

## Results

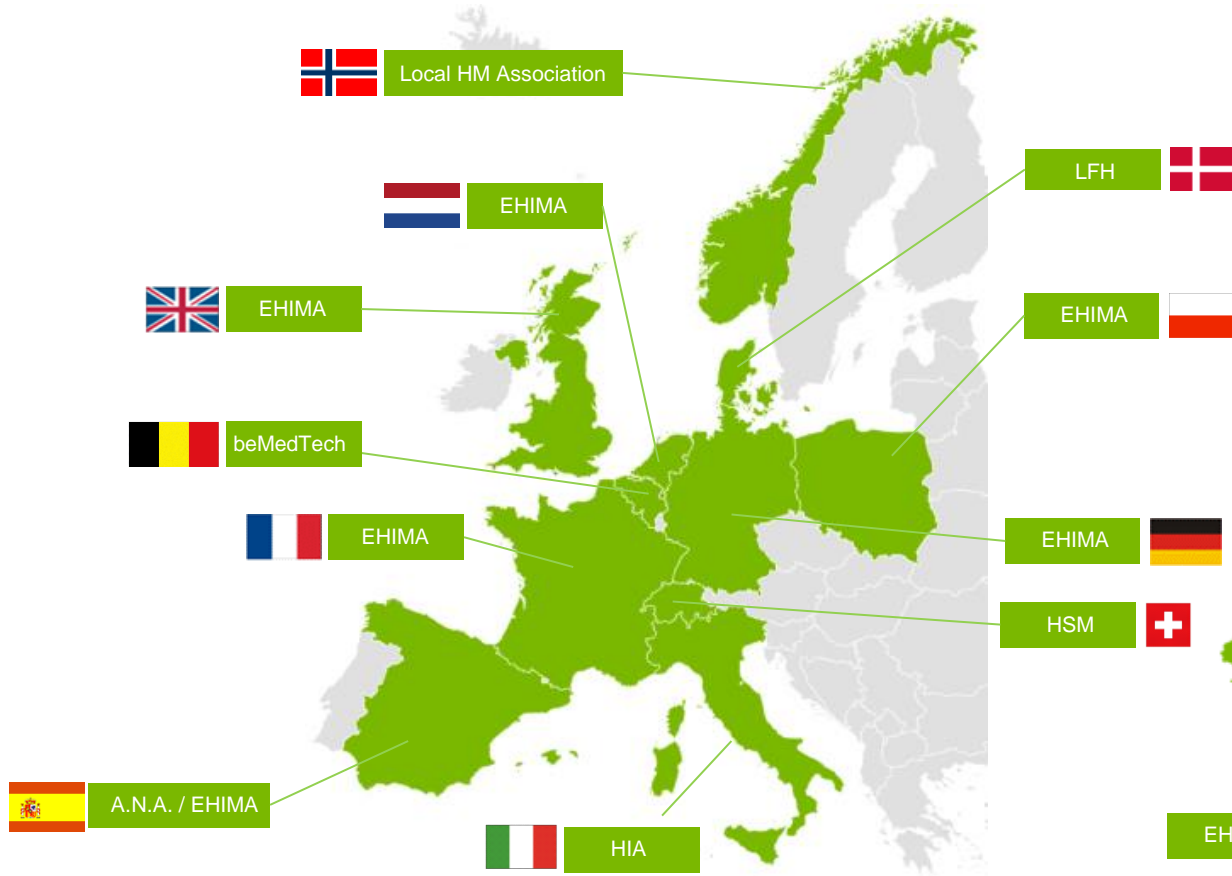
# AustraliaTrak 2021

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

# Summary

## 1. Introduction

AustraliaTrak 2021 is part of the EuroTrak / APACTrak studies:



AustraliaTrak 2021 was designed and executed by Anovum (Zurich) on behalf of HCIA and EHIMA.

Sample sizes:

Representative sample (sample 1): n=14'670 people

Hearing impaired (sample 2): n=1'325 people

HA owners: n= 685 people

Hearing impaired non-owners: n= 640 people



# Summary

## 2. Market overview

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- Stated hearing loss prevalence
  - Total: 11.8%, 18+: 14.2% (2017: 11.9%, 18+: 14.1%).
  - Hearing Tests: 39% (2017: 31%) had a hearing test in the last 5 years, most tests done by by Hearing Aid clinicians and family doctors.
- Hearing aid adoption rate (HA penetration)
  - 44.7% of those with self declared HL (2017: 41.0%).
  - 5.3% of total population (2017: 4.9%).
  - 64% of HA owners have binaural treatment (2017: 63%).
- The route to the hearing aid
  - 67% of the hearing impaired discussed hearing loss with an ENT doctor or family doctor.
  - 57% got hearing aids recommended from the ENT or family doctor (drop out rate=14% / 2017: 17%).
  - 40% of the GP consultations referred to an ENT, 63% to a HA Clinician (2017: 54%). 8% recommended no action.
  - 55% of ENT consultations referred to HA Clinician , 19% recommended no action.
- 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

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- Hearing aid ownership, usage and accessories
  - 65% of the currently owned HAs were bought in 2019 or later.
  - The average age of the currently owned HAs is 2.8 years.
  - The median age of hearing aids before replacement is 5 years.
  - On average, HAs are worn 6.8 hours a day.
  - 56% 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, 76% of those are satisfied with it.
- Importance of listening situations and satisfaction with HAs
  - 87% of the hearing aid owners say their hearing aid works better than or as expected
  - 77% of the HA owners are satisfied with their HAs (2017: 72%).
  - 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, watching TV with others 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 relationship at work improve with hearing aids.
  - 94% 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

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- Reasons not to own/use HAs
  - The main reasons for not using hearing aids are that people (think) they can't afford them, they hear enough in most situations, they have more serious priorities, they think that hearing aids are uncomfortable and do not work well in noisy situations.
  - 8% who own hearing aids don't use them at all (0 hours); 20% use them less than one hour/day (0-1 hour).
- Social rejection and triggers to buy
  - 55% 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 36% 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, HA Clinician, doctors and spouse (+price, insurance coverage for the non owners).

# Detailed Results: Roadmap

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## 1. Introduction

- Organisation of AustraliaTrak 2021
- 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 instrument adoption rates and populations

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# 1. Introduction

# Organisation of AustraliaTrak 2021

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## Organisation

- Principal of the project AustraliaTrak 2021 are HCIA and EHIMA.
- Anovum Zurich developed the concept of AustraliaTrak, 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

- HCIA 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 – AustraliaTrak/2021/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=14'670** 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=685** hearing aid owners and **n=640** hearing impaired non-owners

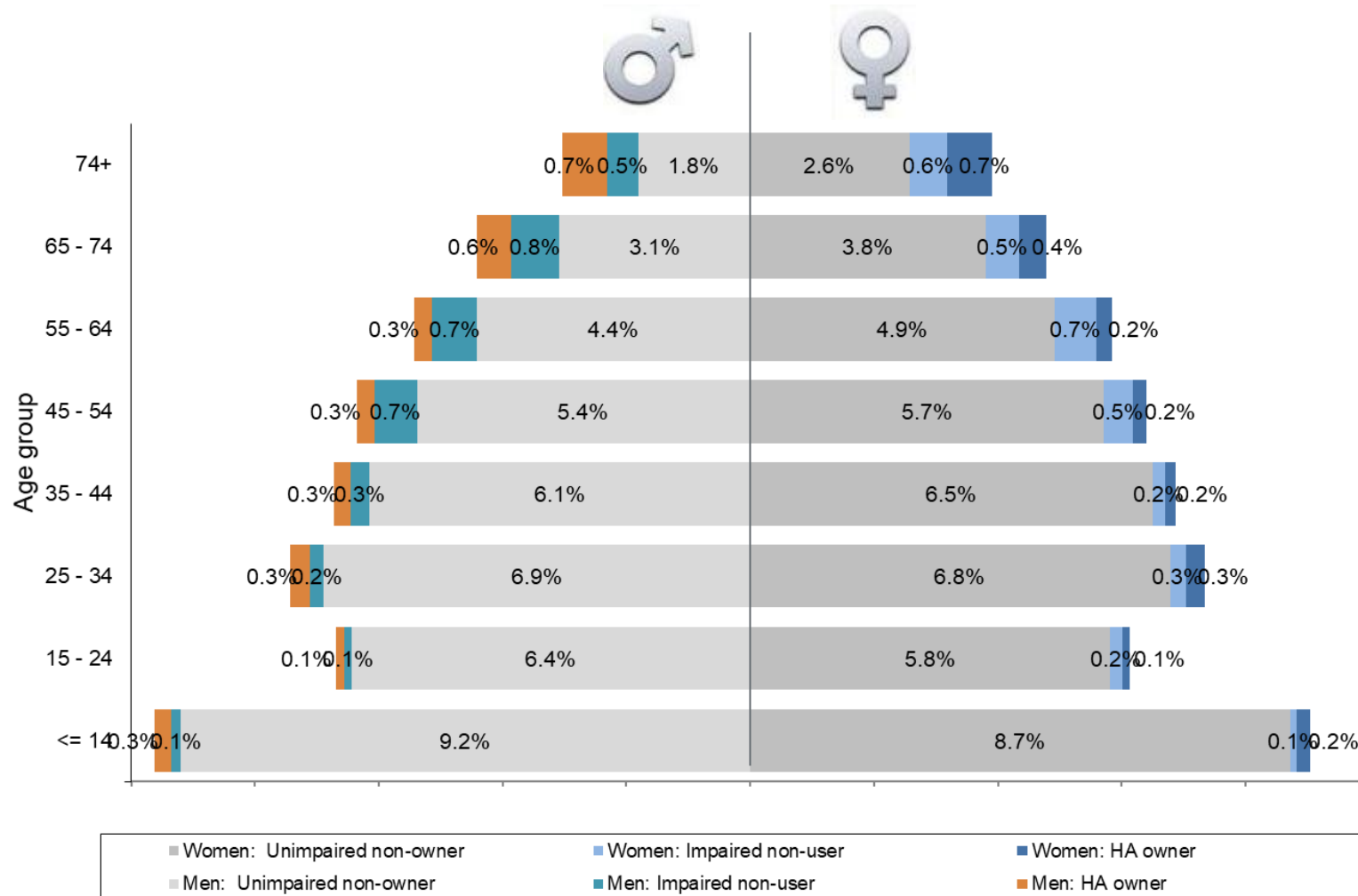
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## 2. Market overview

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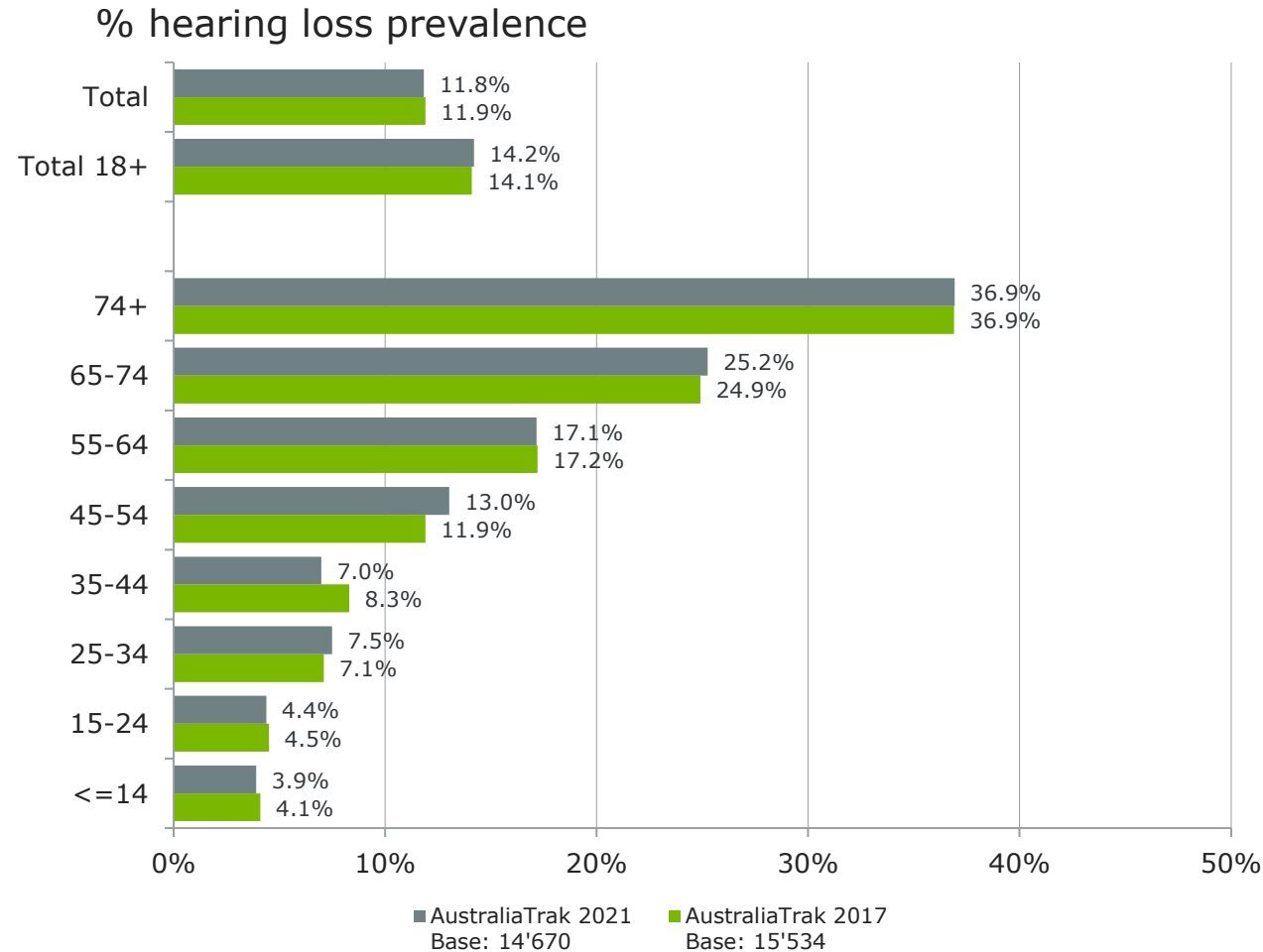
## Prevalence of hearing loss and adoption rate

# Hearing loss and hearing instrument ownership by gender/age

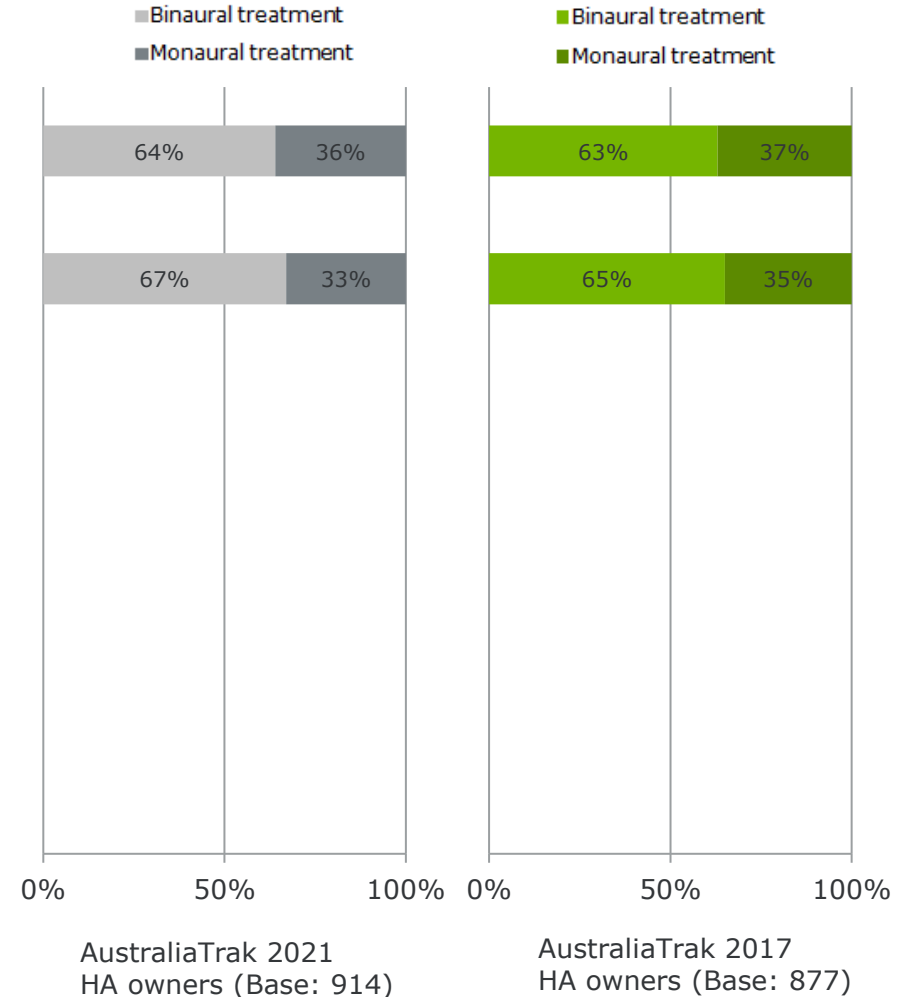
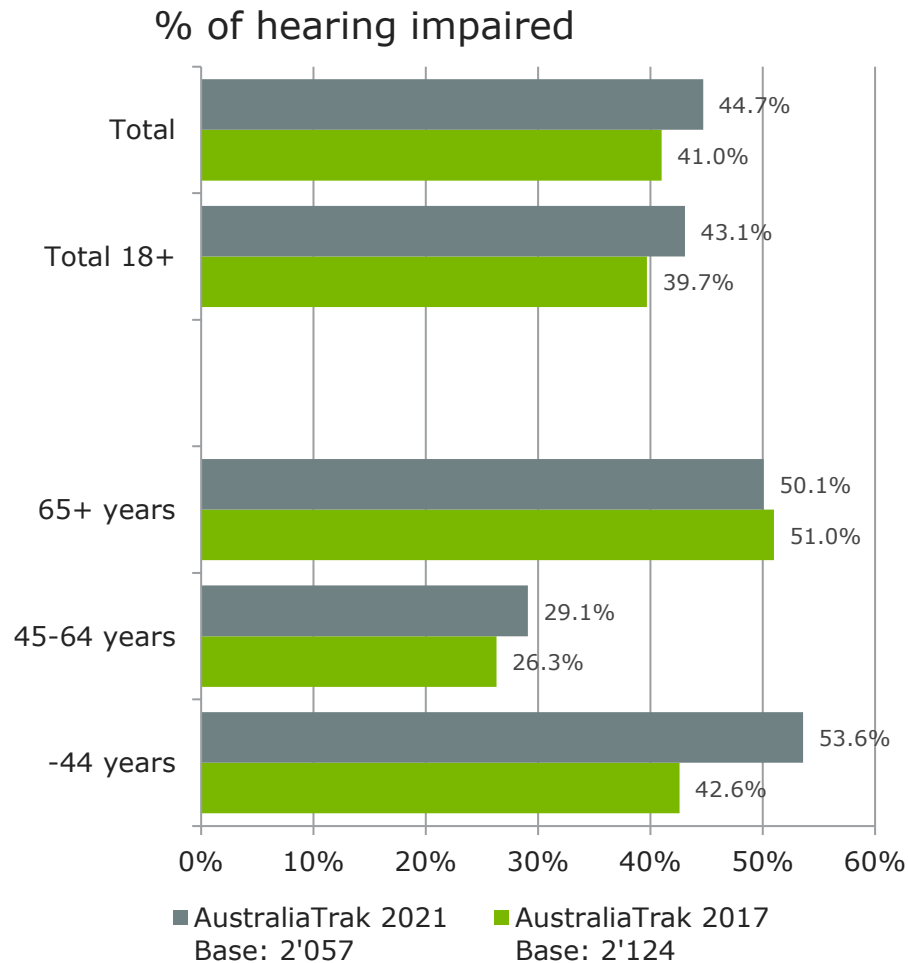


