



Relating Factors and Trends in Hearing Device Adoption Rates to Opportunities for Hearing Health Care Providers

Lindsey E. Jorgensen, Au.D., Ph.D.¹ and Rachel E. Barrett, B.A.¹

ABSTRACT

As with many professions, audiology is continuing to evolve. More specifically in terms of hearing device technology, we see evolution in remote accessibility to providers, public knowledge of devices, and services provided by hearing care professionals. Each of these topics plays a role in an individual's decision to pursue any sort of hearing care services. Given the variety of new devices soon coming to the market (over-the-counter devices), it is important for the audiologist to understand patient motivators and how they have a great impact on both the practice of audiology as well as the patient's overall satisfaction. The goal of this article is to investigate the Marke Trak 2022 data to determine the trends in adoption and use of hearing aids as well as examine predictive factors that can be used to better understand hearing aid adoption.

KEYWORDS: hearing aid adoption, personal sound amplifiers, over-the-counter devices, patient motivators, hearing aid use

While actual rates of hearing loss in the population suggest that approximately a quarter of older adults have some degree of hearing loss, only one in ten individuals in the United States self-report hearing difficulty. Furthermore, despite increases in technology and im-

proved testing, the self-reported rates of hearing loss remain consistent.³ While many people with hearing loss would benefit from increased access to sounds, roughly 38.4% of these people have adopted hearing aids for amplification.³ There are many factors that

¹Department of Communication Sciences and Disorders, University of South Dakota, Vermillion, South Dakota.

Address for correspondence: Lindsey Jorgensen, Au.D., Ph.D., Department of Communication Sciences and Disorders, University of South Dakota, 414 E. Clark St., Vermillion, SD 57069 (e-mail: lindsey.jorgensen@usd.edu).

MarkeTrak 2022: Insights into the Evolving Hearing Market; Guest Editors, Thomas A. Powers, Ph.D. and Jan Kihm, M.S.

Semin Hear 2022;43:289–300. © 2022. The Author(s). This is an open access article published by Thieme under the terms of the Creative Commons Attribution-NonDerivative-NonCommercial-License, permitting copying and reproduction so long as the original work is given appropriate credit. Contents may not be used for commercial purposes, or adapted, remixed, transformed or built upon. (https://creativecommons.org/licenses/by-nc-nd/4.0/)

Thieme Medical Publishers, Inc., 333 Seventh Avenue, 18th Floor, New York, NY 10001, USA DOI: https://doi.org/10.1055/s-0042-1758374. ISSN 0734-0451.

can influence a patient's desire and/or ability to pursue amplification. Factors such as distance to a provider, income, gender, or ethnicity could potentially impact a person's decision or ability to pursue hearing health care. With the availability of over-the-counter (OTC) devices on the horizon, MarkeTrak 2022³ sought to investigate what those with hearing loss are currently obtaining with regard to amplification including the pathways used to obtain these devices. These forms include personal sound amplifiers (PSAPs), hearing aids, as well as cochlear implants. Using this MarkeTrak 2022 data,³ this article seeks to identify trends in adoption rates of amplification, excluding cochlear implants. Cochlear implant adoption and satisfaction can be found in the article by Marinelli et al, in this edition. The authors investigated the knowledge of physicians, access to health care or lack thereof, as well as other self-perceived and actual restrictions to access. The report also includes patient motivators for seeking and pursuing amplification, which also can help increase adoption rates in a practice.

MarkeTrak 2022³ utilized the following hearing device definitions: hearing aid(s) fitted in person by a hearing care professional (HCP; e.g., audiologist, hearing instrument specialist; ear, nose, and throat [ENT]); hearing aid(s) fitted remotely (via an internet phone or video call/chat or app) by an HCP; hearing aid(s) with no fitting assistance from an HCP (also referred to as self-fitting hearing aids); PSAPs which look similar to hearing aids or ear buds (worn in/behind the ear), ordered/purchased directly online by phone, through the mail or at a retail

store, not through a HCP; hearing implant(s) otherwise known as cochlear implants.

WHO ARE THE POTENTIAL PATIENTS AND WHERE ARE THE OPPORTUNITIES?

HCPs have the opportunity to provide hearing health care and amplification options that meet personal needs to patients. Having a deeper understanding of the patients who could seek services may help HCPs provide quality services and seek opportunities to engage potential patients.

