

THE OFFICIAL PUBLICATION OF THE ACADEMY OF DOCTORS OF AUDIOLOGY®

# Audiology PRACTICES

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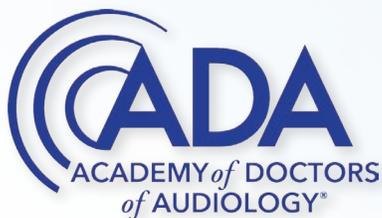
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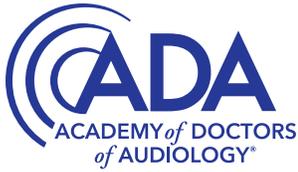
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*Audiology Practices* (USPS 025-476) ISSN (21645248) is published quarterly by the Academy of Doctors of Audiology, 1024 Capital Center Drive, Suite 205, Frankfort, KY 40601. Periodicals Postage Paid at Lexington KY and at additional mailing offices. Subscriptions are \$25 as part of membership dues. POSTMASTER: Send address changes to *Audiology Practices*, 1024 Capital Center Drive, Suite 205, Frankfort, KY 40601.

Contributions are welcomed but the Editor reserves the right to accept or reject any material for publication. Articles published in *Audiology Practices* represent solely the individual opinions of the writers and not necessarily those of the Academy of Doctors of Audiology®.

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## Appreciation and A Call to Action

As I sit down with my laptop this Thanksgiving weekend searching my thoughts for what is appropriate for my last message as your ADA President, I have to admit my mind wanders through many moments over the past year. Overwhelmingly what I want to express is gratitude for the trust you all placed in me to serve at this unprecedented time of change in our profession and for the personal growth and development it has provided me. But more significant is the appreciation I feel for all of you, the members of the Academy of Doctors of Audiology, for being willing to take on the more difficult path when it is needed and appropriate.

All of ADA members are leaders in our profession by virtue of being willing to do the work and lead by example. The perfect embodiment of this was Dr. Eric Hagberg. I am thankful that about ten years ago I met Eric and had the opportunity to know him. While I did not know him as well as many, I am confident in stating this year's AuDacity conference and what was achieved in Dallas would make him extremely proud. This year at AuDacity over \$120,000 was raised for the Eric N. Hagberg Au.D. Advocacy Fund because ADA members in attendance forked over their money for the future of audiology.

Those of you who were not able to join us at AuDacity in October missed an amazing conference that took a bold new direction to stay ahead of the curve. Throughout the meeting, sessions were designed to improve audiology businesses and provide the tools to accomplish members' professional goals.

In my AuDacity President's address, I asked those present to reflect on the premise of role alignment as discussed in our keynote speaker, Kasey Compton's book *Fix This Next for Healthcare Providers*. Now I ask all ADA members, how does role alignment apply to your engagement in the improvement of the profession of Audiology for the present and the future. A role alignment analysis can be applied to our time, talent and treasure.

What are your personal/professional strengths and how can YOU most effectively utilize them to meet your goals for professional engagement. What **ARE** your goals for professional engagement and what should they be? The time has passed for status quo and leaving the mission to a few. I submit that we should all ---no matter our number of years in the Audiology profession or our practice setting---take ownership for the destiny of the profession of Audiology....if we care about having a say in it.

AuDacity was all about **THIS!**

Are you short on time but can contribute financially? Do you have anxiety about public speaking, then perhaps donate your time "behind the scenes" **OR** push yourself out of your comfort zone and

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## No Need to be Coy, Roy: No One Should be Surprised OTC Devices Resemble Traditional Hearing Aids

Now that the first over-the-counter hearing aids have been on the market for a few months, it's a good time to share some thoughts on the first entrants and what to expect from new competitors who might enter this new direct-to-consumer space over the next few years.

Many in the audiology community are abuzz because they have discovered these new OTC devices are not really new. And the industry seems a little coy to come right out and say that many of these new OTCs are re-branded products that were first launched as traditional hearing aids five or more years ago.

Making matters even more interesting, there is also a common theme expressed by many audiologists that runs something along the lines of this: "I am a little disappointed that the first OTC devices are nothing more than re-packaged hearing aids that have been available from hearing care professionals for years. I was expecting something new and innovative from one of the consumer electronic giants." I've heard a version of this thinking more than a few times over the past few months, and, I must admit, it's disheartening to hear this from so many of my fellow professionals.

Why would thoughtful, highly educated clinical professionals sell their own industry suppliers short? The hearing aid industry, despite some flaws<sup>1</sup>, is more innovative than often given credit for.

It's a little astonishing that pundits within the Audiology profession express surprise that the first OTC devices are nothing more than traditional hearing aids in disguise. Of course, they are. Because the hearing aid industry has gotten many aspects of audio performance right, it should no surprise that they are involved in the first OTC to hit the streets.<sup>2</sup> After all, no segment of the audio world<sup>3</sup> is better equipped to tackle the problem of enhancing speech in the presence of noise — far and away the biggest challenge for middle aged and older adults who might be struggling with their hearing — than the hearing aid industry.

No other miniaturized audio device running on a small amount of electric current, immersed in a humid, waxy ear canal for hours per day packs the punch of traditional hearing aids. Here are three essential features, available in a basic hearing aid (which today costs about the same as many OTC devices *and* at a price point that usually includes professional services) for almost twenty years. These features work pretty darn well and you are sure to find them in any new OTC — new, re-branded or re-packaged:

- **Wide dynamic range compression (WDRC):** The ability to provide large amounts of gain, primarily for soft sounds while little to no gain is applied to louder inputs — sounds individuals with mild and moderate hearing loss often hear just fine without hearing aids. Hearing aid

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**BECOME A MEMBER!**

Welcome to the Academy of Doctors of Audiology (ADA), the only national membership association focused on ownership of the audiology profession through autonomous practice and practitioner excellence as its primary purposes. ADA is the premier network and resource for audiologists interested in private practice.

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## Make A Resolution to Make 2023 Your Healthiest Year Ever!

For most of us, this season is just plain hectic. The hustle and bustle of holiday activities, mixed with frantic year-end must-dos for business owners, the mad rush to finish collecting, documenting, and submitting re-licensure requirements, all while meeting the demands of a busy clinic schedule, doesn't leave much time for thinking about next year!

Yet, 2023 is just around the corner, and there is no better time to take action to make resolutions (and keep them) to make 2023 your healthiest year ever!

### Here are three suggested New Year's resolutions:

#### 1. Take Care to Take Care of Yourself

Self-care isn't selfish, it is selfless. If you don't take care of yourself, you cannot care for your loved ones, your patients, or your business. According to the National Institute of Mental Health, self-care means, "taking the time to do things that help you live well and improve both your physical health and mental health." Self-care includes things like eating healthy, exercising, and getting enough sleep (you know, the things that keep you alive, alert, and agile enough to escape predators). It also includes activities to manage stress, burnout, and support mental well-being.

One important self-care tool is mindfulness. I encourage you to read, *An Introduction to Mindfulness for Audiologists*, by Dr. Carolyn Smaka, beginning page 16 of this issue of *Audiology Practices* for an overview of mindfulness and how you can use mindfulness to improve your wellbeing.

#### 2. Give to Others to Get a Health Boost

Studies demonstrate that the act of giving, either through volunteer service to others or through donating resources to social causes can improve well-being. Health benefits associated with giving and volunteering include increased self-esteem, lower rates of depression, lower blood pressure, lower rates of reported stress, and longer life.

If you are looking for meaningful ways to give or give back to the profession of audiology, consider mentoring a student, or an early career professional, volunteer for an audiology mission trip, and join an ADA committee or sign up to lobby for pro-audiology initiatives in your state or federally.

#### 3. Go Beyond and Grow Your Skills

Learning something new promotes a healthy you! Evidence shows that learning new skills improves memory, confidence, and supports brain health and wellbeing. The skill doesn't have to be work-related to be effective. Take up a new hobby or master a new game. Take an art class or a foreign

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MANAGING

# CASH FLOW & CASH RESERVES

## A Case Study Addressing a Cash Shortfall

JoAnna Ahn

A practice's net cash flow is essentially the amount of cash coming into the practice less the amount of cash coming out. A practice's ability to maintain a positive net cash flow is important for several reasons: 1.) positive cash flow is an indicator of profitability, 2.) it reflects the practice's ability to pay off their expenses, and 3.) it allows for planning for future projects.

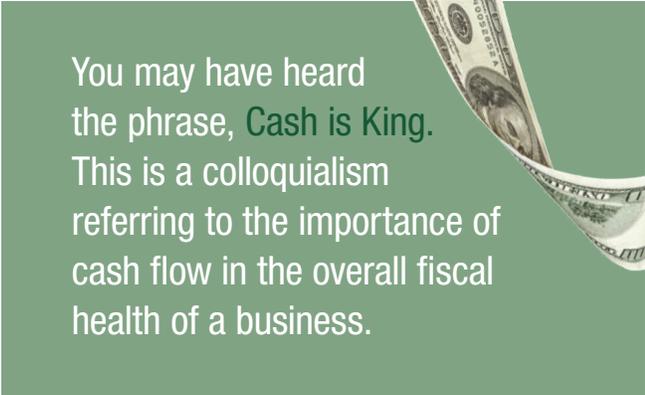
The ability to generate a steady cash flow gives the practice flexibility in operating the practice and allow a greater focus on patient care. A key objective here is to demonstrate that routine activity in operating a practice should be monitoring cash flow and the components of a practice that influences the generation of cash.

The primary objective of this case study is to understand how the income statement and balance sheet can impact cash reserves and methods that can be used to improve cash flow.

### Scope of Challenge

Net cash flow comprises of the difference between cash in and cash out of the practice. The cash coming in includes deposits made for hearing aid purchases and other payments received from patients (collected accounts receivable). Cash outflows would consist of payments of bills (accounts payable, loan payments, paid taxes, or an Owner's distribution).

When a practice is presented with a situation where cash is not enough to pay for an immediate need, the owner needs to understand how they are able to respond quickly. While increasing sales and reducing operating expenses can have an impact on cash in the long term, reviewing balance sheet accounts could provide options for a more immediate result.



You may have heard the phrase, **Cash is King**. This is a colloquialism referring to the importance of cash flow in the overall fiscal health of a business.

### Case Description

This case study involves a practice that records income and expenses on an accrual basis. Income and expenses are reported predominantly on an accrual accounting basis. (Accrual accounting is a financial accounting method that allows a company to recognize revenue and expenses in the time-period when they are incurred, and in the case of revenue, that can mean *before* receiving the cash payment for goods or services sold. Owners can choose an accrual or cash basis of accounting when managing financials. The choice of

which system to use is typically determined between the practice owner / business manager and the practice's Certified Public Accountant (CPA). Basically, an accrual basis of accounting records income and expenses when the service occurs (invoice is sent) whereas in a cash basis of accounting income and expenses are recorded when funds are received/disbursed.

Practice A is owned by a husband and wife in which the wife is one of two full-time audiologists. The practice also employs three administrative staff members. Net revenue through June is \$246,000. The owners' cash balance has been steadily declining over the past few reporting periods and they are facing a large amount of payments due in the form of accounts payable and credit card balances. Unless the practice can improve their cash position, they will have significant problems in meeting their financial obligations, one of which is paying off a large loan amount.

After reviewing their financial statements, the owners were presented with several action items that could help increase cash flow in the short term as well as improve cash flow management in the long term.

## Methods and Results

Monthly financials are shown in **Figure 1.1** (income statement) and **Figure 1.2** (balance sheet). The income statement in **Figure 1.1** shows that for June year-to-date (YTD), which covers a six-month time frame, the practice has generated net profit of \$66,161 with net revenue of \$246,212, or 26.9% of net revenue. Based on YTD amounts, the practice has maintained their profitability. Total expenses (\$125,537) are 51.0% of net revenue. The average monthly payroll expense is \$7,004 per month (\$42,027/6).

The balance sheet in **Figure 1.2** shows the amount of cash available to the practice owners at the end of June is \$6,733. This balance is a concern because this amount of cash cannot cover the average monthly payroll expense of \$7k which was determined from **Figure 1.1**. Note that the balance sheet also reflects credit card balances and current liabilities totaling almost \$70k. (Current liabilities are debts that are due within a short timeframe, typically within one year or less). Cash will be required to pay these liabilities as well as the accounts payable amount of \$72,077. Another potential issue is if the cash position cannot improve, the long-term liabilities (\$234k) on the balance sheet won't be paid down in the future. The owners have assessed their situation with their financial consultant and understand the need to address the immediate need for cash as well as the need for a plan to increase their cash reserves.

**Figure 1.1**

INCOME STATEMENT	
June 2022 YTD	
<b>Income</b>	
Hearing Aid Revenue	\$ 157,449
Net Revenue	\$ 246,212
COGS	\$ 54,514
Gross Profit	\$ 191,698
<b>Expenses</b>	
Marketing	\$ 8,234
Payroll & Related	\$ 42,027
Occupancy & Office	\$ 48,010
Other Expenses	\$ 27,266
Total Expenses	\$ 125,537
<b>Net Profit</b>	\$ 66,161

**Figure 1.2**

BALANCE SHEET	
Jun-22	
<b>Assets</b>	
Checking / Savings	\$ 6,733
Accounts Receivable	\$ 77,700
Fixed & Current Assets	\$ 492
<b>Total Assets</b>	\$ 84,926
<b>Liabilities &amp; Equity</b>	
Accounts Payable	\$ 72,077
Credit Cards & Current Liabilities	\$ 69,979
Long-Term Liabilities	\$ 234,115
<b>Total Liabilities</b>	\$ 376,171
Distributions	\$ (346,658)
Retained Earnings & Capital Stock	\$ 55,413
<b>Total Equity</b>	\$ (291,245)
<b>Total Liabilities &amp; Equity</b>	\$ 84,926

## Discussion

The financial consultant was able to recommend a few actions that could help the owners meet their immediate cash needs and direct them on a path to build up their cash reserves over time.



## Income Statement

The largest driver of cash flow on the income statement is revenue and the ability to generate more of it. In the short term, staff can make a conscious effort to ensure provider schedules are full so that the practice has every opportunity to generate added revenue. The practice needs to consider methods to drive patients (new or existing) into the practice or effectively convert appointments into hearing aid and service revenue. This may require additional marketing spend or a review of operational efficiencies (effectiveness of front office staff and/or providers).

The income statement also provides information on spending trends. An immediate impact on cash can be seen if there is a pause on discretionary spending until the cash reserves improve. Reducing spending arbitrarily across the board may not be helpful as any spending related to employees (payroll or insurance) or practice growth (marketing) would only be a short-term solution and may not benefit the practice in the long term. For example, decreasing payroll by cutting staff or working hours would affect workflow, staff morale and potentially limit the number of patients being seen for care.

## Balance Sheet

The owners were able to note the large accounts receivable balance of \$77,700. If they can focus on collections of past due or late amounts, this would have an immediate impact to their cash balance.

The owners focused on scheduling time for staff to make follow up calls to patients and insurance companies for payments. To hold staff accountable for making the calls, an accounts receivable (A/R) report and tracking sheet were updated weekly and reviewed by owners. An 'aging report' would group accounts receivable in terms of how long the amounts are past due. Accounts are considered past due when payment has not been received within the timeframe agreed upon between the practice and patient (credit terms). Collections calls could be scheduled based on the aging of accounts: those who have the longest aging would be first on the list to call. Note that, for many businesses (in and out of the hearing care space), the longer the age of outstanding balances, the less the chance of collecting the amount at a later date. It is important to avoid customer accounts from becoming too 'old' by continuously monitoring the accounts receivable balance. The risk of late payments could also be mitigated with a policy of late fee charges.

The practice could also attempt to delay the timing of the cash outflows to temporarily hold more cash on the balance sheet. While being consistently late in payments to vendors/manufacturers is not recommended, the practice could ask their vendors for longer credit terms or the possibility of making partial payments on their accounts.

**Take Home Tip.** Perhaps the most effective way to keep Accounts Receivable (A/R) a manageably low number is to have firm policies in place for collecting payment at the time services are rendered. This requires clear communication to patients as well as staff. Careful oversight of insurance billing procedures and collection of co-payments are among the most helpful A/R collection strategies. Billing patients and then chasing after payment is a recipe for a higher, often unmanageable A/R.



## Management

It was also strongly recommended that a weekly cash call/review be done to understand how cash is flowing into and out of the practice. Preparing a weekly forecast of cash receipts and disbursements would highlight where the practice would need to focus their efforts as well as help to anticipate cash needs.



## Considerations

What takeaways can be made from this case study? The situation presented in this case could be found not only in any audiology clinic, but also in any business regardless of industry.

1. While managing the income statement and balance sheet is not the primary role of an owner/practitioner, as a business owner there should be a basic understanding of profitability and financial health. This becomes especially important if the owner/practitioner decides to transition into more of an owner/manager role or if an exit strategy becomes part of the owner's goals.
2. Cash flow and cash reserves are important to the practice as they allow for expenses to be paid, provide reassurance that unexpected needs can be met in case of a shutdown (e.g., due to pandemic or weather-related disaster) or a drop in sales (due to an economic downturn or seasonality). Healthy cash flow also allows for projects/plans to be funded, which in turn allows the practice to grow. Positive cash flow and a comfortable cash reserve adds value to the practice, which positions the practice positively to potential buyers or creditors.
3. Everyone within the practice can have some impact on cash flow. While providers are responsible for the actual treatment of patients which result in hearing aids being sold, other staff members contribute to making sure the opportunities are available for the providers. Staff members also make sure that payments are being made by patients and insurance companies. Owners contribute to improved cash in that they can monitor accounts and focus efforts on those with balances trending in the wrong direction.

## Questions to the Reader:

1. Would a small business loan or line of credit be a good option to cover a short-term cash problem?
2. What level of cash reserves is “enough”?
3. If the practice was holding inventory on the balance sheet, how could that impact cash?
4. Would a smaller practice approach cash flow differently from a larger, more established practice?
5. How could the practice owner involve staff/employees in improving cash flow without sharing sensitive financial information?



**Take Home Tip.** When new patients make an appointment, it is the ideal time to pre-quality their insurance coverage and find out exactly what their insurance covers and the amount of out-of-pocket expenses they can expect to pay at the time of their visit.



## Discussion of Questions:

### 1. Would a small business loan or line of credit be a good option to cover a short-term cash problem?

It depends. Credit is not a bad thing as it helps the practice use their cash on hand more efficiently towards operating activities. However, the practice needs to consider their current debt load and their ability to make the payments. While a loan or credit line would allow for an influx of cash, servicing the debt would impact cash flow when payments begin. Depending on their financials, the practice may not qualify for additional credit or funding from an outside source. Alternatively, a source may be willing to extend a loan or credit, but because of the financials, the interest rate does not make this option financial sense due to the payments being too high. In the case of this case study, credit/loans should be considered only after all other avenues of generating cash have been attempted and there is an immediate need.

## 2. What level of cash reserves is “enough”?

Similar to a family budget, the ratio of cash reserves to average monthly expenses is a good metric to determine how much cash to have on hand. A good level of cash would be equivalent to at least three months of operating expenses, more if the owners prefer to be more conservative, if they anticipate any issues coming up, or if they would prefer to self-fund a large purchase or project.

