

MarkeTrak VIII: Utilization of PSAPs and Direct-Mail Hearing Aids by People with Hearing Impairment

The effect of direct-mail and PSAP devices on the custom hearing aid market

BY SERGEI KOCHKIN, PhD

We've all seen the ads featuring Lee Majors, as well as ads about devices that look exactly like hearing aids but are billed instead as "hearing helpers." How many people buy these devices, how many purchasers would be candidates for custom hearing aids, and how many would actually purchase custom aids if PSAPs and mail-order aids were not available? Here are some estimates.

Within the last 2 years, we have seen an increased proliferation of one-size-fits-all hearing aids and personal sound amplifier products (PSAPs) advertised on television and by direct mail. They can be purchased over the Internet and through the mail, as well as from eBay, Amazon.com, most pharmacies, hardware stores, Radio Shack, and Sears. In Google searches, many of these products come up on the first couple of search pages when you search on "hearing aids" and are sponsored links under the search term "hearing loss."

Most of these products clearly state that they are not intended to compensate for hearing loss; but it is clear from their advertising that they target people with hearing loss with such claims as:

- Never miss another word at lectures, movies, shows, or even church;
- Turn up the volume on what people around you are saying;
- Listen at the level you want without disturbing others;
- Hear a pin drop from across the room;
- Turns ordinary hearing into extraordinary hearing;
- Has the ability to give you sonic hearing, easily amplifying sounds up to 90 feet away;
- Flexible ear mount easily adjusts to fit all ear shapes and sizes; and
- The convenient volume control lets you easily control the intensity and volume.

The FDA has recently issued a guide that differentiates between the intended uses of hearing aids and PSAPs. To quote from the FDA Guide¹:

While these personal sound amplifiers may help people hear things that are at low

volume or at a distance, the Food and Drug Administration (FDA) wants to ensure that consumers don't mistake them—or use them as substitutes—for approved hearing aids.

"Hearing aids and personal sound amplification products (PSAPs) can both improve our ability to hear sound," says Eric Mann, MD, PhD, deputy director of FDA's Division of Ophthalmic, Neurological, And Ear, Nose, and Throat Devices. "They are both wearable, and some of their technology and function is similar."¹

Mann notes, however, that the products are different in that *only hearing aids are intended to compensate for impaired hearing*. He says consumers should buy a personal sound amplifier only after ruling out hearing loss as a reason for getting one. "If you suspect hearing loss, get your hearing evaluated by a health care professional," he adds.

Choosing a PSAP as a substitute for a hearing aid can lead to more damage to your hearing, says Mann. "It can cause a delay in diagnosis of a potentially treatable condition. And that delay can allow the condition to get worse and lead to other complications," he says.

Some direct-mail firms sell one-size-fits-all hearing aids targeting people with hearing loss, but get around FDA regulations with such statements as:

- They are not meant to supplant hearing aids since they are not "hearing aids";
- They are personal sound amplification systems (PSAPs);
- They are like reading glasses for the ears;
- They are hearing helpers;
- We are committed to the unserved hearing-impaired consumer;
- Obtaining hearing help doesn't have to cost \$1000s!



Demography	Custom Hearing aids (n=3109)	Direct Mail Hearing aids (n=187)	PSAP (n=208)
Gender			
Male	59	71	53
Female	41	29	47
Age			
Mean	71.1	71.3	66.2
Median (50%)	74	75	69
Mode (Most frequent)	81	79	75
Income			
Mean	55.7	43.9	46.3
Median (50%)	41.3	31.2	31.3
Mode (Most frequent)	112.5	21.3	23.8
Employment			
Full time	21	19	25
Part time	8	9	10
Retired	63	65	56
Unemployed	8	7	9
Education			
Elementary	8	12	9
High school	51	60	57
College	27	20	22
Graduate school	14	8	12
Marital Status			
Married	62	52	57
Never married	8	13	10
Divorced/widow	30	35	33
Price (\$) paid per hearing aid/device			
Mean	1404	412	<50
Median (50%)	1400	237	
Mode (Most frequent)	0	300	
Hours hearing aid worn			
Mean	8.8	5.3	na
Median (50%)	10	3	
Mode (Most frequent)	12	0	
Percent in the drawer	12	22	
Binaural (%)	76	41	na

TABLE 1. Demographic characteristics of owners of custom hearing aids, Internet hearing aids, and personal sound amplifier products (PSAPs).

Other direct-mail firms clearly state they are selling hearing aids by direct mail, but ask the consumer for a medical waiver before they send them hearing aids from their catalog as a means of meeting FDA requirements. In addition, some provide counseling either by phone or online to help the consumer choose the right hearing aid for their hearing loss.

This is the fourth in a series of publications from the Better Hearing Institute's MarkeTrak VIII (2008-2009) database on the hearing loss population. In this publication, we will:

- 1) Estimate the size of the current population of people with hearing loss who use direct-mail hearing aids or personal sound amplifier products (PSAPs) to compensate for their hearing loss;
- 2) Compare the hearing loss characteristics and demography of the users of one-size-fits-all products to those of the custom hearing aid user; and

- 3) Estimate the population of people with hearing loss in need of customizable amplification who are using PSAPs as a *substitute* for custom hearing aids.

