

bulletin



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The official member magazine of the **American Academy of Otolaryngology—Head and Neck Surgery**

MARCH 2022



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bulletin features

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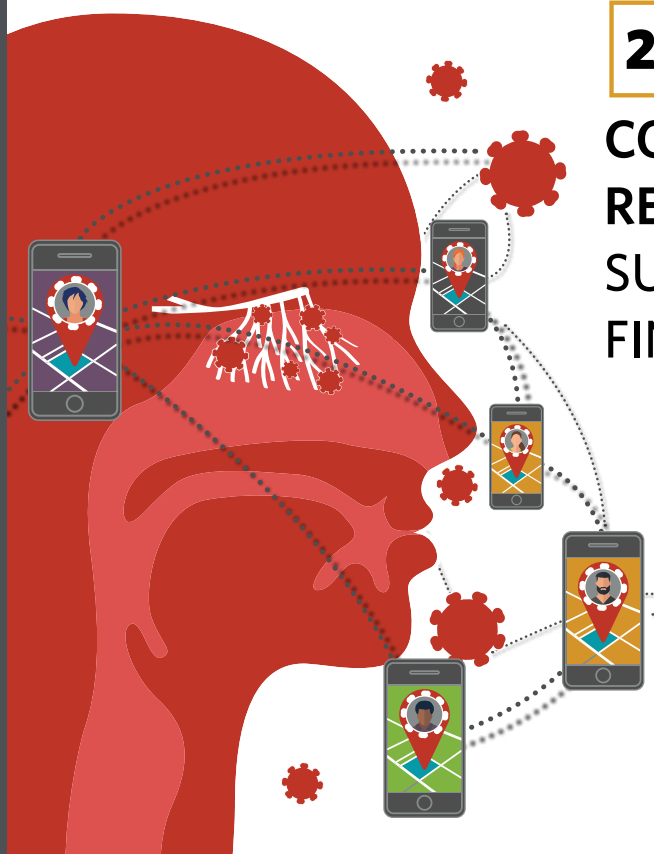
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Advocacy and You

*If you ever need a helping hand
I'll be there on the double just as fast as I can
—“Ain't No Mountain High Enough”
Tammi Terrell and Marvin Gaye*

As the 2022 legislative sessions ramp up in many states across the country, and Congress debates targeted healthcare reforms in Washington, DC, the opportunity and time to advocate for our specialty is upon us once again.

What Is Advocacy?

The primary arenas for advocacy revolve around legislative and healthcare concerns. Identifying and prioritizing the most pertinent issues, raising and confirming awareness to the appropriate bodies (local, regional, or national), and formulating and enacting effective action plans are of paramount importance for us to succeed.

Many familiar themes resurface annually, including scope-of-practice expansions pursued by a variety of different groups, infringements on patient/provider relations and medical decisions, and battles for fair payer regulations and restrictions. It is imperative that we support advocacy efforts for our patients and our practices and for the prosperity and survival of our profession.

When to Advocate?

Any time significant issues arise that impact our ability to deliver optimal healthcare, we should collectively feel the need and urgency to share our thoughts, support, or opposition. Numbers matter from legislators' scopes of vision. A surge in communications by any group—particularly physicians who in general do not routinely contact legislators en masse—can send a strong signal regarding the importance of an issue and hopefully stimulate prompt consideration.

How to Advocate?

National/Federal. The AAO-HNS has a wide swath of advocacy programs and tools to facilitate member engagement. Our role as members is to remain vigilant and united and to take appropriate action when necessary.

- ENT PAC is the only federal political action committee that has the interests of otolaryngologists foremost in their radar and their actions.
- Grassroots advocacy opportunities include (1) Project 535, (2) State Trackers, and (3) In-District Grassroots Outreach [I-Go]. Learn more at <https://www.entnet.org/advocacy/>.

- Federal congressional meetings are held on a regular basis by our Academy leadership with legislators and key influential committees. Our Physician Payment Policy (3P) Workgroup and health policy advocacy staff are continually working to advocate for members with regulators and insurers.

Regional. Our Board of Governors Regional Representative system is a particularly effective way to share regional information on common themes and trends. Our dedicated regional representatives are listed at <https://www.entnet.org/get-involved/board-of-governors/bog-region-map/>.

Local/State. Advocacy occurs primarily through participation with state ENT societies and state medical societies. The following are some of our Connecticut state ENT Society's most successful strategies:

- Employ an executive director/lobbyist to remain abreast of active and impending issues and to maintain essential legislative contacts at the state Capitol to share our concerns and identify supporters and champions of our causes.
- Maintain an invaluable relationship with a team of defense lawyers who keep us alerted to legislative trends and strategies that may influence our goals and agendas.
- Implement mandatory member physician sign-up for member physicians to commit to half a day per year to testify or to speak with key legislators.
- Operate with an inclusive Executive Committee and Board, which has representation from across the state and work collaboratively among all practice types.
- Include updates from legislators, attorneys, and/or lobbyists at our biannual state society meetings.

Why Advocate?

As **Gavin Setzen, MD**, AAO-HNS/F Past President, so succinctly sloganized, “Advocate or Abdicate.” These words have never rung truer. With the plethora of issues currently facing our nation, involvement and participation are key determinants of our successes or failures. To those veteran and already active advocates who routinely participate, thank you for being our champions and our voices. For all others, consider increasing your advocacy efforts through any of the multiple opportunities available. Your input truly matters. ■



Ken Yanagisawa, MD
AAO-HNS/F President

“With the plethora of issues currently facing our nation, involvement and participation are key determinants of our successes or failures.”

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Working Together to Improve Hearing

The Academy partnered with the U.S. Food and Drug Administration (FDA) and other stakeholders in planning and participating in the recent Cochlear Implants Innovation, Research, and Advancement (CIRCA) Workshop that took place February 1-2. This workshop, which originally had been planned for late 2019 as an in-person meeting in Boston, Massachusetts, signaled an important strategic event as the FDA sought input from major stakeholders, including government representatives from the FDA and the National Institutes of Health (NIH), the provider community including otolaryngologists and audiologists, cochlear implant manufacturers, patients, and a representative of the insurance industry.

The workshop addressed future research direction, updating FDA indications to more closely mirror real-world clinical care, discussing the applicability of clinical registries or networks of registries for pre-market and post-market longitudinal tracking of real-world evidence relating to cochlear implant usage and outcomes, identifying and creating a minimum core data set for collection, and aligning the research and clinical study needs required for FDA approval with those used by insurance carriers when determining coverage for cochlear implantation. A common goal of getting the newest technology to patients in a timely fashion was expressed by all stakeholders.

We can't underestimate the significance of the FDA calling together the cochlear implant community to identify opportunities to improve technology and measure outcomes through longitudinal observation and collection of real-world data through registries that would in turn increase timely access to the appropriate level of hearing rehabilitation to maximize hearing results for all levels of hearing loss. This comes at a time when FDA regulations are being finalized for over-the-counter hearing aids that will be available in the next several months to those with mild- to moderate hearing loss. Additionally, there is pending legislation that would expand Medicare coverage to include hearing aids and hearing services that have not previously been covered. Taken as a whole, these three initiatives have great potential to markedly change access to care for those with hearing loss and improve their opportunities in life.

The workshop also highlighted the hurdles we encounter in collecting the data necessary to define desirable outcomes and the design strategies to reach those outcomes. Despite the billions of dollars spent on electronic health records for both in-office and outpatient care, as well as hospital and healthcare system records systems, there continues to be a major problem with interoperability and the ability to incorporate unstructured data and ancillary reports, such as audiograms, imaging and path reports, and detailed operative reports. This situation is compounded by the large number of EMRs used in otolaryngologists' offices and the multiple hospital systems where they also practice. The integration of data even within a single practice can be troublesome, but progress continues to be made and conferences like this will help ensure future progress.

One of the most impactful topics discussed at this workshop involved the harmonization of the pre- and post-market submissions to the FDA for new device approval and longitudinal follow-up with the clinical information required by payers for coverage. Large data sets should shorten the time it takes to accumulate information supporting both. This hopefully will shorten the time it takes to bring new technology to the marketplace and provide insurance coverage so patients can access these new tools that can improve patient care instead of being limited by the current "experimental" and "investigational" tags.

Congratulations to **Carol R. Bradford, MD, MS**, and the Nominating Committee for the outstanding job they did this year in identifying and selecting the slate of candidates that is presented in this *Bulletin* on page 6. We are bringing back the Candidates Forum to the virtual AAO-HNS/F Leadership Forum & BOG Spring Meeting on April 9. You will get the chance to hear each candidate for President-elect speak and answer questions along with an outstanding program crafted by the Board of Governors. This year, we will also include video presentations by candidates for all offices along with their responses to submitted questions that will appear in the April *Bulletin*. The videos from all candidates along with their personal statements and CVs will also be available on the ballot for review during voting. Please take the time to select your future leaders, they will all have important jobs as they guide our future. ■



James C. Denneny III, MD
AAO-HNS/F EVP/CEO

“...these three initiatives have great potential to markedly change access to care for those with hearing loss and improve their opportunities in life.”

AAO-HNS Announces Official Slate of Candidates for the 2022 Annual Election

The AAO-HNS extends sincere appreciation and gratitude to the members of the Nominating Committee for their careful and meaningful deliberation of nominees to present the 2022 official slate of candidates below:

President-Elect

Douglas D. Backous, MD
Lance A. Manning, MD

At-Large Directors (Academic)

Yuri Agrawal, MD
Jeffrey M. Bumpous, MD

At-Large Directors (Private Practice)

Marc G. Dubin, MD
Jeffery J. Kuhn, MD, CAPT, MC,
USN (Ret.)

Nominating Committee (Academic—Seat One)

Nausheen Jamal, MD
Rodney J. Taylor, MD, MSPH

Nominating Committee (Academic—Seat Two)

Michael J. Brenner, MD
D. Gregory Farwell, MD

Nominating Committee (Private Practice—Seat One)

Stephen P. Cragle, MD
D. Scott Fortune, MD

Nominating Committee (Private Practice—Seat Two)

Darius Kohan, MD
Douglas D. Reh, MD

Audit Committee

Cecelia Damask, DO

Look for the candidate statements in the April issue of the *Bulletin* to learn more about each candidate prior to the opening of voting on May 9.

Nominating Committee Members

Carol R. Bradford, MD, MS (Chair); Samantha Anne, MD, MS; Andrew M. Coughlin, MD; C.W. David Chang, MD; Soha N. Ghossaini, MD; Eli R. Groppo, MD; Ken Kazahaya, MD, MBA; Steven T. Kmucha, MD, JD; Stella E. Lee, MD; Charles E. Moore, MD; Anna M. Pou, MD; Seth R. Schwartz, MD, MPH; Angela K. Sturm, MD; and Troy D. Woodard, MD.

Roger D. Cole, MD, and James C. Denny III, MD, also contributed as *ex-officio* members of the committee without vote.

The Candidates Forum Returns in 2022

During the AAO-HNS/F 2022 Leadership Forum & BOG Spring Meeting, which is being held virtually on April 9, the candidates running for President-elect

will be available to answer questions about their vision and qualifications for this leadership position.

The Candidates Forum provides members the opportunity to interact with candidates during the election cycle to learn more about them, their perspectives, and their historic engagement with the Academy as well as prior relevant experience.

Registration for the Leadership Forum is free to all Academy members. Register today to join this important dialogue about the future leadership of the Academy.

https://entnet-org.zoom.us/webinar/register/WN_w2vxxO4OROq0dr5RdrhOkw.

Recorded video statements by all the candidates will be available in April at <https://www.entnet.org/about-us/leadership-governance/annual-election-results/slate-of-candidates/>.

Stay connected with the latest news on the AAO-HNS Election by reading your weekly edition of *OTO News* and the *Bulletin*.





Don't Miss the Latest Podcasts from OTO Journal

To access the library of podcasts hosted by **John H. Krouse, MD, PhD, MBA**, Editor in Chief of *Otolaryngology-Head and Neck Surgery* and *OTO Open*, go to <http://sageotology.sagepub.com>.
libsynpro.com/ ■

New in OTO Logic!