## 3. If the practice was holding inventory on the balance sheet, how could that impact cash?

A balance of hearing aid inventory reflects hearing aids which have most likely been ordered as part of a bulk purchase (to take advantage of some discount or promotion from the manufacturer), or hearing aids ordered for a patient who has not been fitted yet. This inventory may have already been paid for, which would mean no further cash outflow would be required, or the manufacturer’s invoice has not been paid yet and some dollar value is included in accounts payable, which will require additional cash outflow when payment is due.

The opportunity for increasing cash reserves comes with setting appointments for patients who simply need to be fitted for the hearing aids ordered for them or bringing in patients who could potentially benefit from the hearing aids that are being held in stock. Once the patient has completed the treatment, the hearing aid in inventory “becomes cash” from an accounting standpoint.

## 4. Would a smaller, new practice approach cash flow differently from a larger, more established practice?

A larger practice would hopefully already have a few processes in place to monitor cash. The assumption is that the owners would have a better understanding of how their business performs and can anticipate their cash needs. The focus on cash flow and maintaining their cash reserve allows the established practice to fund projects or capital expenditures to continue to grow. A smaller, new practice should be focused on building an initial cash reserve, preferably to cover three months (or more) of operating expenses. The smaller practice owner should also be establishing operating procedures to collect accounts receivable, handle vendor payments, effectively schedule appointments, etc.

## 5. How could the practice owner involve staff/providers/employees in improving cash flow without sharing sensitive financial information?

Some roles within a practice may need access to portions of financial statements to perform their functions. An example would be a front office staff member making collections calls would need to have accounts receivable balances to plan their call schedule. A person in charge of paying bills would need access to accounts payable to understand timing of payments. Providers are aware of hearing aid pricing (revenue) as they are prescribing treatment for patients. While everyone has some information about elements that influence cash, only the owner (or their trusted representative) would be able to take the data to analyze cash. The owner, rather than provide full financial transparency, can create targets related to the different roles, which if met, contribute to the improvement of cash flow. An example could be those tasked with managing collections would need to ensure receivables balances are no higher than a certain dollar or doesn’t increase more than a certain percentage month after month. Another metric could be the number of hearing aid units needed to cover costs of goods sold and operating expenses. An additional number of units can be added to this breakeven analysis to establish a unit target for providers. ■

## References

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*JoAnna Ahn is the marketing director for Audigy.*



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Q

With the competitive environment hearing healthcare providers find themselves in with OTC/DTC and managed care, many are looking for simple and easy ways to innovate their practices. Where does the CareCredit prequalification process fit into this equation and how can it help providers enhance the patient financial experience?

We all know that cost is one of the biggest reasons that patients often don't move forward with the purchase of hearing technology. We also know that financing plays a major role in making comprehensive hearing health care products and services more accessible to patients. If patients can fit the cost into their lifestyle and monthly budget, they may be more likely to move forward with purchasing the technology they want and need to help them live a connected life. CareCredit prequalification makes it even easier for patients to see if they prequalify for the CareCredit credit card with no impact to their credit bureau score. So, providers now have an opportunity to break down yet another barrier that patients may have and increase access to hearing technology.

*If patients can fit the cost into their lifestyle and monthly budget, they may be more likely to move forward with the purchase of hearing technology.*

*continued >>*

**Q**

## What is CareCredit prequalification specifically?

Prequalification is a soft credit inquiry that happens in real-time. There are several ways for patients to see if they prequalify for CareCredit:

- Through the practice's PMS system
- Through the CareCredit Provider Center
- Patients can inquire on their own using a Custom Link and QR Code

If patients prequalify for CareCredit, they can accept the offer and complete the application immediately. Once approved, cardholders can use their new card immediately to pay for the care and technology they need and want, including ear exams and screenings, hearing devices and implants, and other medical treatments for hearing loss. Prequalification is a great option for patients who are interested in learning if they are likely to be approved without impacting their credit bureau score or individuals who may be curious about whether they are eligible for the CareCredit credit card but are not yet ready to commit.

**Q**

## Having the ability to see if they are likely to be approved for CareCredit with no impact to their credit bureau score can obviously be a big benefit and motivator for patients. What other benefits are there for providers with CareCredit prequalification?

There are a lot of great benefits prequalification offers but here are three that I would like to highlight for providers.

### 1. **Helps make financial discussions easier.**

When a patient knows they are prequalified for CareCredit it can help reduce budget concerns and make presenting treatment recommendations and the resulting cost conversations more comfortable.

### 2. **Helps increase treatment acceptance.**

Prequalification can also help by providing a positive financial experience that may motivate more

patients to move forward with a convenient way to pay for care.

### 3. **Allows providers to focus on care.**

With the CareCredit prequalification process, providers can spend more time focused on caring for patients.

Plus, when patients already have a financial solution in place, they are often more able to confidently evaluate your recommendations and make decisions based on what would be best for their hearing health. So, whether it's helping to manage patient uncertainty, motivating tested-not-treated patients, or helping to keep patients loyal because they have a financial solution, when providers make it easy for their patients to access financing it can benefit them in so many ways.

**Q**

## Can you explain how the CareCredit prequalification works?

Absolutely. Let's go through the three ways patients can see if they prequalify in more detail.

### 1. **Practice Management Software.**

At the patient's request, practices can initiate the prequalification process\* through their Practice Management Software systems such as Sycle or Blueprint OMS. Providers can also see which patients currently have a CareCredit account, so they can confidently present a financing solution during the financial conversation — without even leaving their software.

### 2. **Custom Link and QR Code.**

Providers can give patients access to a self-guided financing experience using their Custom Link and QR code. This option is private and secure, and it allows patients to apply on their own at home, curbside or in the practice using their own mobile device. The patient's information is shared directly with CareCredit, and the prequalification decision can be delivered directly to the patient. This can help to alleviate uncomfortable conversations because the provider doesn't have to share credit

*continued >>*

denials. Practices can also allow patients to apply on their own while in the office using the provider's dedicated in-office device such as a desktop computer or tablet and going to [carecredit.com](http://carecredit.com)/apply. Again, there's no need for providers to facilitate the application.

### 3. Provider Center.

Like the PMS integration option, at the patient's request, providers can initiate the prequalification process through the CareCredit Provider Center by clicking "New Application". If the patient receives a pre-approved offer of credit and completes their application, providers can immediately process the transaction\* without having to switch to a different platform.

Whichever option is used, the remaining steps are simple —enter the required information and follow the prompts in the prequalification form. Prequalification is a soft inquiry that doesn't impact their credit bureau score. If the patient receives a pre-approved offer of credit, a full application is submitted. This triggers a hard credit bureau inquiry, which may impact their credit bureau score. Once approved, cardholders can use their new CareCredit credit card account to pay for care right away. It's that easy.

**Q** How does CareCredit prequalification and more generally having CareCredit as a payment option help a provider innovate their practice?

I think hearing healthcare providers want to do everything possible to help patients get the care they need while maintaining their financial health. That's one of the reasons why having the right payment solutions is so important. When we talk about increasing access to hearing technology, that's where CareCredit comes in. Because the CareCredit credit card is exclusively dedicated to financing healthcare costs — and has been for over 30 years — it's a unique and innovative solution that providers can use to help overcome cost concerns

and give their patients an attractive payment option. And now that patients can see if they prequalify, offering CareCredit as a budget friendly financing option is even more convenient for both providers and their patients.

One of the things we often tell providers is that accepting CareCredit makes the financial conversation so much easier because to start the discussion all you have to say is, "Do you have the CareCredit credit card?" With 11.7 million CareCredit cardholders and another 156,000+ new accounts approved on average every month, it's very possible that the patient may already have the healthcare credit card or be familiar with the payment option from other healthcare providers like their dentist, optometrist, veterinarian or even their primary care physician.

Now with prequalification all you have to say is, "Want to see if you prequalify for the CareCredit credit card with no impact to your credit bureau score?" At the end of the day, it's all about making it easy for patients to access financing so that they can live the connected life they expect and get the care they want and need.



To learn more about how to have financial conversations to help grow your practice, **scan** the QR code to schedule a consultation with our Practice Development.

Data fees may apply. Check with your service provider.



Not a CareCredit provider yet? **Scan** the QR code to enroll —today!

Or, call 800.300.3046 to get started.

Data fees may apply. Check with your service provider.

\* Except for providers in California who are prohibited under state law from submitting applications on behalf of patients for certain healthcare loans or lines of credit, including the CareCredit credit card.

# AN INTRODUCTION TO MINDFULNESS FOR AUDIOLOGISTS

Carolyn Smaka, Au.D.

Mindfulness refers to purposely giving your full attention to what's happening now. When you make mindfulness a habit, you feel less stressed, more productive, and more resilient. It is a practical tool for audiologists to help reduce occupational stress and prevent burnout. It can improve audiologists' personal lives as well.

Mindfulness does not require you to change who you are, to work less, or to work slower. It's about building a habit where you can focus your attention where you want, when you want. As a result, you are less vulnerable to distractions and feel more at ease.

The way to build a habit of mindfulness is by practicing mindfulness meditation. This simple, evidence-based practice requires less time each day than a quick coffee run, with results that last much longer than a caffeine buzz. It requires no money or special equipment and is self-directed. You practice on your terms and on your schedule.

I started practicing mindfulness meditation at the start of the pandemic. Almost immediately, I noticed benefits in day-to-day situations. It helped me to manage COVID-related anxiety without overreacting, which can exacerbate stress. I got better at letting things go. This noticeably improved relationships with my immediate family—relationships that had been strained by disrupted routines and too much together time. When I'd wake up in the middle of the night, practicing mindfulness helped me fall back asleep rather than stay up ruminating on worries.

I went on to complete a 100-hour mindfulness meditation teacher training program through Dharma Moon and Tibet House, and I maintain a regular practice.



Feel less stressed,  
more productive,  
and more resilient.

## The Myth of Multitasking

Can audiologists afford to be mindful in our busy, nonstop, 24/7, hyperconnected world?

Emanuel (2021) found time to be the most common theme causing workplace stress for audiologists. Whether it is an unreasonable workload, excessive paperwork/documentation, or other job demands such as supervising staff or students, audiologists in all work settings today are pulled in many different directions.

We may multitask as an intentional strategy for time management. Mindfulness, however, may be a better solution for managing time demands.

In the book, *Finding the Space to Lead*, Marturano (2015) refers to an “epidemic of continuous partial attention” to describe the state of constant multitasking that is the default mode for so many people today. She states, “We go on autopilot for much if not all of our lives. We begin to believe that this is just how it has to be in the fast-paced, distraction-filled world we work and live in. If we don’t live on this incessant treadmill, we’ll fall behind, or fail.”



Multitasking  
actually makes us  
less productive.

Yet, multitasking actually makes us less productive—and generally more stressed, at the end of the day.

Why? When we multitask, we rarely do two things at once; instead, we rapidly switch between tasks. Each time we switch tasks, we lose time, and it adds up. For most tasks, this makes us less efficient and results in lower-quality output.

Studies show that heavy media multitaskers (i.e., those who use more than one device at a time, such as working on a laptop and texting on a phone) have differences in cognition compared to light media multitaskers. Heavy media multitaskers have poorer short-term memory, poorer long-term memory, more forgetfulness, and more trouble with tasks that require sustained attention (Uncapher & Wagner, 2017).

While multitasking is sometimes necessary, there are definite tradeoffs. Consider adding mindfulness as a strategy for working smarter and feeling better on hectic days.

## Benefits, Evidence, and Applications

The many benefits of mindfulness meditation can be summarized into three: strength, stability, and clarity in everyday life.

People who practice mindfulness meditation report they are better able to manage stress, feel more resilient, and are less reactive in stressful situations. They report more clarity, which allows them to see situations as they are, without added drama.

There is extensive research showing these and other benefits of mindfulness meditation. A PubMed search for “mindfulness meditation” yields more than 3,100 results, including more than 200 randomized controlled trials and more than 100 systematic reviews.

Neuroimaging studies like those that use fMRI are starting to uncover the neural signature of mindfulness meditation. Among the findings: People who meditate (i.e., all types of meditation, including mindfulness meditation) have changes in the structure and function of their brains in the areas responsible for self-awareness and self-regulation. See Boccia, Piccardi, & Guariglia (2015) for a review of this fascinating research.

### *Corporate/Business Applications*

Forbes estimates that half of Fortune 500 companies have implemented mindfulness programs (Lau, 2020). Companies

such as Google, Fidelity, Goldman Sachs, AstraZeneca, Nike, General Mills, and the Hospital for Special Surgery report measurable employee benefits from these programs, including increased job satisfaction, improved productivity, and reduced stress/burnout. Intel reports more creativity, innovation, and higher productivity as a result of its mindfulness program, *Awake@Intel* (Intel, 2015).

These benefits directly impact companies' bottom lines. After implementing a year-long mindfulness-based wellness program, Aetna saw a 7% reduction in medical claims which translated to \$9 million in savings (Gelles, 2015).

### *Healthcare Applications*

Mindfulness meditation is used to complement treatments for a long list of health conditions. The National Center for Complementary and Integrative Health (NCCIH), part of the National Institutes of Health, provides an excellent summary of selected research on mindfulness to treat stress, anxiety, depression, high blood pressure, pain, insomnia/sleep, substance use disorder, post-traumatic stress disorder, cancer, weight control/eating behavior, and attention-deficit hyperactivity disorder (NCCIH, 2022). Much of the research is positive, showing beneficial results, although some of it is preliminary and lacks rigor.

NIH-funded research on mindfulness continues, with studies underway examining its utility in the treatment of migraine, opioid use disorder, stress in first responders, and more.

Perhaps the most well-known application of mindfulness meditation is Mindfulness-based Stress Reduction (MBSR), which was developed in the 1970s by Jon Kabat-Zinn. MBSR is a structured multi-week program for managing stress, anxiety, pain, and depression with mindfulness meditation at its core. MBSR principles are used for tinnitus management in a program designed by psychologist Jennifer Gans (see [mindfultinnitusrelief.com](http://mindfultinnitusrelief.com)).

### *Health Professionals*

There are many studies indicating that mindfulness improves not only health professionals' well-being but also the care they provide to their patients (e.g., Calabrese, 2019; Watson, Walker, Cann, & Varghese, 2022; Chmielewski, Łoś, & Łuczyński, 2022).

In a 2019 article in the *Journal of Patient Experience*, Dr. Leonard Calabrese of the Cleveland Clinic calls mindfulness

and meditation a “no-brainer” for healthcare professionals. The Cleveland Clinic Lerner College of Medicine includes meditation and mindfulness as part of a mandatory curriculum for medical students because of the proven benefits for both physicians and patients.

### *Audiology and Mindfulness*

It has been suggested that mindfulness can help audiologists reduce burnout (Kasper, 2009; Sinnott & Mukherjee, 2020) and can make audiologic counseling more effective (Taie, 2019). In addition to helping audiology clinicians to manage stress, improve productivity, and enhance resilience, mindfulness has advantages for audiology practice owners.

Mindful leaders are present, focused, compassionate, self-aware, and inspiring. They empower and engage others and are effective at shepherding change—important skills for audiology leaders in these rapidly changing times.

Whereas a transactional leader is focused on managing tasks using rewards and punishments, a mindful leader is focused on empowering others. More aligned with the skills needed for managing high-achieving audiologists, mindful leadership is a transformative leadership style. It is focused on creating opportunities to develop people and teams.

### *Mindfulness Meditation is the Key*

How do we become mindful audiologists and mindful leaders? By practicing mindfulness meditation. Mindfulness meditation makes mindfulness automatic in everyday life.

### *Pay Attention to Your Breath - No Mountain Climbing Required*

If the idea of mindfulness meditation conjures up an image of a person sitting cross-legged on the top of a mountain with their eyes closed, it is because that is the most typical depiction of the practice in mainstream media. The reality of this simple, everyday practice is more mundane.

Mindfulness meditation is typically done while seated. Any chair will do; it is not necessary to sit on the floor or on a cushion unless you prefer it. Mindfulness meditation is done with the eyes open, for more carryover into real life.

You start by paying attention to your breath. Thoughts, feelings, and emotions come up. You notice them, then you

bring your attention back to your breath. This is done again and again for the duration of the practice. It is a process of noticing thoughts and refocusing attention; redirection *is* the practice.

A common misconception is that meditation involves slowing the mind or controlling thoughts; that is not true for mindfulness meditation. The point is to notice thoughts; once we become familiar with the constant pinging of our thoughts, they do not have as strong a pull on our attention. We can see thoughts come and go without getting caught up in them.

## Getting Started

Mindfulness meditation is completely self-directed, so you do it in your space, on your time. No app is required. You do not need any special equipment. You do not need a teacher or a subscription, and there is no cost involved. Mindfulness meditation supports all belief systems. It is a secular practice that has been adapted from its original Buddhist roots; its benefits are available to anyone willing to practice. To get started, set aside time each day for one week and give it a try. Step-by-step instructions are provided in Figure 1.

### STEP-BY-STEP INSTRUCTIONS FOR PRACTICING MINDFULNESS MEDITATION

Set a timer on your phone for 20 minutes.

#### Take a seat.

Sit upright, without leaning back or slouching. Any chair will do, or you can sit on a pillow or cushion on the floor.

Place your hands on your thighs.

Keep your eyes open but relaxed - softly rest your gaze a few feet out on the floor in front of you.

#### Bring your attention to your breath.

Notice where you feel your breath in your body and bring a soft touch of attention there.

Allow your breath to flow in and out naturally - there is no need to control it or to use any special breathing technique.



#### When your mind wanders away from your breath, label it 'thinking' and return your attention to your breath.

Thoughts, feelings, and emotions will naturally arise. When you notice them, silently label them "thinking" without judgment, and gently return your attention to your breath.

Adjust your posture as needed, then bring your attention back to your breath and take a fresh start. Continue the practice until the time is up.

Figure 1.



## Kobe on Meditation

Not exactly related to audiology, but one of my favorite testimonials for mindfulness meditation is from the late Kobe Bryant, and available on [YouTube](https://www.youtube.com/watch?v=LdrVVJPIUK4&t=197s) (<https://www.youtube.com/watch?v=LdrVVJPIUK4&t=197s>). Former NBA coach Phil Jackson is credited with making mindfulness meditation part of the winning strategy that led the Los Angeles Lakers to five championships. Kobe talks about how it impacted their game, enabling the Lakers to play with poise in stressful situations, and how it improved his life off the court as well.

## Don't Just Do Something - Sit There

Although mindfulness meditation is simple, it is not easy. Making the time to sit and “do nothing” seems counter to our goal-driven, overachieving culture. There is nothing sexy or “Instagrammable” about sitting and noticing your thoughts, but the benefits are well worth it.

As with any new behavior or habit you want to develop, mindfulness meditation requires practice. To get results, it is recommended to practice for a minimum of 20 minutes per day, four to five days per week.

Finding a consistent time to practice can help to build a routine. I find that keeping a log on my phone with dates/lengths when I practice helps me to stay on track. Finding a friend who is interested in starting to practice meditation can also be helpful. You can practice together in person or via FaceTime, share your experiences, and keep one another motivated.

