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Aim

- This poster shows self-reported hearing aid difficulties, adoption of hearing aids, and the degree to which hearing aid owners report using them (now published as Dillon et al., 2020).
- The data are based on large-scale national surveys of health conducted in Wales from 2004 to 2018, where 80% of hearing aids are provided via the NHS.

Introduction

- Hearing aids are effective at improving hearing-related QoL for adults with hearing loss (Ferguson et al (2017)).
- It is commonly reported that most people with hearing loss do not obtain hearing aids.
- Of the people who obtain hearing aids, the proportion who don't wear them at all has been reported to be anywhere from 0% (Takahashi et al., 2007) up to 57% (Gianopoulos, Stephens & Davis, 2002).
- Some problems that affect many surveys on hearing aid adoption and use include:
 - Inadequate sample size
 - Unknown reliability
 - Biased sample
 - Wish to please the survey taker
 - Unknown variation of statistics over time

All of these problems can be solved by using data collected over many years in large-scale national surveys of health.

Methods

Data were extracted from the Welsh Health Survey (WHS) administered to over 10,000 respondents per year from 2004 to 2015, and the National Survey for Wales (NSW), administered to over 10,000 respondents per year in 2016 and 2018.

The questions relevant to hearing, which were embedded in a much larger, more general survey, were:

Difficulty: Do you have any difficulty with your hearing? Without a hearing aid if you usually wear one.

[Yes / No / Don't know]

Use: Do you usually wear a hearing aid?

[Yes, most of the time / Yes, some of the time / No, but have tried one / No / Don't know]

Results

Hearing difficulty

Figure 1 shows that over the 12 years the WHS was administered, the proportion of the adult population reporting difficulty gradually increased from 14 to 16%. There was an apparent step increase to 19% for the two years of the NSW survey, but this likely is the result of a change in method of survey administration.

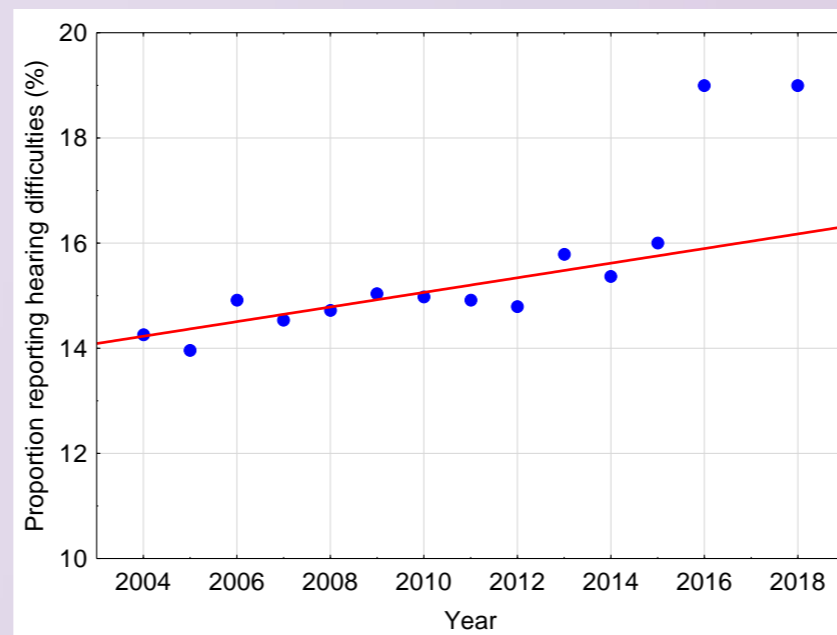


Fig 1. Proportion of responders who report difficulty with their hearing.

Hearing aid adoption

Figure 2 shows the proportion of the adult population who said they either wear, or have tried, one or more hearing aids. The data conform closely to the smooth fitted exponential curve. Over the period of the surveys, the proportion who have ever tried hearing aids has increased from 5 to 7% of the adult population. As with the other data in this poster, the small year-to-year scatter attests to the high reliability of the data.