E&M Coding Changes 2021: A Guide for Otolaryngology Providers

This new eCourse reviews the changes to outpatient E&M coding instituted January 1, 2021, and how those changes affect providers. The redefined medical decision-making elements, time-based coding criteria, and prolonged service codes will be discussed. Assess your knowledge by completing the posttest and evaluation for 1.0 CME/MOC credit. <https://academyu.entnet.org/diweb/catalog/item/id/8822414>

Chronic Cough Evaluation and Management

The new eCourse reviews an evidence-based, organized approach to treating patients with chronic cough and delineates the many possibilities for treatment. Chronic cough is a vexing medical problem that often involves input from many specialists, including primary care physicians, pulmonologists, gastroenterologists, allergists, speech-language pathologists, and otolaryngologists. Assess your knowledge by completing the posttest and evaluation for 1.0 CME/MOC credit. <https://academyu.entnet.org/diweb/catalog/item/id/8618392> ■



World Hearing Day: To Hear for Life, Listen with Care!

The World Health Organization founded World Hearing Day to raise awareness on how to prevent deafness and hearing loss and to promote ear and hearing care throughout the world.

The World Hearing Day 2022 theme focuses on the importance of hearing loss prevention through safe listening, with the following key messages:

- It is possible to have good hearing across the span of one's life through ear and hearing care.
- Many common causes of hearing loss can be prevented, including hearing loss caused by exposure to loud sounds.
- Safe listening can mitigate the risk of hearing loss associated with recreational sound exposure.

Looking for materials to share with your patients? [ENThealth.org](https://enthealth.org) offers extensive patient information on hearing-related conditions and treatments, as well as wellness and prevention articles. [#safelistening](https://twitter.com/safelistening) [#worldhearingday](https://twitter.com/worldhearingday) [#hearingcare](https://twitter.com/hearingcare) ■

#IAMOTO Match Day

March 18, 2022

AAO-HNS looks forward to welcoming newly matched residents to the specialty on Match Day 2022, March 18. Tell us why you're proud to be an ENT, why you love the specialty, what drew you to otolaryngology-head and neck surgery, or your Match Day story by sharing your stories, photos, and videos on social media using #IAMOTO and tagging @aaohns on Facebook, Twitter, Instagram, and YouTube.

Program Directors: Help the Academy showcase the new faces of the specialty! Invite your new and current OTO matches to send a photo or short video on or leading up to Match Day sharing why matching otolaryngology is important to them. We'd also love to see your videos of OTO matches being announced.

For more information, visit <https://www.entnet.org/otomatch>.



WORLD VOICE DAY 2022

APRIL 16

Save the Date: World Voice Day is celebrated on April 16 annually.

Look for more materials from the AAO-HNS Voice Committee in the April *Bulletin* and at <https://www.entnet.org/WorldVoiceDay>.



INTERNATIONAL
ADVISORY BOARD

Call for IAB Chair-Elect Nominees

Are you interested in holding a global leadership position within the Academy, or can you recommend a colleague? The AAO-HNS is seeking nominees to serve as Chair-elect of the International Advisory Board (IAB) starting on October 1, 2022, through September 30, 2023, and as Chair from 2023 to 2024.

Candidates must be Academy members in good standing and practicing outside the United States and affiliated with an AAO-HNSF International Corresponding Society to qualify.

The election will be held during the AAO-HNSF 2022 Annual Meeting & OTO Experience on September 10-14 in Philadelphia, Pennsylvania. Deadline for submission is April 1, 2022.



National Sleep Awareness Week Is March 13-19: Be a Sleep Health Advocate!

The National Sleep Foundation sponsors this health observation to create awareness about the importance of sleep health. For information and resources to share with your patients about sleep disorders and treatments, go to ENThealth.org to find the following patient information:

- ENThealth Sleep Journal
- Pediatric Sleep-disordered Breathing
- Snoring, Sleeping Disorders, and Sleep Apnea
- Continuous Positive Airway Pressure (CPAP)
- Treatment Options for Adults with Snoring
- Surgery for Obstructive Sleep Apnea
- Tips to Improve Your Sleep Quality
- FAQs: Rhinoplasty Patients with Obstructive Sleep Apnea (OSA)



2022 International Visiting Scholarship Program

Are you an international otolaryngologist-head and neck surgeon, less than 40 years old (or within the first eight years of professional practice), and in a junior full-time teaching position? You may be eligible for the AAO-HNS International Visiting Scholarship (IVS). The IVS program offers a limited number of scholarships to junior academics from developing countries to attend the AAO-HNSF Annual Meeting & OTO Experience and participate in an academic observership at a U.S. otolaryngology department or institution (arranged independently by the candidate). IVS awardees receive a one-year membership to the AAO-HNS, a monetary award of USD \$2,000, and a waiver for the AAO-HNSF 2022 Annual Meeting & OTO Experience registration fees.

The application deadline is May 1. Visit www.entnet.org/IVS or contact international@entnet.org for more information.

Oral, Head and Neck Cancer Awareness Week: April 3-9

Oral, Head and Neck Cancer Awareness Week® (OHANCAW), is led by the Head and Neck Cancer Alliance and supported by the AAO-HNS. OHANCAW is a week dedicated to promoting awareness of oral, head, and neck cancer—from screening and diagnosis to treatment and recovery. To learn more about hosting free screenings in your community and to raise awareness, go to <https://www.headandneck.org/ohancaw>. For additional patient information, go to ENThealth.org.

Medical Student Virtual Forum: Is OTO in Your Future?

Spread the word to help the resurgence of engagement and interest in otolaryngology-head and neck surgery!

This webinar is open to anyone interested in discovering more about otolaryngology as a specialty and is being held at 8:00 pm (ET) on March 24. The program focuses on connecting attendees with practitioners representing academic, private, and military practices. Participants will hear firsthand about what it's like to get into and go through residency and what life is like in practice. Discussion topics include subspecialties, research programs, interaction with other specialties, and work-life balance. Everyone is welcome, so please share with your otolaryngology societies and contacts in schools of medicine. Register today at <http://l.ead.me/MedicalStudentForum>.





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DONOR SPOTLIGHT: New Millennium Society Lifetime Donor, Eugene G. Brown III, MD

"supporting our specialty's keeper— the Academy!"

The AAO-HNS *foundation* is pleased to recognize **Eugene G. Brown III, MD**, who recently became a Millennium Society Lifetime Donor with his generous donation to the **125 Strong Campaign**.

"The specialty has been such an important part of my life and practicing otolaryngology has been such a fulfilling career for me that I wanted to give back to help secure the future of our specialty for the next generation of otolaryngologists. Frankly, I could not think of a better way to support the future of our specialty outside of supporting our specialty's keeper—the Academy," said Dr. Brown when asked what inspired him to become a Lifetime Donor.

Dr. Brown is a current member of the AAO-HNS/F Board of Directors, serving

as Director at Large/Private Practice. He has been an active member of the Academy since 1996 and has generously contributed his time, skills, and knowledge through countless volunteer hours and participation on numerous committees.

Dr. Brown's philanthropic support of the **125 Strong Campaign** demonstrates his commitment to build a wave of success and support that offers hope and encouragement to the many leaders, teachers, and volunteers who give so freely of their time and their ideas to further the advancement of the specialty.

"To provide resources so that others may pursue an idea that may change the world, to support underrepresented otolaryngologists by opening the doors of opportunity and advancement, to help recruit and shape tomorrow's leaders, and to fund education where the offerings continually blow me away—these are the reasons that inspire me to give back to the *foundation* and the specialty."

Dr. Brown is in private practice in Charleston, South Carolina. As an advocate



and supporter of maintaining the integrity and structure of the private practice model within the otolaryngology community, he is an avid participant in the Academy's Private Practice Specialty Group. "From my perspective, addressing future practice needs and workforce challenges is paramount in positioning otolaryngology for long-term success. The landscape is confusing and continually changing, while corporate and political interests continue to intrude further into our daily practice affairs and patient care. This creates a misalignment of our professional values and business interests.

"Now more than ever, we need to stand united to protect the specialty, our colleagues, and the patients we treat. **We** continually **are** challenged to be **ONE**—specialty unity is the key and the Academy is the glue."

We thank Dr. Brown for his generous support and commitment to the Academy and its Foundation and for helping to shape the future of the specialty. ■



For more information about the **AAO-HNS foundation** and how you can help shape the future of the specialty by donating to the **125 Strong Campaign**, go to <https://www.entnet.org/about-us/aao-hns-foundation/> or contact Marylou Forgione, MBA, Senior Manager, Development, at mforgione@entnet.org.

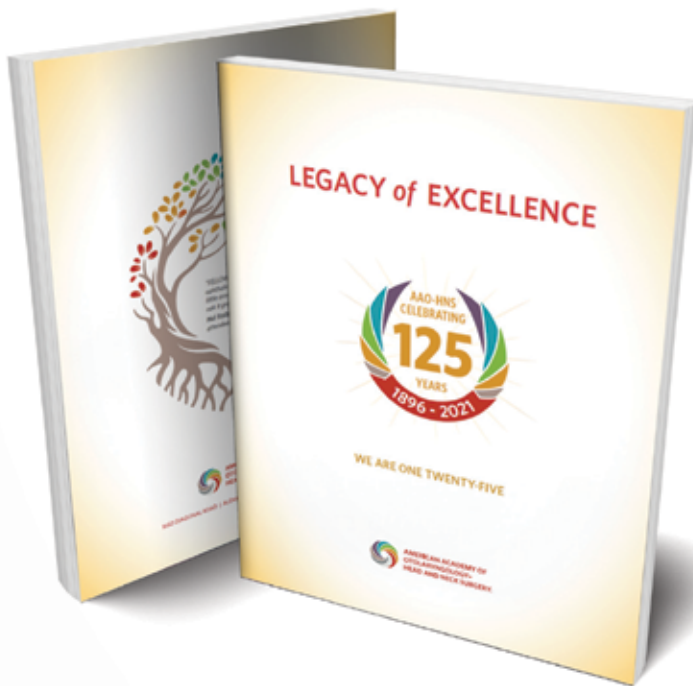


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The sequel to *Century of Excellence*, documents the Academy's contributions to otolaryngology-head and neck surgery and medicine over the past 25 years.



This nearly 300-page publication includes:

- Milestone Moments that document the AAO-HNS/F 125-year history in a pictorial timeline.
- Five chapters that break down the past 25 years and key accomplishments.
- Profiles of the Executive Vice Presidents and CEOs and Past Presidents from 1997 - 2021.
- A commentary on the next 125 years in otolaryngology-head and neck surgery.
- Photo pages that bring the history to life with the people who compose the Academy.
- An appendix documenting 125 years in leadership and dates and locations of the Annual Meetings, and more.

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pearls from your peers:

Pediatric Dizziness



INTERVIEWEE

Kristen Steenerson, MD

*Clinical Assistant Professor, Otolaryngology -
Head & Neck Surgery Divisions
Stanford University*



INTERVIEWER

Jennifer Alyono, MD, MS

*Clinical Assistant Professor, Otolaryngology -
Head & Neck Surgery Divisions
Stanford University*

What are the most common causes of dizziness in children?

The most common causes in children reflect the causes in adults—benign paroxysmal positional vertigo (BPPV), vestibular migraine, and orthostasis. Following that are functional neurologic disorders—3PD, or persistent postural perceptual dizziness. Anywhere from 15% to 20% of dizziness cases are BPPV in children, especially if there is a history of trauma or concussion.

What is your general approach to a child with dizziness?

Look at timing and triggers. Is this episodic versus chronic? If it's episodic, what's the general time frame? Is it mostly seconds? Minutes? Hours? Days?

Ask about triggers: Is there a position change versus a postural change? Here, "position" means a head position change, versus postural, which is standing versus sitting or lying. Those differentiate hemodynamic versus BPPV versus migraine. Migraine can cause position change sensitivity, but you can also ask about more classic migraine triggers such as stress, dehydration, or a hormone fluctuation for catamenial events.

Do kids with vestibular migraine have headaches?

No. In fact, the vast majority don't. That's why it was originally called benign paroxysmal vertigo of childhood before a terminology change to vestibular migraine of childhood in newly published guidelines in the *Journal of Vestibular Research*.

What might clue you in to vestibular migraine as the etiology?

There are interesting migraine equivalents

that grow with us starting with infantile colic and benign paroxysmal torticollis of infancy. Then later in childhood, there is vestibular migraine of childhood or recurrent vertigo of childhood where you have potentially no typical migraine features. Motion sickness, growing pains, unexplained abdominal pain, and Raynaud's disease have been associated with migraine later in life. There's also the adult spectrum of equivalents like "sinus headaches" without sinus disease, ice cream headaches or brain freeze, or exquisite sensitivity to barometric pressure or altitude changes.