Age

Continuing with previous trends (e.g., Marke-Trak 2019²), as people age, the percentage who report hearing loss increases with less than 10% of those younger than 65 years, at 21.2% of those 65 to 74 years of age, at 34.1% of those 75 to 84 years of age, and at 55.7% of those 85 years of age or older (Fig. 1). Those who are unemployed (including those who are retired) reported a higher rate of hearing loss (17%) as compared with those who are employed (9%). These reports are consistent with epidemiological data that indicate the prevalence of hearing loss in those older than 65 years is 27 to 45% and the prevalence increases with age, 4-9 thus suggesting that the data in MarkeTrak 2022³ are representative of the population. It can then be supported that the participant reports of HCP, adoption, satisfaction, and other trends are also in line with population reports. While aging

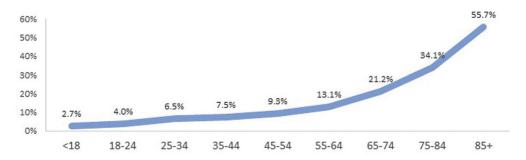


Figure 1 Hearing difficulty rate by age (n = 43,957).

patients are still the most common patients who seek HCP services, there remains an opportunity for HCP services in both aging and younger populations.

Causes of Hearing Loss

HCPs indicate that the majority of their patients report hearing loss due to age or noise exposure. This historically has been the target population for advertisement, social media, and sales (more on the opportunity/influence of marketing later). Based on MarkeTrak 2022,³ 43% of individuals attribute their hearing loss to age-related disorders, 27% to exposure to loud music, 25% to noise exposure on the job/school, 15% to noise exposure from the military, 14% to noise exposure from recreation, and 13% to dayto-day noise exposure. Previous MarkeTrak data from 2019² found that 43% attribute their hearing loss to age-related disorders, 20% to exposure to loud music, 24% to noise exposure on the job, 12% to noise exposure from the military, 15% to noise exposure from recreation, and 11% to day-to-day noise exposure. There appears to be a trend toward more individuals with hearing loss attributing it to noise exposure and not just due to aging or military service.

Given the data, there is an increase in perceived noise exposure especially due to loud music, possibly due to ear level music devices among younger populations (Fig. 2). There is an opportunity for HCP to provide information regarding hearing protection, but also to attract younger patients who may be noticing the effects of hearing loss on their occupational, social, and educational endeavors. Marketing the impact of hearing loss on working memory, mental health, and cognition may influence those with mild hearing loss to seek a solution earlier.

Black, Indigenous, and People of Color

Compared with people who identify as White, those who identify as Black, indigenous, and people of color (BIPOC) report lower rates of hearing difficulty. When looking at the data across the different races that make up BIPOC, those who identify as Black and Hispanic report a disproportionally low rate of hearing loss (5 and 8%, respectively), while Native American respondents report rates comparable to White

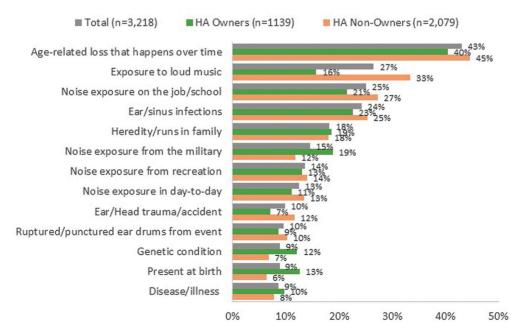


Figure 2 Causes and contributors to hearing difficulty.

respondents (12%). There are several potential reasons as to why people who identify as BIPOC may not report the same levels of hearing difficulty as those who identify as White. One possible reason is that BIPOC families spend a higher percentage of their average annual income on health care (20%) compared with non-BIPOC families (11%). 10 Therefore, BIPOC families may have to prioritize other medical conditions over hearing health care. Due to the lack of access and necessity, perceived less important conditions, such as hearing loss, may not be reported as a concern. Beyond this, persons who identify as BIPOC are less likely to obtain medical care as compared with non-BIPOC individuals due to lack of trust in medical providers. 11