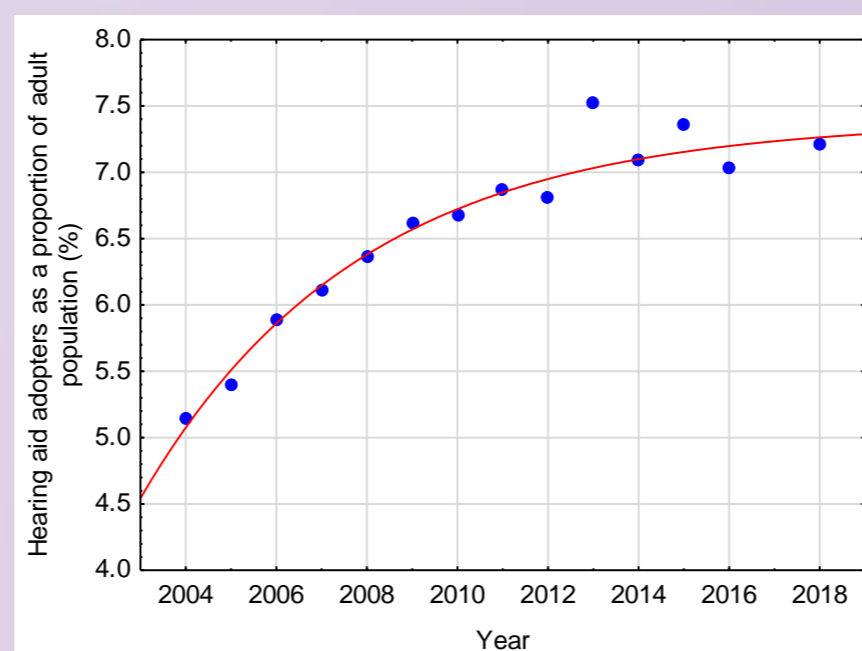


Fig 2. Proportion of responders who report having ever tried one or more hearing aids, and fitted exponential regression line.

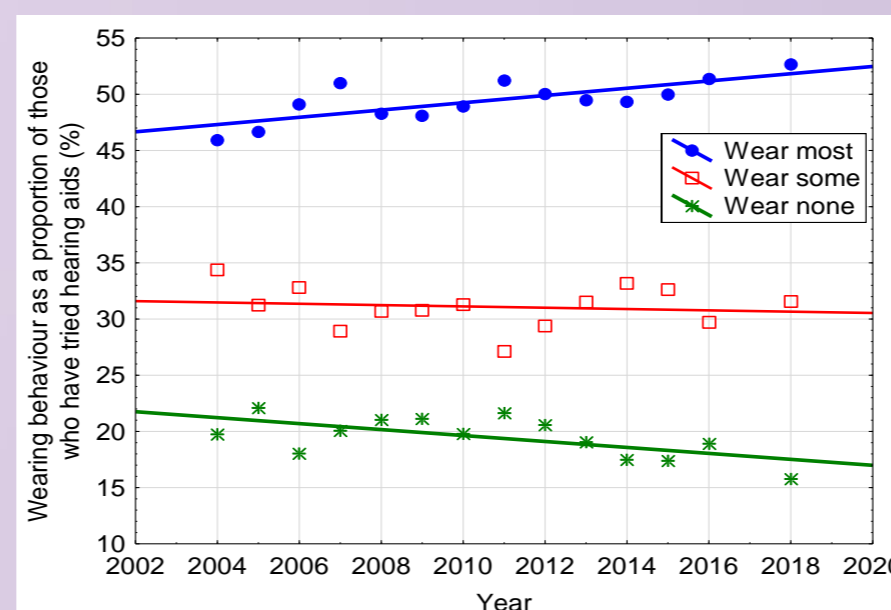


Fig 3. Proportion of people who wear their hearing aid(s) most, some, and none of the time, for all adults who have ever tried hearing aids.

Hearing aid use

Figure 3 shows the use that people make of their hearing aid(s). These data are, of course, limited to those who have ever tried them. Over the years of the survey, there has been a small but systematic increase in the proportion of people who use their hearing aids most of the time, and a corresponding decrease in the proportion who don't use them at all.

Discussion

The proportion of the adult population who are experiencing difficulty with their hearing has increased slightly over time, perhaps as a consequence of population aging.

Hearing aid adoption has been gradually increasing, towards a value of 7% of the adult population. Were those who wear or have ever tried hearing aids to be expressed as a proportion of those who report having hearing difficulties, the proportion increases smoothly from 36 to 46% during the 12 years of the WHS. However, the proportion then drops abruptly back to 37 and 38%, respectively during the 2 years of the NSW. This is likely to be an artefact of the change in survey methodology (despite the actual questions remaining unchanged).

In round numbers, approximately 50% of people who have ever tried hearing aids use them most of the time, 30% used them some of the time, and 20% never use them. These proportions have changed only a little (but in a good direction) over time, and are remarkably similar to Australian data reported by Hogan et al (2020).

Systematic reviews have consistently shown that adherence to self-administered interventions for long-term health conditions is poor and typically around 50% (Nieuwlaat et al, 2014).

Take-home messages

- Hearing aid use compares favorably with adherence to interventions for other self-administered long-term conditions, but there is room for improvement.
- Valuable information can be obtained from national health surveys that routinely include questions on hearing aid adoption.

References

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