

The following article appeared in the January/February 2005 issue of *Hearing Loss*, the official publication of the Hearing Loss Association of America (formerly known as Self Help for Hard of Hearing People or SHHH) and is reprinted here with permission.

## The Cost of Hearing Aids: A Discussion With the Experts

*Edited by Barbara Kelley*

As hearing aid technology has progressed and prices have increased, it is time for a 2005 response from industry leaders, organizations interested in hearing health care, and those in the field with a unique opinions and insight.

From the consumer viewpoint, hearing aids are an expensive investment, most often not covered by health insurance. Since SHHH's beginning, our members have asked the direct and simple question: **"Why Do Hearing Aids Cost So Much?"**

Some go on to ask: **"Why can you buy a powerful personal computer for much less than a hearing aid, when computers are far more sophisticated than hearing aids?"**

We know the answers are far from simple. Over time, we have reported in *Hearing Loss* what is involved in the purchase and servicing of hearing aids. For 25 years, SHHH has encouraged the use of hearing aids and assistive listening devices in our editorial, public policy statements, and position papers. We, in no way, want to discourage anyone from getting the best hearing care they can afford. But, in this age of increased consumer awareness, we are still repeatedly asked this same question about cost.

We asked the respondents for direct and informative answers to help consumers in their quest for better hearing. Three of the respondents chose to answer each question with direct answers. Two respondents chose to write a narrative encompassing all their answers. Either way, we are grateful for the thoughtful responses of the experts.

### Questions Posed by SHHH

1. Why do hearing aids cost what they do? Please give a simple breakdown of the costs.
2. Do people who dispense hearing aids devote more evaluation, counseling and follow-up time to people purchasing the more expensive aids? If so, does this mean that people purchasing less expensive aids are being deprived of necessary services? If not, then at the dispenser level, what justifies the higher prices for the more costly aids?
3. Is there any objective research evidence, other than the contribution of specific features (like directional microphones), that demonstrates that people actually hear better with the more expensive aids than the less expensive ones? (Assuming both are digital aids.)
4. Once the research and development costs for advanced technology are recouped, are subsequent savings passed on to dispensers?

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## ASHA Responds

*By Vic S. Gladstone and Larry Higdon*

**The American Speech-Language-Hearing Association (ASHA), located in Rockville, Maryland, is the professional, scientific, and credentialing association for more than 115,000 members and affiliates who are audiologists, speech-language pathologists, and speech, language, and hearing scientists. Contact at: [www.asqa.org](http://www.asqa.org) or (800)638-8255**

### **Answer to Question 1:**

Obtaining hearing aids is part of a comprehensive audiologic rehabilitation program. Your audiologist will spend considerable time evaluating your hearing, diagnosing the degree and type of your hearing loss and, with your involvement, will consider the most appropriate type of hearing instrument(s) to best meet your communication needs. You will be provided with information about the various types of hearing aids available to meet your specific hearing requirements.

Once a specific type of hearing aid is selected, you will be evaluated with those instruments to assure their performance is meeting your hearing loss needs. You will also begin the process of learning how to care for the instruments and make the most out of the various listening situations you find yourself in every day. This is probably the most critical portion of the audiologic rehabilitation process in which you and your audiologist will participate. Wearing hearing aids for the first time takes adjustment, because your brain has to relearn or re-identify some of the patterns of sound and once again learn to better separate background noise from wanted signals such as speech.

Other factors that contribute to the cost of hearing aids include the fact that, despite almost 30 million Americans who might benefit from them, they are sold in relatively low numbers annually. In addition, the research, development, and marketing of hearing aids by manufacturers is costly.

Hearing aids of today are sophisticated, miniaturized, electronic instruments that are designed to maintain, as faithfully as possible, the integrity of acoustic signals, amplify them and deliver them to an auditory system that, by virtue of the hearing loss, introduces significant distortion to the signal. The hearing aid industry works hard, along with other hearing scientists, to overcome, through technology, this distortion which interferes with your ability to hear as clearly as you remember once hearing.