# Hearing loss prevalence Australia

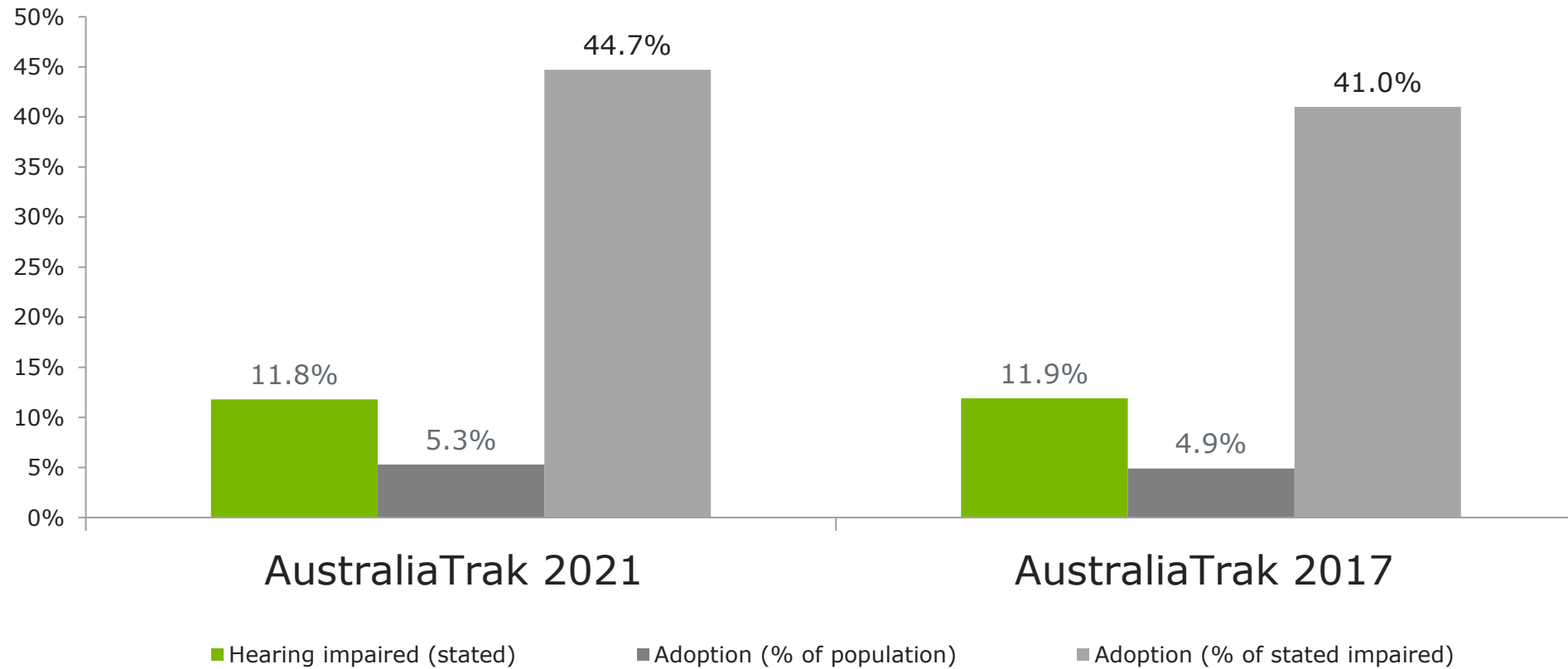
## Self declared hearing loss



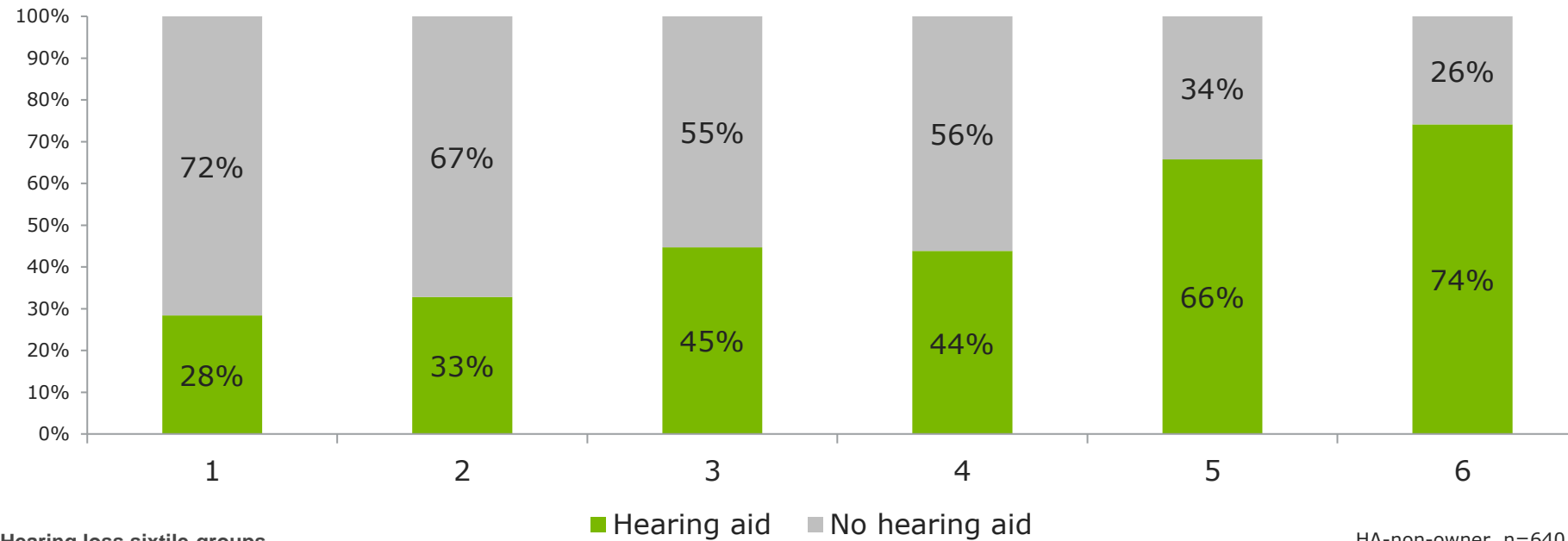
# Hearing aid adoption rate: 45% of hearing impaired have hearing aid(s), 64% of them have binaural treatment



# Overview hearing loss prevalence and hearing aid adoption



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



HA-non-owner, n=640  
HA-owner, n=685

\* 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=640	HA Owner n=685	Hearing Aid Adoption (%)
<b>Ears impaired</b> (stated)			
Unilateral loss	38%	27%	40%
Bilateral loss	62%	73%	53%
<b>Perceived loss</b>			
Mild	41%	18%	27%
Moderate	46%	51%	47%
Severe	9%	26%	67%*
Profound	3%	4%	

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

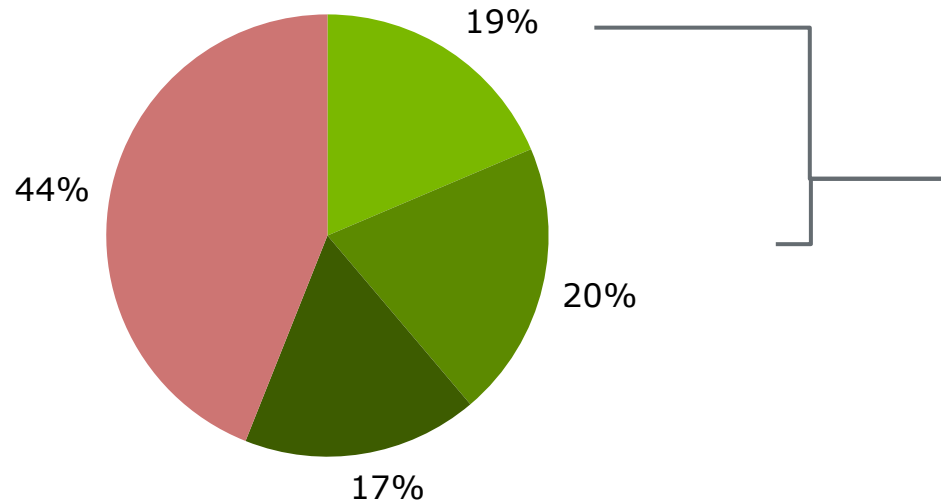
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# Hearing tests and where hearing is tested

# Hearing Tests: 39% had a hearing test in the last 5 years (2017: 31%), most tests done by Hearing Aid clinicians and family doctors

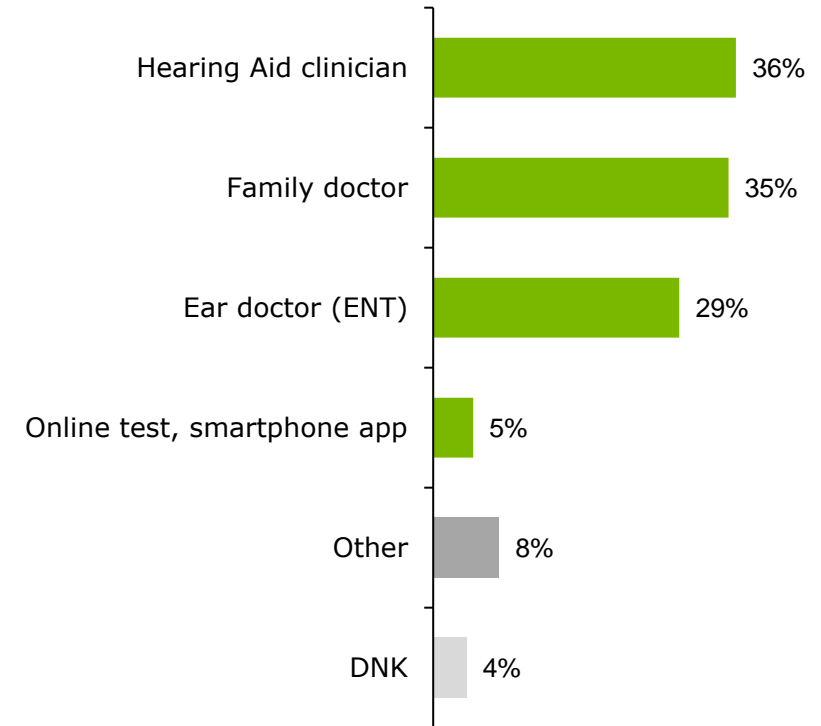
Have you ever taken a hearing test?

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



Base=11'771

Where/how was your hearing tested?



Base= 4'569

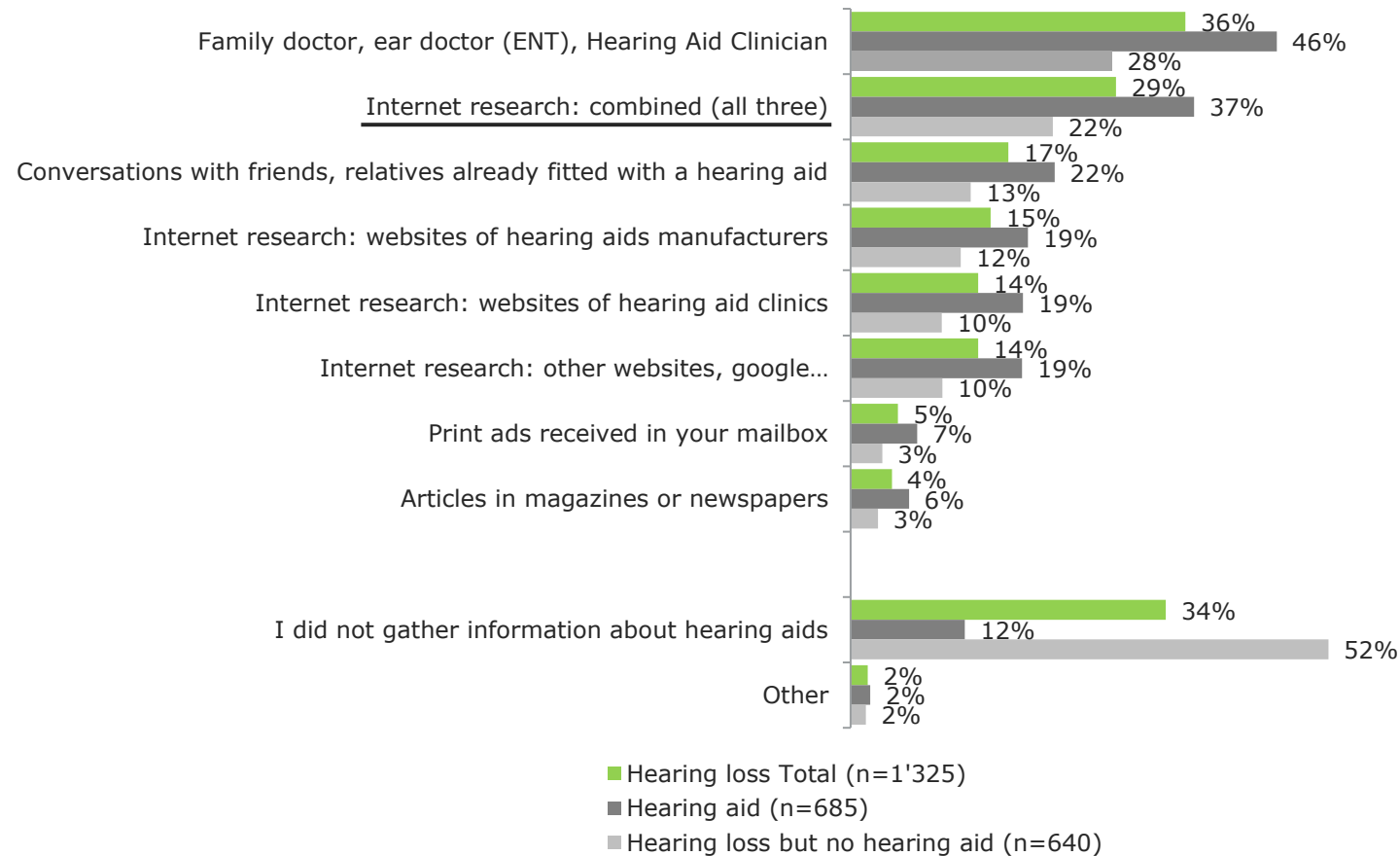


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## The route to the hearing aid: Sources of information and drop-out rates

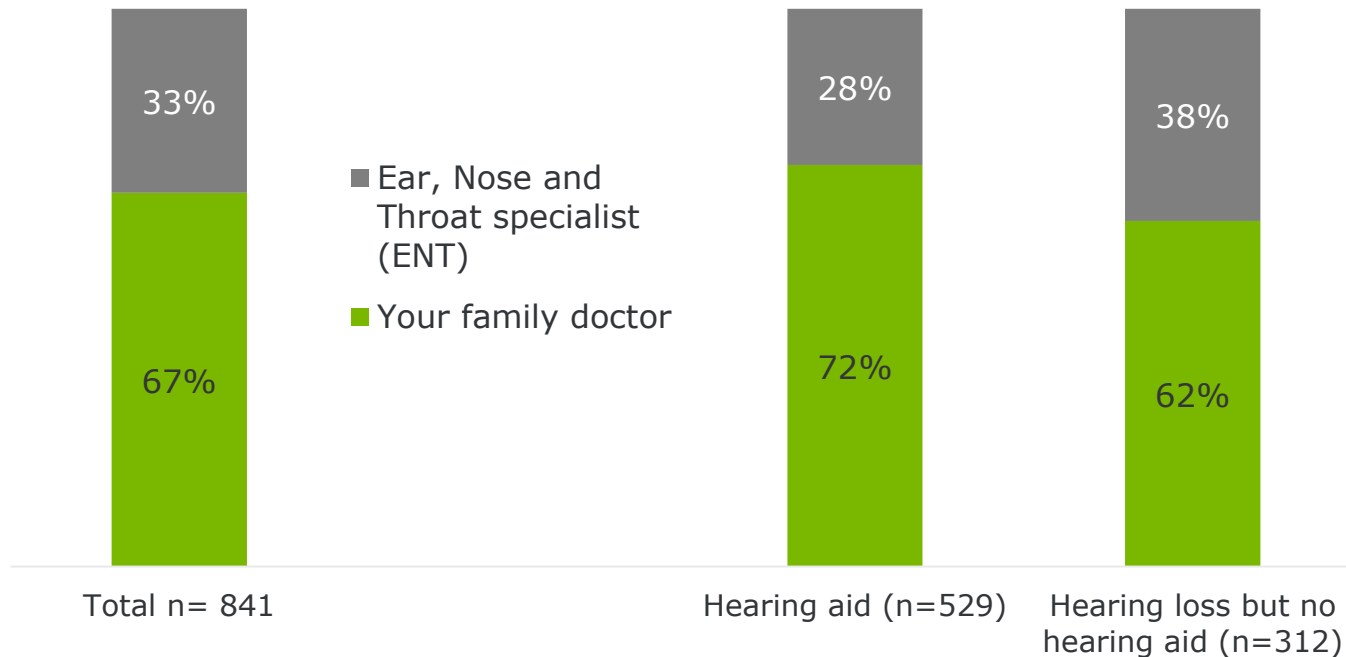
# Doctors/HCPs are the most important sources of information and therefore the major gatekeepers.

## Where did you gather information about hearing aids?

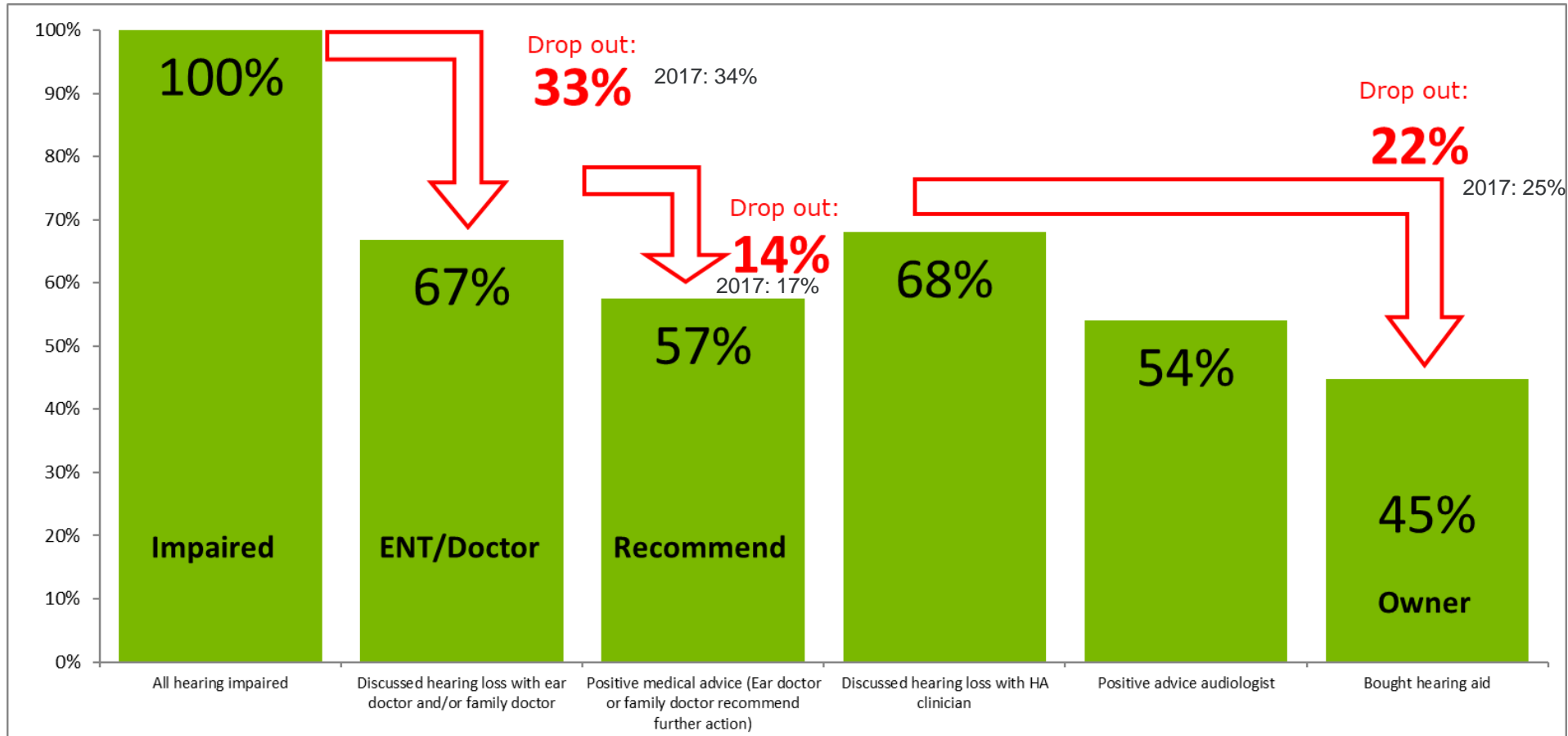


# Of those who discussed the hearing loss with a doctor, 2 out of 3 talked to a family doctor first

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)?



# The route to the hearing aid

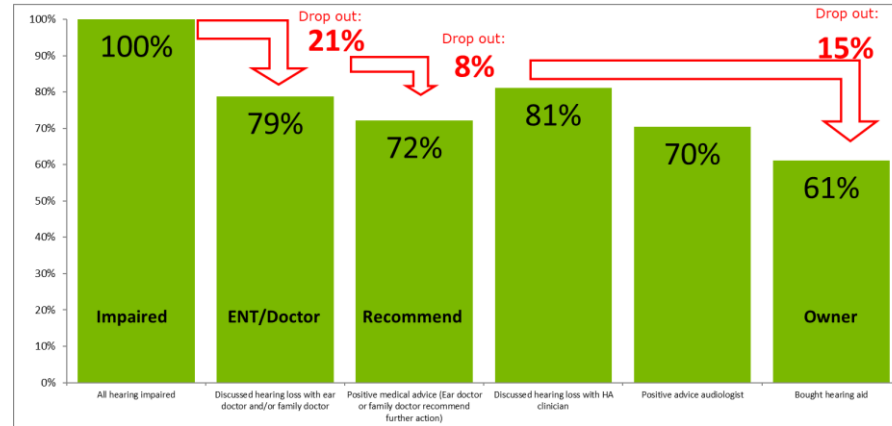


Base: n=1'325

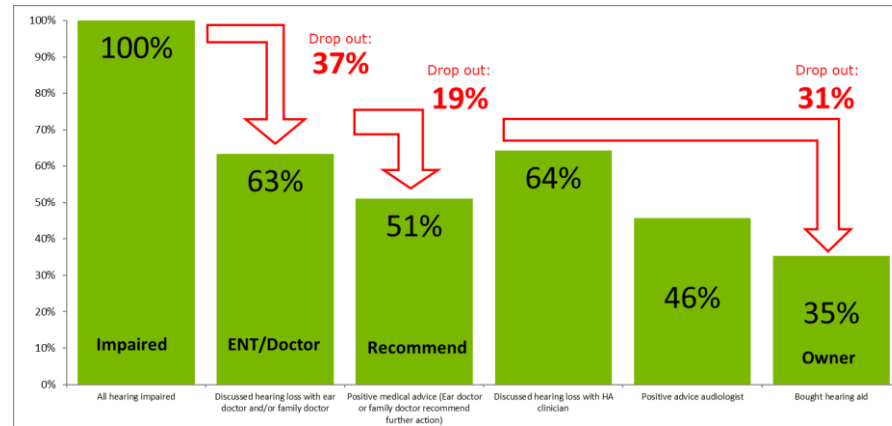


# Much higher drop-out-rates for the lower hearing loss segments

Top 50% hearing loss\*



Low 50% hearing loss\*



Base: n=1`325

\* 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).

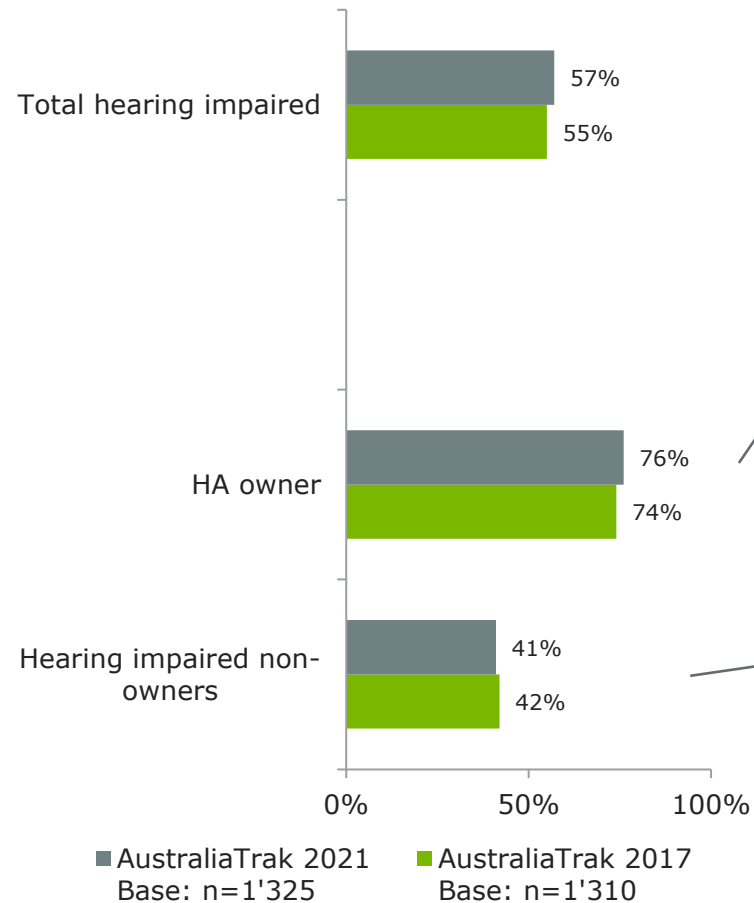




# The route to the hearing aid: GP/Family doctor

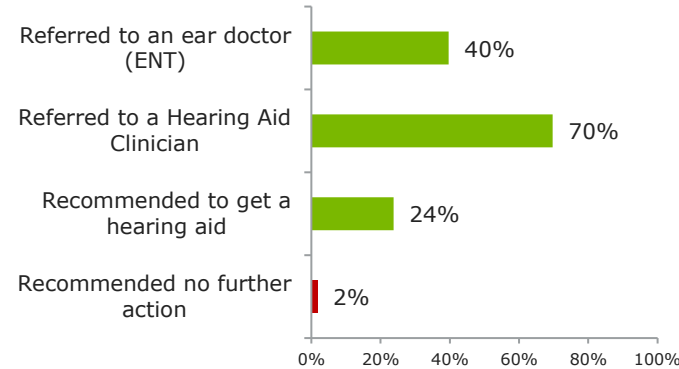
## Have you discussed your hearing problem with your family doctor?