What do you recommend for workup?

Start with your history and physical with a good neuro-developmental exam. Are patients meeting motor and communication milestones? If there are no concerning findings, including a hearing screen, then you don't have to necessarily do additional testing. But if there's any concern for not meeting milestones, if patients have hearing loss, those should be red flags that you should get formal audiometry and vestibular testing.

When is imaging indicated?

Imaging follows a similar type of rule. If a neurological exam is normal, no hearing loss, you don't have to do imaging. But if so, then usually magnetic resonance imaging for brain and vestibulocochlear nerve and computed tomography to look for bony malformations.

What are treatments for pediatric dizziness?

For BPPV, in-office repositioning or formal vestibular physical therapy is an option. Migraine follows similar patterns

to adults—lifestyle changes ensuring adequate sleep, exercise, hydration, and stress management. These measures can be really helpful for most kids. If not, you can use medications ranging from topiramate to tricyclic antidepressants to migraine nutraceuticals.

What do you think the biggest difference between pediatric and adult dizziness is?

Some studies have reflected that in kids with hearing loss, even just from otitis media, 70% will have a vestibular loss in the long term as well. The mechanism is not clear and highly debated. But the point of bringing it up is that it probably is important to do some type of balance screen on someone you're seeing for hearing loss alone. This could be as simple as having them stand on one foot and identifying if they match with their age group the number of seconds they stand.

What are red flags we shouldn't miss?

These include progressive loss of hearing or balance function, regressing in milestones, missing out on school, missing out on social activities, new headaches, vision changes, loss of consciousness, and syncope.

The other thing I should mention is the episodic ataxias because a lot of patients have first onset in childhood. You have a channelopathy that causes cerebellar dysfunction for minutes to hours to days. You can have isolated vertigo, but you can also have downbeat nystagmus, dysarthria, or truncal or appendicular ataxia—more classic cerebellar phenomena. Why they're important is that some of them are exquisitely responsive to acetazolamide so you can really change someone's life. ■



From Residency to Practice: Providing Opportunities for Exploration of Options

Yi-Chun Carol Liu, MD, MS

Chair, Young Physicians
Section



Spring is an exciting time for graduating residents and fellows as they start looking for jobs as an attending otolaryngologist. However, it can also be nerve-racking at the same time if a trainee facing impending graduation is unsure about what type of career path to choose—private practice, academia, hospital based, and so on.

I recall listening to a talk by my senior residents discussing the pros and cons of various employment scenarios. To me, progression to an academic job seemed natural, as I was trained at a tertiary-level center and was keenly interested in research. But I wonder often about what my practice would have been like if I had joined a private practice group instead. What would my work-life balance look like? How challenging would the day-to-day patient care be? Would my job satisfaction be high?

This conundrum could be partially resolved perhaps if trainees were exposed to different types of practices during their training to be able to decide for themselves where their individual interests lie. They may then be in a better position to answer certain questions: “I wonder, what does a private practice job encompass?” “Should I open my own practice?” “Should I join an established practice?”

As I mentor medical students, residents, and fellows regarding their career choices, I often wonder if a private practice rotation should be part of the resident curriculum. The next logical question that arises is whether the rotation should include experience in both clinic and operating room settings. In order to make the young physician’s voice part of this conversation, the Young Physicians Section

(YPS) has appointed **Manan Shah, MD**, as a liaison to work closely with the newly established Private Practice Study Group to develop workshops and webinars around these questions.

How about after your first job—everything is set, right? Well, based on a study by the Atlanta-based healthcare recruiting firm Jackson & Coker, over 50% of physicians leave their first job after five years, with job transitions occurring within and across different practice settings. Thus, continuous education and workshops can provide additional resources for our members.

Business management, insurance billing, and human resource courses should be part of our continuous education. In a recent webinar hosted by YPS, **Lawrence M. Simon, MD**, **Betty S. Tsai, MD**, **Samantha J. Hauff, MD**, and **Manan Shah, MD**, discussed their personal experiences, switching between practices and incorporating health administration and other nonclinical leadership opportunities.

Several months ago, YPS and the Section for Residents and Fellows-in-Training (SRF) cohosted a webinar with a physician contract negotiation service, which sparked a lively dialogue. Due to the many issues raised during that webinar, YPS and the Women in Otolaryngology Section are cohosting a webinar on March 16 focused on women physicians’ contracts.

Women physicians are an increasing part of the work force, and now is the time to negotiate often overlooked but very important and pertinent issues that disproportionately affect women, such as parental leave, childcare benefits, administrative roles, equal pay, and more. The YPS constituency is 23% women, and as we seek our first or second jobs, a greater understanding of contract negotiation with focus on these factors is timely and imperative. ■

YPS Cohosts Webinar: Contract Review and Negotiation for Women Physicians

Now more than ever, the contract you sign will impact your compensation, benefits, and limitations on future options. Before you sign your first employment contract, renegotiate your existing contract, or change practices and sign a new employment contract, plan to participate in this live webinar at 8:00 am (ET) on March 16 cohosted by WIO, YPS, and Resolve, a national firm specializing in physician employment contracts. Discussion will focus on contract terms which may specifically impact women physicians (pregnancy accommodations, maternity leave, part-time employment, the impact on RVU’s, ergonomic equipment), plus COVID-19 impacts, daily considerations (schedule, call, scope of practice, staffing), compensation models, letters of intent, termination, and bonuses. These topics impact women in all settings and at all career levels.

For details and registration information, go to https://entnet-org.zoom.us/webinar/register/WN_KPlawSOhQtmbzKecFn4j1Q.



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Please Note: The program is subject to change. A final detailed program will be emailed to all registrants and additional information can be viewed online.

The 2022 Global Grand Rounds Webinar Series Kicks Off with Record-breaking Attendance

Global Leaders Discuss Chronic Rhinosinusitis with Nasal Polyps and Biologics

The AAO-HNSF 2022 Global Grand Rounds (GGR) webinar series was kicked off on February 12 by **Mark E. Zafereo, Jr., MD**, AAO-HNSF Coordinator of International Affairs. The topic demonstrated to be one of keen interest across the global otolaryngology community with more than more than 2,200 registered attendees from approximately 120 different countries—the largest to date!

The hour and a half webinar, “Chronic Rhinosinusitis with Nasal Polyps and Biologics,” was moderated by **J. Pablo Stolovitzky, MD**, and included the following distinguished panel of presenters: **Wytse Fokkens, MD, PhD** (Netherlands); **Joseph K. Han, MD** (United States); **Dong-Young Kim, MD, PhD** (South Korea); and **Fabrizio Ricci Romano, MD, PhD** (Brazil).

Dr. Stolovitzky welcomed attendees, noting, “We have a tremendous faculty with outstanding thought leader experience as we continue to weave the world of otolaryngology through the International Global Grand Rounds.” The presentation was divided by each of the faculty detailing the use of biologics in treatment for chronic rhinosinusitis with polyps (CRSwNP) within their respective countries.

Each presenter shared their real-life experiences with the use of biologics, including the criteria for determining patient eligibility for treatment. Another common theme expressed was the cost of biological treatments.

Dr. Han was the first faculty to present, representing the United States. He described a recently published stepwise treatment algorithm for an effective and safe treatment option of biologics for CRSwNP patients and his real-life experiences with the use of biologics compared to the results in clinical studies. He also discussed challenges related to cost and coverage as well as dosage

compliance by patients, especially during the pandemic.

He shared mechanisms he follows to overcome some of these challenges. They include documenting detailed treatments given to patients; incorporating a multidisciplinary approach; providing the nasal polyp score in the procedure notes to educate physicians/healthcare providers to describe size of nasal polyps to middle or interior turbinate; and having more frequent office visits to see how patients respond to the treatment, allowing for open and honest dialogue about dosing regimen.

Dr. Fokkens followed with the Netherlands experience discussing the science and guidance surrounding two dominating questions that occur in daily practice as it relates to use of biologics in the management of CRSwNP:

- How do we determine which patient should get a biological based on criteria?
- And then, which biological to give a patient?

She noted the value of biological treatments as a new option in the management of Type 2 CRSwNP with a great deal of effect both on symptoms and on the polyp volume. She shared the approach they took in the Netherlands to address coverage challenges of this costly treatment and encouraged attendees to reach out to the insurance companies in their countries to reiterate that when expert physicians use proper criteria for a limited group of patients, most will benefit from this new treatment. She also shared the guidance that came from the EPOS2020 Guidelines to Rhinosinusitis (<https://epos2020.com/>).

Biologics in Korea were more recently approved in 2021. Dr. Kim noted that as a result, the Korean Rhinology Society is updating the Guideline for CRS to now contain biologics. The real-life experiences to date have demonstrated that biologics are expected to increase efficacy of the nasal polyp score, nasal congestion score, CT score,

SNOT-22, and asthma control with no serious side effects.

Dr. Kim also shared that, even though costly, many rhinologists in Korea, are willing to prescribe biologics. He equated that phenomenon to the fact that, like in Western countries, the proportion of Type 2 CRSwNP is heavily increasing in Korea and now there is finally another “weapon to control” CRSwNP besides corticosteroids.

Dr. Romano rounded off the panel of experts with a discussion of Brazil’s status in using biologics in the management of CRSwNP and the challenges faced as a low-resource country when the cost is high, but the funding is limited.

Brazil is currently undergoing a national multicenter study to determine the predominance of Type 2 CRSwNP and having that information will help better define challenges related to cost and coverage. The patient journey in Brazil is very similar to those around the world with some requiring multiple revision surgeries. He noted, “a great indication of the biologics is to get these patients out of the cycle.”

Questions regarding the usage of biologics in the management of CRSwNP patients seemed similar across borders and around the world. Here are a few that the panelists answered at the end of the webinar during the Q&A session:

- Will there ever be a time that we start patients on biologics before surgery?
- Who is paying for the biologics?
- Can you do biologics in lieu of surgery?
- When do you start biologics for a patient who fails surgery? How long after they fail?

As the webinar ended, it was the welcome remarks at the start of the GGR that resonated from **Ken Yanagisawa, MD**, AAO-HNSF President, “It is always such a pleasure to see colleagues from around the world to join together, learn, and collaborate. It represents the core of our continued dedication



This map is a small sampling of the countries represented in attendance of this webinar. More than 2,200 individuals registered from more than 120 countries.

to building and maintaining excellent international relationships, one of the core tenets of our Academy's Strategic Plan."

If you missed this webinar, a recording of it will be available, free of charge. ■



J. Pablo Stolovitzky, MD (Moderator)

International Steering Committee, AAO-HNSF
Adjunct Assistant Professor, Emory University
President, XXXVII Pan American Congress of Otolaryngology, Orlando, Florida, USA



Wytske Fokkens, MD, PhD

Department of Otorhinolaryngology, Academic Medical Center, Amsterdam, Netherlands



Joseph K. Han, MD

Professor of Otolaryngology Medical Director, Division of Allergy Director, Rhinology & Endoscopic Sinus and Skull Base Surgery, Eastern Virginia Medical School, Norfolk, Virginia, USA



Dong-Young Kim, MD, PhD

Professor, Department of Otorhinolaryngology, Seoul National University College of Medicine, Seoul, South Korea



Fabrizio Ricci Romano, MD, PhD

Hospital Moriah, Sao Paulo, Brazil
Past President, Brazilian Academy of Rhinology, Vice President, Brazilian Association of Otorhinolaryngology

About the GGRs

The Global Grand Rounds webinar series is an initiative of the AAO-HNSF International Advisory Board to improve patient care and physician education worldwide. These virtual events are held quarterly and are open to all otolaryngologists around the world, free of charge. Moderated by AAO-HNS leaders, each session includes world thought leaders and expert panel presentations followed by attendee Q&A.