There are several ways in which HCPs may increase the opportunity for engagement with patients who are BIPOC with hearing loss. The first is an expansion of providers who, themselves, are BIPOC. Patients who are BIPOC are more likely to go to, feel more comfortable with, and have better outcomes from providers who are also BIPOC. 12 Additionally, the report by the National Bureau of Economic Research¹² suggests that BIPOC patients are more likely to follow-up with providers who are also BIPOC. As a profession, hearing health care can continue to expand services to those who are BIPOC by hiring and recruiting BIPOC providers. There are many opportunities for HCPs to engage in bias-reducing strategies with the ultimate goal of consciously taking patients' perspectives and intentionally focusing on individual patients' information apart from their social group. 13 This is an opportunity to expand cultural competency for BIPOC patients and may increase the perception of hearing loss and accessibility of hearing health care. Second, HCPs can increase their cultural competency to provide adequate hearing health care to BIPOC patients. Demonstration of understanding of differences through focused and specific cultural training may increase BIPOC patient comfort with HCPs and may increase the opportunity to provide hearing health care. Third, HCPs need to push manufacturers of ear-level devices to make more devices that meet the skin-tone

needs of a wider variety of patients. Doing so would allow HCPs to have a variety of products that better meet BIPOC patients' needs. As a profession HCPs have an opportunity to better engage with and provide services to people who identify as BIPOC. According to data in this survey, participants who identify as BIPOC do not perceive the incidence of hearing loss nor access to hearing health care as would be expected; this is an excellent opportunity for HCPs to expand the services they provide.

Gender

Slightly more than 10% (11.3%) of those who identify as male report having some level of hearing loss compared with only 9.1% of females. This is consistent with national data trends of rates of hearing loss between genders¹⁴; however, given that male population hearing loss historically was tied to military experience and occupational noise exposure, this trend may begin to fade. Rates of military service are on the decline, 15 and the Occupational Safety and Health Administration (OSHA) and the National Institute for Occupational Safety and Health (NIOSH) are improving protection of hearing in the workforce. It is possible that in the future we will see less of a difference between the rates of reported hearing loss among those who identify as male and those who identify as female.

Anecdotally, HCPs report that most of their patients are male; this is in opposition to medical literature that suggests that female patients tend to seek out health care earlier and more often than males, 16 including hearing health care. Additionally, females are twice as likely than males to seek out preventative services.¹⁶ Currently, female respondents with hearing loss report similar device uptake compared with males with hearing loss (41.6 and 43.2%, respectively). Given that female patients are more likely to seek health care earlier, it is also possible that they could see an increased benefit from amplification, 17 as they potentially would seek a solution earlier in the hearing loss journey. There remains an expanding opportunity for HCPs to provide services to female patients particularly because they typically seek hearing health care earlier, may have increased benefit,

and would potentially refer other patients due to increased satisfaction.

Knowledge of HCP

Patients are more likely to pursue health care 18 and amplification options when they trust their provider and have positive reports from family and friends. 19 This trend continues to be supported in the current data. Respondents still report that talking with others who have hearing loss is their most common pathway to hearing health care, with 25% of the respondents reporting they had a conversation with someone who has a hearing aid. Interestingly, 39% of respondents reported not doing any kind of research prior to going to see an HCP. This suggests that they heard about the HCP from someone in the community or heard of the practice. Roughly half (52%) of the respondents reported that they had discussed their hearing problem with their primary care provider and most commonly the primary care provider referred them to an HCP (45%) or for a hearing test (39%). There exists an opportunity for HCPs to gain more patients through current patient referrals as well as other health care providers; potential patients continue to seek hearing health care based on information from someone else they trust.

There continues to be a portion of the population who report having hearing loss who have not sought any hearing health care. Overall, however, the vast majority of respondents who report hearing loss have taken steps to understand their condition, and nearly 80% of them have had their hearing tested by a professional. Understanding how the respondents with hearing loss adopt and utilize their hearing-assistive devices was an additional focus of the most recent MarkeTrak study.³

ADOPTION RATE TRENDS

General Trends

The individual hearing aid adoption rates among those with hearing difficulty, focusing on the owner's perception and classification of the hearing aid they received most recently, is broken down as such: 31.2% wear hearing aid(s) that were fit in person, 4.5% wear hearing aid(s) that were fit

remotely, and 2.7% wear hearing aid(s) that were self-fit, which includes direct-to-consumer hearing aids. In addition, 4.1% wear cochlear implant (s); and 3.4% have both an implant and a hearing aid together. Almost four in ten individuals with hearing difficulty have a hearing aid, which equates to roughly 3.9% of all individuals in the United States.³ Given these data, we can say that for approximately 5% of people, cost matters. This dataset demonstrates that self-purchase rates are at 38.4%, compared with systems with universal health care where the self-purchase rates are up to 44%.²⁰ Therefore, it can be presumed that the gap accounts for those who could not afford amplification.