## Summary

Mindfulness meditation is a powerful, evidence-based tool for managing stress and building resilience. Being mindful does not mean being someone better or different or slowing down. It is about developing a habit of being more intentional with your time and attention. It is practical and cost-effective. With proven benefits for both individuals and organizations, mindfulness can be a game changer for audiology clinicians, practices, and business owners. ■

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# Optimizing **CASH FLOW** in Your Private Practice



**TIME TO READ**  
6 – 8 MINUTES

## THE TAKEAWAY

LEARN ABOUT THE IMPORTANCE OF CASH FLOW AND HOW TEAMWORK AND CREATING PARTNERSHIPS — BOTH INSIDE AND OUTSIDE THE PRACTICE — CAN HELP YOU TO ACHIEVE YOUR BUSINESS GOALS AND ENHANCE YOUR ABILITY TO EMPOWER PATIENTS TO IMPROVE THEIR HEARING HEALTH.

As part of an ongoing commitment to help hearing healthcare providers achieve their business goals, CareCredit and Allegro Credit continue to develop educational resources featuring industry experts sharing innovative solutions and strategies to enhance the patient experience, optimize cash flow and foster successful partnerships. In this whitepaper **Dr. Keith Darrow, PhD, CCC-A**, Clinic Owner and cofounder of AuDExperts, discusses the importance of cash flow and how creating useful and valuable partnerships can help you build your business.



Q

Can you share why you recommend hearing healthcare providers focus on cash flow to help achieve their business goals?

Cash flow is core to running your business. I like to think of it as the gasoline that keeps your business running. Cash flow is that amount of money that comes into your business each month, quarter, or year. Cash flow is important because it determines if you can pay your employees and meet your bills. Every practice needs a certain amount of cash flow to sustain it. To stress the importance of cash flow, I like to use the patient experience as an analogy. Treating hearing loss is expensive, and one concern for patients is paying a large sum for hearing devices. Many patients can't afford to give a large sum of money upfront, so they may

*"You'll need a consistent stream of income — you can't depend on spikes in cash flow to grow your business long-term."*

prefer to finance their device using a CareCredit credit card, Allegro installment loan, or Allegro lease every month. Patients want a monthly payment that fits into their budget. That is exactly how cash flow works. We all know that accounting can be a nightmare. But by focusing on cash flow, you can determine

*continued >>*

what money you can reinvest in your business to grow and help meet your business goals. Just like a patient, you'll need a consistent stream of income — you can't depend on spikes in cash flow to grow your business long-term.

**Q** What is your recommendation for calculating cash flow?

One thing my father told me before he passed was, “You need a good lawyer and a good accountant.” Owner operators put their heart and soul into helping patients get the care they need by identifying and recommending a plan of care. However, there are some instances where the owner may not have the business knowledge to calculate and analyze this. There's nothing wrong with that. If you asked me to develop an accounting system with proper controls and forecasting, there is no way that I could do it at the level of a Certified Public Accountant (CPA). Partner with an accountant. Bring in an outside CPA and start by going through financials to determine your practice's cash flow. From there, your CPA partner can give you ideas on how to innovate and optimize your cash flow to help set your practice up for success. From my experience, I've never seen a practice grow without one, knowing their cash flow, and two, having negative cash flow. One thing that can shrink your practice is to stop reinvesting in your business, stop reinvesting in marketing, stop reaching out to patients, and stop innovating your practice because your cash flow does not allow it.

**Q** Are you talking about the importance of having partnerships in practice — assembling a team of experts to help guide the practice owner to the right direction and help them achieve their goals?

Absolutely. One thing I stress with all my providers is that treatment is a team sport. It goes beyond

the Audiologist, the ENT, or the Hearing Instrument Specialist. We can even think bigger than in the practice. What partners are you bringing into your practice that help enable care? Could it be someone like AuDExperts who can help you develop a plan to

*“Treatment is a team sport. It goes beyond the Audiologist, the ENT, or the Hearing Instrument Specialist.”*

grow your practice and achieve your goals? Could it be someone like CareCredit or Allegro that provides innovative financing solutions that patients can choose from? Or could it be another provider in another specialty like a dentist who refers patients to your practice? Treatment is a team sport and the practice owner is the quarterback.

**Q** How can a practice help convert their tested-not-treated patients to enhance their cash flow and increase the average patient revenue?

Tested-not-treated — these are some of my favorite words in the hearing industry. Why? Because they present a unique opportunity to help a patient with their hearing healthcare. One way to identify these patients is to go through your Practice Management Software (PMS). This software can help you take a data driven approach to your practice. It can help you mine data and identify opportunities within your patient base. Once you identify those opportunities, you can find ways to bring those patients back to the table and leverage your partners in practice to help move forward with care. You could use your manufacturer partners by highlighting their latest technology and how it meets their lifestyle needs. You could use your financing partners like CareCredit or Allegro to discuss innovative financing options you now offer. You could even do a combination of partners to help move the patient forward with care. Many patients are fearful of what they don't understand. You can use your PMS partner to

*continued >>*

identify those patients who are dealing with uncertainty and leverage your other partners to help alleviate it. Ultimately, you want to use those partners together to help connect patients to a higher quality of life where they see the value in hearing healthcare.

**Q Do you see value in investing in a PMS system as an owner-operated practice?**

Absolutely. I do like the value of having a PMS system. Frankly, if you use paper you might just want to close your doors. One of the many things that your practice should invest in is the best technology for your practice — and that includes the best PMS system for

*“One of the many things that your practice should invest in is the best technology for your practice — and that includes the best PMS system for your practice.”*

your practice. A PMS system can help you see what’s happening in your practice including your cash flow and trends, help you set goals for your practice, and measure how you are building towards them.

**Q Based on your experience with helping practices nationwide, how does in-house financing affect cash flow?**

Hearing professionals are in patient care to help people. That is the fuel that gets them up every day. As a result of this, there are instances where providers may get creative so they can help every patient. This is where in-house financing may have been born. I actually have an experience with this firsthand. I met this amazing couple during my time as a clinical audiologist. They could not afford to pay for the hearing devices up front. I decided to create an in-house financing program for them that would meet their needs and help them move forward with care. They were great people and even invited me to their wedding. However, it took me 16 months to cover my cost of goods sold — let alone to

pay for the front office and my fixed expenses. What I learned from that experience is that in a business with a high cost of goods sold, like a hearing practice, in-house financing doesn’t make sense. You may have a large accounts receivable, but it may not help you cover your cost of goods sold or your fixed costs when those

*“As a business owner, I’ve learned the faster your cash flow comes in, the easier it is to pay for bills and reinvest in your business.”*

bills become due. Options like the CareCredit credit card and the Allegro installment and lease programs let patients select which financing option works best for them — but they can also help providers optimize their cash flow, because they may not have to wait weeks or months to get paid. It can happen in a matter of days. As a business owner, I’ve learned the faster your cash flow comes in, the easier it is to pay for bills and reinvest in your business.

**Q What are some other ways practices can innovate to help optimize cash flow?**

As I said earlier, I believe that treatment is a team sport. It’s important to look at how we can help patients achieve the best outcomes by approaching a plan of care together. It really extends past the four walls of any hearing practice clinic. When it comes to running a great clinic where you are looking to reduce tested-not-treated patients and create more cash flow, you need to invest in great partners. You may need a great CPA, attorney, marketing agency and other advisors. That’s why I’m so proud of the work and the community of like-minded practices we’ve established at AudExperts. I’ve been doing this for over 20 years and my partnerships have helped me grow my business, because they all came together with a singular goal to help me have patients move forward with treatment and build my cash flow.

*continued >>*

## Things you can do in your practice today

- Analyze your operations. Identify what partnerships you can bring in to enhance your business.
- Keep learning. Seek out information that helps you innovate your practice and empowers you to take care of your patients.
- Review your technology. Are you using a PMS system that meets your practice's needs?
- Make time with your CPA partner to review your cash flow and ask for advice on how to achieve your business goals.

CareCredit and Allegro Credit can help you manage uncertainty along your patient journey. Each patient has unique financial and lifestyle needs. The more options you can offer, the more likely patients may be able to move forward with care.

Not a CareCredit provider yet?

**Call (800) 300.3046** (option 5) to enroll today.



To learn more about how to use financing partnerships to grow your practice, **scan** the QR code to make an appointment.

Data fees may apply. Check with your service provider.



**Dr. Keith Darrow** is the cofounder of AuDExperts, a company that helps private hearing practices streamline their operations and build their legacy through community. His clinical experience includes a fellowship at the Brigham and Women's Hospital, and he is the co-founder of the Hearing and Brain Centers of America. Dr. Darrow is a nationally recognized speaker, coach and trainer, and researcher with his work being cited multiple times.

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## Innovations in Hearing Care Delivery Channels –

# AUDIOLOGY AND OPTOMETRY PARTNERSHIPS

Peter Clack, Danny Clarke, OD, and Jed Grisel, MD

If one thing is certain, audiology is undergoing a massive transformation. It is becoming increasingly clear that audiology, in the years to come, will look different than it does today. Advances in hearing technology, increased awareness surrounding hearing health and legislative progress could make the coming decade a golden age for audiology. But challenges exist as well. The complexities of managed care and direct-to-consumer strategies are among potential challenges for the independent audiologist – not to mention the ever-increasing cost to get new patients in the door. The success of audiology moving forward will depend, at least in part, on identifying innovative delivery channels to support independence. The emergence of mobile audiology and tele-audiology are just a few examples of potential innovative solutions.

### Delivery Channels

Traditional hearing care delivery channels leverage access to patients and trusted referral patterns. Existing delivery channels can provide illustrative examples. Ear, Nose, and Throat (ENT) clinics take advantage of a captive audience and trust in the physician's recommendation. Costco leverages a loyal customer base and sheer volume. No doubt, the audiologists who successfully navigate the coming market transformation will be those who are strategically aligned with trusted referral sources and baked-in patient flow.

## Optometry Overview

Optometry is a huge specialty. With over 35,000 members, optometrists perform over 80 million eye exams per year in the US<sup>1</sup> and generate over \$20 Billion in annual revenue. Patients trust their optometrist and value vision as a critical function of daily living. A recent study demonstrated that vision loss is among the health concerns that people most fear.<sup>2</sup> Optometry has been remarkably successful in establishing the societal norm to get an annual eye exam. Among US adults, aged 50-80 years, 66% of survey respondents plan to get their vision checked in the coming year, compared to only 27% for hearing.<sup>3</sup> Public awareness for vision health is also among the highest of any specialty. When asked what constitutes “normal” vision, patients could answer correctly 93% of the time, compared to only 9% for hearing.<sup>3</sup> Optometry represents a unique setting in which to deliver hearing care.

## Optometry and Audiology

Offering audiology services within optometry practices is gaining traction as an innovative and successful way to leverage patient volume in a trusted clinical setting. In the United Kingdom, the marriage of audiology and optometry is rapidly gaining steam. Within the past decade, the number of audiology clinics interwoven into optometry clinics has risen from relative obscurity to over 1,400 clinics.<sup>4</sup> With over 7,200 optometry/optical locations across the United Kingdom<sup>5</sup>, audiology clinics within optometry practices now equate to 19.4% coverage, suggesting that patients desire to access these dual healthcare disciplines from one location.

The pitfalls that have plagued this clinical integration in the past are giving way to rational, mature partnerships between independent audiologists and their optometry colleagues. Likewise, the value proposition for both professions is coming increasingly into focus. Generally speaking, the integration of audiology and optometry offers value to both professions in three general areas—clinical value, commercial value, and professional value. (See Table 1)

Table 1: <b>ADVANTAGES OF THE AUDIOLOGY-OPTOMETRY PARTNERSHIP</b>		
	<b>Audiology</b>	<b>Optometry</b>
<b>Clinical</b>	Vision and hearing loss co-occur Transforms vision clinic into a “sensory” clinic Opportunity for dementia risk-factor management Patient convenience	
<b>Commercial</b>	Reduced start-up cost Reduced marketing costs Access to patient flow in a trusted setting	Turnkey source of bottom-line revenue Fair market rental income
<b>Professional</b>	Supports professional autonomy Opportunity for business ownership and professional development	Market differentiation Supports independence Ongoing support and training

## Clinical Advantages

The prevalence of both vision and hearing loss dramatically increases with age. For this reason, vision clinics tend to have a relatively high concentration of patients with hearing loss compared to the general public. These neurodegenerative processes are also highly linked to cognitive decline.<sup>6</sup> As America continues to age, proactive screening, education, and risk-factor management in one setting can significantly alter the trajectory of dementia development, improving the quality of life for our shared patients.<sup>6,7</sup> Since no effective treatments currently exist for dementia, the current public health approach to cognitive decline is to identify and manage associated risk factors, thus delaying the conversion of mild cognitive impairment to dementia. Optimizing sensory function (vision and hearing) is a rational and evidence-based strategy to accomplishing this goal.

Whereas sensory clinics (vision and hearing) have traditionally existed in silos, there is powerful synergy in combining these service lines in one location. Not only is it convenient for patients to have access to all of these services together, there are practical advantages as well. For example, cognitive screening is a valuable tool for both the optometrist and the audiologist. However, the workflow of a busy optometry clinic creates significant hurdles for the successful implementation of cognitive screening. On the other hand, audiologists tend to spend more time with each patient, and cognitive screening is a natural component of a communication needs assessment. Cooperation between audiology and optometry allows the “sensory clinic” to offer all these services in one location while maintaining an efficient workflow in each service line.

## Commercial Advantages

For the independent optometrist, there is constant pressure to remain relevant and financially solvent amidst an ever-growing number of big-box vision retailers and direct-to-consumer channels. Any service line that adds turnkey revenue to the bottom line is a welcomed opportunity. An audiology managed service represents such an opportunity if implemented correctly. Failed attempts at this integration have occurred when a single optometry clinic adds an employed audiologist or hearing aid dispenser to their payroll with the expectation to keep the professional busy and remain profitable. Partnerships with independent audiologists who deliver a managed audiology service line can resolve these issues. Properly implemented, these partnerships result in profitable activity for both the optometrist and the audiologist, supporting the independence and financial stability of both.



**Cooperation between audiology and optometry allows the “sensory clinic” to offer all these services in one location while maintaining an efficient workflow in each service line.**





For audiologists, the commercial value of such partnerships is clear and significant. By operating within an existing structure, the build-out and startup costs are slashed to a fraction of the cost of a traditional startup. Gaining access to a steady stream of patients in a clinic that has operated for years (or decades) provides an instant flow of patients in a trusted setting. Marketing costs, a significant burden in independent audiology, are reduced or in some cases eliminated. From a commercial standpoint, an audiologist who has successfully integrated with optometry partners will see advantages that a stand-alone, unaffiliated audiology practice will struggle to achieve.

## Professional Advantages

As noted previously, independent optometry has a need to remain relevant in their communities. The installation of a managed audiology service line does this by differentiating the optometrist among the patients they serve from their competitors. The optometrist can stand out in their community with service offerings not available at big-box retailers. This practice builds on an existing trend in independent optometry toward service differentiation (dry eye, myopia management, etc). Offering vision and hearing together transforms the eye clinic into a “sensory” clinic, with more appeal to more patients. Additionally, the combined services give more opportunities to make the clinic “sticky”, retaining patients and encouraging repeat business.

Opportunities for audiologists to be partners in their own business are limited. Additionally, opening an independent audiology practice is often associated with significant risk and financial debt. These realities can result in audiologists beholden to financial institutions or device manufacturers, placing limits on autonomy and professional freedom. A carefully planned partnership with optometry can reduce or eliminate these pressures, leaving the independent audiologist in a strong position to grow professionally and practice in a way that best serves their patients.

## A Word of Caution

Embarking on an audiology-optometry partnership should be taken with caution. Audiology and optometry are unique specialties, each with their own clinical and financial considerations. Oversimplification can create problems and financial losses for both specialties. The strategy should not be simply to start selling hearing aids to vision patients. Rather, successful integration means partnership with highly skilled audiologists, implementing best practices (clinical and commercial) and bringing the best technology to the appropriately selected optometry setting. Careful planning and adherence to proven best practices can increase the likelihood of a successful venture.

## Conclusion

Independent audiology is poised to see some of its best years ahead. However, doing so will require creativity and partnerships with like-minded professionals whose interests are aligned. The thoughtful implementation of an audiology managed service line within optometry represents such an opportunity. ■

## Acknowledgments

Special thanks to Kirstie Evans for editorial assistance.

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*About Amplify Hearing: Amplify Hearing specializes in the insertion of a managed audiology service line within independent optometry practices. Operating in the United Kingdom and the United States, Amplify creates unique partnerships between independent audiologists and a growing network of optometry practices. Audiologists retain ownership in their business, gain back-office support and maintain autonomy as an independent equity partner. To learn more, contact Jed Grisel, MD at [Jed.grisel@amplifyhearing.com](mailto:Jed.grisel@amplifyhearing.com)*

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**Peter Clack**, an audiologist based in the United Kingdom, co-founded Amplify Hearing and serves as the Operational Director. Celebrating 30 years in the industry, his dedication to council the hearing impaired has now developed into his singular focus on developing and supporting fellow clinicians with the mindset of making great people into great clinical leaders.

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**Dr. Grisel**, an otolaryngologist, serves as the President & Chief Medical Officer of Amplify Hearing USA. The majority of Dr. Grisel's clinical practice focuses on hearing loss, including cochlear implants and other implantable hearing devices. His research interests lie in cochlear implant clinical outcomes and the relationship between hearing and cognition.



**The challenge is often not just about hearing more (volume); it is about hearing better (clarity).**

HOW

# FILTER BANK DESIGN

IMPACTS THE USER EXPERIENCE WITH

# HEARING AIDS

By Dana Helmink, AuD

Modern hearing aids are a marvel of electromechanical engineering. Guaranteeing that their performance meets the expectations of wearers involves a complex choreography of signal processing choices within a microelectronic space. This feat of engineering, in the hands of knowledgeable hearing care professionals, has improved quality of life for millions of hearing-impaired people.

Among other risks, [research indicates](#) that hearing loss can lead to social isolation, and [studies from around the world](#) show that social isolation is associated with decline in cognitive function. But it is important to understand that for many, the challenge is not just about hearing *more* (volume); it is about hearing *better* (clarity). It's about picking up the voices of friends and family in a noisy restaurant, for example, or understanding clearly and naturally the words people say. Achieving this with hearing aids depends on many different parameters, but signal processing is at the core.

On the most general level, digital hearing aids process sound through a similar pathway. An analysis filter bank splits the original sound signal into multiple frequency bands, or channels. These bands are then processed using various methods

such as compression or noise reduction. After processing, the signal is put back together through a synthesis filter bank and delivered to the auditory system of the wearer. The goal of this signal processing is providing the gain necessary to compensate for hearing loss while delivering an experience as close to that of natural hearing as possible.

Many wearers grapple with the tinny and artificial sound that results from a delay in sound processing. That is because signal processing in hearing aids takes time—in most hearing aids about 5 to 8 milliseconds. This delay in processed audio, when coupled with the direct, immediate sound that comes through a hearing aid's venting, degrades sound quality for the wearer. Known as the comb-filter effect, this mixing of processed and direct sound in the ear canal can cause distortion, tinniness, and general discomfort when listening over time.