Access Free Recordings of Previous Global Grand Rounds

Avoiding and Managing Complications in Endoscopic Sinus Surgery

Includes three expert 20-minute lectures covering pre-, intra-, and postoperative considerations and management of complications in Endoscopic Sinus Surgery

Disruption and Innovation in Otolaryngology and Neurotology: Endoscopic and Exoscopic Ear Surgery:

Topics include How Endoscopy Disrupted my Ear Surgery Routine, Keep Your Head Up: Endoscopic and Exoscopic Visualization, and Future of Endoscopic Ear Surgery

From UPPP to Neurostimulation—The Role of the Otolaryngologist in the Treatment of Obstructive Sleep Apnea (OSA)

Topics include Drug-Induced Sleep Endoscopy (DISE): Validity, reliability, and results; Advances and Individualized Approach in Sleep Apnea Surgery; and Coblation-assisted Barbed Reposition Pharyngoplasty

SAVE THE DATE 2022 Virtual Global Grand Round Series Presentations:

May 14, 2022: Artificial Intelligence in Otolaryngology-Head & Neck Surgery

July 30, 2022: Head and Neck Cancer 2022

November 2022 (Date TBD):

Disruption and Innovation in Otolaryngology and Neurotology

Thyroid Cancer: New Treatment Paradigms and Technologies in 2021

Topics include Updates and Advances in Transoral Thyroidectomy; Radiofrequency Ablation for Thyroid Nodules and Thyroid Cancer; Beyond Parathyroid Autofluorescence: Combining Autofluorescence with ICG-Based Angiography and Perfusion Assessment; and Parathyroid Autofluorescence in Thyroid Surgery: From Bench to Bedside and Beyond

For instructions on how to access the free GGR recorded sessions, go to <https://www.entnet.org/GGR> and scroll to the bottom of the page.

Reflections of an AAO-HNS Medical Student Travel Grant Recipient



Luis Miguel Rubio was the recipient of a 2021 Medical Student Travel Grant, which afforded him the opportunity to attend the AAO-HNSF 2021 Annual Meeting & OTO Experience in Los Angeles, California. These travel grants are available to medical student members to learn more about the specialty, to meet and network with thousands of otolaryngologists from around the world, and to provide a foundation for continued learning. Look for more information about the 2022 application cycle in the coming weeks.

Luis Miguel Rubio, MS4

Southern Illinois University School of Medicine
Class of 2022

Since the COVID-19 pandemic began in March 2020, it has affected our ability to gather for celebrations, concerts, festivals, and professional conferences. I was at the end of my second year in medical school when this period of isolation began. It was the beginning of my journey to join the specialty of otolaryngology-head and neck surgery. Although disappointed, I understood the need to convert the AAO-HNSF 2020 Annual Meeting & OTO Experience to a virtual meeting.

I am thankful that the Academy decided to offer the experience in person in 2021. It was even more meaningful to me as a fourth-year medical student in the throes of the residency application season. I was initially nervous with the prospect of presenting my research during the poster session. My anxiety was quickly dispelled

once I spoke with a fellow presenter with a similar research topic.

The Annual Meeting is a fantastic experience for medical students interested in pursuing a career in otolaryngology. It affords the ability to network with residents, attendings, fellows, and other medical students who share your passion for the field. It is vital for students who are underrepresented in medicine to attend such large and important conferences in their specialty of choice. I personally was able to meet in person for the first time a mentor I had been meeting with virtually—**Alexander Rivero, MD**, from Kaiser Permanente Med Group - Northern California in Oakland, California.

I truly enjoyed meeting other underrepresented students from all over the country who shared my aspirations. We had a wonderful time attending the different sessions ranging from cutting-edge basic science research to discussions regarding the future of otolaryngology.

When visiting and exploring the OTO

Experience, I was able to try on loupes for the first time. I took advantage of the opportunity to see all the new technology being developed for the field. The incorporation of new technology in surgeries and procedures has always been a big draw for me.

Outside of the conference, I was able to enjoy the wonderful food and culture that Los Angeles, California, has to offer. A few students and I visited Little Tokyo and had an amazing bowl of Ramen followed by delicious ice cream at Somi Somi, an ice cream shop that serves a special Korean dessert known as “Ah-Boong,” a fish-shaped waffle cone filled with your choice of filling and topped with soft serve.

I am thankful for the scholarship opportunity afforded to me by the Academy to attend the Annual Meeting & OTO Experience in Los Angeles. It was energizing to witness so many other underrepresented students in medicine, residents, and attendings taking on active roles in our field. ■



FORWARD TOGETHER

AAO-HNSF 2022

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Adapting, Innovating, and Elevating the Annual Meeting Experience

Daniel C. Chelius, Jr., MD
AAO-HNSF Annual Meeting
Program Coordinator



The AAO-HNSF Annual Meeting & OTO Experience has always been the backbone and heart of our Academy, solidifying the structures that empower our efforts and engendering the passion that sustains our community. As the Academy has grown, the meeting has grown with it. As new technologies and techniques have promised greater opportunity for our practices and our patients, we have seen the meeting evolve to incorporate and investigate how we can benefit from those advances and keep pace with the changing times.

The Annual Meeting has adapted to the needs of the community and the opportunities of the era many times over throughout our rich 125+-year history. The following are

“

Prepare to bring your voice to the hallways, to raise questions in the meeting rooms, to greet colleagues and friends, and to refresh the connections that help us create the future of our field as we come together for the world's largest annual otolaryngology retreat this September in Philadelphia.

”

just a few examples of how the Academy has transitioned through innovation to elevate the offerings of the Annual Meeting:

- The 1921 launch of the Instruction Courses was initiated to meet the demand for standardized post-graduate education in the loosely connected Midwest and western states.
- The incorporation of “video” education in the 1940s allowed us to share the latest in surgical techniques on a new medium.
- The move away from our traditional hotel home in Kansas City, Missouri, to convention centers and rotating cities across the United States was indicative of our growth and commitment to equitable access to the meeting content.
- When new technology allowed us to reliably capture the presentations as recordings in the 1990s, it opened the door to extend the learning opportunities temporally and geographically.
- As the Academy expanded its global connections, so too did the Annual Meeting program incorporating the International Symposium into the main schedule and highlighting international thought leaders within the specialty and welcoming learners from around the world to participate.
- Fast forward to 2020, the Virtual Annual Meeting was delivered completely online as in-person events were not possible due to the COVID-19 pandemic.
- And in 2021, when the pandemic continued to impact travel and large gatherings, the AAO-HNSF supplemented the in-person meeting with a virtual option to accommodate the existing travel restrictions. This allowed us to provide a safe world-class education experience for in-person and virtual attendees both domestically and internationally.

As medical societies around the world continue to evaluate the best way to either

return their meetings to a pre-pandemic “status quo” state or move forward incorporating new platforms, technologies, and experiences—I am confident our Annual Meeting will remain at the forefront as the “meeting of the future” continues to meet the changing needs of our membership and their patients.

Strategic planning

Last fall, AAO-HNSF President, **Ken Yanagisawa, MD**, and EVP/CEO, **James C. Denny III, MD**, launched the Future of Meetings Task Force (FMTF) under the leadership of AAO-HNSF President-elect **Kathleen L. Yaremchuk, MD, MSA**. The task force incorporates a diversity of stakeholder perspectives charged to consider the structures, settings, platforms, and strategic goals of all AAO-HNSF meetings including our Annual Meeting. The FMTF engaged an outside meeting event design and consulting firm to lead a strategic assessment and foundational alignment process. It will report out to the Board of Directors this spring, and we expect the guidance to instruct and focus meeting planning in the coming years.

Looking forward to 2022 in Philly

We are enthusiastic to be planning an in-person meeting in Philadelphia, Pennsylvania, for the AAO-HNSF 2022 Annual Meeting & OTO Experience, September 10-14. We received more than 1,800 submissions during the Call for Science for this fall's meeting. I believe this record number reflects a passion for science and education in our community and the strong desire to renew our sense of connection.

The Annual Meeting Program Committee (AMPC) is hard at work in our review process, while affiliated AAO-HNSF groups



like the Simulation Education Committee and the Medical Devices Committee are preparing a Call for Submissions for SIM Tank and the ENTrepreneur Face-Off events. The Great Debates, which debuted this past year to positive reviews, will be featured again, and we are excited to be crafting these in collaborations with the AMPC and Foundation Education Committees.

The program is always further enhanced with the offerings of the AAO-HNS Sections. As we speak, the leaders from the Sections are busy preparing their General Assemblies and thought-providing programs.

The gathering of the Annual Meeting is also about celebrating each other and honoring the achievements of those who contribute greatly to the specialty, their peers, colleagues, and patients, and the AAO-HNS/F. The Awards Committee is receiving and reviewing the nominations for the many Academy recognitions that will be honored and bestowed at the meeting, including the second class of inductees for the Hall of Distinction. Look to future issues of the *Bulletin* for more about the honorees for all AAO-HNS/F Awards.

How can I still add my voice?

Although the Call for Science closed at the end of January, there are still many opportunities to share your voice at the Annual Meeting.

- Consider submitting to the SIM Tank or ENTrepreneur Face-Off events
- Share your late-breaking science during our submission period coming up in May/June
- Nominate a colleague for an AAO-HNS/F Award
- Contact your appropriate Section leaders to learn of volunteer opportunities this summer that will lead into heightened meeting engagement this fall

Most of all, prepare to bring your voice to the hallways, to raise questions in the meeting rooms, to greet colleagues and friends, and to refresh the connections that help us create the future of our field as we come together for the world's largest annual otolaryngology retreat this September in Philadelphia. ■

Look for Additional Opportunities this Spring!

Simulation Call for Proposals | Late-Breaking Abstracts | ENTrepreneur Face-off
www.entannualmeeting.org

Medical History in Philadelphia: Five Medical History Spots to Explore

The Mütter Museum/College of Physicians of Philadelphia, 19 S. 22nd Street

The College of Physicians of Philadelphia was founded in 1787, making it one of the country's oldest professional medical associations. The Mütter Museum contains a collection of more than 25,000 medical "curiosities" including the Chevalier Jackson, MD, Collection, which houses 2,374 inhaled or swallowed foreign bodies that Dr. Jackson extracted from patients' throats, esophaguses, and lungs during his almost 75-year-long career. Most of the items are on display.

kidney stones. The house is said to be haunted. Tours are offered of the museum and garden.

Wills Eye Hospital, 840 Walnut Street

The first U.S. medical facility dedicated to the treatment of eyes, Wills Eye Hospital was created through an endowment by Quaker merchant James Wills, established in 1832. The world-renowned institute was instrumental in establishing ophthalmology as its own branch of medicine in the United States, created the first residency program in the country, and pioneered many techniques for the prevention and treatment of eye disease.

Pennsylvania Hospital, 800 Spruce Street

The nation's first hospital was founded by Benjamin Franklin and Dr. Thomas Bond in 1751, for "relief of the sick poor" of Philadelphia. The modern hospital offers guided tours that allow you to see the country's oldest existing operating theater where patients were "sedated" with alcohol, laudanum, or a hit to the head.

Portrait of Dr. Samuel D. Gross (The Gross Clinic) at the Pennsylvania Academy of the Fine Arts

Thomas Eakins was one of the finest realist painters of his time and master of the art of the human figure. A lifelong Philadelphia resident, he painted portraits and scenes of sporting and medical events including "Portrait of Dr. Samuel D. Gross (The Gross Clinic)" in 1875. The subject is the world-famous surgeon and teacher in Jefferson Medical College's surgical amphitheater leading a clinic of five doctors operating on a patient. The depiction was shocking and frightening to those who saw it for the first time but is now recognized as one of the greatest American paintings, on view in the Pennsylvania Academy of the Fine Arts' Historic Landmark Building.

Physick House, 321 S. Fourth Street

Dr. Phillip Syng Physick lived in and had an office in this building in the late 1700s and early 1800s. Among Physick's patients were President Andrew Jackson, Chief Justice John Marshall and Dolley Todd Madison. The house was converted to a museum in the 1970s. Among the items on display are Physick's surgical tools, including blood letting instruments, stomach pumps and tubes to remove

Set Your Sights on Philly for #OTOMTG22

Philadelphia, Pennsylvania, plays host to the AAO-HNSF 2022 Annual Meeting & OTO Experience, September 10-14. The City of Brotherly Love is known for a rich history with iconic landmarks, vibrant culture, and diverse neighborhoods—it is a city that has something for everyone. Philadelphia has a passion and appreciation for science and medicine because it is part of the city's history as home of the first hospital, medical school, women's medical school, children's hospital, medical society, medical library, college of pharmacy, and first biomedical research institution.

Now is the time to start planning your extracurricular activities—beyond the Annual Meeting program offerings—that the city has to offer its visitors, including historic sites, quaint shopping districts, vibrant nightlife, restaurants, recreation, and more.