Method

A detailed description of the methodology for the MarkeTrak VIII survey is documented in the first publication,² which appears in the October 2009 *HR* (available at www.hearingreview.com), so it will only be summarized here. In December 2008, a short screening survey to 80,000 households was completed by 46,843 households, identi-

fying 14,623 people with hearing loss and providing detailed demographics on those individuals and their households. The response rate to the screening survey was 59%. In January 2009, an extensive 7-page survey was sent to the total universe of hearing aid owners (n=3,789) in the panel database; 3,174 completed surveys were returned, representing an 84% response rate. In February 2009, an extensive 7-page survey was sent to a random sample of 5,500 people with hearing loss who had not yet adopted hearing aids. The response rate for the non-adopter survey was 79% (n=4,339).

Results

Direct-mail hearing aid and PSAP user population size. In querying our MarkeTrak database of hearing aid owners during January 2009, 3.28% (representing about 280,000 people in the United States) indicated they received their hearing aids by direct mail; in comparison, 3.68% (or 270,000) were direct-mail hearing aid owners in the MarkeTrak VII (2004) survey. For further analysis due to small sample sizes, the direct-mail respondents from MarkeTrak VII and VIII were combined, yielding a sample size of 187 people.

In the *non-adopter survey*, we asked respondents if they purchased PSAPs costing less than \$50 for their hearing loss. To make sure they understood what we were referring to, we specifically listed the most popular devices by brand name, especially those advertising on TV. In addition, we assessed the likelihood that they purchased the device in place of a custom hearing aid; this was accomplished by the person with a hearing loss indicating what they would have done in the absence of PSAPs in the marketplace. Subjects responded

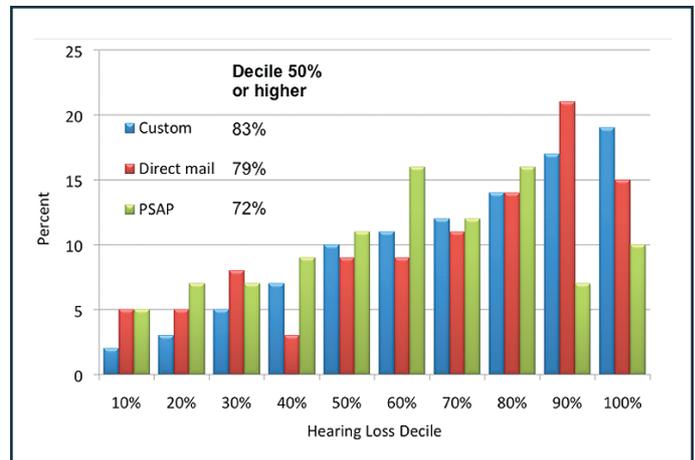


FIGURE 1. Hearing loss deciles of owners of custom hearing aids, direct-mail hearing aids, and personal sound amplifier products (PSAPs).

Hearing loss Measure	Custom Hearing Aids (n=3,109)	Direct Mail Hearing Aids (n=187)	PSAP (n=208)
Ears impaired			
Unilateral loss	13	32	29
Bilateral loss	87	68	71
Perceived loss			
Mild	8	14	21
Moderate	52	51	57
Severe	36	31	19
Profound	4	4	3
Gallaudet Scale			
Hear whisper	7	13	8
Hearing normal speech	29	28	38
Hear shouts	49	46	43
Hear shout better ear	8	9	7
Tell speech from loud noise or worse	7	4	4
Difficulty hearing in noise			
Extremely difficult	36	18	19
Quite difficult	30	21	35
Somewhat difficult	25	28	32
Slightly difficult	8	23	13
Not at all difficult	1	10	1
BHI Quick Hearing Check			
Quartile 1	8	11	14
Quartile 2	17	13	20
Quartile 3	30	32	27
Quartile 4	45	44	39
Hearing Loss Composite (Deciles)			
1 - 10%	2	5	5
2 - 20%	3	5	7
3 - 30%	5	8	7
4 - 40%	7	3	9
5 - 50%	10	9	11
6 - 60%	11	9	16
7 - 70%	12	11	12
8 - 80%	14	14	16
9 - 90%	17	21	7
10 - 100%	19	15	10
1-4 (Bottom 40%)	17	21	28
5-10 (Top 60%)	83	79	72
Years aware of hearing loss			
Mean (average)	6.7	7.7	15
Median (50th percentile)	3	3	10
Mode (Most frequent response)	1	2	2

TABLE 2. Hearing loss characteristics of owners of custom hearing aids, direct-mail hearing aids, and personal sound amplifier products (PSAPs).

to a 5-point scale ranging from 0%-100% likelihood that they *would have* purchased a hearing aid if PSAPs were not available in the market. PSAP owners were found to be 4.79% of the non-adopter population, representing 1,237,700 people. The PSAP sample size for further analysis is 208 people.