When PSAPs are included, the net adoption rate among those with hearing difficulty is 42.5%, which equates to 4.3% of all individuals in the United States. When compared with MarkeTrak 2019² data, the combined rate for hearing aids and PSAPs was slightly lower, at 40.6%. The percentage of those with hearing difficulty who classify their device as a PSAP is 8.2%.3 With OTC devices soon coming to the markets, we can anticipate that the net adoption rate will increase further in future years. In recent years, the talk of OTC devices has become a hot topic in the field of audiology. While there is certainly a market for OTC devices, these data do not suggest that OTC hearing aids will take over the more traditional market. These may be considered as a "steppingstone" by some to get them into the world of hearing aids. The devices may work for these patients for a period of time; however, they may over time feel that hearing aids fit specifically to their needs will be a better option. For some, they may be concerned about the price and by utilizing OTC devices, they start the hearing treatment journey.

Age

The age trends of hearing device adoption rates from this year's MarkeTrak data³ continue to show the unique U-shaped curve as seen in Fig. 3. When looking at Fig. 3, the data suggest that there are fewer middle-aged adults who report using hearing aids than younger or older adults; forming the "U-shaped" curve. As shown in this figure, the older individuals are somewhat more likely to have severe hearing

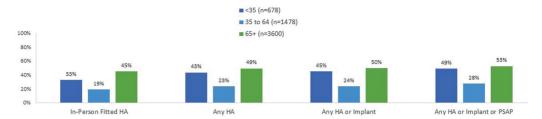


Figure 3 Hearing aid adoption rates by age.

loss and may be in a better position to pursue hearing aids. Younger individuals may be influenced by adults and educators involved in their life. Those in the middle range, age 35 to 64, may feel that they are too young to get hearing aids and be the most impacted by negative images and stigmas. This year's MarkeTrak data³ found that hearing aids rarely make owners feel embarrassed, while untreated hearing loss occasionally or regularly makes nonowners feel this way. These data are consistent with similar patterns reported in the 2019 MarkeTrak 10 data. The "Hearing Aid Effect" was reevaluated in 2013 and results indicated that no hearing aid condition was rated as more negative than any of the non-hearing aid device conditions. In fact, models wearing the standard size BTE with earmold were rated as more trustworthy than models wearing the Bluetooth device.²¹ We know according to this year's MarkeTrak data³ that most hearing aid nonowners are more likely to list noise exposure from loud music and jobs/school as causes for their hearing loss. Given that this age group is often filled with working class individuals, one wonders why they are not pursuing amplification. From a provider's perspective, this is another age group to target with regard to providing hearing protection, monitoring for hearing loss, and counseling on amplification options. This particular population is one that would certainly benefit from amplification in several workplace environments, also emphasizing an audiological need.

This same U-shaped pattern was seen in 2019 MarkeTrak X data,² but the rates from 2022³ increased within the youngest and oldest segments when compared with 2019. This goes against the data where hearing loss is typically a positive trend toward increased rates of loss. The Early Hearing Detection and Intervention

(EHDI) program was developed in 2000.²² This program enforces the performance of hearing screening exams, audiologic diagnostic evaluations, and early intervention services for young children. Thanks to their tremendous efforts, EHDI has been successful at identifying and providing amplification for children who have hearing loss. This is one of the likely explanations for the increased trend in the younger population adoption rates. Given that the young population is defined as younger than age 35, we can expect that this population will continue to grow. However, we anticipate that in the coming years, the middle-aged population also will increase with the younger patients getting older. In fact, some of the children to be implanted with a cochlear implant for the first time have not yet reached age 35 and are included in this category. Another possible explanation for increased adoption rates in the younger population could be technological improvements. We are now able to better fit mild and moderate hearing losses, which are often found in young children. With this subset of patients included, it would increase the overall rate within the younger population. To add to this, we should also consider the effect that noise exposure can have on young children and how that will pan out in the future, in particular, the increase in use of personal electronic devices by young children, as well as headsets/ear buds for other technologies such as cell phones and computers. These devices have been shown to cause hearing effects.²³ All of these combined, we can predict that trends will increase in the future.