This is where advances in signal processing come into play—and where the choice of signal processing technique can positively impact the natural sound experience for hearing aid wearers. The goal is to minimize delay and quash the comb-filter effect, resulting in more natural sound. Through a combination of high sampling rate and time-domain filter banks, this natural sound in hearing aids is achievable.

## How People Hear

Recreating human speech is a very complicated endeavor. The ear is a logarithmic system, with higher sensitivity at lower frequencies and lower sensitivity at higher frequencies. This is the result of a physiological difference with larger areas of the cochlea dedicated to lower frequencies and smaller areas to higher frequencies (similar to the layout of the pure-tone audiogram). In speech, spoken consonants are short in duration, but high and wide in frequency. Spoken vowels are longer in duration but lower and narrower in frequency. When we look at a speech spectrogram (Figure 1), we can visualize the difference.

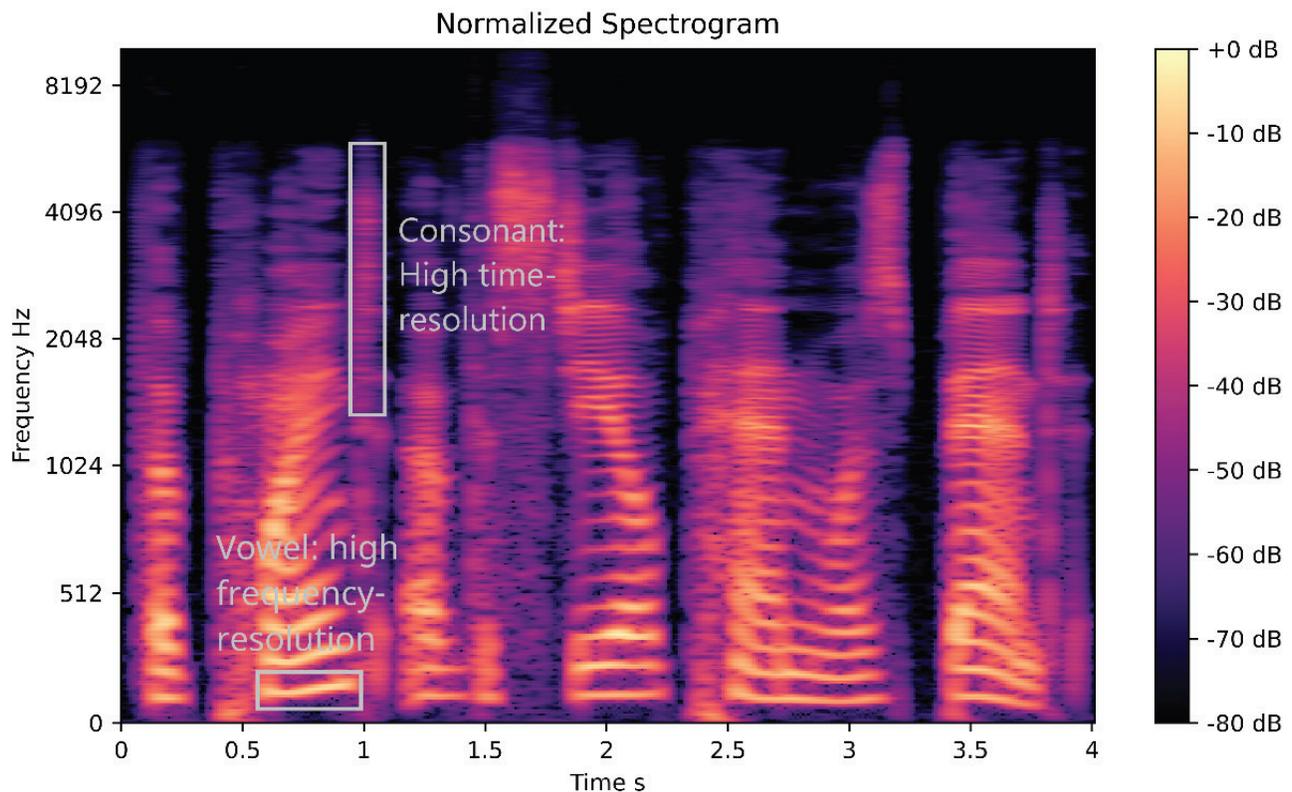


Figure 1: Speech spectrogram illustrating a vowel (lower box) that requires higher frequency resolution and a consonant (upper box) that requires higher time resolution.

What does this mean in practice? It means that speech signals may most effectively be processed by a system that mimics the ear - where the high frequencies have higher time resolution while the low frequencies have better frequency resolution. For this reason, the fundamental design of a signal processing system is critical to the user experience.

## The trade-off between time and frequency

Two main types of filter banks in hearing aids are **time-domain** and **frequency-domain filter banks**. Frequency-domain filter banks are the popular choice for hearing aid manufacturers, and there are some convincing reasons why. But to deliver the most natural sound, time-domain filter banks offer significant advantages.

The obvious question is of course what the difference is between the two. The answer lies in the relationship between time and frequency resolution. In any filter bank, the wider the frequency band, the greater the time resolution. Therefore, a bandwidth that is five times wider has a time resolution that is five times higher (faster). Conversely, a narrower bandwidth means poorer time resolution (slower).

Frequency-domain filter banks limit the system to frequency bands of the same width across the entire frequency range. In practice, this means that all bands are relatively narrow because bandwidth is set based on the bandwidth needed for the lowest frequencies, where the ear's frequency sensitivity is the highest, and the bands therefore must be narrow. Because of the trade-off between time and frequency, this also means that all bands—both high- and low-frequency—operate with the same, relatively poor, time resolution and long processing delay.

On the other hand, time-domain filter banks offer the flexibility to use filters that vary in bandwidth. This means that hearing aid designers can set bandwidths any way they like. With a frequency-domain filter bank, all bands have the same width and time resolution, but with a time-domain filter bank, the bands can vary in width and, therefore, also in time resolution. This is important when it comes to a hearing aid use case.

What do variable widths mean in practice? Time-domain filter banks allow hearing aid designers to narrow the bands at lower frequencies and broaden them at higher frequencies, resulting in the same trade-off between time and frequency as humans have in their ears.

## Avoiding Down-Sampling for Better Sound Quality

One more thing to consider about filter bank design in hearing aids is the role of down-sampling. For wearers, hearing aids are vital for their daily life. Ideally, they should last a long time before needing to be recharged, which means power-consuming functions like signal processing need to be optimized. Down-sampling can help accomplish this, but it can also introduce annoying artifacts.

Frequency-domain filter banks with narrow filters make down-sampling straightforward, and fewer samples mean



less power consumption, but also the risk of artifacts that are inherent to non-linear processes like down- and up-sampling. With a time-domain filter bank, the benefits of down-sampling are minor and do not outweigh the risk of artifacts. Therefore, choosing a time-domain filter bank means that other creative solutions may be necessary for keeping power consumption sufficiently low, but by avoiding down-sampling and preserving the original input signal, much is achieved: higher fidelity, reduced risk of artifacts, and a more natural sound quality.

Although choosing a time-domain filter bank can make it more challenging to optimize power consumption and certain other aspects of signal processing, both are achievable. And ultimately, a time-domain filter bank better complements the human auditory system and helps optimize sound quality. In other words, when it comes to signal processing in hearing aids, time-domain filter banks will deliver the best result for the wearer. ■

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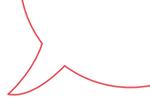
# KEEPING COMPLIANT

## WITH INTERNAL CLINIC COMMUNICATIONS



Josiah Dykstra, Ph.D.

Audiologists are increasingly adopting digital solutions for secure, private, and HIPAA-compliant communications with patients. This is a positive trend. Less commonly discussed is the safety of internal staff communications, such as instant messages. At AuDacity in October, 2022, there were several comments and conversations where various tools were discussed as ways practices communicate and collaborate between staff members. This article highlights compliance considerations for selecting software that is both practical for the businesses and appropriately secure.



Whether a practice has two people or 200, communication is essential for the business to run smoothly. Internal electronic messages might include sharing substantial updates about new products, quick logistics about staff meetings, tasks for individuals, situational awareness about patients that day, and even social events and humor. By one estimate, people 35-44 years old send 50+ text messages per day!<sup>1</sup>

It is natural and common that internal clinic messages may include protected health information (PHI). The HIPAA laws list the 18 identifiers of health information that must be protected.<sup>2</sup> Table 1 contains several examples of messages that contain PHI, and examples that do not. HIPAA does not explicitly allow or prohibit any individual product or service platform, including text messages and email. However, the law does require that certain conditions be met. For instance, a Business Associate Agreement (BAA) is required with any company that transmits PHI on a practice's behalf. Further, Apple is a business associate if a practice sends PHI using iMessage. However, Apple does not currently offer to sign a BAA and therefore is not HIPAA-compliant.

Message With PHI	Messages Without PHI
Jane Adams called and is running 15 min late for her appt.	@DrSpor your next patient is here
My patient today is the President of State University!	Ms. Smith's kids were here are they are so cute!
M.B. from Waverly wants new hearing aids.	Did anyone place the food order for the lunch and learn with Dr. Hyde's office tomorrow?
Please send a receipt to scott@designersecurity.com	Reminder: we have a staff meeting at 11am.
ToDo: finish report tonight... <a href="https://counselear.com/Controls/Pages/Secure/index.aspx?page=Patients/SearchResults&amp;searchVal=Josiah%20Dykstra">https://counselear.com/Controls/Pages/Secure/index.aspx?page=Patients/SearchResults&amp;searchVal=Josiah%20Dykstra</a>	Check out this new AP article on cyber trends in audiology: <a href="https://www.audiologypractices.org/10-trends">https://www.audiologypractices.org/10-trends</a>

Table 1. Example messages with and without protected health information (PHI). PHI is highlighted.

Some companies *will* sign a BAA, including Microsoft and Google. Be careful: a BAA alone does not make a service compliant. The vendor must also comply with HIPAA requirements, such as data encryption and logging. There is no standard or accreditation process for HIPAA compliance, so when a vendor says they are HIPAA compliant you must do due diligence to validate their claim or blindly trust them. It is also your responsibility to use the service in a compliant manner. For example, if you upload a spreadsheet of patients to Microsoft OneDrive but make the document accessible to the world, that is a HIPAA violation even if OneDrive itself is HIPAA-compliant.

Table 2 shows some popular message service that clinics may be currently using to communicate between staff. WhatsApp, iMessage, and GroupMe are examples of services that are not HIPAA compliant and will not sign a BAA. This means that a practice could use them for non-PHI messages, but as evident from the comments at AuDaCITY many use them for PHI. Staff should be carefully trained and routinely reminded about using platforms in a compliant manner to avoid HIPAA violations.

Other services, including Microsoft Teams and Google Chat, advertise themselves as HIPAA-compliant and will sign a BAA with you. In a few cases, such as Slack, you must purchase a specific type of their service to be HIPAA-compliant. Other commercial services, less commonly observed in the profession audiology, are tailor-made for healthcare including Trillian and TigerConnect.

Messaging Service	BAA	HIPAA-Compliant
SMS ("texting")		
iMessage		
WhatsApp		
GroupMe		
Microsoft Teams	X	X
Slack	X	Slack Enterprise Grid Plan
CounselEar Chat	X	X
Google Chat	X	X

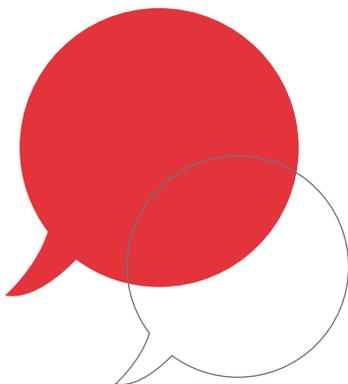
Table 2. Message services and advertised HIPAA-compliance and willing to execute a BAA.





**Audiologists must ensure staff is trained and prepared to appropriately use internal messaging systems.**

Even when a compliant solution exists, it takes deliberate education, effort, and engrained culture not to bypass official communication mechanisms. This is not unique to audiology. It is also not surprising: people already have and frequently use programs like WhatsApp in their personal lives where they can make their own security and privacy decisions. “Staff perceive WhatsApp as a quicker, more convenient method to quickly share information/photos, compared to using the official systems,” said one study of European health professionals.<sup>3</sup> Audiology practices should reinforce the importance of secure and compliant communication and examine whether switching to another messaging service would lower the burden on users. In many cases, an integrated solution – such as using Microsoft Teams if a clinic already uses Microsoft email – can be more cost-effective and user-friendly than adopting an entirely new technology.



**Digital messages are easy to spread and difficult to retract.**

During the COVID-19 public health emergency, the Health and Human Services (HHS) Office for Civil Rights issued a Notification of Enforcement Discretion to enable temporary increased access to telehealth during the pandemic.<sup>4</sup> This allowed providers to use additional non-public facing remote communication products, including WhatsApp and Apple FaceTime. The change was exclusively focused on the delivery of telehealth and did not address their use for general instant messaging.

HIPAA compliance is mandatory and it is important to remember that compliant systems are only half the battle.

Audiologists must also ensure staff is trained and prepared to appropriately use internal messaging systems. For example, audiologists must have adequate policies and procedures that comply with the HIPAA Security Rule’s administrative, physical, and technical safeguards. While technical considerations are certainly vital for such internal communications systems, revisiting and ensuring administrative and physical safeguards are appropriately updated and maintained is also important. In light of increased remote workforces, use of personal devices, use of external networks, and continuing transition to paperless records and communications, consider updating policies and training for your staff.

Audiologists should even consider additional security and privacy controls above and beyond the legal requirements. Digital messages are easy to spread and difficult to retract. Imagine a “joke” message meant only for staff that accidentally became public. “*Did you see that hideous outfit that my patient was wearing this morning?*” Such a message may be compliant but inappropriate. The appropriate use of technology should be covered in an employee handbook. Further, digital messages are nearly impossible to erase and may be subject to disclosure in a lawsuit. So, a private and compliant message could still cause problems, such as “*Reminder that we have our security refresher today, but you don’t need to pay attention.*”

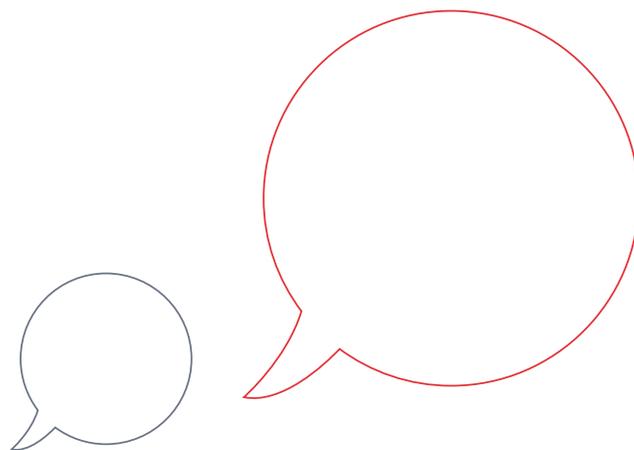
Audiologists must protect PHI no matter where it exists, including internal business messages and communications. With increasingly connected staff members, dispersed staff, and multiple offices, effective and compliant messaging are becoming even more essential. Security and compliance are achievable with careful and informed decisions. ■

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## Promoting Healthy Hearing through the Lifespan with Decision Aids

Brian Taylor, Au.D.

**R**ecent reports indicate that the onset of extended high frequency (EHF) hearing loss in healthy young adults is detected in their early 20s (Mishra et al., 2022). One report (Motlagh Zadeh et al. 2019) suggests that an astounding 64% of normal-hearing adults between 18 and 65 years of age have EHF hearing loss. Even in the younger group (18–30 years) with normal hearing, 56% were found to have EHF loss. Additionally, a remarkable 64% of middle-aged individuals with EHF loss self-reported difficulty listening in background noise.

As any clinician can tell you hearing loss on the audiogram, even extended high frequency audiometry, rarely conducted in U.S. clinics, does not necessarily equate to functional communication deficits. For example, Mishra et al. (2022) determined that approximately 20% of younger adults, aged 19 to 38 years, had EHF hearing loss but only 7% of this group with EHF hearing loss reported difficulty hearing in noise, when a single question was asked: “Do you have listening in noise difficulty? Other reports suggest that percentage might be slightly higher. Not long ago, Spankovich et al (2017) reported that 12%, and Tremblay et al (2015) stated 15% of adults, spanning an age range from 18 to over 70, have normal routine audiograms but express self-reported hearing difficulties.

Although there is often a disconnect between the audiogram results and self-reported hearing difficulties, these reports suggest that around 10% of younger and middle-aged adults could benefit from improved hearing. Surprisingly, this is roughly the same percentage of adults with hearing loss who could benefit from hearing aids – and represents a population underserved by audiology. Further, given the large number of wireless earbud wearers, who tend to listen at harmfully high intensity levels (Portnuff, 2016), there is an opportunity for audiologists to provide preventive care services to younger and middle-aged adults.

Audiologists can play an invaluable role in better educating the community, and assisting adults who are interested in preventive hearing care, in making an informed decision. This decision aid is an example of several non-hearing aid options that prevent hearing loss, optimize the listening experience, or enhance hearing in challenging listening situations. All the options shown in the decision aid can be customized to the individual and assessed with various clinical tools, including real ear measures. Given the prevalence of hearing loss in younger populations and the growing demand, especially around the so-called healthy aging population, audiologists are encouraged to broaden their offerings and use a decision aid like the one shown here. ■

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# The Spectrum of Customizable Preventive Hearing Care Options



*\*Disclaimer: The illustration of the devices and apps above is not associated with an endorsement of them. These are intended to be examples used for educational purposes. Audiologists are encouraged to evaluate options in each of the categories shown in the decision aid before recommending or dispensing them.*

# A NEW ANALYSIS OF THE AUDIOLOGY WORKFORCE, BENCHMARKED TO OTHER HEALTHCARE PROFESSIONS

Victor Bray, MSC, PhD, FNAP

Amy M. Amlani, PhD, FNAP



## Introduction

The primary role of audiology is to assess hearing status, diagnose auditory and balance system disorders, and provide treatment to patients with hearing and vestibular problems. The objective of audiological care is to provide professional services—augmented by advancements in technology offerings—that are accessible and meet the demands of consumers in improving their quality of life (QoL). The responsibility of the profession, then, is to make certain it generates a dynamic, balanced, and viable supply of professionals (i.e., workforce) that can service the hearing healthcare needs of its population.

The assessment of this responsibility is complex, and includes such factors as evaluating the educational pipeline, assessing job satisfaction to minimize pre-mature professional attrition, and appraising the current workforce. The purpose of the present undertaking is to provide the reader with our ongoing research efforts in analyzing workforce trends, over time, (i) within audiology, and (ii) between audiology in comparison to other healthcare occupations (i.e., benchmark). Our purpose is driven by the intended objective of

understanding how past historical audiology workforce trends impact the future of the profession as a function of the population it aims to serve, and as future service delivery models evolve.

To achieve our purpose and intent, we utilize a US government database that provided historical data. Specifically, the Bureau of Labor Statistics (BLS) created an occupational code for Audiology that was separate from Speech-Language Pathology starting in 1999.<sup>1</sup> In this paper, we provide the reader with an overview of our previous effort that evaluated the audiology profession between 1999 and 2019, and provide a new analysis, based on statistical modeling, representing the last 10-years (2012-2021). BLS employment data are also available for other healthcare professions for the same 10-year span, to which we benchmark the health of the audiology workforce.