Top Can't-Miss Experiences in Philly

Whether it's your first visit to Philadelphia or your first visit in a while, the city is filled with many can't-miss experiences and "Instagram-able" moments that should be added to any itinerary. (Be sure to tag the Academy @AAOHNS)

Visit the Liberty Bell

A symbol of freedom, the famed Liberty Bell is synonymous with Philadelphia. The cracked bell is free to visit year-round and is found inside the Liberty Bell Center, which sits just across Chestnut



Street from its former home at Independence Hall. Inside the Center, you'll find exhibits highlighting the bell's history, as well as written information available in a dozen languages.

Tour Independence Hall

Transport yourself back to 1776 with a tour of Independence Hall and step foot into the Assembly Room, where the Founding Father's debated, adopted, and signed the Declaration of Independence and later



the U.S. Constitution. The tour reveals interesting details about the building's history and architecture, as well as insightful tales about the Framers of the nation shared by national park rangers.

Run the Rocky Steps

As made famous by an inspirational training montage in the 1976 film, *Rocky*, the 72 steps that lead to the eastern entrance of the Philadelphia Museum of Art are now at the top of anyone's Philadelphia to-do list. Thousands of visitors flock to the steps each day to race their way to the top and strike



their best Rocky pose at the spot where he stood—arms held high with the city skyline serving as the ultimate backdrop.

Walk through the Italian Market

You'll find the nation's oldest open-air marketplace, the Italian Market, along Ninth Street in South Philadelphia. The market is home to dozens of produce vendors, butchers, cheese connoisseurs, and restaurants. The cuisine



offered throughout the Market extends far beyond what its name implies, with Asian and Latin American menus becoming more prevalent as the cultural identity of the surrounding neighborhood continues to change.

Snap a Selfie at LOVE Park

Installed in John F. Kennedy Plaza—now affectionately referred to as LOVE Park—for the nation's Bicentennial celebration in 1976, Robert Indiana's now-iconic LOVE sculpture is arguably one of Philadelphia's most photo-worthy pieces of public art.





Explore the Museums along the Benjamin Franklin Parkway

Known as Philadelphia's Museum Mile, the Benjamin Franklin Parkway is home to many of the city's most coveted institutions. It is here that you can study science at The Franklin Institute or learn about dinosaurs and natural history at the Academy of Natural Sciences—the first natural sciences institution in the Americas. There is also the Barnes Foundation—home to the world's greatest collection of Impressionist, Post-Impressionist, and Early Modernist paintings—and the Rodin Museum, featuring one of the largest collections of Auguste Rodin's work outside of Paris. Capping the western end of the Parkway is the iconic Philadelphia Museum of Art, whose 200 galleries are filled with artwork from around the world spanning 2,000 years.



Photo Credit: Paul J. L. for PHLCVB

Satisfy Your Cravings at the Reading Terminal Market

Opened in 1893, Philadelphia's Reading Terminal Market is one of the oldest farmers' markets in the nation and is home to nearly 80 vendors inside, including 26 restaurants. The market's vendors serve a wide range of cuisine, including Caribbean, Cajun, Greek, Japanese, and soul food favorites, as well as local flavors like the cheesesteak, pretzels, hoagies, and more. Not to be missed are the several stalls that specialize in traditional Pennsylvania Dutch recipes.



Photo Credit: Kait Privitera for PHLCVB

Immerse Yourself in Mosaics at the Magic Gardens

Encompassing three full city lots in South Philadelphia, artist Isaiah Zagar's magical mosaic maze is one of Philadelphia's most "Insta-worthy" attractions.

Zagar's largest work to date features an indoor gallery space and a sprawling, layered outdoor maze, with narrow pathways and hidden nooks

lined with pieces of mirrors, ceramic tiles, and found objects ranging from bike wheels to soda bottles.



Photo Credit: K. Huff for PHLCVB

Admire Some of the City's Best Views

There are plenty of vantage points offering breathtaking views of the Philadelphia skyline from multiple angles. Catch the sunrise while perched high atop Belmont Plateau in Fairmount Park or watch the sun dip behind the Center City skyscrapers as you stroll along the Benjamin Franklin Bridge's pedestrian walkway. Give cheers to unforgettable happy hour views at Bok Bar, Assembly Rooftop Lounge, XIX Nineteen, or JG SkyHigh, or take in waterfront views at



Photo Credit: Graydon Wood for Philadelphia Museum of Art

Penn Treaty Park in the northeast or aboard the historic Battleship New Jersey just across the Delaware River.

Relax along the Waterfronts

The city of Philadelphia is sandwiched between two rivers—the Delaware and the Schuylkill—with each offering their own waterfront experiences. On the eastern side of the city along the Delaware River, enjoy recreational piers and parks like Race Street Pier, Cherry Street Pier, Penn's Landing, and Spruce Street Harbor Park, all soon to be connected by an improved waterfront trail system. To the west, the Schuylkill River Trail runs along the Schuylkill River and offers a walking, running, or biking path with ample lawn space perfect for riverside picnics.

Survey Boathouse Row (By Day or Night)

The beginning of Philadelphia's 2,000+ acre Fairmount Park is marked by 15 beautiful and historic boathouses along the Schuylkill River. Home to the rowing clubs of various local universities, these houses are notably lined with bright LED lights that glow in the evenings and change colors to honor certain holidays. TIP: The best view of the boathouses is from the eastern-most end of Martin Luther King Jr. Drive, where you'll find a small platform perfect for admiring the landmark.



Photo Credit: Greg Benson for PHLCVB

Learn more about the #OTOMTG22 host city at <https://www.discoverphl.com/otomtg22/>.

For the latest information about the Annual Meeting, go to <https://www.entnet.org/events/annual-meeting/>. ■



COVID-19 Anosmia Reporting Tool: Subsequent Findings

C.W. David Chang, MD; Rachel Kaye, MD; Ken Kazahaya, MD, MBA; David R. Gilley, MD; Jean Brereton, MBA; James C. Denny III, MD

Severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2), which causes coronavirus disease 2019 (COVID-19) is responsible for a global pandemic that as of February 20, 2022, caused over 5.8 million deaths and over 422 million confirmed cases and over 5.8 million deaths have been reported globally.¹

Early in the history of the pandemic, the World Health Organization and the Centers for Disease Control and Prevention (CDC) advocated fever, cough, and shortness of breath as key symptoms for COVID-19. As the health community continued to accrue experience with the illness, reports regarding profound loss of smell began to surface. Evidence of olfactory dysfunction in COVID-19 patients led ENT UK to recommend that new onset anosmia be considered for COVID-19 infection and to take precautionary isolation.²

The AAO-HNS advised that anosmia, hyposmia, and dysgeusia be considered symptoms for COVID-19.³ Since then, olfactory and gustatory dysfunction (OGD) have become known as a hallmark of COVID-19 infection, and the CDC added smell and taste dysfunction to the symptomatology of COVID-19.⁴

The data behind the AAO-HNS recommendation were based on crowd-sourced information collected using a web-based questionnaire.⁵ The data collection platform was built with digital safeguards that ensure anonymity. The reporting tool was hosted on the AAO-HNS website and publicized to membership via email communications, press releases, and social media posts. Data were collected from March 25, 2020, to September 2, 2020, comprising 1,335 usable entries. Preliminary results from this tool were previously published and reflected the first 237 entries, which had been entered up to April 3, 2020.⁶ Analysis of the total aggregate entries are presented on the following pages.

There was a large volume of entries

initially during the roll out (Figure 1). The majority of respondents arrived at the questionnaire through the AAO-HNS website. Overall, the largest source of cases was from patients themselves (62%), with the remainder provided by healthcare workers (Figure 2). Otolaryngologists were the most likely reporting healthcare providers (16%). Demographics of the studied population can be found in Table 1. While responses were largely derived from the United States, 25% of replies were from other countries (Figure 3).

OGD was found to be an early symptom in the subjects, with 70% reporting these symptoms prior to diagnosis and 28% with OGD as one of the initial symptoms (Table 2). This substantiates literature initially supporting this notion.⁷⁻¹¹ Additionally, OGD may be the only significant or identifiable symptom, often occurring in the absence of nasal congestion. Early recognition of acute olfactory dysfunction—while not as physically discomforting as other symptoms—can serve to identify individuals with COVID-19 so that they may be tested, receive necessary

treatment, and quarantine as early as possible to limit further spread.

Among the subjects, OGD was increasingly one of the symptoms that prompted COVID testing, ranging from 54% of subjects initially in March 2020 to 80% of subjects in August 2020 (Figure 4).

Resolution of OGD was more difficult to determine using the questionnaire. Only 25% reported “resolution” of OGD at the time of case submission. Within this group, the average number of days to this occurrence was 12.5 ± 12.2 days (median 8 days). Of note, more than 76% of those did so by day 14 and more than 88% of those did so by day 21. These data need to be carefully interpreted. First, it is unknown as to when in the course of their illness respondents had the opportunity to answer the questionnaire. Second, respondents were forced to answer in a binary (yes/no) fashion when presented with the question, “Did the anosmia/dysgeusia resolve?” Those that noted resolution variably reported partial to complete resolution.

From the body of early literature, it seems that OGD symptoms largely improve with time, particularly over about a three-week period.⁸⁻¹² Many patients do have improvement or complete resolution early, even within the first five to eight days.⁸⁻⁹ In a 60-day prospective study, Vaira et al.¹³ followed 138 patients with objective testing every 10 days. Within the four days of COVID-19 symptom onset, anosmia or severe hyposmia affected 61% of patients. This was reduced to about 15% at 30 days and 6% at 60 days. While improved olfaction occurs over time, it is also evident that after a period of a month or longer some patients still have some degree of objective olfactory dysfunction relative to controls.^{9,12} Even with return of smell, continued derangements such as parosmia and phantosmia have been noted in 10%-30%.¹⁴⁻¹⁵

Crowd-sourced data have the advantage of rapid procurement in a fast-evolving pandemic. One of the early sources suggesting OGD with COVID-19 came from an online survey posted through social networks in Iran¹⁶ and initially posted March 27, 2020, on medRxiv.¹⁷ Another large symptom data aggregator, the COVID

Symptom Study app, is a collaboration with Zoe Global Ltd., a digital healthcare company, and academic scientists from Massachusetts General Hospital and King’s College London.¹⁸ The app relies on voluntary participation from the public to self-report demographics and symptoms to study the epidemiology of COVID-19 in real time. As further demonstration of the changing data to inform pandemic epidemiology, researchers from the COVID Symptom Study reported that OGD is a less common symptom among those likely infected by the newer delta and omicron variants of SARS-CoV-2 compared to the alpha variant.¹⁹

Limitations of this study include its cross-sectional methodology and, in some cases, short time interval from infection to reporting. The survey solicited cases of anosmia only, which makes it difficult to compare against patient groups who did not have olfactory dysfunction. Participation by patients or physicians was voluntary and may have introduced selection bias. Recall bias may limit accuracy of response as timing between onset of diagnosis and response to questionnaire was not determined. The study was not designed to longitudinally track the course of OGD of each respondent.

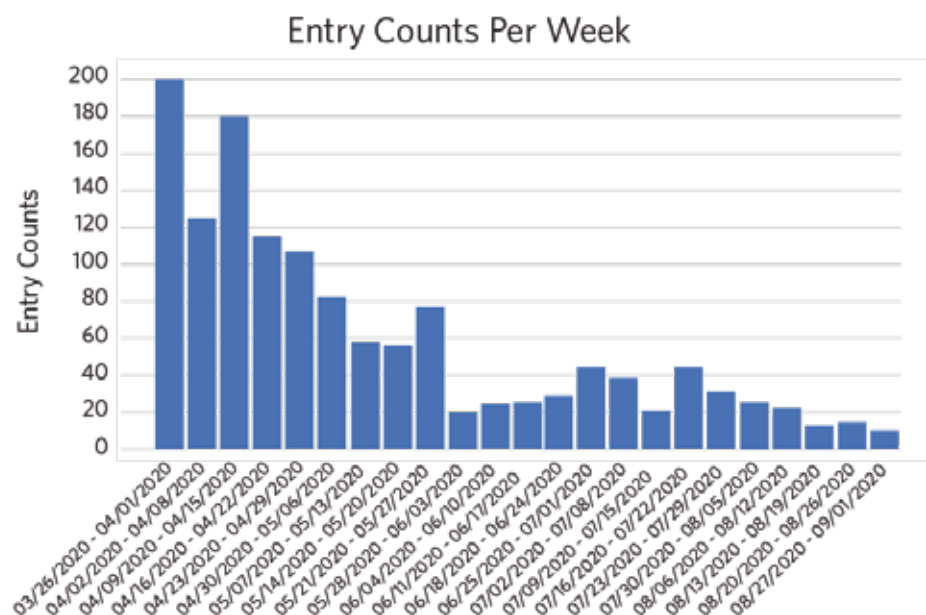
Discrimination between different degrees and types of OGD was based upon subjective data. The wide demographic distribution of respondents, bias toward healthcare workers, and bias toward a socioeconomic class of individuals with access to the internet may also enter further selection biases that make generalization to other specific populations difficult. Despite these limitations, the tool was influential in demonstrating OGD as an early and sometimes presenting symptom of COVID-19 infection. Future studies are warranted to understand the natural history of COVID OGD resolution, parosmia rates, effects of treatments, and potential long-term psychosocial effects of OGD on patients.