### **Answer to Question 2:**

The evaluation, counseling, and follow-up time devoted to people selecting more expensive hearing aids typically is related to the advanced features contained in the more expensive instruments. Your audiologist will provide you with whatever amount of time is necessary to assure the proper selection, fit, and adaptation to your hearing aid(s), regardless of cost. Of paramount concern is that you receive the benefit available; and the counseling and follow-up services that are designed to help you adjust your expectations to the reality of the benefit the instrument(s) can provide.

Audiologists also keep current with technology developments as well as with strategies designed to assist patients with adapting to and effectively using hearing instrumentation through continuing professional development programs such as the ASHA Audiology Conference entitled, Hearing Technologies: Audiologists Make the Difference.

### Answer to Question 3:

There are numerous articles in the peer-reviewed, professional literature that evaluate various features of hearing aids. Generally speaking, when a new feature or technological advance is announced, scientists and clinicians conduct research studies to evaluate the effectiveness of the feature. Results of these studies are reported in professional journals and become incorporated into clinical practice. It is important to remember that, due to the myriad of variations of hearing loss types and patterns, different features provide various degrees of benefit to different study subject groups.

### Answer to Question 4:

Typically, once research and development costs are recouped, such savings are not directly passed on to dispensers. Manufacturers generally price hearing instruments based upon research & development costs, manufacturing costs (including costs of components purchased from sub-contractors), marketing costs, and distribution costs. Manufacturers may offer a dispenser a 'volume discount' based upon the number of instruments purchased by the dispenser. The consumer usually benefits from this discount.

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## AAA Responds

*By Richard E. Gans*

**The American Academy of Audiology (AAA), located in Reston, Virginia, is the world's largest professional organization of, for and by audiologists. The membership of more than 9,000 audiologists join together to provide the highest quality hearing healthcare service to children and adults described by our national slogan "Caring for America's Hearing." Contact at: [www.audiology.org](http://www.audiology.org) or (800)AAA-2336**

As a child, I saw firsthand the impact that my parents hearing loss had on their lives and our family. My parents had experienced hearing loss when they were young adults. My father had otosclerosis in both ears by the time he was 21 and my mother developed Meniere's disease in her early thirties. It was ultimately the presence of grandchildren, many years later that forced my parents, my father in particular, to finally accept amplification. Without hearing aids, he was destined to be isolated and estranged from the grandchildren he loved so dearly. He simply could not hear those high-pitched little voices without the use of hearing aids. The cost of not treating hearing loss can be far more devastating in human emotions and relationships than in dollars.

I will discuss the delivery of audiological services and offer several strategies for hearing aid consumers to consider as they decide on a provider for their hearing health care services. I will defer to my colleagues in manufacturing regarding all the variables that constitute the wholesale price of hearing aids.

Consumers should recognize that the device alone is rarely the solution to the hearing problem. It is the complete audiological process -- including a technically accurate and comprehensive audiological evaluation, a real understanding of the patient's listening and communication needs, lifestyle, physical characteristics of their ears, and a listening or aural rehabilitation treatment plan -- that leads to successful use of hearing aids.

Historically, the total cost of hearing aids has included the examination, the product, dispensing costs, and all the after-care for the life of the hearing aids. This method is often referred to as an inclusive or bundled model. The patient pays one fee, which will include all of their future service costs and repairs while the device is under warranty.

During the past five years, an itemized or unbundled method has become increasingly popular. In this method, the patient purchases the device, and the audiologist presents an itemized fee schedule. This approach itemizes the costs of the hearing aids, and the fitting and dispensing of the product, independent and separate from unlimited aftercare. The concept is simple. Why pay today for future care or services you may not need or use. This approach saves the consumer money today, with an understanding that they will need to pay as they go later on. This may save hundreds or even thousands of dollars with the caveat that you will be expected to pay for service and care when it is needed at a future date. The office visit fees may range between \$15 to \$50 dollars depending on the time and complexity of the care required. An open discussion with the audiologist about these different methods may provide you with options that are more desirable for your own needs and finances. Prospective and experienced hearing aid users too, should have an open and candid discussion with their audiologist, just as they would with their physician or dentist when considering an elective procedure or treatment.