% Discussed with GP

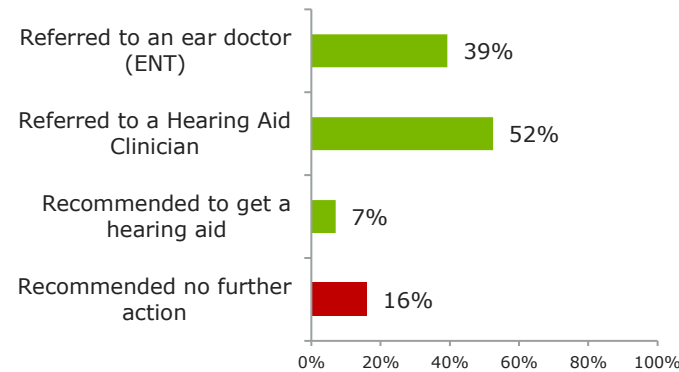


What did he/she recommend ?

HA owner (Base: n = 439)



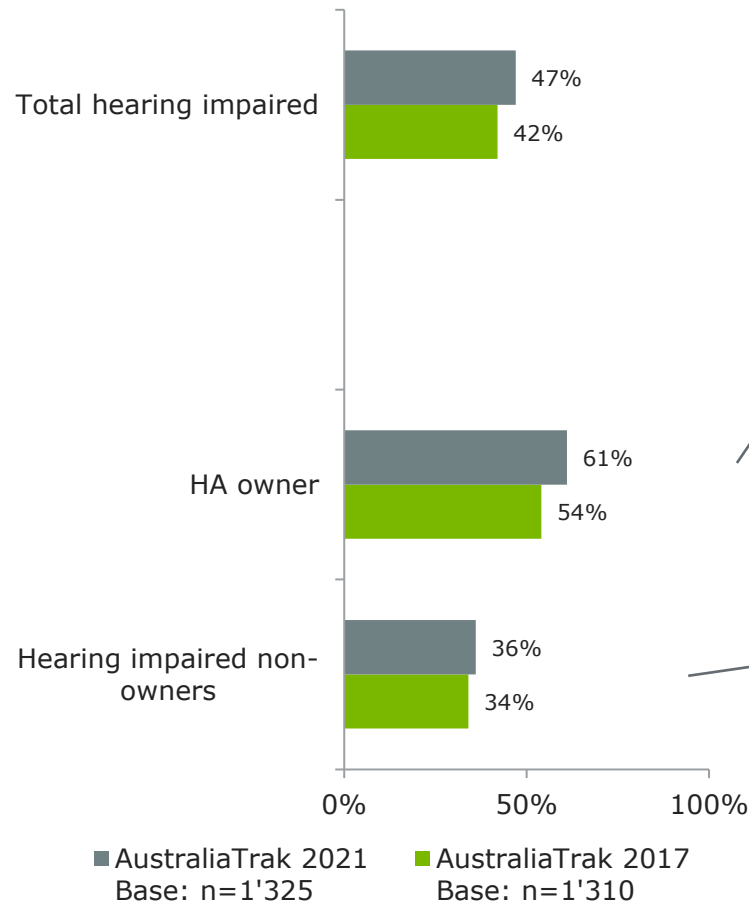
Impaired non-owner (Base: n = 298)



# The route to the hearing aid: ENT

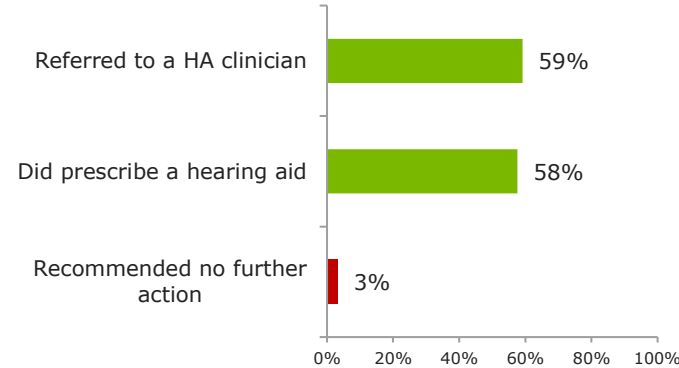
## Have you ever discussed your hearing problem with an Ear, Nose and Throat specialist (ENT)?

% Discussed with ENT

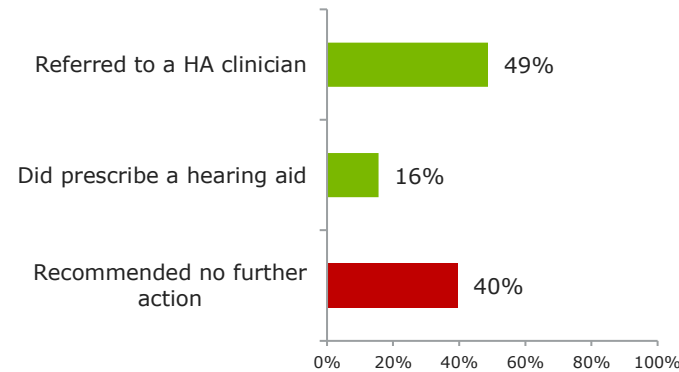


What did he/she recommend ?

HA owner (Base: n = 351)



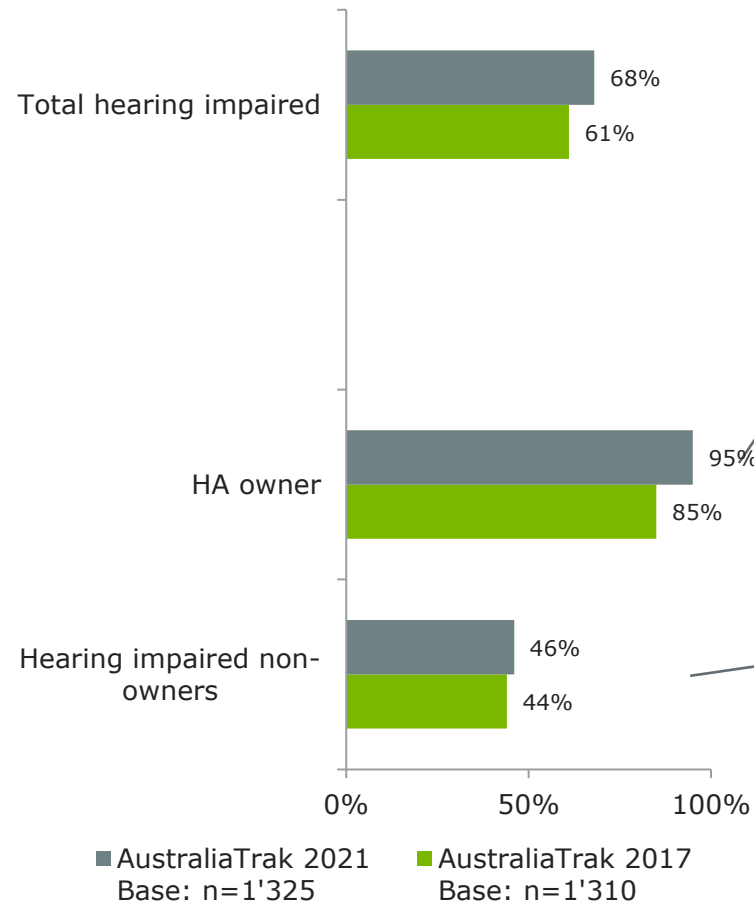
Impaired non-owner (Base: n = 258)



# The route to the hearing aid: HA clinician

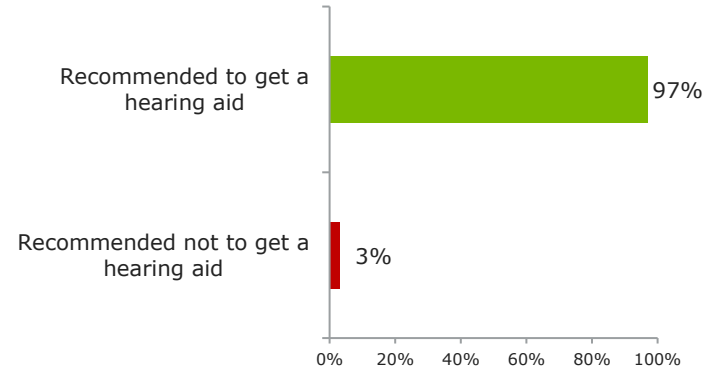
## Have you ever discussed your hearing problem with a HA clinician?

% Discussed with HA clinician

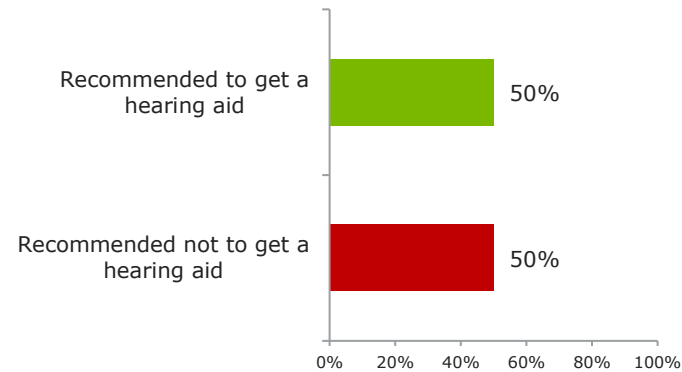


What did he/she recommend ?

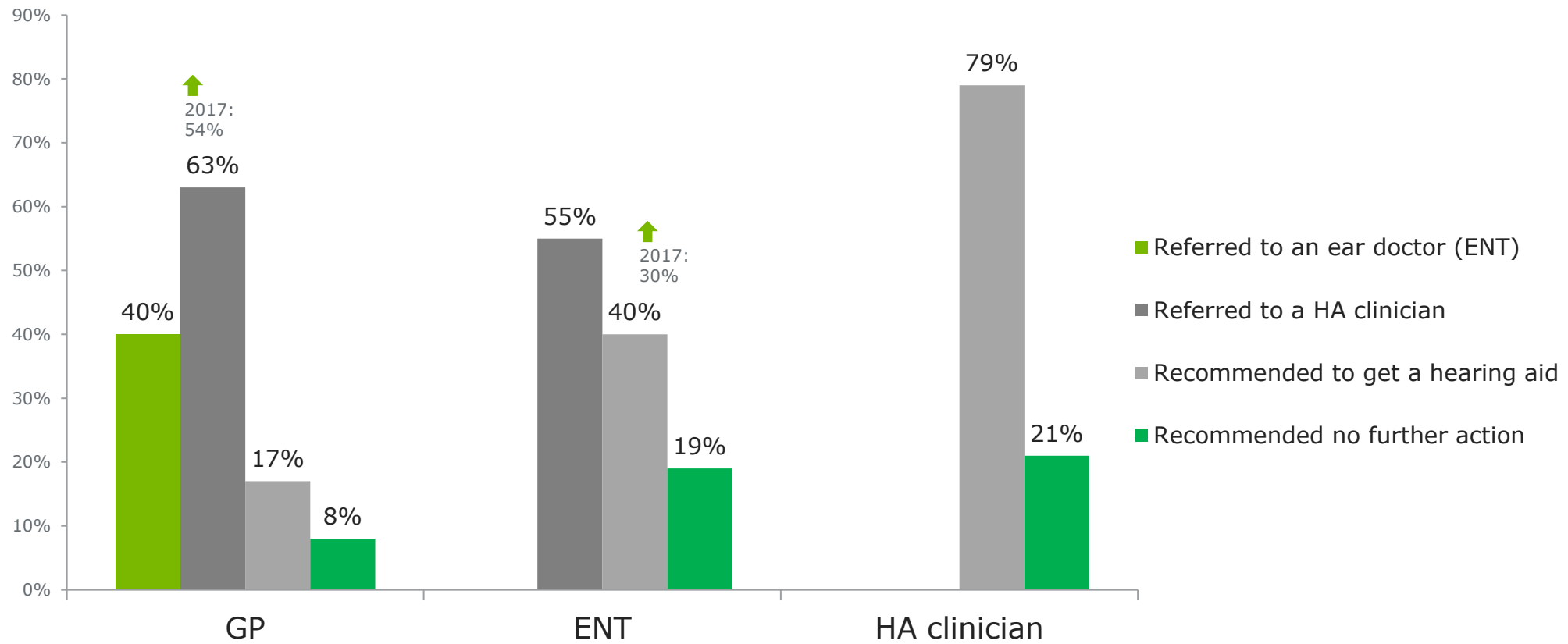
HA owner (Base: n = 644)



Impaired non-owner (Base: n = 288)



# Recommendations by profession

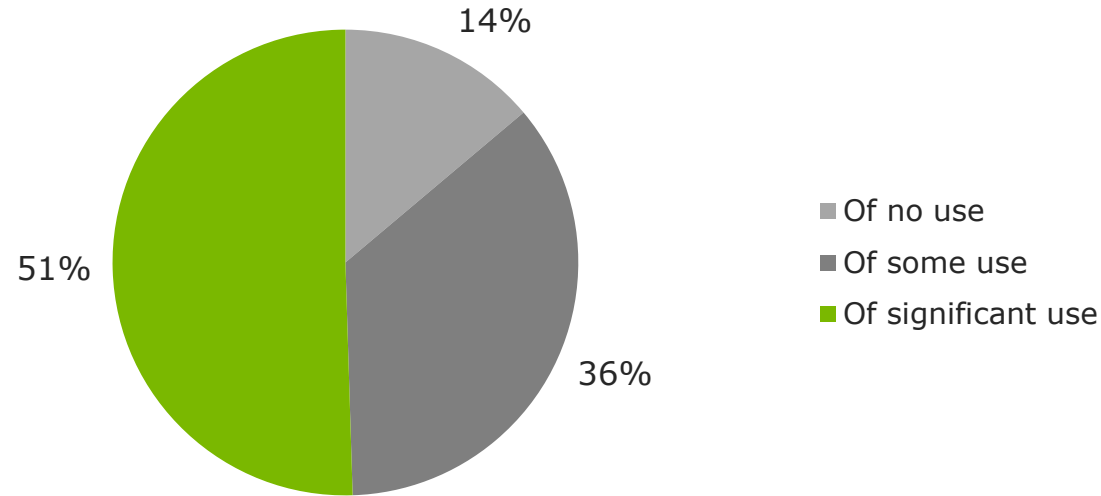


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Potential social cost-savings due to the use of hearing aids: Work competitiveness, depressive symptoms, sleep quality, co-morbidities

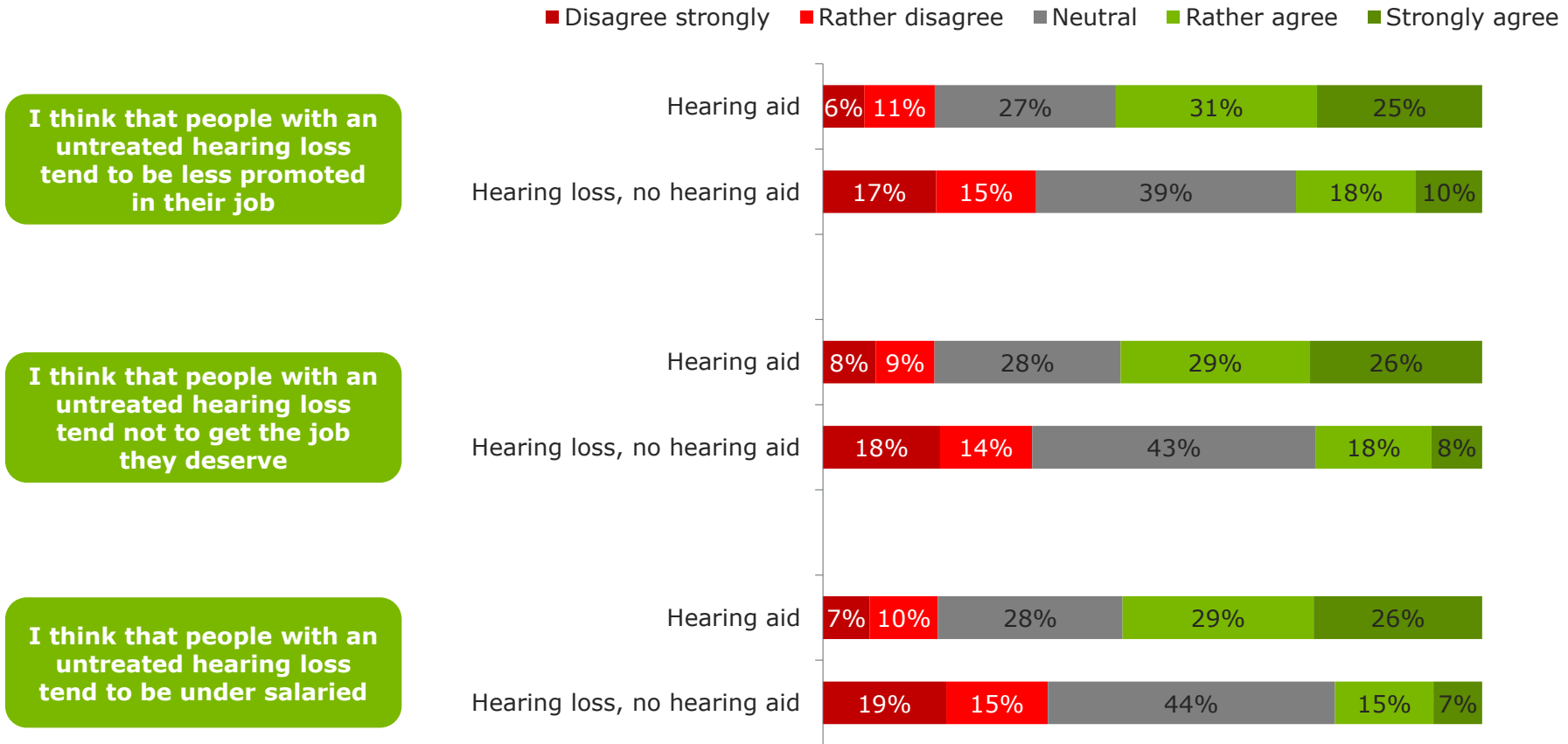
# Work competitiveness: 86% of the working hearing aid owners state their hearing aid(s) are useful on their job.

How useful are your hearing aids on your job?



Base: n=219

# 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=462/ hearing aid n=511



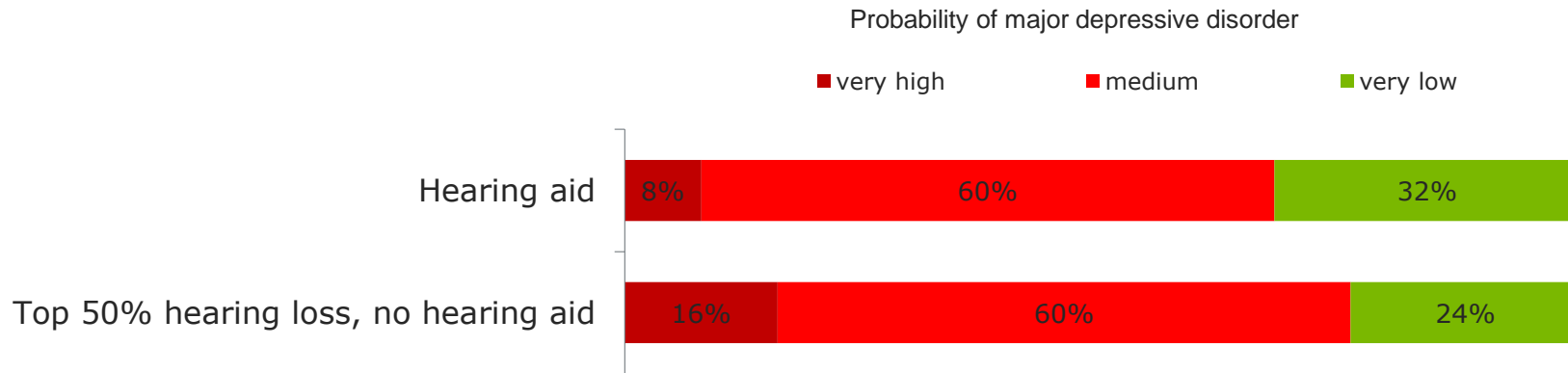
# General health problems: Hearing aid owners have a lower risk of being depressed (PHQ-2 Screening) compared to impaired non-owners with comparable hearing loss (Top50% hearing loss group\*).

