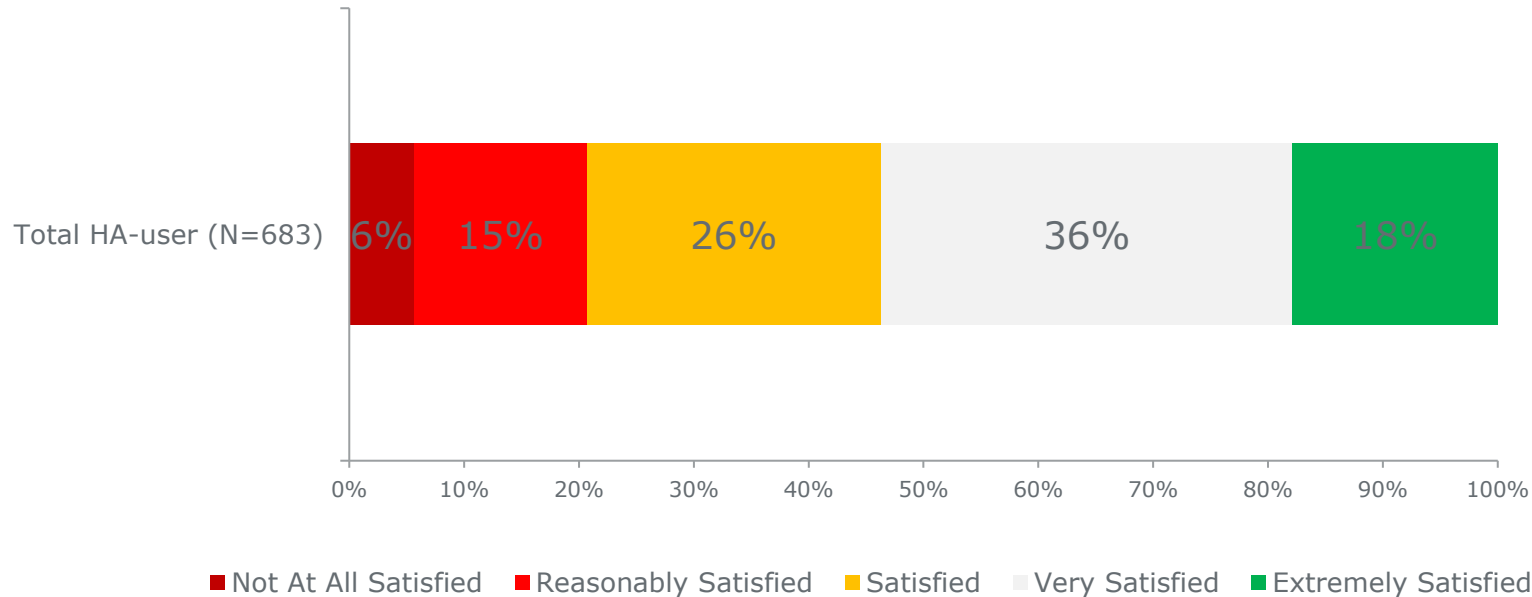
Sample description: Region, ethnic group

State / Territory	%
Auckland	36%
Bay of Plenty	5%
Canterbury	15%
Gisborne	1%
Hawke's Bay	3%
Manawatu-Wanganui	6%
Marlborough	1%
Nelson	1%
Northland	3%
Otago	4%
Southland	2%
Taranaki	2%
Tasman	1%
Waikato	9%
Wellington	11%
West Coast	1%

What ethnic group do you most identify with?	%
New Zealand European	69.9%
Māori	9.1%
Pacific Islander	3.0%
Asian	16.2%
Middle East	0.5%
Latin America	0.4%
African	0.9%

Overall satisfaction with HA: Alternative question

Overall how satisfied are you with your hearing device?
 [NZ Ministry of Health survey question]