Another consideration is the type of facility you select as your hearing health care provider. Today, many of the large national hearing aid retail chains are actually owned or heavily supported by manufacturers. Although this may be appealing, because they offer a nationwide network of service, it could restrict your options for product availability and the flexibility of whether an inclusive or itemized package is offered.

A final consideration is selecting an audiologist or dispenser who abides by the American Academy of Audiology and Academy of Dispensing Audiologists ethical guidelines. These guidelines prohibit the acceptance of gifts or sales incentives, which may ultimately increase the cost of goods to the consumer.

The best protection and value will be for the prospective hearing aid consumer to be in the hands of a caring, competent and ethical audiologist where the needs of the patient always come first.

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# The International Hearing Society Responds

By Alan L. Lowell

The International Hearing Society (IHS), located in Livonia, Michigan, is the non-profit, professional association that represents Hearing Instrument Specialists in the United States, Canada, and Japan, and several other countries. Founded in 1951, the Society continues to recognize the need for promoting and maintaining the highest possible standards for its members in the best interest of the consumer. Contact at: [www.ihsinfo.org](http://www.ihsinfo.org) or (800)521-5247 (Hearing Aid Helpline)

## Answer to Question 1:

The cost of a high quality pair of hearing aids today is partly due to the number of aids that are sold annually. While it is estimated that approximately 30 million Americans have hearing loss, only 20 percent wear hearing aids. This ranks hearing aids as one of our nation's most underutilized medical devices. In spite of this, the manufacturing community continues to make major expenditures and advancements in the research and development of customized hearing aids.

The latest advancements in hearing aid technology offer unparalleled benefits. Digital sound quality, computerized programming, and user options make hearing and listening in noisy situations more comfortable and more effective than ever before.

When comparing the cost of hearing aids to other consumer products, the size of the market must be taken into account. In other words, how many hearing aids will be purchased compared to eyeglasses, televisions, computers, refrigerators, stoves, etc? Several of these products are used daily by virtually each and every one of us. In contrast, hearing aids have much smaller market appeal. Interestingly, when the cost of customized hearing aids is compared to highly inflated industries such as homes and automobiles over time; the cost for advanced hearing aid technology is only slightly higher.

Regardless of the size of the market, consumers need access to qualified and licensed hearing health professionals who conduct business and provide services from well-equipped and staffed facilities. The costs, too numerous to list, associated with maintaining a viable business or practice also must be factored into the sales price of hearing aids.

## Answer to Question 2:

Regardless of the type, model, size and technology, the comprehensive hearing evaluation and process to determine hearing aid candidacy is generally the same for all patients.

Selection, fitting, counseling, follow-up, and post-fitting management, each of which are key elements in the process, regardless of technology, must be considered when discussing the retail prices of hearing aids. For example, a first-time user or an experienced wearer fitted with digital programmable hearing aids for the first time, may require numerous office visits to ensure optimal results. This can be a lengthy process since computer programming provides a vast number of fine-tuning possibilities which, in part, makes these types of aids more expensive.

Patients with more basic technology often have the same issues as those who wear the more advanced hearing aids. Addressing these issues may take the same number of office visits to resolve, but may require a somewhat shorter appointment time. Regardless of technology, the adjustment period is similar for either group. Whether wearing advanced or basic technology, patient adherence to a regimen of periodic routine visits for general care and maintenance will ensure maximum benefit from the device. The costs associated with these visits normally are included in the selling price.

If history is any indicator of the future, the industry will continue to search for messages that will motivate those among us who have not yet sought treatment for hearing loss to take action. Manufacturers will continue producing cutting-edge technology enabling us to hear and understand more comfortably and effectively. This also means that new and updated software programs to support the technology will need to be developed on an ongoing basis.

Although it's unlikely that prices will fall dramatically over the next five years due to future research and development of both hardware and software, the prices of hearing aids will continue to be driven by market dynamics. However, until we can convince the vast number of people with hearing loss who don't wear hearing aids that today's hearing aids really do make a difference, these costs will continue to be absorbed by those of us who do enjoy the benefits of amplification!