Methods

Tool development and validation:

The proposed tool was evaluated for content validity in a mixed-methods procedure similar to table of specifications methodology that is employed in psychological research.¹¹ The COVID-19 Anosmia Reporting Tool (CART) was developed with two versions. In the initial version (CART1), the content was originally developed by AAO-HNS Infectious Disease and Patient Safety Quality Improvement Committee members based

Figure 1. Histogram of entries over time.



on emerging evidence within the published literature linking COVID-19 with olfactory and gustatory dysfunction (OGD). Four experts independently reviewed the tool and recommended changes in terms of content and readability.

After review of the first responses collected from March 25, 2020, to April 3, 2020,¹⁰ it became apparent through the remarks provided in the free text comment portion of the tool that there were submissions from some individuals who did not have laboratory confirmation of COVID-19 infection. As such, the tool was amended (CART2) to include an additional question, namely the COVID test status of the subject. Thus, CART1 had 277 entries whose COVID test status was blank except for those who had provided this unsolicited information. Additionally, CART1 was designed with physicians as targeted respondents. Strategically, to increase the yield of respondents, wording of questions and instructions were edited in CART2 to encourage patient self-reporting. CART2 was implemented April 7, 2020 (Supplemental Data).

Data collection:

The data collection platform was similar to that of the AAO-HNS Patient Safety Event Reporting Tool,¹² with built in digital safeguards that certify anonymity. No identifiable user data were solicited. Device

internet protocol addresses were not tracked or captured. The reporting tool was hosted on the AAO-HNS website (<https://www.entnet.org/covid-19-anosmia-reporting-tool/>) and publicized to membership via email communications and social media posts. Data were collected from March 25, 2020, to September 2, 2020. Descriptive statistics, chi-square tests, and *t*-tests were used along with an $\alpha = 0.05$. Approval for this project was secured from the University of Missouri Institutional Review Board.

Results:

In the 161 days of data accrual, 1,360 entries were made. Five of these were removed due to clinical inconsistencies; 1,355 entries were analyzed. Source of cases were from patients themselves in 62%, with the remainder provided by healthcare workers (Figure 1). Otolaryngologists were the most likely healthcare provider reporters, with 16% of overall reports. There was a large volume of entries initially, spurred from press releases as well as email blasts from AAO-HNS

SOURCE OF DATA

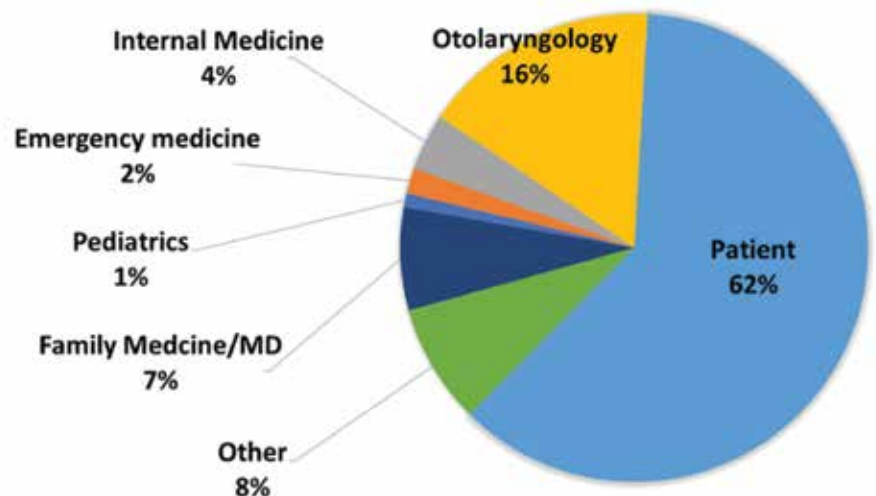


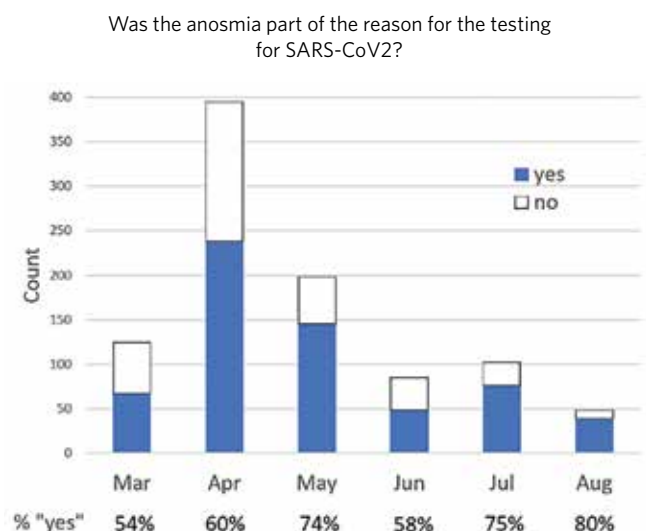
Figure 2. Source of data.

"Other" includes categories below 1% representation as well as nonphysician categories. Self-reporters were characterized as "patient."

Figure 3. Animated global view of patient entries. Size of red dot corresponds to number of entries from a given country (to see animated file, go to <https://www.youtube.com/watch?v=PJwT9dRHjLw>).



Figure 4. Was the anosmia part of the reason for the testing for SARS-CoV2? Of the patients who developed OGD prior to diagnosis, an increasing percentage of patients reported that OGD instigated COVID-19 testing.



during the initial rollout (Figure 2). The vast majority of respondents arrived at the CART questionnaire through the AAO-HNS website.

Laboratory confirmation of COVID diagnosis varied among subjects. All respondents from CART1 were summated with those who answered “presumed positive” in CART2 to comprise the final 542 “presumed positive” respondents denoted in Table 1. Given the widespread nature of the pandemic and lack of test early test availability, the presumed positive group was maintained for analysis. Patients with negative COVID test comprised 4% and were maintained for analysis given the other supporting symptoms they described and the plausible high false-negative testing rate.¹³ Similar justification was used to maintain data from other test responses. Tables 1 and 2 break out data analysis of patients with laboratory-confirmed COVID infection as well.

Characteristics of respondents are reported in Table 1. The average subject age was 39.1 ± 13.9 years (median 36 years), with age histogram skewing toward the younger population (Figure 3). Interestingly, the majority of subjects (64%) were female. Self-reporting was significantly associated with female in our report with a X^2 of 7.65 and an odds ratio of 1.37 (95% CI, 1.10-1.72). Reports from the United States predominated. In terms of environmental risk factors for COVID-19 infection, the most common was the subject’s position as a healthcare worker (41%), followed by close contact with a confirmed case (30%), and 27% reported no identified factors. Health risk factors are shown in Table 1 as well.

Regarding the timing of OGD (Table 2), 70% of respondents reported occurrence before COVID-19 diagnosis. Among this group, OGD was increasingly one of the symptoms that instigated COVID testing, ranging from 54% of subjects initially in March 2020 to 80% of subjects in August 2020 (Figure 4). For the 30% who reported OGD after diagnosis, the average number of days for presentation of OGD following COVID diagnosis was 5.4 ± 5.9 days (median four days). In 28% of subjects, no other symptoms were present prior to

Table 1. Characteristics of Respondents

This includes 287 patients collected by CART1 (of which 237 were featured in our previous publication) plus 255 who answered “presumed positive” on CART2. COVID+: laboratory confirmed infection. Bolded items demonstrated statistically significant difference between the groups.

	<u>All, n (%)</u>	<u>COVID+, n (%)</u>
Total	1355 (100)	629 (100)
Q2. Age, y		
Mean (\pm SD)	39.1 (\pm 13.9)	38.8 (\pm 13.6)
Median	36	36
Range	0-89	0-85
Q3. Sex, M/F (%)	493/862 (36/64)	192/437 (30/70)
Q4. Patient location, n (%)		
United States	1020 (75)	513 (82)
UK	44 (3)	13 (2)
Mexico	24 (2)	5 (<1)
Russia	16 (1)	12 (2)
Q5. COVID testing data, n (%)		
Positive test	629 (46)	629 (100)
Presumed positive*	539 (40)	
Negative test	58 (4)	
Test results pending	67 (5)	
Other (no test)	62 (5)	
Q7. Social risk factors (multiple answers possible)		
None	371 (27)	165 (26)
Healthcare worker	551 (41)	294 (47)
First responder	42 (3)	19 (3)
Close contact w/case	403 (30)	203 (32)
Congregant living	35 (3)	13 (2)
Other (e.g. travel, suspected contact, large gathering)	231 (17)	69 (11)
Q8. Health factors (multiple answers possible)		
None	921 (68)	423 (67)
Smoking	93 (7)	39 (6)
Head trauma	9 (<1)	3 (<1)
Sinusitis/allergy	254 (19)	121 (19)
Chronic pulmonary disease/asthma	111 (8)	60 (10)
Cardiac disease	17 (1)	7 (1)
Neurologic disease	7 (<1)	6 (1)
Other	60 (4)	30 (5)
Q12. Condition of patient at time of OGD		
Inpatient/hospitalized	29 (2)	10 (2)
Outpatient	1326 (98)	619 (98)
Q13. COVID Condition after OGD		
Worsen	376 (28)	195 (31)
Improve	979 (72)	434 (69)
Q14. Current COVID status		
Active	616 (45)	278 (44)
Recovered	721 (53)	347 (55)
Deceased	18 (1)	4 (<1)

development of OGD. In 22% of subjects, the onset of OGD continued in the absence of other symptoms. Otherwise, OGD was accompanied by nasal congestion and rhinorrhea in 33% and 17% of patients, respectively.

Regarding patients' evolutionary course of OGD, only 25% reported "resolution" at the time of case submission. Within this group, the average number of days to this occurrence was 12.5 ± 12.2 days (median eight days). Of note, more than 76% of those reported resolution by day 14, and more than 88% of those did by day 21. These data need to be carefully interpreted. First, it is unknown as to when in the course of their illness respondents answered the

questionnaire. Second, by the design of skip logic used in questionnaire, only those who answered "yes" when asked, "Did the anosmia/dysgeusia resolve?" received further questions regarding the degree of improvement (partial vs. complete) and its timing. Third, the interpretation of "resolution" by respondents is likely variable. It is quite possible that those who had some improvement of OGD nevertheless answered in the negative, as the question may have been interpreted to be asking only about complete resolution. These individuals would not have seen the follow-up question asking whether resolution was partial versus complete. Yet, there are evidently respondents who interpreted "resolution"

as some degree of improvement—half those reporting "resolution" noted having only partial resolution. Thus, this group of respondents may be better characterized as those who acknowledged some degree OGD improvement, although it may not be inclusive of all in this group. This may have biased solicitation of data from those who had faster improvement of anosmia/dysgeusia. It bears noting that approximately 15% of subjects offered information regarding the number of days that elapsed from COVID-19 development to case entry using the tool. On average, the interval was approximately 37 days.

Comparing all group ages for degree of improvement, the group with symptom improvement (complete and partial) was significantly older than those without improvement (40.7 vs. 38.6 years, $p = 0.02$). The group with complete symptom resolution was significantly older than the group without any improvement (41.1 vs. 38.6 years, $p = 0.03$).

There was no significant difference in age between the complete and partial symptom improvement groups nor between the partial symptom improvement and no improvement groups. Gender was not associated with symptom improvement on chi-square analysis. Analysis for concurrent symptoms and improvement in OGD demonstrated that both nasal congestion and rhinorrhea were significantly associated (X^2 4.59 and 7.88, respectively) with lack of symptom improvement with odds ratio of 1.34 (95% CI, 1.02-1.76) and 1.67 (95% CI, 1.16-2.40), respectively.