It is important that the reader understand the application, and potential misapplication, of the data presented in this paper. The importance of the BLS Occupational Employment and Wage Statistics database is that it provides a comprehensive historical record of the American workplace. We use the data for the evaluation of long-term trends to facilitate

1. Prior to 1999 Speech-Language Pathology and Audiology shared the occupational code of 32314.

projections of the future. The intent of this data is not to establish the current size of the workforce. For example, the BLS Occupational Outlook Handbook page for Audiology says that there are 14,600 jobs in 2021.<sup>2</sup> In contrast, the BLS page for Audiology reports employment of 13,240 in 2021, with a footnote that “Estimates do not include self-employed workers.”<sup>3</sup>

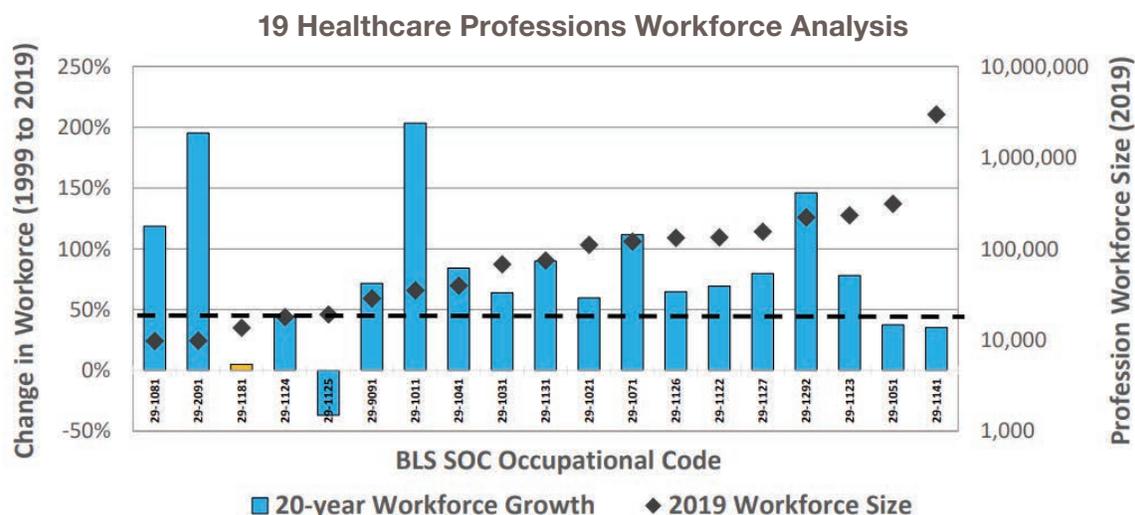
In discussions with leadership of the major audiology organizations, the 14,600-workforce number seems to be a more appropriate estimate of the current workforce size. But understand we are using the number of 13,240 in 2021 as it is part of a long-term historical data set from which trends, such as 10- and 20-year growth rates, can be determined.

## Benchmarking Across Professions

Our previous work on the Audiology workforce, presented in 2021,<sup>4</sup> resulted in an analysis of nineteen healthcare

professions using BLS data between 1999 and 2019.<sup>5</sup> The results of the analysis are shown in **Figure 1**. The *blue bars* shown in the figure highlight the *percentage growth in employment* (on the y-axis [ordinate]) between 1999 (reference year) to 2019 (current BLS data) as a function of nineteen occupations. Percentage growth was determined as the difference between the reference year (1999) and the most recent year (2019). Furthermore, the *black diamonds* displayed in the figure captures the *size of the occupational workforce reported in 2019* and are referenced to the right ordinate (i.e., z-axis).

The orange bar (third from the left, BLS Code 29-1181), displayed in **Figure 1**, represents Audiology. In comparison, the three occupations showing the highest 20-year growth rates were Orthotists and Prosthetists at 195% (BLS Code 29-2091), Chiropractic at 203% (BLS Code 29-1011), and Dental Hygienists at 146% (BLS Code 29-1292). The two occupations showing the lowest growth rates were Audiology at 5% (BLS Code 29-1181) and Recreational Therapists at negative 37% (BLS Code 29-1125).



**Figure 1. Workforce analysis for nineteen healthcare occupations comparing workforce growth between 1999 and 2019 as reported by Bray & Amlani.<sup>4</sup> See text for details.**

2. <https://www.bls.gov/ooh/healthcare/audiologists.htm#>

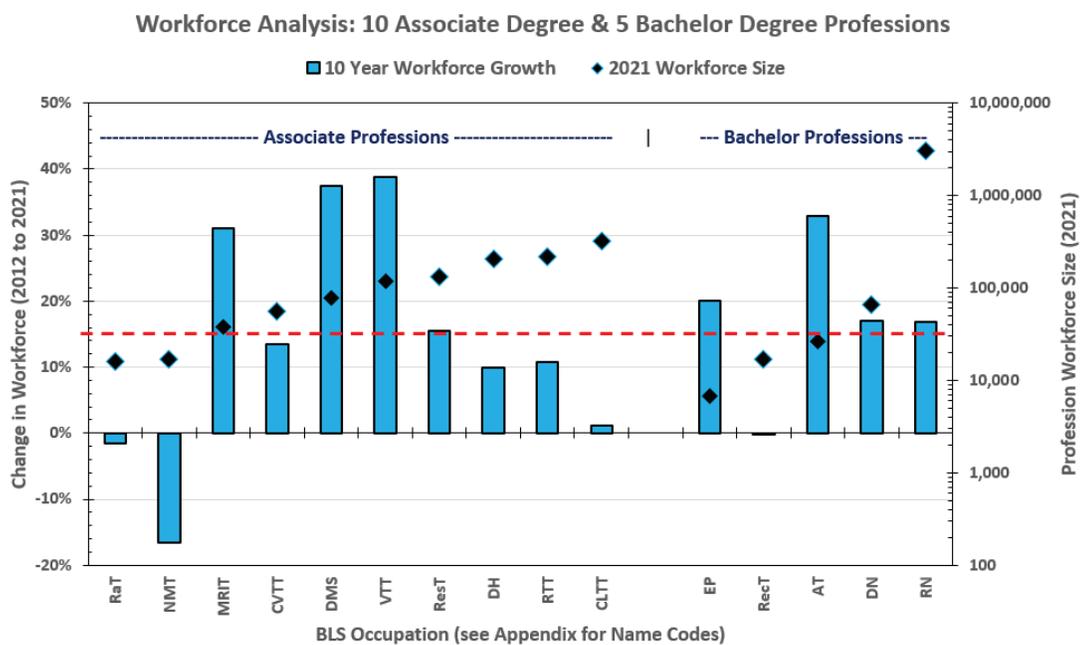
3. <https://www.bls.gov/oes/current/oes291181.htm>

4. Bray & Amlani (2021). Historical Trends in US Audiology Workforce, Benchmarked to Other Healthcare Professions. Poster presented at AAA Convention, April, Virtual.

5. Several healthcare occupations that in later sections of this paper were not in the BLS database for the years 1999 - 2019.

An updated workforce analysis is provided in this paper. In the new analysis, we first expand the number of healthcare occupations from nineteen to thirty-one.<sup>6</sup> These thirty-one professions were sorted by the degree requirement: Associate, Bachelor’s, Master’s, or Doctorate. Second, the time frame was reduced from twenty years (1999 – 2019) to ten years (2012 – 2021), supporting a focus on more recent data trends. In addition, the calculation of percent change in the workforce was not based on the simple difference between the base year (2012) and the most recent year (2021), but instead on linear regression modeling utilizing annual workforce numbers across the decade of data for each occupation.

The results are shown in **Figures 2 and 3**. Similar to our previous work, the *blue bars* represent the *change in workforce growth* (10 years) referenced to the left ordinate (i.e., y-axis). Likewise, the *black diamonds* represent the *workforce size of the occupation in 2021* referenced to the right ordinate (i.e., z-axis). In **Figure 2**, the left side displays growth rate for ten Associate’s degree professions and the right side shows the growth rate for five Bachelor’s degree professions. The dashed red line provides a reference of 15% growth rate, which was the mean growth rate combined across the fifteen occupations.



**Figure 2. Updated workforce analysis across healthcare occupations as reported by degree designation (Associates, Bachelors) between 2012 and 2021. See text for details.**

In **Figure 3**, the left side exhibits the growth rate for eight Master’s degree professions and the right side reveals the growth rate for eight Doctoral degree professions. The dashed red line serves as a reference for the 32% mean growth rate combined across the sixteen occupations.

The outcomes from these analyses showcase several emerging trends. In **Figure 2**, three of the Associate’s degree professions had large growth rates from 2012 to 2021: Magnetic Resonance Imaging Technologists (MRIT) at 31%, Diagnostic Medical Sonographers (DMS) at 37%, and Veterinary Technologists and Technicians (VTT) at 39%. Two of the Bachelor’s degree professions had large growth rates: Exercise Physiologists (EP) at 20% and Athletic Trainers at 33%. In **Figure 3**, two of the Master’s degree professions had very large growth rates: Physician Assistants (PA) at 59% and Nurse Practitioners (NP) at a remarkable 123%. The Doctoral degree profession with the largest growth rate was Veterinarians at 36%.

6. In 2012, BLS expanded their system to add several healthcare professions that were not previously in the database.

### Workforce Analysis: 8 Master Degree & 8 Doctor Degree Professions



**Figure 3. Updated workforce analysis across healthcare occupations as reported by degree designation (Master, Doctoral) between 2012 and 2021. See text for details.**

On the flipside, **Figure 2** shows that three of the Associate degree professions did not have significant growth: Radiation Therapists (RaT) at negative 2%, Nuclear Medicine Technologists (NMT) at negative 17%, and Clinical Laboratory Technologists and Technicians (CLTT) at 2%. Among the Bachelor’s degree professions, Recreational Therapists (RT) growth rate was 0%. In **Figure 3**, all the Master’s degree professions grew at rates of 25% or greater. In the Doctoral degree professions, the growth rate of Podiatry (Pod) was lowest at 5%. The growth rate for Audiology (orange bar, AuD) was 15%.

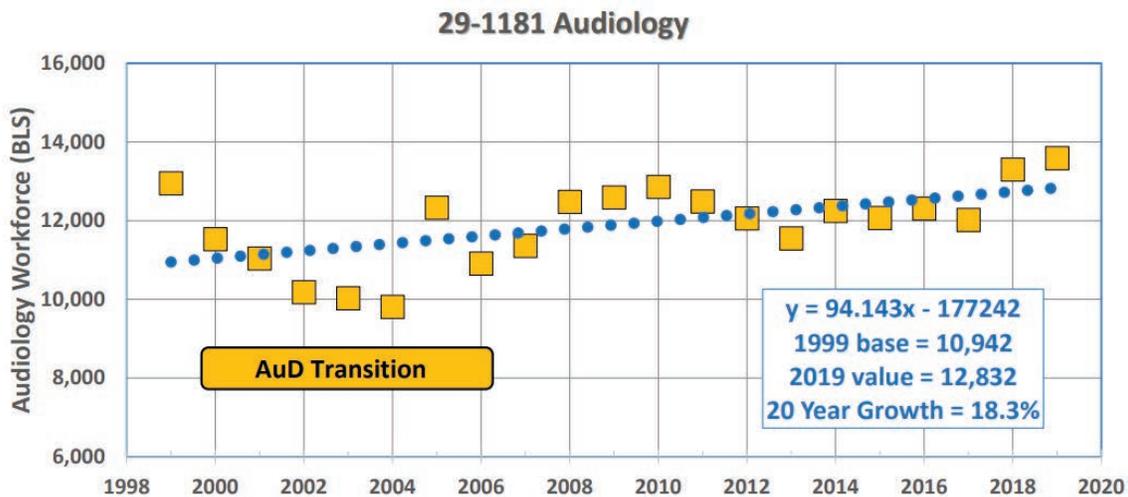
Several important observations can be made from these data. First, there are different occupational growth rates for the four-degree groups: 14% for Associate’s, 17% for Bachelor’s, 45% for Master’s, and 20% for Doctoral. Second, growth of an occupation’s workforce is not guaranteed as growth rates were nominal for RaT, CLTT, and RecT and negative for NMT. Third, explosive growth rates can occur. For example, NP entered the BLS database in 2012 with a workforce of 105,780 and grew to 234,690 by 2021. Fourth, the Master’s degree group shows the best overall performance in terms of occupational growth rate, suggesting that these professions, in general, are successful in filling, and even growing, their

occupational niche. Fifth, this new analysis reveals a growth rate for Audiology of 15% over ten years, which is in marked contrast to the growth rate of 5% over twenty years that was reported in our prior (i.e., 2021) analysis. This last observation is the basis of the next section in this paper.

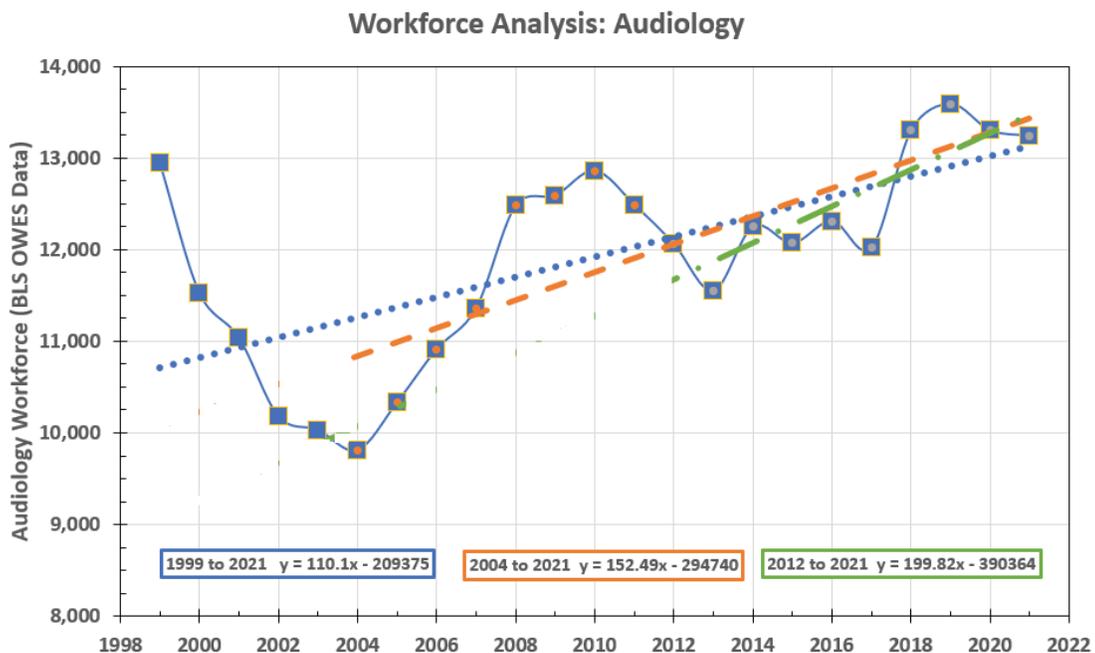
**New analysis reveals a growth rate for Audiology of 15% over ten years.**

### Analysis of Audiology Growth

In our 2021 analysis, Bray and Amlani initially reported a 5% change in the Audiology occupational workforce between 1999 and 2019 (see **Figure 1**). A subsequent linear regression analysis in the same paper was performed—shown in **Figure 4**—across the twenty-year data that revealed a slope of 94—representing the annual growth in the workforce—and a twenty-year growth rate of 18%.



**Figure 4. Change in Audiology occupational workforce between 1999 and 2019 as reported by Bray & Amlani.<sup>4</sup> See text for details.**



**Figure 5. Updated change in Audiology occupational workforce between 1999 and 2019. See text for details.**

In re-examining our 2021 analysis, we conclude that there is an aberration in the audiology workforce data that we would like to remove from the analysis. From 1999 to 2004, note the negative trend in workforce, followed by positive trend starting in 2005. Regarding **Figure 4**, we remarked that, “The data show a 24% decline from 12,950 in 1999 to a low of 9,810 in 2004, which coincides with the transition from the Master’s degree to the Doctoral/Professional degree requirement.”

Our current analysis, which is more robust, is shown in **Figure 5**, and considers Audiology workforce data between 1999 and 2021. The *annual workforce numbers* are denoted by the *solid blue line*. Here, the occupational workforce loss and recovery between 1999 and 2010 can clearly be seen.

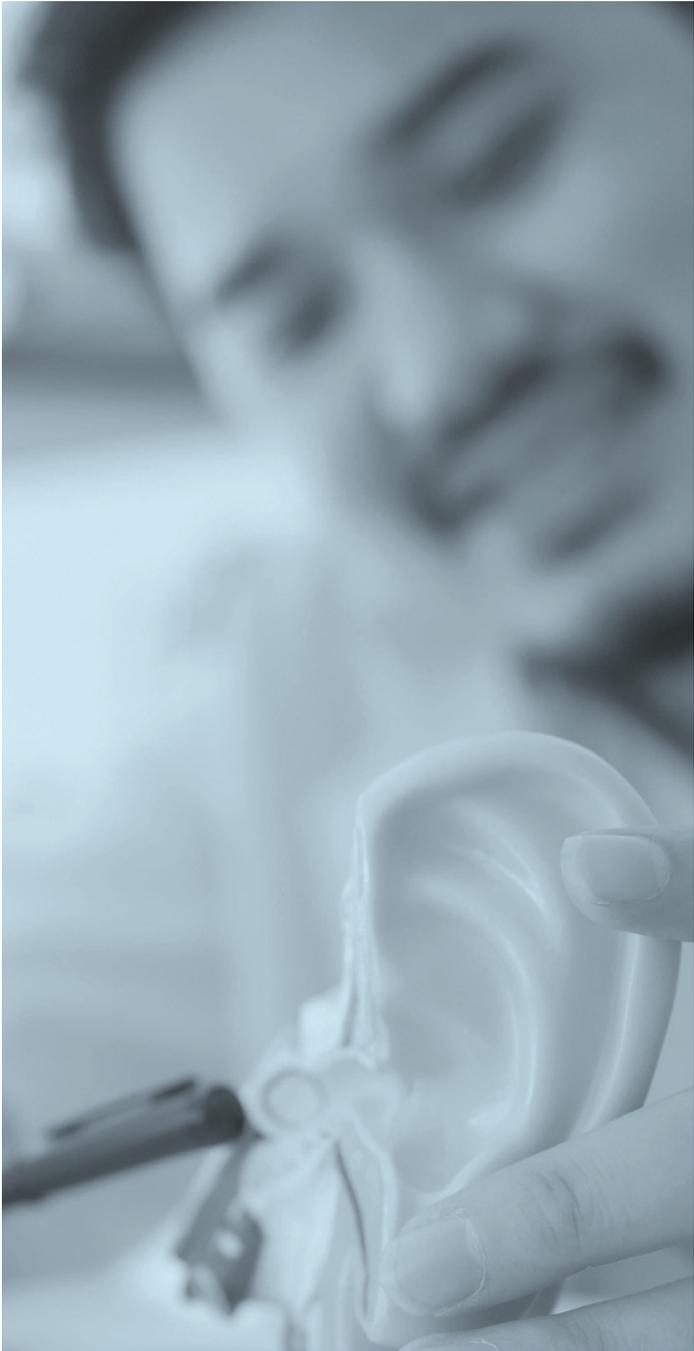
At first glance, the workforce picture is alarming, with a workforce size of 12,950 in 1999 and 13,240 in 2021, for a net growth of 290 audiologists over a 22-year period, or a workforce growth rate of 13 audiologists per year (i.e.,  $[13,240 - 12,950] / 22$ ). But, given the dramatic changes in the year-to-year numbers, a more robust (and accurate) analysis includes the use of linear regression modeling. Using a regression model over the 22-year span (denoted by the *blue dotted line*) yields a slope of 110.1, indicating that the audiology workforce was growing at a rate of 110 persons per year during this period. In contrast, an analysis from the lowest point—in 2004—to the present (i.e., most recent seventeen years, represented by the *dashed orange line*) yields a slope of 152.5, or a workforce growth rate of 153 persons per year. Alternatively, an analysis using the most recent decade (i.e., 2012 - 2021, which is denoted by the *dash-dot green line*) yields a slope of 199.8, or a workforce growth rate of 200 audiologists per year.