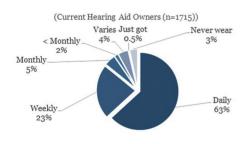
Hearing Aids versus PSAP

PSAPs have been available in stores for several years; however, OTC devices will soon make an

appearance on the market. It has been thought by some that these devices will make hearing aids obsolete. However, JapanTrak data²⁴ from 2018 found that consumers reported PSAP/ OTC devices were reasonable for their purposes, but satisfaction with medical hearing devices fitted by a HCP was much higher. Significant differences were noted in reliability of the hearing aid when compared with the PSAP/OTC devices (80 vs. 25%). They also found that with a higher satisfaction rate, patients wearing their hearing aids fit by an HCP were worn on average for 8.1 hours a day, while PSAP/OTC devices were worn 4.9 hours a dav.24 These data are consistent with 2022 MarkeTrak³ data that found the proportion of hearing aid owners who wear their device daily is higher than it is for PSAP owners (Fig. 4). Typically, those who wear PSAPs do not have significant hearing loss, which could potentially impact how often they wear their devices or their rate of satisfaction. This could also raise the question of "do these patients not wear or enjoy the devices due to their dislike of the sound." MarkeTrak 20223 (Fig. 5) data found

that most hearing aid owners reported that they would classify their level of loss as moderate-to-severe, while most non-owners classified it as mild-to-moderate. This further highlights the importance of the role of audiologists and for patients to get their hearing tested to know their actual hearing loss and what options are right for them. This is especially important to know if a patient were to come to into an HCPs office stating that their OTC device is not working when in fact, they have a significant hearing loss, and this device is simply not an appropriate solution for their level or type of loss.

This year's MarkeTrak data³ suggest that first time owners are more likely to try PSAPs. Perhaps these patients are ones who would not have historically purchased hearing aids and are now willing to try a less expensive device. Theoretically, one could argue that this is what OTC devices were "intended for": to target those who weren't quite ready to pursue hearing aids. This could include those with mild hearing loss, or those not ready to financially commit. There is certainly a select group of people for whom these devices may work.



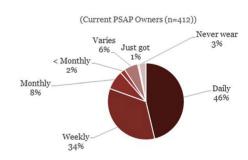


Figure 4 Wearing rates for hearing aid and personal sound amplifier owners.

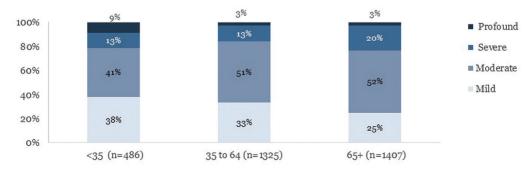


Figure 5 Self-reported degree of hearing loss by age.

Historically, this subset of the population would have been the patients that HCPs would have likely missed. OTC devices could be what brings this group of patients into a HCP office. This also relates to JapanTrak data,²⁴ where users report that the PSAP devices were reasonable for their purposes. In these cases, it will be important for the HCP to properly counsel the patients on outcomes and expectations with OTC devices compared with hearing aids. It may be beneficial to implement an OTC device to be sold in a HCP practice. This could be tailored to patients who do not want to pursue the financial commitment of hearing aids. Data from 2021²⁵ found that the technology level of devices does in fact result in a patient-perceived difference between the entry and premium level. To specify, patients in this study found that noise acceptance and satisfaction for speech in a large group were significantly improved when using the premium devices. According to data found by this year's MarkeTrak data,³ hearing aid owners are significantly more likely to say it is extremely difficult to follow conversations in noise when unaided compared with non-owners. Because of this difficulty, it is more common for these patients to pursue amplification than those who do not. Modern hearing aid technology may be able to help patients in these settings and situations. In addition, according to JapanTrak data,²⁴ patients with hearing aids reported 40 to 60% satisfaction with their devices in most noise or conversational settings, while PSAP users gave roughly a 20% rating. This would be an important point to note when comparing OTC devices to true hearing aids.

Referrals from Physicians

There are many ways that patients find out about hearing devices. This includes TV/radio marketing, social media, word of mouth, and medical referrals from physicians. As noted earlier, this year's MarkeTrak data³ found that roughly half of those with self-reported hearing difficulty have discussed this issue with their medical doctor. When there is a referral from a medical doctor, it is more likely for the patient to see an HCP than an ENT (both are among the top recommendations). Roughly

one-fifth of those who discuss their hearing problem with a doctor receive a recommendation to get a hearing device. When it comes to ENT physicians, just over one-third of those with hearing difficulty have spoken to one about their problem. Among those who have talked with an ENT, a little less than 50% have received a recommendation to get a professional hearing test.³ ENT physicians recommend that patients see a HCP roughly 37% of the time. Hearing devices are recommended to just over one-quarter of those who speak with an ENT about their hearing loss. It is possible that the ENTs do not discuss this topic as they then leave it to the HCP to explain the various options to patients. According to the American Speech-Language and Hearing Association,²⁶ they report that nearly three quarters of audiologists (73.5%) are employed in health care settings, including 47.3% in nonresidential health care facilities, 25.1% in hospitals, and 1.1% in residential health care facilities. They also report that more than one quarter (28.6%) of audiologists are employed full-time or parttime in private practice, which may be part of ENT medical offices. Seeing as how audiologists are employed in numerous large medical settings, the hope is that these numbers would be higher from medical/ENT referrals.