Depression symptoms:

PHQ-2 Screening:

In the last 2 weeks:

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



Base: hearing aid n=439 / top 50% HL, no hearing aid =117

\*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:

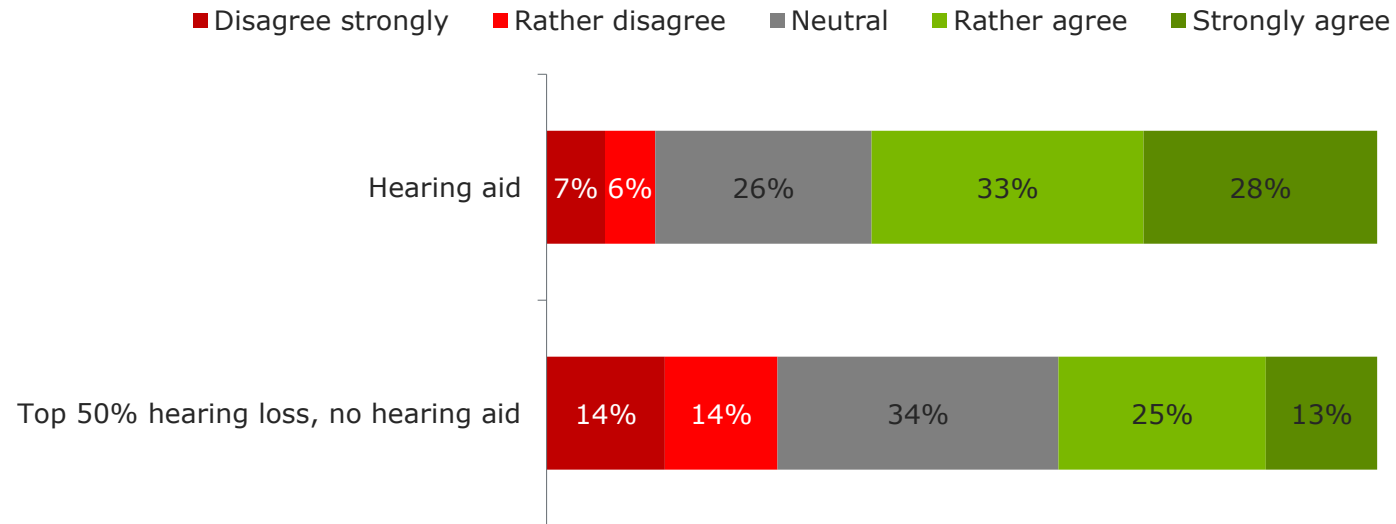
- Number of ears impaired (one or two)
- Stated hearing loss (Mild to Profound)
- Scores on 6 APHAB-EC - like questions (Scaled 1-5)
- When NOT using a hearing aid, how difficult is it for you to follow conversations in the presence of noise

→ 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=629 / top 50% HL, no hearing aid =148

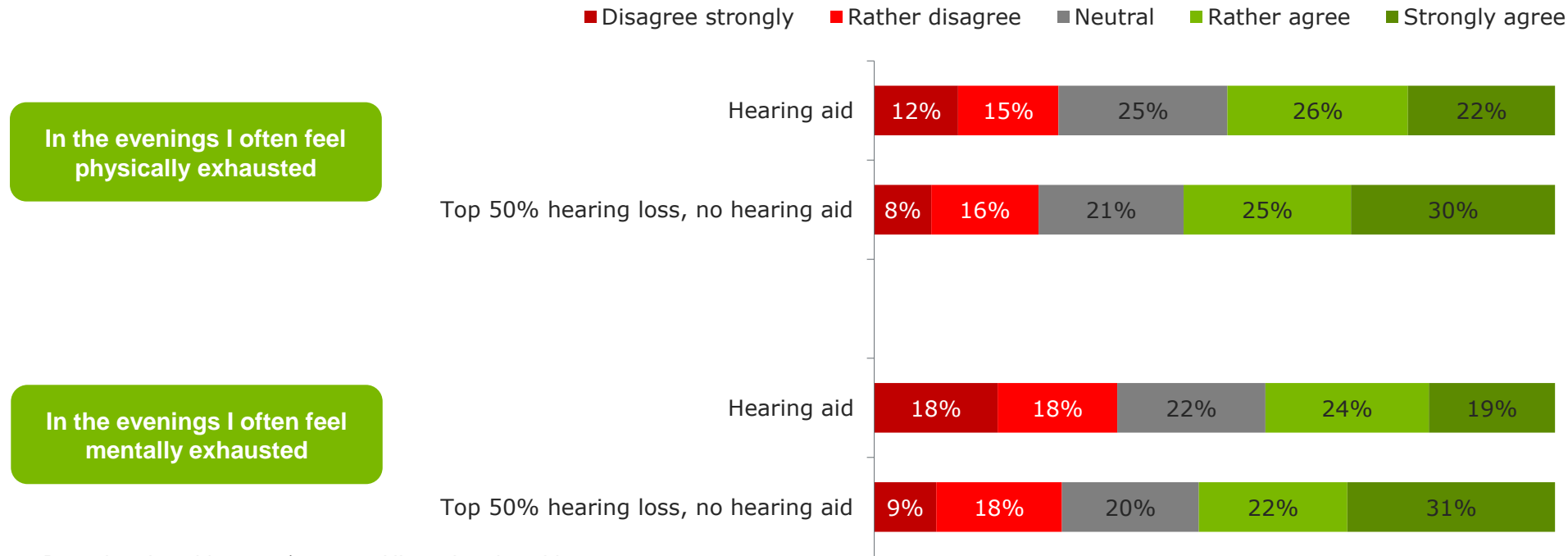
\*Construction of 6-groups: A factor analysis was performed to identify one factor "degree of hearing loss". The following questions were included in the factor:

- 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).

Australia specific question



# 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



Base: hearing aid n=433 / top 50% HL, no hearing aid =115

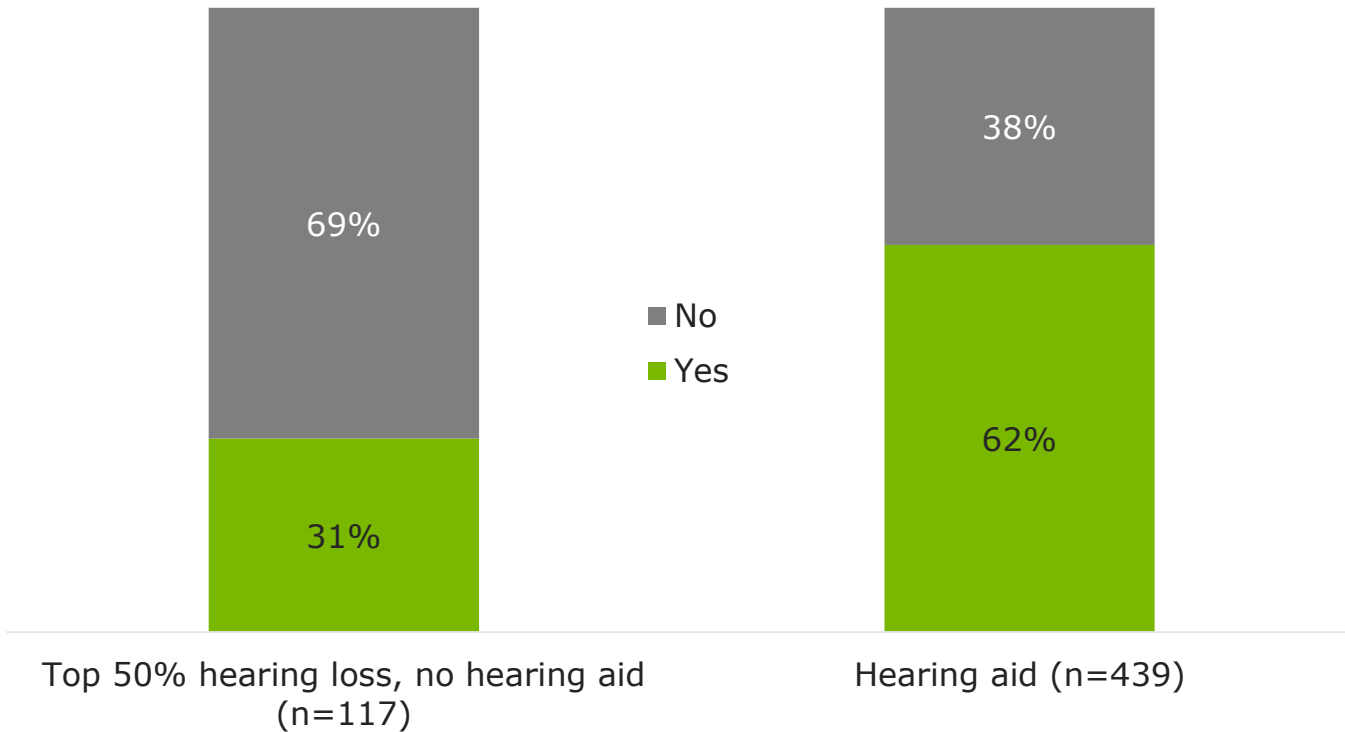
\*Construction of 6-groups: A factor analysis was performed to identify one factor "degree of hearing loss". The following questions were included in the factor:

- 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).

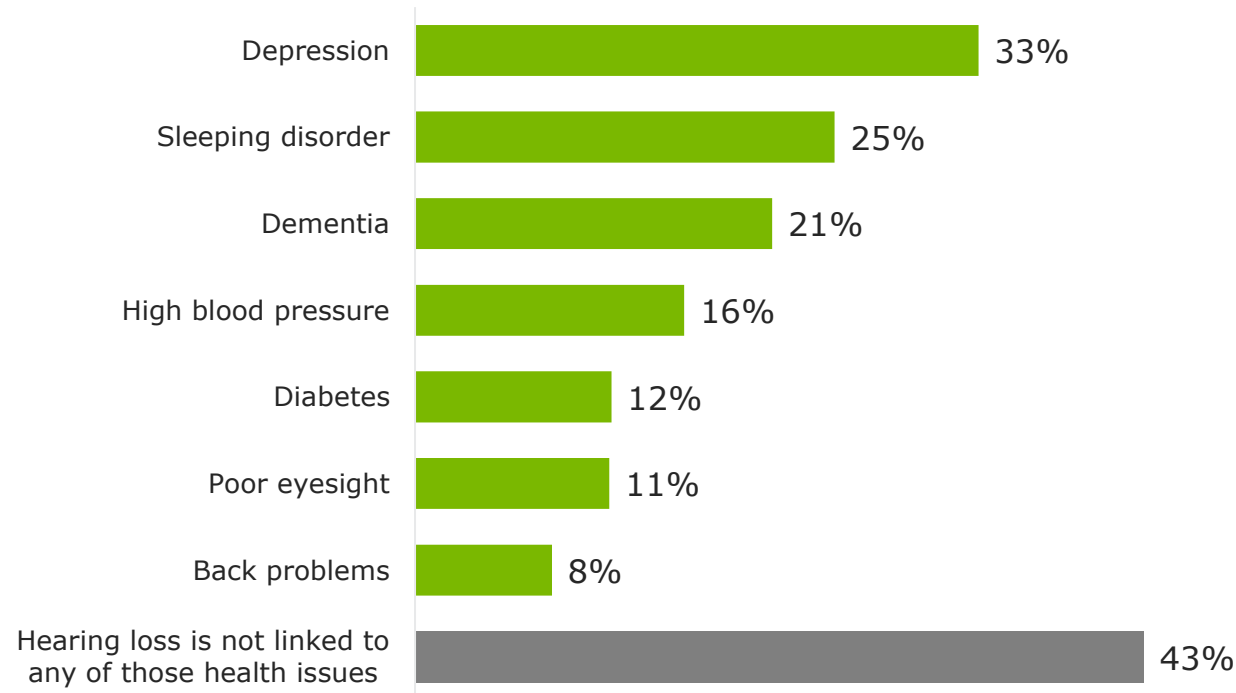
# General health problems: Quality of sleep seems to improve if hearing impaired use hearing aids

Are you generally satisfied with the quality of your sleep?



# 33% 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=1'325

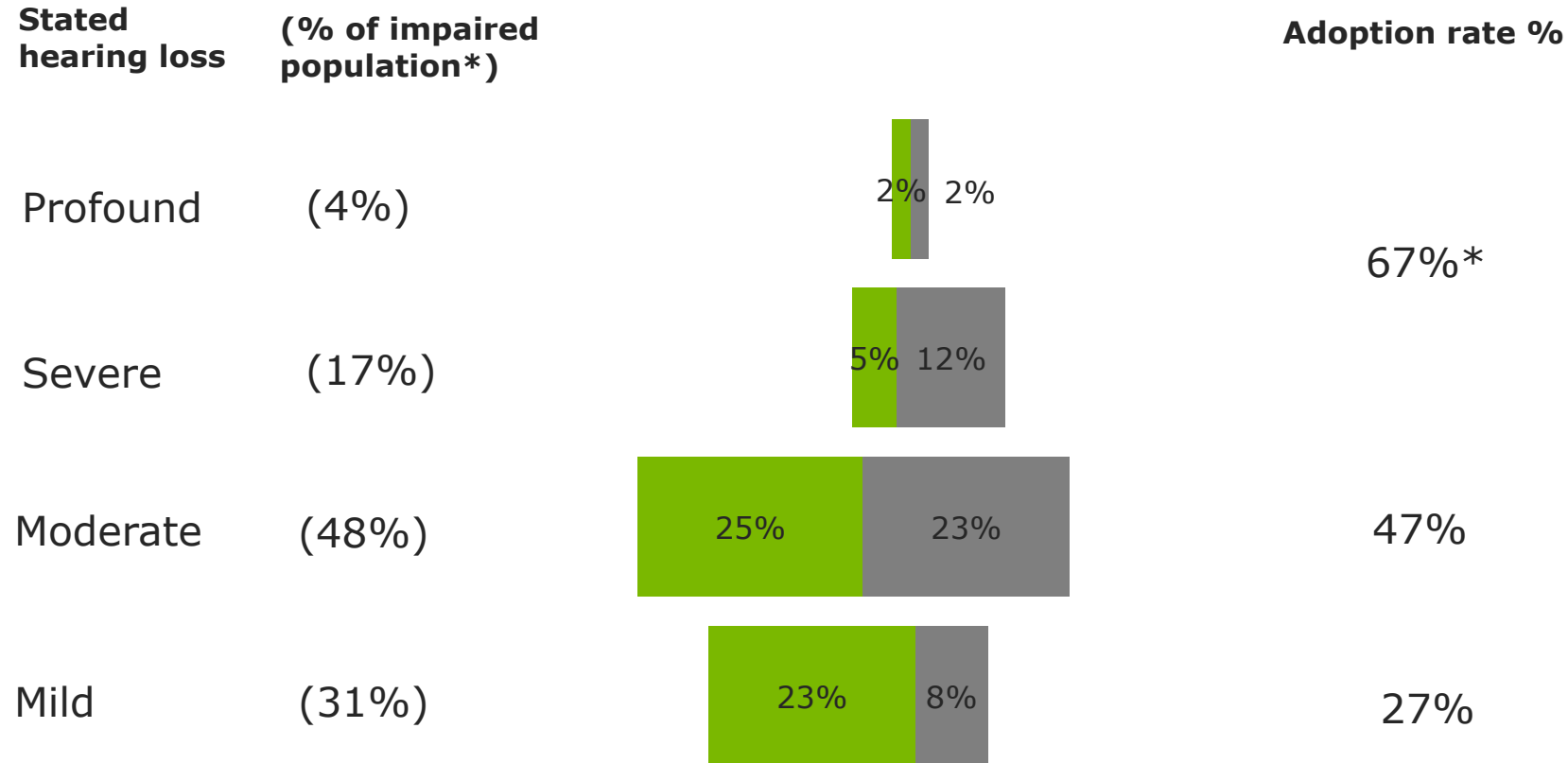
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## 3. Analysis of hearing aid owners

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## Hearing aid ownership, awareness of hearing loss before getting hearing aids, lifetime of hearing aids and usage

# Low adoption rates within mild hearing loss



Base: n=1'325

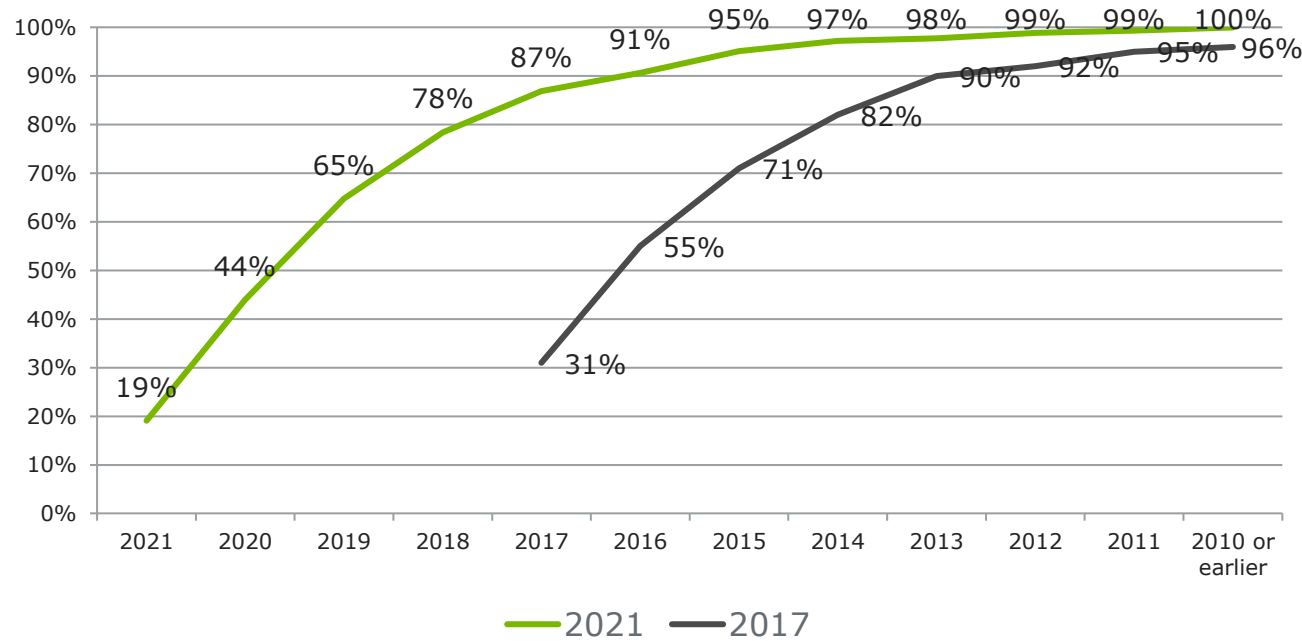
Sums can differ from 100% due to rounding

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

■ No hearing aid  
■ Hearing aid

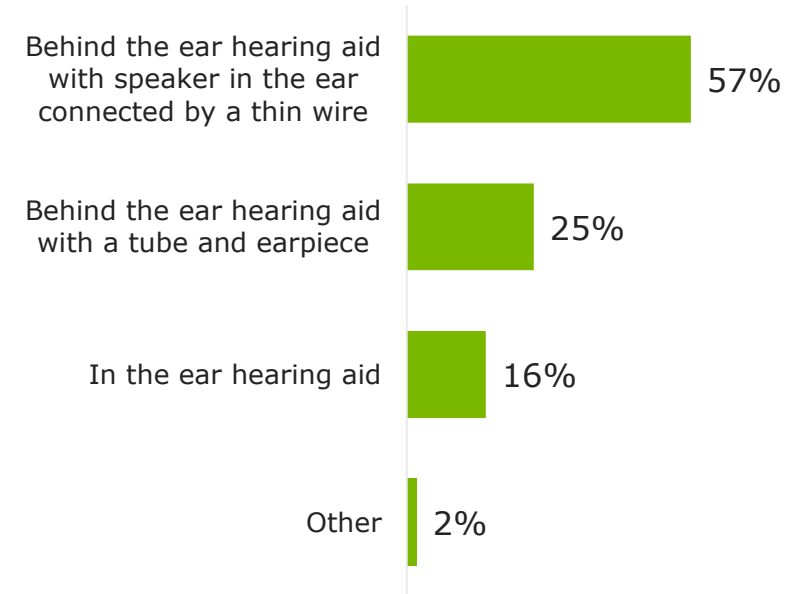
# 65% of the currently owned HAs were acquired in 2019 or later RIC is the most often purchase type of HA

Year of purchase



**Age of currently owned HAs (Mean):**  
**2021: 2.8 years**  
**2017: 3.0 years**

Type of HA



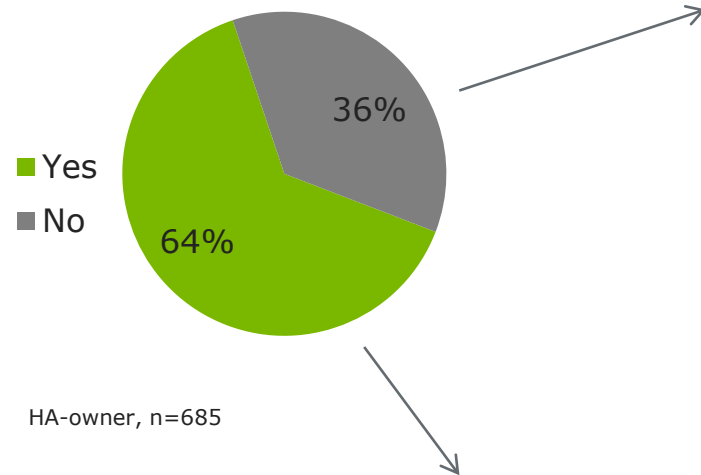
HA-owner, n=685



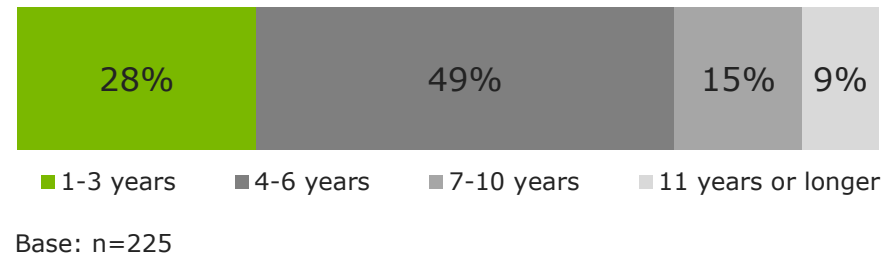


On average 3 years pass between becoming aware of the hearing loss and the purchase of hearing aids. Hearing aids are used for 5 years before they are being replaced.

Current HAs = first HAs?

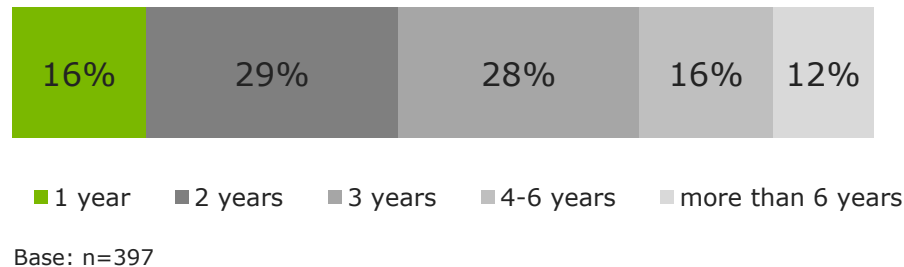


How many years did you own your previous HAs?