So, what is the ‘right answer’ for the Audiology workforce growth: 13, 110, 153, or 200 audiologists per year? We now believe that the best answer is to use the most recent 10-year data as it represents current conditions and eliminates the abnormal drop and recovery associated with the AuD transition process between 1999 and 2010. This growth rate of 200 audiologists per year is the highest value, and most optimistic picture, that we have reported in our ongoing ‘Analysis of the Audiology Profession’ project that began in 2019.

## A “What If” vs “What Is” Scenario for Audiology

Another analysis of the profession that deserves attention is the ‘what if’ scenario. Specifically, ‘what if’ the Audiology workforce had not lost over 3000 jobs (almost 25% of the workforce) from 1999 to 2004? ‘What if’ Audiology had grown at the same rate as similar professions from 1999 to 2021 (e.g., OT at 62%, PT and SLP at 72%, and Optometry at 81%)?

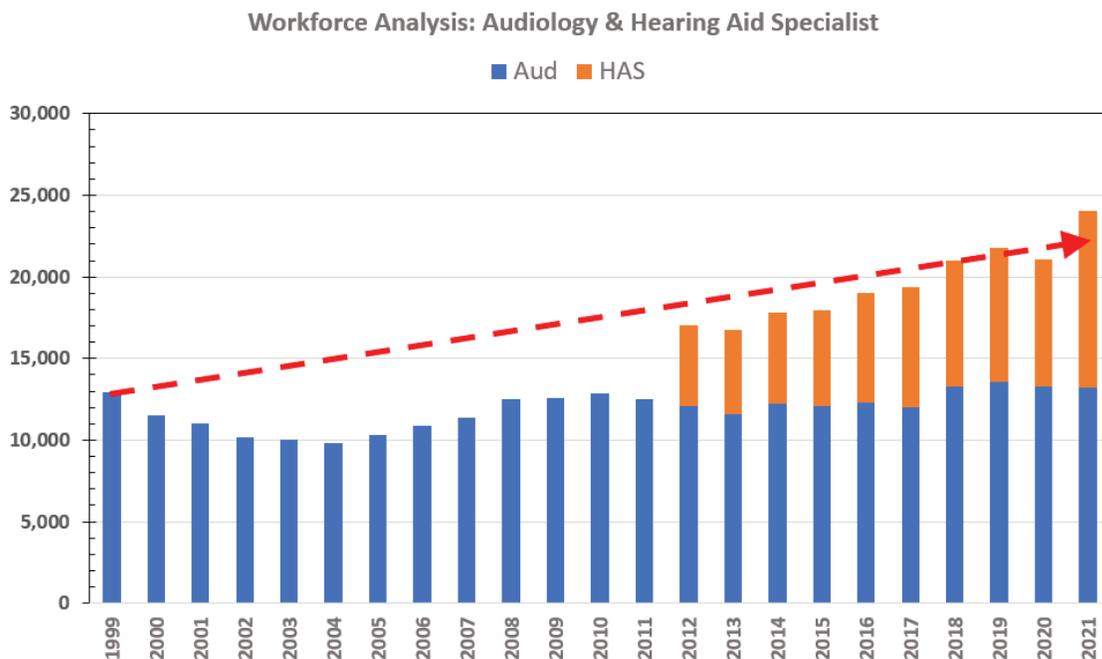
Applying a benchmark growth rate of 72%—the average workforce growth rate of OT, PT, SLP, and Optometry—onto the 1999 Audiology workforce baseline, the profession would have increased to a workforce of slightly more than 22,000. This outcome would have yielded a workforce of an additional 9,000 Audiologists beyond the 2021 BLS reported workforce of 13,000. A preliminary conclusion from this analysis is that the Au.D. transition process to a



At first glance, the workforce picture is alarming, with a net growth of 290 audiologists over a 22-year period.

doctoral-level profession contributed to an opportunity cost that markedly depreciated the long-term workforce numbers (i.e., 9,000 jobs by 2021), and that ripple effect is still being felt by the profession.

The resulting opportunity cost begs the question, who is doing the work of 9,000 audiologists to meet the hearing healthcare needs of the US population? To answer this question, we, again, access the BLS database. As previously mentioned, in 2012, BLS expanded its database and added several professions and included Hearing Aid Specialist (HAS). In 2012, BLS reports the HAS workforce to be 4,980. In 2021, the HAS workforce number is reported at nearly 11,000. This means that during the last decade—while the Audiology workforce grew 15%—the HAS workforce grew by greater than 100%. The impact of this doubling in HAS workforce is displayed in **Figure 6**, as denoted by the orange bars. When we aggregate the workforce numbers for the hearing care segment, the effect of combining professions (i.e., Audiology + HAS) closely answers the ‘what if’ scenario asked at the outset of this section.



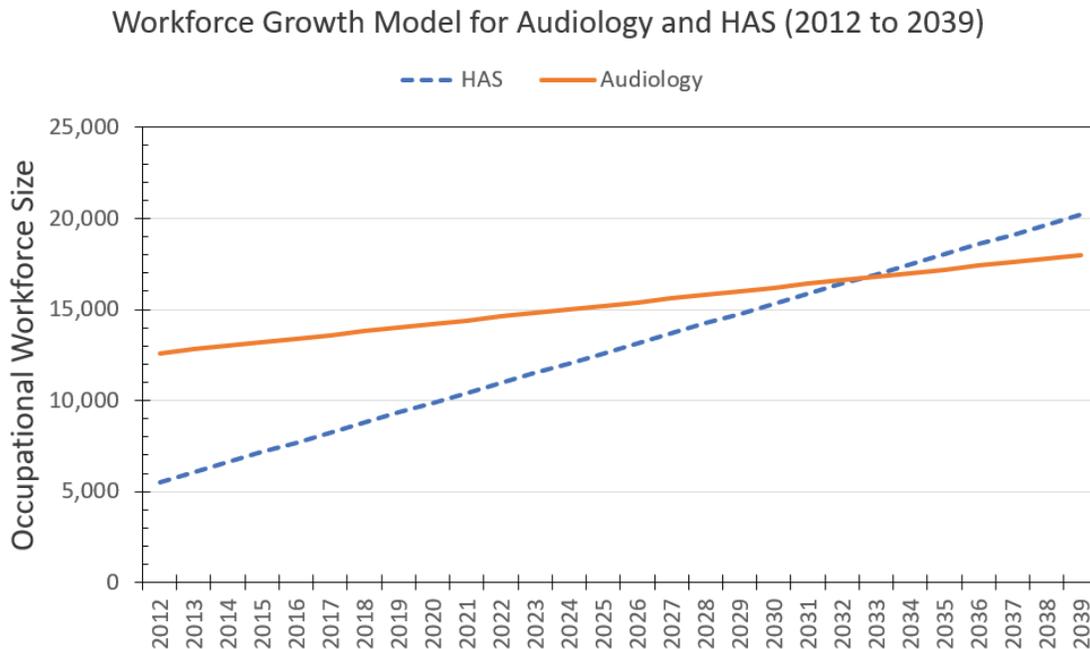
**Figure 6. Predicting hearing healthcare workforce that is expected in 2021 (re: 1999, depicted as red dashed line), and workforce estimates of Audiology (i.e., blue bars) and Hearing Aid Specialist (i.e., orange bars)**

The ‘what is’ scenario is currently being played out before our eyes. Specifically, the HAS scope of practice continues to expand—albeit with guidance from prominent audiologists aiding industry corporations in leveraging increased marketshare—to lessen the gap when it comes to serving the demand of US consumers in need of hearing health services. HAS are closing the gap on (i) the dispensing of hearing aids, (ii) the provision of services and technology related to tinnitus, (iii) the management of comorbidities (such as falls) by the introduction of healthable technologies, and (iv) screening for comorbidities and disabilities that may be associated

with untreated hearing loss (when there is a profit motive such as cognitive screening). Putting this into perspective, we refer to the adage: *While there may be ‘no free lunch,’ it certainly appears that the HAS profession is eating Audiology’s lunch!*

**The HAS scope of practice continues to expand to lessen the gap when it comes to serving the demand of US consumers in need of hearing health services.**

Lastly, **Figure 7** was constructed to predict the future impact of the current HAS workforce growth rate compared to that of the Audiology workforce growth. In the figure, *Audiology* is represented by the *solid orange line* and *HAS* is denoted by the *dashed blue line*. Note that the modeling predicts that that the HAS workforce will intersect (i.e., equal value) and surpass the AUD workforce around 2033, unless something changes for the two professions that alters their respective workforce growth rates.



**Figure 7. Predict future impact of the current Hearing Aid Specialist (HAS) workforce growth rate compared to that of the Audiology (AuD) workforce growth**

## Projections of Future Needs

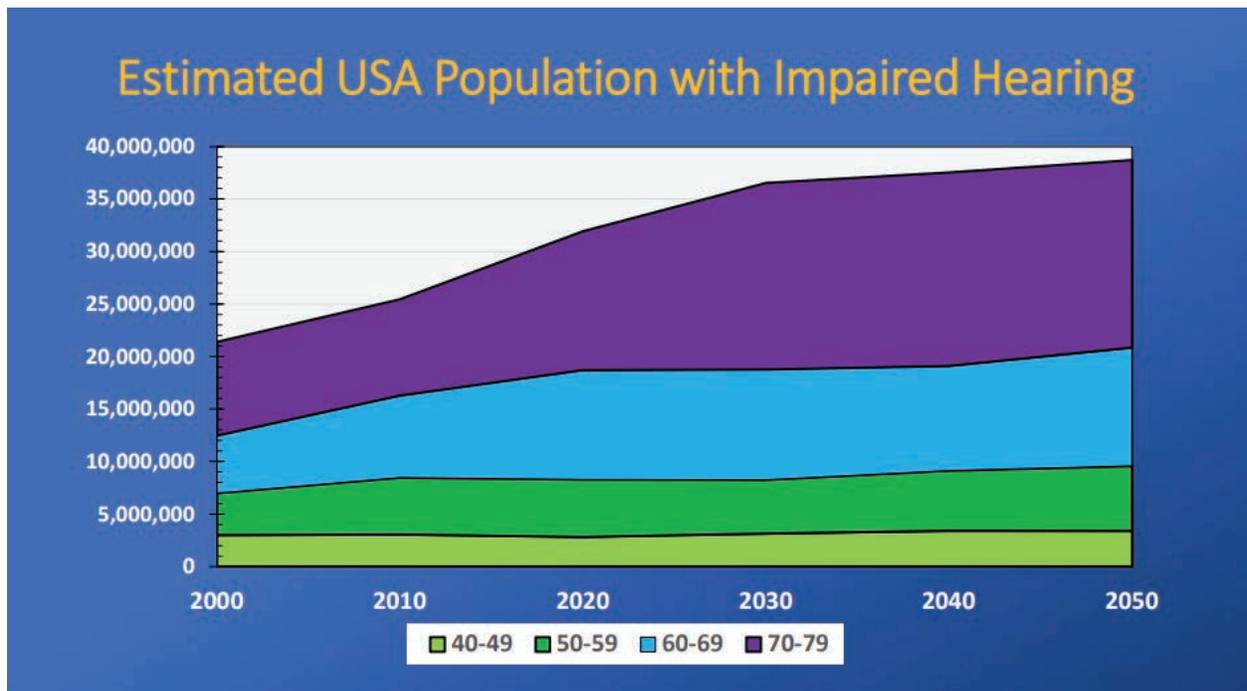
This workforce analysis would not be complete without a discussion on the population that is being served. **Figure 8** represents the predicted number of persons in the USA with impaired hearing (ages 40 to 79) between 2000 and 2050.<sup>7</sup> The figure was created by determining the US population as a function of age group by decade, which was multiplied by coefficients provided by Mener and colleagues<sup>8</sup> that estimates the percentage of individuals with hearing loss by age group.

Results from this analysis clearly show the Graying of America, where the number of hearing-impaired people aged 40-49 increase from nearly 3 million to 3.4 million between 2000 and 2050, while the number of hearing-impaired people aged 70-79 double from 8.9 million to 17.9 million during the same period. Overall, the hearing-impaired US population—aged 40-79 years—is expected to increase from 21.4 million in 2000 to 38.7 million in 2050.

In this modeling, in 2000, the ratio of audiologists to adult hearing loss was about 1:1,646 (21.4 million/13,000). This ratio increased markedly to 1:2,283 in 2030 (36.5 million/16000) given the marked rise in the adult hearing-impaired population, and slightly decreases in 2050 to an estimated 1:1,935 (38.7 million/20,000; Audiology inferred taken from data used in Figure

7. Bray & Amlani (2022). Analysis of Audiology and the (4-Year) Au.D. Degree. Presentation at ASHA Convention, November, New Orleans, LA.

8. Mener DJ, Betz J, Genther DJ, Chen D, Lin FR. (2013). Hearing loss and depression in older adults. *J AM Geriatric Soc*, 61(9):1627-1629.



**Figure 8. Graying of America: Predicted number of persons in the USA with impaired hearing (ages 40 to 79) between 2000 and 2050.**

7). Clearly, the future success and viability of our profession and our scope will hinge on whether we can grow our workforce to match accelerating population demands, particularly between now and 2030.

## Final Thoughts

The purpose of this paper was to provide our colleagues in the Academy of Doctors of Audiology (ADA) with insights with respect to the Audiology workforce. The positive message is that Audiology, with a renewed and robust analysis, seems to be on-par with BLS projections for its growth. Specifically, our report of 15% workforce growth over the last decade is in line with the BLS Occupational Outlook Handbook, Audiologists Job Outlook (2021-2031) of 10% projected change in employment.

Despite this piece of good news, there remain several problems. There is an opportunity cost associated with the transition to a doctoral-level profession that continues to impact the profession negatively (estimated at 9,000 in 2021), and that must be addressed to meet the needs of the ballooning growth of older Americans with hearing loss. In addition, the 15% growth rate over ten years is not on par with growth rates of similar professions such as OT (25%), PT (20%), SLP (26%), and Optometry (29%). This begs the question, ‘Why Not’, and will be a topic of future publications in this series.

Nationally, the ongoing shortage in Audiology workforce is being offset by rapid growth in HAS workforce. Their expanding workforce and expansion of scope of practice will continue as HAS foresees themselves as the primary profession that is serving the consumer with hearing loss, including all related services that can be provided through selling of multi-function, prescription hearing aids. Like-it-or-not, the viability and sustainability of Audiology is being challenged and the scope of practice is being slowly encroached.

# 15%

Workforce growth over the last decade is on-par with BLS projections for its growth.



Lastly, we strongly believe that our conclusions are indicative of the professional workforce and its challenges. However, the reader should be aware that there exist several other databases that could provide a different set of values and, correspondingly, different estimates than what is presented in this paper. In addition, we hope that the reader will understand that our intent is not to attack our profession, but through benchmarking which can identify best practices, identify both weakness in our current situation and possible solutions from other healthcare professions, especially those that have the Master's or Doctoral/Professional degree as the entry requirement to practice. ■

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# Centers for Medicare and Medicaid Services (CMS) CY2023 Physician Fee Schedule Update

BY KIM CAVITT, Au.D.

## **Physician Order Requirement Changes, effective January 1, 2023 ([www.cms.gov/files/document/cy2023-physician-fee-schedule-final-rule-cms-1770f.pdf](http://www.cms.gov/files/document/cy2023-physician-fee-schedule-final-rule-cms-1770f.pdf))**

As of January 1, 2023, audiologists will be able to **provide Medicare Part B beneficiaries with a non-acute hearing assessment every 12 months without a physician order.** However, **these assessments must be unrelated to:**

- Disequilibrium or hearing aids
- Examinations for the purpose of prescribing, fitting, or changing hearing aids

This applies to traditional Medicare (Part B) beneficiaries only. Medicare Advantage plans, generally, do not require a physician order (unless specified in your agreement).

Medicare Advantage plans, generally, do not require a physician order (unless specified in your agreement).

Vestibular Services (92517-92519 and 92537-92549) will always require a physician order for traditional Medicare coverage. (See Table A).

When the chief complaint is non-acute hearing assessment and unrelated to disequilibrium or hearing aids, or examinations for the purpose of prescribing, fitting, or changing hearing aids AND the audiologist is providing one or more of the 36 procedures listed in Table A, the audiologist can assess this patient once per calendar year without a physician order.

Audiology practices, especially at the outset, will need to be wary of the use of acute diagnoses such as sudden idiopathic hearing loss, acute otitis media, or vestibular diagnoses (dizziness, labyrinthitis, neuritis) on claims without a physician order. The Academy of Doctors of Audiology (ADA) recommends obtaining a physician order when receiving a referral from a physician or NPP, specifically an otolaryngologist (even if you are employed by the same business entity), for assessment of an acute otologic or vestibular conditions. In these situations, it is better to err on the side of caution and obtain a physician order, even if you are employed by the same business entity.

## SCHEDULING

Triage will be invaluable at scheduling to determine the appropriate need for a physician order. A practice will need to screen individuals for the warning signs of ear disease and any complaint, symptom,

**Table A: The list of 36 audiologic procedures that can be provided by audiologists for non-acute conditions without a physician or non-physician practitioner (NPP; nurse practitioner, physician assistant, for example) order once every 12 months.**

CPT Code	Short Descriptor
92550	Tympanometry & reflex thresh
92552	Pure tone audiometry air
92553	Audiometry air & bone
92555	Speech threshold audiometry
92556	Speech audiometry complete
92557	Comprehensive hearing test
92562	Loudness balance test
92563	Tone decay hearing test
92565	Stenger test pure tone
92567	Tympanometry
92568	Acoustic refl threshold tst
92570	Acoustic immitance testing
92571	Filtered speech hearing test
92572	Staggered spondaic word test
92575	Sensorineural acuity test
92576	Synthetic sentence test
92577	Stenger test speech
92579	Visual audiometry (vra)
92582	Conditioning play audiometry
92583	Select picture audiometry
92584	Electrocochleography
92587	Evoked auditory test limited
92588	Evoked auditory tst complete
92601	Cochlear implt f/up exam <7
92602	Reprogram cochlear implt <7
92603	Cochlear implt f/up exam 7/>
92604	Reprogram cochlear implt 7/>
92620	Auditory function 60 min
92621	Auditory function + 15 min
92625	Tinnitus assessment
92626	Eval aud funcj 1st hour
92627	Eval aud funcj ea addl 15
92640	Aud brainstem implt programg
92561	Aep hearing status deter i&r
92562	Aep thrshld est mlt freq i&r

or condition that is recent (within the past 90 days), or which involves disequilibrium (dizziness, vertigo, imbalance). Acute and disequilibrium concerns should be referred to a physician or NPP prior to testing, to secure a physician order.