PSAP user demography compared to the custom hearing aid population. Previously, it was stated by the FDA that PSAPs were not meant for people with hearing loss. Thus, one would expect that these subjects would have a demography and hearing loss profile markedly different from that of people who use custom hearing aids to compensate for their hearing loss. Table 1 details the demography for the three amplification groups, and Table 2

and Figure 1 detail their hearing loss profiles. The demography is similar for all three groups with the following exceptions:

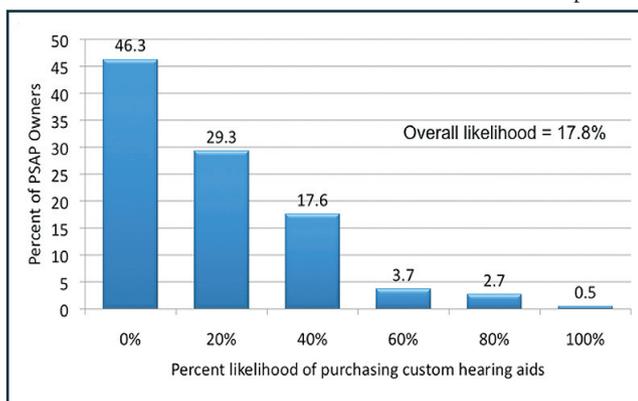


FIGURE 2. Percentage likelihood that PSAP owners said they would have purchased custom hearing aids in absence of PSAPs. Nearly half (46.3%) said there was no chance (0%) they would have purchased a custom aid, while slightly fewer than 7% said there was a 60% or greater chance of them purchasing a custom aid.

- There is a greater likelihood that males purchase direct-mail hearing aids (71% versus 59% custom market);
- Both the direct-mail and PSAP subjects on average earn \$10,000 less per year (median) than the custom market;
- Direct-mail subjects wear their hearing aids only 3 hours a day (median) compared to custom hearing aid owners who wear them 10 hours per day; and
- Direct-mail subjects are less likely to purchase binaural (41%) than the custom hearing aid patient (76%).

As previously stated, PSAP owners paid less than \$50 for their amplifiers compared to a median price of \$237 for direct-mail hearing aids, and \$1,400 for custom hearing aids (price includes the VA population).

With respect to hearing loss characteristics (Table 2), both direct-mail and PSAP owners are more than twice as likely to have a unilateral hearing loss, have a greater tendency to describe their hearing loss as “mild,” and report less problems hearing in noise.

Taking into account the number of ears impaired, perceptions of hearing loss, and subjective measures of hearing loss (hearing in noise, Gallaudet scale, BHI Quick Hearing Check) as in a previous study in this series,² all people with hearing loss were segmented into 10 hearing loss groups, called *deciles*, where the 1-10% group represents those with the mildest hearing loss and 91-100% the most severe hearing loss. A cutoff for considering a custom hearing aid candidate was earlier established as Decile 5 or higher—or the top 60% of people with hearing loss, since 83% of custom hearing aid owners reside here.² Referring to Table 2 and Figure 2, notice that 79% of direct-mail owners and 72% of PSAP owners have hearing loss profiles similar to those of custom hearing aid patients. In other words, around 3 out of 4 direct-mail and PSAP owners are candidates for custom hearing aids since they have moderate to severe hearing loss.

So, Do PSAPs Steer People Away from Custom Hearing Aids?

While a significant majority of people owning direct-mail hearing aids or PSAPs are candidates for custom hearing aids, how can we tell if these inexpensive devices are steering people away from needed custom hearing aids?

To assess this issue for

PSAPs, we explored what the patient would have done for their hearing loss in the absence of these products. Figure 2 shows the distribution of the likelihood that PSAPs were purchased as *substitutes* for custom hearing aids. Using the weightings from this distribution, 17.8% of PSAP owners indicate they would have purchased custom hearing aids if PSAPs were not available. This would mean a total of 220,310 of the 1.2 million PSAP users.

Estimates of repurchasing cycles vary, and data does not exist on repurchase rates of PSAP users. However, if we were to use a 4-year purchase cycle for this group (ie, similar to hearing aids), the custom hearing aid market is probably losing about 55,000 patients a year. This figure has credibility when you consider the fact that, on average, the PSAP population was aware of their hearing loss for the last 10 years (median) compared to 3 years for the custom and direct-mail populations.

Conclusions

- Approximately 1.5 million people with hearing impairment use either direct-mail or personal sound amplifier products (PSAPs) to compensate for their hearing loss;
- Users of these devices, on average, have incomes \$10,000 less than those of custom hearing aid users;
- Despite the warning from the FDA that PSAPs should be used only when hearing loss is ruled out, it is apparent that approximately 3 out of 4 PSAP or direct-mail hearing aid users have hearing loss profiles equivalent to those of custom hearing aid users;
- The PSAP user has been aware of their hearing loss, on average, for 10 years compared to 3 years for the typical hearing aid user;
- While there is little doubt that PSAPs are used to compensate for hearing loss, a reasonable estimate is that less than 18% of PSAP users substituted

PSAPs for custom hearing aids. In the absence of PSAPs in the marketplace, it's likely that the majority would have lived with their hearing loss.

Acknowledgement

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