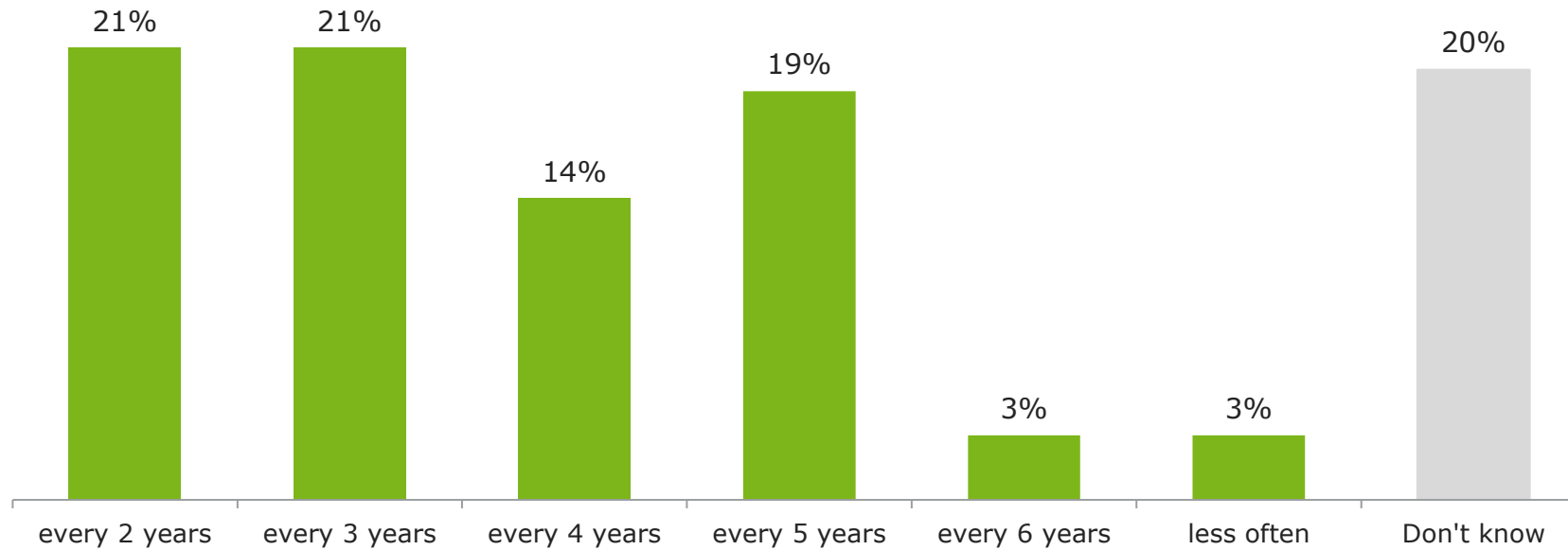
Age of HA before it has been replaced:  
 2021: 5 years (median)  
 2017: 5 years (median)

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?



# 42% 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?



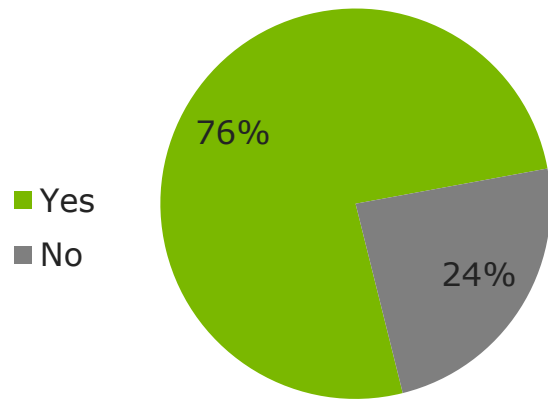
HA-owner, n=685

**Australia specific question**



# 76% of all HA owners think they should have gotten their HAs sooner! Main reason is missing out on social life.

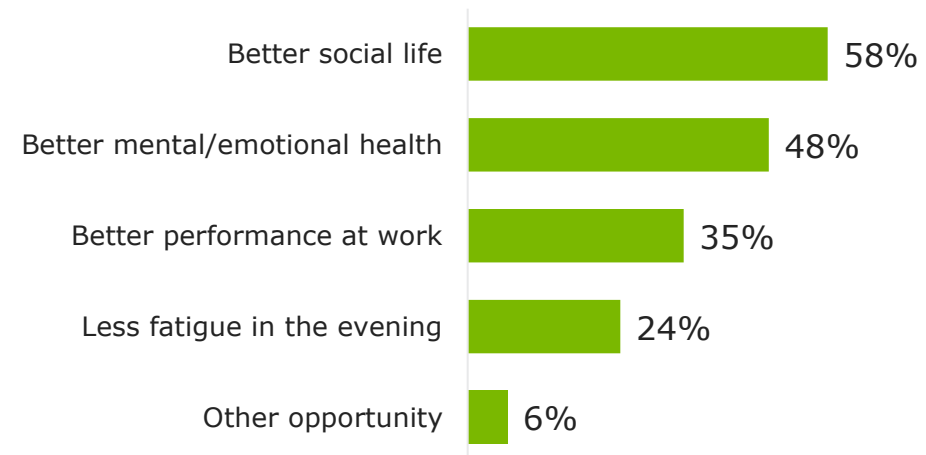
Thinking back before you obtained your first hearing aid(s): do you think, you should have gotten them sooner?



HA-owner, n=685

*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

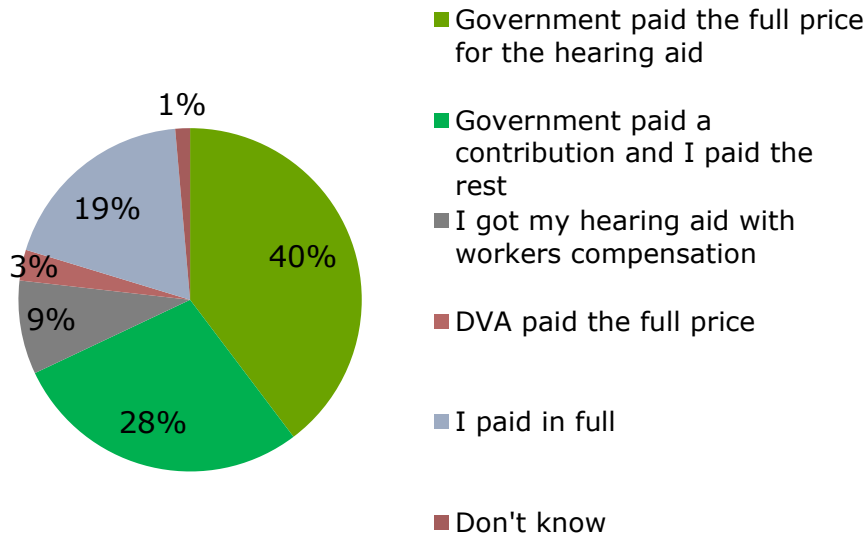


Base: n=522



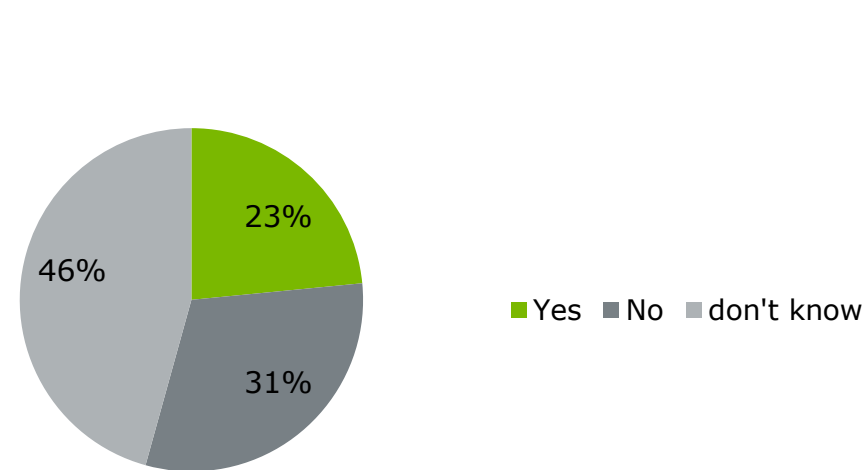
# 80% received some kind of 3rd party reimbursement. Information deficit non-owners: only 23% know whether government/insurance would pay

**Owners:** For the purchase of your hearing aid and for hearing services, which of these best describes how you paid for them?



HA-owner, n=685

**Non-owners:** Based on your current knowledge, would any part or all of your hearing aid(s) be paid for by a third party ?

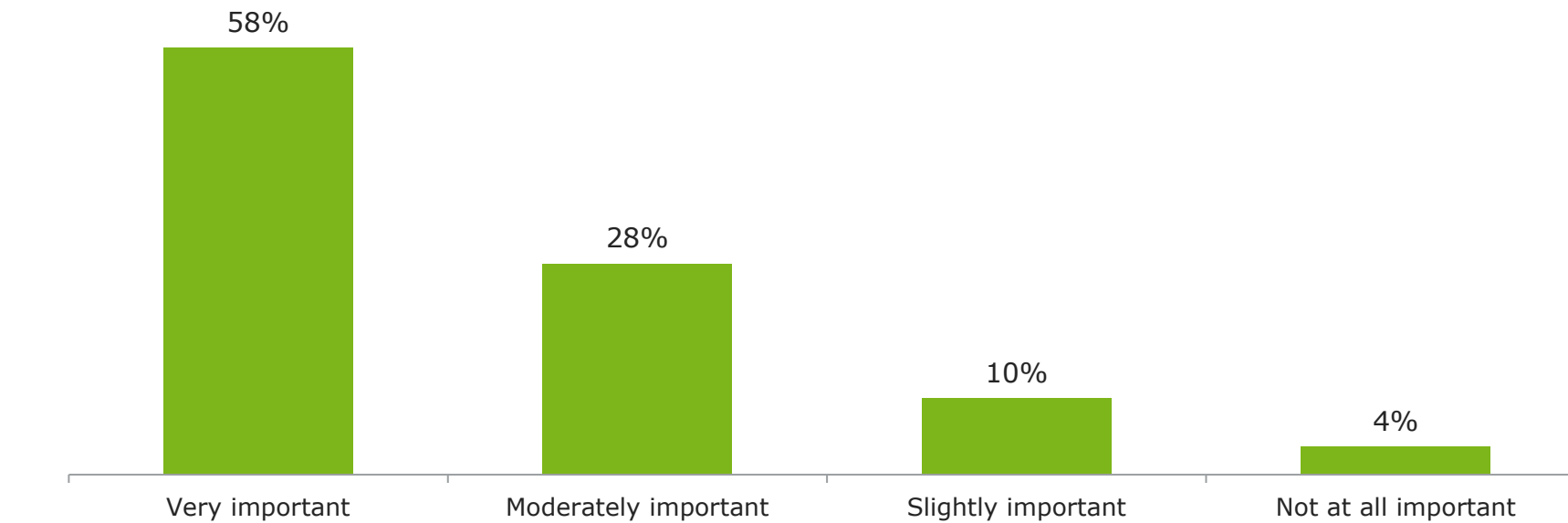


HA-non-owners, n=640



# Choice to self-fund on top of the government subsidy is seen as very or moderately important by 86% of the hearing impaired.

How important do you think it is that pensioners have the choice to self-fund on top of the government subsidy, if they wish to access more advanced hearing aid features?



Hearing impaired, n=1'325

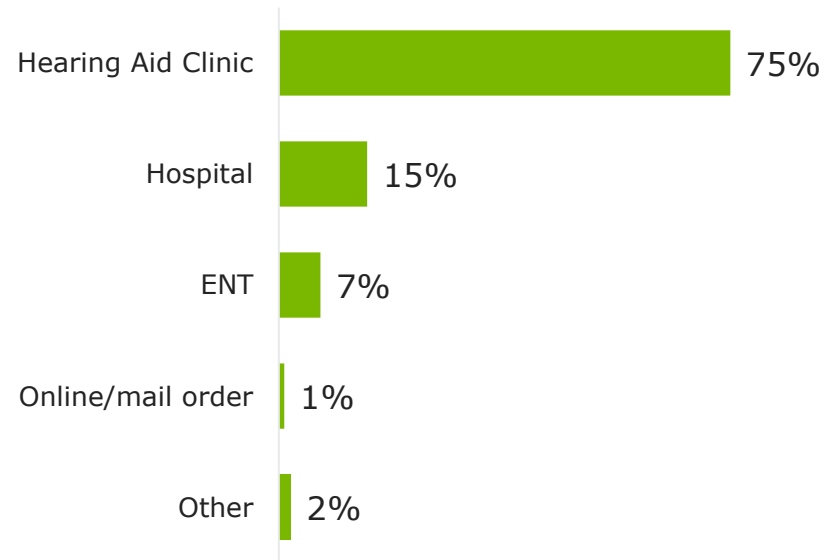
**Australia specific question**



# Hearing Aid Clinics are by far the preferred place for obtaining hearing aids (both for owners and non owners).

## **OWNERS:**

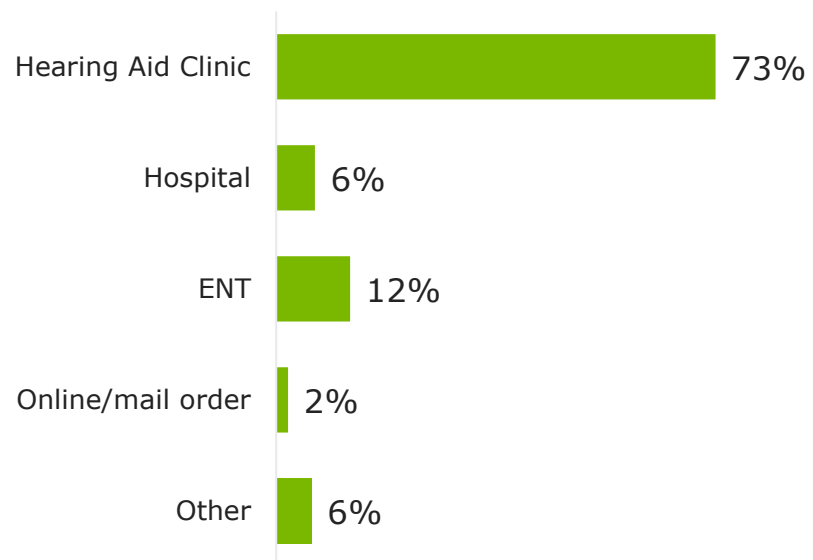
Where was your most current hearing aid obtained?



HA-owner, n=685

## **NON OWNERS:**

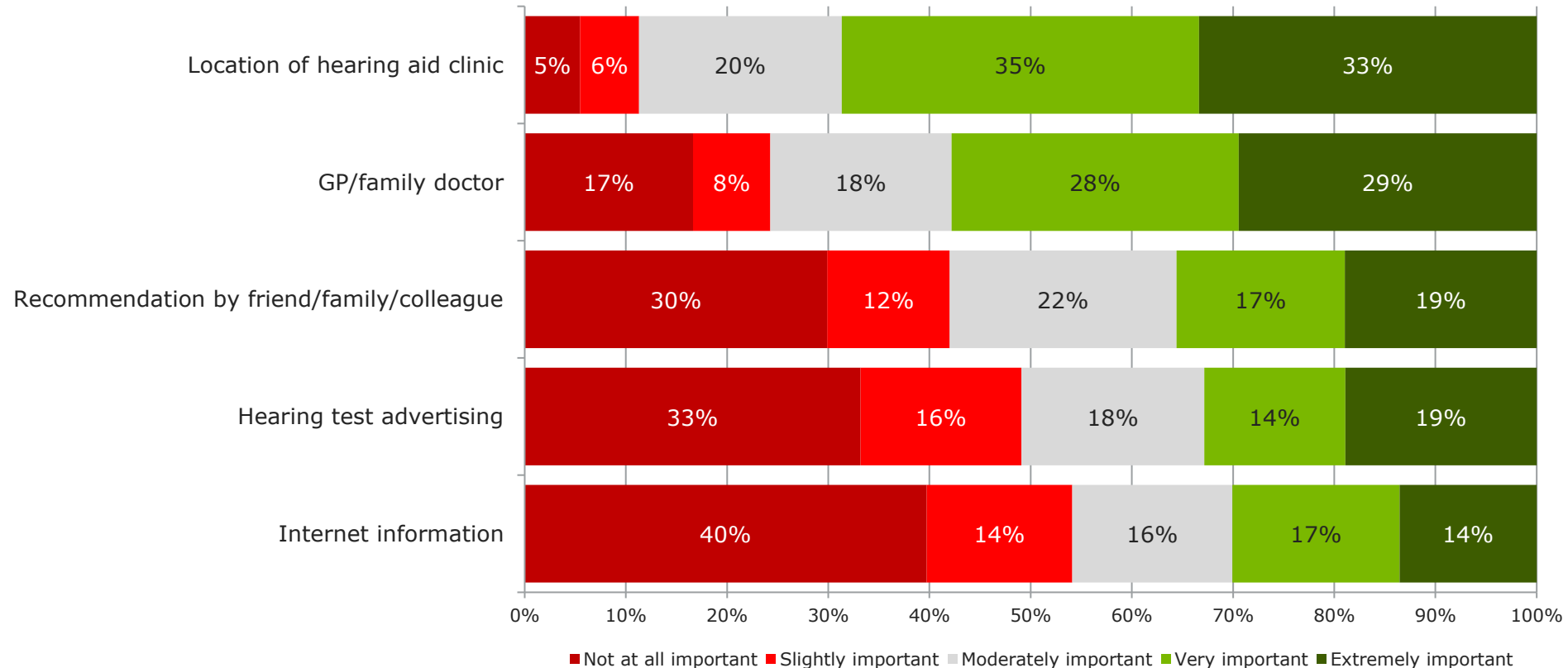
If you were to get hearing aids, where would you go?



HA-non-owner, n=640

# Location and GP were most important factors for choosing the hearing aid clinic.

How important were the following factors in your decision to choose your hearing aid clinic?



HA-owner who purchased at hearing aid clinic, n=531

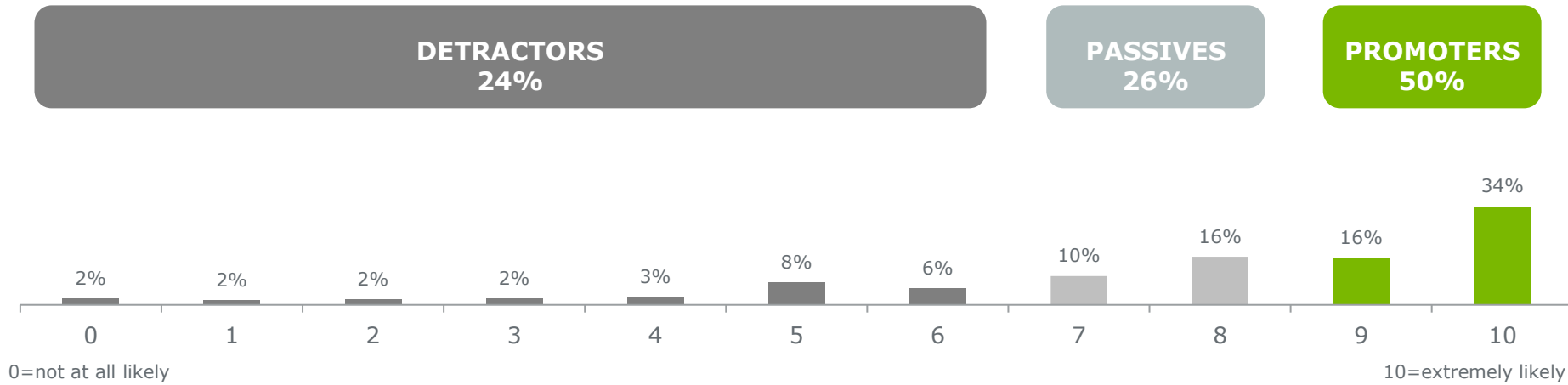
Australia specific question



# 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 26.

*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 = 26**

HA-owner, n=685

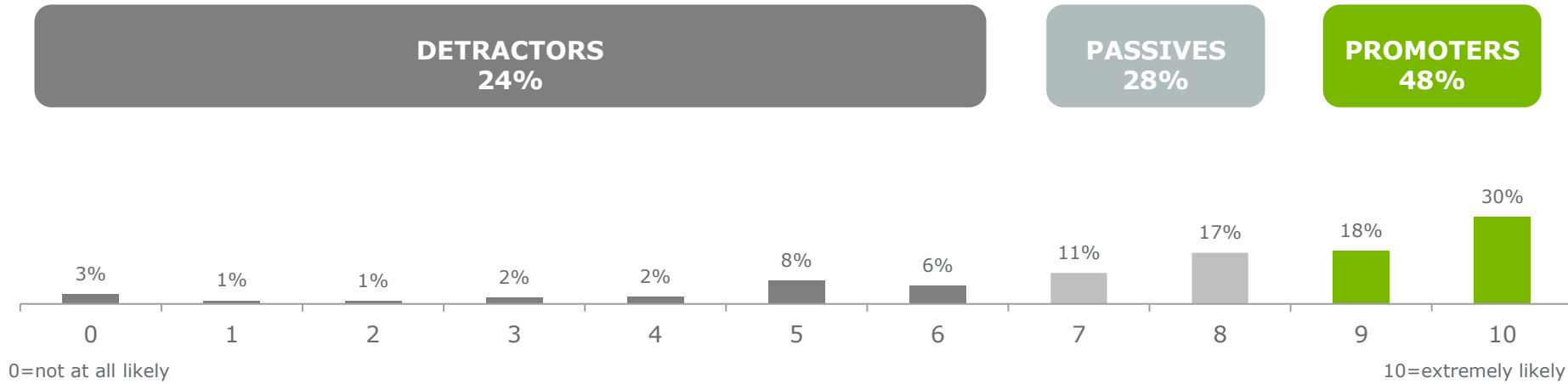




# NPS Hearing aids

Recommendation intention of hearing aids is also good, with a positive NPS score of 24.