## BILLING

**When a physician order is not required and not obtained, no ordering physician will be listed on the claim. Instead, the AB modifier (*Audiology service furnished personally by an audiologist without a physician/NPP order for non-acute hearing assessment unrelated to disequilibrium, or hearing aids, or examinations for the purpose of prescribing, fitting, or changing hearing aids; service may be performed once every 12 months, per beneficiary*) must be added to every procedure code performed on that date of service.**

Generally, the services billed on a traditional Medicare claim, will either all be physician ordered (where the name and national provider identifier of the ordering physician or non-physician practitioner is listed on the claim) or not ordered (non-acute hearing assessment and unrelated to disequilibrium or hearing aids, or examinations for the purpose of prescribing, fitting, or changing hearing aids where the AB modifier is added to every item and service listed on the claim). Failure to document an ordering physician AND failure to add an AB modifier to every service on a claim (that was provided without an order) will result in a claims denial. One exception may be when billing for some services to obtain the required Medicare denial. In this case, the GY modifier (item or service statutorily excluded or does not meet the definition of a Medicare benefit) would be added to those items and services which are non-covered by Medicare.

CMS will provide additional communication to determine if a patient has been seen in the past 12 months and therefore, a practice would be required to obtain a physician and/or NPP order to inform the patient that the testing would not be medically necessary.

It is recommended that practices either utilize an Advanced Beneficiary Notice, prior to assessment, or secure a physician referral if their practice has 1) no record of the use of the AB code (and associated testing) by their or another practice within the past 12 months, 2) does not have a physician order, AND 3) are planning, as a result of the lack of a

physician order, to utilize the AB modifier. Triage at the time of scheduling cannot be understated. ADA also encourages audiologists to reach out to their Electronic Health Record/Electronic Medical Record (EHR/EMR) vendors to determine what internal verification processes might exist.

Practices will need to obtain a physician order for ANY medically necessary procedure on the audiology code list ([www.cms.gov/audiology-services](http://www.cms.gov/audiology-services)) and/or that is listed in Table A once the beneficiary has undergone audiologic testing and utilized the AB modifier, for any service, within the past 12 months.

## GENERAL REMINDERS

Please note that just because the outcome is a hearing aid, does not mean that Medicare does not cover audiologic testing. Per CMS Update to Audiology Policies, “It is appropriate to pay for audiological services for patients who have sensorineural hearing loss and who wear hearing aids if the reason for the test is anything other than evaluation of the hearing aid. For example, there may be a perceived change in hearing or tinnitus that makes testing appropriate and covered<sup>1</sup>. Such testing might rule out other reasons for the symptoms (auditory nerve lesions, middle ear infections) and result in subsequent evaluation of the hearing aid (not covered) or aural rehabilitation by a speech-language pathologist (covered). 5717.5 When a test reveals information that is not known to the physician prior to the test, that information cannot be used to deny payment. For example, a test ordered due to a reported change in hearing may not be denied when the results reveal there is no change in hearing, but the audiologist also finds a hearing aid malfunction. However, if no hearing change is reported but the physician is aware that the patient’s hearing aid is broken, a test cannot be ordered solely for the purpose of fitting a new hearing aid.

Medicare covers testing that is medically reasonable and necessary. Per CMS Medicare Benefit Policy Manual, Chapter 15, section 80.3 (C)<sup>2</sup>:

**“Coverage and, therefore, payment for audiological diagnostic tests is determined by the reason the tests were performed, rather than by the diagnosis or the patient’s condition.”**

<sup>1</sup> <https://www.cms.gov/Regulations-and-Guidance/Guidance/Transmittals/downloads/r84BP.pdf>

<sup>2</sup> <https://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/downloads/bp102c15.pdf>

Under any Medicare payment system, payment for audiological diagnostic tests is not allowed by virtue of their exclusion from coverage in section 1862(a)(7) of the Social Security Act when:

- The type and severity of the current hearing, tinnitus or balance status needed to determine the appropriate medical or surgical treatment is known to the physician before the test; or
- The test was ordered for the specific purpose of fitting or modifying a hearing aid.

Payment of audiological diagnostic tests is allowed for other reasons and is not limited, for example, by:

- Any information resulting from the test, for example:
  - » Confirmation of a prior diagnosis;
  - » Post-evaluation diagnoses; or
  - » Treatment provided after diagnosis, including hearing aids, or
- The type of evaluation or treatment the physician anticipates before the diagnostic test; or
- Timing of reevaluation. Reevaluation is appropriate at a schedule dictated by the ordering physician when the information provided by the diagnostic test is required, for example, to determine changes in hearing, to evaluate the appropriate medical or surgical treatment or to evaluate the results of treatment. For example, reevaluation may be appropriate, even when the evaluation was recent, in cases where the hearing loss, balance, or tinnitus may be progressive or fluctuating, the patient or caregiver complains of new symptoms, or treatment (such as medication or surgery) may have changed the patient’s audiological condition with or without awareness by the patient.

Examples of appropriate reasons for ordering audiological diagnostic tests that could be covered include, but are not limited to:

- Evaluation of suspected change in hearing, tinnitus, or balance;

Coverage and, therefore, payment for audiological diagnostic tests is determined by the reason the tests were performed, rather than by the diagnosis or the patient's condition.



- Evaluation of the cause of disorders of hearing, tinnitus, or balance;
- Determination of the effect of medication, surgery, or other treatment;
- Reevaluation to follow-up changes in hearing, tinnitus, or balance that may be caused by established diagnoses that place the patient at probable risk for a change in status including, but not limited to: otosclerosis, atelectatic tympanic membrane, tympanosclerosis, cholesteatoma, resolving middle ear infection, Menière's disease, sudden idiopathic sensorineural hearing loss, autoimmune inner ear disease, acoustic neuroma, demyelinating diseases, ototoxicity secondary to medications, or genetic vascular and viral conditions;
- Failure of a screening test (although the screening test is not covered);
- Diagnostic analysis of cochlear or brainstem implant and programming; and
- Audiology diagnostic tests before and periodically after implantation of auditory prosthetic devices”.

Please note that, if an audiologist has never assessed the beneficiary, they do not know the “cause of disorders of hearing, tinnitus, or balance” or whether or not they are a hearing aid candidate. As a result, this testing is not precluded from legitimate Medicare coverage if medical necessity is documented in the medical record.

## TAKE HOME MESSAGE

Audiology has a significant opportunity here to illustrate the safety, efficacy, and savings of direct access. Do not ruin this for the entire profession by failing to refer for otologic and/or medical evaluations, when medically necessary, and/or by failing to appropriately document referrals in the medical

record and in the audiologic reports to primary care and attending physicians and health care providers. Documentation will be vital for medical necessity and medical review.

This will be a large learning curve for audiologists, their staffs, EHR/EMR vendors, clearinghouses, and Medicare Administrative Contractors (MACs). Education and patience will be important, especially in the first quarter of 2023. Per CMS, in the Final Rule:

“Aligning our final policy to use modifier AB...necessitates multiple changes to our claims processing systems, which will take some time to operationalize, possibly until mid-year 2023. Until such time, audiologists may use the AB modifier that is available for dates of service on and after January 1, 2023, to provide services/tests to beneficiaries who have directly accessed their services. Audiologists who furnish these services without an order are expected to follow our policy and safeguards built into the AB modifier, as above and in the code descriptor below. As we noted above, we plan to communicate to audiologists via provider education and other guidance, including the Audiology Services webpage page at <https://www.cms.gov/audiology-services>”.

The Academy of Doctors of Audiology (ADA) will continue to communicate with its members as new information becomes available. ADA will be hosting their annual coding and reimbursement update on December 9, 2022 at 12PM EST. Please watch your email for more information.

## Medicare Conversion Factor and Pricing Formula

The 2023 Medicare conversion factor will decrease by \$1.55, from \$34.61 in CY2022 to \$33.06 in CY2022. That will result in an approximately 4.4% reduction in Medicare allowable rates for 2023. In coming weeks, you will be able to view your 2023 Medicare fee schedule at <https://www.cms.gov/medicare/physician-fee-schedule/search/overview>.

## Telehealth

Medicare has again granted a temporary extension of coverage of audiology services, delivered via evidence-based telehealth, until December 31, 2023.

The services listed in Table B are covered if provided by a licensed audiologist.

**Table B: Audiology Telehealth Codes**

CPT Code	Short Descriptor
92550	Tympanometry & reflex thresh
92552	Pure tone audiometry air
92553	Audiometry air & bone
92555	Speech threshold audiometry
92556	Speech audiometry complete
92557	Comprehensive hearing test
92562	Loudness balance test
92563	Tone decay hearing test
92565	Stenger test pure tone
92567	Tympanometry
92568	Acoustic refl threshold tst
92570	Acoustic immitance testing
92587	Evoked auditory test limited
92588	Evoked auditory tst complete
92601	Cochlear implt f/up exam <7
92625	Tinnitus assessment
92626	Eval aud funcj 1st hour
92627	Eval aud funcj ea addl 15

## Merit Based Incentive Payment System (MIPS)

Audiologists are eligible providers within the MIPS system. Audiologists can determine their reporting requirements/options for voluntary reporting at <https://qpp.cms.gov/>. At this juncture, most audiologists do not meet the low volume threshold for required reporting, without penalty.

The Audiology Measure Set for 2023 includes:

- Documentation of Current Medications in the Medical Record
- Preventive Care and Screening: Screening for Depression and Follow-Up Plan
- Falls: Plan of Care
- Referral for Otologic Evaluation for Patients with Acute or Chronic Dizziness
- Preventative Care and Screening: Tobacco Use: Screening and Cessation Intervention
- Elder Maltreatment Screen and Follow-Up Plan
- Already a requirement of many state audiology licensure acts.
- Functional Outcome Assessment
- Falls: Screening for Future Falls Risk
- Screening for Social Drivers of Health
- Preventive Care and Screening: Unhealthy Alcohol Use: Screening & Brief Counseling

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**Dr. Kim Cavitt** was a clinical audiologist and preceptor at The Ohio State University and Northwestern University for the first ten years of her career. Since 2001, Dr. Cavitt has operated her own Audiology consulting firm, Audiology Resources, Inc. She currently serves on the State of Illinois Speech Pathology and Audiology Licensure Board. She also serves on committees through AAA and ASHA and is an Adjunct Lecturer at Northwestern University.



## The Tools You Need to Run Your Practice.

ADA's Practice Resource Library offers a comprehensive collection of off-the-shelf forms, documents, and guidance materials. These resources will assist audiologists and their staff with practice operations, compliance, and patient management.

- Adult Case History
- Business Associate Agreement
- Employee Manual
- Hearing Aid Bill of Sale/Purchase Agreement
- Hearing Aid Insurance Waiver
- Hearing Aid Loaner Agreement
- Hearing Aid Orientation Checklist
- Hearing Aid Upgrade Notice
- HIPAA Security Policy Template
- Insurance Verification Form
- Notice of Non-Coverage
- Office and Financial Policies
- Patient Registration Form
- Policies and Procedures Manual
- Price Quote Form

ADA members receive a discounted rate when purchasing any of the above forms. Visit [audiologist.org/forms](https://audiologist.org/forms) for details!



# HAVE YOU HEARD?

## **ADA 2022 Award Recipients Honored at AuDacity**

The Academy of Doctors of Audiology (ADA), the leading national audiology association dedicated to autonomous practice, has announced the recipients of the prestigious ADA Leo Doerfler Award for Clinical Excellence in the Community, the Craig W. Johnson Audiology Advocate Award, the Audiology Awareness Award, and the ADA Hearing Industry Leadership Award.

### **Dr. Whitney Swander Receives the Leo Doerfler Award for Clinical Excellence in the Community**

ADA has named Whitney Swander, Au.D., owner of Hearing Health Care Centers in Colorado, as the 2022 Leo Doerfler Award recipient. The Doerfler Award, ADA's highest honor, recognizes an audiologist for demonstrating outstanding clinical services in the community throughout their career. Eligibility for the Doerfler Award is open to ADA members who are private practitioners.

"Dr. Swander exemplifies lifelong learning and continually strives to find new ways to serve her patients and the community," said ADA President, Kristin Davis, Au.D. "In addition to her tremendous services to patients throughout Colorado, her volunteer service extends globally, and includes multiple mission trips to deliver better hearing and kindness to those in other countries."

Dr. Swander is a compassionate leader who is dedicated to her patients, her employees, and the community she serves. She has expanded her practice from four locations to seven and nearly doubled the number of employees (currently 20) over the past decade.

### **Dr. Timothy Steele Receives the Craig W. Johnson Audiology Advocate Award**

ADA has named Tim Steele, Ph.D., President & CEO of Associated Audiologists, as the 2022 Craig W. Johnson Award recipient. The Johnson Audiology Advocate Award recognizes an audiologist who has made significant contributions to the profession of audiology through federal and/or state advocacy.

In 2012, Dr. Steele was influential in securing the first Congressional sponsor (Representative Lynn Jenkins) to introduce federal legislation, which is today known as the Medicare Audiologist Access and Services Act, to streamline Medicare beneficiary access to audiologists and to improve coverage policies for audiology services.

"Dr. Steele has made tremendous personal, professional, and financial sacrifices to support advocacy initiatives that support evidence-based clinical practices and professional autonomy for audiologists," said ADA President, Dr. Kristin Davis. "We are grateful for both his foresight and his persistence—which is a model for all of us to follow!"

### **Dr. Kathy Landau Goodman Receives the ADA Audiology Awareness Award**

ADA has named Kathy Landau Goodman, Au.D. as the 2022 Audiology Awareness Award recipient. As

a Co-founder and President of the Audiology Awareness Campaign (AAC), Dr. Landau Goodman has led monumental efforts to raise awareness about audiology as a profession and the importance of optimizing hearing health during her three decades of service to the organization.

“Dr. Landau Goodman built the Audiology Awareness Campaign into a leading national public relations initiative,” said ADA President, Dr. Kristin Davis. “Her passion for the audiology profession is only matched by her creativity and communication savvy, and the audiology profession and the patients we serve have benefitted greatly from her work.

ADA, a longstanding supporter of the AAC, assumed oversight of the organization on October 1, 2022. ADA leaders look forward to following in Dr. Landau Goodman’s footsteps and continuing the exemplary work to advance AAC’s mission.

### **Dr. David Akbari Receives the ADA Hearing Industry Leadership Award**

ADA has named David Akbari, Au.D., Senior Medical Science, clinical and Regulatory Affairs Liaison at Intricon Corporation, as the recipient of the prestigious ADA Hearing Industry Leadership Award. The ADA Hearing Industry Leadership Award recognizes an individual or organization for outstanding achievements that elevate or advance the hearing industry.

“Dr. Akbari is a visionary leader who has made significant contributions to the hearing industry over the past several years,” said ADA President, Kristin Davis, Au.D. “During his volunteer service as a member of the ADA Over-the-Counter (OTC) Hearing Aid Working Group, Dr. Akbari provided invaluable technical and scientific expertise to help formulate ADA’s recommendations to the U.S. Food and Drug Administration in response to its Proposed Rule Establishing Over the Counter Hearing Aids, many of which were adopted by the agency.”

Dr. Akbari’s service to the hearing industry is not limited to OTC hearing aids. He currently serves as Chair of the ANSI/ASA/SE/WG48 Working Group, where he leads a vibrant group of scientists at the core of innovation and leadership in developing standard measures for testing hearing aids.

### **Sobun and Orologio Bring Home the Gold at the ADA Student Business Plan Competition**

The ADA Student Business Plan Competition took center stage as four competitors battled it out. Pallavi Sobun, Au.D. and Camden Orologio, Au.D., representing the Long Island Au.D. Consortium took home top honors and the \$5,000 Grand Prize for their proposal to bring audiology services to the Republic of Mauritius. This dynamic duo wowed judges with their innovative proposal and flawless presentation delivery.

Second Place, and a \$3,000 prize went to Autumn Barron, representing the University of Memphis with her business plan proposal for Reveal Mobile Hearing Solutions. Third Place and \$2,000 was awarded to Jasmin Rodriguez, representing California State University Northridge for the business plan proposal for Endearing Hearing and the \$1,000, Fourth Place honorable mention was awarded to Rachel Price and Kristen Moore, representing the University of Illinois Urbana-Champaign and their proposal for the FAB Foundation. Business plans were judged based on the following criteria: creativity, feasibility, completeness, cohesiveness, and professionalism.

The ADA Student Business Plan Competition could not succeed without the tireless commitment of the judges, who evaluate the business plan proposals and provide advice to students throughout the program. 2022 competition judges include Bill Conner-ton, National Vice President of Sales at CQ Partners, Dr. Sherri Little, owner and lead audiologist at Hearing Associates, a private practice with two locations in South Carolina, and Dr. Peter Marincovich, owner of Audiology Associates, a private practice in Santa Rosa, California.

ADA would like to thank CQ Partners and CounselEAR for their generous support of the 2022 ADA Student Business Plan Competition!

## AuDacity 2022 – Practically Perfect Peer-to-Peer Education



AuDacity 2022 was widely praised for bringing together audiologists and practice owners from around the nation to share resources, how-tos, and fixes with each other in a format designed to delivery practical and unstructured learning opportunities. A preconference Mobile Audiology Workshop, held in collaboration with Hearing Health & Technology Matters (HHTM) allowed participants to tour a mobile audiology clinic and offered hands-on demonstrations with portable audiology equipment.

Anchored by Keynote Presenter, Kacey Compton, M.Ed., LPCC-S, the regular AuDacity program featured concepts from her book, “Fix This Next for Healthcare Providers,”

which was distributed to all attendees. Plenary and concurrent sessions took the “healthcare practice hierarchy of needs” and applied the concepts to audiology practices. More than 50 exhibiting companies were on hand—with handy resources, products, and services that offered audiologists and practice owners innovative solutions that supported concepts discussed during the educational sessions.

The AuDacity program finale included two clinical workshops for audiologists interested in deepening their knowledge about tinnitus and auditory processing disorders, as well as an advocacy workshop, focused on implementation of the Food and Drug Administration Final Rule on Implementation of Over-the-Counter Hearing Aids.