### **Answer to Question 3:**

Speaking from a dispensing perspective, other than on-site verification testing, it is difficult to measure objective comparisons. There are significant variables that can impact the results or the perceived benefit that wearers achieve with their aids.

For example, rarely will you hear someone wearing corrective lenses comment that they have difficulty seeing because the light is either too dim or too bright or that the images aren't sharp enough. On the other hand, hearing aid wearers constantly evaluate how good their aids are based on how they hear in noisy situations. Today's advanced technology is developed to improve hearing in noise. And for most, there is a significant improvement. However, when comparing basic vs. advanced technologies, features must also be considered.

Today's advanced hearing aid technology is feature-rich. Think in terms of what television was like before remote control. You couldn't view two different channels at the same time, mute the program, or for that matter make any adjustments without going to the TV. The newer technology didn't just make the picture sharper and clearer, it made viewing TV much more comfortable, enjoyable and convenient.

In contrast to basic analog technology, digital hearing aids produce a cleaner sound. In most cases, computerization and programming enable multiple fitting algorithms and adjustments, both for the hearing care professional and the hearing aid user. The useful lifespan is not only longer but is equally effective since the new fitting matrix, which is similar to a prescription for corrective lenses, can be programmed for the patient's hearing at any time. Of course, as with anything else, nothing lasts forever. Technology is constantly advancing, and at some point change is either necessary or desired.

When selecting an eye-care professional for something as important as my vision, I wasn't guided by who would be the least expensive, although that was a consideration, but rather who was the most qualified and would utilize the best state of the art materials. Those of us who need and seek hearing help have a similar choice. It should be very comforting to know that we can select from a wide range of technologies and prices that fit our needs, preferences and budget.

### **Answer to Question 4:**

It is difficult to predict what, if any, savings will be passed on to dispensers after research and development costs are recouped. This can best be answered directly by hearing aid manufacturers.

What is certain is that the manufacturing community will continue to relentlessly pursue the development of the finest, most technologically advanced hearing instruments of our time. Of equal importance is to advance and streamline the administrative, logistical and other product support processes, all of which contribute to the cost of hearing aids.

Contrary to many perceptions and unlike other industries, close observers of the hearing aid industry have noticed a slow but steady decline in prices since the mid to late 1990's, when programmable and digital hearing aids first emerged. The mechanics in delivering many of the newer hearing aids consumed a great deal of the industry's resources for education and training of the dispensing community. This also drove the prices for hearing aids higher. A decade later, dispensers are up to speed and synchronized with manufacturing, greatly reducing the time needed to spend on training. Will the purchase price of hearing aids continue to decline? When contemplating the answer, what must be considered are the rising costs of virtually everything else we use in our daily lives. We need only look as far as what it costs to purchase a gallon of milk or gasoline. However, if trends are any indicators for the future, consumers of hearing aids have a lot to look forward to!

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## **Hearing Industries Association Responds**

By Carole M. Rogin

**The Hearing Industries Association (HIA), located in Alexandria, Virginia, is the national membership organization of hearing and components manufacturers and suppliers. HIA members produce the vast majority of hearing aids sold in the United States and the organization works to expand and enhance the use of hearings aids by people with hearing losses. Contact at : [www.hearing.org](http://www.hearing.org) or (703)684-5744**

### **Answer to Question 1:**

Hearing aids, like other custom medical devices such as dentures, artificial limbs and even individually-manufactured wheelchair seats, are major purchases that address major health issues. However, hearing aids -- unlike many of the other devices -- are typically not covered by third party payments. Consequently, the cost is a major consideration in purchasing hearing aids.

While that cost typically reflects both the professional services and the product (addressed elsewhere in this article), the product cost alone covers a broad array of elements. The hearing aid itself reflects the research, development, and sophistication of a high-performance, miniaturized device that is sold in very low volumes compared to general consumer electronics.