*And how likely would you be to recommend hearing aids to a friend or colleague?*



**NPS = PROMOTERS – DETRACTORS = 24**

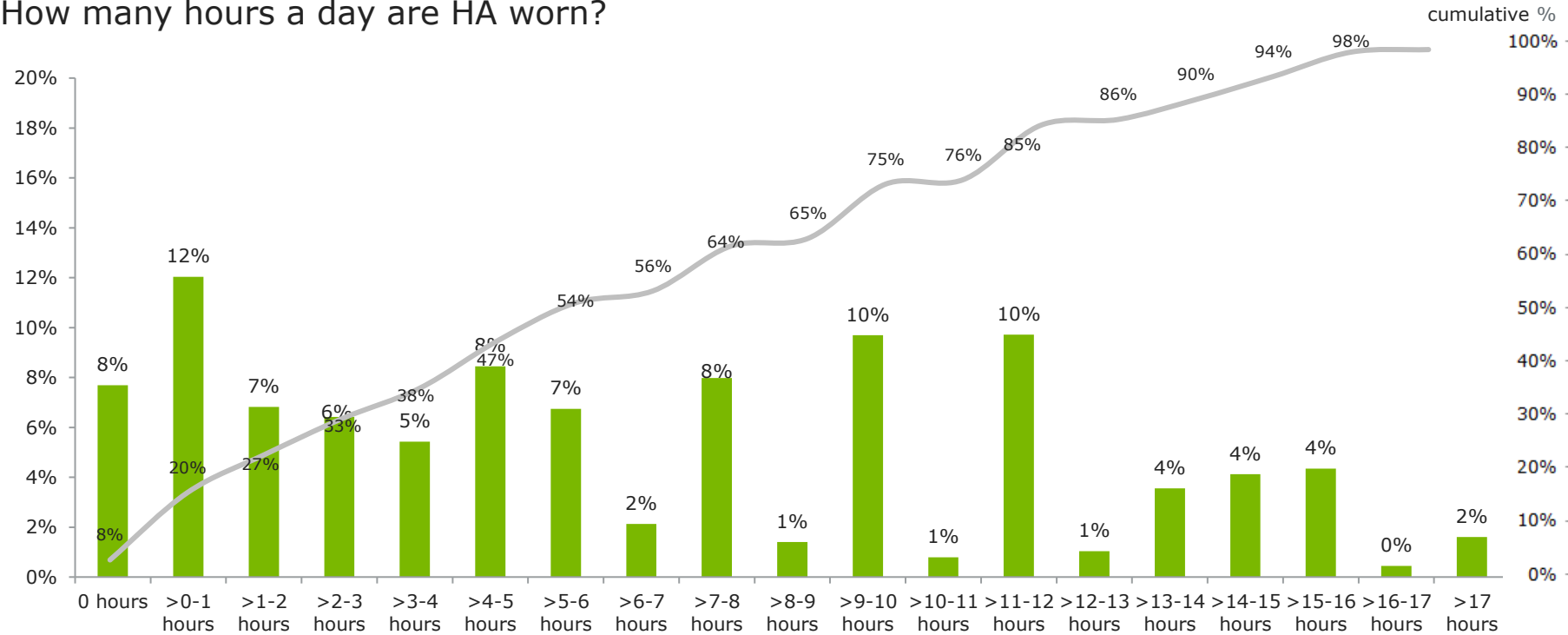
HA-owner, n=685

**Australia specific question**



# On average, HAs are worn 6.8 hours a day

How many hours a day are HA worn?



**HA worn:**  
 2021 Mean: 6.8 hours/day  
 2017 Mean: 6.6 hours/day

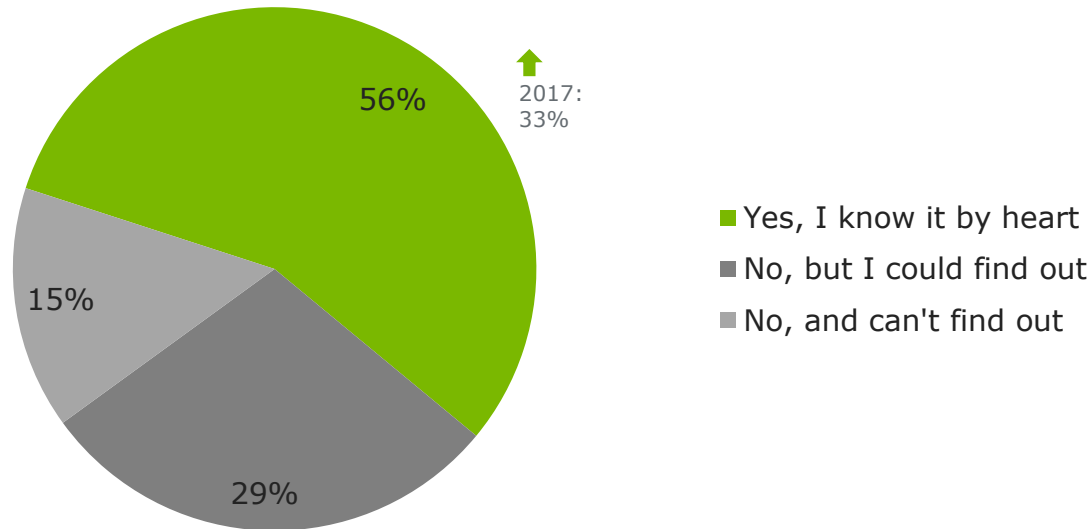
**In the drawer (0 hours):**  
 2021: 8%  
 2017: 10%

HA-owner, n=685



# 56% of today's hearing aid owners are aware of their hearing aid brand (brand awareness has increased since 2017).

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



HA-owner, n=685

44% of the HA owners use an accessory/app for their hearing aids, 76% 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=685)

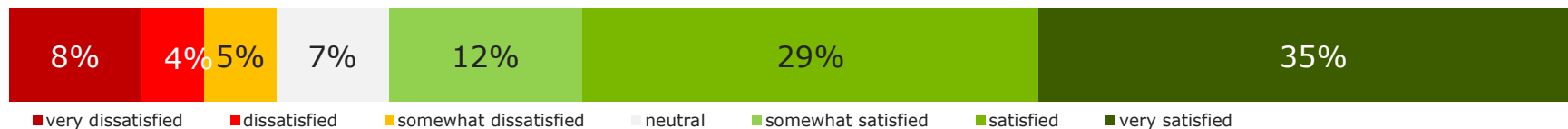


Do you personally use accessories for your hearing aids (TV-Streamer/ Apps / Remote Control / etc.) ? (HA owners, n= 685)



*IF ACCESSORIES USED (n=290):*

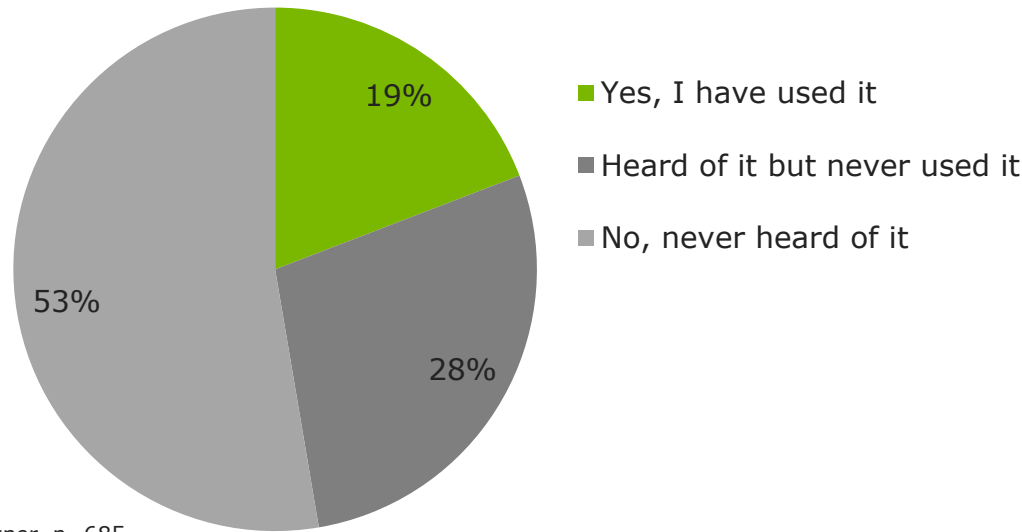
Overall, how satisfied with the performance of your accessorie(s)?



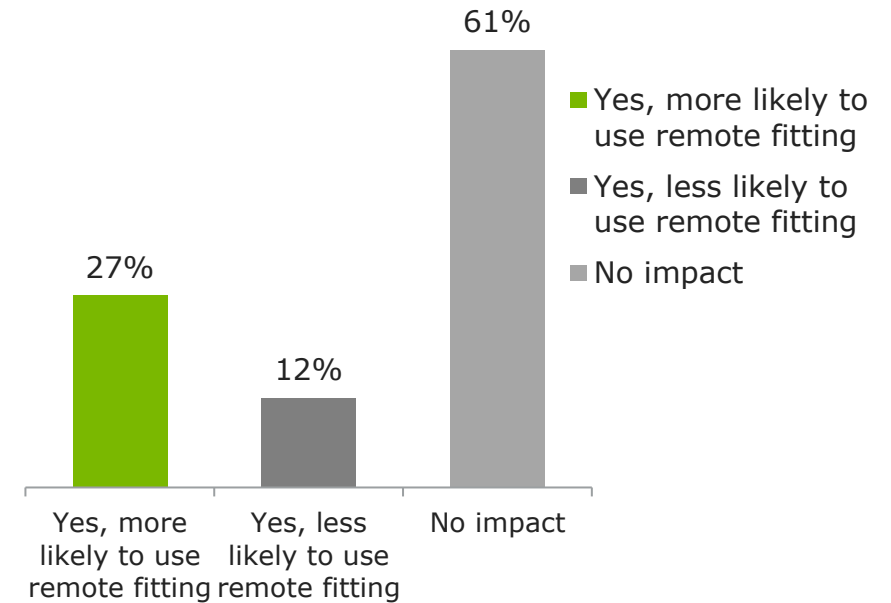
19% of the HA owners have already used remote fitting, but also more than half of them have never heard of it. 27% claim that they are more likely to use remote fitting because of the Covid-19 pandemic.

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)

Does the current Covid-19 pandemic have an impact on your intention to use remote fitting for your hearing aids?



HA-owner, n=685

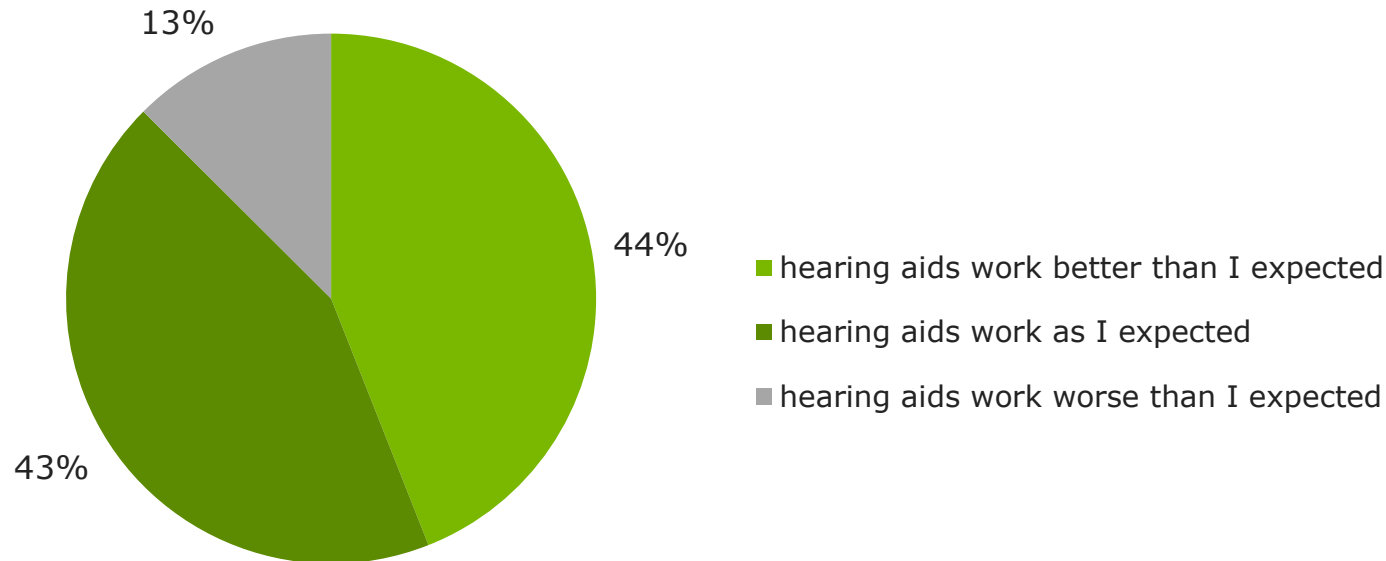


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## Satisfaction with hearing aids and drivers

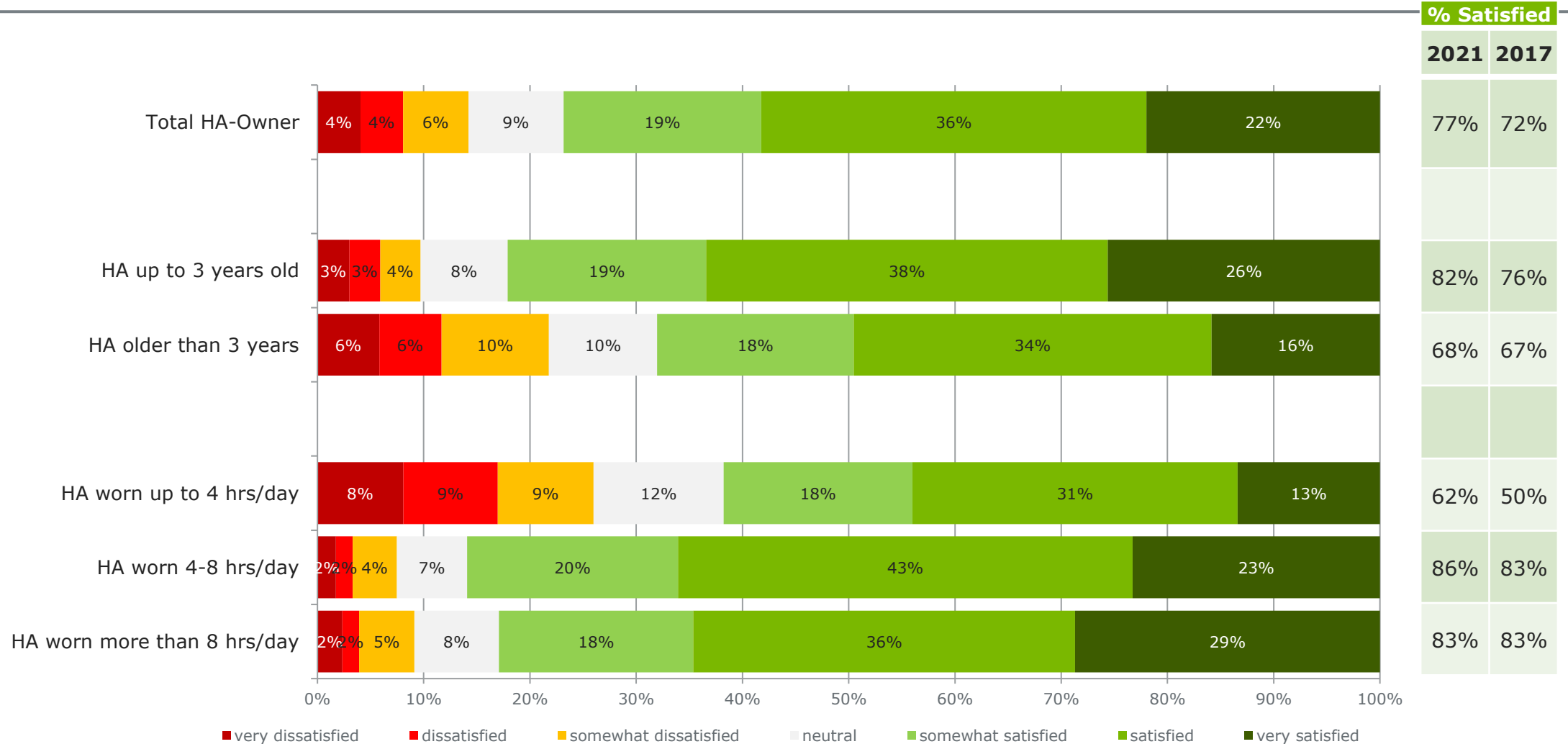
# 87% of the hearing aid owners say their hearing aid works better than or as expected

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



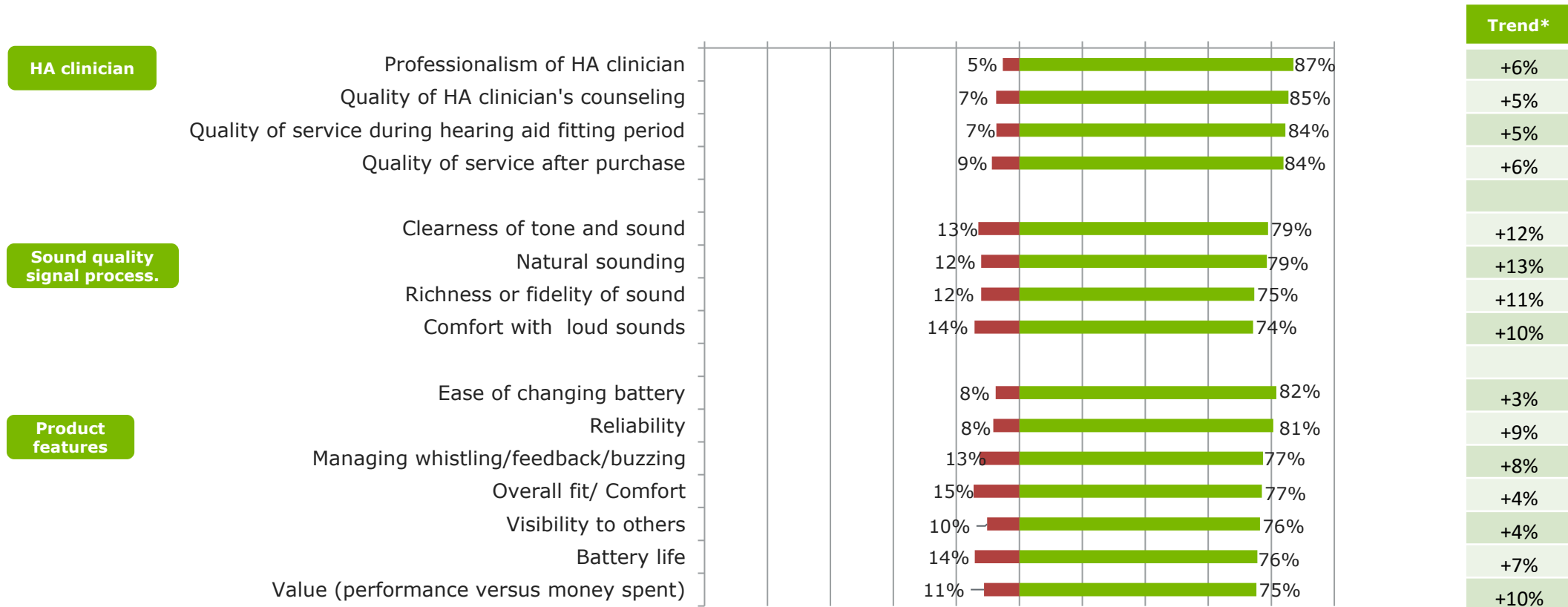
Base: n=685

# Overall satisfaction with HA: 77% 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 2017

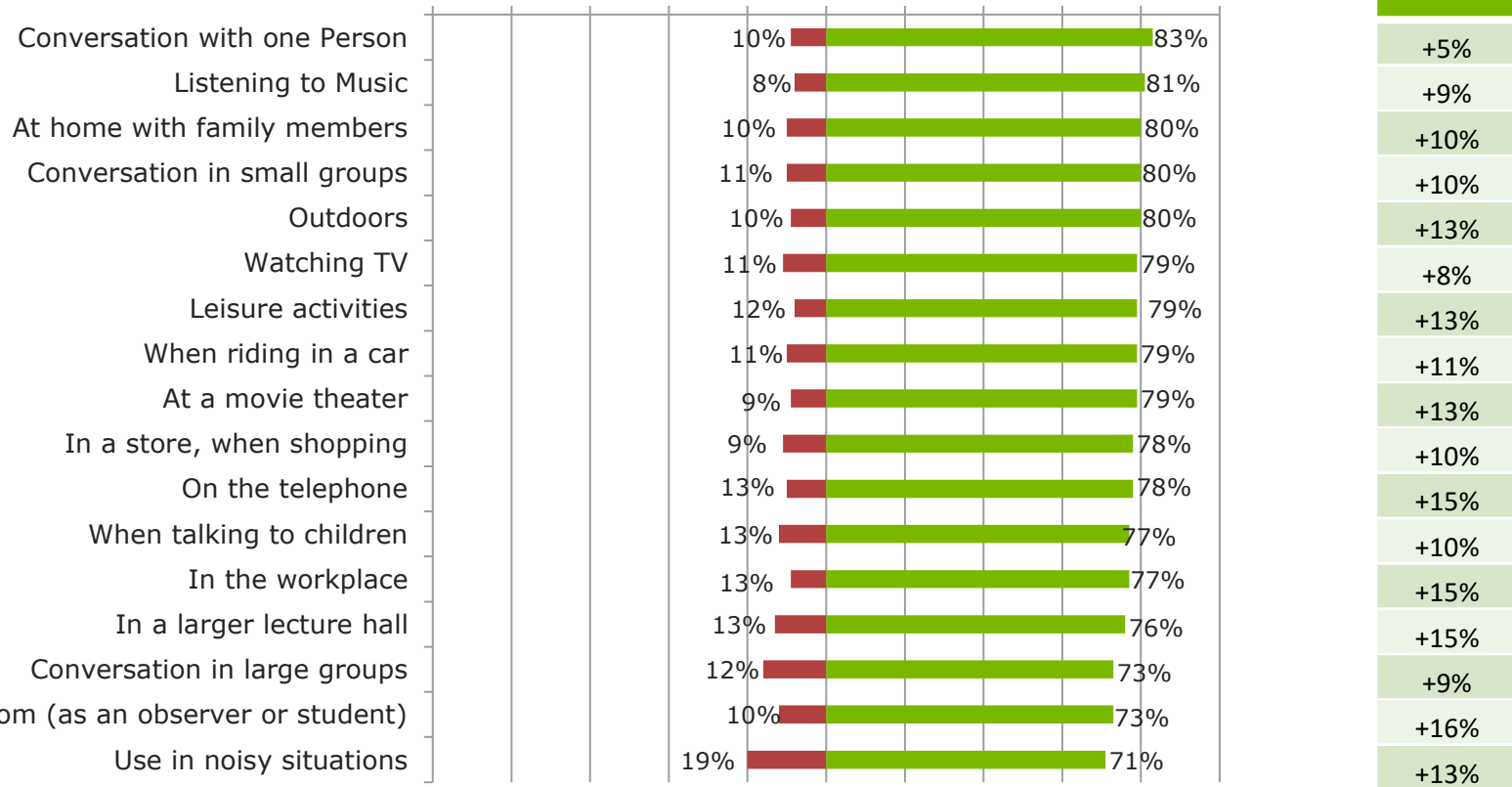
■ dissatisfied ■ satisfied

HA-owner, n=685



# Satisfaction with current hearing aids

Listening situation



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

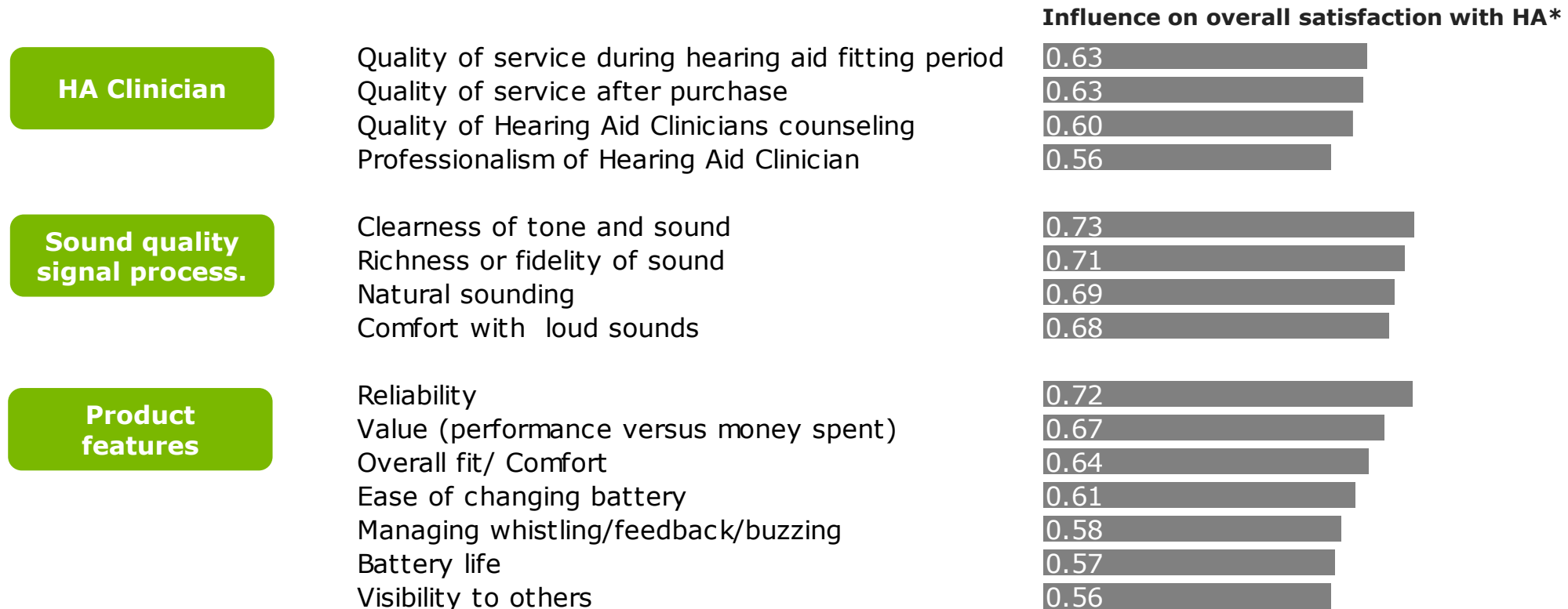
\*% of satisfied HA owners compared to 2017