WRAPPING BACK

Throughout this article, it has been discussed that the general adoption trends among patients vary by age, gender, race, income levels, and hearing devices. The article has presented thoughts on how patients get to a practice and what they do once they get to the practice. How can an HCP best maximize these data within their practice? Roughly half of those with selfreported hearing difficulty have discussed this issue with their medical doctor and then were referred to a hearing professional to get a hearing test. Medical physicians often recommend hearing aids with in-person assistance.³ This further emphasizes the importance of HCPs and maintaining good standing relationships with local primary care physicians and ENT physicians. However, as previously noted, less than 50% of ENT physicians refer their patients for a professional hearing test and less than 30% recommend

a hearing aid/device. Not only is it important to maintain a professional relationship with ENT providers, but also to educate them on the services that HCPs provide.

Another avenue to consider when trying to get more patients in the provider's door is through the use of social media. As a practitioner, we have consistently found that the populations we are reaching via this mode are vielding results. One way to get to that population is to use social media outside of Facebook. Other social media platforms include Instagram, TikTok, Twitter, and Google + . Currently, Facebook is still the most common social media outlet across the board, but Instagram is next. Currently, Instagram is used more by current PSAP owners³ (Fig. 6). This is important to consider when considering building a practice reputation to recruit future patients. The practice presence on these social media platforms could include descriptions and pictures of products it works with, their features, and services provided. HCPs could demonstrate how a hearing test is performed, the different types of cerumen management, and even introduce the staff at the practice. There are a variety of ways that a practice can engage with the public. Social media is a great way to build up the practice brand and immerse its name in the community.

As previously mentioned, OTC devices will be coming to the market soon and HCP practices must decide if, as a practice, they will be selling any of these devices. One could see the benefit to selling such devices for the

convenience of the patient and simply getting them in the door. This is another route of providing amplification perhaps to a group of the population that typically would not purchase. If a patient starts at the HCP clinic by purchasing an OTC, they will then be an established patient. As the provider, the HCP will be able to build that interpersonal relationship throughout their time with the device. Down the road, if the patient wishes to purchase hearing aids, they will be more likely to purchase from that particular provider. Not all patients come into the office with the intent to purchase hearing aids. They may only wish to discuss options and learn about the technology and pricing. By offering an OTC device, the HCP may be able to cater toward another set of patients. As previously discussed in this article, with proper counseling, some patients for whom OTC devices are intended can do fairly well. As seen in the JapanTrak 2018 data,²⁴ there is a select group of people for whom these devices are sufficient. However, there are many who will still prefer to pursue true hearing aids. By offering both devices within a practice, the HCP can increase the patient base. One of the motivators noted by patients seeking a specific HCP was that they had benefits/coverage there. This can be another tricky and cumbersome task, but clearly patients appreciate the efforts and knowledge that the HCP is able to provide. When it boils down to it, if the provider is thorough with each patient and does not pressure them into buying immediately, the patient will be grateful. This, in turn, will pay off in the

Social Media Sites Visited in Last Month Visited for any reason	Total (n=3218)	HA Status		PSAP Status	
		Current Owners (n=1139)	Non-Owners (n=2079)	Current Owners (n=208)	Non-Owners (n=3010)
Facebook	68%	62%	72%	73%	68%
Instagram	31%	29%	32%	50%	29%
Pinterest	21%	20%	22%	36%	20%
Tik Tok	21%	17%	23%	39%	19%
Twitter	21%	21%	20%	41%	19%
Google+	20%	22%	18%	32%	19%
SnapChat	17%	16%	18%	34%	16%
LinkedIn	15%	17%	14%	31%	14%
Yelp	6%	7%	6%	13%	6%
Dating site	5%	7%	4%	16%	4%
None in the past month	19%	25%	15%	10%	20%

Figure 6 Reported social media usage for owners and non-owners of hearing aids and personal sound amplifiers.