Further, that device is custom-manufactured with a shape unique to only one ear in the world, sits totally inside that specific ear canal (for over 80 percent of today's hearing aids) and virtually matches the human body's amazing imperviousness to elements like wind, water, ear wax and more. Add to that the regulatory costs of manufacturing a safe and effective medical device, the generous repair and return privileges, and the costs of shipping impressions and finished hearing aids between your hearing health care professional and the factory, and you can begin to appreciate what really goes into that small electronic marvel on which people with hearing loss depend.

### **Answer to Question 2:**

While the question of dispenser time is best answered by dispensers, studies like the MarkeTrak research of the Better Hearing Institute (BHI) indicate that consumers estimate that they receive 30-45 minutes of counseling time when they purchase hearing aids, and that time does not vary by type of hearing aids.

However, manufacturers certainly spend substantially more time training hearing health care professionals to fit their newer, more feature-rich devices and it seems only logical that more sophisticated instruments require more dispensing time for consumers, as well. The best and most sophisticated new technologies, which are typically the most expensive hearing aids, are wasted if the dispensing professional does not take the time to maximize each feature for each individual.

### **Answer to Question 3:**

The largest, broad-based study of hearing aid benefit was conducted by the Veterans Administration, in conjunction with the National Institute on Deafness and Other Communication Disorders (NIDCD). That study was completed prior to the “digital revolution” in hearing aids, and there is not yet a comparable clinical study of digital hearing aid performance and consumer satisfaction.

As the SHHH question indicates, however, there is a good body of research on digital hearing aids developing around specific hearing aid features, and those studies can be accessed through the manufacturing sponsors of research, often by visiting the company’s website.

### **Answer to Question 4:**

Research and new product development are ongoing responsibilities of hearing aid manufacturing companies, and research efforts provide the need for new semiconductors to process the advancements realized in research. These new algorithms result in the need for new, high-performance integrated circuits. Driven by the development costs of new semiconductors, the costs today to develop a new hearing aid are in excess of \$10 million. Changes associated with integrated circuit geometry reduction at the semiconductor level and research-driven performance changes require manufacturers to retool their digital platforms every two to three years.

The hearing aid industry’s relatively low sales volumes, when compared to consumer electronics that rely on similar kinds of technologies, prohibit individuals who purchase hearing aids from receiving all of the cost benefits of large volume production. Ultimately, as more and more new technology-driven products are introduced to the hearing aid market, the oldest technologies are replaced. Consequently, the price of hearing aids is not necessarily reduced, but new features resulting in advanced performance become available in lower cost instruments.

As an example, five years ago digital technology was only found in the premium segment of the market. Today, digital is widely used in entry level as well as the most advanced products.

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## Mark Ross Responds

**Mark Ross is an audiologist as well as a consumer and writes a regular column in this Journal on technology and hearing aids.**

It's undeniable that the price of hearing aids is often a source of contention between consumers and their hearing aid providers. Nobody likes to be told that they're going to have to lay out six or more thousand dollars for anything. But there are also some points that I think we can all agree on. Perhaps, it would be useful to review these before going on to discuss those areas in which unanimity is less likely.

The first point is that for many people hearing aids are not just helpful devices, but absolutely essential. There are individuals who simply can't function without them. Their choices are not whether they should use a hearing aid, but which one (or two), where and how will they be acquired, and how much would they have to pay. In brief, for many people hearing aids are not a luxury but a necessity. What they would like to do is to purchase hearing aids that work as well as possible for the lowest possible price.

The second point, and one major theme of this exchange, is that we can agree that they are expensive. We may or may not believe that the cost can be justified, but whatever we feel, the dollar figure is still there, still high, and still looms very large for many prospective hearing aid purchasers. A pair of high-end digital aids costs as much as six or eight thousand dollars, with such accessories as a personal FM system adding thousands of dollars more. It is no wonder, therefore, that price becomes a very relevant consideration when people contemplate purchasing hearing aids.