■ dissatisfied ■ satisfied

HA-owner, n=685



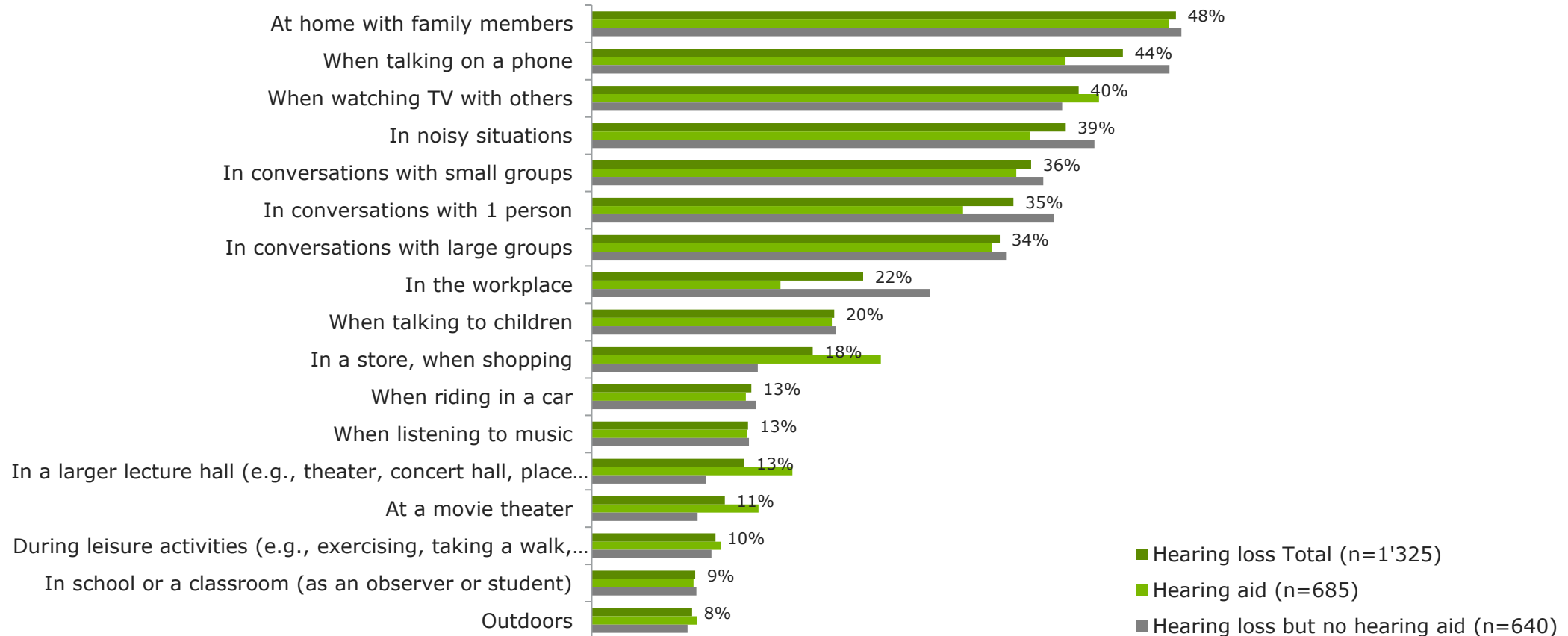
# Factors influencing satisfaction with current HA: Sound quality/signal processing is most important for overall satisfaction with HA



\*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 is 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)

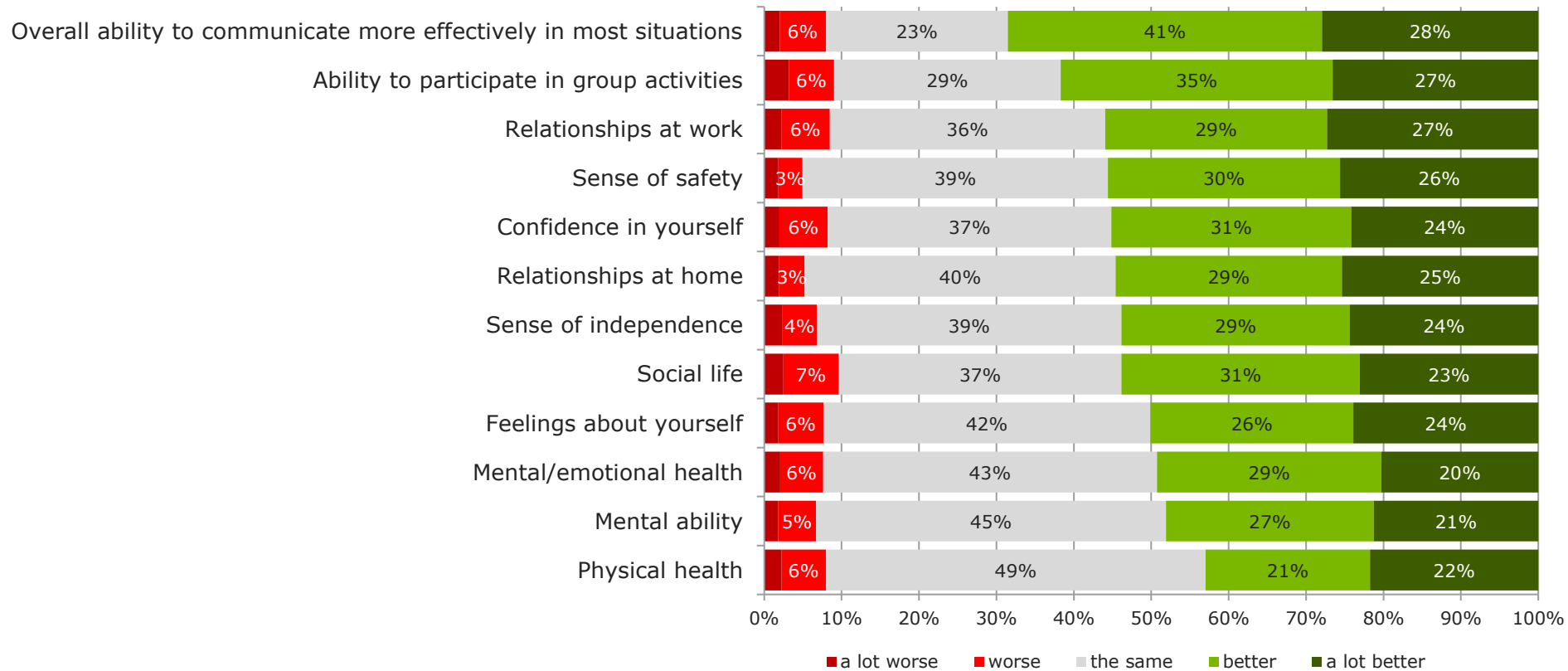


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## Positive impact of hearing aids, quality of life

# Significant positive impact of HAs on different aspects: Especially Communication effectiveness, ability to participate in group activities and relationship at 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).

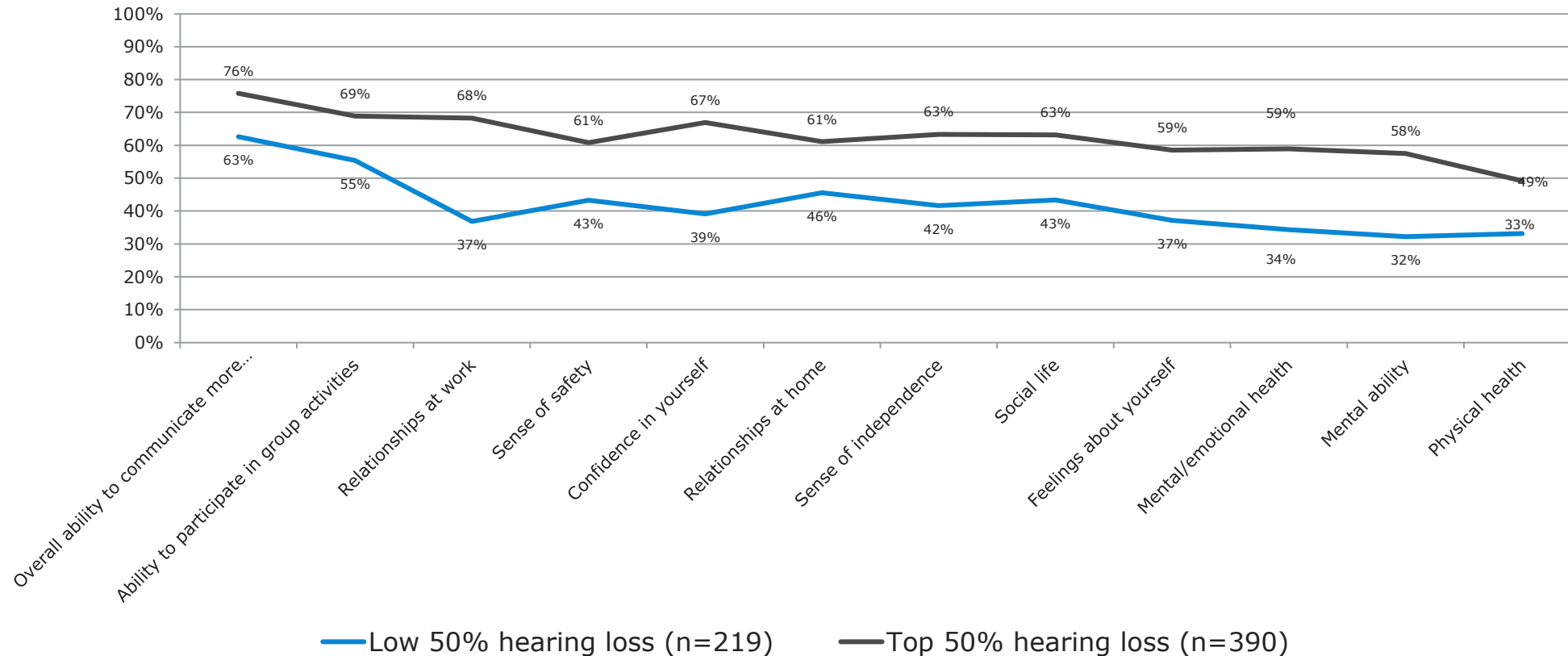


HA-owner, n=685



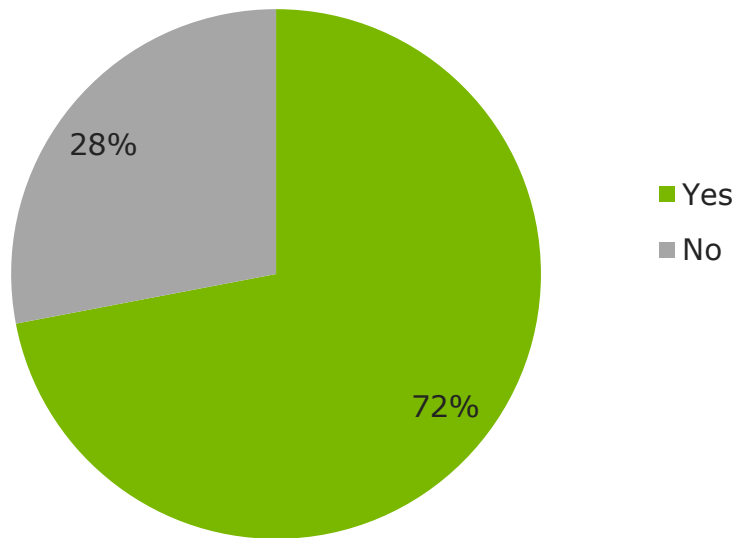
# Impact of HAs is perceived more positive by patients with a Top 50% hearing loss in all aspects

% of HA owners feeling better/a lot better



# Most 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?

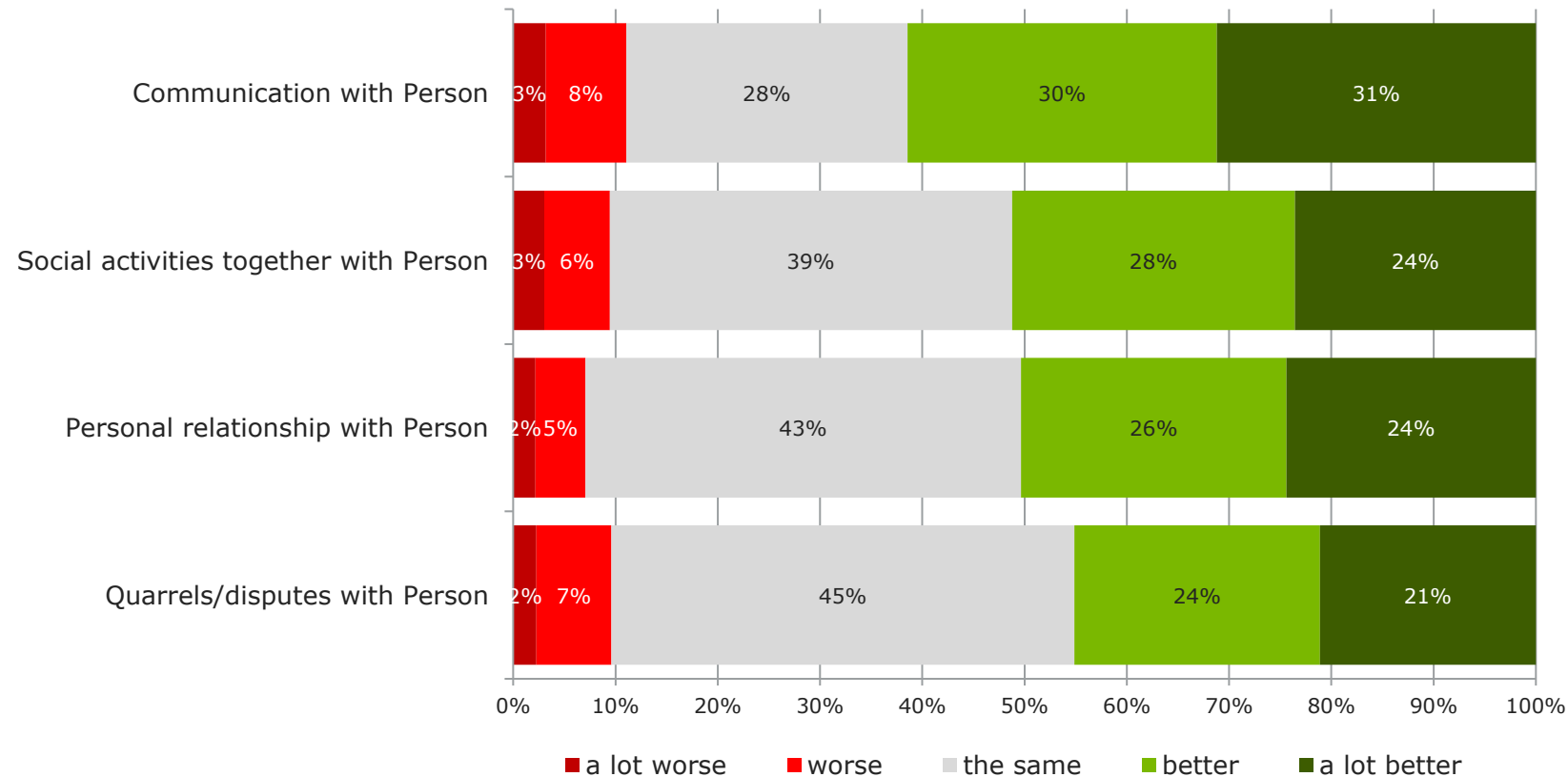


Base: n=685



# 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?

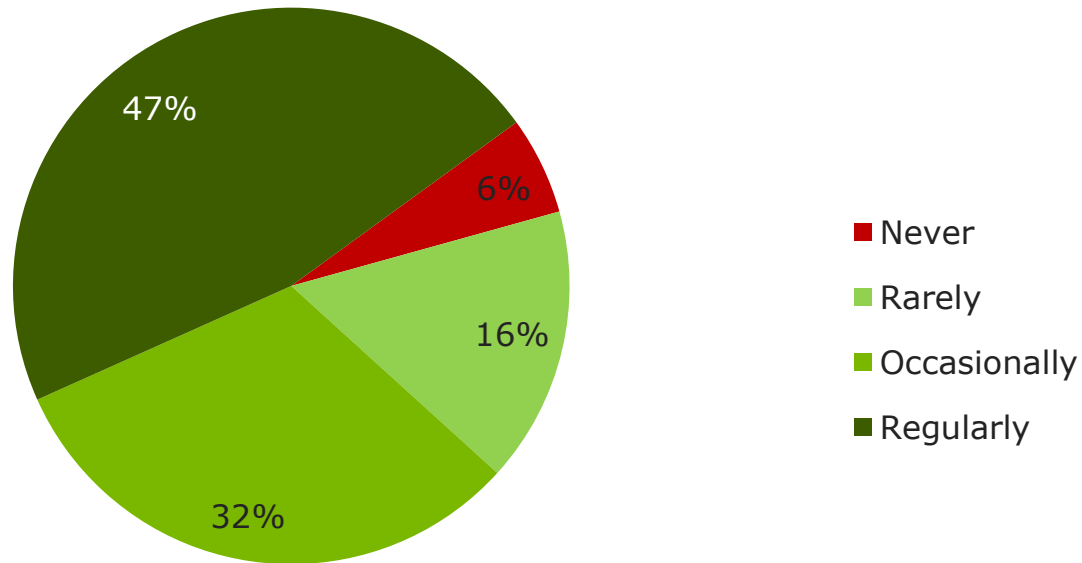


Someone in HH / parent has HA, n=653



# 94% 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?



Base: n=685



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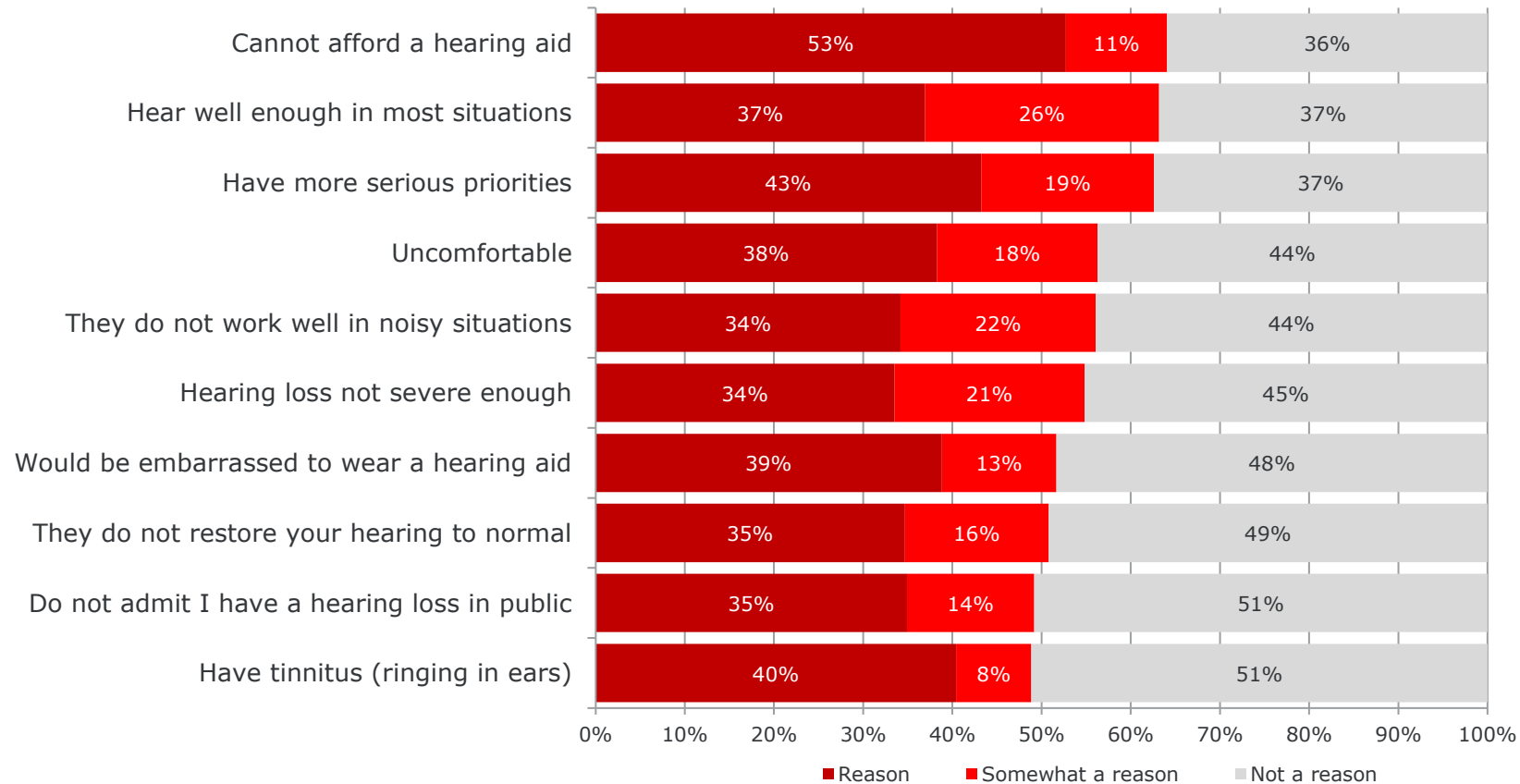
## 4. Analysis of hearing impaired non-owners