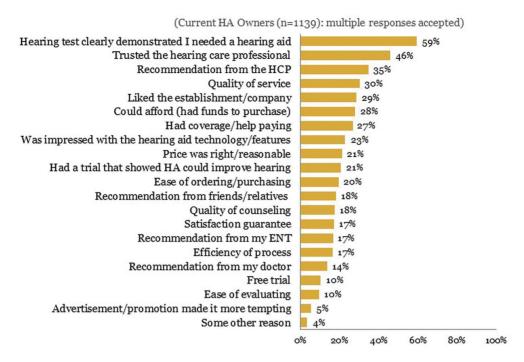


Figure 7 Hearing aid owners reported reasons for purchase of hearing aids.

long run for a variety of reasons including future recommendations and sales.

The recent MarkeTrak study³ showed that the number 1 factor that influences owners to get hearing aids is a hearing test that demonstrates a need, followed by a trustworthy HCP (Fig. 7). Other reasons include a recommendation from the HCP, the quality of service, and the patient liking the establishment. In fact, patients specifically sought out HCPs because of a good reputation, a referral from a professional, or a recommendation from someone who has hearing aids. The majority of all who engage with an HCP rate their experience positively. This includes the HCP making fine tune adjustments to the hearing aids, providing realistic expectations on what the hearing aids can and cannot do, thoroughly explaining how to use the device, and more. Once again, this highlights the value of personal connections with patients and how much time the HCP spends with them in appointments. There is so much that goes into the clinical experience: not only the HCP but also the front office staff, the presence on social media, the reviews from other patients and so

on. The front office staffs of a practice really are an integral and crucial part of a practice. They are the ones oftentimes who are making that first connection with a patient by answering the phone, giving them a smile as they walk into the office, and helping them to schedule future appointments. Not only are they crucial from the patient's perspective but also for the audiologist. They are often the ones taking messages trying to comprehend the audiology lingo, checking on insurance benefits, ensuring that the appropriate paperwork is filled out and sent to where it needs to go, and so much more. When a strong relationship is established between the HCP and the patient, it is more likely that the patient will be satisfied with the practice and the overall experience. This, in turn, should improve the reputation of the HCP and lead to more business. The best way to increase HCP business is to sell the profession—not only the provider's education, expertise, and knowledge but also staff, clinic space, and HCP's passion.

MarkeTrak 2022 study³ found that four in ten hearing aid owners said that they were "ready, willing, and able" to take a step compared

with one-quarter of non-owners. Non-owners of hearing aids are slightly more motivated when they get tired of coping or receive a professional recommendation. Each patient has their own factors that influence them to pursue amplification. Common motivators listed by individuals who visited an HCP were getting tired of asking for repetition, convenience of the HCP location, ease of obtaining an appointment, and adequate hours of operation. What about the patients who do not have easy access to an office? They could live in a rural area and have a busy day job where they are unable to attend appointments. Or perhaps they do not have the means to travel to an appointment due to transportation concerns. The use of telehealth services is often a common suggestion when it comes to these types of concerns of being able to attend appointments. However, lower-income households may not have smartphones, and if they do, there may be limited data storage/usage on the device. Perhaps they do not have steady or reliable internet to establish a connection.²⁷ With the MarkeTrak data³ from this year highlighting the importance of convenience, perhaps there are outreach clinics that occur once a month in more rural communities. This not only would help expand the HCP business but it would also reach a population who otherwise may not be able to pursue amplification.

CONCLUSIONS

There are many areas of audiology where HCPs have the opportunity to expand their services to meet the needs of a variety of patients. Through careful examination of the current MarkeTrak data³ as well as previous MarkeTrak data, data from other continents, as well as historical data and current trends, HCPs can better understand their current patients and where the future of hearing health care trends.

CONFLICTS OF INTEREST

L.E.J.: No financial conflicts; nonfinancial: director of USD speech and hearing clinics, various relationships with manufacturers for clinic and research, site for collection for FDA 510K application.

R.E.B.: No financial conflicts, University of South Dakota; nonfinancial: lifelong user of hearing-assistive technology.