The only antecedent symptom associated with lack of improvement was headache, with a X^2 of 7.06 and odds ratio of 1.41 (95% CI, 1.09-1.82). Regarding patient risk factors, smoking was found to be significantly associated, with a lack of improvement with a X^2 of 5.01 and odds ratio 1.92 (95% CI, 1.08-3.45). Finally, chi-square analysis was applied to all methods of COVID-19 exposure and none were significantly associated with degree of symptom improvement.

Table 2. Olfactory Dysfunction and COVID Symptoms

No statistical difference was found between groups. COVID+: laboratory confirmed infection.

	<u>All, n (%)</u>	<u>COVID+, n (%)</u>
Total	1355 (100)	629 (100)
Q9. When was the anosmia or dysgeusia first noticed by the patient?		
Before COVID diagnosis	954 (70)	424 (67)
Was it part of the reason for Testing? y/n	615/338 (65/35)	307/117 (72/28)
After COVID dx	401 (30)	205 (33)
Mean days after dx + SD	5.4 + 5.9	5.4 + 6.5
Q10. Did the patient have any other symptoms BEFORE the development of anosmia/dysgeusia?		
Yes	972 (72)	474 (75)
No	383 (28)	155 (25)
Q11. What symptoms did the patient have AT THE TIME of anosmia/dysgeusia?		
None	295 (22)	122 (19)
Fever	281 (21)	131 (21)
Chills	209 (15)	97 (15)
Malaise	576 (43)	288 (46)
Cough	428 (32)	202 (32)
Headache	484 (36)	236 (38)
Nasal congestion	449 (33)	236 (37)
Rhinorrhea	234 (17)	124 (20)
GI distress	182 (13)	92 (15)
Other (eg myalgia, sore throat, dyspnea)	126 (9)	66 (11)
Q15. Did the anosmia/dysgeusia resolve?		
Yes	335 (25)	140 (22)
Complete resolution	179 (13)	80 (13)
Partial resolution	156 (12)	60 (10)
Mean start of improvement, days +SD	12.5 + 12.2	13.9 + 13.1
Median days	8	9
No	1020 (75)	489 (78)

Conclusion

We present a large international cohort of subjects with OGD associated with COVID-19, which represents the updated report of the COVID-19 Anosmia Reporting Tool, comprising 1,355 cases. OGD can precede COVID-19 diagnosis and symptoms may take several weeks to improve. Concomitant rhinorrhea, concomitant nasal congestion, antecedent headache, and active smoking are associated with lack of symptom improvement. Of those with symptom improvement, 76% of subjects experienced it by day 14 of illness and 88% did so by day 21. ■

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Difficult Cochlear Implantation

Daniel H. Coelho, MD,
and **J. Thomas Roland, Jr., MD**

In the earlier days of the field of implantation, cochlear malformations and ossification were considered a contraindication to surgery. This belief was based on concerns that even if the anatomical obstructions that preclude electrode insertion were properly addressed, the damage caused to the spiral ganglion cells would be too great to result in any significant auditory precept. However, subsequent refinements in the understanding of microanatomy and pathophysiology, earlier ages of diagnosis, refinements in radiographic evaluations, electrode design, processing strategies, and advanced surgical techniques have allowed cochlear implantation to significantly benefit patients previously considered inoperable.

While rewarding, implantation of ossified

and dysplastic cochlea presents many unique challenges to both the surgeon and programming team. Altered embryology and physiology of these labyrinthine dysplasias may result in forms and functions unfamiliar to those casually involved with cochlear implants. However, with a thorough understanding of the specific issues attendant to this fascinating and varied patient population, the goal of successful implantation and performance has become a reality.

Advanced cochlear implantation includes both ossified and malformed cochleae. Although there are substantial principal areas of overlap between the two with respect to radiographic workup, electrode choice, and surgical technique, they are in fact two separate conditions, each with their own unique problems and solutions.

Timely and accurate diagnosis are paramount in this patient population, as earlier

implantation (especially in the case of post-meningitic hearing loss) leads to improved performance. Both computed tomography (CT) and magnetic resonance imaging (MRI) may be necessary in this patient population. Despite controversies in nomenclature, inner ear dysplasias are readily identifiable by thin section high resolution CT scan of the temporal bone. Likewise, T2-weighted MRI can be helpful evaluating cochlear patency and can be particularly useful in determining the presence of septations within a cavity. MRI is especially important when no reliable auditory thresholds are obtainable with behavioral/play audiometry. In these patients, the presence or absence of a cochlear nerve can be ascertained by evaluating high-quality sagittal views of the internal auditory canal (IAC) in the constructive interference in steady state (CISS)/FIESTA sequences.

The ideal electrode in both normal and abnormal cochleae is one that lies in closest

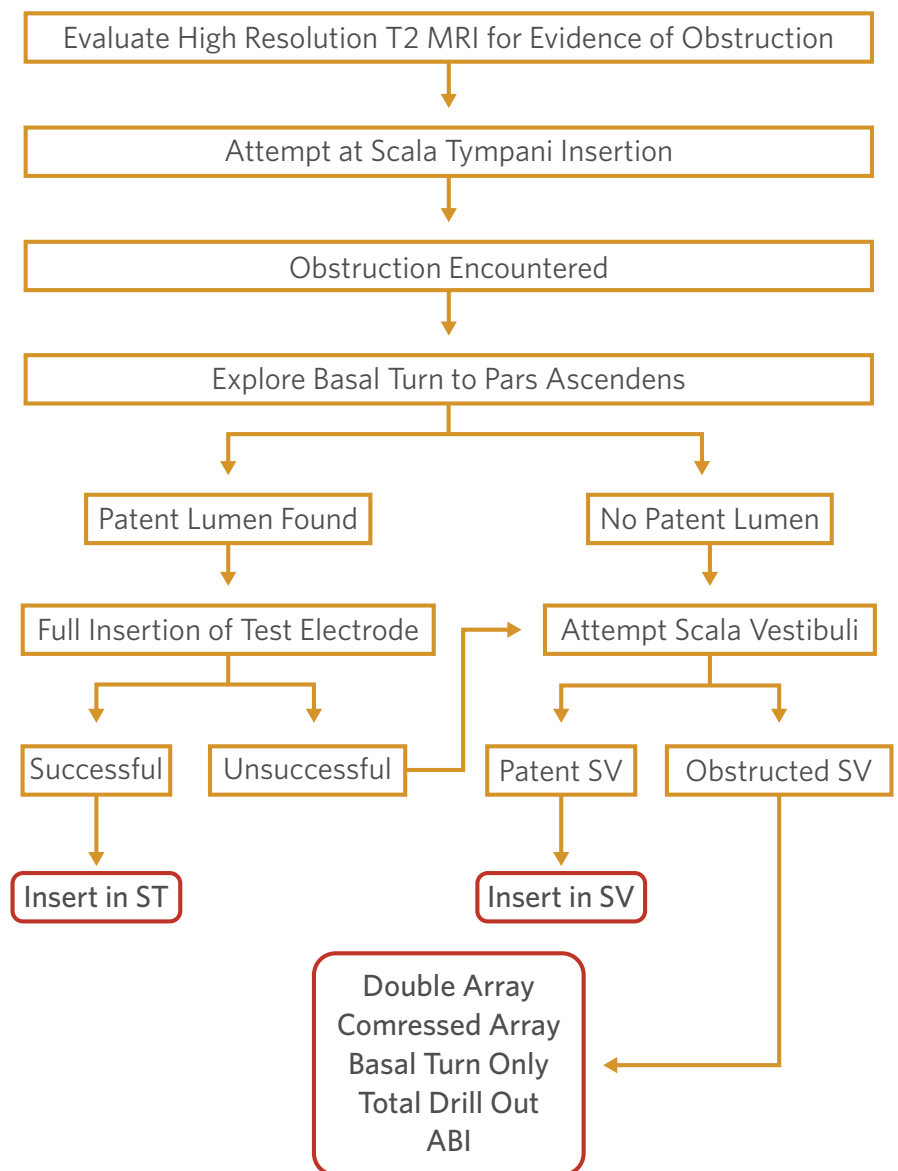
proximity to the neuroepithelium. For ossified cochleae, more rigid arrays can be helpful in navigating the tight architecture of the cochlear lumen. In cases when incomplete insertion of full arrays cannot be achieved, compressed or double arrays can be employed (and should be ordered in advance). In malformed cochleae, the critical neuronal sensory cells don't necessarily lie in the normal perimodiolar location close to the scala tympani. Moreover, the cochlear neuronal count can in some cases be a fraction of the normal count of 20,000 and still provide meaningful auditory input.

The ideal electrode in such a cochlea would therefore be one that remains close to the outer walls of the common cavity (CC) or hypoplastic cochlear cavity chamber (HC) and has a circumferential direction of stimulation so that the electrical fields are distributed toward the cell bodies. Additionally, these delicate neural elements might be traumatized by electrode insertion, so great care must be taken to avoid trauma during the insertion procedure.

Short or compressed arrays should be utilized in HC patients. The increased risk of complications, including extracochlear placement, intrameatal array insertion, electrode kinking or bending, or insertional trauma resulting in cochlear neuroepithelial damage must all be minimized to achieve optimal placement and performance. In the rare cases of no auditory percept, auditory brainstem implantation may be considered.

Surgical approach should be planned well in advance and is not recommended for the novice surgeon. Of course, approach depends on the particular challenge involved. For ossified cochleae, we recommend the algorithm presented here. For the majority of implantable inner ear malformations, including HC, a standard transmastoid facial-posterior tympanostomy (facial recess) approach to the middle ear can be applied. In many cases, removal of the incus bar and incus may be necessary to provide adequate

ALGORITHM FOR IMPLANTING OBSTRUCTED COCHLEAE



Video Resources:
<https://youtu.be/OcwGwrsNv4U>

visualization of optimal cochleostomy target.

The main exception to this is the CC malformation, which is best approached through a simple transmastoid labyrinthotomy. These patients are at risk for several complications, including electrode rollover, facial nerve injury, cerebrospinal fluid leaks, and internal auditory canal (meatal) insertion. We highly recommend the use of intraoperative fluoroscopy to mitigate these risks.

Postoperatively, clear communication between surgeon and implant audiologist is critical. Knowing electrode choice and implanted location are essential to successful programming and usage. The absence of normal tonotopic cochlear architecture can result in unpredictable frequency representation along the electrode. In double-array implantation, the surgeon must know if the apical array is inserted in an anterograde or retrograde fashion.

Just as with surgical considerations, there are a number of programming challenges that

present as a result of the abnormal cochlear anatomy and, in particular, the location of neural elements. Successful usage of an implant is related to establishment of a usable program or “MAP.” In patients with malformed cochlea, threshold and comfort levels fluctuate more; therefore, frequent adjustment in programming of these implants is necessary. Likewise, wider stimulation pulse width modes may be needed and hence more power consumed. Stimulation of the facial nerve by the cochlear implant electrodes is common and deactivation of the electrodes in question may be necessary to remove this problem. Though necessary, the deactivation can result in further degradation of the signal available to the neural elements. As a result, MAPping children with anomalous cochleovestibular systems is more difficult and takes longer to achieve. However, within the published literature, there is a consensus that the speech perception results in malformed cochleae obtained over time can in some cases be in

the same range as results observed in implant recipients with normally formed cochleae.

Implantation of obstructed and malformed cochleas presents a challenging yet rewarding endeavor for the implant team. Remarkable developments in diagnosis, electrode design, processing strategies, and programming have all contributed to the ability to successfully implant patient populations previously excluded. With increased surgeon comfort in anatomy and technique, more and more children can benefit from this life-changing intervention. ■

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COCHLEAR IMPLANT HEALTH: WHAT PATIENTS AND PARENTS SHOULD KNOW

WHAT IS A COCHLEAR IMPLANT?

A cochlear implant is a device that can be used to improve hearing in people with a specific form of hearing loss known as sensorineural hearing loss (when nerve impulses cannot be properly generated and/or transmitted from the inner ear to the brain). Cochlear implants are typically used for people who do not benefit from a hearing aid or other assistive listening devices because of the severity of their hearing loss.