**ADA Treasurer, Jason Leyendecker, Au.D. presents Whitney Swander, Au.D. with the ADA Leo Doefler Award**



**L-R ADA 2022 Student Business Plan Competition Judge Peter Marincovich, Ph.D, ADA 2022 Student Business Plan Competition Judge Bill Connerton, ADA Treasurer Jason Leyendecker, Au.D., Business Plan Competition Winners Pallavi Sobun, Au.D., Camden Oroglio, Au.D., ADA President-elect, Dawn Heiman, Au.D.**



**ADA President Kristin Davis, Au.D. presents Kathy Landau Goodman, Au.D. with the ADA Audiology Awareness Award**



**ADA Advocacy Committee Member Stacy Baldwin, Au.D. presents Tim Steele Ph.D. with the Johnson Audiology Advocate Award**



**ADA Immediate Past President, Victor Bray, Ph.D. presents David Akbari, Au.D. with the ADA Hearing Industry Leadership Award**

## Feedback on AuDacity 2022 from One Practice and Two Professionals

I wanted to thank you for the privilege of participating in the 2022 AuDacity Conference Planning Committee. I have to say I was blown away by the genuine enthusiasm to promote independent Audiology practices. It certainly bolstered my desire to stay active in the advocacy of our profession at the state and national levels. We all know there is still much work to be done to have Audiology acknowledged, accepted, and respected in the medical field.

I hope to have the opportunity to continue to work closely with the ADA for future events.

Dr. Abby Ryan, my colleague, was afforded the opportunity to speak in the concurrent sessions. Like I, she was so impressed with the level of the interest in Audiology practice management which we have not seen this well promoted at state or other national conferences. It was refreshing to have such a large group of practice owners presenting which allowed for great side discussions of how we can all benefit from one another's experiences in business. The venue was easily accessible for travel planning, from all over the country, and certainly offered a fabulous variety of options to enjoy when not in meetings.

I have proudly submitted my membership for 2023 and look forward to another great conference in Bonita Springs!



**Dana Walchek, Au.D.**  
Owner/Audiologist, Hearing Solutions, Birmingham, AL

As a first time ADA/AuDacity attendee, I first want to thank everyone for bringing their expertise and experience to the table and engaging in such fruitful, constructive, and open exchanges throughout the four days of this conference. This was by far the most informative conference that I have attended. I definitely gained a lot of business insight and tools that I can use right away within our audiology private practice.

Also, special thanks to the Education Committee, including my mentor, Dr. Dana Walchek, for their leadership and support. It was an honor to be included in the Amplification Concurrent sessions alongside Drs. Alicia Spoor, Jill Davis, and Ram Nileshtar. I greatly enjoyed sharing our professional experience related to expanding amplification services through the cochlear provider network and hope it assists others in their amplification and service offerings. In addition, I feel the topic of cochlear implants is of extreme importance given the ever-growing need for cochlear audiologists. With the recent change in cochlear implant candidacy criteria for Medicare/Medicaid being increased from 40% to 60% in the best-aided scenario, effective immediately, now is the time to act. Now is the time to consider providing such services because according to the world health organization, by 2050 seven hundred million people will have disabling hearing loss. By providing cochlear services wherever you are in your hearing health journey you will broaden your service portfolio, partner with others in your medical community, better maintain existing patients as well as attract new patients, expand alternate revenue sources, and captivate your patients with new audiology talent.

Again, many thanks for the invitation to speak at the 2022 ADA/AuDaCITY conference in Grapevine, Texas. I am extremely proud and honored to be one of the newest members of an organization dedicated to the advancement of practitioner excellence, high ethical standards, professional autonomy, and sound business practices in the provision of quality audiologic care. I look forward to participating in and seeing you all next year in the sunshine state, Florida, for the ADA 2023 conference!



**Abby Ryan, Au.D.**  
Audiologist, Hearing Solutions, Birmingham, AL

# AuDacity 2022



## PRESIDENT'S MESSAGE

*Continued from page 3*

strive for personal growth and development while contributing to the work of sound hearing healthcare policy. Each of us has personal and professional strengths that can be employed as resources for our profession. If each of us give a little the work will be much less for all.

I would also like to take this opportunity to ask you all.....Do you still stand behind the mission and beliefs of the Academy of Doctors of Audiology? Do you want autonomy, meaning you, the professional, are in charge of yourself? Do you want to be a full doctoring, profession? Will you do what it takes to get there?

The ADA members at AuDacity this year answered the call to action speaking with their wallets to send a definitive message: **We are mobilized to pass the Medicare Audiologist Access and Services Act and advocate for autonomy!**

*What can all of us do?*

- Be an active/engaged member of our state professional organization.
- Our national organizations have their strengths and weaknesses as well. I would argue that one of ADA's strengths is **ADVOCACY**. Choose who you contribute your limited time and resources to, based on their alignment with your goals.
- **DO SOMETHING**-pick one thing and start there...it can be as little as one phone call or email to a legislative office, a \$10 donation to the ADA Eric N. Hagberg, Au.D. Advocacy Fund, or signing up for a committee with your state or national organization. When you volunteer you have greater input into the direction of your profession.

This matters! While We are on our way to seeing the passage of MAASA, our work is far from over. We need to view ourselves and our profession through the lens of “what doctors do” and rise to that level of professionalism.

Speaking of which, there is still time to “Fork it Over for Audiology” and if you hurry, you can also have one of the super cool tuning fork trophies created by Stephanie Czuhajewski and crew!

The Academy of Doctors of Audiology leaders will keep working toward what those before us, like Dr. Hagberg, started -- to move Audiology to a full doctoring profession. My year as your President is coming to a close but I will continue to use my time, talent, and treasure to ensure the future of an autonomous audiology profession. I reflect on 2022, full of hope because of all of you! ■

## EDITOR'S MESSAGE

*Continued from page 5*

manufacturers have their own “flavor” of WDRC, meaning they all work a little differently. However, each “flavor” of WDRC performs the same essential job: amplify soft sounds more than loud sounds.

- **Feedback cancellers:** A negative by-product of the first feature, WDRC, is feedback (that nasty squealing sound). Hearing aids have the ability to instantaneously recognize that squealing sound and cancel it without reducing the gain necessary to hear soft speech.
- **Multiple types of noise reduction algorithms:** There are several types of algorithms on a single hearing aid that identify and reduce unwanted, steady-state and impulse noise — the type of noise you experience when eating dinner at your kitchen island and the appliances are running and the silverware clanks on the dish. Hearing aid manufacturers have been incrementally improving the performance of these noise reduction features for decades. Several studies demonstrate they improve listening effort and reduce fatigue when they are activated.

*Continued on page 64*

## EDITOR'S MESSAGE

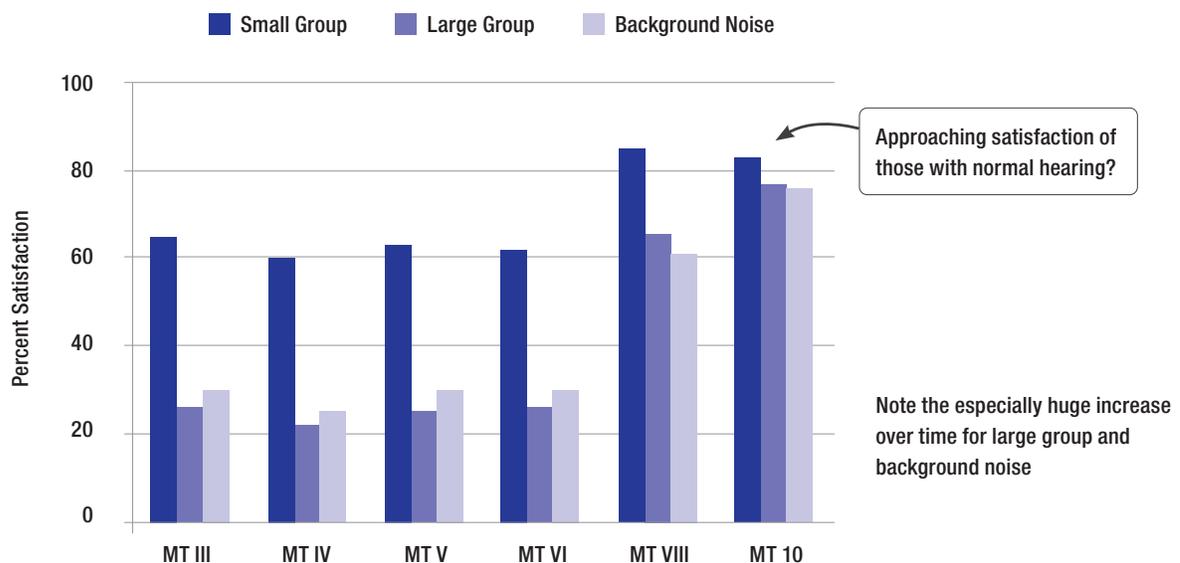
Continued from page 63

- **A final important point:** When these features (and others) are combined in the same hearing device, all kinds of weird artifacts affecting sound quality can occur. The hearing aid industry has decades of experience and knowledge they apply to improving how these features work together. It's doubtful any upstart OTC manufacturer, on their own without any assistance from experienced hearing aid engineers, would get these synergistic effects right for at least a few product cycles.

### Get on the Bus, Gus

The Figure below, created by Gus Mueller, shows just how much patient satisfaction for noisy listening conditions has improved in the past few years. This is survey data, collected by the Hearing Industries Association about every four years for the past 30 years (MT III was collected in 1991 and MT 10 was collected in 2019). It shows the positive impact that hearing aid innovations have had on performance in challenging listening situations.

**Figure. Patient satisfaction trends across 30 years for three different listening conditions.**



You could argue this improvement in patient satisfaction is driven more by the quality of care provided by the professional who is prescribing and fitting the device, than the device itself. Indeed, it is true that the hearing care professional plays a critical role in creating satisfied patients but having been an audiologist since 1991 (when MT III data was collected), I can tell you firsthand the consistency and quality of service has stayed the same for those 30-plus years. As a profession, we take great care of patients the same thorough and kind-hearted way today that we did in 1991!

Instead, this sudden uptick in patient satisfaction, shown in the MT VIII and MT 10 surveys, for noisy places is driven by the innovations coming from hearing aid manufacturers.

### Make a new plan, Stan

Rather than anticipating novel approaches to how sound is identified and processed by hearing devices, we should be looking for upstarts to commercialize other technological breakthroughs that will address the pervasively low hearing aid uptake rates. Here are three innovations I would like to see from OTC players



It's a little astonishing that pundits within the Audiology profession express surprise that the first OTC devices are nothing more than traditional hearing aids in disguise.

**Wearer-friendly device interfaces:** Make the fitting, adjustment and fine-tuning of gain, output, and other key features (directional microphones) intuitive and easy-to-do using a smartphone app, self-directed by the wearer instead of the professional. We're already seeing in-roads in this area from Bose (and others) who have brought fresh approaches to fitting and fine-tuning — methods that could stand side-by-side with the traditional audiogram-based prescriptive method we've been using in clinics for about 50 years.

**Extended bandwidth devices:** Recent research suggests that at fairly large number of younger and middle-aged adults have normal hearing, as recorded on the audiogram, and self-reported difficulties communicating in noisy places. However, ultra-high frequency audiometry (testing beyond 8 KHz) shows substantial hearing loss in many of these individuals. Additionally, there is some evidence indicating these individuals might benefit from hearing devices that restore these ultra-high frequencies.

Traditional hearing aids tend to roll-off high frequency gain starting at about 6 KHz. Perhaps a start-up OTC company can bring a device to market that enables people with this condition to self-fit and have these ultra-high frequencies restored.

**Hearing aids that effectively amplify music:** Given the demand to improve speech understanding, hearing aid manufacturers have devoted tons of resources to addressing this problem. The challenge, however, is that signal processing algorithms designed to optimize speech in noise tend to not sound too good when the wearer wants to listen to music. Maybe a consumer electronic device company will commercialize a hearing aid that can be tuned by the wearer to maximize the enjoyment of music.

Given their track record, I'm betting the mainstay hearing aid manufacturers get there first. So, drop off the key, Lee, and set audiology free. ■

## Footnotes

1. It's a valid point that over the past 50-plus years, the hearing aid industry and the hearing healthcare professions, on a massive scale, have done little to improve the low uptake rate of hearing aids for under-served populations. When it comes to service delivery innovations we do seem to be running behind. Remote or virtual care, when combined with prescription or OTC hearing aids might move the needle on uptake rates.
2. More than 40 years ago, renowned audiologist and engineer, Mead Killion, established that the fidelity of hearing aids could be on par with sophisticated stereo equipment
3. Loosely defined as any electronic device that reproduces sound, the "audio world" includes recorded music, home theater systems, car stereos, consumer electronics such as earbuds and headphones and of course hearing aids

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*Brian Taylor, AuD is the senior director of audiology for Signia. Yes, he is employed by a hearing aid manufacturer. Additionally, he is (or has been) a clinician, business manager and professor. He is the co-author of the text, Fitting and Dispensing Hearing Aids, now in its third edition.*

## HEADQUARTER'S REPORT

*Continued from page 7*

language. Read poetry if you typically read non-fiction. You may also find that the things you learn outside of your normal sphere, will spark new creative ideas that you can apply to your clinical or business pursuits.

When it comes to audiology education in 2023, make a resolution to reduce your intake of “fatty” content--and instead, go beyond! Make plans to go to AuDacity 2023, *Go Beyond*, which will be held November 2-5, 2023, in Bonita Springs, Florida, and take your clinical and business practices beyond!

AuDacity, *Go Beyond*, will combine unmatched learning opportunities and unrivaled social activities to help you build your network, your clinical expertise, and your business. Meet new people and new ideas, while meeting up with old friends in a beautiful, rejuvenating setting!

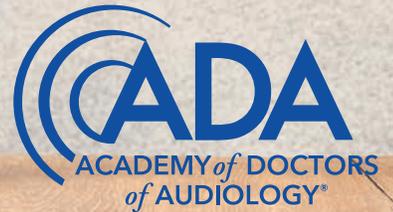
Here's to a Healthy, Happy 2023! ■

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# Contact Your Legislators!

Urge them to support the **Medicare Audiologist Access and Services Act** (H.R. 1587 and S. 1731)



The Medicare Audiologist Access and Services Act of 2021 (H.R. 1587 and S. 1731) will remove unnecessary barriers, allowing patients to receive appropriate, timely, and cost-effective audiologic care. This legislation can improve outcomes for beneficiaries by allowing direct access to audiologic services and streamlining Medicare coverage policies so that audiologists can provide the full range of Medicare-covered diagnostic and treatment services that

correspond to their scope of practice. The legislation would also reclassify audiologists as practitioners, which is consistent with the way Medicare recognizes other non-physician providers, such as clinical psychologists, clinical social workers, and advanced practice registered nurses.

## **Support the future of audiology!**

Contact Congress today and express your support for H.R. 1587 and S. 1731.

Visit [chooseaudiology.org/support](https://chooseaudiology.org/support) and contact your congressperson today!



# AuDACITY

November 2-5, 2023

BONITA SPRINGS, FLORIDA

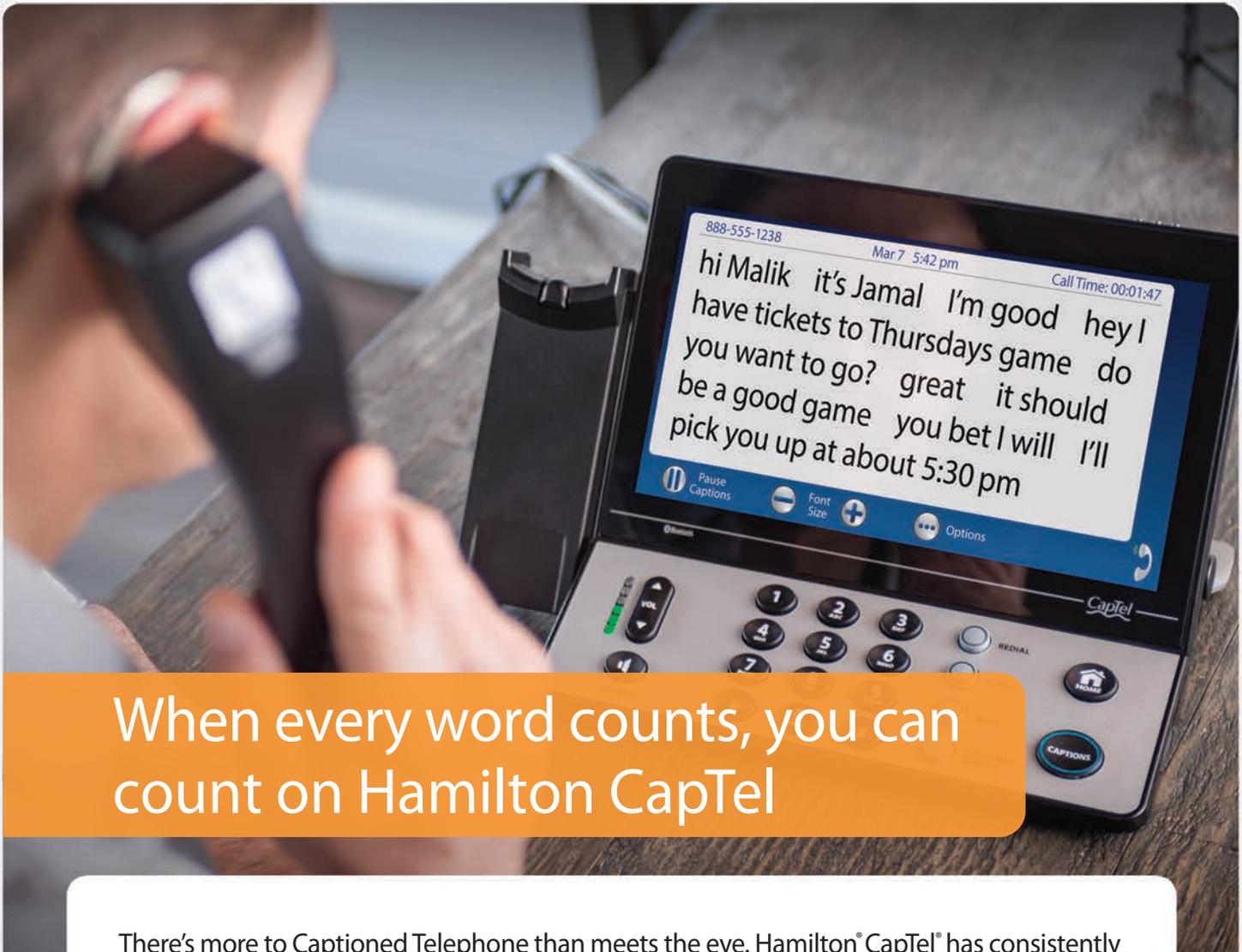
HYATT REGENCY COCONUT POINT



**AuDacity 2023, Go Beyond**, will exceed every limit and all expectations with brand new, peer-curated content, developed and delivered by practicing audiologists and practice owners (no canned presentations, no “circuit” speakers, and no cliques). AuDacity, Go Beyond, will combine unmatched learning opportunities and unrivaled social activities to help you build your network, your clinical expertise, and your business.

Visit [audiologist.org/2023](https://audiologist.org/2023)  
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The purpose of the **ADA Student Academy of Doctors of Audiology (SADA)** is to serve the varied needs and concerns of student and emerging graduated members of ADA. SADA members have access to exclusive student resources, ADA's mentoring program, eligibility to participate in the Student Business Plan competition at the annual AuDacity Conference, and can help set the direction of ADA student initiatives.

**Get involved today! Visit [audiologist.org/sada](https://audiologist.org/sada) for more information.**