Third, it is apparent that the high cost does discourage prospective new hearing aid users from acquiring their first set of hearing aids, while dissuading some experienced users from upgrading to newer models. While this reality is often countered by stating that the cost is worth the benefit (which, ideally, should be true in every instance), the fact remains that the high cost of hearing aids does deter some people from purchasing hearing aids, either initially or as replacements. This would be particularly true for those who feel that they can "get along" without hearing aids.

The fourth point is that to properly select hearing aids takes time. It takes even more time to provide the necessary follow-ups to ensure that the hearing aids are properly fitted, both acoustically and physically, and that the user understands how to care and employ them appropriately.

There are those who feel that the selection and adjustment process can be shortened, a step that could reduce the cost of hearing aids. For some people, perhaps experienced users or those with minimal hearing losses, maybe it can. For the rest, however, a truncated hearing aid selection process jeopardizes their chances of not only realizing the full benefit of hearing aids but of obtaining other kinds of help in learning how to minimize the effect of a hearing loss. And, yes, this does take time, and time is money. This is a reality that does have to be acknowledged and confronted.

### **The Mystery of Pricing**

Hearing aid users have very little information about how manufacturers arrive at the price they charge individual dispensers for their hearing aids. We don't know what financial resources manufacturers devote to such areas as research and development, cost of components, the manufacturing process, as well as marketing and merchandising, etc. Much of this, such as costly marketing, is unavoidable because of the nature of the business and our economic system. We don't know their profit margins,

and we are not likely to find this out. This entire area is a black box insofar as consumers (and hearing aid dispensers) are concerned.

Fortunately, given the intense competitive character of the hearing aid industry, it can be assumed that manufacturer's prices are to some extent subject to market forces. For example, dispensers are often able to reduce their unit cost by joining a cooperative buying group who, by purchasing hearing aids in large quantities, are able to negotiate a lower price for the aids they purchase. This results in cost savings that can, theoretically, be passed on to a dispenser's clients.

A major force in the industry is the Veterans Administration which purchased nearly 290,000 hearing aids in 2003 (or 14.5 percent of the total hearing aid market). Undoubtedly, they paid much less per unit than a private hearing aid dispenser would. So bulk purchasing does work and is one way the price of hearing aids can be reduced for consumers.

The economies of scale are also a factor according to several of the contributors to this exchange. In 2003, the entire hearing aid industry sold just a bit less than two million hearing aids. That sounds like quite a lot, but when divided among 20 or so manufacturers is no longer such an impressive figure. If hearing aids were as popular as cell phones, I don't doubt that economies of scale could be applied. Of course, if more people who can be helped by hearing aids purchase them, then not only would they get help, but we can help boost the scale so that we can all realize the economy.

But since, to put it mildly, this is not likely to happen, not with just two percent of our population using hearing aids, it is unlikely that the economies of scale will ever apply to the same extent it does to other electronic products.

Fortunately individual consumers are not completely powerless in negotiating the price of hearing aids with a hearing aid dispenser. Consumers can shop around, look for sales, and use alternative channels like mail order and the Internet in return for lower prices.

Most importantly, by knowing the cost ranges of various kinds of hearing aids, plus their performance implications, consumers can make a more intelligent cost/benefit choice with respect to specific hearing aids.

### **Average Cost of a Hearing Aid**

What is the average cost of a hearing aid (in 2003, the last full year for which this data is available)? One can answer \$1,794.00, which is the figure used in the 2004 Hearing Review dispenser survey. But this figure lumps all types of aids and technology together; it is accurate, but not applicable for specific individuals. Instead, we should look at the breakdown of costs, provided by Karl Strom, author of the The Hearing Review survey.

According to this survey, the price of the different types of hearing aids; i.e. behind-the-ear (BTE), in-the-ear (ITE), in-the-canal, (ITC) and completely-in-the-canal (CIC) differed considerably. Generally, the smaller the hearing aid, the more it cost (CIC aids were the most expensive while BTE and ITE were the least).

What I find most interesting was the breakdown given in the survey between the price of economy, mid-level, and premium digital hearing aids. Economy digital aids were just a little more than half the price of the premium aids. For example, economy BTE digital aids averaged \$1,390 while the cost of the premium BTE digital aids averaged \$2,559.