Unlike hearing aids, which increase the volume of sound and deliver it to the ear, cochlear implants bypass the area of the inner ear that is not functioning correctly (called the cochlea), and directly stimulate the nervous structures of the inner ear. Additionally, unlike conventional hearing aids, cochlear implants require a surgical procedure. The cochlear implant device has two components: an internal device that is implanted surgically, and an external device that is worn like a hearing aid. This external device picks up sound from the environment and delivers it to the internal device.

WHAT IS THE APPROPRIATE AGE RANGE FOR COCHLEAR IMPLANTS?

Cochlear implants can be used on infants, children, and adults with severe to profound sensorineural hearing loss. The minimal age of FDA approval for cochlear implants is 12 months, however, devices have been safely implanted in infants as young as six months. In adults, patients with better hearing at lower tones have been found to benefit from implants as well. There is no maximum age limit; recently, even people in their 90s have successfully received cochlear implants.

HOW DO I KNOW IF I'M ELIGIBLE FOR A COCHLEAR IMPLANT?

To see if you or a family member are eligible for a cochlear implant, you should have a hearing test to evaluate your current hearing level. Next, a cochlear implant surgeon will look at your ear's anatomy and review your hearing test to see if you may be a candidate

for implantation. This may include a CT scan or MRI scan of your inner ear to ensure that the device can be safely implanted. You will also meet with an implant audiologist to have a cochlear implant hearing evaluation, which may include a more in-depth evaluation of your ability to hear noise and understand speech. In infants and young children, this testing is typically not performed.

WHAT DOES THE SURGICAL PROCEDURE INCLUDE?

Cochlear implantation involves placing an electrode within the cochlea to bypass the area of the inner ear that is not functioning correctly, and directly stimulating the nerve. An incision is made behind the ear and a processor attached to the electrode is implanted behind the ear. The procedure is usually a same-day surgery, and you will need to see your surgeon within a few days to two weeks following surgery to make sure you are healing properly.

The device will be tested during surgery to ensure that it is working correctly, and that your ear is responding to the device. However, you will not be able to hear immediately following the procedure to let your wound heal before "activating" the device. This will be done with the implant audiologist approximately two to four weeks following the surgery depending on your age and healing. Once the device is activated, your implant audiologist will work with you to optimize the device's programming and your hearing response.

WHY ARE VACCINATIONS IMPORTANT FOR COCHLEAR IMPLANT USERS?

Bacterial meningitis is a serious, life-threatening infection of the brain and the fluid that surrounds the brain. Individuals who have a cochlear implant are at increased risk for bacterial meningitis. Although this risk is small, it is important for children and adults with cochlear implants to be vaccinated against the type of bacteria

that seems to cause the majority of meningitis cases, *Streptococcus pneumoniae* (*Pneumococcus*). Additional vaccines are available against other potential causes of meningitis, including *Haemophilus influenzae* type b (Hib) and *Meningococcus*. These vaccines are widely available and strengthen the body's defenses against infection.

WHAT FOLLOW-UP CARE IS NECESSARY?

Cochlear implant users and their families should also be aware that vaccinations do not eliminate the risk of meningitis. Children and adults with cochlear implants who develop a middle ear infection (known as otitis media) or a fever of uncertain cause should seek medical treatment and monitoring until the infection resolves. Infections in a child or an adult with a cochlear implant should be taken seriously. Untreated middle ear and other infections may spread to produce meningitis.

In addition, if an ear with a cochlear implant develops a discharge from the ear canal, or produces unusual ear symptoms or a watery nasal discharge, it is important to have that ear examined by the surgeon who performed the surgery, or another suitable experienced cochlear implant surgeon.

An annual checkup with an audiologist is recommended to map and reprogram the device as needed to ensure optimal hearing.

WHAT QUESTIONS SHOULD I ASK MY DOCTOR?

1. How do I decide on which ear may need an implant, or both?
2. What do I do if I experience ear drainage?
3. What do I do if I experience abnormal sound or changes in sound quality?
4. What do I do if there is redness around the magnet site?
5. What alternatives are there for managing my hearing loss?



Truth in Numbers: Biostatistics for the Otolaryngologist Clinician

Diego A. Preciado, MD, PhD

One need not be proficient in running statistical software, nor have a master's degree in epidemiology or public health, to understand most of what is needed for critical interpretation of clinical data. With increasing awareness and a generalized emphasis regarding the importance of practicing evidenced-based medicine, it is critical for clinicians to have a concrete and basic understanding of biostatistics as they pertain to clinical research and credible outcomes.

Further, comfort with data interpretation is paramount to improving the quality of our research, and more importantly, to informing appraisal of the medical literature and the process of conducting peer review. Certainly, as we have learned the past two years, the pandemic has brought to light how important it is to recognize differences between true and anecdotal outcomes.

For the past years, the AAO-HNSF has allowed me the great privilege to discuss these topics through a lecture format at the Annual Meeting. Using an interactive case-based approach, the course has covered essential and practical information for critically appraising or conducting research. The material covered has included a discussion of normal distributions, non-parametric data, continuous versus categorical variables, effect size, confidence intervals, p -values, time-to-event analyses, correlations, multivariate linear and logistic

regression models, and common statistical errors and misconceptions.

Highlighted areas include review of which statistical tests are needed in order to test specific hypotheses—while grasping the true meaning of significance. Although it may be important to know how p -values are calculated for different types of data (continuous, categorical, and time), it is even more important to understand what p -values actually mean. Undoubtedly, the widespread use of “statistical significance” (generally interpreted as “ $p \leq 0.05$ ”) as a license for making a claim of a scientific finding (or implied truth) may at times lead to considerable distortion of the scientific process. When looking at p -values in a vacuum, these distortions can be magnified.

Instead, p -values need to be considered in the context of clinical significance—nominally often represented by clinical effect size (proportional difference, relative risk, and odds ratio). Comprehending the meaning of these effect size measures and how they are calculated is perhaps more critical than being able to determine p -values.

A nearly reflexive understanding of different types of clinical data is paramount. As clinicians, we should move away from the lay vernacular description of populational characteristics or outcomes as “averages” to the more appropriate use of “means/medians” that account for common biases or skewing in sample distribution. Moreover, when sampling any cohort, comparatively or descriptively, it is critical to describe the “variation” (standard deviation/standard error/

confidence intervals) noted in the sample, perhaps more important than to simply focus on the “mean.” Representing the sample characteristics graphically, employing tools that best depict the entire cohort (mean/median/and variance) is often the best approach.

Consider censoring of loss to follow-up subjects is of importance when discussing time-to-event occurrences. When trying to infer the relevance of a clinical variable affecting an outcome (most usually through an association, with most clinical studies not necessarily designed to determine causality), it is particularly important to consider all other potentially contributing variables in some form of multivariable regression model.

Univariable comparisons tend to be quite reductionist and may also distort inferences by missing contributions from common confounders. From a technical standpoint, running multivariable models is relatively straightforward with many software programs readily available for this purpose. An example of widely versatile, relatively inexpensive, and user-friendly data analysis program is GraphPad Prism, which also produces simple, publication-ready graphs and charts.

In conclusion, the analysis and interpretation of data is something which, like it or not, permeates our practices (and lives!). The process of arriving at “truth in numbers” for us otolaryngologists should actually be as simple and enjoyable as possible. At the end of the day, there should be nothing more rewarding than the confirmation or rejection of conceived impressions through data. ■

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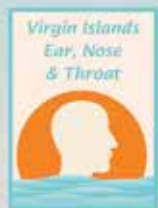
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Icahn School of Medicine at Mount Sinai • Department of Otolaryngology – Head and Neck Surgery

The **Mount Sinai Health System Department of Otolaryngology – Head and Neck Surgery** is seeking applications for full-time Pediatric Otolaryngologists and General Otolaryngologists to join the academic staff at the Icahn School of Medicine at Mount Sinai. The Department of Otolaryngology is expanding its clinical practice throughout the 5 boroughs of New York City, Long Island and New Jersey.

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The candidates should be qualified for faculty appointment at the Assistant Professor, Associate Professor or Professor level commensurate with his/her level of experience. The candidates are also required to have a medical degree, board certification and be able to obtain a New York State medical license. The Pediatric Otolaryngology candidates should be fellowship-trained in pediatric otolaryngology.

Please send inquiries and curriculum vitae to:

Mona Kim

Program Manager

Mona.Kim@mountsinai.org



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Department of Otolaryngology – Laryngology Faculty Opportunity

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Laryngologist - The Department of Otolaryngology at the University of Texas Medical Branch (UTMB) in Galveston, Texas is actively recruiting enthusiastic Laryngology candidates for immediate hire. The faculty of UTMB Department of Otolaryngology strive to provide the most contemporary, comprehensive, and multi-disciplinary care available to the community. The Department is fully supported by full time clinically trained speech pathologist with specialties in head and neck cancer, voice, and management of tracheoesophageal prosthetics. This position entails opportunities to participate in all aspects of clinical practice, as well as resident and medical student teaching. In addition, clinical research is encouraged but not mandatory.

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Applicants must apply at:

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For additional information, contact:

Richard G. Gurgel, MD

Associate Professor and Director

Neurotology Program

Otolaryngology – Head and Neck Surgery

University of Utah School of Medicine

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Salt Lake City, Utah 84132

Phone: (801) 585-3186

Fax: (801) 585-5744

E-mail: susan.harrison@hsc.utah.edu



Physician

Department of Otolaryngology-Head & Neck Surgery

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Winston Salem is located in the Piedmont region of North Carolina and has been ranked among the top 50 "Best Places to Live" by U.S. News & World Report. It enjoys an even distribution of all four seasons and easy access to both the Blue Ridge Mountains and Atlantic coast, striking an enviable balance between big city amenities and small-town southern charm. It is also the home to three universities: Wake Forest University, Winston-Salem State University, and the University of North Carolina School of the Arts, infusing the community with energy from sports, arts, culinary diversity and recreation. Explore this opportunity by contacting us today at recruitment@piedmontent.com.

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Interested candidates, please reach out to **Ken Altman, MD, PhD, Chair, Department of Otolaryngology – Head & Neck Surgery, and Professor – Geisinger Commonwealth School of Medicine, 100 N. Academy Avenue, Danville, PA 17822** at kaltman@geisinger.edu or apply online at jobs.geisinger.org/physicians.



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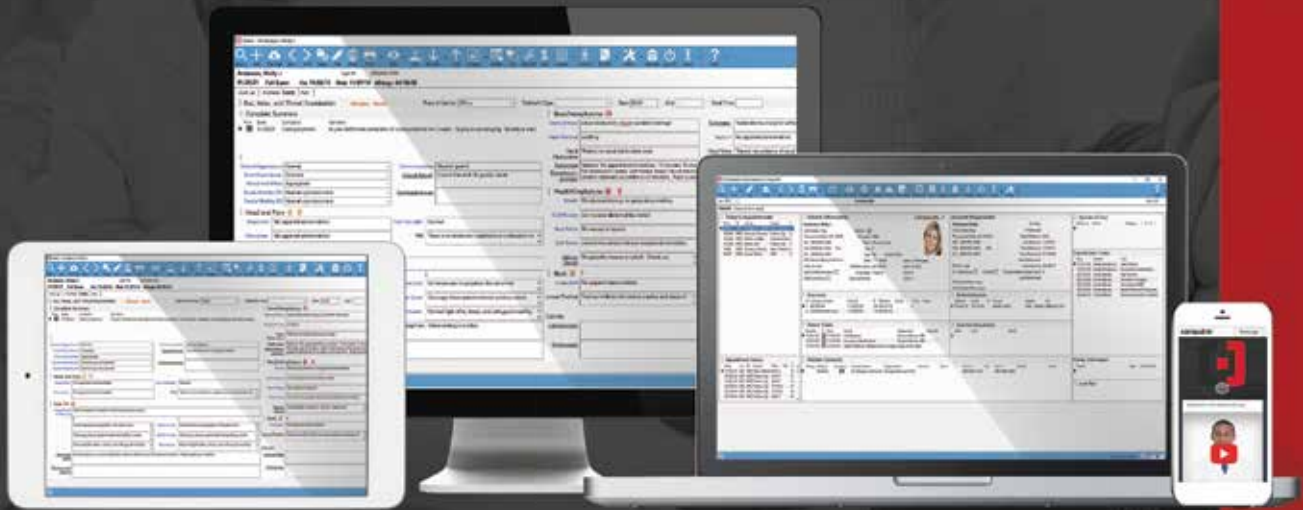
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