REFERENCES

- National Institute on Deafness and Other Communication Disorders. Hearing loss increases with age. 2017. Accessed October 15, 2022 at: https://www.nidcd.nih.gov/health/statistics/hearing-loss-increases-with-age
- Hearing Instrument Association. MarkeTrak X. 2019. Accessed October 15, 2022 at: https://betterhearing.org/policy-research/marketrak/
- Hearing Instrument Association. MarkeTrak 2022.
 Accessed October 15, 2022 at: https://bette-rhearing.org/policy-research/marketrak/
- Bunch CC. Age variations in auditory acuity. Arch Otolaryngol 1929;9(06):625–636
- Cooper JC, Owen JH. Audiologic profile of noiseinduced hearing loss. Arch Otolaryngol 1976;102 (03):148–150
- Corso JF. Aging and auditory thresholds in men and women. Arch Environ Health 1963;6:350–356
- Gates GA, Cooper JC Jr, Kannel WB, Miller NJ. Hearing in the elderly: the Framingham cohort, 1983-1985. Part I. Basic audiometric test results. Ear Hear 1990;11(04):247-256
- 8. Goetzinger CP, Proud GO, Dirks D, Embrey J. A study of hearing in advanced age. Arch Otolaryngol 1961;73:662–674
- 9. Hinchcliffe R. The threshold of hearing as a function of age. Acoustica. 1959;3:303–308
- Henry J. Kaiser Family Foundation. The Real Cost of Health Care: Interactive Calculator Estimates Both Direct and Hidden Household Spending. 2019. Accessed October 15, 2022 at: https://www.kff.org/health-costs/press-release/interactive-calculator-estimates-both-direct-and-hidden-household-spending/.
- Kennedy BR, Mathis CC, Woods AK. African Americans and their distrust of the health care system: healthcare for diverse populations. J Cult Divers 2007;14(02):56–60
- Asalan M, Garrick O, Grazaini G. Does Diversity Matter for Health? Experimental Evidence from Oakland. Cambridge, MA: National Bureau of Economic Research; 2018
- Butler M, McCreedy E, Schwer N, et al. Improving Cultural Competence to Reduce Health Disparities. AHRQ Comparative Effectiveness Reviews. Rockville, MD: Agency for Healthcare Research and Quality; 2017
- National Institute on Deafness and Other Communication Disorders. Hearing loss prevalence declining in U.S. adults aged 20 to 69. 2016. Accessed

- October 15, 2022 at: https://www.nidcd.nih.gov/news/2016/hearing-loss-prevalence-declining-us-adults-aged-20-69
- Goodkind N. Facing falling enlistment numbers, the U.S. Army takes a new approach to recruitment: Mom and Dad. Fortune 2020. Accessed October 15, 2022 at: https://fortune.com/2020/ 02/20/army-military-enlistment-recruitment-ads/
- Centers for Disease Control. Women more likely than men to visit the doctor, more likely to have an annual exam. 2001. Series report 132. No 149. 51 pp. (PHS) 2001–1720.
- 17. Glick HA, Sharma ACortical Neuroplasticity and Cognitive Function in Early-Stage. Cortical neuroplasticity and cognitive function in early-stage, mild-moderate hearing loss: evidence of neurocognitive benefit from hearing aid use. Front Neurosci 2020;14:93
- Goold SD. Trust, distrust and trustworthiness. J Gen Intern Med 2002;17(01):79–81
- Jorgensen L, Novak M. Factors influencing hearing aid adoption. Semin Hear 2020;41(01):6–20
- European Hearing Instrument Association. EuroTrak 2022. Accessed October 15, 2022 at: https://www.ehima.com/surveys/
- Rauterkus EP, Palmer CV. The hearing aid effect in 2013. J Am Acad Audiol 2014;25(09):893–903

- Hearing Loss Association of America. Know your rights early hearing detection and intervention act

 EHDI. 2000. Accessed October 15, 2022 at: https://www.hearingloss.org/programs-events/advocacy/know-your-rights/early-hearing-detection-intervention-act-ehdi/
- Gopal KV, Champlin S, Phillips B. Assessment of safe listening intentional behavior toward personal listening devices in young adults. Int J Environ Res Public Health 2019;16(17):3180
- Japan Hearing Instrument Association. JapanTrak. 2018. Accessed October 15, 2022 at: https://ehima. com/wp-content/uploads/2018/11/JAPAN_Trak 18.pdf
- Plyler PN, Hausladen J, Capps M, Cox MA. Effect of hearing aid technology level and individual characteristics on listener outcome measures. J Speech Lang Hear Res 2021;64(08): 3317–3329
- American Speech Language and Hearing Association. Employment settings for audiologists. Accessed October 15, 2022 at: https://www.asha.org/ students/employment-settings-for-audiologists
- Jorgensen LE, Barrett RE. Case study comparison: limitations in telehealth relating to poverty and family support. Semin Hear 2021;42(02):158– 164