Overall, the price range between the highest and lowest digital hearing aid was over \$1,700. This suggests that effective hearing help is currently available at less than premium prices. And even less expensive than the economy digital hearing aids were the digitally programmable analog hearing aids, with linear analog hearing aids costing the least. We should emphasize that these, too, can provide significant auditory assistance to many people with hearing loss.

### **Does Cost Indicate How Well the Hearing Aid Will Perform?**

The question we have to ask ourselves is whether there is a performance difference between the highest and lowest price hearing aids? That is, do people who buy more expensive hearing aids actually hear better? And if there is such a difference, is it worth the extra cost to the people who wear the most expensive hearing aids? Maybe it's not necessary to purchase a "premium" hearing aid in order to receive, if not "premium" hearing help, at least perfectly acceptable help!

Fortunately, we have some information on this question in a report by Sergei Kochkin in a 2003 article in *The Hearing Review*. In it, he points out that in numerous studies he found only a slight positive relationship between the cost of a hearing aid and the actual hearing benefit received by a consumer. So, paying more does not guarantee that someone will hear noticeably better.

However, benefit (an objective measure) is still not the whole story. In terms of how people perceive the value of the benefit they receive -- whether they feel the benefit is worth the cost -- the situation gets a bit more complicated. It turns out that the more people pay for a hearing aid, the higher their expectations (not at all surprising!) and the less they are likely to be satisfied with the value of the hearing aid.

In other words, higher price hearing aids do not automatically translate into greater benefit or satisfaction with the hearing aid performance.

As a society, however, we are somehow conditioned to believe "that you get what you pay for"; i.e. that superior performance can be purchased with higher prices. This is an oversimplification. True, for some features (like directional microphone hearing aids), this may well apply. And yes, such features do add to the cost of a hearing aid. But simple directional microphones are now routinely included in the many of the lower price digital hearing aids.

I stress the word "simple," since this feature has spawned a host of expensive variations, such as adaptive directional microphones, for which the degree of added benefit and value is still an open question. Other specific hearing aid features may be important to some particular individuals, and these too would add to the cost, but the burden of proof has to be on the dispenser to demonstrate that the higher price tag associated with a specific feature does confer desirable (and proven) benefits. It is apparent that high-end modern digital hearing aids are chock full of expensive features and other refined electroacoustic variations. The digital revolution has opened up the kind of speech processing strategies we could hardly conceive of a generation ago.

But because something can be accomplished technically, does not mean that the outcome is of practical significance. This has to be demonstrated separately, most desirably with well-controlled research studies independent of the manufacturer. The question we have to ask is whether these newly introduced and expensive hearing aids actually produce in real-life the benefits described in the marketing material? Is the cost/benefit ratio going to be positive for the individual wearer? It may well be that an economy or mid-level BTE or ITE hearing aid could provide the same practical assistance to a hearing aid user as a more expensive model.

## **Research and Development**

My own feeling is that part of the reason that hearing aids are so expensive is precisely because of the competitive nature of research and development in the hearing aid industry. Each company that engages in this R&D activity strives to differentiate itself from its competitors by introducing some technical variation -- the basic goal being to ensure audibility of a speech signal at as high a speech-to-noise ratio as possible.

Understandably, their intent is to boost their market share and bottom line. But such activities cost money, a lot of it I suspect, and this is an expense that is ultimately borne by consumers. Logically, it is not plausible that every newly introduced development results in improved listening technology. If so, then over the past 50 years that I've observed the industry, with a "new" feature or circuit introduced every year or two, I'd expect hearing aid users to display "superhuman" hearing! And nobody that I know is claiming this.

## **There's More to a Hearing Aid...**

Actually, while it may be heresy to say so, the most important consideration in a hearing aid selection is not the hearing aid itself. Rather, it is the skill and dedication of the hearing aid dispenser. It is this person's responsibility to ensure that a suitable instrument is selected, while providing the client with an understandable explanation of its merits and problems.