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=685	HA-Non-owner Low 50% HL n=312	Non-owner Top 50% HL n=180
<b>Ears impaired (stated)</b>			
Unilateral loss	27%	39%	37%
Bilateral loss	73%	61%	63%
		More similar hearing loss-structure	
<b>Perceived loss</b>			
Mild	18%	50%	12%
Moderate	51%	45%	58%
Severe	26%	4%	22%
Profound	4%	1%	7%

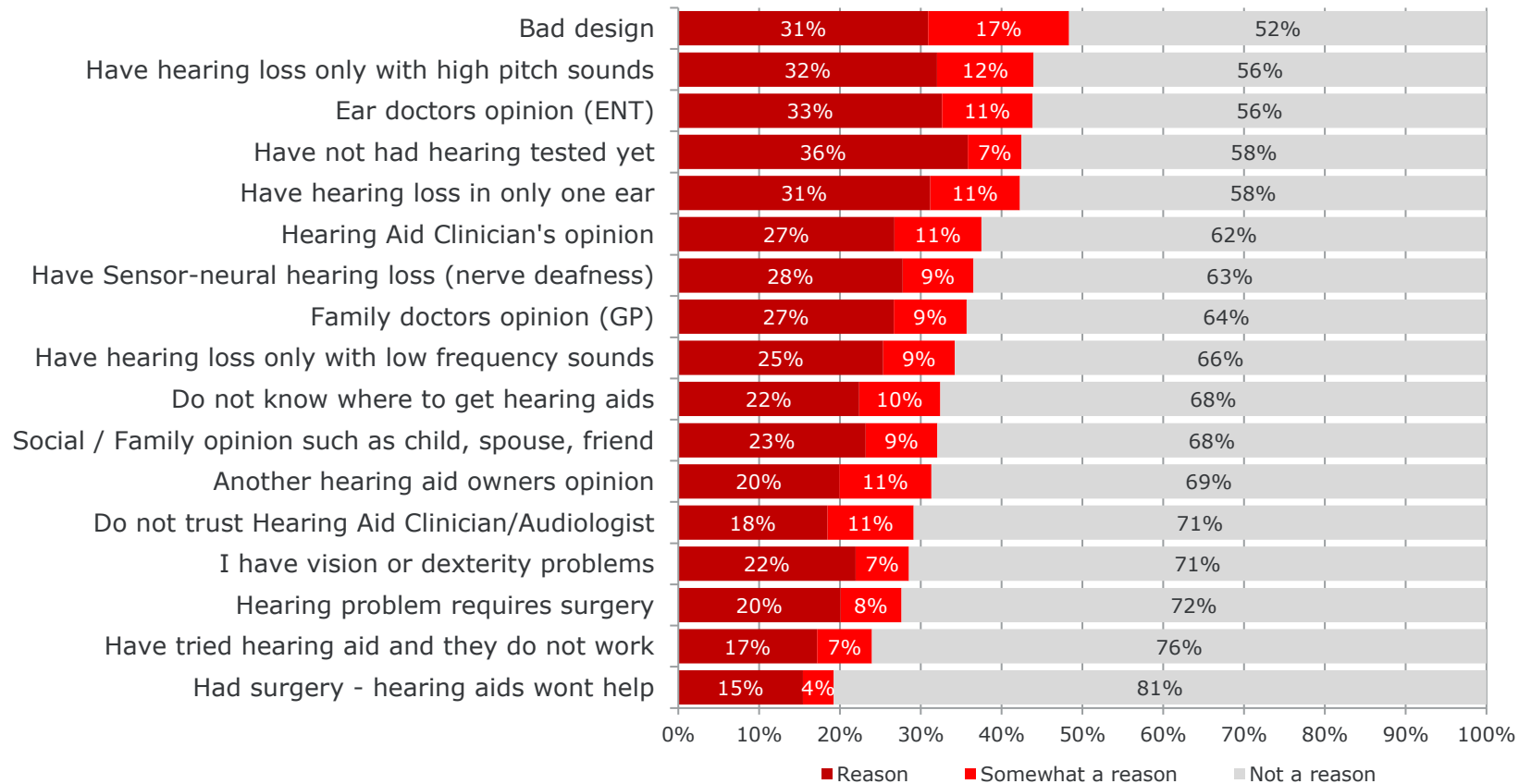
# Top 10 reasons for not having a hearing aid (I/II)



Base: non owners Top 50% HL: n=180



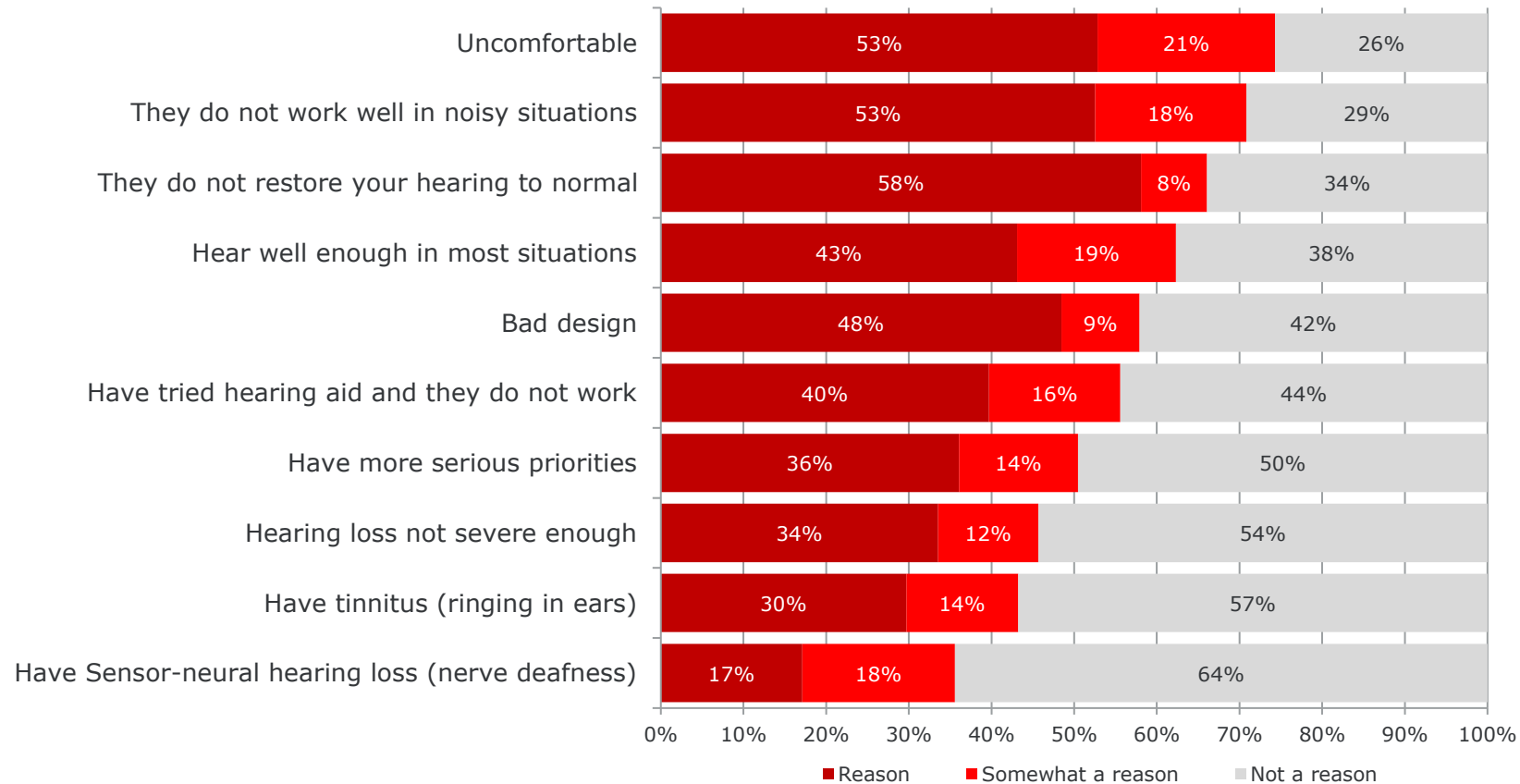
# Less important reasons for not having a hearing aid (II/II)



Base: non owners Top 50% HL: n=180



# Top 10 reasons for HA owners NOT using them



Owners who don't use, n=56 (low sample)



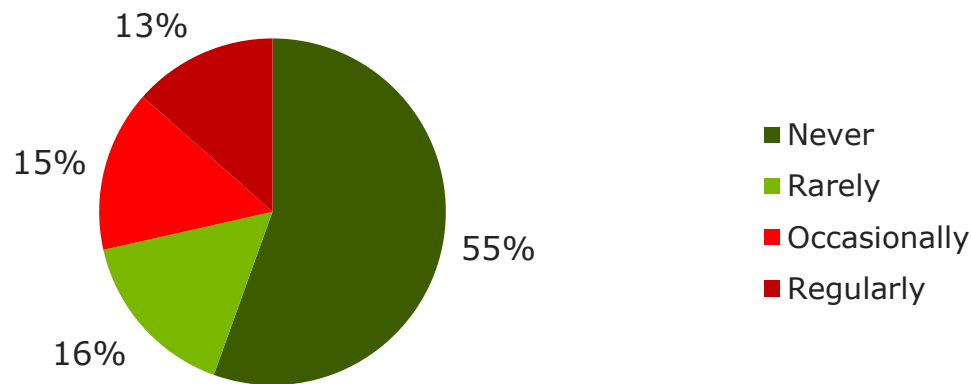
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Social rejection because of hearing loss compared to the acceptance of hearing aids



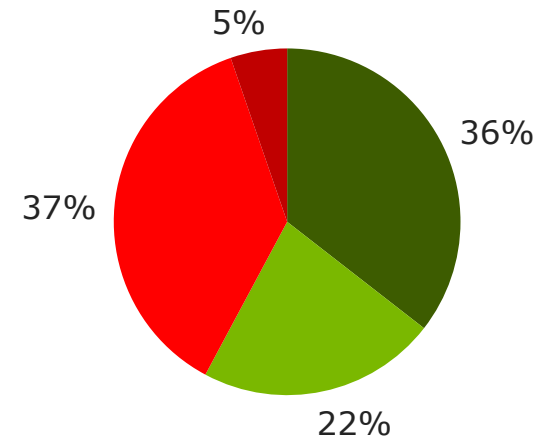
# 55% of hearing aid owners feel that people never make fun of or reject them because of their hearing aids. It is more likely somebody makes fun or rejects a hearing impaired without hearing aid.

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



Base: n=685

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=180



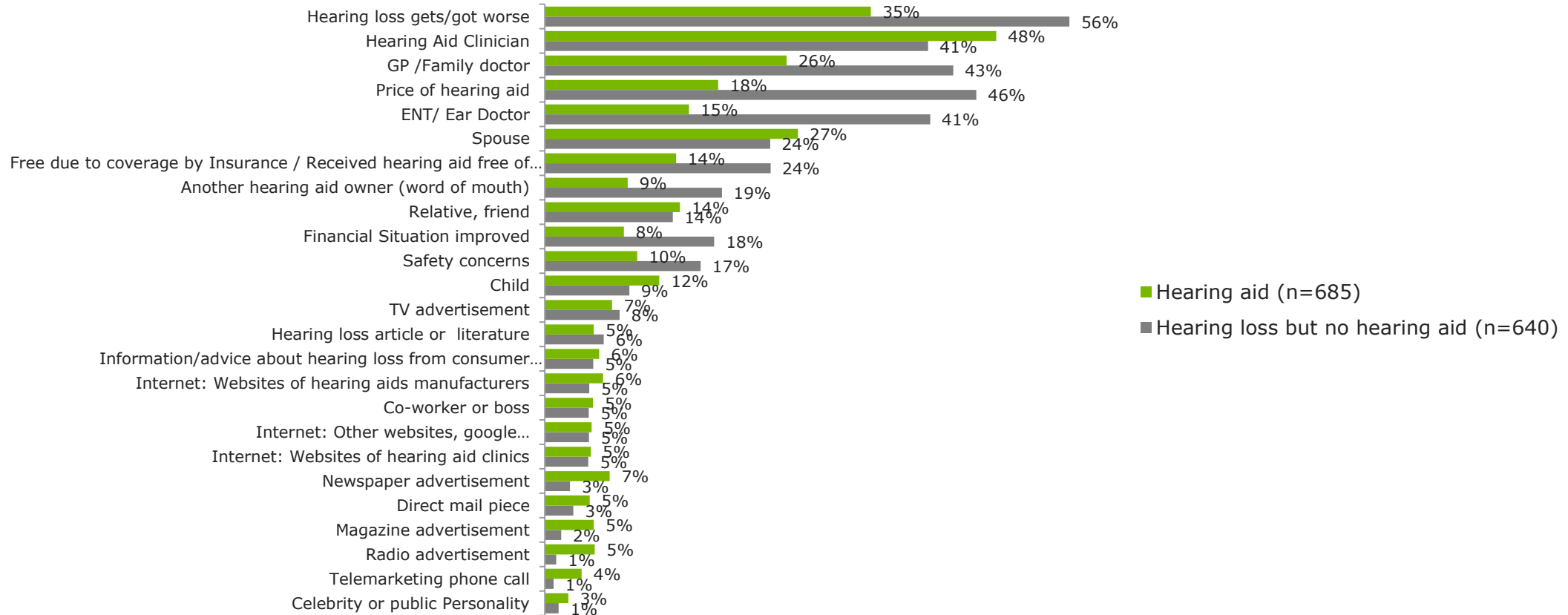
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## Most important triggers to buy

# The most important influencing factors are worsening hearing loss, HA Clinician, doctors and spouse (+price, insurance coverage for the non owners)

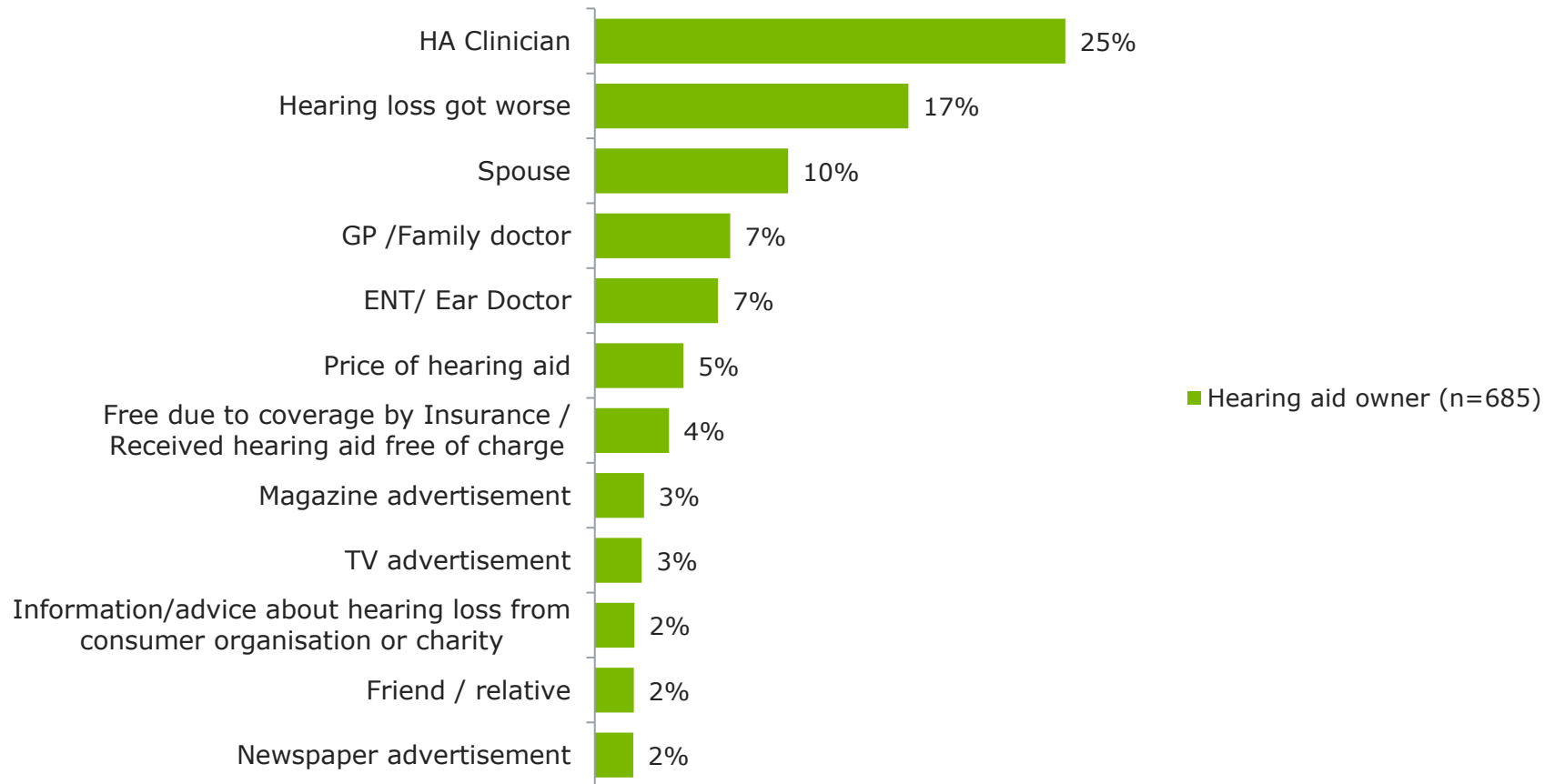
**Owner:** Thinking back to when you obtained your first hearing aid(s), what influenced you to obtain /purchase the hearing aid(s)?

**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 HA Clinician, followed by worsening hearing loss and the spouse

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





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# 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
<b>Gender</b>							
	<b>Male</b>	7'291	12.7%	45.0%	49.2%	53.3%	53.9%
	<b>Female</b>	7'379	10.9%	44.4%	50.8%	46.7%	46.1%
<b>Age recoded</b>							
	<b>1 - 14</b>	2'737	3.9%	66.3%	20.3%	3.8%	9.1%
	<b>15 - 24</b>	1'879	4.4%	43.3%	13.9%	4.9%	4.6%
	<b>25 - 34</b>	2'167	7.5%	56.3%	15.5%	7.4%	11.8%
	<b>35 - 44</b>	1'994	7.0%	46.8%	14.3%	7.7%	8.4%
	<b>45 - 54</b>	1'871	13.0%	30.1%	12.6%	17.8%	9.4%
	<b>55 - 64</b>	1'654	17.1%	28.3%	10.6%	21.2%	10.3%
	<b>65 - 74</b>	1'351	25.2%	43.0%	7.8%	20.3%	18.9%
	<b>74+</b>	1'018	36.9%	56.5%	5.0%	17.0%	27.4%
<b>Type of household</b>							
	<b>single household</b>	1'437	21.1%	44.6%	8.8%	17.5%	17.4%
	<b>Couple, no kids</b>	2'840	16.9%	45.4%	18.2%	27.3%	28.1%
	<b>Couple with kid(s)</b>	7'081	7.8%	48.7%	50.5%	29.7%	34.8%
	<b>Single mom/dad with kid(s)</b>	1'396	9.1%	40.6%	9.8%	7.8%	6.6%
	<b>Retirement home, hospital etc.</b>	231	36.8%	52.2%	1.1%	4.2%	5.7%
	<b>Other</b>	1'685	11.0%	30.5%	11.6%	13.5%	7.3%

# Demographics (2) 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
<b>Status</b>						
Head of the household (alone or together with someone)	6'898	16.9%	44.7%	44.3%	67.3%	67.4%
The spouse of the head of the household	2'728	12.2%	53.1%	18.5%	16.3%	22.8%
Daughter/son of head of household	3'858	2.6%	35.3%	29.1%	6.8%	4.6%
Other person	1'185	11.2%	30.7%	8.1%	9.6%	5.3%
<b>Employment</b>						
Full time employed	4'635	10.2%	40.6%	41.2%	30.5%	27.3%
Part time employed	1'857	9.1%	36.1%	16.7%	11.7%	8.7%
Unemployed / not working	1'744	10.8%	33.1%	15.4%	13.6%	8.9%
Retired under a disability pension scheme (fully or partly)	639	28.4%	46.1%	4.5%	10.6%	11.9%
Early retired under an early retirement benefit scheme	341	23.1%	41.1%	2.6%	5.0%	4.6%
Retired (at the official retirement age)	1'785	28.6%	51.5%	12.6%	26.9%	37.5%
Student / pupil / in training	725	3.2%	33.5%	6.9%	1.7%	1.1%
<b>Education</b>						
Incomplete Secondary Education	1'765	19.4%	42.5%	14.1%	21.4%	20.7%
Secondary Education Completed	2'612	13.7%	38.4%	22.3%	24.0%	19.7%
Vocational or Professional Certification Completed	1'646	15.2%	38.2%	13.8%	16.8%	13.6%
Some University or Vocational Certification	1'090	11.4%	45.3%	9.6%	7.4%	8.1%
University Education Completed	2'411	10.2%	44.8%	21.4%	14.8%	15.8%
Postgraduate Education Completed	1'396	13.2%	58.9%	12.0%	8.2%	15.4%
Doctorate, Post-doctorate or equivalent Completed	311	15.6%	58.4%	2.6%	2.2%	4.0%
Other	496	13.5%	28.3%	4.2%	5.2%	2.7%



# 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)

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

# Sample description: Region, inhabitants

State / Territory	%
Australian Capital Territory	2%
New South Wales	33%
Northern Territory	1%
Queensland	19%
South Australia	8%
Tasmania	3%
Victoria	28%
Western Australia	7%

Inhabitants	%
Less than 10 000	13%
More than 10 000, less than 50 000	20%
More than 50 000, less than 500 000	26%
More than 500 000, less than 1 mio	11%
More than 1 mio	29%