Demographics (1) Hearing instrument adoption rates and populations

					Profiles: Categories add to 100%*		
		Count	Hearing difficulty	Hearing aid adoption rate % (Base=hearing impaired)	No hearing loss	Hearing loss but no hearing aid	Hearing aid
Gender							
	Male	7'752	11.5%	44.0%	49.4%	56.6%	55.8%
	Female	7'728	9.0%	44.8%	50.6%	43.4%	44.2%
Age							
	1 - 14	2'997	3.1%	45.9%	20.9%	5.7%	6.0%
	15 - 24	1'971	4.0%	47.7%	13.6%	4.6%	5.3%
	25 - 34	2'245	4.9%	35.7%	15.4%	7.9%	5.5%
	35 - 44	1'992	6.8%	25.0%	13.4%	11.4%	4.8%
	45 - 54	1'929	11.0%	35.3%	12.4%	15.6%	10.7%
	55 - 64	1'848	15.1%	31.8%	11.3%	21.5%	12.6%
	65 - 74	1'406	20.1%	49.7%	8.1%	16.1%	19.9%
	74+	1'093	36.6%	62.1%	5.0%	17.2%	35.3%
Type of household							
	single household	1'208	20.8%	52.2%	6.9%	13.6%	18.6%
	Couple, no kids	3'683	14.8%	51.2%	22.6%	30.0%	39.5%
	Couple with kid(s)	7'069	5.8%	37.8%	47.9%	29.1%	22.2%
	Single mom/dad with kid(s)	1'067	8.8%	32.3%	7.0%	7.2%	4.3%
	Retirement home, hospital etc.	195	33.8%	70.2%	0.9%	2.2%	6.6%
	Other	2'258	9.8%	28.4%	14.7%	17.9%	8.9%

Demographics (2) Hearing instrument adoption rates and populations

					Profiles: Categories add to 100%*		
					No hearing loss	Hearing loss but no hearing aid	Hearing aid
	Count	Hearing difficulty	Hearing aid adoption rate % (Base=hearing impaired)				
Employment							
Full time employed	6'258	8.3%	36.5%		53.0%	39.7%	28.7%
Part time employed	1'561	10.2%	39.6%		12.9%	11.6%	9.5%
Unemployed / not working	1'355	10.5%	29.7%		11.2%	12.0%	6.4%
Retired under a disability pension scheme (fully or partly)	269	31.3%	42.7%		1.7%	5.8%	5.4%
Early retired under an early retirement benefit scheme	185	23.9%	45.8%		1.3%	2.9%	3.1%
Retired (at the official retirement age)	1'899	27.6%	58.5%		12.7%	26.1%	46.4%
Student / pupil / in training	790	2.5%	18.8%		7.1%	1.9%	0.6%
Education							
Primary school	368	25.1%	48.1%		2.5%	5.8%	6.7%
High school	4'279	14.7%	47.2%		33.7%	39.9%	45.0%
Polytechnic, Institute of Technology	2'509	13.7%	44.8%		20.0%	22.7%	23.2%
University, college	4'692	8.0%	39.4%		39.9%	27.1%	22.2%
Other	469	11.9%	34.0%		3.8%	4.4%	2.9%
What ethnic group do you most identify with?							
New Zealand European	10'215	11.7%	45.6%		66.8%	75.7%	79.3%
Māori	1'354	12.0%	43.3%		8.8%	10.8%	10.3%
Pacific Islander	509	8.1%	44.5%		3.5%	2.7%	2.7%
Asian	2'667	4.8%	37.4%		18.8%	9.3%	6.9%
Middle East	77	6.6%	58.7%		0.5%	0.2%	0.4%
Latin America	67	3.8%	0.0%		0.5%	0.3%	0.0%
African	152	7.9%	21.1%		1.0%	1.1%	0.4%

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 ± 3.1 around 15% - which means between 11.9% and 18.1% (Conservative assumption: 95% confidence level)

Sample size	Random sample error	
	Level of proportion: 50%/50%	Level of proportion: 15%/85%
	Real value is within interval:	
50	± 13.9	± 9.9
100	± 9.8	± 7.0
250	± 6.2	± 4.4
500	± 4.4	± 3.1
1'000	± 3.1	± 2.2
5'000	± 1.4	± 1.0
10'000	± 1.0	± 0.7