Of course the selection and fitting process takes time; in one study, the audiologists at a large center spent almost four contact hours with each new hearing aid user. As it happens, the time that audiologists spend with people who purchase premium models is not significantly greater than with those who purchase less expensive models.

With all of them, the audiologist still has to interview the person, conduct appropriate audiometric and other tests, take ear impressions, select and fit the aids, reprogramming when necessary, schedule several follow-up appointments, provide all necessary information, and deal with drop ins when problems occur. I view these kinds of services as intrinsic to the hearing aid selection process. Without them, we could just as easily purchase hearing aids through mail order catalogs.

## **"Unbundling" Costs: For and Against**

In fact, it is precisely because professional services are time-consuming that many people, including several of the respondents in this exchange, have suggested "unbundling" the hearing aid selection process. In its extreme application, this would mean that hearing aids would be sold as a distinct product and that every test, clinical activity and follow-up visit be charged separately.

The proponents of unbundling point out that some clients take an inordinate amount of the dispenser's time, returning often for troubleshooting visits, while others take relatively little time, but that both pay the same price for the hearing aid. Thus, some clients can be said to be subsidizing the visits of other clients. With unbundling, each client only pays for the services that he/she receives. The advocates do have a point.

On the other hand, the opponents of unbundling are convinced that many people would not return for necessary follow-up services, or would not contact the dispenser when problems occur, and that seems plausible too. These people require the extra assistance that repeated visits can give them, but are unable or unwilling to pay for them, or simply unaware of the frequent necessity for follow-up visits. Without the encouragement and support occurring in these repeated visits, many such individuals would either discard their aids or not realize their full benefits. Here, the advocates of bundling also have a point.

The people espousing both points of view in this exchange are responsible professionals who truly want to serve their clients to the best of their ability. But at the same time, hearing aid dispensers are professionals conducting a business with their professional time one of their major assets. So is there another point of view or a middle ground in this debate? I think so.

For me, it comes down to how the hearing aid dispensing process is defined. I do not think of hearing aids as just sophisticated electronic devices. That point of view trivializes the potential impact of a hearing loss upon the person and his or her family. A hearing aid can be conceptualized as the therapeutic “hardware” designed to ameliorate the auditory consequences of a hearing loss.

The “software” is all the testing and services required to ensure that hearing aid users receive optimal benefit from this hardware. As with computers, we can’t really separate the hardware from the software. When a hearing aid is dispensed, it has to be part of a package that routinely includes certain required professional services. These would include all the prior audiometric testing, interviewing, fitting, and follow-up activities.

As recommended in an SHHH position paper, I would include a group hearing aid orientation program as an integral component of the selection procedure. (available on [www.hearingloss.org/html/group\\_hearing\\_aid\\_orientation\\_.HTM](http://www.hearingloss.org/html/group_hearing_aid_orientation_.HTM))

One advantage of such a program is that it is likely to reduce the need for some scheduled individual visits as well as reduce unscheduled drop-ins. If this were to occur, then it would be perfectly appropriate that people would be expected to pay for any visits and services that are in addition to those defined as part of the package.

It should not be assumed that the purchase of a hearing aid is a free lifetime ticket to the professional ministrations of the hearing aid dispenser. But it also should not be assumed that a hearing aid stands by itself without consideration of the essential fitting and follow-up activities.

### **“So, Why Do Hearing Aids Cost So Much?”**

I know that I haven’t provided any definitive answer to the question of why hearing aids cost so much. But then neither have any of the other respondents to this exchange. Some of the reasons are unavoidable (e.g., the fitting and follow-up process) while others are an integral consequence of our economic system (i.e., the intense competition between the various manufacturers).

I’m afraid there’s not much we can do about these factors. What we can do is seek amelioration of this economic burden elsewhere, such as working for third-party insurance coverage, recognizing the cost/benefit value of less expensive hearing aids, and considering alternative dispensing models (e.g., an Internet based model that would include human interactions).

And, above all, recognizing the profound impact that well-fitted hearing aids can have on the lives of hard of hearing people.

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